

DS #:

4926

APN:

137-22.000-017

PROJECT:

Summerlin West Planning Area Master Plan Update

SUBMITTAL:

1st

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		November 11, 2017
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for: Summerlin West Planning Area Master Plan Update		COPIES TO: VTN Nevada
Cross Streets:	West of I-215 between Lake Mead Boulevard and Charleston Boulevard	The Howard Hughes Corporation
File Number:	F:\Depot\DSMemos\DS4926.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-22-000-017	CCRFCD
Zoning Action:		CCPW
FEMA Flood Zone	YES ☒ NO ☐	
Proposed Storm Drain	YES ☒ NO ☐	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	10/9/2017 & 10/25/2017	11/8/2017	See Comments Below	\$400.00	490518: \$400
TOTAL FEES (LDDRS):				\$400.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

	is approved subject to conformance to all City standards and the following conditions:
X	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. Provide a copy of the zoning/planning conditions associated with this site with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District (CCRFCD)* master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.
3. The site is adjacent to Clark County. Clark County Public Works concurrence is required prior to final approval of the drainage study.
4. Provide a letter of approval from Summerlin for the subject Summerlin West Planning Area Master Study Update in the next submittal.
5. Provide a table showing the 2006 combination point flows versus the similar current combination point flows. Such table will provide a convenient comparison between the previous and the proposed differences.

6. Provide a discussion of the phasing plans of **Summerlin West Planning Area**. It appears that **Area 1** will be included as the first phase, please discuss the sequence of future phasing. Technical drainage studies will be required for infrastructures and the subsequent Area 1, Area 2 etc. onsite developments.
7. In *Figure A.6.1 Overall Drainage Basin Map*, provide labeled contours and identify the proposed study limits. Show the discharging points of each tributary. For example, "CP1.4" of V26 Tributary etc. Also identify the location of the existing DB5 Detention Basin and the proposed Grand Park Detention Basin on the map.
8. In *Figures A.6.2, A.6.3, and A.6.4 (Tributary Maps)*, provide labeled contours and show the downstream detention basins. Also, please differentiate the labels for the combination points and Lot IDs more clearly and adjust overlapping labels.
9. In *Figure A.5.2 Overall Soil Map*, check that the legend matches the exhibit. For example, the soil numbers in the legend are red but on the exhibit, they appear black. The black labels are difficult to read when overlapped with the other labels.
10. In *Figure A.6.5 Regional Flood Control Facilities Map*, make sure the legend matches the exhibit. For example, the legend shows a black dot for the concentration points but the exhibit appears to have pink dots. Also, please use a different line type or color to differentiate between the Basin Boundary and the Existing Storm Drain Alignment.
11. Provide an exhibit or adjust existing exhibits to show all basins included in the HEC-1 models. For example, Beltway Channel North/V26 Basin Tributary as shown in figure A.6.2 is the upstream portion of the HEC-1 model. Provide an exhibit that shows all basins and basin interaction (flow direction/combination points) for the entire HEC-1 model so that the model can be properly evaluated. Please also show the CCRFCD flood control systems that these basins ultimately drain to on this exhibit.
12. Check the graphic scale on all exhibits for accuracy. For example, Figure A.6.1 Overall Drainage Basin Map and A.6.7 Area 1 Flood Control Facilities Map show a graphic scale of 1" = 1' which does not seem to be correct.
13. Clarify why soil numbers 294, 351, 151, and 263 do not appear in the "Soil Comparison 7809" table but appear in the soils report and on the overall soil map.
14. In *Appendix B.4*, provide the CN computations in a legible format. The current format is too small to read.
15. In *Figure A.6.5 Regional Flood Control Facilities Map*, concentration point CPDBA-B appears to be a detention basin. If this is the Grand Park Detention Basin discussed in the report please clearly label it and if not please clarify and provide discussion.
16. Provide the precipitation calculations used to derive the PB (precipitation) values in the HEC-1 models. Additionally, in *Appendix B.2 CCRFCD Supplemental Documentation* please circle or highlight values used from each table and figure as applicable to calculating the precipitation including marking the site location on Figures 506 and 503.
17. Soil Comparison 7809 table, in the second table please clarify what "100-yr Old" and "100-yr New" values are supposed to represent.
18. Beltway Channel North / Village 26 Tributary HEC-1 model basin 1-2 input UD (lag time) does not match the value provided in Standard Form 4 (*Appendix B.4*).
19. Beltway Channel North / Village 26 Tributary HEC-1 model basin 1-6 input BA (basin area) and UD (lag time) do not match the value provided in Standard Form 4 (*Appendix B.4*).
20. *Appendix B.1 HEC-1 Flowrate Summary* for V26 Tributary Proposed Condition concentration point CP1.4 lists a Q_{100} of 3285 cfs whereas Figure A.6.2 lists CP1.4 to have a Q_{100} of 3315 cfs. Please revise the values to the correct flow.

21. *Appendix B.4*, cover sheets do not match contents. For example, *Appendix B.4.2 Beltway North Tributary* contains curve number/lag time/ routing calculations for onsite DB5/ Alta Tributary. Please adjust all cover sheets to match the correct contents.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS
WSP/AYS

T/R/S: T21S/R69E/22
AREA K-22

Update the Summerlin West Conceptual Land Use Plan .

Bill Meyer

From: April Chapman <April.Chapman@howardhughes.com>
Sent: Monday, October 09, 2017 11:36 AM
To: Bill Meyer
Cc: Christopher Anderson; Dave Edwards
Subject: HHC Conceptual Drainage Study Approval Email

Bill,

Howard Hughes has reviewed and approved the 2017 Summerlin West Planning Area, Conceptual Drainage Update. If you need an official letter from Chris, he will be back next week.

Regards,

April Chapman | Project Manager, Engineering Support Services | The Howard Hughes Corporation
Summerlin | 10801 W Charleston Blvd. | 3rd Floor | Las Vegas, NV 89135
702.791.4201 direct | 949.302.7046 mobile

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 ST. TIME 11/11 14:35
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 PGS. 3
 RESULT OK

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM

DATE:

November 11, 2017

TO:

Land Development Services
 Department of Building & Safety

FROM:

Albert Sung, P.E.
 Flood Control Project Engineer
 Department of Public Works

SUBJECT:

Drainage Study for:

Summerlin West Planning Area Master Plan Update

COPIES TO:

VTN Nevada

Cross Streets:

West of I-215 between Lake Mead Boulevard
 and Charleston Boulevard

The Howard Hughes Corporation

File Number:

F:\Depot\DSMemos\DS4926.doc

Bart Anderson, P.E., DevCo

Parcel Number:

137-22-000-017

CCRFCD

Zoning Action:

CCPW

FEMA Flood Zone

YES

X

NO

Proposed Storm Drain

YES

X

NO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
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TOTAL FEES (LDDRS):				\$400.00	----

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X	must be resubmitted or supplemented including the following:
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	is conditionally approved subject to Clark County Public Works Department concurrence.

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2. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District (CCRFCD)* master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

FLOOD CONTROL MASTER PLAN UPDATE

SUMMERLIN WEST PLANNING AREA

Las Vegas, Nevada

W.O. # 7809

Prepared for:
Howard Hughes Corp.

Submitted to:
Public Works Department
City of Las Vegas



HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin West Planning Area Master Plan Update Date: October 9, 2017

Location of Development: a) Descriptive (Cross Streets) North/South: I215
East/West: Between Lake Mead Blvd./Charleston Blvd.

b) Section: 3 and 4 Township: 21S Range: 69E

c) APN : 137-22-000-013

Name of Owner: The Howard Hughes Corporation

Telephone No.: (702) 791-4336 Fax No.: (702) 791-4453 E-Mail Address: chris.anderson@howardhughes.com

Address: 10801 W. Charleston Blvd. LV, NV, 89135

Contact Person-Name: William Meyer Telephone No.: (702)-873-7550

E-Mail Address: bmeyer@vtnnv.com Fax No.: (702)-362-2597

Firm: VTN Nevada

Address: 2727 S. Rainbow Blvd, LV, NV, 89146

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☒	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit		

1. Total Owned Land Area: At Site: 5100+/- Acres Being Developed/Disturbed: +/-5100 Acres

2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☒ Yes** ☐ No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No

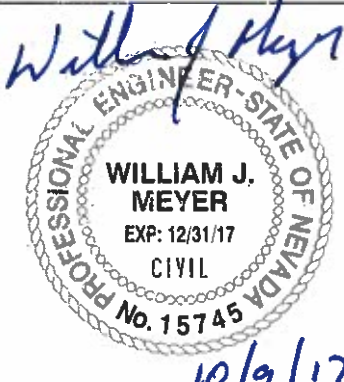
4. Proposed type of development (Residential, Commercial, Etc.): Mixed Use

5. Approximate upstream land area which drains to the subject site: +/- 11.5 sq.mi.

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: 2006 Summerlin West Master Plan Update

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: _____

8. Briefly describe your proposed schedule for the subject project: As soon as possible

 WILLIAM J. MEYER EXP: 12/31/17 CIVIL No. 15745 Engineer's Seal	Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study. *New Required Field **Review and concurrence of the Clark County Regional Flood Control District is required. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Revision</th> <th style="width: 40%;">Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> Local Entity File No. _____	Revision	Date						
Revision	Date								
REFERENCE:	STANDARD FORM 1								

2017 SUMMERLIN WEST PLANNING AREA

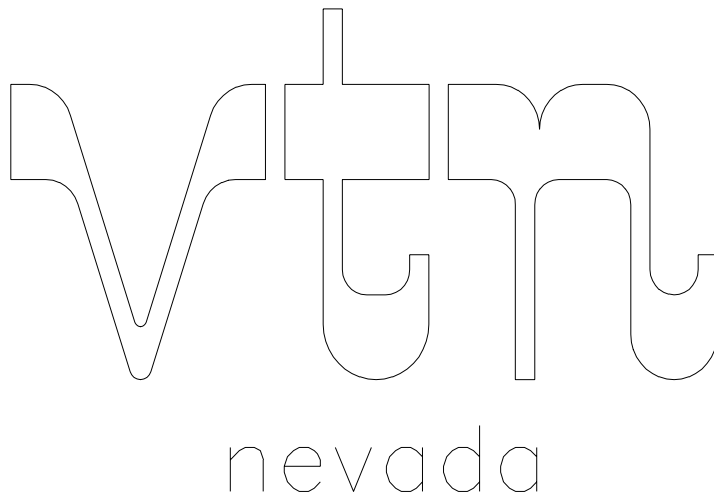
FLOOD CONTROL MASTER PLAN UPDATE

CITY OF LAS VEGAS, NEVADA

W.O. # 7809

Prepared for:
HOWARD HUGHES CORPORATION

Submitted to:
**CITY OF LAS VEGAS
DEVELOPMENT DESIGN**





October 9, 2017
W.O. #7809

City of Las Vegas
Development Design
333 N. Rancho Drive
Las Vegas, Nevada 89106

Attention: Albert Sung, P.E.

**SUBJECT: SUMMERLIN WEST PLANNING AREA FLOOD CONTROL MASTER PLAN
UPDATE**

Dear Mr. Albert Sung, P.E.

Transmitted herewith for your review are two (2) copies of the *Conceptual Master Plan for the 2017 Summerlin West Planning Area*. The site is approximately 5100.1 ± acres, and is located within Township 20, Range 59 and Sections 14-17, 20-23, 26-29, and 32-34.

If there are any questions concerning this study or if additional information is needed, please do not hesitate to contact this office.

Respectfully Submitted,

VTN Nevada

William J. Meyer, P.E.

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- D.2 .. Response to Comments on the Master Drainage Study for Summerlin Village 26 Reverence
- D.3 Crossbridge Unit 3
- D.4 DB5 LOMR

1 INTRODUCTION

1.1 STUDY OVERVIEW AND PURPOSE

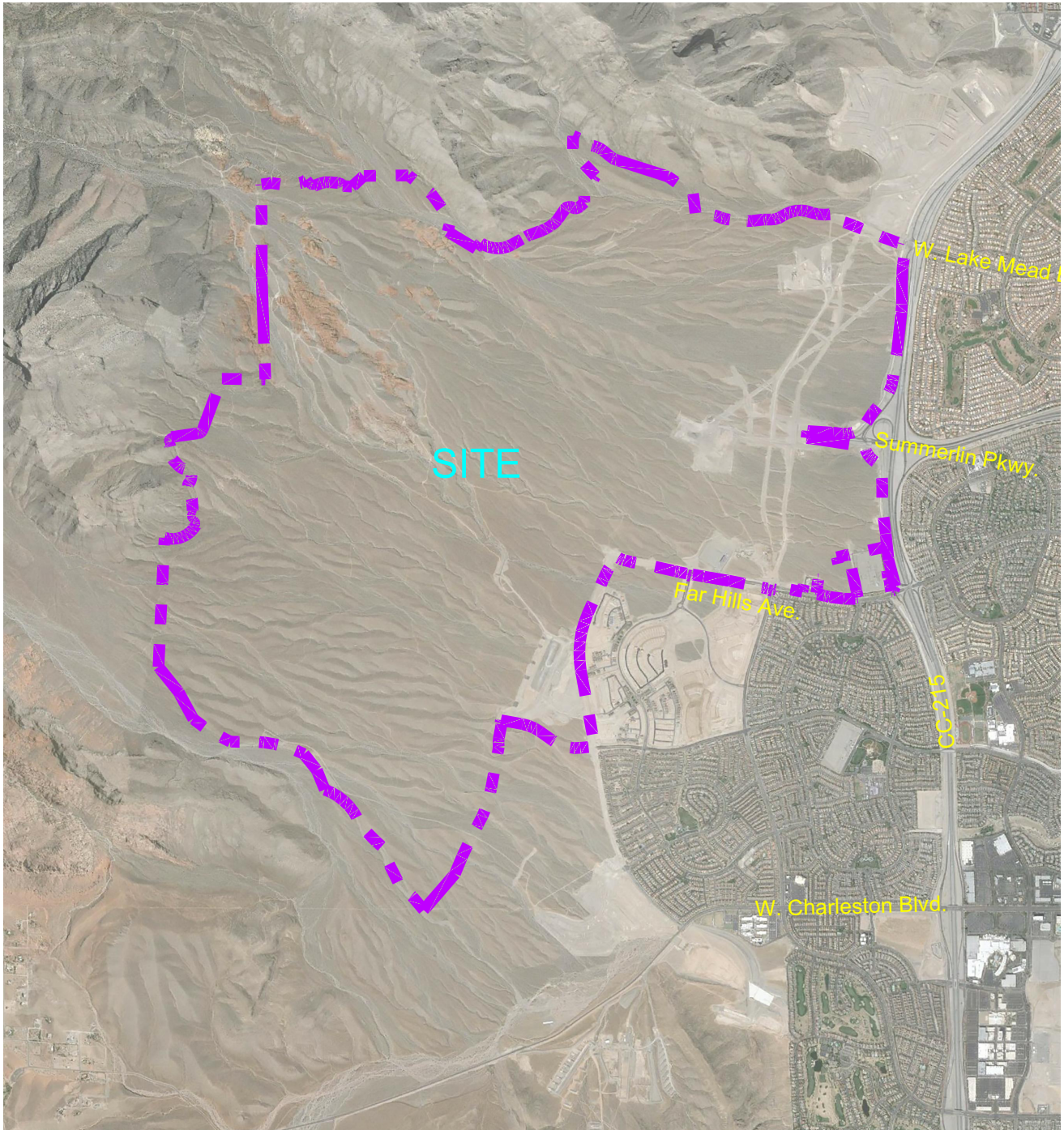
The Summerlin West Planning Area (SWPA) is a master planned community that consists of residential and mixed use development. The area was studied in 1997 and in 2006. Due to modifications to the land plan, the flood control master plan is being restudied.

1.2 SITE LOCATION AND DESCRIPTION

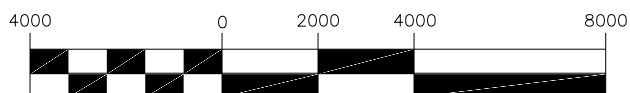
The Summerlin West Planning Area is bounded by Lake Mead Boulevard on the north, undeveloped Bureau of Land Management property on the west, West Charleston Boulevard on the south, and the Western Beltway on the east. The SWPA is approximately 5100.1± acres, and is located in Township 20, Range 59 and Sections 14-17, 20-23, 26-29, and 32-34. Please refer to Figures 1 and 2 for the location of the project. The proposed development consists of mostly residential areas, with some commercial, parks, golf courses, natural land, and landscaped areas.

1.3 PREVIOUS HYDROLOGIC STUDIES AND DRAINAGE INFORMATION

- *2007 Summerlin West Planning Area Flood Control Master Plan Update.* The SWPA study was used as a comparison to the new 2017 Master Plan Update for Summerlin West.
- *Letter of Map Revision for the DB5 Detention Basin.* Approved September 2017. The study was used to insure the Summerlin West Planning Area does not create an adverse impact on the existing DB5 facility..
- *Response to Comments on the Master Drainage Study for Summerlin Village 26 Reverence* (hereinafter referred to as the V26 Master Study). Approved May 28, 2016. The Village 26 HEC-1 model was referenced to develop the downstream condition HEC-1 model that evaluates the SWPA impacts to the water surface elevation of the downstream Lone Mountain Detention Basin (GOLM146).



GRAPHIC SCALE



1" = 4000'



vtm
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NV 89146-5148

2017 SUMMERLIN WEST PLANNING AREA

**SITE DESCRIPTION MAP
FIGURE 2**

SCALE	HORZ.
	VERT.
W.O. NO.	7809
DRAWN BY:	SVB
DATE:	SEPTEMBER 2017
SHEET	OF

1.4 FEMA FLOODPLAIN INFORMATION

Figure 3 is a portion of the Federal Emergency Management Agency (FEMA) Flood Control Rate Map (FIRM) containing Community Panel Numbers 32003C 2125 E and 32003C 2150 E dated September 27, 2002. Review of the FIRM shows that the majority is located within a FEMA Zone “X” (areas outside of the 500-year flood plain). A small portion of the site is located within a Zone “A” (no base flood elevations determined) at the existing Detention Basin #5 facility. Development in the SWPA area will not encroach into the flood plain.

1.5 CLARK COUNTY REGIONAL FLOOD CONTROL (CCRFCD) MASTER PLAN INFORMATION

Figures 4A and 4B reproductions of Figures F-24 and F-29 from the 2013 Clark County Regional Flood Control Master Plan Update of the Las Vegas Valley (hereinafter referred to as MPU Reference 1). The figures depict the project site in relation to proposed and existing CCRFCD facilities. As shown on the figures, there are several MPU facilities in the area.

The SWPA drains to four (4) separate existing detention basin facility locations as shown in the 2013 CCRFCD Master Plan Update. Although the watershed boundaries have been revised for this study, the naming of the tributary areas is consistent with those shown in the 2006 SWPA Flood Control Master Plan. The revised drainage basin maps are included in Appendix A of this study.

At the southern side of the site flows are conveyed under Charleston Boulevard via an existing two span bridge to the existing 2,007 acre feet Red Rock Detention Basin (RRWA 0716). This area is designated as the Red Rock Tributary area.

North of this watershed, flows are conveyed to the existing 384 acre feet Detention Basin #5 facility (APM5 0000), hence referred to as DB5, and then downstream via 2 existing 7-foot by 5.5-foot RCBs (APAD 0203) in the Angel Park - Alta Drive Branch facility. These flows are ultimately then conveyed to the Angel Park Detention Basin. Further north of this watershed, flows are captured by the proposed 95 acre-foot Grand Park Detention Basin, and then conveyed downstream via the Angel Park Beltway Branch and the Angel

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevation (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD). Users of this FIRM should be aware that coastal flood elevations may also be provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map is Universal Transverse Mercator (UTM) Zone 11. The **horizontal** datum is NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **benchmarks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Clark County Regional Flood Control District. This information was converted using Orthophotography, dated 1999 or newer, and GBF/DIME data. Segments were digitized off of the orthophotography based on center of pavement.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

An accompanying Flood Insurance Study report, Letters of Map Revision or Letters of Map Amendment revising portions of this panel, and digital versions of this PANEL may be available. Contact the **FEMA Map Service Center** at the following phone numbers and Internet address for information on all related products available from FEMA:

Phone: 800-358-9616
FAX: 800-358-9620
www.fema.gov/msc

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.

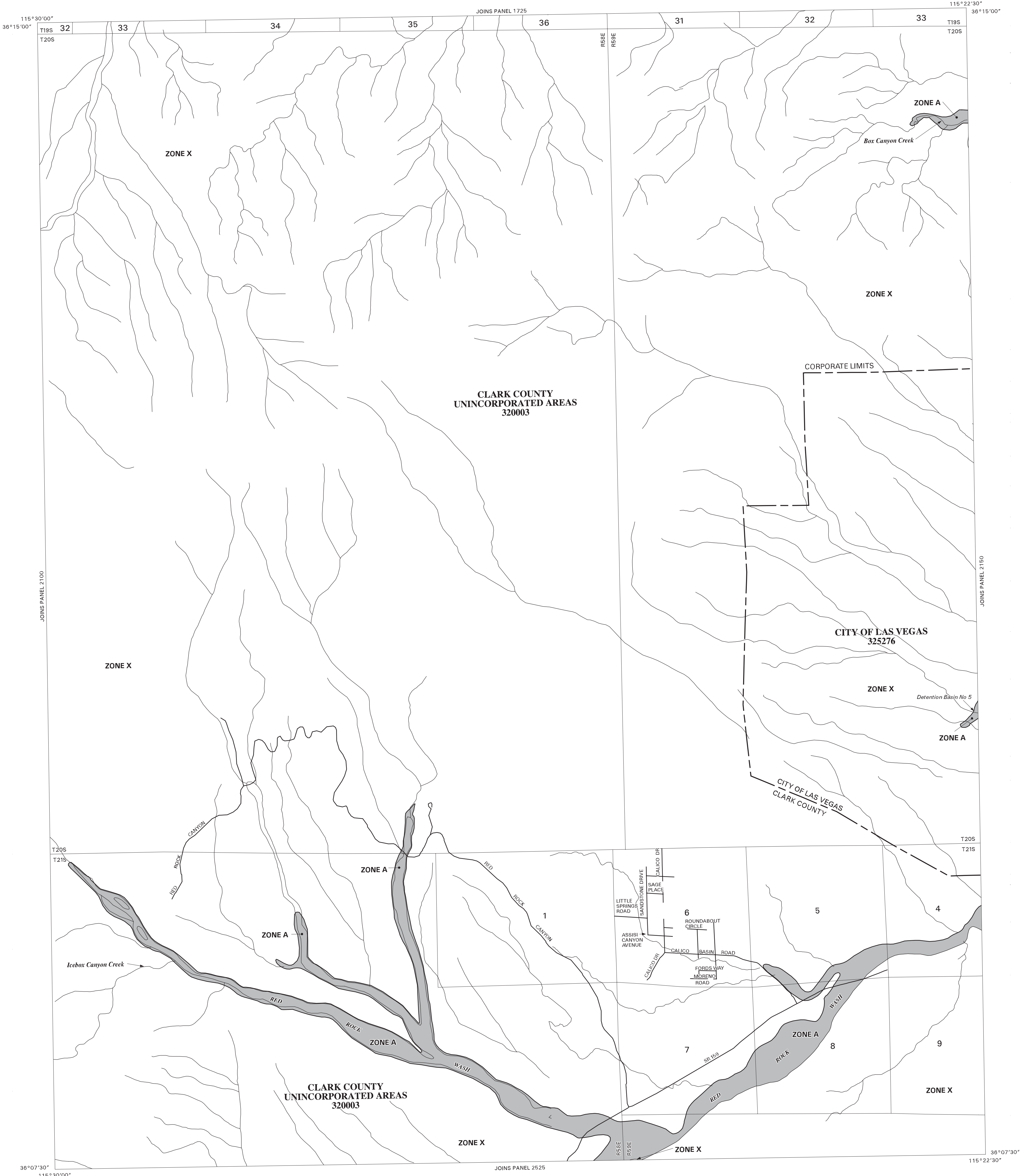
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on this map.

This Digital Flood Insurance Rate Map (DFIRM) was produced through a unique partnership between Clark County and the Federal Emergency Management Agency (FEMA). Clark County has developed a long-term approach of floodplain management to decrease the costs associated with flooding. This is demonstrated by the Clark County commitment to share and maintain floodplain layers within their Geographic Information System Management Office (GISMO).

This DFIRM reflects several innovative features. These include:
+ Southern Nevada GIS--Cooperation among local governmental agencies throughout Clark County. The foundation of cooperation is the GIS Interlocal Agreements formed between fourteen regional participants. In part, the agreements specify that the Clark County GIS Management Office (GISMO) will be responsible for maintaining a GIS data warehouse and associated Southern Nevada GIS Metadata.

+ The GISMO's responsibilities go beyond maintaining the GIS data warehouse. GISMO also maintains the Street Centerline Database used by 911 dispatch services. This centerline database serves as the base map for this DFIRM.

DIGITAL DATA AVAILABILITY: <http://www.co.clark.nv.us/ceit/gismo/gismo.htm>



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
- ZONE A99** Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Coastal Barrier Boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross Section Line
- Transect Line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid values, zone 11
- 5000-foot grid ticks

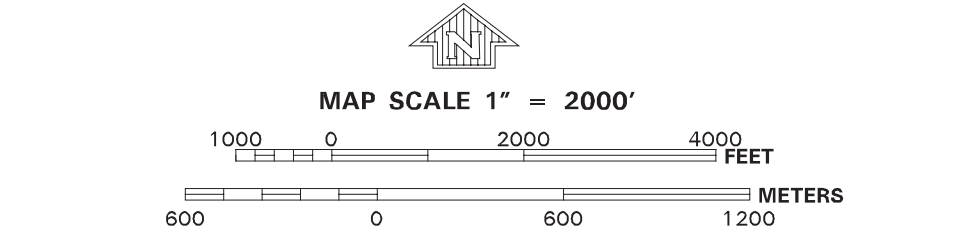
- Bench mark (see explanation in Notes to Users section of this FIRM panel).
- River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
AUGUST 16, 1995
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

September 27, 2002: to update corporate limits, to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to delete special flood hazard areas, to change zone designations, to add roads and road names, to incorporate previously issued letters of map revision, to incorporate previously issued letters of map amendment, and to change floodway.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 635-6620.



PANEL 2125 E

FIRM
FLOOD INSURANCE RATE MAP
CLARK COUNTY,
NEVADA AND
INCORPORATED AREAS

PANEL 2125 OF 4090

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
	LAS VEGAS, CITY OF	325276	2125	E
	CLARK COUNTY UNINCORPORATED AREAS	320003	2125	E

Notice to User: The **Map Number** shown below should be used when plotting map orders. The **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
32003C2125 E

MAP REVISED:
SEPTEMBER 27, 2002

Federal Emergency Management Agency



LEGEND

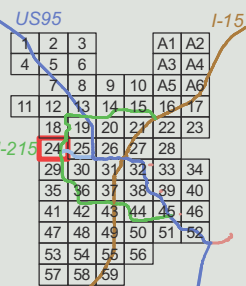
- Stormdrain
- ===== Lined Channel
- == = Unlined Channel
- XXXXX Levee/Dike
- Natural Wash/Floodway
- ID-Mile Separator

Category A	Category B
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- 

 Scale: 1 inch = 2,000 feet

 Refer to Figure G-2 for Aerial Source(s)



ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
APAD		ANGEL PARK - ALTA DRIVE BRANCH						
0044	E	11' X 8' RCAP	1565	3140	CSWAA-3	ALLGOW4	8.26	4.24
0073	E	11' X 8' RCAP	2220	2917	CSWAA-2	ALLGOW3	7.68	3.50
0146	E	10' X 8' RCB	3010	2220	CSWAA-1	ALLGOW3	6.98	4.40
0203	E	2: 7' X 5.5' RCB	1136	2220	CSWAA-1	ALLGOW3	6.98	5.28
0225	E	2: 7' X 5.5' RCB Outlet	360	2149	SUM5DB	ALLGOW3	6.74	3.40
APBE		ANGEL PARK - BELTWAY BRANCH						
0013	E	3: 12' X 8' RCB	489	4060	CSWFH-9	ALLGOW3	2.65	6.50
0022	E	Conc Chnl 20'W 7'D 2:1 SS	1556	4060	CSWFH-9	ALLGOW3	2.65	1.81
0051	E	Conc Chnl 20'W 7'D 2:1 SS	1583	4060	CSWFH-9	ALLGOW3	2.65	2.77
0081	E	8' X 8' RCBC @ Far Hills	777	423	SWFH-9	ALLGOW3	0.17	2.32
0094	E	Conc Chnl 10'W 5'D 2:1 SS	1465	423	SWFH-9	ALLGOW3	0.17	1.88
0122	E	Conc Chnl 10'W 4'D 2:1 SS	1409	423	SWFH-9	ALLGOW3	0.17	0.80
APCH		ANGEL PARK - CARRIAGE HILL BRANCH						
0000	E	8' X 6' RCB	152	585	SWFH-8	ALLGOW3	0.29	0.87
0003	P0	8' X 7' RCB	1461	585	SWFH-8	ALLGOW3	0.29	2.39
0031	P0	8' X 5' RCB	896	585	SWFH-8	ALLGOW3	0.29	0.60
APD2		ANGEL PARK - DESERT FOOTHILLS 2 BRANCH						
0002	P0	7' X 7' RCB	964	948	SWAA-2	ALLGOW3	0.70	2.00
APD5		ANGEL PARK - DESERT FOOTHILLS 5 BRANCH						
0000	P0	8' X 6' RCB	685	1701	CSWFH-2	ALLGOW3	1.09	1.89
0013	P0	72" RCP	1436	1701	CSWFH-2	ALLGOW3	1.09	4.18
APD6		ANGEL PARK - DESERT FOOTHILLS 6 BRANCH						
0000	P0	6' X 6' RCB	2604	1076	CSWFH-6	ALLGOW3	0.56	6.15
APDF		ANGEL PARK - DESERT FOOTHILLS BRANCH						
0000	P0	12' X 10' RCB	1356	2897	CSWFH-7	ALLGOW3	1.81	2.20
0026	P0	12' X 10' RCB	2463	1962	CSWFH-3	ALLGOW3	1.25	1.62
0073	P0	10' X 8' RCB	2679	1962	CSWFH-3	ALLGOW3	1.25	4.10
0123	P0	6' X 5' RCB	5355	1701	CSWFH-2	ALLGOW3	1.09	6.53
APF2		ANGEL PARK - FAR HILLS 2 BRANCH						
0000	P0	8' X 6' RCB	1046	669	CSWFH-5	ALLGOW3	0.38	1.00
APFH		ANGEL PARK - FAR HILLS BRANCH						
0000	E	2: 8' X 8' RCB	995	3862	CSWFH-8	ALLGOW3	2.48	3.50
0019	E	2: 8' X 8' RCB	250	3392	CCSWFH-7	ALLGOW3	2.18	4.19
0024	E	16' X 8' RCAP	1943	3392	CCSWFH-7	ALLGOW3	2.18	5.10
0061	P0	8' X 6' RCB	1492	669	CSWFH-5	ALLGOW3	0.38	2.00
0089	P0	8' X 6' RCB	2902	669	CSWFH-5	ALLGOW3	0.38	2.00
0144	P0	7' X 6' RCB	1556	669	CSWFH-5	ALLGOW3	0.38	5.50
APM5		ANGEL PARK - MIDDLE 5 BRANCH						
0000	E	384 ac-ft Detention Basin #5		7001	SUM5IN	ALLGOW3	6.74	
0001	E	12,153 cfs PMF Spillway		12153	SUM5IN	ALLGOW3	6.74	
0008	P0	Conc Chnl 50'W 4.5'D 2:1 SS	2102	3725	CDB54-6R	ALLGOW3	4.30	5.20
0009	P0	Conc Chnl 50'W 4.5'D 2:1 SS	4180	3624	CDB55-8	ALLGOW3	2.45	5.80
0047	E	Diversion Berm with Gabion Bank Protection	1000	3725	CDB54-6R	ALLGOW3	4.30	1.30
0056	P0	Conc Chnl 80'W 4'D 2:1 SS	264	3725	CDB54-6R	ALLGOW3	4.30	1.30
0057	P0	Conc Chnl 50'W 3'D 2:1 SS	9922	1821	CDB54-4	ALLGOW3	1.01	6.80
0059	P0	Conc Chnl 100'W 3'D 2:1 SS	8923	2358	CDB54-5	ALLGOW3	2.45	7.00
0212	P0	Conc Chnl 30'W 3.5'D 2:1 SS	6695	1238	CDB55-2	ALLGOW3	0.74	7.50
0213	P0	Conc Chnl 50'W 2.5'D 2:1 SS	6522	1125	CDB55-5	ALLGOW3	0.62	7.30
APSP		ANGEL PARK - SUMMERLIN PARKWAY						
0135	E	Conc Chnl 10'W 6'D 2:1 SS	2030	1173	C8B-1	ALLGOW3	1.14	2.40
0177	E	9' X 8' RCBC @ Anasazi	330	867	C11B-1	ALLGOW3	0.84	1.70
0183	E	Conc Chnl 10'W 6'D 2:1 SS	1680	867	C11B-1	ALLGOW3	0.84	1.70
GO02		GOWAN SOUTH FACILITIES (CHEYENNE CHANNEL)						
0257	E	Conc Chnl 10'W 6.75'D 1.5:1 SS	4293	2577	CCJ-C	ALLGOW3	2.97	4.10
GOB2		GOWAN LONE MOUNTAIN SYST. 2 BELTWAY						
0000	P0	36" RCP Outlet	118	75	DET22	ALLGOW3	0.76	6.76
0001	P0	123 ac-ft Village 22 Detention Basin		1344	CSV22-DB	ALLGOW3	0.76	
0020	P0	8' X 7' RCB	657	1247	SV22-2	ALLGOW3	0.70	8.30
0033	P0	8' X 6' RCB	3359	1247	SV22-2	ALLGOW3	0.70	6.90
0096	P0	6' X 5' RCB	1332	1247	SV22-2	ALLGOW3	0.70	6.00

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
GOB3		GOWAN LONE MOUNTAIN SYST. 3 BELTWAY						
0000	P0	66" RCP	1877	530	SV22-3	ALLGOW3	0.28	6.60
0035	P0	54" RCP	965	530	SV22-3	ALLGOW3	0.28	6.40
GOBE		GOWAN LONE MOUNTAIN SYST. BELTWAY						
0000	E	20' X 10' RCBC @ Access Rd	30	958	CSV22-3	GW3SC	0.28	5.67
0001	E	Conc Chnl 20'W 5'D 2:1 SS	3355	958	CSV22-3	GW3SC	0.28	6.50
0065	E	Conc Chnl 20'W 6'D 2:1 SS	1220	958	CSV22-3	GW3SC	0.28	1.90
0088	E	2: 10'X9' RCBC @ Lake Mead	400	471	CDET22	ALLGOW3	0.96	0.50
0096	E	Conc Chnl 20'W 9'D 2:1 SS	627	471	CDET22	ALLGOW3	0.96	0.50
0108	E	Conc Chnl 20'W 6'D 2:1 SS	1021	471	CDET22	ALLGOW3	0.96	0.50
0127	E	Conc Chnl 20'W 6'D 2:1 SS	638	442	SV22-1	ALLGOW3	0.20	0.50
0139	E	Conc Chnl 10'W 5.5'D 2:1 SS	1500	442	SV22-1	ALLGOW3	0.20	1.02
GOL3		GOWAN LONE MOUNTAIN SYSTEM-BRANCH 3						
0010	E	Conc Chnl 20'W 10'D 0:1 SS	3037	2946	CRCLMT1R	GW3SC	2.61	2.78
0068	E	Transition Structure	100	2946	CRCLMT1R	GW3SC	2.61	3.50
0070	E	20' X 6' RCBC @ Cliff Shadows	350	1162	CRCSV223	ALLGOW3	5.68	2.44
0077	E	Conc Chnl 20'W 6'D 0:1 SS	1229	1162	CRCSV223	ALLGOW3	5.68	6.11
0100	E	Conc Chnl 20'W 10'D 0:1 SS	200	1162	CRCSV223	ALLGOW3	5.68	5.67
0115	E	66" RCP Outlet	670	679	DET26	ALLGOW3	4.43	
0128	E	333 ac-ft Village 26 Detention Basin		3767	VIL26IN	ALLGOW3	4.43	
0137	P0	14' X 14' RCB	4335	3767	VIL26IN	ALLGOW3	4.43	0.50
0216	P0	Conc Chnl 50'W 4.5'D 2:1 SS	3761	3693	CSV26-1	ALLGOW3	4.15	6.08
0289	P0	Conc Chnl 50'W 3.5'D 2:1 SS	6215	2396	30	ALLGOW3	2.51	7.95
0290	E	Natural Wash 363"W	4850	1465	SV26-1	ALLGOW3	1.64	22.50
0370	E	Natural Wash 450"W	7000	2396	30	ALLGOW3	2.51	8.50
GOL4		GOWAN LONE MOUNTAIN SYSTEM-BRANCH 4						
0000	E	14' X 8' RCB	554	2257	CLMT1R	ALLGOW3	2.33	2.50
0010	E	2: 9' X 8' RCB	820	2257	CLMT1R	ALLGOW3	2.33	4.74
0025	E	Soil Cement Chnl 60'W 8'D 3-4:1 SS	320	2257	CLMT1R	ALLGOW3	2.33	2.00
0026	E	Soil Cement Chnl 42'W 6'D 3-4:1 SS	700	2257	CLMT1R	ALLGOW3	2.33	1.00

* The HEC-1 node shown identifies the controlling concentration point for the associated facility and is located upstream of this facility due to decreasing peak flow with increasing tributary area caused by storm distribution transitions, depth area reduction factors, or attenuation of flow from routing.

** As-built or design slopes were used when available. All other slopes are based on existing topography. The user should verify the facility slope listed prior to performing any facility specific analysis.

^ For parallel facilities, the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e., HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow).



2013 LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

FACILITY INVENTORY
FIGURE F - 24

L E G E N D	ID (Facility Identifier)	AAB	Existing Facility.....E			
	Parent Stream Name		Proposed or Modified Facility.....P	Bottom Width.....W		
	Stream Name		Contingency Level	Depth.....D		
	River Mile		Category B.....P0	Side Slope, H:V.....SS		
	Distance Above Confluence with Parent Stream (Miles)	0000	Master Plan.....P1			
	Miles in Hundredths		Preliminary Design.....P2			
			Design.....P3			
			Construction Features			
			Cast in Place Concrete Pipe.....CIPCP	Reinforced Concrete Arch Culvert.....RCAC		
			Corrugated Metal Arch Pipe Culvert.....CMAP	Reinforced Concrete Box.....RCB		
			Corrugated Metal Pipe Culvert.....CMPC	Reinforced Concrete Box Culvert.....RCBC		
			High Density Polyethylene.....HDPE	Reinforced Concrete Pipe.....RCP		
			Horizontal Elliptical Reinforced Concrete Pipe.....HERCP	Reinforced Concrete Pipe Culvert.....RCP		
			Reinforced Concrete Arch Pipe.....RCAP	Storm Sewer Pipe.....SSP		



2013
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

FIGURE F- 29
FLOOD CONTROL FACILITIES

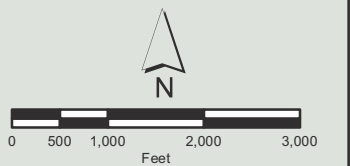
LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Local Proposed Facilities
- Detention Basin

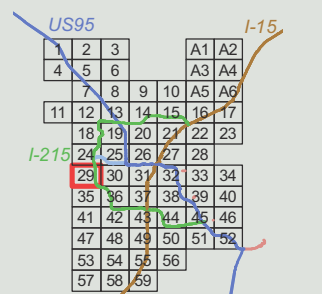
- Stormdrain
- Lined Channel
- Unlined Channel
- Levee/Dike
- Natural Wash/Floodway
- ID-Mile Separator

Remove & Replace/Parallel Facilities

- | Category A | Category B |
|------------|------------|
| Channel | Channel |
| Stormdrain | Stormdrain |



Refer to Figure G-2 for Aerial Source(s)



ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
APAD		ANGEL PARK - ALTA DRIVE BRANCH						
0000	E	2: 12' X 8' RCB	944	3140	CSWAA-3	ALLGOW4	8.26	6.00
0018	E	10' X 8' RCB	1392	3140	CSWAA-3	ALLGOW4	8.26	4.53
0044	E	11' X 8' RCAP	1565	3140	CSWAA-3	ALLGOW4	8.26	4.24
0073	E	11' X 8' RCAP	2220	2917	CSWAA-2	ALLGOW3	7.68	3.50
0115	E	10' X 8' RCB	1632	2917	CSWAA-2	ALLGOW3	7.68	2.20
0146	E	10' X 8' RCB	3010	2220	CSWAA-1	ALLGOW3	6.98	4.40
0203	E	2: 7' X 5.5' RCB	1136	2220	CSWAA-1	ALLGOW3	6.98	5.28
0225	E	2: 7' X 5.5' RCB Outlet	360	2149	SUM5DB	ALLGOW3	6.74	3.40
APBE		ANGEL PARK - BELTWAY BRANCH						
0000	E	3: 12' X 8' RCB	712	4060	CSWFH-9	ALLGOW3	2.65	0.82
0013	E	3: 12' X 8' RCB	489	4060	CSWFH-9	ALLGOW3	2.65	6.50
0022	E	Conc Chnl 20'W 7'D 2:1 SS	1556	4060	CSWFH-9	ALLGOW3	2.65	1.81
APCB		ANGEL PARK - CHARLESTON BLVD BRANCH						
0000	E	2: 10' X 6' RCB	833	1622	CSW18	ALLGOW3	1.35	1.54
0001	E	12' X 6' RCB	988	1622	CSW18	ALLGOW3	1.35	3.13
0019	E	11' X 6' RCB	1616	1196	CSW17	ALLGOW3	0.94	1.39
0050	E	8' X 7' RCB	757	1196	CSW17	ALLGOW3	0.94	1.00
0064	E	8' X 7' RCB	849	1196	CSW17	ALLGOW3	0.94	2.08
0080	E	7' X 7' RCB	1489	743	SW11	ALLGOW3	0.59	1.67
APD2		ANGEL PARK - DESERT FOOTHILLS 2 BRANCH						
0000	E	7' X 7' RCB	96	948	SWAA-2	ALLGOW3	0.70	3.62
0002	P0	7' X 7' RCB	964	948	SWAA-2	ALLGOW3	0.70	2.00
APD3		ANGEL PARK - DESERT FOOTHILLS 3 BRANCH						
0000	E	7' X 7' RCB	1090	743	SW11	ALLGOW3	0.59	1.67
0021	E	7' X 7' RCB	749	743	SW11	ALLGOW3	0.59	2.75
APM5		ANGEL PARK - MIDDLE 5 BRANCH						
0000	E	384 ac-ft Detention Basin #5		7001	SUM5IN	ALLGOW3	6.74	
0001	E	12,153 cfs PMF Spillway		12153	SUM5IN	ALLGOW3	6.74	
0009	P0	Conc Chnl 50'W 4.5'D 2:1 SS	4180	3624	CDB55-8	ALLGOW3	2.45	5.80
APMD		ANGEL PARK - MIDDLE BRANCH						
0133	E	Natural Wash	3015	6048	C11A-3*	ALLGOW4	11.31	3.00
0190	E	3: 12'X8' RCBC @ Town Center	236	6048	C11A-3	ALLGOW4	11.31	3.53
0195	E	Transition Structure	145	6048	C11A-3	ALLGOW4	11.31	3.59
0198	E	Conc Chnl 62'-68'W 5.5'-7.5'D 2:1 SS	500	6048	C11A-3	ALLGOW4	11.31	3.59
0208	E	Conc Chnl 62'-68'W 6.5'-7.5'D 2:1 SS	550	6048	C11A-3	ALLGOW4	11.31	2.81
0218	E	Conc Chnl 66'-69'W 6.5'-7.0'D 2:1 SS	500	6048	C11A-3	ALLGOW4	11.31	2.00
0227	E	Transition Structure	134	6048	C11A-3	ALLGOW4	11.31	2.00
0230	E	3: 12' X 8' RCBC @ Pavilion Center Dr	133	5889	C11A-1	ALLGOW4	11.12	2.00
0233	E	Transition Structure	207	5889	C11A-1	ALLGOW4	11.12	4.00
0237	E	Conc Chnl 76' W 6.5'-9.0'D 2:1 SS	516	5889	C11A-1	ALLGOW4	11.12	4.00
0247	E	3: 12' X 8' RCBC @ Access Rd	52	5889	C11A-1	ALLGOW4	11.12	4.00
0248	E	Transition Structure	128	5889	C11A-1	ALLGOW4	11.12	4.00
0253	E	Conc Chnl 76'W 6.5'D 2:1 SS	283	5889	C11A-1	ALLGOW4	11.12	4.00
0258	E	Transition Structure	100	5788	CRCSWFH9	ALLGOW4	10.91	0.82
APSO		ANGEL PARK - SOUTH BRANCH						
0205	E	Natural Wash	2380	2056	C12B	ALLGOW3	2.00	3.46
0254	E	2: 8' X 8' RCBC @ Town Center Dr.	190	1932	C12A	ALLGOW3	1.74	3.00
0255	E	24' X 12' RCAC @ Town Center Dr.	140	1932	C12A	ALLGOW3	1.74	3.00
0258	E	Natural Wash	3235	1932	C12A	ALLGOW3	1.74	1.36
0345	E	2: 8' X 8' RCBC @ Pavilion Center	120	1622	CSW18	ALLGOW3	1.35	2.00
0346	E	Natural Wash	880	1622	CSW18	ALLGOW3	1.35	1.40
RRBW		RED ROCK CHANNEL - BELTWAY LATERAL						
0000	E	6' X 6' RCB	1300	500	USACE	USACE	0.72	0.67
RRR4		R4 CHANNEL						
0000	E	Conc Chnl 16'W 10'D 0:1 SS	260	2400	USACE	USACE	7.08	3.15
0007	E	16' X 10' RCBC	80	2400	USACE	USACE	7.08	4.25
0008	E	Conc Chnl 16'W 7.5'D 0:1 SS	2200	2400	USACE	USACE	7.08	2.88
RRWA		RED ROCK CHANNEL						
0395	E	Conc Chnl 19'W 10'D 0:1 SS	1180	4800	USACE	USACE	4.61	1.75
0425	E	19' X 10' RCBC @ Town Center	230	4800	USACE	USACE	4.61	1.75

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
RRWA		RED ROCK CHANNEL						
0430	E	Conc Chnl 14'W 13'D 0:1 SS	230	2300	USACE	USACE	2.19	3.15
0435	E	14' X 10' RCBC	50	2300	USACE	USACE	2.19	3.15
0436	E	Conc Chnl 14'W 8'D 0:1 SS	800	2300	USACE	USACE	2.19	3.15
0440	E	Conc Chnl 10'W 7.5'D 2:1 SS	2660	2300	USACE	USACE	2.19	2.14
0490	E	Conc Chnl 13'W 10'D 0:1 SS	200	2300	USACE	USACE	2.19	1.00
0500	E	13' X 10' RCBC @ Desert Inn	190	1900	USACE	USACE	1.75	1.00
0502	E	Conc Chnl 10'W 7'D 2:1 SS	1580	1900	USACE	USACE	1.75	2.60
0534	E	Conc Chnl 16'W 7'D 0:1 SS	400	1500	USACE	USACE	1.07	1.24
0541	E	Conc Chnl 10'W 7'D 2:1 SS	2120	1500	USACE	USACE	1.07	0.80
0581	E	13' X 9' RCB	1040	1000	USACE	USACE	1.07	0.60
0606	E	10' X 9' RCB	450	750	USACE	USACE	0.72	0.60
0607	E	10' X 9' RCB	450	750	USACE	USACE	0.72	0.60
0608	E	96" RCP	4930	460	USACE	USACE	0.72	0.55
0692	E	96" CIPCP	195	180	USACE	USACE	0.19	1.40
0695	E	96" RCP	290	180	USACE	USACE	0.19	0.50
0701	E	72" RCP	125	180	USACE	USACE	54.74	0.50
0709	E	Riprap Chnl 10'W 6'D 2:1 SS	830	180	USACE	USACE	54.74	0.80
0714	E	2.25' X 2.25' RCBC Outlet	445	180	USACE	USACE	54.74	
0715	E	110,000 cfs PMF Spillway		110000	USACE	USACE	54.74	
0716	E	2,007 ac-ft Red Rock Detention Basin		12800	USACE	USACE	54.74	
0777	E	2 Span Bridge 200'W 17'D @ SR 159	50	1998	CRD3	FLAM3A	1.24	2.50

* The HEC-1 node shown identifies the controlling concentration point for the associated facility and is located upstream of this facility due to decreasing peak flow with increasing tributary area caused by storm distribution transitions, depth area reduction factors, or attenuation of flow from routing.

** As-built or design slopes were used when available. All other slopes are based on existing topography. The user should verify the facility slope listed prior to performing any facility specific analysis.

^ For parallel facilities, the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e., HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow).

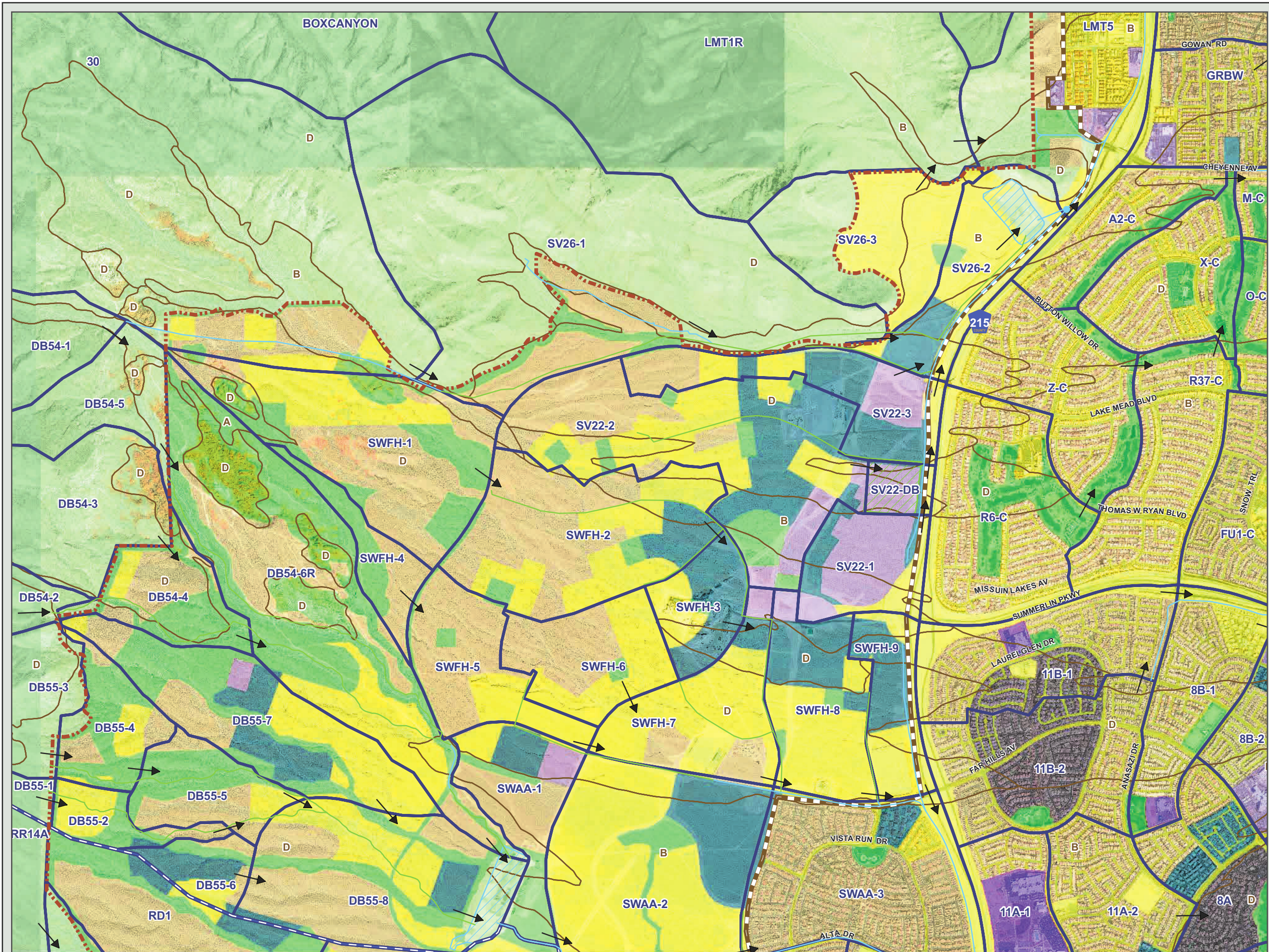
USACE - Refer to "Las Vegas Wash & Tributaries (Tropicana and Flamingo Washes) Hydrologic Basis for Design" prepared by U.S. Army Corps of Engineers, Los Angeles District, June 1993. See Figure S-6 for USACE Boundary.



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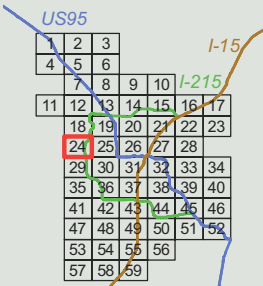
FACILITY INVENTORY
FIGURE F - 29

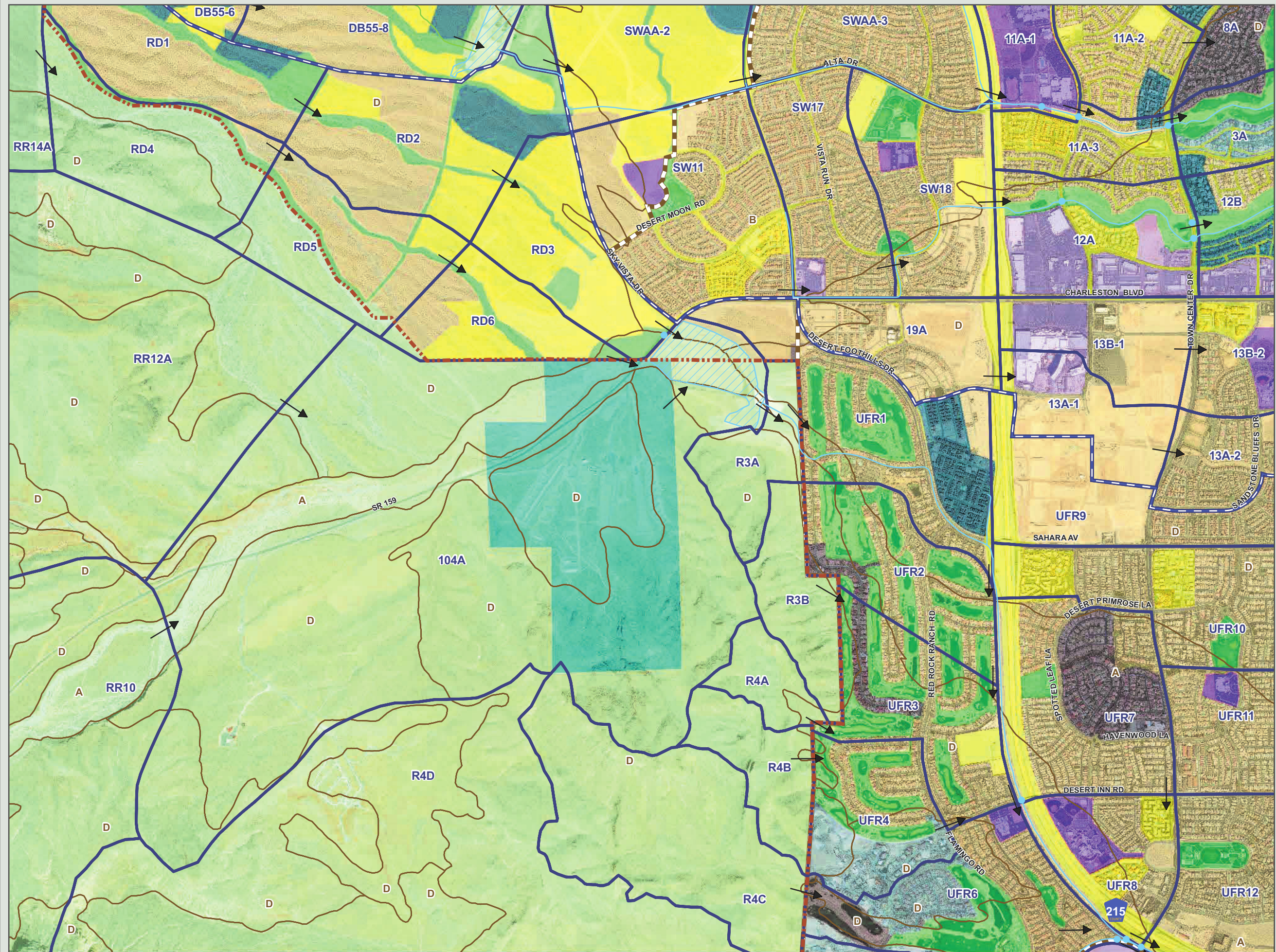
L E G E N D	ID (Facility Identifier)	AAB	Existing Facility.....	E	Construction Features			
	Parent Stream Name		Proposed or Modified Facility.....	P	Bottom Width.....	W	Cast in Place Concrete Pipe.....	CIPCP
	Stream Name		Contingency Level		Depth.....	D	Corrugated Metal Arch Pipe Culvert.....	CMAP
	River Mile		Category B.....	P0	Side Slope, H:V.....	SS	Corrugated Metal Pipe Culvert.....	CMPC
	Distance Above Confluence with Parent Stream (Miles)	0000	Master Plan.....	P1			High Density Polyethylene.....	HDPE
	Miles in Hundredths		Preliminary Design.....	P2			Horizontal Elliptical Reinforced Concrete Pipe.....	HERCP
			Design.....	P3			Reinforced Concrete Arch Pipe.....	RCAP
							Reinforced Concrete Box.....	RCB
							Reinforced Concrete Box Culvert.....	RCBC
							Reinforced Concrete Pipe.....	RCP
							Reinforced Concrete Pipe Culvert.....	RCPC
							Storm Sewer Pipe.....	SSP



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FIGURE H-24
HYDROLOGIC SUMMARY

- LEGEND**
- Ultimate Development Boundary
 - Watershed Boundary
 - Subbasin Boundary
 - Drought Ordinance Boundary
 - Flow Arrows
- Flood Control Facilities**
- Existing Facilities
 - Category A Proposed Facilities
 - Category B Proposed Facilities
 - Category A Remove & Replace/Parallel Facilities
 - Category B Remove & Replace/Parallel Facilities
- Type Hydrologic Soil Groups**
- A Low Runoff Potential
 - B Moderately Low Runoff Potential
 - C Moderately High Runoff Potential
 - D High Runoff Potential/Rock Outcrops
- Typical Land Use**
- 1 Undeveloped Land, Open Desert
 - 2 Parks, Golf Courses
 - 3 Rural
 - 4 / 14* Low Density Residential
 - 5 / 15* Medium Density Residential
 - 6 / 16* High Density Residential
 - 7 / 17* Public Facility, Residential
 - 8 / 18* Very High Density Residential
 - 9 / 19* Commercial, Retail, Casino, High Rise Condominiums
 - 10 / 20* Light Industrial
 - 11 / 21* Heavy Industrial
 - 12 / 22* Schools
 - 13 Lakes
- * Drought Ordinance Applied
- Scale: 1 inch = 2,000 feet
Refer to Figure G-2 for Aerial Source(s)





2008
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FIGURE H- 29
HYDROLOGIC SUMMARY

LEGEND

Ultimate Development Boundary
 Watershed Boundary
 Subbasin Boundary
 Drought Ordinance Boundary
 Flow Arrows

Flood Control Facilities

Existing Facilities
 Category A Proposed Facilities
 Category B Proposed Facilities
 Category A Remove & Replace/Parallel Facilities
 Category B Remove & Replace/Parallel Facilities

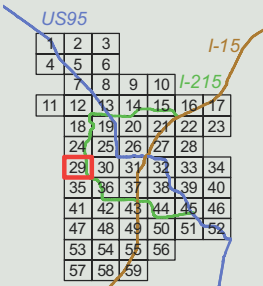
Type Hydrologic Soil Groups

A Low Runoff Potential
B Moderately Low Runoff Potential
C Moderately High Runoff Potential
D High Runoff Potential/Rock Outcrops

Typical Land Use

1 Undeveloped Land, Open Desert
2 Parks, Golf Courses
3 Rural
4 / 14* Low Density Residential
5 / 15* Medium Density Residential
6 / 16* High Density Residential
7 / 17* Public Facility, Residential
8 / 18* Very High Density Residential
9 / 19* Commercial, Retail, Casino, High Rise Condominiums
10 / 20* Light Industrial
11 / 21* Heavy Industrial
12 / 22* Schools
13 Lakes
* Drought Ordinance Applied

0 500 1,000 2,000 3,000 Feet
Scale: 1 inch = 2,000 feet
Refer to Figure G-2 for Aerial Source(s)



Park Middle Branch to the existing Angel Park Detention Basin downstream. The Angel Park Detention Basin, labeled APNO0001, is a 1,515 acre foot facility. This area is designated as the DB5/Alta Tributary.

At the north side of the SWPA area are two basins that drain to the existing Beltway Channel. These flows are ultimately conveyed to the Lone Mountain Detention Basin. This is an 888 acre foot detention basin labeled CCRFCD facility GOLM0146. This drainage area is designated as the Village 26 Tributary area. Only a small portion of the 2017 SWPA drains to this basin.

The Beltway Channel (North) Tributary has also been revised for the 2017 SWPA MPU. The new tributary is defined as a single drainage basin that drains to the Beltway Channel. These flows combine with the runoff generated by the Village 26 Tributary area and are conveyed downstream to the Lone Mountain Detention Bain.

2 HYDROLOGIC CRITRIA

2.1 METHOD OF ANALYSIS

The Hydrologic analysis developed in this study utilized the SCS Unit Hydrograph Method in the HEC-1 computer program. *The HEC-1 Flood Hydrograph Computer Model* was developed by the U. S. Army Corps of Engineers Hydrologic Engineering Center in the late 1970's and then adopted by *CCRFCD Hydrologic Criteria and Drainage Design Manual* in 1999 for rainfall and runoff predictions. The model is used to simulate the surface runoff response of the watershed to a design rainfall event. Each subbasin in the watershed is described by a set of parameters that specify the subbasin drainage and storm characteristics. These basin parameters include precipitation, basin area, curve number, and lag time. The hydrologic parameters within the program were based on parameters established by the 2002 MPU Study and the West Henderson Pittman Detention Basins Study. Modified hydrologic parameters were determined in accordance with the *CCRFCD Hydrologic Criteria and Drainage Design Manual*.

To use the HEC-1 computer model, the drainage system in a watershed is converted into node-link type of system. A node is placed at the subbasin outlet or at the design point

along the water course. Links between nodes represent conveyance elements in the drainage system. Hydrographs are computed for each subbasin and are placed at the subbasin outlet node. These hydrographs are then routed and/or combined according to the drainage basin network configuration through links. A depth-area reduction factor (DARF) is determined at each design point and is used to determine the peak flow at the design point depending on the contributing area.

2.2 PRECIPITATION CALCULATIONS

The project offsite and onsite area falls outside of the McCarran Airport Rainfall Area. The precipitation values used for the project area and the offsite basins were incorporated from the 2002 MPU model and verified using Figure 506 from the CCRFCD Hydrologic and Drainage Design Manual. The following is a discussion of the method for determining rainfall within the project area.

2.2.1 Point Precipitation Values

Using the methods in the *CCRFCD Hydrologic Criteria and Drainage Design Manual*, the 100-year storm runoff hydrograph generated from the subbasin can be found using the Rainfall Depth Duration Frequency 100-Year, 6-Hour (NOAA Atlas 2, Vol. VII Nevada 1973). The 100-year six hour precipitation values and correlating multiplication factors can also be found in Figure 506 and Table 501, in the *CCRFCD Hydrologic and Drainage Design Manual*. Likewise, the 10-year six-hour precipitation values can be found in Figure 503 (Refer to Appendix B). Point precipitation values used in the 100-year analysis ranged from 3.72 inches (near the Spring Mountains) to 3.33 inches (at the 215 Beltway) throughout the watershed. A 10-Year evaluation was conducted for the Grand Park Detention Basin to determine if the 10-year event was contained in the lower pool. A DARF of 0.57 was used to develop these precipitation values.

2.2.2 Area Reduction

The point precipitation values are related to rainfall intensity at an isolated point. Since the rainfall occurs over an extensive area simultaneously, with the more intense rainfall occurring near the center of the storm, a reduction factor is used to adjust the point precipitation when modeling the rainfall decay characteristics over a large area. The National Oceanic and Atmospheric Administration (NOAA) developed the rainfall Depth

Area Reduction Factors (DARF) for the purpose of converting a point precipitation depth to an average precipitation over the entire storm area. The DARF ratios used in this study were obtained from the CCRFCD *Hydrologic Criteria and Drainage Design Manual* (Refer to Table 502 in Appendix B).

2.2.3 Rainfall Pattern

The Percent of Total Depth tabulation recommended by the USACE, Los Angeles District in 1988, was adopted for rainfall/runoff predictions in the Las Vegas Valley. For those channels and design points where the tributary watershed is less than eight square miles, the SDN3 distribution is used. The SDN5 distribution is used if the total area of the watershed exceeds 12 square miles and SDN4 is for area between 8.0-12.0 square miles. The SDN3, SDN4, and SDN5 storm distributions are used in this study (Refer to Table 503 in Appendix B).

2.3 RUNOFF COMPUTATIONS

Major precipitation losses consist of infiltration losses determined by the soil type and depression losses caused by land uses. Infiltration losses occur throughout the storm event, while depression losses only occur during the initial period of the storm. The difference between the total precipitation volume and the loss volume is the direct runoff volume.

The SCS curve number method was developed to compute both types of precipitation losses. This method uses a curve number (CN) index to relate precipitation losses to soil type, land use, and vegetative cover conditions. A CN calculation worksheet, included in Appendix B includes CN values calculated based on the soil parameters provided by the USDA and estimated land use, see Figure 3, within the project area.

2.3.1 Soil Survey

The project area is located in the southeast portion of the Pittman Watershed. For the purpose of this hydrologic analysis, infiltration losses are related to the SCS Soil Classifications. SCS soils fall into four hydrologic soil groups: Group A, Group B, Group C, and Group D, which were developed based on infiltration rates. SCS Group A Soil has a high infiltration rate, such as for sands and gravels. SCS Group D on the other hand has a low infiltration, such as for clay soil.

The SCS Soil Survey of Las Vegas Valley Area, Clark County, Nevada was used to identify soil types, and their corresponding hydrologic soil groups, for a portion of the offsite drainage area. A large part of the watershed was not surveyed at the time of the Soil Survey or 2002 MPU, due to the relatively remote location of the southern portion of the tributary area. Since the Soil Survey was published, however, the Natural Resources Conservation Service, formerly the SCS, has been working in this area of the valley. Copies of the information obtained from NRCS for this area are included in Appendix B. Table 2.3.1 shows the soil types and hydrologic soil groups found to be within the tributary area.

TABLE 2.3.1 – SOIL HYDROLOGIC CLASSIFICATION

SOIL MAP UNIT	NRCS SOIL NAME AND USDA TEXTURE	HYDROLOGIC SOIL GROUOP
112	Arizo very gravelly loamy sand	A
152	Cave gravelly fine sandy loam	D
155	Cave gravelly fine sandy loam	D
156	Vace-Wechech association	D
191	Dalian very cobbly fine sandy loam	A
294	Rock-outcrop, sandstone	-
320	Boxspring-Zeheme-Rock outcrop	-
323	Boxspring-Scrapy-Rock outcrop association	-
351	Seralin extremely gravelly loam	D
360	Rock-outcrop-St. Thomas complex	-
502	Canutio-Cave gravelly fine sandy loam	A
640	Rock outcrop, sandstone	-
731	Purob-Irongold association	D

Note that there has been a revision to the Curve Numbers for these soil types since the last SWPA MPU. The new values were taken from the USDA Web Soil Survey. The revisions to the numbers were generally minor; however, in several cases the values were reduced slightly. This has had the effect of reducing the calculated flows slightly. A comparison is included in Appendix B. Additionally, Appendix B includes the USDA Soil Survey Maps, Soil and Water Features table that explains hydrologic grouping of every different soil type, and the Engineering Index Properties table.

2.4 LAG TIMES

Lag times for each subbasin were calculated using the procedure outlined in the CCRFCD *Hydrologic Criteria and Drainage Design Manual*. Lag time calculations are included in Standard Form 4 included in Appendix B.

The travel time velocities within the Standard Form 4 were calculated using a generalized form of the Manning's equation $V=CS^{1/2}$ taken from Section 602.1 of the *CCRFCD Hydrologic Criteria and Drainage Design Manual*. In accordance with the Manual, the coefficient "C" was set to 29.4 to represent flow in a wide channel under non-urbanized conditions. The slopes were determined from the existing topography of the areas. Developed basin travel time velocities were determined by the same equation with "C" equal to 30.6 as suggested in the *HCDDM*.

2.5 ROUTING

Two separate routing methods have been employed for the HEC-1 models. The Muskingum-Cunge method was used to model existing and proposed conveyance facilities (i.e. storm drains and open channels). The Muskingum method was used to model existing washes in the undeveloped areas of the watershed. Calculations used to develop the Muskingum parameters are included in Appendix A.

3 HYDROLOGIC ANALYSIS

3.1 EXISITNG CONDITION

Since the approval of the 2006 Summerlin West Master Plan, considerable design and construction has occurred in the SWPA Villages 20 (The Vistas) and 23A and B (The Paseos) have been completed, or are near completion. Both these villages are located to the south of Far Hills Avenue, and west of Sky Vista Drive. Village 24 (Stonebridge) which is located west of Sky Vista Drive has been designed, and the infrastructure is in construction. Additionally, the Village 26 area north of Lake Mead Boulevard and south of Cheyenne Avenue has been designed and the area is under construction. The Village 26 area is now named the Reverence Master Planned Community. These areas have not been modeled in the SWPA for this Master Plan.

The Summerlin West Planning Area drains to four (4) different CCRFCD flood control systems. These are the Gowan Lone Mountain System, the Angel Park – Middle Branch, the Gowan Lone Mountain System Beltway, and the Red Rock Channel.

At the northeast corner of the proposed site flows are conveyed downstream via the GOBE0001 facility which is part of the Gowan Lone Mountain System Beltway. The facility is an existing 20-foot wide by 5-foot depth 2:1 side slope trapezoidal concrete lined channel. The facility is shown to convey a peak flowrate of 958 cfs for the 100-year event.

The central drainage location of the proposed site drains to the Angel Park Detention Basin via the Angel Park – Beltway Branch and the Angel Park – Alta Drive Branch. The Beltway Branch facility is an existing 3: 12-foot wide by 8.0-foot high reinforced concrete box facility, and is labeled APBE0013. The Alta Drive Branch facility is an existing 2: 10.2-foot wide by 8.0-foot wide reinforced concrete box facility, and is labeled APAD0000. Both facilities connect to the Angel Park Middle Branch facility labeled APMD0237 which is a 76-foot bottom width by 6.5-foot to 9.0-foot depth 2:1 side slope concrete lined trapezoidal channel. The 2013 CCRFCD MPU shows that this facility conveys 5889 cfs.

The Village 26 Detention Basin is a 333 acre-feet facility that is part of the Gowan – Lone Mountain system. Labeled as GOL30128, the facility was designed as part of the Reverence Master Plan Community, and was a part of the previous 2006 Summerlin West MPU. This area was previously named Village 26 in that MPU.

At the southeast corner of the proposed site, runoff is conveyed to the Red Rock Channel via an existing wash. The Red Rock Detention Channel facility is labeled as RRWA0777, and is an existing 2 span 200.0-foot wide by 17.0-foot deep bridge. The concrete lined channel connects to the Red Rock Detention basin and is labeled RRWA0425.

3.2 DEVELOPED CONDITION ANALYSIS

The 2017 SWPA Master Plan Update evaluates revisions to the proposed site since the 2006 study was approved. Included with the revisions are changes to the land use and

changes to the site layout. Hydrologic models reflecting these revisions have been developed, so that onsite as well as offsite impacts can be addressed. Since the approval of the 2006 SWPA Master Plan the Village 26 area has been designed; however, there have been some minor revisions to this area that are included with this study.

As previously mentioned the site as proposed currently drains to four existing CCRFCD Master Plan Facilities. Therefore, the hydrologic analyses have been separated into four (4) separate tributary area models. The naming of these four (4) areas is consistent with those previously shown in the 2006 SWPA MPU. These areas are named, Village 26 Tributary, Beltway Channel (North) Tributary, DB5/Alta Tributary, and the Red Rock Tributary. The Overall Drainage Basin Map is included in Appendix A and is labeled *Figure A.6.1: Overall Drainage Basin Map*.

3.2.1 Village 26 Tributary Area

The Village 26 Tributary Basins are designated as 1-series basins. Since the 2006 Summerlin West MPU the Village 26 area, now called Reverence, has been substantially completed. There are two subbasins in the new 2017 Summerlin West MPU that drain to this area. These basins, labeled 1-A and 1-B, were previously labeled 1-1B and 1-2B respectively in the 2006 SWPA MPU. There have been some revisions since the last MPU to these basins that include both the area and the curve number which have resulted in a reduction to the calculated flowrates. A comparison of the hydrologic parameters and the resulting calculated flowrates is shown in the table below.

TABLE 3.2.1 – VILLAGE 26 BASIN COMPARISON

2006 Summerlin West MPU				2017 Summerlin West MPU			
Basin	CN	Area (sq. mi.)	Q (cfs)	Basin	CN	Area (sq. mi.)	Q (cfs)
1-1B	84.1	0.175	294	1-A	67.1	0.125	82
1-2B	86.1	0.215	365	1-B	79.7	0.184	223

Additionally, a comparison of the concentration point upstream of the developed area in Reverence has been conducted. The previous Master Plan for Village 26 showed that there was a 100-Year flowrate of 3309 cfs at Concentration Point CP3. The flowrate

calculated at the comparable Concentration Point CP1.4 is 3315 cfs. The model developed for this study shows that there is no significant increase in the flowrate at this location. These revisions do not have a negative effect on the downstream development. A copy of the updated Drainage Basin Map is included in Appendix A. Copies of the referenced Drainage Basin Map and the HEC-1 model from the 2006 MPU have been included in Appendix D. The revised basin map is *Figure A.6.2: Beltway Channel North/V26 Tributary Drainage Basin Map*.

3.2.2 Beltway Channel (North) Tributary Area

The Beltway Channel (North) Tributary area is represented by a single subbasin for this update. Labeled as Subbasin 2-C, these flows are routed to the CCRFCD MPU Facility GOBE0001. The revised flowrate entering the CCRFCD MPU facility is 786 cfs, which is a reduction from the 2013 MPU of 958 cfs. These flows are conveyed downstream to the Gowan Lone Mountain Detention Basin. The revisions do not represent a negative impact on the downstream properties. The revised basin map is *Figure A.6.2: Beltway Channel North/V26 Tributary Drainage Basin Map*.

3.2.3 DB5/Alta Tributary

The DB/5 Alta Tributary basins are designated as 3-series basins (i.e. 3-A, 3-B, etc.). These basins generally slope from west to east with flow headed in the eastern direction, and are captured and routed downstream to the Angel Park – Beltway Branch channel facility. The previous Village 22 detention basin has been relocated further west, and is now located in subbasin 3-C. Previously the flow upstream of the Grand Park Detention Basin was routed north; however, these flows are now routed south. This has provided for a considerable amount of area (and generated runoff) being routed away from the Beltway Channel (North) Tributary Area to the Existing Alta Branch facilities. The new detention basin, labeled the Grand Park Detention Basin, is located further west in the watershed away from the commercial zoned area, which does provide attenuation of the peak runoff flowrate. The Grand Park Detention Basin is designed to contain the 10-Year event volume of 32 acre-feet in the lower pool of the facility, and 95 acre-feet for the entire 100-year event. The WSEL for the 10-Year event is at an elevation 3516.93 feet, and the WSEL for the 100-Year event is at 3526.1 feet. The revised basin map is *Figure A.6.3: DB5/Alta Tributary Drainage Basin Map*.

New regional facilities have been preliminarily designed and are shown on Figure A.6.6. The revised facilities have also affected those flows getting to the Far Hills RCB storm drain and the Angel Park Beltway Branch channel facility. The revised flowrates are summarized in the following table.

TABLE 3.2.2 – ONSITE CCRFCD FACILITY FLOW COMPARISON

CCRFCD ID Mile	Ref. Conc. Pt.	Ref. Q (cfs)	Prop. Conc. Pt.	Prop. Q (cfs)	Reference
APMD0089, 0061	CSWFH-5	669	CP3.8	795	CCRFCD MPU
APFH0024, 0019	CCSWFH-7	3392	CP3.9	1701	CCRFCD MPU
APFH0000	CCSFH-7	3862	CP3.10	3374	CCRFCD MPU
APBE0051, 0022, 0013	CSWFH-9	4060	CP3.11	3589	CCRFCD MPU
APAD0225	SUM5DB	2149	DB5	2142	CCRFCD MPU
APAD0203, 0146	CSWAA-1	2200	CP3L	2230	CCRFCD MPU
APAD0115, 0073	CSWAA-2	2917	CSWAA-2	2944	CCRFCD MPU
APAD0044, 0018, 0000	CSWAA-3	3453	CSWAA-3	3185	2006 SWPA MPU
APMD0258	CRCSWFH9	5910	CRCSWFH9	5538	2006 SWPA MPU

As shown in the previous table, the revised flowrates do not have a negative effect on the existing onsite facilities.

There have been revisions to the land use of the upstream drainage area to the DB5 detention basin. However, these have had the effect of reducing the calculated water surface elevation at the DB5 Detention Basin. Additionally, a LOMR has been approved establishing the water surface elevation of the detention Basin at an elevation of 3559.5 feet. The LOMR Case Number is 17-09-1166P and the Effective date of the revision is February 5, 2018. The SDN3 HEC-1 model for the DB5/Alta Tributary shows the water surface elevation to be at 3559.32 feet. The revisions do not have a negative impact on the flood control facilities. A copy of the HEC-1 model output is included in Appendix B and the updated FEMA information is included in Appendix D.

3.2.4 Red Rock Tributary

The Red Rock tributary drainage area at the south of the SWPA ultimately drains to the Red Rock detention basin as shown on Figure A.6.4. The area has been truncated for this MPU since the 2006 SWPA MPU due to the ongoing design of the Stonebridge subdivision of the Village 24 area. Additionally, the drainage basins have been revised slightly to

provide for the new parcel layout. The revised basin map is *Figure A.6.4: Red Rock Detention Basin Tributary Drainage Basin Map*.

The revised hydrology still drains to the same locations. As shown in the Referenced Proposed Condition Drainage Map -2, Red Rock Detention Basin there are two outflow locations for upstream drainage subbasin (now labeled subbasin 4-B) at existing washes downstream in the Stonebridge development. These are labeled as COS-1 with an allowable flowrate of 554 cfs, and COS-3 with an allowable flowrate of 720 cfs. The proposed facility map indicates that there is a total of 841 cfs in the wash upstream of COS-1 and that there is a flow split of 287 cfs directed towards the wash labeled COS-3. In total the flowrates at these two locations (COS-1 and COS-2) are 1274 cfs. The revised hydrology shown for this study at concentration point CP4.3 is 1170 cfs which is a reduction in the calculated flowrate. A copy of the HEC-1 output is included in Appendix B.

3.3 AREA 1 ANALYSIS

Area 1 is approximately 378.9 +/- acres and lies within a portion of the DB5/Alta Tributary. Area 1 generally slopes from west to east. A HEC-1 model has been provided for Area 1 to conceptually analyze in detail the parcels and roadways bounded by Summerlin Parkway to the north, the 215 Beltway Channel to the east, Far Hills Avenue to the south, and Fox Hill Drive to the east. The model provides the design flow rates used for the preliminary sizing of the local storm drain infrastructure within the area. Area 1 drainage patterns are depicted on *Figure A.6.7: Area 1 Drainage Basin Map*.

Flows generated by each of the individual the Area 1 parcels will be collected by local storm drain, and will not be discharged into streets. Therefore, Subbasins have been delineated for each of the proposed parcels and roadways and have been modeled as fully developed. Flows generated by Area 1 are routed to the proposed CCRFCD storm drain and are ultimately conveyed south towards the existing CCRFCD RCB in Far Hills Avenue and east towards the existing channel adjacent to the 215 Beltway.

3.4 DOWNSTREAM EXISITNG CCRFCD FACILITY ANALYSES

HEC-1 models that evaluate the Summerlin West Master Plan Community on two existing detention basins downstream of the proposed site have been developed for this study. The intent is to verify that the Summerlin West Master Plan Community does not have a negative impact on downstream facilities and properties. These detention basins are the Angel Park (AONO0001), and the Gowan Lone Mountain (GOLM0146).

The first of these models considers the area tributary to the Angel Park Detention Basin downstream. The model for the Alta/DB5 Tributary area was used in the development of this regional model. All subbasins that are not developed for the revised SWPA have been referenced from the 2013 CCRFCD MPU. Note that the comparison below assumes a Series 2 storm centering where the DARF is based on the downstream area from the Grand Park Detention Basin. A comparison of the CCRFCD MPU and the SWPA flows is shown in the following table.

TABLE 3.4.1 – ANGEL PARK DETENTION BASIN TRIBUTARY COMPARISON

ID	MILE	MPU Conc. Pt.	MPU Q (cfs)	MPU Model	SWPA Conc. Pt	SWPA Q (cfs)	DARF	SWPA Model
APMD	0133	C11A-3	6048	ALLGOW4	C11A-3	5591	0.85	Alta-SDN4
APMD	0198	C11A-3	6048	ALLGOW4	C11A-3	5591	0.85	Alta-SDN4
APMD	0208	C11A-3	6048	ALLGOW4	C11A-3	5591	0.85	Alta-SDN4
APMD	0218	C11A-3	6048	ALLGOW4	C11A-3	5591	0.85	Alta-SDN4
APMD	0230	C11A-1	5889	ALLGOW4	C11A-1	5423	0.85	Alta-SDN4
APMD	0233	C11A-1	5889	ALLGOW4	C11A-1	5423	0.85	Alta-SDN4
APMD	0237	C11A-1	5889	ALLGOW4	C11A-1	5423	0.85	Alta-SDN4
APMD	0253	C11A-1	5889	ALLGOW4	C11A-1	5423	0.85	Alta-SDN4
APNO	0004	ANGLPKIN	9199	ALLGOW5	ANGLPKIN	8972	0.77	Alta-SDN5
APNO	0001	ANGLPKIN	9199	ALLGOW5	ANGLPKIN	8972	0.77	Alta-SDN5

The revisions to the Alta/DB5 Tributary area have had an effect of the downstream facility flowrates. The Grand Park Detention Basin has attenuated the hydrograph, and has reduced the peak flowrate in the existing open channel (downstream at the Beltway). Additionally, the addition of area has had the effect of changing the SDN values APMD0133 through APMD0208, which has had a significant effect on the calculated

flowrates. The value went from an SDN4 to an SDN5. The proposed revisions to the Alta/DB5 drainage area do not have a negative impact on the downstream open channel facilities.

As shown in the ALLGOW5 CCRFCD HEC-1 model, the Angel Park Detention Basin has an existing spillway crest elevation of 2619.0 feet. The CCRFCD MPU shows that there is a 100-Year peak stage water surface elevation of 2618.69 feet. As shown by Alta-SDN5 HEC-1 model, the revised peak stage water surface elevation is at 2,618.26 feet. The revised Alta/DB5 model, included in Appendix B, does not have a negative impact on the Angel Park Detention Basin.

The second of these comparative models analyzes the Lone Mountain Detention Basin. The Village 26 and the Beltway (North) Tributary models were used for this analysis. All subbasins that are not for the revised SWPA have been referenced from the 2013 CCRFCD MPU. A comparison of the CCRFCD MPU and the SWPA flows is shown in the following table.

TABLE 3.4.2 – LONE MOUNTAIN DETENTION BASIN TRIBUTARY AREA

ID	MILE	MPU Conc. Pt.	MPU Q (cfs)	MPU Model	SWPA Conc. Pt	SWP A Q (cfs)	DARF	SWPA Model
GOBE	0000	CSV22-3	958	GW3SC	2-C	786	0.99	V26-SDN3
GOBE	0001	CSV22-3	958	GW3SC	2-C	786	0.99	V-26-SDN3
GOL3	0100	CRCSV223	1162	ALLGOW3	CRCSV223	1152	0.91	V26-SDN3
GOL3	0077	CRCSV223	1162	ALLGOW3	CRCSV223	1152	0.91	V26-SDN3
GOL3	0010	CRCLMT1R	3186	ALLGOW4	CRCLMT1R	3260	0.89	V26-SDN3
GOL3	0000	CLMT5	3508	GW3SC	CLMT5	3653	0.89	V26-SDN3
GOLM	0226	CUVB2	2961	ALLGOW3	CUVB2	2961	0.95	V26-SDN3
GOLM	0174	CCLMT5	6173	GW3SC	CCLMT5	5068	0.87	V26-SDN4
GOLM	0162	CGABW	6323	GW3SC	CGABW	5209	0.87	V26-SDN4
GOLM	0146	LMTNDB	7252	ALLGOW4	LMTNIN	5954	0.86	V26-SDN4
GOLM	0145	LMTNDB	190	ALLGOW4	LMTNDB	186	0.86	V26-SDN4

Typically the CCRFCD flowrates used in the comparison are taken from the Facility Inventory of the F-Maps in the MPU; however, in the case of GOL30010 the Series 1 flowrate was used as this was the more conservative value.

As shown in the ALLGOW4 CCRFCD MPU HEC-1 model, the existing spillway crest elevation of the Lone Mountain Detention Basin is at an elevation of 2,652.57 feet. The MPU shows that there is a 100-Year peak stage water surface elevation of 2,651.29 feet.

4 AREA 1 LOCAL DRAINAGE FACILITIES

The recommended Area 1 local storm drain facilities are depicted on *Figure A.6.7: Local Flood Control Facilities Map*. As discussed previously, local storm drain is proposed with this study to collect the flow generated by each parcel within Area 1. No flow generated by Area 1 parcels will be conveyed as surface flow through proposed roadways. The local storm drain conveys flows to the regional facilities discussed in the previous section of this report.

Storm drain sizes have been based on existing topography and the Area 1 HEC-1 model flow rates. The calculated storm drain sizes were determined assuming full flow. To establish the recommended storm drain sizes, the calculated storm drain sizes were rounded up to the nearest standard pipe size and increased by 6 inches to account for hydraulic losses. Future technical drainage studies will be required to provide a more detailed storm drain hydraulic analysis to verify the design provided in this conceptual study. Additionally, drop inlets within the roadways will be located and sized with future technical studies to accommodate future roadway improvements.

5 CONCLUSIONS AND RECOMMENDATIONS

- Methods used to calculate storm runoff, and size facilities are consistent with the Manual.
- No construction is proposed with this study. Technical drainage studies evaluating individual sites will be submitted as future development progresses.
- Several CCRFCD facilities are within or adjacent to the SWPA (see MPU Figure A.3); therefore, this study will be submitted to the CCRFCD upon approval by the CLV.
- The majority of the SWPA is not located in a FEMA designated Zone A or Special Flood Hazard Area. A small portion of this planning area near the DB5 facility is located within a FEMA Zone A.
- The SWPA drains to four (4) existing CCRFCD facilities: the Angel Park Beltway Branch Channel, the Gowan Branch Beltway Channel, the Alta Drive Channel, and the Red Rock Detention Basin.
- Underground storm drain is recommended for parcel drainage.

6 REFERENCES

1. *Las Vegas Valley Flood Control Master Plan Update*, Clark County Regional Flood Control District, 2013.
2. *Las Vegas Valley Flood Control Master Plan Update*, Clark County Regional Flood Control District, 2008.
3. *Hydraulic Criteria and Drainage Design Manual*, Clark County Regional Flood Control District (CCRFCD), 1999.
4. *Soil Survey of Clark County Area, Nevada*, Natural Resources Conservation Service (NRCS), United States Department of Agriculture, 2006.
5. *2006 Summerlin West Planning Area Flood Control Master Plan Update*, by GC Wallace, Inc., August 2006.
6. *Response to Comments on the Master Drainage Study for Summerlin Village 26 Reverence*, by GC Wallace, Inc. Nevada, November 2015.

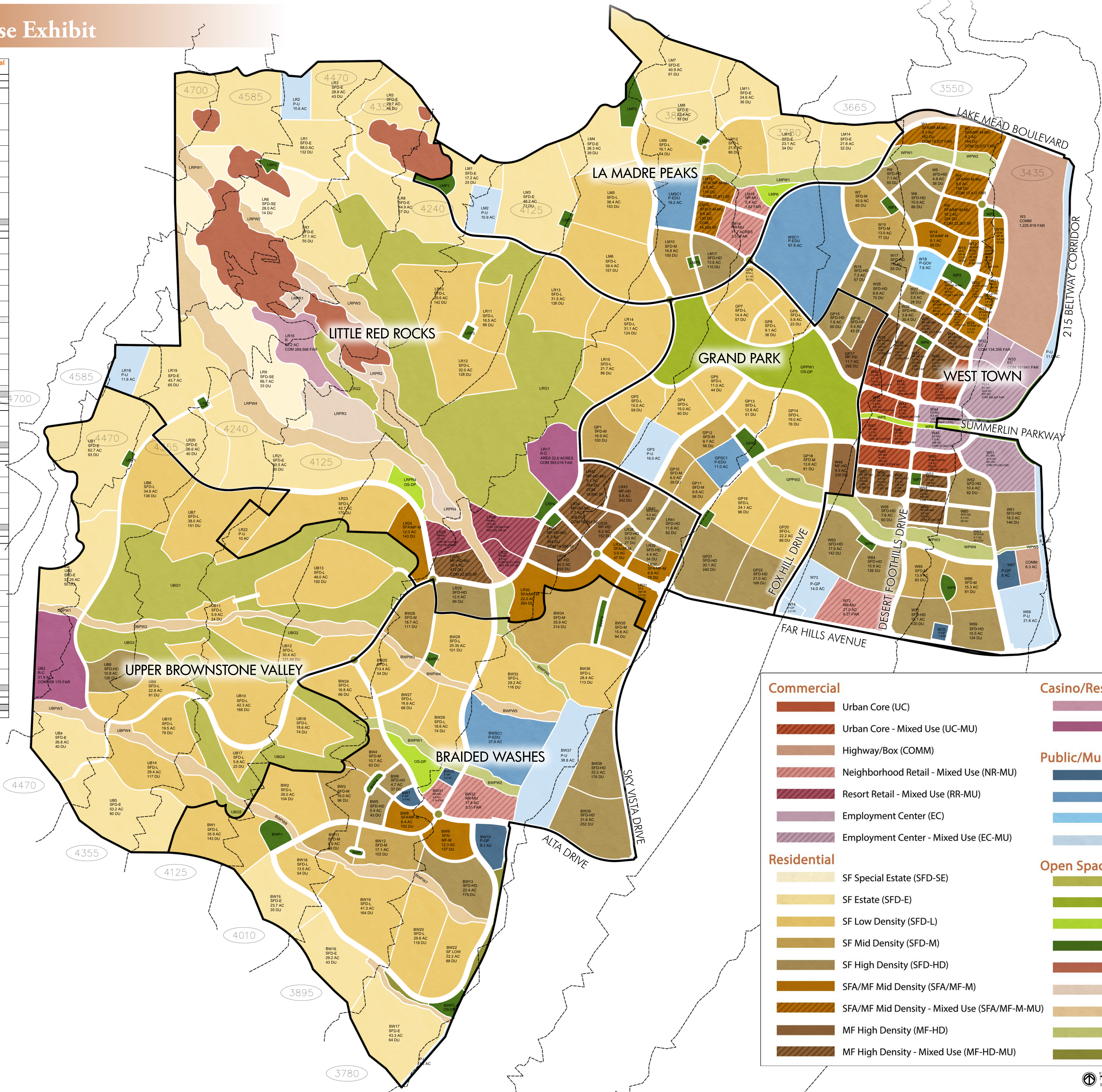
APPENDIX

APPENDIX A

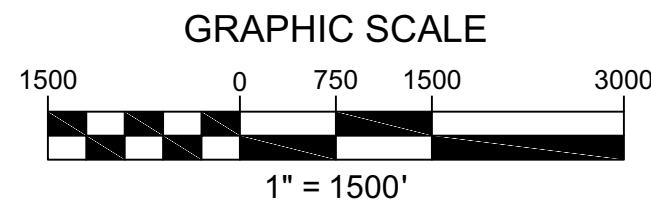
FIGURES

Master Plan: Land Use Exhibit

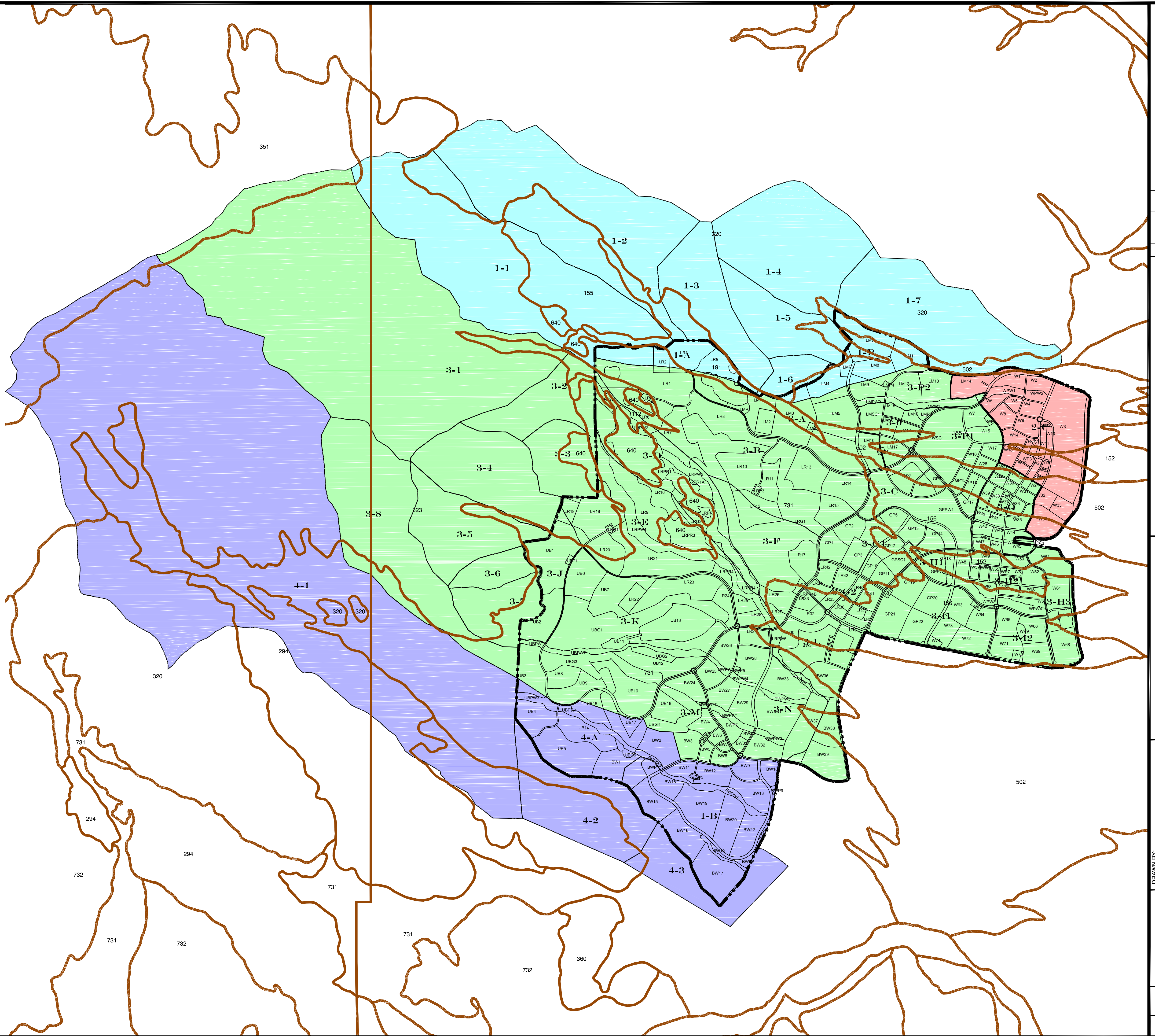
Color Key	Product Type	Acres	DU	Commercial SF
Commercial				
	Urban Core (UC)	0.0		0
	Urban Core - Mixed Use (UC-MU) (20% com./80% res.)	50.8	1,771	442,747
	Highway/Box (COMM)	100.1		1,307,556
	Neighborhood Retail - Mixed Use (NR-MU)	59.8		781,123
	Resort Retail - Mixed Use (RR-MU) (50% com./50% res.)	30.5	665	332,545
	Employment Center (EC)	17.0		296,298
	Employment Center - Mixed Use (EC-MU) (40% com./60% res.)	56.8	1,485	990,062
Total Commercial		315.0	3,921	4,150,331
Residential				
	SF Special Estate (SFD-SE)	94.8	47	
	SF Estate (SFD-E)	855.8	1,284	
	SF Low Density (SFD-L)	1096.5	4,386	
	SF Mid Density (SFD-M)	250.6	1,504	
	SF High Density (SFD-HD)	383.9	3,071	
	SFAMF Mid Density (SFA/MF-M)	94.2	1,131	
	SFAMF Mid Density - Mixed Use (SFA/MF-M-MU) (5% com./95% res.)	68.8	1,307	149,810
	MF High Density (MF-HD)	47.3	1,181	
	MF High Density - Mixed Use (MF-HD-MU) (5% com./95% res.)	85.6	3,251	186,333
		296	6,870	336,144
Total Residential		2,977	17,162	336,144
Casino/Resort/Hotel				
	Boutique Hotel/Spa (R)	22.2		289,598
	Casino/Resort/Hotel (R-C)	54.5		949,186
Total Casino/Resort/Hotel		76.6	0	1,238,785
Public/Municipal				
	General Public (Fire, Police, Religious, Library) (P-GP)	21.4		
	Education/School (P-EDU)	132.8		
	Government Facility (P-GOV)	7.6		
	Utility (DB, Reservoirs, Sub Stations, Pump Stations) (P-U)	156.7		
Total Public		318.4	0	0
Open Space				
	Golf Course (OS-GC)	491.2		
	Regional Park (OS-RP)	80.4		
	District Park (OS-DP)	23.6		
	Neighborhood Park (OS-NP)	53.9		
	Preserved Red Rocks (OS-RR)	114.6		
	Preservation Area (OS-PRES)	46.0		
	Protected U.S. Waters (OS-WOUS)	201.0		
	Preserved Enhanced Wash (OS-W)	89.7		
	General Open Space (OS)	6.3		
Total Open Space		1106.6	0	0
Land Use Subtotal		4794.1	21,083	5,725,259
Roads (Water/M)		327.1		
Total (Site)		5101.2	21,083	5,725,259



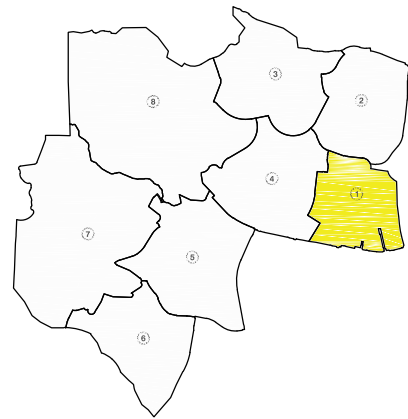
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	Urban Core (UC)		Boutique Hotel/Spa (R)
	Urban Core - Mixed Use (UC-MU)		Casino/Resort/Hotel (R-C)
	Highway/Box (COMM)		
	Neighborhood Retail - Mixed Use (NR-MU)		Public/Municipal
	Resort Retail - Mixed Use (RR-MU)		General Public (P-GP)
	Employment Center (EC)		Education/School (P-EDU)
	Employment Center - Mixed Use (EC-MU)		Government Facility (P-GOV)
			Utility (P-U)
Residential		Open Space	
	SF Special Estate (SFD-SE)		Golf Course (OS-GC)
	SF Estate (SFD-E)		Regional Park (OS-RP)
	SF Low Density (SFD-L)		District Park (OS-DP)
	SF Mid Density (SFD-M)		Neighborhood Park (OS-NP)
	SF High Density (SFD-HD)		Preserved Red Rocks (OS-RR)
	SFA/MF Mid Density (SFA/MF-M)		Preservation Area (OS-PRES)
	SFA/MF Mid Density - Mixed Use (SFA/MF-M-MU)		Protected US Waters (OS-WOUS)
	MF High Density (MF-HD)		Preserved Enhanced Wash (OS-W)
	MF High Density - Mixed Use (MF-HD-MU)		General Open Space (OS)



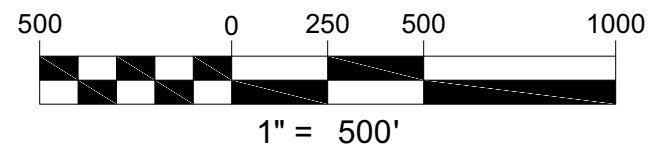
- SWPA BOUNDARY
- PARCEL BOUNDARY
- 640 SOIL NUMBER
- SOIL BOUNDARY



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SEPTEMBER 2017		SCALE: 1"=1500'		HORIZ. VERT.	
2017 SUMMERLIN WEST PLANNING AREA		FIGURE A.5.2 OVER ALL SOIL MAP		VTN	
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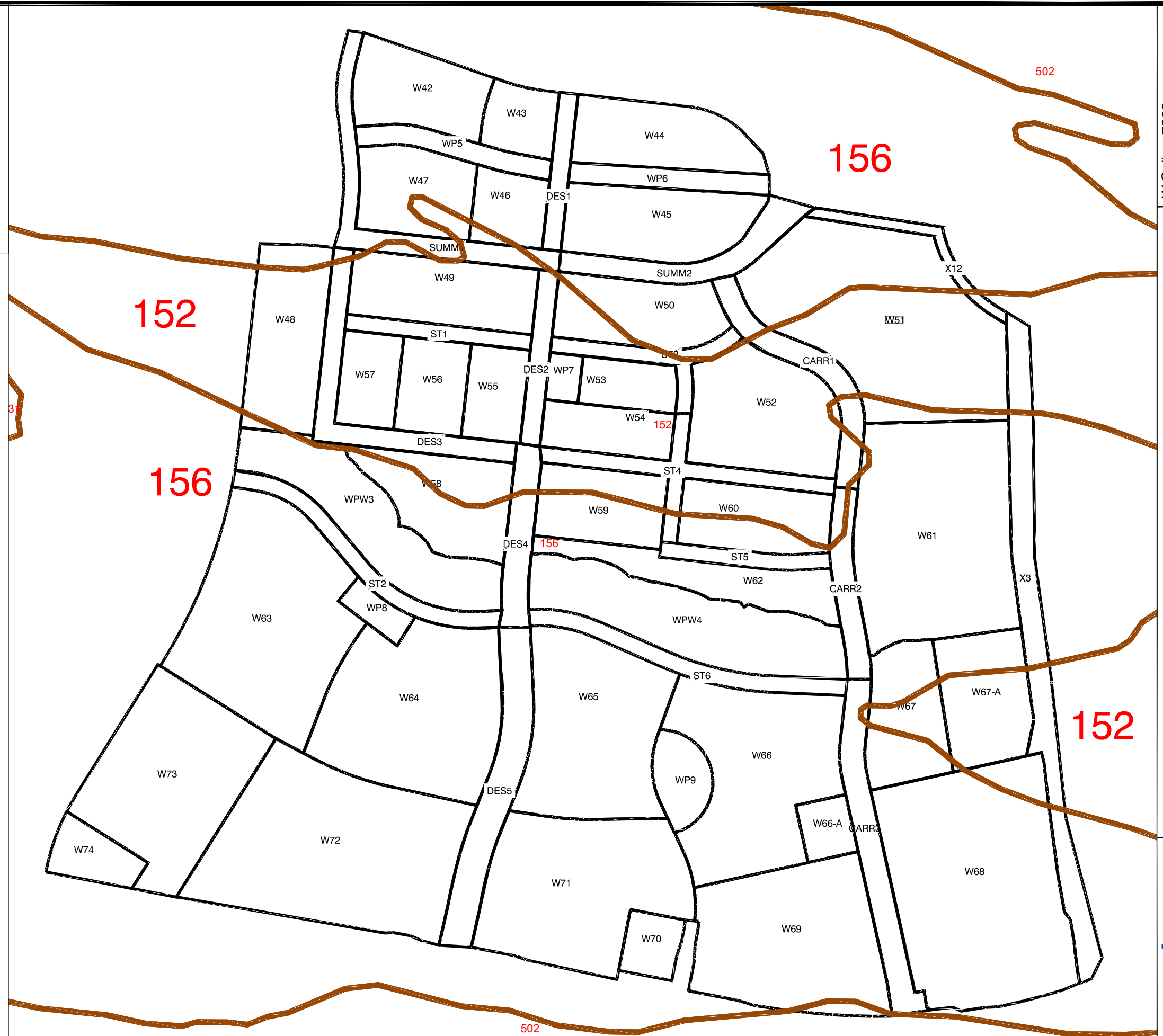


GRAPHIC SCALE



LEGEND

-  BASIN BOUNDARY
-  SOIL NUMBER
-  SOIL BOUNDARY



W.O.#: 7809

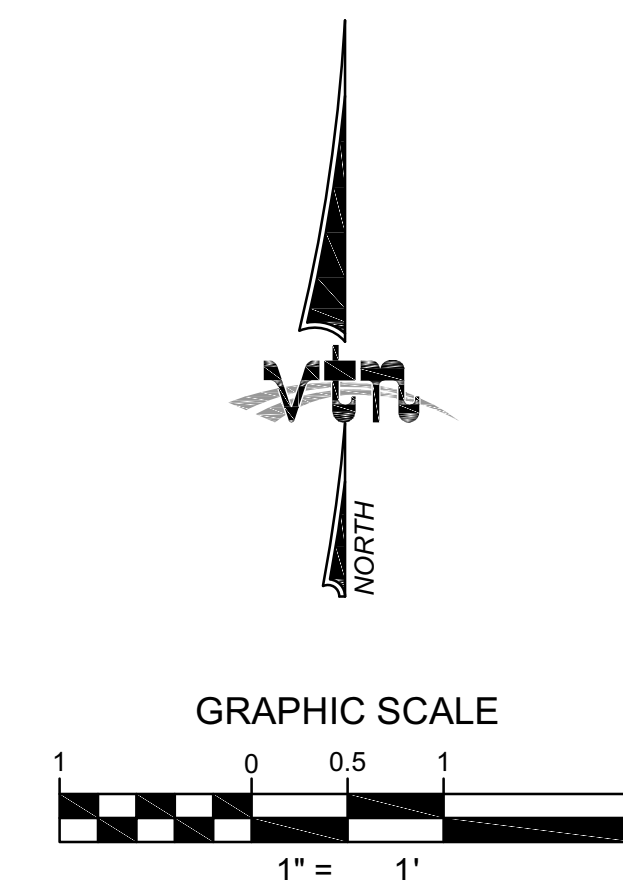
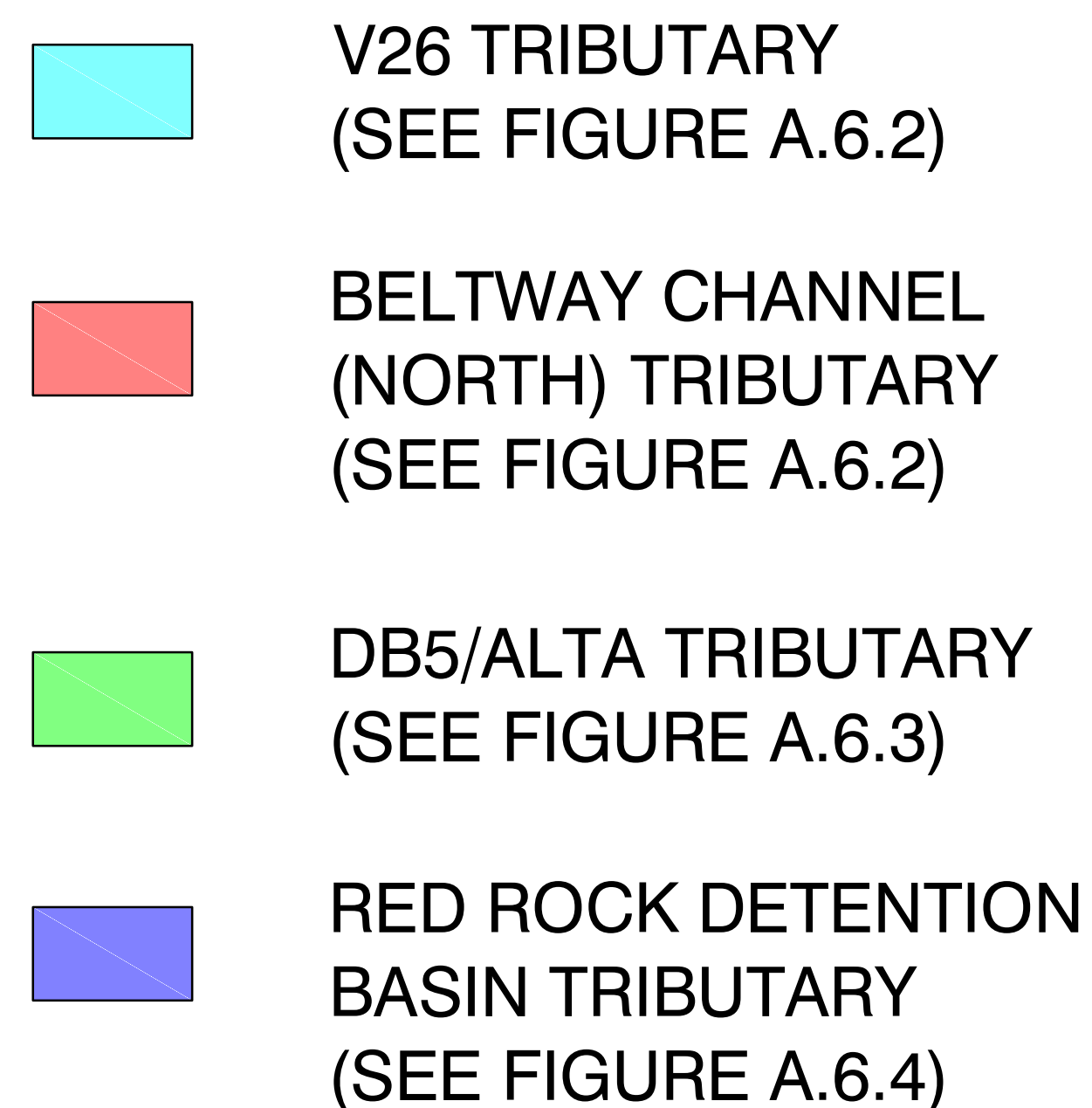
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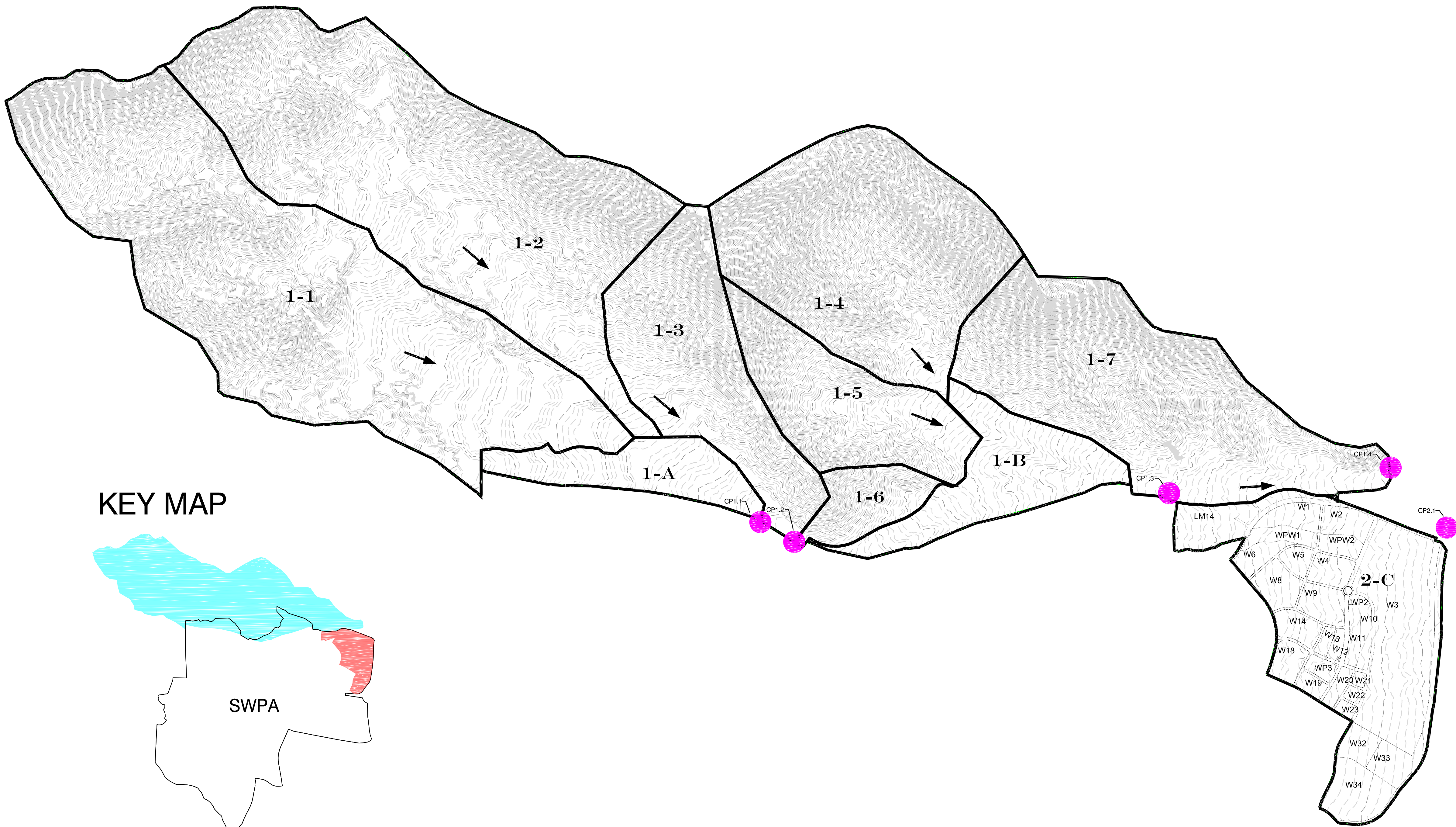
BY: SVB/JYA

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SHEET 1 OF 1

FIGURE 5-3
AREA 1 SOILS MAP



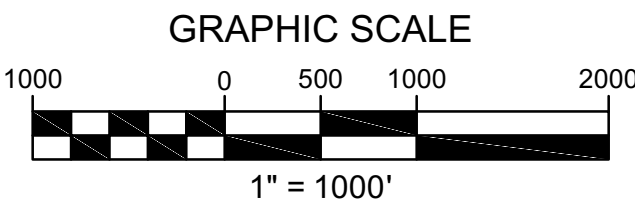
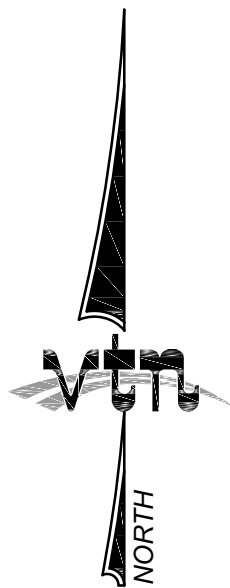


HEC-1 SUMMARY TABLE BELTWAY CHANNEL (NORTH) TRIBUTARY PROPOSED CONDITION		
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)
2-C	317.54	786
CP2.1	-	786

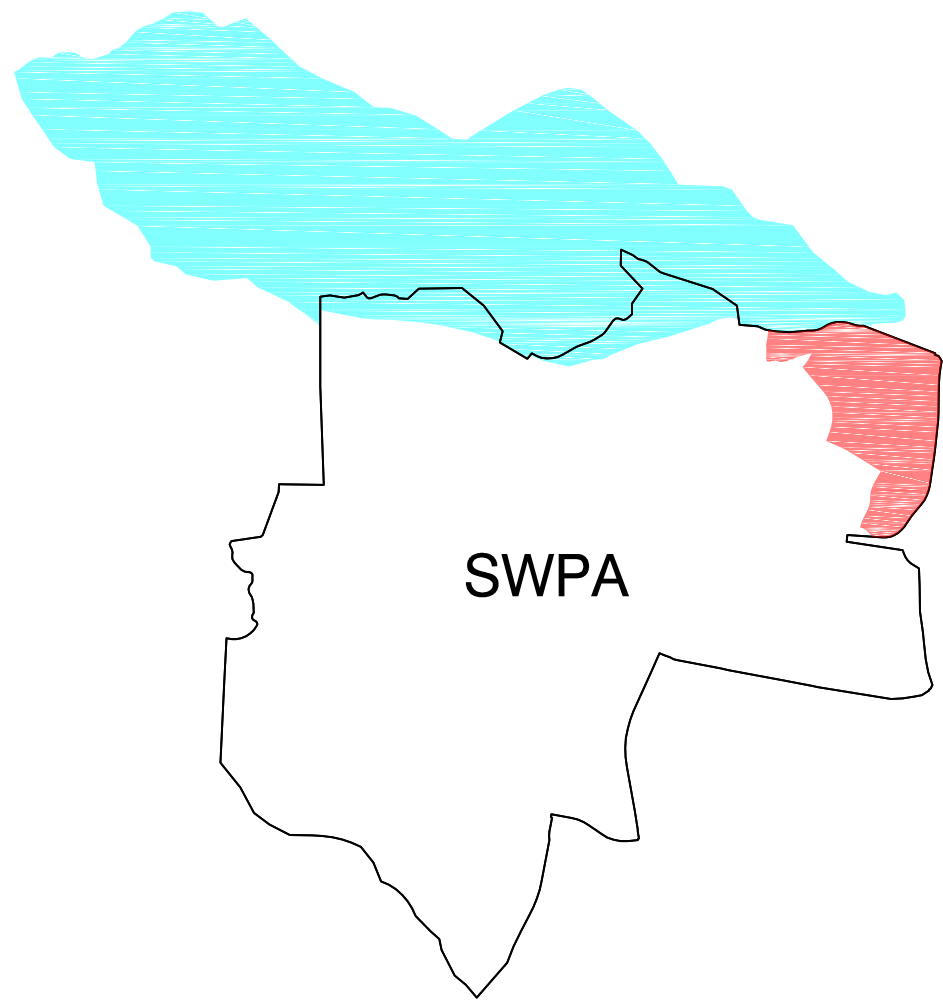
HEC-1 SUMMARY TABLE V26 TRIBUTARY PROPOSED CONDITION		
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)
1-1	683.46	1170
1-A	79.92	82
1-2	589.84	1041
CP1.1	-	2131
1-3	211.25	579
CP1.2	-	2256
1-4	347.58	1040
1-5	153.59	268
1-6	48.17	385
1-B	117.62	223
CP1.3	-	2872
1-7	354.66	970
CP1.4	-	3315

LEGEND

- CONCENTRATION POINT
- BASIN BOUNDARY
- LOT BOUNDARY
- 1-1 OFFSITE BASIN ID
- 1-A ONSITE BASIN ID
- LM3 LOT ID



KEY MAP



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2017 SUMMERLIN WEST
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A.6.2
BELTWAY CHANNEL NORTH
/ V26 BASIN TRIBUTARY

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SVE 9/2017

PROJECT NO:
7859

CHECKED BY:

SCALE:
HORIZ.
VERT.

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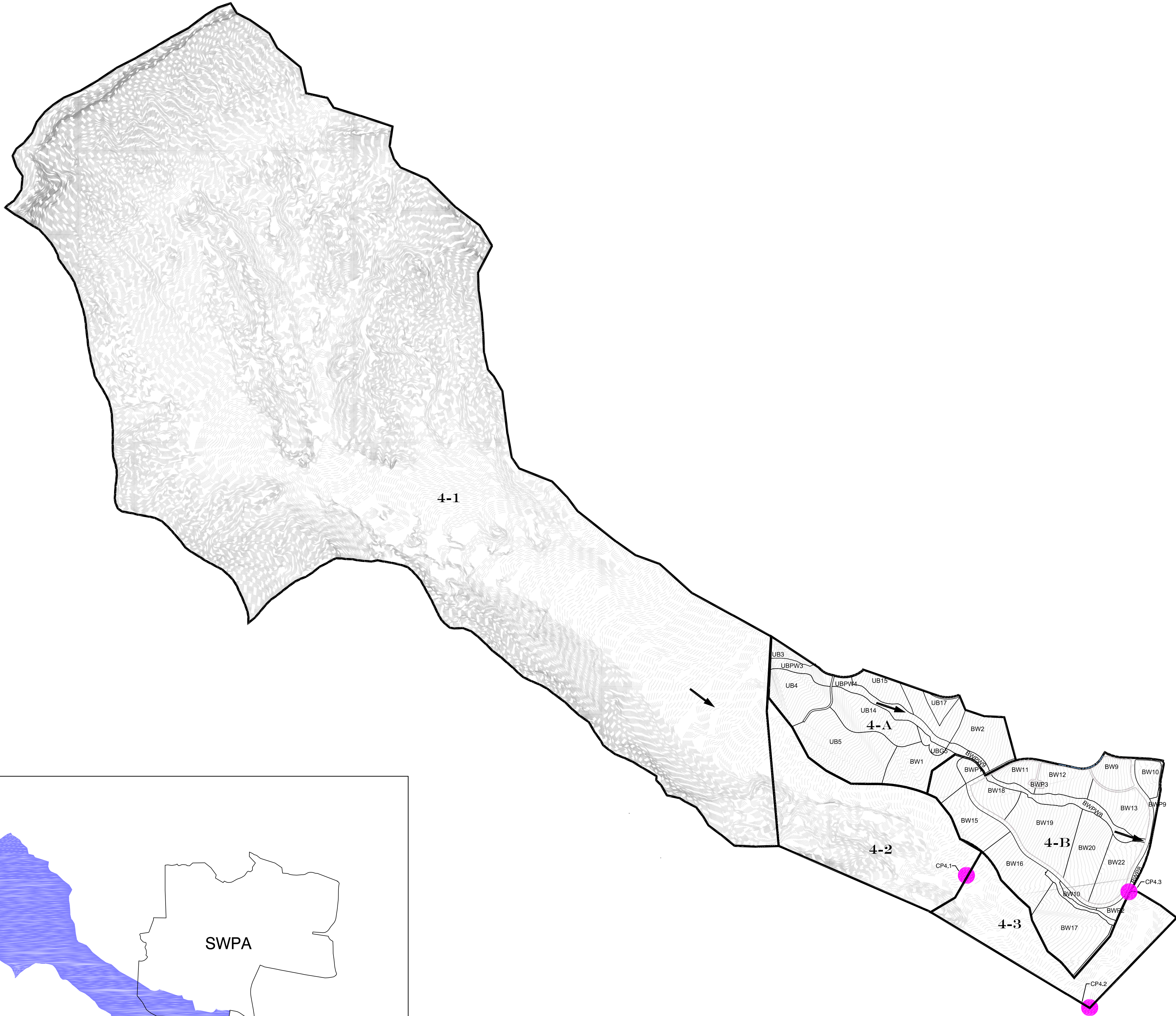
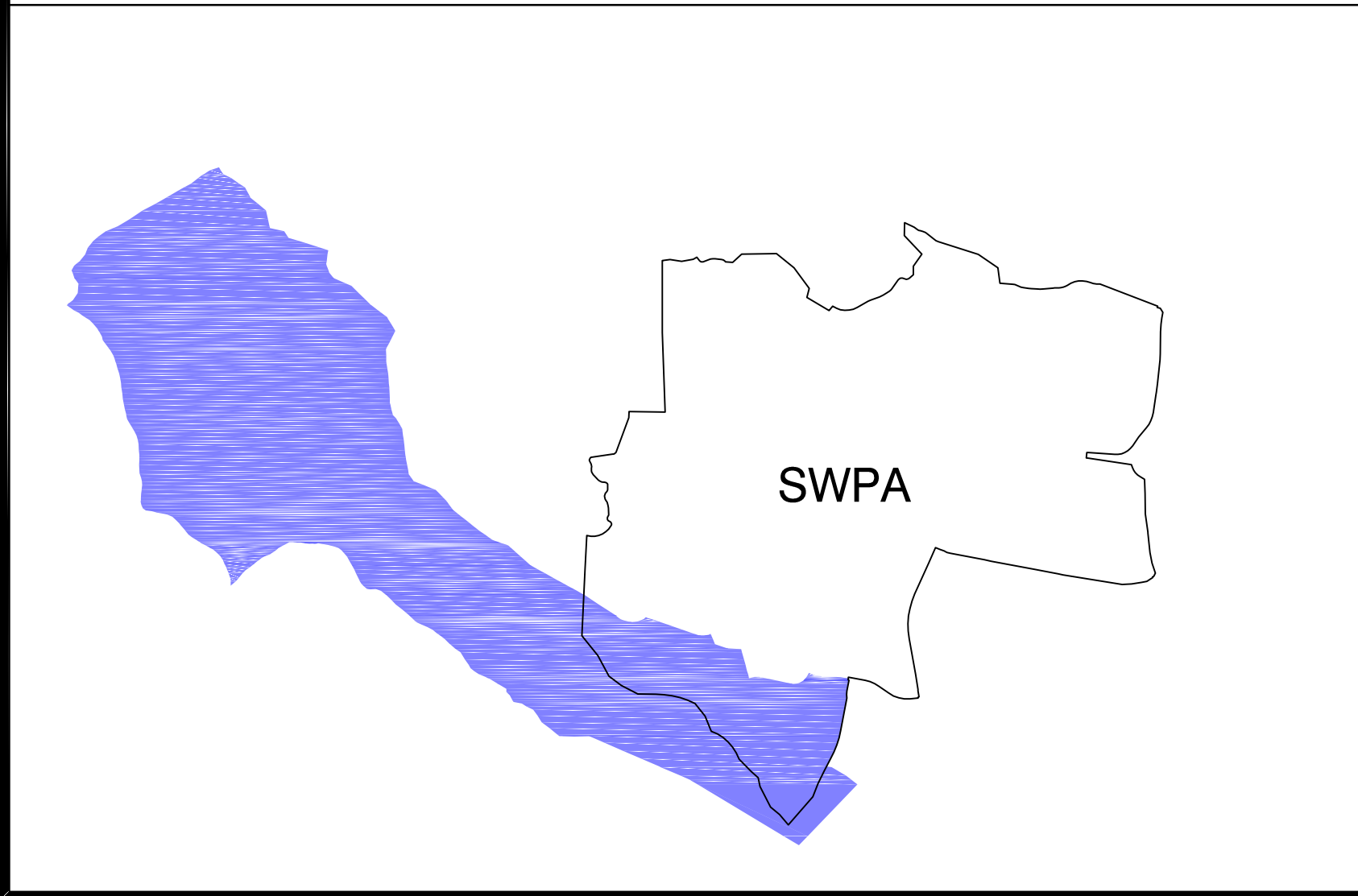
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HEC-1 SUMMARY TABLE RED ROCK DETENTION BASIN TRIBUTARY PROPOSED CONDITION		
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)
4-1	2946.46	3797
4-2	233.47	602
CP4.1	-	3873
4-3	134.55	345
CP4.2	-	3867
4-A	230.33	523
4-B	345.76	650
CP4.3	-	1170

LEGEND

CONCENTRATION POINT

BASIN BOUNDARY

1-1

1-A

LM3

GRAPHIC SCALE

1200

0

600

1200

2400

1" = 1200'

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2017 SUMMERLIN WEST
PLANNING AREA

A.6.4
RED ROCK DETENTION BASIN
TRIBUTARY

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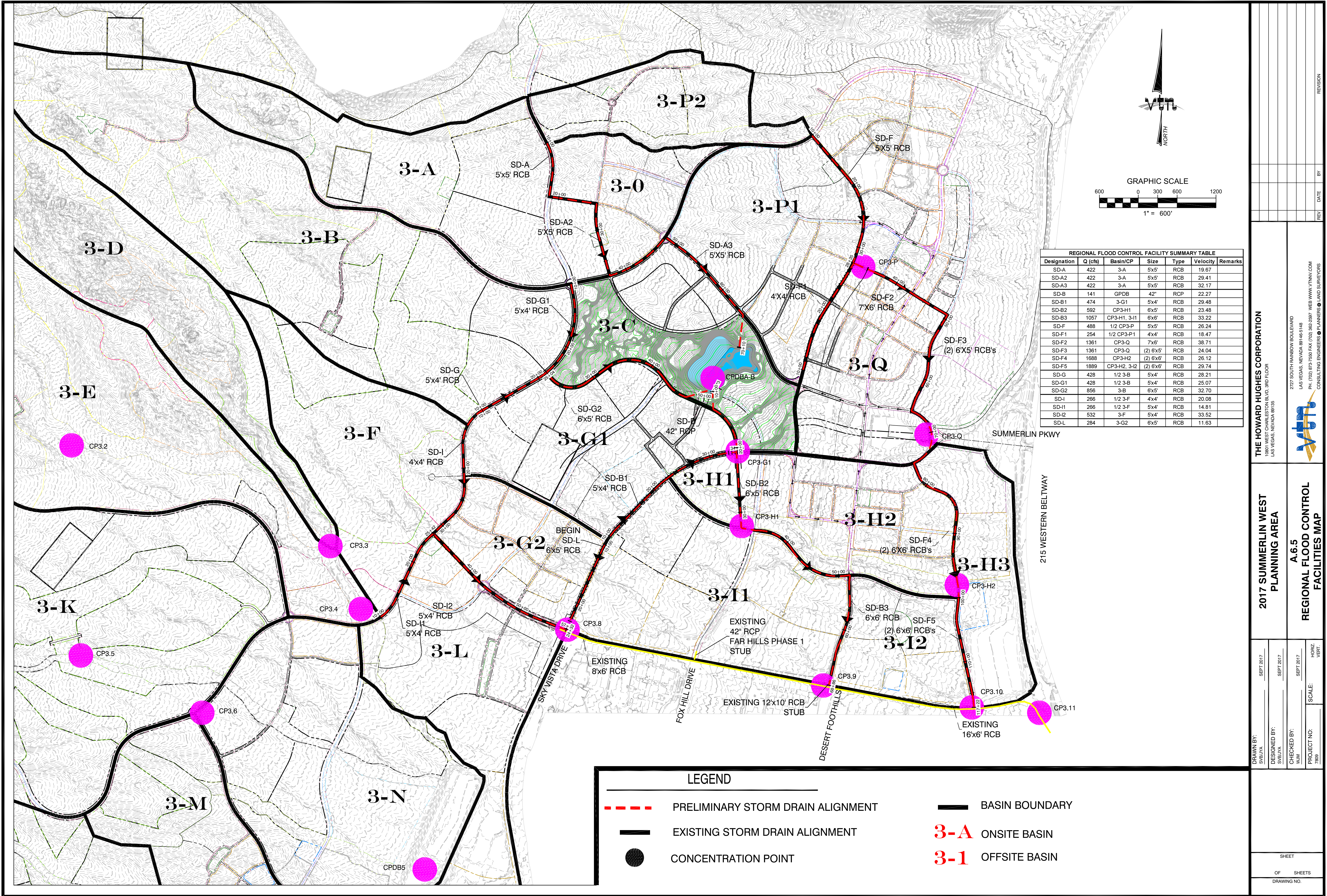
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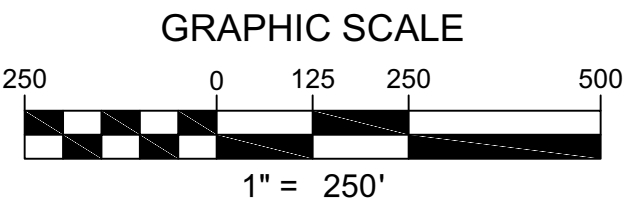
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LEGEND

- BASIN BOUNDARY
- BASIN DESIGNATION
- CONCENTRATION POINT

HEC-1 SUMMARY TABLE					
AREA 1					
PROPOSED CONDITION					
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)	Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)
W63	17.40	62	W50	5.99	24
WP8	1.20	4	ST3	2.09	10
ST2	2.93	13	CST3	-	231
W64	15.11	54	SUMM2	3.45	15
W72	21.22	82	CARR1	3.49	15
DES5	8.45	29	W52	9.11	33
W74	2.41	10	W58	6.78	25
W73	13.89	51	DES3	4.22	19
W44	4.78	20	CDES3	-	44
W45	7.22	28	W54	3.43	14
WP6	2.26	7	W59	5.21	20
W42	5.65	23	CW59	-	77
W43	2.67	11	ST4	3.57	16
WP5	2.25	4	CST4	-	91
CWP5	-	38	W60	5.42	20
DES1	1.64	7	ST5	1.48	7
CDES1	-	44	W62	5.33	20
W47	5.43	22	DES2	1.59	8
W46	2.95	12	WPW3	9.11	27
SUMM1	4.28	17	CWPW3	-	35
CW46	-	51	WPW4	10.93	32
CSUMM1	-	95	CARR2	2.49	11
W48	7.65	27	W65	13.16	43
W57	3.09	12	ST6	2.99	13
CW57	-	38	CST6	-	54
W56	3.54	13	WP9	2.51	8
CW56	51		W66	15.68	54
W55	3.09	12	W69	14.1	47
W49	6.78	26	W70	1.9	8
ST1	1.62	7	W71	14.67	53
CST1	-	189	W51	20.28	76
WP7	0.87	3	W61	18.5	62
CWP7	-	191	W67	5.73	22
W53	2.54	10	W68	21.74	82
CW53	-	199			

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2017SUMMERLIN WEST
PLANNING AREA

A.6.6
AREA 1 LOCAL FLOOD CONTROL
DRAINAGE BASIN MAP

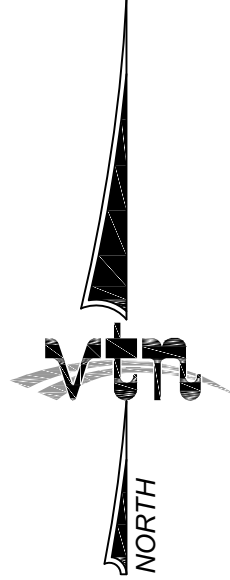
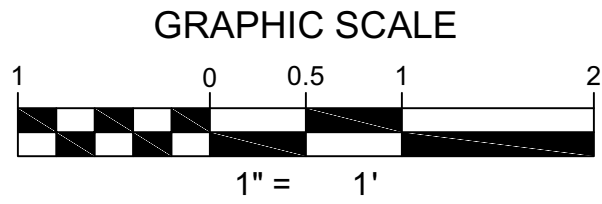
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CHECKED BY: WJM	9/2017
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LEGEND

- REGIONAL STORM DRAIN ALIGNMENT
- EXISTING STORM DRAIN ALIGNMENT
- AREA 1 LOCAL STORM DRAIN ALIGNMENT
- W51 BASIN DESIGNATION
- CONCENTRATION POINT
- LOCAL FACILITY DESIGNATION

AREA 1 LOCAL FLOOD PROTECTION FACILITIES				
Facility Label	Design Slope (%)	Q100 (cfs)	Tributary Basin/CP	Facility
1	4.0%	62	W63	36" RCP
2	8.7%	4	WP8	18" RCP
3	4.9%	54	W64	36" RCP
4	7.1%	82	W72	36" RCP
5	6.3%	51	W73	30" RCP
6	5.3%	10	W74	24" RCP
7	4.2%	20	W44	24" RCP
8	7.8%	7	WP6	18" RCP
9	4.8%	28	W45	30" RCP
10	1.3%	11	W43	24" RCP
11	4.4%	23	W42	30" RCP
12	4.2%	28	WP5, W42	30" RCP
13	1.7%	38	CWP5	36" RCP
14	7.2%	22	W47	24" 4CP
15	3.1%	22	W47	30" RCP
16	3.3%	12	W46	24" RCP
17	3.1%	51	CW46	36" RCP
18	1.8%	95	CSUMM1	48" RCP
19	6.7%	27	W48	24" RCP
20	2.1%	12	W57	24" RCP
21	5.4%	38	CW57	30" RCP
22	1.0%	13	W56	30" RCP
23	5.9%	51	CW56	30" RCP
24	2.4%	26	W49	30" RCP
25	2.8%	33	CW56	30" RCP
26	1.9%	12	W55	24" RCP
27	7.8%	189	CST1	42" RCP
28	9.0%	3	WP7	18" RCP
29	5.3%	191	CWP7	48" RCP
30	2.9%	10	W53	24" RCP
31	5.9%	199	CW53	48" RCP
32	7.3%	24	W50	24" RCP
33	6.6%	231	CST3	48" RCP
34	5.8%	33	W52	30" RCP
35	5.6%	25	W58	24" RCP
36	4.6%	14	W54	24" RCP
37	1.0%	20	W59	30" RCP
38	6.0%	91	CST4	36" RCP
39	6.1%	27	W60, ST5	24" RCP
40	6.1%	20	W62	24" RCP
41	6.2%	35	CWPW3	24" RCP
42	4.9%	67	CWPW3, WPW4	36" RCP
43	5.0%	43	W65	30" RCP
44	5.0%	54	CST6	36" RCP
45	5.0%	62	WP9, W66	36" RCP
46	4.2%	47	W69	30" RCP
47	1.2%	8	W70	24" RCP
48	2.3%	53	W71	36" RCP
49	11.8%	76	W51	30" RCP
50	2.0%	62	W61	36" RCP
51	8.5%	22	W67	24" RCP
52	12.0%	82	W68	36" RCP

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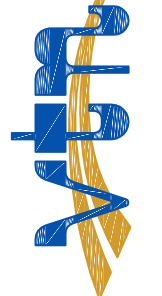
2017 SUMMERLIN WEST
PLANNING AREA

A.6.7
AREA 1 LOCAL FLOOD CONTROL
FACILITIES MAP

DRAWN BY: JVA 9/2017
DESIGNED BY: JVA 9/2017
CHECKED BY: WJM 9/2017
PROJECT NO: 1324.6.7 Area 1 Local Flood Control Facilities Map.dwg
SCALE: #####
HORIZ. VERT.

SHEET
OF SHEETS
DRAWING NO.

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 973-7550 FAX: (702) 362-2897 WEB: WWW.VTNV.COM
CONSULTING ENGINEERS & PLANNERS & LAND SURVEYORS



APPENDIX B

HYDROLOGIC

ANALYSIS

B.1 HEC-1 FLOWRATE SUMMARY

HEC-1 SUMMARY TABLE					
AREA 1					
PROPOSED CONDITION					
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)	Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)
W63	17.40	62	W50	5.99	24
WP8	1.20	4	ST3	2.09	10
ST2	2.93	13	CST3	-	231
W64	15.11	54	SUMM2	3.45	15
W72	21.22	82	CARR1	3.49	15
DES5	8.45	29	W52	9.11	33
W74	2.41	10	W58	6.78	25
W73	13.89	51	DES3	4.22	19
W44	4.78	20	CDES3	-	44
W45	7.22	28	W54	3.43	14
WP6	2.26	7	W59	5.21	20
W42	5.65	23	CW59	-	77
W43	2.67	11	ST4	3.57	16
WP5	2.25	4	CST4	-	91
CWP5	-	38	W60	5.42	20
DES1	1.64	7	ST5	1.48	7
CDES1	-	44	W62	5.33	20
W47	5.43	22	DES2	1.59	8
W46	2.95	12	WPW3	9.11	27
SUMM1	4.28	17	CWPW3	-	35
CW46	-	51	WPW4	10.93	32
CSUMM1	-	95	CARR2	2.49	11
W48	7.65	27	W65	13.16	43
W57	3.09	12	ST6	2.99	13
CW57	-	38	CST6	-	54
W56	3.54	13	WP9	2.51	8
CW56	-	51	W66	15.68	54
W55	3.09	12	W69	14.1	47
W49	6.78	26	W70	1.9	8
ST1	1.62	7	W71	14.67	53
CST1	-	189	W51	20.28	76
WP7	0.87	3	W61	18.5	62
CWP7	-	191	W67	5.73	22
W53	2.54	10	W68	21.74	82
CW53	-	199			

HEC-1 SUMMARY TABLE
BELTWAY CHANNEL (NORTH) TRIBUTARY
PROPOSED CONDITION

Basin / Concentration Point	Area (acre)	Q₁₀₀ (cfs)
2-C	317.54	786
CP2.1	-	786

HEC-1 SUMMARY TABLE DB5/ALTA TRIBUTARY PROPOSED CONDITION					
Basin / Concentration Point	Area (acre)	Q ₁₀₀ (cfs)	SDN	Basin / Concentration Point	Area (acre)
3-1	1422.67	2093	SDN3	3-F	180.16
3-2	144.58	403	SDN3	3-G2	82.23
CP3.1	-	2153	SDN3	CP3.8	-
3-D	213.07	482	SDN3	3-A	217.07
CP3.3	-	2307	SDN3	3-B	446.26
3-3	111.16	395	SDN3	3-C	184.83
3-4	221.26	754	SDN3	CPDBA-B	-
3-5		628	SDN3	GPDB	-
CP3.2	-	1666	SDN3	3-G1	110.4
3-E	348.31	801	SDN3	CP3-G1	-
CP3.4	-	3573	SDN3	3-H1	27.48
3-6	56.74	202	SDN3	CP3-H1	-
3-7	109.69	423	SDN3	3-I1	187.75
3-J	97.87	199	SDN3	CP3.9	-
CP3.5	-	688	SDN3	3-O	71.96
3-8	408.73	1105	SDN3	3-P2	156.22
3-K	568.98	1226	SDN3	3-P1	92.53
CP3.6	-	2794	SDN3	CP3-P	-
3-N	291.64	681	SDN3	3-Q	126.31
3-M	123.16	360	SDN3	CP3-Q	-
CPDB5	-	6813	SDN3	3-H2	117.36
DB5	-	2142	SDN3	CP3-H2	-
3-L	206.53	579	SDN3	3-I2	75.83
CP3-L	-	2230	SDN3	CP3.10	-
RCSWAA-1	-	2229	SDN3	3-H3	89.8
SWAA-2		948	SDN3	CP3.11	-
CSWAA-2	-	2944	SDN3	ANGLPKIN	-
SWAA-3		668	SDN3	ANGLPKDB	-
CSWAA-3	-	3185	SDN4		

Q₁₀₀ (cfs)	SDN
532	SDN3
284	SDN3
795	SDN3
422	SDN3
856	SDN3
367	SDN3
1533	SDN3
141	SDN3
474	SDN3
526	SDN3
91	SDN3
592	SDN3
465	SDN3
1701	SDN3
237	SDN3
260	SDN3
507	SDN3
976	SDN3
402	SDN3
1361	SDN3
369	SDN3
1688	SDN3
201	SDN3
3374	SDN3
256	SDN3
3589	SDN3
8972	SDN5
406	SDN5

HEC-1 SUMMARY TABLE
RED ROCK DETENTION BASIN TRIBUTARY
PROPOSED CONDITION

Basin / Concentration Point	Area (acre)	Q₁₀₀ (cfs)
4-1	2946.46	3797
4-2	233.47	602
CP4.1	-	3873
4-3	134.55	345
CP4.2	-	3867
4-A	230.33	523
4-B	345.76	650
CP4.3	-	1170

**HEC-1 SUMMARY TABLE
V26 TRIBUTARY
PROPOSED CONDITION**

Basin / Concentration Point	Area (acre)	Q₁₀₀ (cfs)
1-1	683.46	1170
1-A	79.92	82
1-2	589.84	1041
CP1.1	-	2131
1-3	211.25	579
CP1.2		2256
1-4	347.58	1040
1-5	153.59	268
1-6	48.17	385
1-B	117.62	223
CP1.3	-	2872
1-7	354.66	970
CP1.4	-	3285

B.2 CCRFCD SUPPLEMENTAL DOCUMENTATION

B.2.1 PRECIPITATION ADJUSTMENT RATIOS

PRECIPITATION ADJUSTMENT RATIOS

<u>Recurrence Interval</u>	<u>Ratio to NOAA Atlas 2</u>
2-year	1.00
5-year	1.16
10-year	1.24
25-year	1.33
50-year	1.39
100-year	1.43

- NOTE: 1. Multiply the values obtained from the NOAA Atlas 2 by the above ratios to obtain the adjusted precipitation values.
2. NOAA Atlas 2 values for use with TR-55 shall not be adjusted by the above ratios.
3. Tables 505 and 506 require no adjustments.

<i>Revision</i>	<i>Date</i>

B.2.2 6-HOUR DEPTH-AREA REDUCTION FACTORS

SIX HOUR DEPTH-AREA REDUCTION FACTORS

<u>Drainage Area (Square Miles)</u>	<u>Six-Hour Depth-Area Reduction Factor</u>
0.0	1.00
0.5	0.98
1.0	0.97
2.0	0.93
4.0	0.91
6.0	0.90
8.0	0.88
10.0	0.86
20.0	0.79
30.0	0.74
50.0	0.68
100.0	0.60
150.0	0.55
200.0	0.51
300.0	0.46
400.0	0.42
500.0	0.39

- NOTES: 1. A graphical representation of these factors is presented in Figure 514.
2. Consult with the local entity and/or the CCRFCD for guidance in using the Depth-Area Reduction Factors for drainage areas greater than 200 square miles.

<i>Revision</i>	<i>Date</i>

B.2.3 6-HOUR STORM DISTRIBUTIONS

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

SIX-HOUR STORM DISTRIBUTIONS

Percent of Total Storm Depth				Percent of Total Storm Depth			
Storm Time (In Minutes)	SDN3	SDN4	SDN5	Storm Time (In Minutes)	SDN3	SDN4	SDN5
0	0.0	0.0	0.0	185	32.2	37.6	43.0
5	2.0	2.0	2.0	190	35.2	41.5	47.7
10	5.7	5.8	5.9	195	40.9	46.2	51.4
15	7.0	7.5	8.0	200	49.9	53.0	56.1
20	8.7	9.9	11.0	205	59.0	61.0	63.0
25	10.8	12.6	14.4	210	71.0	71.0	71.0
30	12.4	13.7	15.0	215	74.4	73.2	72.0
35	13.0	14.5	16.0	220	78.1	75.6	73.1
40	13.0	14.9	16.8	225	81.2	78.2	75.2
45	13.0	15.1	17.1	230	81.9	79.9	77.9
50	13.0	15.5	18.0	235	83.5	81.3	79.0
55	13.0	15.6	18.2	240	85.1	82.3	79.5
60	13.0	15.9	18.7	245	85.6	83.0	80.4
65	13.3	16.2	19.0	250	86.0	83.5	81.0
70	14.0	16.9	19.7	255	86.8	84.4	82.0
75	14.2	17.2	20.2	260	87.6	85.1	82.6
80	14.8	17.9	21.0	265	88.8	86.4	84.0
85	15.8	18.9	22.0	270	91.0	88.5	85.9
90	17.2	20.1	23.0	275	92.6	90.8	88.9
95	18.1	21.1	24.1	280	93.7	92.4	91.0
100	19.0	22.0	25.0	285	95.0	94.4	93.8
105	19.7	22.8	25.9	290	97.0	96.8	96.6
110	19.9	23.2	26.5	295	97.6	97.3	97.0
115	20.0	24.0	28.0	300	98.2	97.8	97.4
120	20.1	24.6	29.0	305	98.5	98.2	97.9
125	20.4	25.2	30.0	310	98.7	98.4	98.1
130	21.4	26.0	30.5	315	98.9	98.6	98.3
135	22.9	26.9	30.9	320	99.0	98.8	98.5
140	24.1	27.6	31.0	325	99.3	99.1	98.9
145	24.9	28.3	31.7	330	99.3	99.2	99.0
150	25.1	28.6	32.1	335	99.4	99.3	99.2
155	25.6	29.2	32.7	340	99.5	99.4	99.3
160	27.0	30.2	33.3	345	99.8	99.7	99.6
165	27.8	31.2	34.6	350	99.8	99.8	99.7
170	28.1	32.1	36.1	355	99.9	99.9	99.9
175	28.3	33.2	38.1	360	100.0	100.0	100.0
180	29.5	35.2	40.8				

- Notes: 1. For drainage areas less than 8 square miles in size, use SDN 3.
 2. For drainage areas greater than or equal to 8 square miles and less than 12 square miles in size, use SDN 4.
 3. For drainage areas greater than or equal to 12 square miles, use SDN 5.
 4. A graphical representation of these values is presented on **Figure 515**.

Revision	Date

REFERENCE:

TABLE 503

B.2.4 DEPTH-DURATION-FREQUENCY VALUES

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DEPTH-DURATION-FREQUENCY VALUES FOR McCARRAN AIRPORT RAINFALL AREA (IN INCHES)

TIME	RECURRENCE INTERVAL					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
5 min.	0.15	0.27	0.35	0.46	0.54	0.63
10 min.	0.25	0.44	0.57	0.74	0.89	1.02
15 min.	0.33	0.57	0.74	0.97	1.15	1.32
30 min.	0.44	0.78	1.01	1.31	1.55	1.79
1 hour	0.52	0.89	1.15	1.50	1.78	2.06
2 hour	0.59	1.01	1.30	1.70	2.01	2.30
3 hour	0.64	1.08	1.39	1.82	2.15	2.48
6 hour	0.72	1.22	1.58	2.05	2.41	2.77
24 hour (TR-55)	1.20	1.60	1.80	2.40	2.70	2.96

- NOTE: 1. Refer to Figure 513 for a description and drawing of the area included in the McCarran Airport Rainfall Area.
2. The 24 hour values presented above are for use with TR-55 only.
3. Table 501 adjustments not required.

Revision	Date

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ENGINEERING**

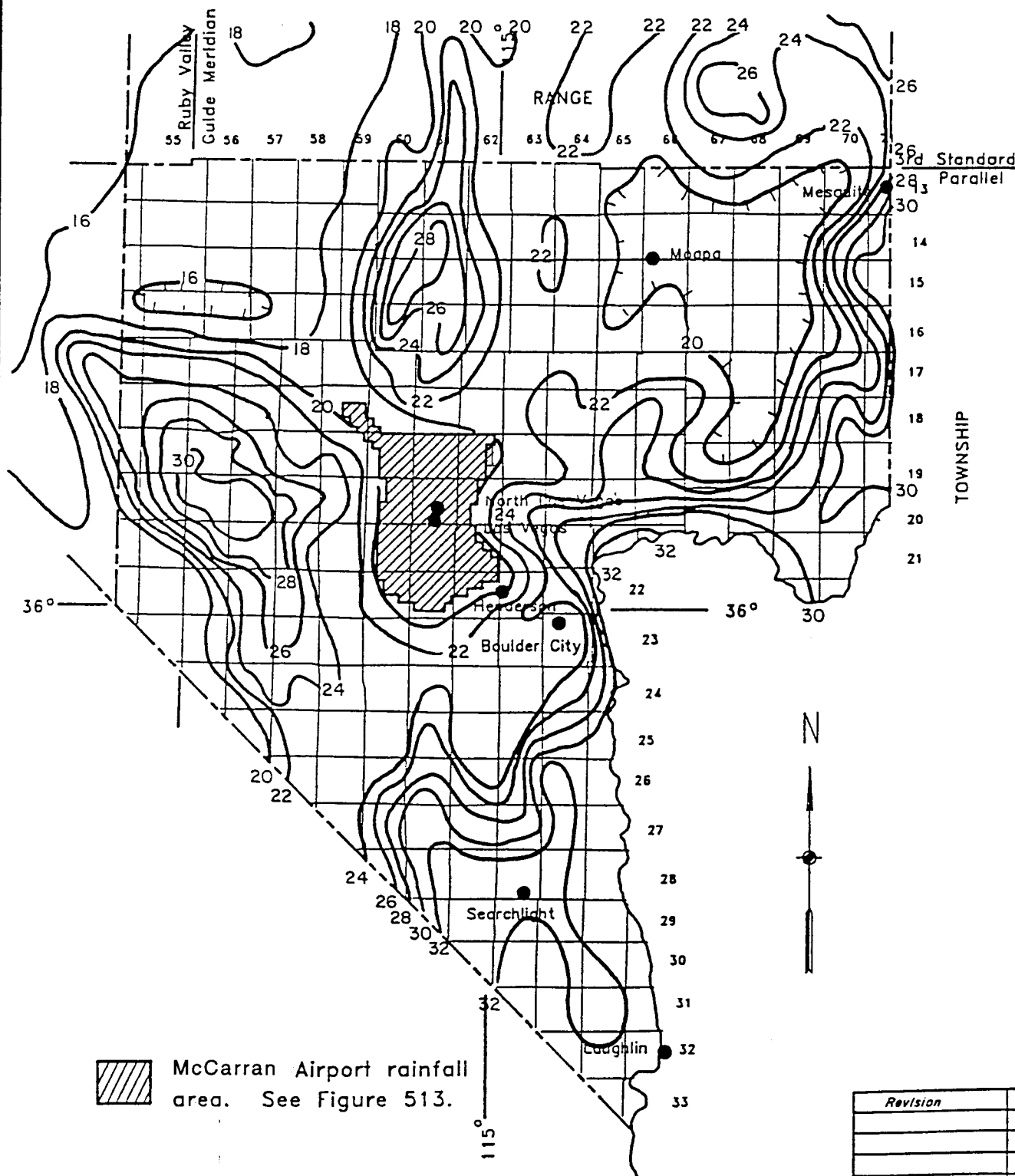
REFERENCE:

USACE, Los Angeles District, 1988

TABLE 505

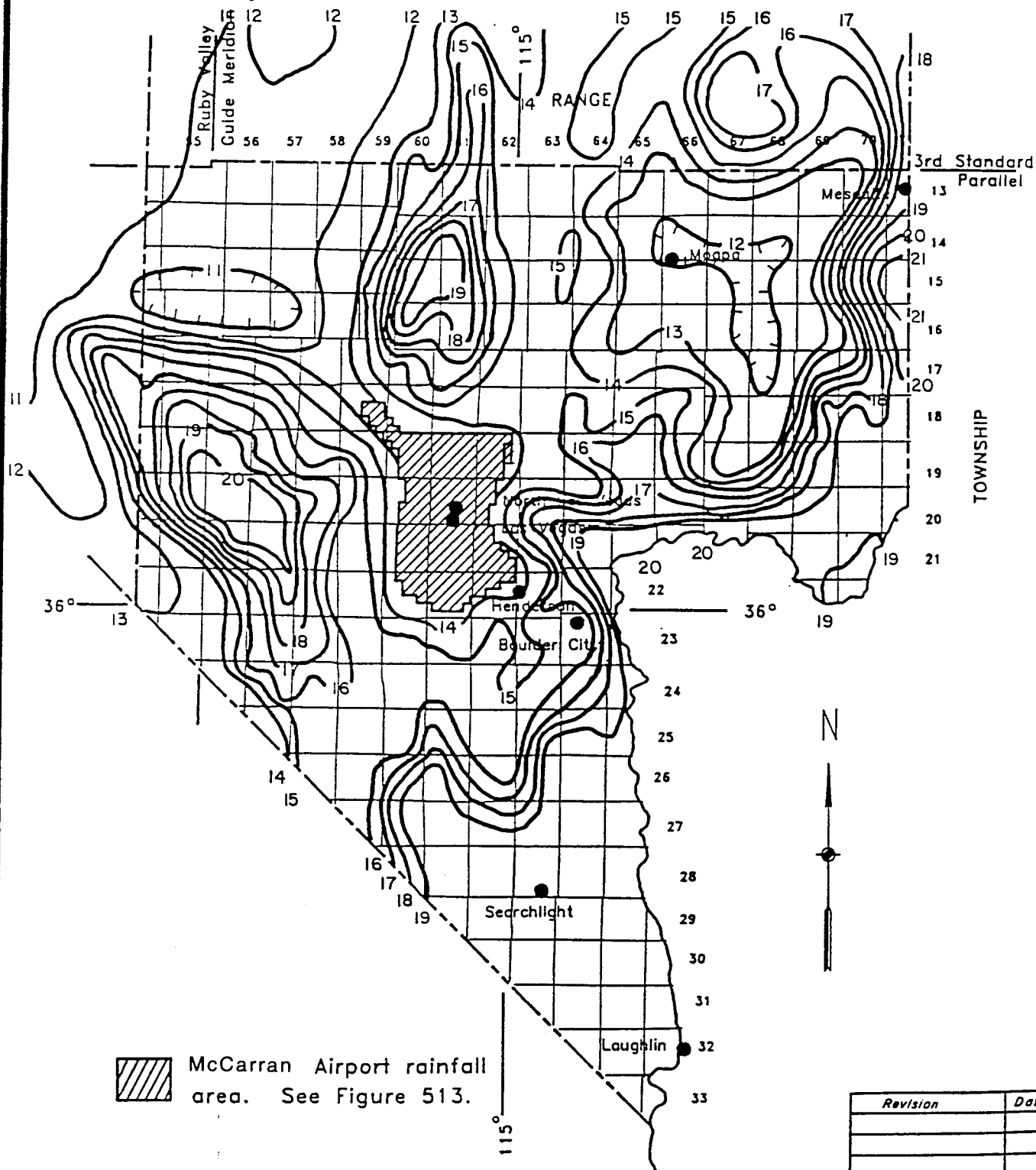
**B.2.5 RAINFALL DEPTH-DURATION-FREQUENCY
100-YEAR, 6-HOUR**

RAINFALL DEPTH-DURATION-FREQUENCY 100-YEAR, 6-HOUR (DEPTHS IN TENTHS OF INCHES)



**B.2.6 RAINFALL DEPTH-DURATION-FREQUENCY
10-YEAR, 6 HOUR**

RAINFALL DEPTH-DURATION-FREQUENCY 10-YEAR, 6-HOUR (DEPTHS IN TENTHS OF INCHES)



Revision	Date

B.2.7 RUNOFF CURVE NUMBER-URBAN AREAS

RUNOFF CURVE NUMBERS (URBAN AREAS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.): ³					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved: curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved: open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					

See Table 602A

Developing urban areas

Newly graded areas (pervious areas only, no vegetation) ⁵	77	86	91	94
--	----	----	----	----

1 Average runoff condition, and $I_a = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system. Impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 603.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using Figure 603 based on the impervious area percentage (CN #98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using Figure 603 based on the degree of development impervious area percentage) and the CN's for the newly graded pervious areas.

Revision	Date

B.2.8 RUNOFF CURVE NUMBER-SEMI-ARID RANGELANDS

RUNOFF CURVE NUMBERS (SEMIARID RANGELANDS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition ²	A ³	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹Average runoff condition, and $I_a = 0.2S$.

²Poor: <30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: >70% ground cover.

³Curve numbers for group A have been developed only for desert shrub.

Revision	Date

B.2.9 RUNOFF CURVE NUMBER-RESIDENTIAL DISTRICTS

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS - RESIDENTIAL DISTRICTS

Average Lot Size or Usage ¹	Percent Impervious ²	Curve Number for Hydrologic Soil Groups			
		A	B	C	D
Apartments/Condos	72	81	88	91	93
Townhouses/6,000 sq ft lots or less ³	69	80	87	90	92
7,000 sq ft lots	63	76	84	89	91
8,000 sq ft lots	58	73	82	88	90
10,000 sq ft lots	38	61	75	83	87
14,000 sq ft lots	30	57	72	81	86
20,000 sq ft lots	25	54	70	80	85
40,000 sq ft lots	20	51	68	79	84
80,000 sq ft lots	12	46	65	77	82

1 Lot size should represent the size of the average lot and not the gross acreage divided by the number of lots.

2 Actual percent impervious value should be compared to selected land use type.

3 In cases where average residential lots are smaller than 6,000 sq ft, commercial/business/industrial land use should be used.

Revision	Date

REFERENCE:

TABLE 602A

B.2.10 SOIL CURVE NUMBER COMPARISON

SOIL COMPARISON 7809

Soil 2016 -Soil 1997	Soil Name *1(USDA)	Soils Group - New *1	Soil Name *2(Soil Survey)	Soils Group Old*2
112-112	ARIZO	A	Arizo	A
152-152	CAVE	D	Cave	D
731-155A	Purob (60%)	D	Cave	D
	Irongold (25%)	D		
	Typic Torriorhents (5%)	A		
	Arizo (3%)	A		
	Purob (3%)	D		
	Typic Haplocalcids (2%)	B		
	Xeric Haplocambids (1%)	A		
	Aridic Calcixerolls (1%)	A		
156 - 155B	Vace (45%)	D	Cave	D
	Wechech (25%)	D		
	Wechech, Steep (15%)	D		
	Weiser (8%)	B		
	Irongold (4%)	D		
	Commski (2%)	B		
	Threelakes (1%)	A		
155 - 155C	Cave	D	Cave	D
191 - 191	Dalian	A	Dalian	B
323 - 360*A	Boxspring (40%)	D	St. Thomas	D
	Srapy (30%)	D		
	Lithic Calciustolls (9%)	D		
	Typic Haplustolls (6%)	D		
320 - 360*B	Boxspring (50%)	D	St. Thomas	D
	Zeheme (25%)	D		
	Zeheme (8%)	D		
	Typic Haploclids (2%)	B		
360 - 360*C	Rock Outcrop (50%)	D	St. Thomas	D
	St. Thomas (35%)	D		
	Weiser (10%)	A		
	Bracken (5%)	A		
502 - 502	Canutio (55%)	A	Canutio (55%)	B
	Cave (40%)	D	Cave	D
	Arizo (5%)	A		
640 - 640	Rock Outcrop (90%)	D	Rock Outcrop	D
	Moentria (5%)	D		
	Nupper (5%)	D		

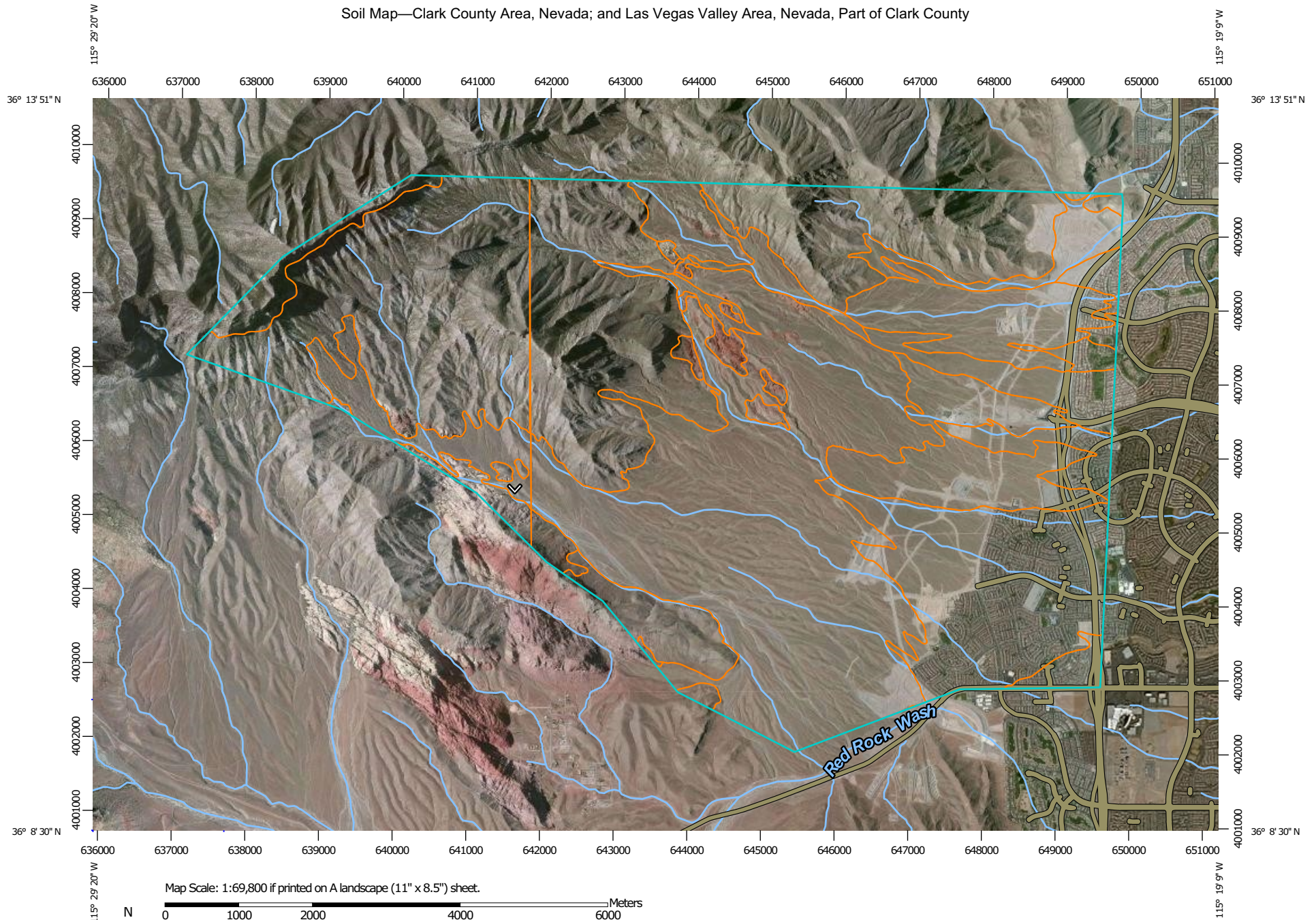
*1 USDA Web Soil Survey <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

*2 USDA Soil Survey of Las Vegas Valley Area Nevada Part of Clark County

Soil (New-Old)	Old CN	New CN	100-yr Old	100-yr New
731-155A	91	89.36	211	198
156-155B	91	90.15	211	204
502-502	87.15	82	180	140
191-191	84	76	155	101
320-360B	91	90.86	211	210
360-360C	91	88.75	211	193
502-502	87.15	82	180	140

B.3 USDA SOIL SURVEY DATA

Soil Map—Clark County Area, Nevada; and Las Vegas Valley Area, Nevada, Part of Clark County



Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification
of soils for engineering purposes. ASTM Standard D2487-00.

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Absence of an entry indicates that the data were not estimated. The asterisk "*" denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).



Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
294—Rock outcrop, sandstone														
Moentria	5	D	0-3	Extremely gravelly loam	GC, GC-GM	A-2	0- 2- 5	0- 3- 8	25-30-35	15-20-25	10-15-20	10-15-20	19-25-30	4-8 -12
			3-9	Extremely gravelly loam, very gravelly loam, extremely gravelly fine sandy loam, very gravelly fine sandy loam, extremely gravelly very fine sandy loam, very gravelly very fine sandy loam	GC, GC-GM	A-2	0- 0- 0	0- 0- 5	25-40-45	15-30-35	15-25-30	10-20-25	18-24-30	4-8 -12
			9-19	Bedrock	—	—	—	—	—	—	—	—	—	—
			19-29	Bedrock	—	—	—	—	—	—	—	—	—	—
Nupper	5	D	0-3	Extremely flaggy loamy fine sand	SM, SC-SM, GC-GM, GM	A-1, A-2	0- 0- 0	60-80-85	40-70-75	35-65-70	35-50-60	10-18-20	16-19-23	2-4 -6
			3-13	Extremely cobbly fine sandy loam, extremely gravelly sandy loam, extremely gravelly fine sandy loam	GC-GM, GP-GC, GC	A-2	0- 0- 5	15-30-45	20-30-40	15-25-35	10-20-25	5-10- 15	18-24-27	4-8 -10
			13-23	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
320—Boxspring-Zeheme-Rock outcrop complex, 15 to 50 to percent slopes MLRA 30														
Boxspring	50	D	0-2	Extremely gravelly loam	GP-GC	A-1-a	7-10- 11	3-16- 20	6-14- 32	3-11- 30	3-10- 27	2- 6- 18	18-21 -25	4-6 -9
			2-5	Very gravelly loam	GC-GM	A-2-4	0- 0- 0	0- 0- 0	35-45- 50	33-43- 48	28-37- 44	19-25- 31	20-23 -29	6-7 -12
			5-15	Extremely gravelly loam	GC-GM	A-2-4	0- 0- 0	0- 0- 0	20-24- 27	18-21- 25	15-19- 23	11-13- 17	20-23 -29	6-7 -12
			15-25	Bedrock	—	—	—	—	—	—	—	—	—	—
Zeheme	25	D	0-2	Extremely gravelly fine sandy loam	GM, GW-GM, GP-GM	A-1	0- 3- 5	0-15- 15	25-33- 40	15-23- 30	10-18- 25	5-10- 15	18-24 -30	NP-3 -5
			2-9	Very gravelly fine sandy loam, very gravelly sandy loam	GM	A-1, A-2	0- 0- 0	5-15- 25	35-45- 55	30-40- 50	20-30- 40	15-23- 30	18-24 -30	NP-3 -5
			9-19	Bedrock	—	—	—	—	—	—	—	—	—	—
Zeheme	8	D	0-3	Extremely stony fine sandy loam	GC	A-2-4	25-28- 40	15-25- 30	25-35- 50	20-30- 45	15-25- 40	10-15- 25	18-24 -29	4-8 -12
			3-13	Very gravelly sandy loam, very gravelly fine sandy loam	GC	A-2, A-2-4	0- 0- 0	5-15- 25	35-45- 55	30-40- 50	20-30- 40	15-23- 30	19-24 -29	4-8 -12

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			13-23	Bedrock	—	—	—	—	—	—	—	—	—	—
Typic haplocalcids	2	B	0-5	Very cobbly sandy loam	GC-GM	A-2-4	0- 2- 3	0- 3- 7	42-49-55	28-40-55	20-31-45	9-15- 23	19-23-27	4-7 -10
			5-14	Extremely gravelly sandy loam	GP-GC	A-1-a	0- 1- 3	0- 3- 6	13-25-35	7-20- 31	5-16- 26	3- 8- 14	16-21-26	2-6 -9
			14-60	Extremely gravelly coarse sandy loam	GP-GC	A-1-a	0- 1- 3	3- 5- 7	19-26-32	6-19- 32	4-12- 21	2- 7- 13	16-21-26	2-6 -9

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
323—Boxspring-Scrapy-Rock outcrop association														
Boxspring	40	D	0-2	Extremely gravelly loam	GP-GC	A-2	0- 0- 0	5-25- 30	25-30- 35	15-20- 25	13-15- 24	9-10- 19	20-25 -30	6-9 -12
			2-15	Extremely gravelly loam, very gravelly loam	GC	A-1, A-2	0- 0- 0	0-10- 25	30-35- 55	20-25- 45	15-22- 40	10-16- 35	20-25 -30	6-9 -12
			15-25	Bedrock	—	—	—	—	—	—	—	—	—	—
Scrapy	30	D	0-1	Very gravelly sandy loam	GP-GM, GM, GC-GM, GP-GC	A-1	0- 0- 5	0- 0- 5	35-40- 50	30-35- 45	10-20- 30	5-15- 20	17-21 -28	2-4 -10
			1-12	Very gravelly loam, extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly loam	GP-GC, GC-GM, GM, GP-GM	A-1, A-2	0- 0- 5	0- 0- 5	25-40- 50	20-35- 45	10-30- 45	5-20- 35	16-20 -27	2-4 -10
			12-22	Bedrock	—	—	—	—	—	—	—	—	—	—
Lithic calciustolls	9	D	0-2	Extremely stony sandy loam	GM, GP-GM	A-1	25-30- 40	15-20- 25	35-48- 60	15-23- 30	10-18- 25	5-13- 20	20-23 -25	NP-3 -5
			2-7	Very gravelly loam	GM	A-1, A-2	0- 0- 0	10-13- 15	40-53- 65	35-43- 50	30-35- 40	20-25- 30	20-23 -25	NP
			7-16	Very gravelly loam, very gravelly very fine sandy loam	SM	A-1, A-2	0- 0- 0	15-23- 30	55-65- 75	45-55- 65	25-35- 45	15-23- 30	20-23 -25	NP-3 -5

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			16-26	Bedrock	—	—	—	—	—	—	—	—	—	—
Typic haplustolls	6	D	0-2	Very stony loam	GM, GP-GM	A-1	0- 3- 5	15-20-25	35-48-60	15-23-30	10-18-25	5-13-20	20-23-25	NP-3 -5
			2-7	Very gravelly loam	GM	A-1, A-2	0- 0- 0	10-13-15	40-53-65	35-43-50	30-35-40	20-25-30	20-23-25	NP
			7-16	Very gravelly loam, very gravelly very fine sandy loam	GM	A-1, A-2	0- 0- 0	15-20-30	50-60-70	45-55-65	25-35-45	15-23-30	20-23-25	NP-3 -5
			16-26	Unweathered bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
351—Seralin extremely gravelly loam, 30 to 75 percent slopes														
Seralin	85	D	0-2	Extremely gravelly loam	GP-GC	A-2	0- 0- 0	5-25- 30	25-30- 35	15-20- 25	13-15- 24	9-10- 19	20-25 -30	6-9 -12
			2-14	Extremely gravelly loam, extremely gravelly very fine sandy loam, very gravelly loam, very gravelly very fine sandy loam	GC-GM, GC, GP-GC	A-2	0- 0- 5	5-15- 25	15-40- 45	10-35- 40	8-27- 30	5-17- 25	21-26 -31	6-9 -12
			14-24	Bedrock	—	—	—	—	—	—	—	—	—	—
Potosi	7	D	0-2	Very gravelly loam	GM	A-1	0- 5- 10	0- 8- 15	40-50- 55	30-40- 45	10-15- 20	10-15- 20	15-20 -25	NP-3 -5
			2-11	Extremely gravelly loam, very gravelly sandy loam	GM, GP-GM	A-1	0- 0- 0	0- 8- 15	20-33- 45	10-23- 35	10-15- 20	5-13- 20	15-20 -25	NP-3 -5
			11-21	Bedrock	—	—	—	—	—	—	—	—	—	—
Lithic torriorthents	4	D	0-2	Extremely gravelly sandy loam	GP	A-1	5-10- 15	10-18- 25	15-18- 20	10-13- 15	5- 8- 10	0- 3- 5	17-21 -25	3-5 -7
			2-11	Very gravelly sandy loam	GM, GP-GM	A-1, A-2	0- 0- 0	0- 0- 0	35-48- 60	25-38- 50	20-33- 45	5-20- 35	15-20 -25	NP-3 -5
			11-21	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
731—Purob-Irongold association														
Purob	60	D	0-3	Extremely gravelly loam	GC-GM, GC	A-2	0- 2- 5	0- 6- 10	25-33-40	15-23-30	13-18-25	10-15-20	18-23-29	3-7 -10
			3-8	Gravelly loam, very gravelly loam	GC-GM, GC, SC, SC-SM	A-4, A-6, A-2	0- 0- 5	0- 0- 5	45-55-80	35-45-70	30-45-60	25-38-50	22-30-34	7-13-14
			8-19	Extremely gravelly loam, extremely gravelly clay loam, very gravelly loam	GC, GC-GM	A-2	0- 0- 5	0- 7- 15	25-40-55	15-30-45	15-25-35	10-20-30	22-31-31	7-12-14
			19-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Irongold	25	D	0-1	Extremely gravelly loam	GM	A-1	0- 2- 5	0- 8- 10	25-30-35	15-20-25	15-18-20	10-13-15	15-20-25	NP-3 -5
			1-7	Gravelly loam, loam	SM, ML, GM, CL-ML	A-4	0- 0- 5	0- 0- 5	70-83-95	60-75-90	50-65-80	45-58-70	15-20-25	NP-3 -5
			7-11	Gravelly sandy loam, very gravelly loam, very gravelly sandy loam, gravelly loam	GM, SM	A-1, A-2, A-4	0- 3- 5	0- 5- 10	35-48-65	30-43-60	20-35-50	15-28-40	15-20-25	NP-3 -5
			11-34	Cemented material	—	—	—	—	—	—	—	—	—	—
			34-60	Extremely gravelly loamy coarse sand	GP, GP-GM	A-1	0- 0- 5	0- 0- 5	30-38-45	10-18-25	5- 8- 10	0- 5- 10	0-17 -21	NP-2 -4
Typic torriorthents	5	A	0-3	Very gravelly sandy loam	GP, GP-GM	A-1	0- 0- 0	15-28-40	20-28-35	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
			3-9	Extremely gravelly sandy loam, extremely gravelly fine sandy loam	GP, GP-GM	A-1	0- 0- 0	10-20-30	20-28-35	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			9-31	Extremely gravelly fine sandy loam, extremely gravelly sandy loam	GP, GW-GM	A-1	0- 3- 5	0- 5- 10	20-30-40	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
			31-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly fine sandy loam	GP, GW-GM	A-1	0- 3- 5	0- 5- 10	20-30-40	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
Arizo	3	A	0-5	Extremely gravelly loamy coarse sand	GP-GM, GP	A-1	0- 2- 5	0- 5- 10	30-40-50	15-25-30	5-10- 15	0- 5- 10	10-12-15	NP-2 -5
			5-60	Stratified very gravelly coarse sand to extremely gravelly sand	GP-GM, SP-SM, SP, GP	A-1	0- 0- 5	0- 5- 25	25-40-55	10-25-45	5-15- 30	0- 3- 7	0-0 -18	NP-0 -2
Purob	3	D	0-3	Extremely gravelly loam	GC, GC-GM	A-2	0- 2- 5	0- 6- 10	25-33-40	15-23-30	13-18-25	10-15-20	18-23-29	3-7 -10
			3-8	Gravelly loam, very gravelly loam	GC-GM, GC, SC, SC-SM	A-4, A-6, A-2	0- 0- 5	0- 0- 5	45-55-80	35-45-70	30-45-60	25-38-50	22-30-34	7-13-14
			8-19	Extremely gravelly loam, very gravelly loam, extremely gravelly clay loam	GC, GC-GM	A-2	0- 0- 5	0- 7- 15	25-40-55	15-30-45	15-25-35	10-20-30	22-31-31	7-12-14

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			19-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Typic haplocalcids	2	B	0-5	Very gravelly fine sandy loam	GM	A-1, A-2	0- 3- 5	0- 5- 10	35-45-55	25-38-50	20-30-40	10-20-30	25-28-30	NP-3 -5
			5-14	Extremely gravelly sandy loam	GP-GM	A-1	0- 3- 5	0- 5- 10	25-30-35	15-20-25	10-15-20	5- 8- 10	25-28-30	NP-3 -5
			14-60	Extremely gravelly fine sandy loam, extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GP-GM	A-1	0- 3- 5	5-13- 20	25-30-35	15-20-25	10-15-20	5- 8- 10	25-28-30	NP-3 -5
Aridic calcixerolls	1	A	0-3	Very gravelly sandy loam	GM, SM	A-1-b	0- 0- 0	0- 8- 15	30-47-65	25-38-50	20-30-40	10-18-25	15-20-25	NP-3 -5
			3-10	Gravelly fine sandy loam	GM, SM	A-4, A-1, A-2-4	0- 0- 0	0- 5- 10	55-70-85	50-63-75	35-50-65	20-33-45	15-20-25	NP-3 -5
			10-46	Extremely gravelly sandy loam, extremely gravelly fine sandy loam	GP, GM, GP-GM, GP-GM	A-1-a	0- 0- 0	0- 8- 15	20-35-50	10-20-30	5-18- 30	0- 8- 15	15-20-25	NP-3 -5

Engineering Properties—Clark County Area, Nevada														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			46-60	Very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy coarse sand	GP-GM, GM, SP-SM, SM	A-1	0- 0- 0	0- 3- 5	30-47-65	20-35-50	10-23-35	5-13- 20	15-18-20	NP-3 -5
Xeric haplocambids	1	A	0-3	Very gravelly sandy loam	GM, SM	A-1	0- 0- 0	0- 8- 15	30-47-65	25-38-50	20-30-40	10-18-25	15-20-25	NP-3 -5
			3-10	Gravelly fine sandy loam	GM, SM	A-4, A-1, A-2	0- 0- 0	0- 5- 10	55-70-85	50-63-75	35-50-65	20-33-45	15-20-25	NP-3 -5
			10-46	Extremely gravelly fine sandy loam, extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0- 0- 0	0- 8- 15	20-35-50	10-20-30	5-18- 30	0- 8- 15	15-20-25	NP-3 -5
			46-60	Very gravelly loamy coarse sand, extremely gravelly sandy loam	GP-GM, GM, SP-SM, SM	A-1	0- 0- 0	0- 3- 5	30-47-65	20-35-50	10-23-35	5-13- 20	15-18-20	NP-3 -5

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
112—Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes														
Arizo	100	A	0-2	Very gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1	0- 0- 5	0- 7- 15	40-50-60	30-40-50	15-23-30	5-10- 15	0-17 -21	NP-2 -4
			2-60	Stratified extremely gravelly loamy sand to cobbly coarse sand	GP, GP-GM	A-1	0- 3- 5	5-22- 30	35-45-55	20-35-50	10-20-30	0- 5- 10	0-16 -19	NP-1 -3

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
151—Vace-Jean association														
Vace	50	D	0-2	Gravelly fine sandy loam	SC, SC-SM, GC	A-2	0- 0- 1	0- 0- 5	60-70-85	50-60-75	35-45-55	15-20-35	18-24-30	4-8 -12
			2-8	Loam, gravelly fine sandy loam, fine sandy loam, gravelly loam	CL, CL-ML, SC	A-6, A-4	0- 0- 0	0- 0- 5	65-95-100	55-90-100	50-75-85	40-55-65	18-24-30	4-8 -12
			8-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Jean	35	A	0-1	Gravelly loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	75-80-85	65-70-75	55-63-70	15-20-25	0-0 -19	NP-0 -2
			1-18	Loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	90-95-100	75-88-100	65-78-90	25-30-35	0-0 -19	NP-0 -2
			18-60	Stratified extremely gravelly sand to very gravelly loamy fine sand	GW-GM, GW, GP, GP-GM	A-1	0- 3- 5	10-25-35	25-35-45	10-23-35	5-18-30	0- 5- 10	0-0 -19	NP-0 -2
Jean	6	A	0-1	Gravelly loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	75-80-85	65-70-75	55-63-70	15-20-25	0-0 -19	NP-0 -2
			1-18	Loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	90-95-100	75-88-100	65-78-90	25-30-35	0-0 -19	NP-0 -2

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			18-60	Stratified extremely gravelly sand to very gravelly loamy fine sand	GP, GW-GM	A-1	0- 3- 5	10-25-35	25-35-45	10-23-35	5-18- 30	0- 5- 10	0-0 -19	NP-0 -2
Irongold	4	D	0-1	Extremely gravelly loam	GM	A-1	0- 2- 5	0- 8- 10	25-30-35	15-20-25	15-18-20	10-13-15	15-20-25	NP-3 -5
			1-7	Loam, gravelly loam	SM, ML, GM, CL-ML	A-4	0- 0- 5	0- 0- 5	70-83-95	60-75-90	50-65-80	45-58-70	15-20-25	NP-3 -5
			7-11	Very gravelly sandy loam, gravelly loam, gravelly sandy loam, very gravelly loam	GM, SM	A-1, A-2, A-4	0- 3- 5	0- 5- 10	35-48-65	30-43-60	20-35-50	15-28-40	15-20-25	NP-3 -5
			11-34	Cemented material	—	—	—	—	—	—	—	—	—	—
			34-60	Extremely gravelly loamy coarse sand	GP, GP-GM	A-1	0- 0- 5	0- 0- 5	30-38-45	10-18-25	5- 8- 10	0- 5- 10	0-17 -21	NP-2 -4
Riverwash	4		0-6	Extremely gravelly coarse sand	GP, GW	A-1	0- 5- 10	0-13- 25	10-25-40	10-23-35	5-15- 25	0- 3- 5	0-0 -14	NP

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			6-60	Stratified extremely gravelly coarse sand to gravelly sand	GP, GW, SP, SW	A-1	0- 5- 10	0-13- 25	25-40- 55	25-38- 50	10-20- 30	0- 3- 5	0-0 -14	NP
Purob	1	D	0-3	Extremely gravelly loam	GC, GC-GM	A-2	0- 2- 5	0- 6- 10	25-33- 40	15-23- 30	13-18- 25	10-15- 20	18-23 -29	3-7 -10
			3-8	Gravelly loam, very gravelly loam	GC-GM, GC, SC, SC-SM	A-4, A-6, A-2	0- 0- 5	0- 0- 5	45-55- 80	35-45- 70	30-45- 60	25-38- 50	22-30 -34	7-13-14
			8-19	Very gravelly loam, extremely gravelly clay loam, extremely gravelly loam	GC, GC-GM	A-2	0- 0- 5	0- 7- 15	25-40- 55	15-30- 45	15-25- 35	10-20- 30	22-31 -31	7-12-14
			19-60	Cemented material	—	—	—	—	—	—	—	—	—	—
152—Cave gravelly fine sandy loam, 0 to 4 percent slopes														
Cave	100	D	0-12	Gravelly fine sandy loam	SC-SM, SM	A-2, A-4	0- 0- 0	0- 3- 5	70-80- 90	60-68- 75	40-53- 65	25-33- 40	15-20 -25	NP-3 -5
			12-36	Indurated	—	—	—	—	—	—	—	—	—	—
			36-60	Gravelly loamy sand, very gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2	0- 0- 0	0- 3- 5	35-55- 75	30-45- 60	20-28- 35	10-20- 30	0-8 -15	NP
155—Cave gravelly fine sandy loam, 4 to 15 percent slopes														
Cave	100	D	0-15	Gravelly fine sandy loam	SC-SM, SM	A-2, A-4	0- 0- 0	0- 3- 5	70-80- 90	60-68- 75	40-53- 65	25-33- 40	15-20 -25	NP-3 -5
			15-60	Indurated	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
156—Vace-Wechech association														
Vace	45	D	0-2	Gravelly fine sandy loam	GC, SC, SC-SM	A-2	0- 0- 1	0- 0- 5	60-70-85	50-60-75	35-45-55	15-20-35	18-24-30	4-8 -12
			2-8	Gravelly loam, fine sandy loam, gravelly fine sandy loam, loam	CL, CL-ML, SC	A-6, A-4	0- 0- 0	0- 0- 5	65-95-100	55-90-100	50-75-85	40-55-65	18-24-30	4-8 -12
			8-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Wechech	25	D	0-2	Very gravelly sandy loam	GC, GC-GM	A-1, A-2	0- 0- 0	5- 8- 15	35-50-55	30-45-50	20-25-35	10-15-20	18-22-30	4-6 -12
			2-7	Very gravelly sandy loam, very gravelly fine sandy loam	GC-GM	A-1, A-2	0- 0- 0	0- 0- 5	35-50-55	30-45-50	20-30-35	12-20-25	18-22-30	4-6 -12
			7-13	Very gravelly sandy loam, very gravelly fine sandy loam	GC-GM, GC	A-2, A-1	0- 0- 0	0- 8- 10	35-40-50	30-35-45	15-30-40	8-15- 25	18-22-30	4-6 -12
			13-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Wechech, steep	15	D	0-2	Very gravelly sandy loam	GC, GC-GM	A-1, A-2	0- 0- 0	5- 8- 15	35-50-55	30-45-50	20-25-35	10-15-20	18-22-30	4-6 -12
			2-7	Very gravelly fine sandy loam, very gravelly sandy loam	GC-GM	A-1, A-2	0- 0- 0	0- 0- 5	35-50-55	30-45-50	20-30-35	12-20-25	18-22-30	4-6 -12
			7-13	Very gravelly sandy loam, very gravelly fine sandy loam	GC-GM, GC	A-2, A-1	0- 0- 0	0- 8- 10	35-40-50	30-35-45	15-30-40	8-15- 25	18-22-30	4-6 -12

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			13-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Weiser	8	B	0-6	Gravelly very fine sandy loam	GM, SM	A-4	0- 0- 0	0- 0- 0	60-70-80	55-65-75	50-60-70	35-43-50	15-20-25	NP-3 -5
			6-10	Extremely gravelly loam	GP-GM	A-1	0- 3- 5	0- 5- 10	15-23-30	10-18-25	5-13- 20	5- 8- 10	15-20-25	NP-3 -5
			10-42	Extremely gravelly sandy loam	GP, GP-GM	A-1	0- 3- 5	0- 5- 10	15-23-30	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
			42-60	Extremely gravelly sandy loam	GP, GP-GC, GP-GM	A-1, A-2	0- 3- 5	0- 5- 10	15-23-30	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-5 -10
Irongold	4	D	0-1	Very gravelly sandy loam	GM	A-1	0- 3- 5	0- 5- 10	40-50-55	35-45-50	15-18-20	10-13-15	15-20-25	NP-3 -5
			1-7	Loam, gravelly loam	SM, ML, GM, CL-ML	A-4	0- 0- 5	0- 0- 5	70-83-95	60-75-90	50-65-80	45-58-70	15-20-25	NP-3 -5
			7-11	Gravelly sandy loam, very gravelly loam, very gravelly sandy loam, gravelly loam	GM, SM	A-1, A-2, A-4	0- 3- 5	0- 5- 10	35-48-65	30-43-60	20-35-50	15-28-40	15-20-25	NP-3 -5
			11-34	Cemented material	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			34-60	Extremely gravelly loamy coarse sand	GP, GP-GM	A-1	0- 0- 5	0- 0- 5	30-38-45	10-18-25	5- 8- 10	0- 5- 10	0-17 -21	NP-2 -4
Commski	2	B	0-3	Extremely gravelly loam	GW-GM, GM	A-1	0- 8- 10	0- 8- 10	20-30-35	10-20-25	10-18-25	7-13- 17	15-20 -25	NP-3 -5
			3-60	Extremely gravelly coarse sandy loam, extremely gravelly fine sandy loam, extremely gravelly sandy loam	GW-GM	A-1	0- 2- 5	0- 3- 10	20-30-35	10-20-25	7-13- 18	4- 8- 10	25-28 -30	NP-3 -5
Threelakes	1	A	0-4	Extremely gravelly loamy sand	GP-GM, GP	A-1	0- 2- 5	10-15-23	30-40-50	15-25-30	5-10- 15	0- 5- 10	10-12 -15	NP-2 -5
			4-31	Extremely gravelly fine sandy loam, extremely gravelly sandy loam	GP, GP-GM, GP-GC	A-1, A-2	0- 0- 5	0- 7- 10	20-28-35	10-18-25	5-13- 20	0- 5- 10	16-22 -27	2-6 -10
			31-60	Stratified extremely gravelly fine sandy loam to extremely gravelly loamy coarse sand	GP, GW-GC	A-1, A-2	0- 0- 5	0- 5- 8	20-30-40	10-18-25	5-13- 20	0- 5- 10	17-22 -27	3-6 -10
191—Dalian very cobbly fine sandy loam, 2 to 8 percent slopes														
Dalian	100	A	0-5	Very cobbly fine sandy loam	GM	A-1, A-2	0- 0- 0	35-43-50	55-60-65	50-55-60	40-48-55	20-25-30	0-7 -14	NP
			5-60	Very gravelly sandy loam, very gravelly fine sandy loam	GM	A-1	0- 0- 0	5- 8- 10	35-45-55	30-40-50	20-30-40	10-18-25	0-7 -14	NP

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
263—Jean complex, 2 to 4 percent slopes														
Jean	55	A	0-1	Gravelly loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	75-80-85	65-70-75	55-63-70	15-20-25	0-7 -14	NP
			1-11	Loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	90-95-100	75-88-100	65-78-90	25-30-35	0-7 -14	NP
			11-60	Stratified extremely gravelly sand to very gravelly loamy fine sand	GP, GP-GM	A-1	0- 3- 5	10-25-40	25-35-45	10-23-35	5-18- 30	0- 5- 10	0-7 -14	NP
Jean	40	A	0-1	Very gravelly loamy fine sand	GM, SM, SP-SM, GW-GM	A-1	0- 0- 0	0-15- 30	40-50-60	25-38-50	20-30-40	5-10- 15	0-7 -14	NP
			1-11	Loamy fine sand	SM	A-2	0- 0- 0	0- 0- 0	90-95-100	75-88-100	65-78-90	25-30-35	0-7 -14	NP
			11-60	Stratified extremely gravelly sand to very gravelly loamy fine sand	GP, GW-GM	A-1	0- 3- 5	10-25-40	25-35-45	10-23-35	5-18- 30	0- 5- 10	0-7 -14	NP
Goodsprings	5	D	0-5	Gravelly fine sandy loam	GM, SM	A-2	0- 0- 0	0- 0- 0	55-68-80	50-63-75	40-50-60	25-30-35	0-7 -14	NP
			5-15	Gravelly fine sandy loam	GM, SM	A-2	0- 0- 0	0- 5- 10	60-68-75	55-63-70	45-50-55	25-30-35	0-7 -14	NP
			15-52	Cemented	—	—	—	—	—	—	—	—	—	—
			52-60	Extremely gravelly loamy fine sand, extremely gravelly sandy loam	GP, GP-GM	A-1	0- 0- 0	10-13-15	15-23-30	10-18-25	5-13- 20	0- 5- 10	0-7 -14	NP

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
320—Boxspring-Zeheme-Rock outcrop complex, 15 to 50 to percent slopes MLRA 30														
Boxspring	50	D	0-2	Extremely gravelly loam	GP-GC	A-1-a	7-10- 11	3-16- 20	6-14- 32	3-11- 30	3-10- 27	2- 6- 18	18-21 -25	4-6 -9
			2-5	Very gravelly loam	GC-GM	A-2-4	0- 0- 0	0- 0- 0	35-45- 50	33-43- 48	28-37- 44	19-25- 31	20-23 -29	6-7 -12
			5-15	Extremely gravelly loam	GC-GM	A-2-4	0- 0- 0	0- 0- 0	20-24- 27	18-21- 25	15-19- 23	11-13- 17	20-23 -29	6-7 -12
			15-25	Bedrock	—	—	—	—	—	—	—	—	—	—
Zeheme	25	D	0-2	Extremely gravelly fine sandy loam	GM, GW-GM, GP-GM	A-1	0- 3- 5	0-15- 15	25-33- 40	15-23- 30	10-18- 25	5-10- 15	18-24 -30	NP-3 -5
			2-9	Very gravelly fine sandy loam, very gravelly sandy loam	GM	A-1, A-2	0- 0- 0	5-15- 25	35-45- 55	30-40- 50	20-30- 40	15-23- 30	18-24 -30	NP-3 -5
			9-19	Bedrock	—	—	—	—	—	—	—	—	—	—
Zeheme	8	D	0-3	Extremely stony fine sandy loam	GC	A-2-4	25-28- 40	15-25- 30	25-35- 50	20-30- 45	15-25- 40	10-15- 25	18-24 -29	4-8 -12
			3-13	Very gravelly sandy loam, very gravelly fine sandy loam	GC	A-2, A-2-4	0- 0- 0	5-15- 25	35-45- 55	30-40- 50	20-30- 40	15-23- 30	19-24 -29	4-8 -12

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			13-23	Bedrock	—	—	—	—	—	—	—	—	—	—
Typic haplocalcids	2	B	0-5	Very cobbly sandy loam	GC-GM	A-2-4	0- 2- 3	0- 3- 7	42-49-55	28-40-55	20-31-45	9-15- 23	19-23-27	4-7 -10
			5-14	Extremely gravelly sandy loam	GP-GC	A-1-a	0- 1- 3	0- 3- 6	13-25-35	7-20- 31	5-16- 26	3- 8- 14	16-21-26	2-6 -9
			14-60	Extremely gravelly coarse sandy loam	GP-GC	A-1-a	0- 1- 3	3- 5- 7	19-26-32	6-19- 32	4-12- 21	2- 7- 13	16-21-26	2-6 -9

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
323—Boxspring-Scrapy-Rock outcrop association														
Boxspring	40	D	0-2	Extremely gravelly loam	GP-GC	A-2	0- 0- 0	5-25- 30	25-30-35	15-20-25	13-15-24	9-10- 19	20-25-30	6-9 -12
			2-15	Extremely gravelly loam, very gravelly loam	GC	A-1, A-2	0- 0- 0	0-10- 25	30-35-55	20-25-45	15-22-40	10-16-35	20-25-30	6-9 -12
			15-25	Bedrock	—	—	—	—	—	—	—	—	—	—
Scrapy	30	D	0-1	Very gravelly sandy loam	GP-GM, GM, GC-GM, GP-GC	A-1	0- 0- 5	0- 0- 5	35-40-50	30-35-45	10-20-30	5-15- 20	17-21-28	2-4 -10
			1-12	Very gravelly loam, extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly loam	GP-GC, GC-GM, GM, GP-GM	A-1, A-2	0- 0- 5	0- 0- 5	25-40-50	20-35-45	10-30-45	5-20- 35	16-20-27	2-4 -10
			12-22	Bedrock	—	—	—	—	—	—	—	—	—	—
Lithic calciustolls	9	D	0-2	Extremely stony sandy loam	GM, GP-GM	A-1	25-30-40	15-20-25	35-48-60	15-23-30	10-18-25	5-13- 20	20-23-25	NP-3 -5
			2-7	Very gravelly loam	GM	A-1, A-2	0- 0- 0	10-13-15	40-53-65	35-43-50	30-35-40	20-25-30	20-23-25	NP
			7-16	Very gravelly loam, very gravelly very fine sandy loam	SM	A-1, A-2	0- 0- 0	15-23-30	55-65-75	45-55-65	25-35-45	15-23-30	20-23-25	NP-3 -5

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			16-26	Bedrock	—	—	—	—	—	—	—	—	—	—
Typic haplustolls	6	D	0-2	Very stony loam	GM, GP-GM	A-1	0- 3- 5	15-20-25	35-48-60	15-23-30	10-18-25	5-13- 20	20-23-25	NP-3 -5
			2-7	Very gravelly loam	GM	A-1, A-2	0- 0- 0	10-13-15	40-53-65	35-43-50	30-35-40	20-25-30	20-23-25	NP
			7-16	Very gravelly loam, very gravelly very fine sandy loam	GM	A-1, A-2	0- 0- 0	15-20-30	50-60-70	45-55-65	25-35-45	15-23-30	20-23-25	NP-3 -5
			16-26	Unweathered bedrock	—	—	—	—	—	—	—	—	—	—
360—Rock outcrop-St. Thomas complex, 15 to 30 percent slopes														
St. thomas	35	D	0-7	Extremely cobbly fine sandy loam	GM, SM	A-1	0- 3- 5	55-65-75	45-58-70	35-48-60	25-33-40	10-18-25	15-18-20	NP-3 -5
			7-17	Unweathered bedrock	—	—	—	—	—	—	—	—	—	—
Weiser	10	A	0-1	Extremely gravelly fine sandy loam	GC-GM, GM, GP-GC, GP-GM	A-1, A-2	0- 3- 5	0- 8- 15	15-25-35	10-20-30	10-18-25	5-10- 15	15-20-25	NP-5 -10
			1-63	Stratified extremely gravelly sandy loam to very gravelly fine sandy loam	GM, GP, GP-GM, GP-GC, GW-GC	A-1, A-2	0- 3- 5	0-20- 40	20-28-35	10-23-35	5-18- 30	0-10- 20	15-20-25	NP-5 -10
Bracken	5	A	0-1	Very cobbly fine sandy loam	GM, SM	A-1	0- 1- 1	25-40-55	45-53-60	40-48-55	25-35-45	10-18-25	0-7 -14	NP
			1-50	Gypsiferous material	GP	A-1	—	—	—	—	—	—	—	—
			50-60	Weathered bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
502—Canutio-Cave gravelly fine sandy loams, 2 to 8 percent slopes														
Canutio	55	A	0-9	Gravelly fine sandy loam	GC, GC- GM, SC-SM, SM	A-1, A-2	0- 0- 0	0- 8- 15	60-70- 80	55-65- 75	40-50- 60	20-28- 35	15-20 -25	NP-5 -10
			9-60	Stratified extremely gravelly loamy coarse sand to gravelly loam	GC, GC- GM, GM, GP-GM	A-1, A-2	0- 0- 0	5-18- 30	30-43- 55	25-38- 50	15-25- 35	10-20- 30	15-20 -25	NP-5 -10
Cave	40	D	0-16	Gravelly fine sandy loam	SC-SM, SM	A-2, A-4	0- 0- 0	0- 3- 5	70-80- 90	60-68- 75	40-53- 65	25-33- 40	15-20 -25	NP-3 -5
			16-30	Indurated	—	—	—	—	—	—	—	—	—	—
			30-60	Gravelly loamy sand, very gravelly sandy loam	GM, GP- GM, SM, SP- SM	A-1, A-2	0- 0- 0	0- 3- 5	35-55- 75	30-45- 60	20-28- 35	10-20- 30	0-8 -15	NP
Arizo	5	A	0-2	Very gravelly loamy sand	GM, GP- GM, SM, SP- SM	A-1	0- 0- 5	0- 7- 15	40-50- 60	30-40- 50	15-23- 30	5-10- 15	0-17 -21	NP-2 -4
			2-60	Stratified extremely gravelly loamy sand to cobbly coarse sand	GP, GP- GM	A-1	0- 3- 5	5-22- 30	35-45- 55	20-35- 50	10-20- 30	0- 5- 10	0-16 -19	NP-1 -3

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
640—Rock outcrop, sandstone														
Moentria	5	D	0-3	Extremely gravelly loam	GC, GC-GM	A-2	0- 2- 5	0- 3- 8	25-30-35	15-20-25	10-15-20	10-15-20	19-25-30	4-8 -12
			3-9	Extremely gravelly loam, very gravelly loam, extremely gravelly fine sandy loam, very gravelly fine sandy loam, extremely gravelly very fine sandy loam, very gravelly very fine sandy loam	GC, GC-GM	A-2	0- 0- 0	0- 0- 5	25-40-45	15-30-35	15-25-30	10-20-25	18-24-30	4-8 -12
			9-19	Bedrock	—	—	—	—	—	—	—	—	—	—
			19-29	Bedrock	—	—	—	—	—	—	—	—	—	—
Nupper	5	D	0-3	Extremely flaggy loamy fine sand	SC-SM, GC-GM, GM, SM	A-1, A-2	0- 0- 0	60-80-85	40-70-75	35-65-70	35-50-60	10-18-20	16-19-23	2-4 -6
			3-13	Extremely cobbly fine sandy loam, extremely gravelly sandy loam, extremely gravelly fine sandy loam	GC-GM, GP-GC, GC	A-2	0- 0- 5	15-30-45	20-30-40	15-25-35	10-20-25	5-10- 15	18-24-27	4-8 -10
			13-23	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
731—Purob-Irongold association														
Purob	60	D	0-3	Extremely gravelly loam	GC-GM, GC	A-2	0- 2- 5	0- 6- 10	25-33-40	15-23-30	13-18-25	10-15-20	18-23-29	3-7 -10
			3-8	Gravelly loam, very gravelly loam	GC-GM, GC, SC, SC-SM	A-4, A-6, A-2	0- 0- 5	0- 0- 5	45-55-80	35-45-70	30-45-60	25-38-50	22-30-34	7-13-14
			8-19	Extremely gravelly loam, extremely gravelly clay loam, very gravelly loam	GC, GC-GM	A-2	0- 0- 5	0- 7- 15	25-40-55	15-30-45	15-25-35	10-20-30	22-31-31	7-12-14
			19-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Irongold	25	D	0-1	Extremely gravelly loam	GM	A-1	0- 2- 5	0- 8- 10	25-30-35	15-20-25	15-18-20	10-13-15	15-20-25	NP-3 -5
			1-7	Gravelly loam, loam	SM, ML, GM, CL-ML	A-4	0- 0- 5	0- 0- 5	70-83-95	60-75-90	50-65-80	45-58-70	15-20-25	NP-3 -5
			7-11	Gravelly sandy loam, very gravelly loam, very gravelly sandy loam, gravelly loam	GM, SM	A-1, A-2, A-4	0- 3- 5	0- 5- 10	35-48-65	30-43-60	20-35-50	15-28-40	15-20-25	NP-3 -5
			11-34	Cemented material	—	—	—	—	—	—	—	—	—	—
			34-60	Extremely gravelly loamy coarse sand	GP, GP-GM	A-1	0- 0- 5	0- 0- 5	30-38-45	10-18-25	5- 8- 10	0- 5- 10	0-17 -21	NP-2 -4
Typic torriorthents	5	A	0-3	Very gravelly sandy loam	GP, GP-GM	A-1	0- 0- 0	15-28-40	20-28-35	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
			3-9	Extremely gravelly sandy loam, extremely gravelly fine sandy loam	GP, GP-GM	A-1	0- 0- 0	10-20-30	20-28-35	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			9-31	Extremely gravelly fine sandy loam, extremely gravelly sandy loam	GP, GW-GM	A-1	0- 3- 5	0- 5- 10	20-30-40	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
			31-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly fine sandy loam	GP, GW-GM	A-1	0- 3- 5	0- 5- 10	20-30-40	10-18-25	5-13- 20	0- 5- 10	15-20-25	NP-3 -5
Arizo	3	A	0-5	Extremely gravelly loamy coarse sand	GP-GM, GP	A-1	0- 2- 5	0- 5- 10	30-40-50	15-25-30	5-10- 15	0- 5- 10	10-12-15	NP-2 -5
			5-60	Stratified very gravelly coarse sand to extremely gravelly sand	GP-GM, SP-SM, SP, GP	A-1	0- 0- 5	0- 5- 25	25-40-55	10-25-45	5-15- 30	0- 3- 7	0-0 -18	NP-0 -2
Purob	3	D	0-3	Extremely gravelly loam	GC, GC-GM	A-2	0- 2- 5	0- 6- 10	25-33-40	15-23-30	13-18-25	10-15-20	18-23-29	3-7 -10
			3-8	Gravelly loam, very gravelly loam	GC-GM, GC, SC, SC-SM	A-4, A-6, A-2	0- 0- 5	0- 0- 5	45-55-80	35-45-70	30-45-60	25-38-50	22-30-34	7-13-14
			8-19	Extremely gravelly loam, very gravelly loam, extremely gravelly clay loam	GC, GC-GM	A-2	0- 0- 5	0- 7- 15	25-40-55	15-30-45	15-25-35	10-20-30	22-31-31	7-12-14

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			19-60	Cemented material	—	—	—	—	—	—	—	—	—	—
Typic haplocalcids	2	B	0-5	Very gravelly fine sandy loam	GM	A-1, A-2	0- 3- 5	0- 5- 10	35-45-55	25-38-50	20-30-40	10-20-30	25-28-30	NP-3 -5
			5-14	Extremely gravelly sandy loam	GP-GM	A-1	0- 3- 5	0- 5- 10	25-30-35	15-20-25	10-15-20	5- 8- 10	25-28-30	NP-3 -5
			14-60	Extremely gravelly fine sandy loam, extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GP-GM	A-1	0- 3- 5	5-13- 20	25-30-35	15-20-25	10-15-20	5- 8- 10	25-28-30	NP-3 -5
Aridic calcixerolls	1	A	0-3	Very gravelly sandy loam	GM, SM	A-1-b	0- 0- 0	0- 8- 15	30-47-65	25-38-50	20-30-40	10-18-25	15-20-25	NP-3 -5
			3-10	Gravelly fine sandy loam	GM, SM	A-4, A-1, A-2-4	0- 0- 0	0- 5- 10	55-70-85	50-63-75	35-50-65	20-33-45	15-20-25	NP-3 -5
			10-46	Extremely gravelly sandy loam, extremely gravelly fine sandy loam	GP, GM, GP-GM, GP-GM	A-1-a	0- 0- 0	0- 8- 15	20-35-50	10-20-30	5-18- 30	0- 8- 15	15-20-25	NP-3 -5

Engineering Properties—Las Vegas Valley Area, Nevada, Part of Clark County														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
			46-60	Very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy coarse sand	GP-GM, GM, SP-SM, SM	A-1	0- 0- 0	0- 3- 5	30-47-65	20-35-50	10-23-35	5-13-20	15-18-20	NP-3 -5
Xeric haplocambids	1	A	0-3	Very gravelly sandy loam	GM, SM	A-1	0- 0- 0	0- 8- 15	30-47-65	25-38-50	20-30-40	10-18-25	15-20-25	NP-3 -5
			3-10	Gravelly fine sandy loam	GM, SM	A-4, A-1, A-2	0- 0- 0	0- 5- 10	55-70-85	50-63-75	35-50-65	20-33-45	15-20-25	NP-3 -5
			10-46	Extremely gravelly fine sandy loam, extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0- 0- 0	0- 8- 15	20-35-50	10-20-30	5-18-30	0- 8- 15	15-20-25	NP-3 -5
			46-60	Very gravelly loamy coarse sand, extremely gravelly sandy loam	GP-GM, GM, SP-SM, SM	A-1	0- 0- 0	0- 3- 5	30-47-65	20-35-50	10-23-35	5-13-20	15-18-20	NP-3 -5

Data Source Information

Soil Survey Area: Clark County Area, Nevada

Survey Area Data: Version 11, Sep 16, 2016

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 11, Sep 16, 2016



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clark County Area, Nevada

Survey Area Data: Version 11, Sep 16, 2016

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 11, Sep 16, 2016

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 7, 2011—Feb 25, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Clark County Area, Nevada (NV755)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
294	Rock outcrop, sandstone	119.6	0.7%
320	Boxspring-Zeheme-Rock outcrop complex, 15 to 50 to percent slopes MLRA 30	27.5	0.2%
323	Boxspring-Scrapy-Rock outcrop association	2,409.2	14.7%
351	Seralin extremely gravelly loam, 30 to 75 percent slopes	226.0	1.4%
731	Purob-Irongold association	397.1	2.4%
Subtotals for Soil Survey Area		3,179.5	19.4%
Totals for Area of Interest		16,376.7	100.0%

Las Vegas Valley Area, Nevada, Part of Clark County (NV788)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
112	Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes	79.0	0.5%
152	Cave gravelly fine sandy loam, 0 to 4 percent slopes	517.5	3.2%
155	Cave gravelly fine sandy loam, 4 to 15 percent slopes	983.3	6.0%
156	Vace-Wechech association	926.7	5.7%
191	Dalian very cobbly fine sandy loam, 2 to 8 percent slopes	164.3	1.0%
263	Jean complex, 2 to 4 percent slopes	0.4	0.0%
320	Boxspring-Zeheme-Rock outcrop complex, 15 to 50 to percent slopes MLRA 30	1,271.3	7.8%
323	Boxspring-Scrapy-Rock outcrop association	1,815.8	11.1%
360	Rock outcrop-St. Thomas complex, 15 to 30 percent slopes	406.3	2.5%
502	Canutio-Cave gravelly fine sandy loams, 2 to 8 percent slopes	2,318.8	14.2%
640	Rock outcrop, sandstone	266.5	1.6%
731	Purob-Irongold association	4,447.1	27.2%
Subtotals for Soil Survey Area		13,197.2	80.6%
Totals for Area of Interest		16,376.7	100.0%

Las Vegas Valley Area, Nevada, Part of Clark County

112—Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: hr9d
Elevation: 1,700 to 2,800 feet
Mean annual precipitation: 5 to 7 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Arizo and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arizo

Setting

Landform: Channels
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 2 inches: very gravelly loamy sand
H2 - 2 to 60 inches: stratified extremely gravelly loamy sand to cobbly coarse sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 12.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A
Ecological site: VALLEY WASH (R030XB028NV)

Las Vegas Valley Area, Nevada, Part of Clark County

152—Cave gravelly fine sandy loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: hr9v

Elevation: 2,000 to 4,800 feet

Mean annual precipitation: 4 to 12 inches

Mean annual air temperature: 57 to 70 degrees F

Frost-free period: 180 to 280 days

Farmland classification: Not prime farmland

Map Unit Composition

Cave and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cave

Setting

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Mixed alluvium

Typical profile

H1 - 0 to 12 inches: gravelly fine sandy loam

H2 - 12 to 36 inches: indurated

H3 - 36 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 4 percent

Depth to restrictive feature: 4 to 20 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Gypsum, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)

Sodium adsorption ratio, maximum in profile: 12.0

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)

Las Vegas Valley Area, Nevada, Part of Clark County

155—Cave gravelly fine sandy loam, 4 to 15 percent slopes

Map Unit Setting

National map unit symbol: hr9w

Elevation: 2,000 to 4,800 feet

Mean annual precipitation: 4 to 12 inches

Mean annual air temperature: 57 to 70 degrees F

Frost-free period: 180 to 280 days

Farmland classification: Not prime farmland

Map Unit Composition

Cave and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cave

Setting

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Mixed alluvium

Typical profile

H1 - 0 to 15 inches: gravelly fine sandy loam

H2 - 15 to 60 inches: indurated

Properties and qualities

Slope: 4 to 15 percent

Depth to restrictive feature: 4 to 20 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)

Available water storage in profile: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)

Las Vegas Valley Area, Nevada, Part of Clark County

156—Vace-Wechech association

Map Unit Setting

National map unit symbol: 1tf5w

Elevation: 2,720 to 4,030 feet

Mean annual precipitation: 5 to 7 inches

Mean annual air temperature: 57 to 69 degrees F

Frost-free period: 180 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Vace and similar soils: 45 percent

Wechech and similar soils: 25 percent

Wechech, steep, and similar soils: 15 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vace

Setting

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Calcareous loess and mixed alluvium

Typical profile

H1 - 0 to 2 inches: gravelly fine sandy loam

H2 - 2 to 8 inches: loam

H3 - 8 to 60 inches: cemented material

Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: 4 to 14 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 30 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Las Vegas Valley Area, Nevada, Part of Clark County

191—Dalian very cobbly fine sandy loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: hrb4

Elevation: 2,200 to 3,400 feet

Mean annual precipitation: 4 to 6 inches

Mean annual air temperature: 61 to 66 degrees F

Frost-free period: 210 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Dalian and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dalian

Setting

Landform: Fan skirts

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Alluvium derived from limestone and dolostone

Typical profile

H1 - 0 to 5 inches: very cobbly fine sandy loam

H2 - 5 to 60 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 60 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Clark County Area, Nevada

294—Rock outcrop, sandstone

Map Unit Setting

National map unit symbol: hqwd

Elevation: 3,970 to 6,660 feet

Mean annual precipitation: 7 to 9 inches

Mean annual air temperature: 51 to 56 degrees F

Frost-free period: 130 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Setting

Landform: Cliffs

Down-slope shape: Convex

Across-slope shape: Convex

Minor Components

Nupper

Percent of map unit: 5 percent

Landform: Cliffs

Landform position (two-dimensional): Summit

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: SHALLOW SANDSTONE HILL 11-13 P.Z.
(R030XC020NV)

Hydric soil rating: No

Moentria

Percent of map unit: 5 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z. Mountain
portions correlated t (R030XC007NV)

Other vegetative classification: Shallow Gravelly Loam 8-10 p.z.
(029XY077NV_1)

Las Vegas Valley Area, Nevada, Part of Clark County

320—Boxspring-Zeheme-Rock outcrop association

Map Unit Setting

National map unit symbol: 1tf6q

Elevation: 2,360 to 6,300 feet

Mean annual precipitation: 5 to 9 inches

Mean annual air temperature: 54 to 64 degrees F

Frost-free period: 150 to 210 days

Farmland classification: Not prime farmland

Map Unit Composition

Boxspring and similar soils: 50 percent

Zeheme and similar soils: 25 percent

Rock outcrop: 15 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boxspring

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Colluvium and/or residuum weathered from
limestone and dolomite

Typical profile

H1 - 0 to 2 inches: extremely gravelly loam

H2 - 2 to 15 inches: extremely gravelly loam

H3 - 15 to 25 inches: bedrock

Properties and qualities

Slope: 15 to 50 percent

Percent of area covered with surface fragments: 1.0 percent

Depth to restrictive feature: 14 to 20 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 0.9 inches)

Las Vegas Valley Area, Nevada, Part of Clark County

323—Boxspring-Scrapy-Rock outcrop association

Map Unit Setting

National map unit symbol: 1tf6r

Elevation: 4,430 to 7,690 feet

Mean annual precipitation: 7 to 14 inches

Mean annual air temperature: 51 to 57 degrees F

Frost-free period: 130 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Boxspring and similar soils: 40 percent

Scrapy and similar soils: 30 percent

Rock outcrop: 15 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boxspring

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Colluvium and/or residuum weathered from
limestone and dolomite

Typical profile

H1 - 0 to 2 inches: extremely gravelly loam

H2 - 2 to 15 inches: extremely gravelly loam

H3 - 15 to 25 inches: bedrock

Properties and qualities

Slope: 30 to 75 percent

Depth to restrictive feature: 14 to 20 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 0.9 inches)

Clark County Area, Nevada

351—Seralin extremely gravelly loam, 30 to 75 percent slopes

Map Unit Setting

National map unit symbol: hqvv

Elevation: 5,120 to 8,100 feet

Mean annual precipitation: 10 to 12 inches

Mean annual air temperature: 45 to 49 degrees F

Frost-free period: 90 to 130 days

Farmland classification: Not prime farmland

Map Unit Composition

Seralin and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Seralin

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Colluvium and/or residuum weathered from limestone and dolomite

Typical profile

H1 - 0 to 2 inches: extremely gravelly loam

H2 - 2 to 14 inches: very gravelly loam

H3 - 14 to 24 inches: bedrock

Properties and qualities

Slope: 30 to 75 percent

Percent of area covered with surface fragments: 5.0 percent

Depth to restrictive feature: 8 to 14 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Las Vegas Valley Area, Nevada, Part of Clark County

360—Rock outcrop-St. Thomas complex, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: hrby
Elevation: 1,600 to 3,000 feet
Mean annual precipitation: 4 to 9 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 170 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 50 percent
St. thomas and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex

Description of St. Thomas

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium derived from limestone and dolomite over residuum weathered from limestone and dolomite

Typical profile

H1 - 0 to 7 inches: extremely cobbly fine sandy loam
H2 - 7 to 17 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 30 percent
Percent of area covered with surface fragments: 2.0 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent

Las Vegas Valley Area, Nevada, Part of Clark County

502—Canutio-Cave gravelly fine sandy loams, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: hrcf
Elevation: 1,700 to 4,800 feet
Mean annual precipitation: 4 to 12 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Canutio and similar soils: 55 percent
Cave and similar soils: 40 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canutio

Setting

Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 9 inches: gravelly fine sandy loam
H2 - 9 to 60 inches: stratified extremely gravelly loamy coarse sand to gravelly loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: A

Las Vegas Valley Area, Nevada, Part of Clark County

640—Rock outcrop, sandstone

Map Unit Setting

National map unit symbol: hrct

Elevation: 3,970 to 6,660 feet

Mean annual precipitation: 7 to 9 inches

Mean annual air temperature: 51 to 56 degrees F

Frost-free period: 130 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Setting

Landform: Cliffs

Down-slope shape: Convex

Across-slope shape: Convex

Minor Components

Moentria

Percent of map unit: 5 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)

Other vegetative classification: Shallow Gravelly Loam 8-10 p.z.
(029XY077NV_1)

Hydric soil rating: No

Nupper

Percent of map unit: 5 percent

Landform: Cliffs

Landform position (two-dimensional): Summit

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: SHALLOW SANDSTONE HILL 11-13 P.Z.
(R030XC020NV)

Las Vegas Valley Area, Nevada, Part of Clark County

731—Purob-Irongold association

Map Unit Setting

National map unit symbol: 1tf74

Elevation: 3,410 to 6,660 feet

Mean annual precipitation: 5 to 10 inches

Mean annual air temperature: 51 to 63 degrees F

Frost-free period: 130 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Purob and similar soils: 60 percent

Irongold and similar soils: 25 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Purob

Setting

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Alluvium derived from limestone

Typical profile

H1 - 0 to 3 inches: extremely gravelly loam

H2 - 3 to 8 inches: very gravelly loam

H3 - 8 to 19 inches: very gravelly loam

H4 - 19 to 60 inches: cemented material

Properties and qualities

Slope: 2 to 8 percent

Percent of area covered with surface fragments: 1.0 percent

Depth to restrictive feature: 14 to 20 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 80 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to
2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Las Vegas Valley Area, Nevada, Part of Clark County

731—Purob-Irongold association

Map Unit Setting

National map unit symbol: 1tf74

Elevation: 3,410 to 6,660 feet

Mean annual precipitation: 5 to 10 inches

Mean annual air temperature: 51 to 63 degrees F

Frost-free period: 130 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Purob and similar soils: 60 percent

Irongold and similar soils: 25 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Purob

Setting

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Alluvium derived from limestone

Typical profile

H1 - 0 to 3 inches: extremely gravelly loam

H2 - 3 to 8 inches: very gravelly loam

H3 - 8 to 19 inches: very gravelly loam

H4 - 19 to 60 inches: cemented material

Properties and qualities

Slope: 2 to 8 percent

Percent of area covered with surface fragments: 1.0 percent

Depth to restrictive feature: 14 to 20 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 80 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to
2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Description of Irongold

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: And/or alluvium derived from limestone

Typical profile

H1 - 0 to 1 inches: extremely gravelly loam
H2 - 1 to 7 inches: gravelly loam
H3 - 7 to 11 inches: very gravelly loam
H4 - 11 to 34 inches: cemented material
H5 - 34 to 60 inches: extremely gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 8 percent
Percent of area covered with surface fragments: 1.0 percent
Depth to restrictive feature: 10 to 14 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 70 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: SHALLOW GRAVELLY LOAM 5-7 P.Z.
(R030XB029NV)
Hydric soil rating: No

Minor Components

Typic torriorthents

Percent of map unit: 5 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Arizo

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: UPLAND WASH (R030XB051NV)
Hydric soil rating: No

Purob

Percent of map unit: 3 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Typic haplocalcids

Percent of map unit: 2 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: SHALLOW LIMESTONE SLOPE 5-7 P.Z.
(R030XA006NV)
Hydric soil rating: No

Xeric haplocambids

Percent of map unit: 1 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: GRAVELLY CALCAREOUS INSET FAN 9-11 P.Z.
(R030XC012NV)
Hydric soil rating: No

Aridic calcixerolls

Percent of map unit: 1 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: GRAVELLY INSET FAN 7-9 P.Z. (R030XC011NV)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Description of Irongold

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: And/or alluvium derived from limestone

Typical profile

H1 - 0 to 1 inches: extremely gravelly loam
H2 - 1 to 7 inches: gravelly loam
H3 - 7 to 11 inches: very gravelly loam
H4 - 11 to 34 inches: cemented material
H5 - 34 to 60 inches: extremely gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 8 percent
Percent of area covered with surface fragments: 1.0 percent
Depth to restrictive feature: 10 to 14 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 70 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: SHALLOW GRAVELLY LOAM 5-7 P.Z.
(R030XB029NV)
Hydric soil rating: No

Minor Components

Typic torriorthents

Percent of map unit: 5 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Arizo

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: UPLAND WASH (R030XB051NV)
Hydric soil rating: No

Purob

Percent of map unit: 3 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)
Hydric soil rating: No

Typic haplocalcids

Percent of map unit: 2 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: SHALLOW LIMESTONE SLOPE 5-7 P.Z.
(R030XA006NV)
Hydric soil rating: No

Xeric haplocambids

Percent of map unit: 1 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: GRAVELLY CALCAREOUS INSET FAN 9-11 P.Z.
(R030XC012NV)
Hydric soil rating: No

Aridic calcixerolls

Percent of map unit: 1 percent
Landform: Inset fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: GRAVELLY INSET FAN 7-9 P.Z. (R030XC011NV)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Description of Cave

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 16 inches: gravelly fine sandy loam
H2 - 16 to 30 inches: indurated
H3 - 30 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 4 to 20 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Gypsum, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 12.0
Available water storage in profile: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Minor Components

Arizo

Percent of map unit: 5 percent
Landform: Channels
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: VALLEY WASH (R030XB028NV)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 2.0

Available water storage in profile: Very low (about 0.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Other vegetative classification: LIMY HILL 3-5" P.Z.
(030XB017NV_3)

Hydric soil rating: No

Minor Components

Weiser

Percent of map unit: 10 percent

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)

Hydric soil rating: No

Bracken

Percent of map unit: 5 percent

Landform: Pediments

Down-slope shape: Convex

Across-slope shape: Convex

Other vegetative classification: GYSIC LOAM 3-8 P.Z.
(030XB026NV_2)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 10, Aug 22, 2014

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Potosi

Percent of map unit: 7 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: SHALLOW LIMESTONE SLOPE 7-9 P.Z.

(R030XC008NV)

Hydric soil rating: No

Lithic torriorthents

Percent of map unit: 4 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: SHALLOW GRAVELLY FAN 11-15 P.Z.

(R030XC023NV)

Hydric soil rating: No

Rock outcrop

Percent of map unit: 4 percent

Landform: Cliffs

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Data Source Information

Soil Survey Area: Clark County Area, Nevada

Survey Area Data: Version 11, Sep 16, 2016

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 11, Sep 16, 2016

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)

Other vegetative classification: Shallow Gravelly Loam 8-10 p.z.
(029XY077NV_1)

Hydric soil rating: No

Description of Scrapy

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Down-slope shape: Concave

Across-slope shape: Linear

Typical profile

A - 0 to 1 inches: very gravelly sandy loam

Bk - 1 to 12 inches: very gravelly sandy loam

R - 12 to 22 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent

Percent of area covered with surface fragments: 2.0 percent

Depth to restrictive feature: 10 to 14 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Gypsum, maximum in profile: 1 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to
2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Ecological site: SHALLOW LIMESTONE SLOPE 11-13 P.Z.
(R030XC025NV)

Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Cliffs

Down-slope shape: Convex
Across-slope shape: Convex

Minor Components

Lithic calciustolls

Percent of map unit: 9 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: Pinus monophylla-Juniperus osteosperma/Artemisia
nova-Amelanchier utahensis/Poa fendleriana (F030XC235NV)
Hydric soil rating: No

Typic haplustolls

Percent of map unit: 6 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: Pinus monophylla-Juniperus osteosperma/Purshia
stansburiana-Artemisia nova/Bouteloua gracilis
(F030XC243NV)
Other vegetative classification: PIMO-JUOS WSG: OR0507
(029XY126NV)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: SHALLOW GRAVELLY LOAM 7-9 P.Z.
(R030XC007NV)

Other vegetative classification: Shallow Gravelly Loam 8-10 p.z.
(029XY077NV_1)

Hydric soil rating: No

Description of Zeheme

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Colluvium and/or residuum weathered from
limestone

Typical profile

H1 - 0 to 3 inches: extremely stony fine sandy loam

H2 - 3 to 13 inches: very gravelly fine sandy loam

H3 - 13 to 23 inches: bedrock

Properties and qualities

Slope: 15 to 50 percent

Percent of area covered with surface fragments: 15.0 percent

Depth to restrictive feature: 7 to 14 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to
2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: LIMESTONE HILL 5-7 P.Z. (R030XB068NV)
Other vegetative classification: Shallow Limestone Slope 5-7 p.z.
(030XB030NV_1)

Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Cliffs

Down-slope shape: Convex

Across-slope shape: Convex

Minor Components

Zeheme

Percent of map unit: 8 percent

Landform: Mountains

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: SHALLOW LIMESTONE SLOPE 5-7 P.Z.
(R030XB030NV)

Hydric soil rating: No

Typic haplocalcids

Percent of map unit: 2 percent

Landform: Fan remnants

Landform position (two-dimensional): Summit

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: SHALLOW GRAVELLY LOAM 5-7 P.Z.
(R030XB029NV)

Other vegetative classification: Shallow Gravelly Loam 7-9 p.z.
(030XB029NV_4)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 10, Aug 22, 2014

Hydric soil rating: No

Data Source Information

Soil Survey Area: Clark County Area, Nevada

Survey Area Data: Version 11, Sep 16, 2016

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 11, Sep 16, 2016

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Hydrologic Soil Group: D
Ecological site: LIMY 5-7 P.Z. (R030XB005NV)
Other vegetative classification: Limy 5-7 p.z. (030XB005NV_3)
Hydric soil rating: No

Description of Wechech

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and dolomite

Typical profile

H1 - 0 to 2 inches: very gravelly sandy loam
- 2 to 7 inches: very gravelly sandy loam
H2 - 7 to 13 inches: very gravelly sandy loam
H3 - 13 to 60 inches: cemented material

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 8 to 14 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 50 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Very low (about 0.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: LIMY 5-7 P.Z. (R030XB005NV)
Hydric soil rating: No

Description of Wechech, Steep

Setting

Landform: Fan remnants
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and dolomite

Typical profile

H1 - 0 to 2 inches: very gravelly sandy loam

- 2 to 7 inches: very gravelly sandy loam
H2 - 7 to 13 inches: very gravelly sandy loam
H3 - 13 to 60 inches: cemented material

Properties and qualities

Slope: 8 to 30 percent
Depth to restrictive feature: 8 to 14 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 50 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Very low (about 0.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: LIMY HILL 5-7 P.Z. (R030XB001NV)
Hydric soil rating: No

Minor Components

Weiser

Percent of map unit: 8 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: GRAVELLY FAN 5-7 P.Z. (R030XB075NV)
Other vegetative classification: Gravelly Fan 5-7 p.z.
(030XB075NV_1)
Hydric soil rating: No

Irongold

Percent of map unit: 4 percent
Landform: Fan remnants
Landform position (two-dimensional): Shoulder
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: SHALLOW GRAVELLY LOAM 5-7 P.Z.
(R030XB029NV)
Other vegetative classification: Shallow Gravelly Loam 5-7 p.z.
(030XB029NV_2)
Hydric soil rating: No

Commski

Percent of map unit: 2 percent
Landform: Fan remnants

Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: CALCAREOUS LOAM 5-7 P.Z. (R030XA066NV)
Other vegetative classification: Calcareous Loam 5-7 p.z.
(030XA066NV_1)
Hydric soil rating: No

Threelakes

Percent of map unit: 1 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: VALLEY WASH (R030XB028NV)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 10, Aug 22, 2014

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County

Survey Area Data: Version 10, Aug 22, 2014

B.4 CURVE NUMBER, SUBBASIN LAGTIME, AND ROUTING CALCULATIONS

B.4.1 VILLAGE 26 TRIBUTARY

STANDARD FORM 4

DEVELOPMENT: Summerlin
W.O. # 7809 CALCULATED BY: SVB

V1 applies to the first 500 feet of travel distance V2 applies to the remaining travel distance	
Existing:	Developed
$V1 = 148 * S^{1/2}$ $V2 = 294 * S^{1/2}$	$V1 = 202 * S^{1/2}$ $V2 = 306 * S^{1/2}$

$$T_i = \frac{1.8(1.1 - k)L^{1/2}}{S^{1/3}} \quad T_i = \frac{L}{60V}$$

$$k = 0.0132C_n - 0.39 \quad T_c = T_i + T_t$$

SUB-BASIN DATA					INITIAL/OVERLAND TIME (Ti)			TRAVEL TIME (Tt)					Tc CHECK (URBANIZED BASINS)		FINAL Tc	LAG TIME	REMARKS
DESIG.	Cn	K	AREA Ac.	AREA MI^2	LENGTH Ft	SLOPE %	Ti Min.	LENGTH Ft.	SLOPE %	V1 fps	V2 fps	Tt Min.	TOTAL LENGTH	Tc Min.	Min.	TLAG Hr.	
(1)		(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)			
DEVELOPED CONDITION ONSITE																	
1-A	67.1	0.496	79.92	0.1249	100	1.0	10.87	5716	7.3	5.5	8.3	12.03	5816	42.31	22.90	0.229	
1-B	79.7	0.662	117.62	0.1838	100	1.0	7.89	5751	7.5	5.5	8.4	11.94	5851	42.51	19.83	0.198	

TRAVEL TIME CALCULATIONS

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB

$$Velocity = CS^{\frac{1}{2}}$$

C1 applies to the first 500 feet of travel distance
C2 applies to the remaining travel distance

Existing:	Developed
C1=14.8 C2=29.4	C1=20.2 C2=30.6

					First 500 feet		Remaining Travel Distance	
Basin	Length (ft)	High Elev (ft)	Low Elev (ft)	Slope (ft/ft)	C1	V1 (fps)	C2	V2 (fps)
DEVELOPED CONDITION ONSITE								
1-A	5716	4530	4112	0.073	20.2	5.5	30.6	8.3
1-B	5751	4020	3588	0.075	20.2	5.5	30.6	8.4

CURVE NUMBERS FOR SOILS - W.O. #7899

Soil # 112 Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Arizo	100%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		63	98	77	81	80	76	61	54	68	89
Soil # 192 Cave gravelly fine sandy loam, 0 to 4 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 195 Cave gravelly fine sandy loam, 4 to 15 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 156 Vaca - Wechee association												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Vaca and Similar	65%	D	88	98	94	93	92	91	87	85	89	95
Wechee and Similar	25%	D	88	98	94	93	92	91	87	85	89	95
Wechee, Vaca, and Similar	10%	D	88	98	94	93	92	91	87	85	89	95
Water	8%	B	77	98	94	88	87	84	75	70	79	92
Ironstone	4%	D	88	98	94	93	92	91	87	85	89	95
Combed	2%	B	77	98	94	88	87	84	75	70	79	92
Therapsites	6%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		87	98	94	93	92	91	86	84	88	95
Soil # 191 Italian very cobbly fine sandy loam, 2 to 8 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Italian	100%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		63	98	77	81	80	76	61	54	68	89
Soil # 284 Rock outcrop, sand stone												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Rock outcrop	65%	D	88	98	94	93	92	91	87	85	89	95
Nepper	5%	D	88	98	94	93	92	91	87	85	89	95
Mountain	30%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 303 Bouspring - Zelma - Rock outcrop association												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Bouspring	50%	D	88	98	94	93	92	91	87	85	89	95
Zelma	30%	D	88	98	94	93	92	91	87	85	89	95
Rock Outcrop	10%	D	88	98	94	93	92	91	87	85	89	95
Typic Haplochreids	10%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 303 Bouspring - Scarp - Rock Outcrop Association												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Bouspring	40%	D	88	98	94	93	92	91	87	85	89	95
Scarp	30%	D	88	98	94	93	92	91	87	85	89	95
Rock outcrop	15%	D	88	98	94	93	92	91	87	85	89	95
Typic Haplochreids	15%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 351 Scarp extremely gravelly loam, 30 to 75 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Scarp	65%	D	88	98	94	93	92	91	87	85	89	95
Polio	7%	D	88	98	94	93	92	91	87	85	89	95
Little Ironstone	4%	D	88	98	94	93	92	91	87	85	89	95
Mountain	24%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 360 Rock outcrop - St. Thomas Complex												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Rock outcrop	50%	D	88	98	94	93	92	91	87	85	89	95
St. Thomas	30%	D	88	98	94	93	92	91	87	85	89	95
Water	10%	A	63	98	77	81	80	76	61	54	68	89
Bracken	5%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		85	98	92	92	91	89	84	81	86	95
Soil # 502 Canuto-Cave gravelly fine sandy loam, 2 to 8 percent slopes												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Canuto	65%	A	63	98	77	81	80	76	61	54	68	89
Cave	40%	D	88	98	94	93	92	91	87	85	89	95
Arizo	5%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		75	98	85	87	86	83	73	68	78	92
Soil # 640 Rock outcrop, sand stone												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Rock outcrop	65%	D	88	98	94	93	92	91	87	85	89	95
Mountain	5%	D	88	98	94	93	92	91	87	85	89	95
Nepper	9%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95
Soil # 731 Purb-ironfold association												
Soil	Percent	Group	Existing	Impervious	Newly Graded Areas	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Residential _(.04, .04, .04)	Open Space _(.04, .04, .04)	Urban Districts _(.04, .04, .04)
Purb	60%	D	88	98	94	93	92	91	87	85	89	95
Impold	25%	D	88	98	94	93	92	91	87	85	89	95
Typic Ironstone	5%	A	63	98	77	81	80	76	61	54	68	89
Arizo	3%	A	63	98	77	81	80	76	61	54	68	89
Purb	3%	D	88	98	94	93	92	91	87	85	89	95
Typic Haplochreids	2%	B	77	98	94	88	87	84	75	70	79	92
Xeric Haplochreids	1%	A	63	98	77	81	80	76	61	54	68	89
Acidic Haplochreids	1%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		86	98	93	92	91	89	85	82	87	95

- 1-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 4 of 4
* Down Slope to Poor Hydrologic Condition
- 2-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Streets and Roads
- 3-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* New Graded Areas
- 4-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* Apartments / Condos (MF/IF A-MU > 10 UNITS per ACRE)
- 5-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* Townhouses / 6,000 sq ft lots (SF/IFA 7-10 UNITS per ACRE)
- 6-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 7,000 sq ft lots (SF/IFA 5-7 UNITS per ACRE)
- 7-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 10,000 sq ft lots (SF LOW 3-5 UNITS per ACRE)
- 8-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 20,000 sq ft lots (SF ESTATE 1.5-3 UNITS per ACRE)
- 9-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Open spaces in poor condition (grass cover < 50%)
- 10-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Commercial and Business

Curve Number calculations for basins

Basin	Total Area (ACRES)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	3	4	5	6	7	8	9	10	Weighted CN Value	Composite CN Value	CN Value	
1-A	79.92	DEVELOPED CONDITION ONSITE																		
		LR1	24.42	30.56%	191	1%									100%			25.0	67.1	81.7
					731	99%									100%					
		LR2	8.00	10.01%	191	7%				100%								9.2		91.9
					731	93%				100%										
		LR3	26.53	33.20%	191	84%									100%			18.5		55.7
					731	6%									100%					
		LR4	0.59	0.74%	191	100%												0.5		83.9
			191	98%										94%		14.0	55.2			
			520	2%																
1-B	117.62	LM1	0.64	0.54%	191	98%									100%			0.3	94.6	
					320	2%									100%					
					155	62%									100%					
		LM3	7.74	6.58%	191	3%									100%			5.5	84.1	
					320	36%									100%					
		LM4	19.32	16.43%	155	97%									100%			14.0	85.0	
					320	3%									100%					
		LM7	40.89	34.76%	155	40%									100%			26.0	74.9	
					502	60%									100%					
		LM8	17.85	15.18%	155	94%									100%			12.7	84.0	
					502	6%									100%					
		LM9	2.69	2.29%	155	100%								100%				1.99	87.0	
					155	36%									100%					
		LM11	20.36	17.31%	502	61%										100%		12.9	74.6	
			155	89%										100%						
			320	15%											100%		4.5	87.2		
			502	16%											100%					
		ROADS	2.09	1.78%	NA	100%		100%									1.7	98		

B.4.2 BELTWAY NORTH TRIBUTARY

STANDARD FORM 4

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB/JYA

V1 applies to the first 500 feet of travel distance V2 applies to the remaining travel distance			
Existing:		Developed	
$V1 = 148 * S^{1/2}$	$V2 = 294 * S^{1/2}$	$V1 = 202 * S^{1/2}$	$V2 = 306 * S^{1/2}$

$$T_i = \frac{1.8(1.1 - k)L^{1/2}}{S^{1/3}}$$

$$T_t = \frac{L}{60V}$$

$$k = 0.0132C_n - 0.39$$

$$T_c = T_i + T_t$$

SUB-BASIN DATA					INITIAL/OVERLAND TIME (Ti)			TRAVEL TIME (Tt)					Tc CHECK (URBANIZED BASINS)		FINAL Tc	LAG TIME	REMARKS
DESIG.	Cn	K	AREA Ac.	AREA MI^2	LENGTH Ft	SLOPE %	Ti Min.	LENGTH Ft	SLOPE %	V1 fps	V2 fps	Tt Min.	TOTAL LENGTH (11)	Tc Min. (12)	Min.	TLAG Hr.	
(1)		(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)			
DEVELOPED CONDITION ONSITE																	
3-A	80.8	0.677	217.07	0.3392	100	1.0	7.61	7330	6.8	5.3	8.0	15.84	7430	51.28	23.45	0.234	
3-B	83.1	0.707	446.26	0.6973	100	1.0	7.07	10232	7.9	5.7	8.6	20.28	10332	67.40	27.35	0.274	
3-C	87.0	0.759	141.56	0.2212	100	1.0	6.14	6330	6.4	5.1	7.8	14.15	6430	45.72	20.29	0.203	
3-D	84.6	0.727	213.07	0.3329	100	1.0	6.72	8248	8.8	6.0	9.1	15.59	8348	56.38	22.31	0.223	
3-E	85.8	0.743	348.31	0.5442	100	1.0	6.42	8060	6.8	5.3	8.0	17.34	8160	55.33	23.76	0.238	
3-F	88.9	0.784	180.16	0.2815	100	1.0	5.69	4535	7.6	5.6	8.4	9.49	4635	35.75	15.18	0.152	
3-G1	90.0	0.798	153.95	0.2406	100	1.0	5.43	3050	5.5	4.7	7.2	7.70	3150	27.50	13.13	0.131	
3-G2	93.2	0.841	82.23	0.1285	100	1.0	4.67	2410	5.9	4.9	7.4	5.99	2510	23.94	10.65	0.107	
3-H1	90.7	0.808	27.48	0.0429	100	1.0	5.26	1406	6.4	5.1	7.7	3.58	1506	18.37	8.85	0.088	
3-H2	92.7	0.833	117.36	0.1834	100	1.0	4.80	3390	5.3	4.7	7.1	8.62	3490	29.39	13.42	0.134	
3-H3	94.3	0.854	89.80	0.1403	100	1.0	4.42	4697	2.8	3.4	5.1	16.22	4797	36.65	20.64	0.206	
3-I1	88.8	0.782	187.75	0.2934	100	1.0	5.73	5255	3.9	4.0	6.0	15.20	5355	39.75	20.93	0.209	
3-I2	90.5	0.805	75.83	0.1185	100	1.0	5.31	5255	3.9	4.0	6.0	15.20	5355	39.75	20.51	0.205	
3-J	78.6	0.647	97.87	0.1529	100	1.0	8.15	3340	5.1	4.6	6.9	8.63	3440	29.11	16.78	0.168	
3-K	87.6	0.766	568.98	0.8890	100	1.0	6.01	9699	5.3	4.6	7.0	23.60	9799	64.44	29.61	0.296	
3-L	88.4	0.777	206.53	0.3227	100	1.0	5.81	3441	3.9	4.0	6.1	10.17	3541	29.67	15.98	0.160	
3-M	88.8	0.782	123.16	0.1924	100	1.0	5.72	3727	5.9	4.9	7.4	8.93	3827	31.26	14.66	0.147	
3-N	88.9	0.784	291.64	0.4557	100	1.0	5.69	7430	3.9	4.0	6.0	21.19	7530	51.83	26.88	0.269	
3-O	92.6	0.832	71.96	0.1124	100	1.0	4.82	3204	6.3	5.1	7.7	7.53	3304	28.36	12.35	0.123	
3-P1	92.0	0.825	156.22	0.2441	100	1.0	4.95	2850	6.3	5.1	7.7	6.73	2950	26.39	11.69	0.117	
3-P2	87.1	0.760	92.53	0.1446	100	1.0	6.13	4385	8.5	5.9	8.9	8.66	4485	34.92	14.78	0.148	
3-Q	92.8	0.835	126.31	0.1974	100	1.0	4.77	3730	3.6	3.8	5.8	11.42	3830	31.28	16.19	0.162	

TRAVEL TIME CALCULATIONS

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB/JYA

$$Velocity = CS^{\frac{1}{2}}$$

C1 applies to the first 500 feet of travel distance
C2 applies to the remaining travel distance

Existing:	Developed
C1=14.8 C2=29.4	C1=20.2 C2=30.6

					First 500 feet		Remaining Travel Distance	
Basin	Length (ft)	High Elev (ft)	Low Elev (ft)	Slope (ft/ft)	C1	V1 (fps)	C2	V2 (fps)
DEVELOPED CONDITION ONSITE								
3-A	7330	4244	3745	0.068	20.2	5.3	30.6	8.0
3-B	10232	4530	3718	0.079	20.2	5.7	30.6	8.6
3-C	6330	3737	3330	0.064	20.2	5.1	30.6	7.8
3-D	8248	4488	3760	0.088	20.2	6.0	30.6	9.1
3-E	8060	4310	3760	0.068	20.2	5.3	30.6	8.0
3-F	4535	4050	3707	0.076	20.2	5.6	30.6	8.4
3-G1	3050	3740	3573	0.055	20.2	4.7	30.6	7.2
3-G2	2410	3715	3573	0.059	20.2	4.9	30.6	7.4
3-H1	1406	3540	3450	0.064	20.2	5.1	30.6	7.7
3-H2	3390	3450	3270	0.053	20.2	4.7	30.6	7.1
3-H3	4697	3315	3185	0.028	20.2	3.4	30.6	5.1
3-I1	5255	3555	3350	0.039	20.2	4.0	30.6	6.0
3-I2	4125	3350	3230	0.029	20.2	3.4	30.6	5.2
3-J	3340	4356	4184	0.051	20.2	4.6	30.6	6.9
3-K	9699	4302	3790	0.053	20.2	4.6	30.6	7.0
3-L	3441	3705	3570	0.039	20.2	4.0	30.6	6.1
3-M	3727	3885	3665	0.059	20.2	4.9	30.6	7.4
3-N	7430	3768	3478	0.039	20.2	4.0	30.6	6.0
3-O	3204	3786	3585	0.063	20.2	5.1	30.6	7.7
3-P1	2850	3633	3453	0.063	20.2	5.1	30.6	7.7
3-P2	4385	3814	3440	0.085	20.2	5.9	30.6	8.9
3-Q	3730	3440	3305	0.036	20.2	3.8	30.6	5.8

CURVE NUMBERS FOR SOILS - W.O. #7809

Soil #11 Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Arizo	100%	A	63	98	77	81	80	76	61	54	68	89	81	46
Total	100%		63	98	77	81	80	76	61	54	68	89	81	46

Soil # 152 Cave gravelly fine sandy loam, 0 to 4 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (0,000 ft ² or Less)	Residential ₆ (1,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 155 Cave gravelly fine sandy loam, 4 to 15 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 156 Vace - Wehech association														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Vace and Similar	45%	D	88	98	94	93	92	91	87	85	89	95	93	82
Wehech and Similar	25%	D	88	98	94	93	92	91	87	85	89	95	93	82
Wehech, steep, and similar	15%	D	88	98	94	93	92	91	87	85	89	95	93	82
Weiser	8%	B	77	98	86	88	87	84	75	70	79	92	88	65
Irongood	4%	D	88	98	94	93	92	91	87	85	89	95	93	82
Comma	2%	B	77	98	86	88	87	84	75	70	79	92	88	65
Threelakes	1%	A	63	98	77	81	80	76	61	54	68	89	81	46
Total	100%		87	98	94	93	92	91	86	84	88	95	93	80

Soil # 191 Italian very cobbly fine sandy loam, 2 to 8 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Italian	100%	A	63	98	77	81	80	76	61	54	68	89	81	46
Total	100%		63	98	77	81	80	76	61	54	68	89	81	46

Soil # 234 Rock outcrop, sand stone														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Rock outcrop	90%	D	88	98	94	93	92	91	87	85	89	95	93	82
Nupper	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Moentria	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 320 Boxspring - Zeheme - Rock outcrop association														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Boxspring	50%	D	88	98	94	93	92	91	87	85	89	95	93	82
Zeheme	33%	D	88	98	94	93	92	91	87	85	89	95	93	82
Rock Outcrop	15%	D	88	98	94	93	92	91	87	85	89	95	93	82
Typic Haplocalcids	2%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 323 Boxspring - Scrapy - Rock Outcrop Association														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Boxspring	40%	D	88	98	94	93	92	91	87	85	89	95	93	82
Scrapy	30%	D	88	98	94	93	92	91	87	85	89	95	93	82
Rock outcrop	15%	D	88	98	94	93	92	91	87	85	89	95	93	82
Litic calcocalcids	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Typic Haplocalcids	6%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 351 Seratin extremely gravelly loam, 30 to 75 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Seratin	85%	D	88	98	94	93	92	91	87	85	89	95	93	82
Potosi	7%	D	88	98	94	93	92	91	87	85	89	95	93	82
Lithic Torriorthents	4%	D	88	98	94	93	92	91	87	85	89	95	93	82
Rock Outcrop	4%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82
Total		100%												

Soil # 360 Rock outcrop - St. Thomas Complex														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Rock outcrop	50%	D	88	98	94	93	92	91	87	85	89	95	93	82
St. Thomas	35%	A	63	98	77	81	80	76	61	54	68	89	81	46
Weiser	10%	A	63	98	77	81	80	76	61	54	68	89	81	46
Bracken	5%	A	63	98	77	81	80	76	61	54	68	89	81	46
Total	100%		85	98	92	92	91	89	84	81	86	95	92	77

Soil # 502 Canuto-Cave gravelly fine sandy loams, 2 to 8 percent slopes														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Canuto	55%	A	63	98	77	81	80	76	61	54	68	89	81	46
Cave	40%	D	88	98	94	93	92	91	87	85	89	95	93	82
Arizo	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		75	98	85	87	86	83	73	68	78	92	87	63

Soil # 640 Rock outcrop, sand stone														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft or Greater)
Rock outcrop	90%	D	88	98	94	93	92	91	87	85	89	95	93	82
Moentria	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Nupper	5%	D	88	98	94	93	92	91	87	85	89	95	93	82
Total	100%		88	98	94	93	92	91	87	85	89	95	93	82

Soil # 731 Purob-Irongold association														
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (3,000 ft ² or Less)	Residential ₆ (7,000 ft ²)	Residential ₇ (10,000 ft ²)	Residential ₈ (20,000 ft ²)	Open Space ₉ (Poor Condition)	Urban Districts ₁₀ (Commercial and Business)	Industrial ₁₁	Residential ₁₂ (30,000 sq ft)
Purob	60%	D	88	98	94	93	92	91	87	85	89	95	93	82
Irongold	25%	D	88	98	94	93	92	91	87	85	89	95	93	82
Typic toncorithes	5%	A	63	98	77	81	80	76	61	54	68	89	81	46
Arizo	3%	A	63	98	77	81	80	76	61	54	68	89	81	46
Purob	3%	D	88	98	94	93	92	91	87	85	89	95	93	82
Typic haplocalcids	2%	B	77	98	86	88	87	84	79	70	79	92	88	65
Xeric haplocambisols	1%	A	63	98	77	81	80	76	61	54	68	89	81	46
Axitic calcocalcids	1%	A	63	98	77	81	80	76	61	54	68	89	81	46
Total	100%		86	98	93	92	91	90	85	82	87	95	92	79

- 1-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 4 of 4
* Desert Shrub in Poor Hydrologic Condition
- 2-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
Streets and Roads
- 3-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
Newly Graded Areas
- 4-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
Apartments / Condos (MFISFA-MU > 10 UNITS per ACRE)
- 5-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
Townhouses / 6,000 sq ft lots or less (SFISFA 7-10 UNITS per ACRE)
- 6-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
7,000 sq ft lots (SFISFA 5-7 UN

3-D	213.07	LRG1	17.71	8.31%	731	100%														7.2	84.6	87.0		
		LRG2	6.83	3.21%	731	95%														2.8		87.1		
		LRPR1	6.95	3.26%	731	100%	100%													2.8		86.0		
		LRPR2	5.15	2.42%	731	21%	100%													2.1		87.6		
		LRPR5	1.28	0.60%	640	79%	100%													0.5		86.0		
		LRPW1	7.98	3.75%	731	100%														3.0		80.1		
					112	39%																		
		LRPW2	3.63	1.70%	731	37%																1.4		79.8
					112	44%																		
		LRPW3	39.34	18.46%	640	94%														100%		16.1	87.1	
UNNAMED	77.04	36.16%	640	8%		100%												100%	31.7		87.6			
3-E	348.31	LR9	46.60	13.38%	731	89%													100%	10.6		79.3		
		LR16	16.37	4.70%	731	91%												100%	4.5	95.0				
					640	9%																		
		LR18	8.47	2.43%	323	100%												100%	2.3	94.0				
		LR19	43.72	12.55%	731	11%												100%	10.6	84.7				
					640	4%																		
		LR20	26.62	7.64%	323	85%												100%	6.4	83.9				
		LR21	60.47	17.36%	731	38%													100%	14.3	82.4			
					323	62%																		
		LR25	8.27	2.37%	731	100%													100%	2.3	95.0			
LR26	0.68	0.20%	156	100%													100%	0.2	95.0					
LR27	1.65	0.47%	731	58%														100%	0.5	95.0				
			156	42%																				
LR28	10.37	2.98%	731	89%														95%	2.7	91.6				
			502	11%																				
LRG2	9.33	2.68%	731	79%													100%	2.3						
LRP1	0.78	0.22%	640	21%													100%	0.2						
LRPR3	23.98	6.88%	323	100%													100%							
LRPR4	5.44	1.96%	731	3%	100%													100%	6.1	88.0				
			640	97%	100%																			
LRPR5	4.58	1.31%	731	100%	100%												100%	1.3	86.0					
LRPW3	6.04	1.73%	731	80%														95%	2.7	91.6				
			502	20%																				
LRPW4	63.21	18.15%	731	93%														100%	15.8	87.1				
			640	6%																				
UB1	3.68	1.06%	323	1%													100%							
ROADS	8.05	2.31%	NA	100%													100%	0.9		85.0				
3-F	180.16	LR12	20.49	11.37%	731	100%													100%	2.3		86.0		
		LR17	22.55	12.52%	731	100%													9.7		85.0			
		LR26	14.71	8.16%	156	18%													100%	11.9		95.0		
		LR27	4.72	2.62%	731	1%													100%	2.5	95.0			
					156	99%																		
		LRG1	111.39	61.83%	731	94%												100%	53.8		87.1			
		LRP4	2.41	1.34%	156	6%													100%	1.2	88.0			
					731	51%																		
		ROADS	3.89	2.16%	NA	49%													100%					
		GP1	16.88	15.29%	731	100%														2.1		98.0		
GP2	14.87	13.47%	731	100%														13.8		90.0				
3-G1	110.40	GP3	15.98	14.47%	731	100%													100%	11.4		85.0		
		GP4	15.02	13.60%	731	61%												100%	11.6	90.0				
					156	39%																		
		GP10	6.51	5.90%	731	100%											100%	5.3		90.0				
		GP11	9.82	8.89%	731	92%											100%	8.0		90.1				
		GP12	9.77	8.85%	731	40%												100%	7.8	88.6				
					156	60%																		
		GPSC1	10.99	9.95%	731	92%												100%	9.2		92.5			
		ROADS	10.56	9.57%	156	8%	50%												50%	9.4	98.0			
					NA	100%	100%																	
LR34	7.74	9.41%	731	57%													50%	8.7		92.6				
3-G2	82.23	LR35	6.18	7.52%	156	43%												95%	7.0	92.8				
					731	16%																		
		LR36	1.95	2.37%	156	100%												100%	2.2		93.0			
		LR37	6.59	8.01%	156	100%												100%	7.5		93.1			
		LR38	3.50	4.26%	731	9%												100%	3.9		91.9			
		LR39	4.36	5.30%	156	91%													100%	4.9	92.0			
					731	100%																		
		LR40	6.03	7.33%	731	100%												100%	6.7		91.0			
		LR41	11.63	14.14%	731	29%													100%	13.0	91.7			
					156	71%																		
LR42	9.13	11.10%	731	100%													100%	10.2		92.2				
3-H1	27.48	LR43	9.75	11.86%	731	100%													95%	10.9		92.0		
		ROADS	15.37	18.69%	NA	100%												100%	18.3		98.0			
		GP18	13.55	49.32%	156	16%													44.9		91.0			
		GPPW2	9.56	34.79%	156	100%													100%	30.3	87.0			
					152	84%																		
		ROADS	4.37	15.89%	NA	100%												100%	15.6		98.0			
		3-H2	117.36	W48	9.28	7.91%	156	18%												100%	7.4		93.0	
				W49	8.18	6.97%	152	84%												100%	6.6	95.0		
							156	73%																
				W50	7.36	6.27%	152	27%												100%	6.0		95.0	
W52	10.39			8.85%	152	27%													100%	8.1	92.0			
					156	73%																		
W53	2.65			2.26%	152	100%												95%	2.1		93.1			
W54	3.58			3.05%	152	100%													95%	2.8		93.1		
W55	3.21			2.74%	152	100%													95%	2.5		93.1		
W56	3.39			2.89%	152	100%													95%	2.7		93.1		
W57	3.21	2.74%	152	100%													95%	2.5		92.1				
W58	7.56	6.44%	156	59%													100%	5.9		92.0				
3-H3	89.80	W59	5.53	4.71%	152	41%												95%	4.4	93.1				
					156	57%																		
		W60	6.34	5.40%	156	51%												95%	5.0		92.0			
		W62	5.73	4.88%	152	49%												100%	4.5	92.0				
					156	100%																		
		W63	9.21	7.85%	156	100%												100%	6.8		87.0			
		W64	11.06	9.42%	156	100%													5.2		87.0			
		W67	2.32	1.98%	152	100%												100%	1.8		98.0			
		ROADS	18.36	15.64%	NA	100%													100%	15.3		98.0		
		3-J	97.87	W51	21.47	23.91%	156	46%													100%	22.7		95.0
W61	18.33			20.41%	152	54%												100%	18.8	92.0				
					156	100%																		
W67	12.28			13.65%	156	43%												100%	13.0		95.0			
W68	21.79			24.26%	152	57%												100%	23.1	95.0				
					156	84%																		

[illegible]

B.4.3 DB5/ALTA TRIBUTARY

STANDARD FORM 4

DEVELOPMENT: Summerlin
W.O. # 7809 CALCULATED BY: SVB

V1 applies to the first 500 feet of travel distance V2 applies to the remaining travel distance			
Existing:		Developed	
$V1=148*S^{\frac{1}{2}}$	$V2=294*S^{\frac{1}{2}}$	$V1=202*S^{\frac{1}{2}}$	$V2=306*S^{\frac{1}{2}}$

$$T_i = \frac{1.8(1.1 - k)L^{1/2}}{S^{1/3}}$$
$$k = 0.0132C_n - 0.39$$

$$T_t = \frac{L}{60V}$$
$$T_c = T_i + T_t$$

SUB-BASIN DATA					INITIAL/OVERLAND TIME (Ti)			TRAVEL TIME (Tt)					Tc CHECK (URBANIZED BASINS)		FINAL Tc	LAG TIME	REMARKS
DESIG.	Cn	K	AREA Ac.	AREA Mi^2	LENGTH Ft	SLOPE %	Ti Min.	LENGTH Ft	SLOPE %	V1 fps	V2 fps	Tt Min.	TOTAL LENGTH	Tc Min.	Min.	TLAG Hr.	
(1)		(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)			
DEVELOPED CONDITION ONSITE																	
4-A	84.6	0.727	230.33	0.3599	100	1.0	6.71	6399	7.2	5.4	8.2	13.52	6499	46.11	20.24	0.202	
4-B	86.3	0.750	345.76	0.5403	200	1.0	8.92	8180	3.6	3.8	5.8	24.20	8380	56.56	33.12	0.331	

TRAVEL TIME CALCULATIONS

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB

$$Velocity = CS^{1/2}$$

C1 applies to the first 500 feet of travel distance
C2 applies to the remaining travel distance

Existing:	Developed
C1=14.8 C2=29.4	C1=20.2 C2=30.6

					First 500 feet		Remaining Travel Distance	
Basin	Length (ft)	High Elev (ft)	Low Elev (ft)	Slope (ft/ft)	C1	V1 (fps)	C2	V2 (fps)
DEVELOPED CONDITION ONSITE								
4-A	6399	4260	3800	0.072	20.2	5.4	30.6	8.2
4-B	8180	3850	3555	0.036	20.2	3.8	30.6	5.8

CURVE NUMBERS FOR SOILS - W.O. #7809

Soil # 112 Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Arizo	100%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		63	98	77	81	80	76	61	54	68	89

Soil # 152 Cave gravelly fine sandy loam, 0 to 4 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 155 Cave gravelly fine sandy loam, 4 to 15 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Cave	100%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 156 Vace - Wechech association												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Vace and Similar	45%	D	88	98	94	93	92	91	87	85	89	95
Wechech and Similar	25%	D	88	98	94	93	92	91	87	85	89	95
Wechech, steep, and similar	15%	D	88	98	94	93	92	91	87	85	89	95
Weiser	8%	B	77	98	86	88	87	84	75	70	79	92
Irongold	4%	D	88	98	94	93	92	91	87	85	89	95
Commski	2%	B	77	98	86	88	87	84	75	70	79	92
Threelakes	1%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		87	98	94	93	92	91	86	84	88	95

Soil # 191 Dalian very cobbly fine sandy loam, 2 to 8 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Dalian	100%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		63	98	77	81	80	76	61	54	68	89

Soil # 294 Rock outcrop, sand stone												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Rock outcrop	90%	D	88	98	94	93	92	91	87	85	89	95
Nupper	5%	D	88	98	94	93	92	91	87	85	89	95
Moentria	5%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 320 Boxspring - Zeheme - Rock outcrop association												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Boxspring	50%	D	88	98	94	93	92	91	87	85	89	95
Zeheme	33%	D	88	98	94	93	92	91	87	85	89	95
Rock Outcrop	15%	D	88	98	94	93	92	91	87	85	89	95
Typic Haplocalcids	2%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 323 Boxspring - Scrapy - Rock Outcrop Association												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Boxspring	40%	D	88	98	94	93	92	91	87	85	89	95
Scrapy	30%	D	88	98	94	93	92	91	87	85	89	95
Rock outcrop	15%	D	88	98	94	93	92	91	87	85	89	95
Lithic calcicustolls	9%	D	88	98	94	93	92	91	87	85	89	95
Typic Haplustolls	6%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 351 Seralin extremely gravelly loam, 30 to 75 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Seralin	85%	D	88	98	94	93	92	91	87	85	89	95
Potosi	7%	D	88	98	94	93	92	91	87	85	89	95
Lithic Torriorthents	4%	D	88	98	94	93	92	91	87	85	89	95
Rock Outcrop	4%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85		95

Soil # 360 Rock outcrop - St. Thomas Complex												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Rock outcrop	50%	D	88	98	94	93	92	91	87	85	89	95
St. Thomas	35%	D	88	98	94	93	92	91	87	85	89	95
Weiser	10%	A	63	98	77	81	80	76	61	54	68	89
Bracken	5%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		85	98	92	92	91	89	84	81	86	95

Soil # 502 Canutito-Cave gravelly fine sandy loams, 2 to 8 percent slopes												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Canutito	55%	A	63	98	77	81	80	76	61	54	68	89
Cave	40%	D	88	98	94	93	92	91	87	85	89	95
Arizo	5%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		75	98	85	87	86	83	73	68	78	92

Soil # 640 Rock outcrop, sand stone												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Rock outcrop	90%	D	88	98	94	93	92	91	87	85	89	95
Moentria	5%	D	88	98	94	93	92	91	87	85	89	95
Nupper	5%	D	88	98	94	93	92	91	87	85	89	95
Total	100%		88	98	94	93	92	91	87	85	89	95

Soil # 731 Purob-Irongold association												
Soil	Percent	Group	Existing ₁	Impervious ₂	Newly Graded Areas ₃	Residential ₄ (Apartment/Condo)	Residential ₅ (6,000 Ft. ² or Less)	Residential ₆ (7,000 Ft. ²)	Residential ₇ (10,000 Ft. ²)	Residential ₈ (20,000 Ft. ²)	Open Space ₉ (poor Condition)	Urban Districts ₁₀ (Commercial and Business)
Purob	60%	D	88	98	94	93	92	91	87	85	89	95
Irongold	25%	D	88	98	94	93	92	91	87	85	89	95
Typic torriorthents	5%	A	63	98	77	81	80	76	61	54	68	89
Arizo	3%	A	63	98	77	81	80	76	61	54	68	89
Purob	3%	D	88	98	94	93	92	91	87	85	89	95
Typic haplocalcids	2%	B	77	98	86	88	87	84	75	70	79	92
Xeric haplocambids	1%	A	63	98	77	81	80	76	61	54	68	89
Aridic calcixerolls	1%	A	63	98	77	81	80	76	61	54	68	89
Total	100%		86	98	93	92	91	90	85	82	87	95

- 1-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 4 of 4
* Desert Shrub in Poor Hydrologic Condition
- 2-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page1 of 4
* Streets and Roads
- 3-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Newly Graded Areas
- 4-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* Apartments / Condos (MP/SFA-MU > 10 UNITS per ACRE)
- 5-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* Townhouses / 6,000 sq ft lots or less (SF/SFA 7-10 UNITS per ACRE)
- 6-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 7,000 sq ft lots (SF/SFA 5-7 UNITS per ACRE)
- 7-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 10,000 sq ft lots (SF LOW 3-5 UNITS Per ACRE)
- 8-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602A
* 20,000 sq ft lots (SF ESTATE 1.5-3 UNITS per ACRE)
- 9-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Open spaces in poor condition (grass cover < 50%)
- 10-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual Table 602 page 1 of 4
* Commercial and Business

Curve Number calculations for basins																					
Basin	Total Area	Subbasin	Area	%Area	Type	Soil Percentage	1	2	3	4	5	6	7	8	9	10	Weighted CN Value	Composite CN Value	CN Value		
	(ACRE)	DEVELOPED CONDITION ONSITE																			
4-A	230.33	BW1	23.57	10.23%	731	100%							100%				8.7	84.6	85.0		
		BW2	26.05	11.31%	731	100%							100%				9.6		85.0		
		UB3	5.43	2.36%	731	100%									100%	2.2	95.0				
		UB4	28.86	12.53%	731	100%											10.3		82.0		
		UB5	53.23	23.11%	731	100%											19.0		82.0		
		UB14	28.35	12.74%	731	100%								100%			10.8		85.0		
		UB15	13.01	5.65%	731	100%								100%			4.5		85.0		
		UB17	5.66	2.46%	731	100%								100%			2.1		85.0		
		UBG4	16.16	7.02%	731	100%										100%	6.1		87.0		
		UBG5	3.22	1.40%	731	100%										100%	1.2		87.0		
		UBPW3	8.12	3.53%	731	100%										100%	3.1		87.0		
		UBPW4	16.31	7.08%	731	100%										100%	6.2		87.0		
		ROADS	1.36	0.59%	NA	100%		100%									0.6	98.0			
4-B	345.76	BW1	12.33	3.57%	731	100%							100%				3.0	86.3	85.0		
		BW9	12.28	3.55%	731	100%											3.3		92.0		
		BW10	8.98	2.60%	731	100%											100%		2.5	95.0	
		BW11	9.96	2.88%	731	100%								100%					2.6	90.0	
		BW12	17.02	4.92%	731	100%													4.4	90.0	
		BW13	22.41	6.48%	731	100%								100%					5.8	90.0	
		BW15	23.74	6.87%	731	100%										100%			5.6	82.0	
		BW16	29.19	8.44%	731	100%										100%			6.9	82.0	
		BW17	43.27	12.51%	731	100%										100%			10.3	82.0	
		BW18	13.57	3.92%	731	100%										100%			3.3	85.0	
		BW19	41.25	11.93%	731	100%										100%			10.1	85.0	
		BW20	29.55	8.55%	731	100%										100%			7.3	85.0	
		BW22	22.39	6.48%	731	100%										100%			5.5	85.0	
		BWP2	3.26	0.94%	731	100%											100%			0.8	87.0
		BWP3	0.53	0.15%	731	100%											100%			0.1	87.0
		BWP8	2.76	0.80%	731	100%											100%			0.7	87.0
		BWP9	1.74	0.50%	731	100%											100%			0.4	87.0
		BWP1	5.17	1.50%	731	100%											100%			1.3	87.0
		BWP10	1.85	0.54%	731	100%											100%			0.5	87.0
		BWPW7	4.32	1.25%	731	100%											100%			1.1	87.0
		BWPW8	14.97	4.33%	731	100%											100%			3.8	87.0
		BWPW9	3.67	1.12%	731	100%											100%			1.0	87.0
				UNNAMED	1.68	0.49%	731	100%													0.4	82.0
		ROADS	19.67	5.69%	NA	100%		100%										5.6	98.0		

B.4.4 RED ROCK DETENTION BASIN TRIBUTARY

STANDARD FORM 4

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB

V1 applies to the first 500 feet of travel distance V2 applies to the remaining travel distance			
Existing:		Developed	
V1 = 148 * S ^{1/2}	V2 = 294 * S ^{1/2}	V1 = 202 * S ^{1/2}	V2 = 306 * S ^{1/2}

$$T_i = \frac{1.8(1.1 - k)L^{1/2}}{S^{1/3}} \quad T_i = \frac{L}{60V}$$

$$k = 0.0132C_n - 0.39 \quad T_c = T_i + T_l$$

SUB-BASIN DATA					INITIAL/OVERLAND TIME (Ti)			TRAVEL TIME (Tt)					Tc CHECK (URBANIZED BASINS)		FINAL Tc	LAG TIME	REMARKS
DESIG.	Cn	K	AREA Ac.	AREA Mi^2	LENGTH Ft	SLOPE %	Ti Min.	LENGTH Ft.	SLOPE %	V1 fps (9a)	V2 fps (9b)	Tt Min.	TOTAL LENGTH (11)	Tc Min. (12)	Min.	TLAG Hr.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
EXISTING CONDITION																	
1-1	87.3	0.762	683.46	1.0679													OVER 1 MI ²
1-2	86.8	0.755	589.84	0.9216	500	88.0	3.12	11375	12.1	5.2	10.2	19.32	11875	75.97	22.44	0.224	CLOSE TO 1 MI ² USE HCDDM EQ 613
1-3	84.3	0.722	211.25	0.3301	500	48.0	4.19	6213	13.2	5.4	10.7	10.46	6713	47.29	14.65	0.146	
1-4	88.0	0.772	347.58	0.5431	500	44.0	3.74	5402	24.1	7.3	14.4	6.81	5902	42.79	10.56	0.106	
1-5	78.3	0.643	153.59	0.2400	500	64.0	4.60	4955	3.1	2.6	5.2	17.46	5455	40.31	22.06	0.221	
1-6	88.0	0.772	48.17	0.0753	100	32.0	1.86	1780	22.2	7.0	13.8	2.74	1880	20.44	10.00	0.100	ORIGINAL TC WAS 4.6 MIN
1-7	86.6	0.753	354.66	0.5542	100	50.0	1.70	9501	19.1	6.5	12.8	12.98	9601	63.34	14.68	0.147	
3-1	87.0	0.758	1422.67	2.2229													OVER 1 MI ²
3-2	83.9	0.717	144.58	0.2259	440	59.0	3.71	5695	23.3	7.1	14.2	7.27	6135	44.08	10.99	0.110	THIS IS EXACT SAME BASIN AS DB54-5
3-3	88.0	0.771	111.16	0.1737	500	64.0	3.31	3019	17.2	6.1	12.2	4.80	3519	29.55	8.10	0.081	
3-4	88.0	0.771	221.26	0.3457	170	85.0	1.75	5808	22.7	7.1	14.0	7.49	5978	43.21	9.25	0.092	
3-5	87.7	0.768	187.91	0.2936	500	72.0	3.22	5108	26.6	7.6	15.2	6.15	5608	41.16	9.37	0.094	
3-6	88.0	0.771	56.74	0.0887	460	52.0	3.40	2956	23.7	7.2	14.3	4.02	3416	28.98	7.42	0.074	
3-7	87.2	0.761	109.69	0.1714	100	77.0	1.43	2770	30.5	8.2	16.2	3.35	2870	25.94	4.78	0.048	
3-8	87.8	0.769	408.73	0.6386	500	64.0	3.33	10844	15.5	5.8	11.6	16.30	11344	73.02	19.64	0.196	
4-1	87.6	0.766	2946.48	4.6039													OVER 1 MI ²
4-2	85.4	0.737	233.47	0.3648	225	8.0	4.90	5288	8.2	4.2	8.4	11.43	5513	40.63	16.32	0.163	
4-3	85.1	0.733	134.55	0.2102	100	6.0	3.63	4263	6.5	3.8	7.5	10.62	4363	34.24	14.25	0.143	

TRAVEL TIME CALCULATIONS

DEVELOPMENT: Summerlin

W.O. # 7809

CALCULATED BY: SVB

$$Velocity = CS^{\frac{1}{2}}$$

C1 applies to the first 500 feet of travel distance
C2 applies to the remaining travel distance

Existing:	Developed
C1=14.8 C2=29.4	C1=20.2 C2=30.6

					First 500 feet		Remaining Travel Distance	
Basin	Length (ft)	High Elev (ft)	Low Elev (ft)	Slope (ft/ft)	C1	V1 (fps)	C2	V2 (fps)
EXISTING CONDITION								
1-1	11284							
1-2	11375	5680	4300	0.121	14.8	5.2	29.4	10.2
1-3	6213	4880	4060	0.132	14.8	5.4	29.4	10.7
1-4	5402	5200	3900	0.241	14.8	7.3	29.4	14.4
1-5	4955	3955	3800	0.031	14.8	2.6	29.4	5.2
1-6	1780	4245	3850	0.222	14.8	7.0	29.4	13.8
1-7	9501	5100	3290	0.191	14.8	6.5	29.4	12.8
3-1	14144							
3-2	5695	5640	4315	0.233	14.8	7.1	29.4	14.2
3-3	3019	4680	4160	0.172	14.8	6.1	29.4	12.2
3-4	5808	5680	4360	0.227	14.8	7.1	29.4	14.0
3-5	5108	5680	4320	0.266	14.8	7.6	29.4	15.2
3-6	2956	5000	4300	0.237	14.8	7.2	29.4	14.3
3-7	2770	5160	4315	0.305	14.8	8.2	29.4	16.2
3-8	10844	6000	4315	0.155	14.8	5.8	29.4	11.6
4-1	23488							
4-2	5288	4190	3755	0.082	14.8	4.2	29.4	8.4
4-3	4263	3795	3520	0.065	14.8	3.8	29.4	7.5

CURVE NUMBERS FOR SOILS - W.O. #7809

Soil # 112 Arizo very gravelly loamy sand, flooded, 0 to 4 percent slopes			
Soil	Percent	Group	Existing ₁
Arizo	100%	A	63
Total	100%		63

Soil # 155 Cave gravelly fine sandy loam, 4 to 15 percent slopes			
Soil	Percent	Group	Existing ₁
Cave	100%	D	88
Total	100%		88

Soil # 191 Dalian very cobbly fine sandy loam, 2 to 8 percent slopes			
Soil	Percent	Group	Existing ₁
Dalian	100%	A	63
Total	100%		63

Soil # 294 Rock outcrop, sand stone			
Soil	Percent	Group	Existing ₁
Rock outcrop	90%	D	88
Nupper	5%	D	88
Moentria	5%	D	88
Total	100%		88

Soil # 320 Boxspring - Zeheme - Rock outcrop association			
Soil	Percent	Group	Existing ₁
Boxspring	50%	D	88
Zeheme	33%	D	88
Rock Outcrop	15%	D	88
Typic Haplocalcids	2%	D	88
Total	100%		88

Soil # 323 Boxspring - Scrapy - Rock Outcrop Association			
Soil	Percent	Group	Existing ₁
Boxspring	40%	D	88
Scrapy	30%	D	88
Rock outcrop	15%	D	88
Lithic calcistolls	9%	D	88
Typic Haplustolls	6%	D	88
Total	100%		88

Soil # 351 Seralin extremely gravelly loam, 30 to 75 percent slopes			
Soil	Percent	Group	Existing ₁
Seralin	85%	D	88
Potosi	7%	D	88
Lithic Torriorthents	4%	D	88
Rock Outcrop	4%	D	88
Total	100%		88

Soil # 360 Rock outcrop - St. Thomas Complex			
Soil	Percent	Group	Existing ₁
Rock outcrop	50%	D	88
St. Thomas	35%	D	88
Weiser	10%	A	63
Bracken	5%	A	63
Total	100%		85

Soil # 502 Canutio-Cave gravelly fine sandy loams, 2 to 8 percent slopes			
Soil	Percent	Group	Existing ₁
Canutio	55%	A	63
Cave	40%	D	88
Arizo	5%	D	88
Total	100%		75

Soil # 640 Rock outcrop, sand stone			
Soil	Percent	Group	Existing ₁
Rock outcrop	90%	D	88
Moentria	5%	D	88
Nupper	5%	D	88
Total	100%		88

Soil # 731 Purob-Irongold association			
Soil	Percent	Group	Existing ₁
Purob	60%	D	88
Irongold	25%	D	88
Typic torriorthents	5%	A	63
Arizo	3%	A	63
Purob	3%	D	88
Typic haplocalcids	2%	B	77
Xeric haplocambids	1%	A	63
Aridic calcixerolls	1%	A	63
Total	100%		86

1-Referenced Clark County's Hydrologic Criteria and Drainage Design Manual
 * Desert Shrub in Poor Hydrologic

Curve Number calculations for basins

Basin	Type	Soil Percentage	1	CN Value
EXISTING CONDITION				
1-1	155 (30%)	30%	88	87.3
	191 (3%)	3%	63	
	320 (8%)	8%	88	
	323 (54%)	54%	88	
	351 (1%)	1%	88	
	640 (4%)	4%	88	
1-2	155 (15%)	15%	88	86.8
	191 (5%)	5%	63	
	320 (80%)	80%	88	
	191 (15%)	15%	63	
1-3	320 (85%)	85%	88	84.3
	320 (94%)	94%	88	
1-4	502 (6%)	6%	88	88.0
	320 (94%)	94%	88	
1-5	155 (2%)	2%	88	78.3
	320 (23%)	23%	88	
	502 (75%)	75%	75	
1-6	155 (9%)	9%	88	88.0
	320 (91%)	91%	88	
1-7	155 (1%)	1%	88	86.6
	320 (88%)	88%	88	
	502 (11%)	11%	75	
	112 (4%)	4%	63	
3-1	323 (90%)	90%	88	87.0
	351 (6%)	6%	88	
	112 (8%)	8%	63	
3-2	323 (65%)	65%	88	83.9
	640 (7%)	7%	88	
	731 (18%)	18%	86	
	323 (65%)	65%	88	
3-3	640 (34%)	34%	88	88.0
	731 (1%)	1%	86	
	323 (99%)	99%	88	
3-4	731 (1%)	1%	86	88.0
	323 (99%)	99%	88	
3-5	323 (85%)	85%	88	87.7
	731 (15%)	15%	86	
3-6	323 (99%)	99%	88	88.0
	731 (1%)	1%	86	
3-7	323 (60%)	60%	88	87.2
	731 (40%)	40%	86	
3-8	323 (90%)	90%	88	87.8
	731 (10%)	10%	86	
	294 (8%)	8%	88	
4-1	320 (2%)	2%	88	87.6
	323 (54%)	54%	88	
	351 (4%)	4%	88	
	360 (4%)	4%	85	
	731 (14%)	14%	86	
	640 (14%)	14%	88	
	360 (60%)	60%	85	
	731 (40%)	40%	86	
4-2	360 (92%)	92%	85	85.4
	731 (8%)	8%	86	
4-3	360 (92%)	92%	85	85.1
	731 (8%)	8%	86	

B.4.5 USBR ROUTING CALCULATIONS TRIBUTARY

USBR ROUTING CALCULATIONS

$$TLAG = 20K_n \left(\frac{LL_c}{S^{0.5}} \right)^{0.33}$$

4-1	
Kn	0.05
L	4.448501 MILE
Lc	2.681387 MILE
S	678.88 FT/MI
TLAG=	0.772722 <-- 2008 MPU IS 0.725

3-1	
Kn	0.05
L	2.86 MILE
Lc	1.62 MILE
S	573 FT/MI
TLAG=	0.581628 <--2008 MPU IS 0.495

1-1	
Kn	0.05
L	2.02 MILE
Lc	1.1348 MILE
S	495.0495 FT/MI
TLAG=	0.472359

E-NORTH	
Kn	0.05
L	2.88 MILE
Lc	1.55 MILE
S	270.3 FT/MI
TLAG=	0.650361

B.5 ULTIMATE CONDITION HEC-1 MODEL OUTPUT

**B.5.1 100-YEAR BELTWAY CHANNEL
NORTH/VILLAGE 26 TRIBUTARY**

B.5.1 LMDB-sdn3

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1*****
*****
*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
*
* RUN DATE 05OCT17 TIME 16:45:30 *
*
*
*****
*****
```

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

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X   X   XXXXXX   XXXX   X
X   X   X       X   X   XX
X   X   X       X       X
XXXXXXX XXXX   X       XXXX X
X   X   X       X       X
X   X   X       X   X   X
X   X   XXXXXX   XXXX   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 INPUT FILE DATE = JULY 2017
2 ID DESIGN STORM = 100-YEAR 6-HR STORM
3 ID STORM DISTRIBUTION = SDN #3
4 ID MODELED BY VTN (SVB)
5 ID
6 ID
7 ID
8 ID
9 ID
10 ID *****
11 ID * HYDROLOGIC MODEL:3 REFERENCE FILES ARE USED *
12 ID * 2017 SUMMERLIN MASTER PLAN BASINS - REMAKE OF SUMMERLIN *
13 ID * CCRFCD 2008 MASTER PLAN UPDATE GOWAN WATERSHED *
14 ID *
15 ID *****
16 ID * REMAKE OF HYDROLOGIC MODEL: *
17 ID * SUMMERLIN VILLAGE 26 - RESPONSE TO COMMENTS *
18 ID * DATED NOVEMBER 2015 START ON PAGE 31/175 *
19 ID * HEC-1 TITLE - SUMMERLIN VILLAGE 26 REVERENCE *
20 ID *
21 ID *
22 ID * ***** THIS HEC -1 TO BE USED WITH ALTERNATIVE 1-B ONLY *****
23 ID *
24 ID * *****
25 ID
26 ID
27 ID
28 ID
29 ID
30 ID AREA DARF
31 ID SQ. MI.
32 ID 0-0.5 0.99
33 ID 0.5-1 0.975
34 ID 1-2 0.95
35 ID 2-3 0.925
36 ID 3-4 0.915
37 ID 4-5 0.908
38 ID 5-6 0.903
39 ID 6-7 0.895
40 ID 7-8 0.885
41 ID
42 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
43 ID
44 ID 100-YEAR, 6-HOUR STORM, SDN3
45 ID
46 IT 5 0 0 650
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1

PAGE 2

85 KK CP1.1
86 KM COMBINE R1-1, 1-A and R1-2
87 HC 3
 *

1

PAGE 3

105	KK	1-6	
106	KM	PORTION OF 2008 MPU BASIN	SV26-1
107	BA	0.1753	
108	PB	3.52	
109	LS	0	88.0
110	UD	0.0753	
	*		

111	KK	R1-6							
112	KM	ROUTE 1-6 THROUGH 1-B TO CP1.3							
113	KM	PORTION OF FACILITY GOL30289 (CONC CHANNEL)							
114	RD	3600 0.0795 0.013 0 TRAP 50	2						
	*								
115	KK	1-B							
116	KM	PORTION OF 2008 MPU BASIN SV26-1							
117	BA	0.1838							
118	PB	3.52							
119	LS	0 79.7							
120	UD	0.198							
	*								
121	KK	R1-B							
122	KM	ROUTE 1-B TO CP1.3							
123	KM	PORTION OF FACILITY GOL30289 (CONC CHANNEL)							
124	RD	650 0.0795 0.013 0 TRAP 50	2						
	*								
1		HEC-1 INPUT						PAGE 4	
LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10								
125	KK	1-5							
126	KM	PORTION OF 2008 MPU BASIN SV26-1							
127	BA	0.2400							
128	PB	3.52							
129	LS	0 78.3							
130	UD	0.221							
	*								
131	KK	R1-5							
132	KM	ROUTE R1-5 THROUGH 1-B TO CP1.3							
133	KM	PORTION OF FACILITY GOL30290 (NATURAL WASH)							
134	RD	3600 0.225 0.030 0 TRAP 363	0						
	*								
135	KK	1-4							
136	KM	PORTION OF 2008 MPU BASIN SV26-1							
137	BA	0.5431							
138	PB	3.52							
139	LS	0 88.0							
140	UD	0.106							
	*								
141	KK	R1-4							
142	KM	ROUTE R1-4 THROUGH 1-B TO CP1.3							
143	KM	FACILITY GOL30290 (NATURAL WASH)							
144	RD	4850 0.225 0.030 0 TRAP 363	0						
	*								
145	KK	CP1.3							
146	KM	COMBINE RCP1.2, R1-4, R1-5, R1-B and R1-6							
147	HC	5							
	*								
148	KK	RCP1.3							
149	KM	ROUTE RCP1.3 THROUGH 1-7 TO CP1.4							
150	KM	FACILITY GOL30216 (CONC CHANNEL)							
151	RD	3800 0.0608 0.013 0 TRAP 50	2						
	*								
152	KK	1-7							
153	KM	PORTION OF 2008 MPU BASIN SV26-1							
154	BA	0.5542							
155	PB	3.52							
156	LS	0 86.6							
157	UD	0.147							
	*								
	*	START SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE							
	*								
1		HEC-1 INPUT						PAGE 5	
LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10								
158	KK	1-3P							
159	PB	3.36							
160	BA	0.0258							
161	LS	0 94.9							
162	UD	0.084							
	*								
163	KK	CP1.4							
164	KM	PREVIOUSLY CALLED CP4 IN VILLAGE 26 STUDY							
165	KM	COMBINE 1-3P, 1-7 AND RCP1.3							
166	HC	3							
	*								
167	KK	RCP1.4							
168	KM	THIS IS RCSV26-1 IN THE 2008 MPU							
169	KM	ROUTE CSV26-1 TO VILLAGE 26 DETENTION BASIN							
170	KM	FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 3							

171 KM FACILITY # = GOL3 0137
 172 KM LINING = RCB
 173 RD 4334 0.005 0.015 0 TRAP 14 0
 *
 174 KK 1-12P
 175 PB 3.32
 176 BA 0.1814
 177 LS 0 83.8
 178 UD 0.234
 *
 179 KK CP5
 180 KM COMBINE CP4 AND 1-12P
 181 HC 2
 *
 182 KK 1-14
 183 PB 3.31
 184 BA 0.0016
 185 LS 0 86.3
 186 UD 0.100
 *
 187 KK 1-15
 188 PB 3.32
 189 BA 0.0057
 190 LS 0 86.1
 191 UD 0.100
 *
 192 KK 1-16
 193 PB 3.31
 194 BA 0.0030
 195 LS 0 86.3
 196 UD 0.100
 *

1

HEC-1 INPUT

PAGE 6

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

197 KK 1-17
 198 PB 3.28
 199 BA 0.0039
 200 LS 0 86.3
 201 UD 0.100
 *
 202 KK 1-18
 203 PB 3.28
 204 BA 0.0038
 205 LS 0 86.3
 206 UD 0.100
 *
 207 KK CP5B
 208 KM COMBINE CP5, 1-14, 1-15, 1-16, 1-17, AND 1-18 AT DETENTION BASIN
 * KO 1
 209 HC 6
 *
 210 KK EXDB
 * KO 1
 211 KM DETENTION BASIN CHEYENNE AND BELTWAY
 212 KM LOW FLOW OUTLET IS 66" PIPE
 213 RS 1 STOR 0
 214 SV 0 0.07 0.80 12.71 18.75 25.05 85.95 95.04 124.21 135.14
 215 SV 200.27 243.11 258.06 273.36 289.00 304.99
 216 SE 2990 2991 2992 2995 2996 2997 3005 3006 3009 3010
 217 SE 3015 3018 3019 3020 3021 3022
 218 SL 2993.7 22.31 0.7 0.5
 219 SS 3021.9 200 2.6 1.5
 *
 220 KK 2-C
 221 KM PORTION OF 2008 MPU BASIN SV22-3
 222 BA 0.4962
 223 PB 3.41
 224 LS 0 93.2
 225 UD 0.293
 *
 226 KK R2-C
 227 KM THIS IS RCSV22-3
 228 KM ROUTE CSV22-3 TO CRCSV223 FROM THE 2008 MPU
 229 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY BRANCH
 230 KM FACILITY # = GOBE 0000, 0001, 0065
 231 KM LINING = CONCRETE
 232 RD 4605 0.065 0.015 0 TRAP 20 2
 *

1

HEC-1 INPUT

PAGE 7

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

```

233      KKCRCSV223
234      KM   COMBINE RCP2.1, AND EXDB
235      HC     2
      *
      * RE-START SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE
      *

236      KK   1-4R
237      PB   3.44
238      BA   0.0536
239      LS     0      86.3
240      UD   0.100
      *

241      KK   1-5R
242      PB   3.42
243      BA   0.0343
244      LS     0      86.3
245      UD   0.100
      *

246      KK   CP6
247      KM   COMBINBE 1-4R AND 1-5R
248      HC     2
      *

249      KK   R8
250      KM   ROUTE CP6 THROUGH 1-11P TO CP9
251      KM   ASSUME RCP
252      KM   LEN   SLOPE      n      SHAPE      DIAMETER
253      RD   1800  0.0610  0.013      0      CIRC      4
      *

254      KK   1-6R
255      PB   3.43
256      BA   0.0152
257      LS     0      86.3
258      UD   0.100
      *

259      KK   1-7R
260      PB   3.44
261      BA   0.0271
262      LS     0      86.3
263      UD   0.100
      *

264      KK   CP7
265      KM   COMBINE 1-6R AND 1-7R
266      HC     2
      *

```

1

HEC-1 INPUT

PAGE 8

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

```

267      KK   R9
268      KM   ROUTE CP7 THROUGH 1-11P TO CP9
269      KM   ASSUME RCP
270      KM   LEN   SLOPE      n      SHAPE      DIAMETER
271      RD   3150  0.0400  0.013      0      CIRC      4.5
      *

272      KK   1-8R
273      PB   3.42
274      BA   0.0025
275      LS     0      86.3
276      UD   0.100
      *

277      KK   1-10R
278      PB   3.41
279      BA   0.0556
280      LS     0      86.1
281      UD   0.100
      *

282      KK   CP8
283      KM   COMBINE 1-8R AND 1-10R
284      HC     2
      *

285      KK   R10
286      KM   ASSUME RCP
287      KM   LEN   SLOPE      n      SHAPE      DIAMETER
288      RD   2900  0.0400  0.013      0      CIRC      4.5
      *

289      KK   1-11P
290      PB   3.38
291      BA   0.1775
292      LS     0      81.7
293      UD   0.214
      *

```

294 KK CP9
295 KM COMBINE CP6, CP7, CP8, AND 1-11P
296 HC 4
*

297 KK 1-13
298 PB 3.34
299 BA 0.0008
300 LS 0 86.3
301 UD 0.100
*

1

HEC-1 INPUT

PAGE 9

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

302 KK CP10
303 KM COMBINE CP9, 1-13
304 HC 2
*
* END SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE
* BEGIN 2008 MPU
*

305 KK RSV26-3
306 KM ROUTE SV26-3 TO CLMT1R
307 KM NATURAL WASH
308 KM TRAVEL LENGTH = 1,200
309 KM SLOPE = 3.3%
310 KM N = 0.040
311 KM HYDRAULIC RADIUS = 1.5
312 KM VELOCITY = 14.2
313 RM 0 0.024 0.15
*
* END OF G.C. WALLACE'S HYDROLOGY
*

314 KK LMT1R
315 BA 1.945
316 PB 3.45
317 LS 0 87.7
318 UD 0.447
*

319 KK CLMT1R
320 KM COMBINE RSV26-3 AND LMT1R
321 HC 2
*

322 KK RCLMT1R
323 KM ROUTE CLMT1R TO CRCLMT1R
324 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 4
325 KM FACILITY # = GOL4 0000, 0010, 0025
326 KM LINING = RCB
327 RD 3000 0.025 0.015 0 TRAP 16 0
*

328 KKRCRLMT1R
329 KM COMBINE RCRCV22 AND RCLMT1R
330 HC 2
*

331 KKRCRLMT1
332 KM ROUTE CRCLMT1R TO CLMT5
333 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 3
334 KM FACILITY # = GOL3 0000, 0010, 0068
335 KM LINING = CONCRETE
336 RD 3640 0.027 0.015 0 TRAP 20 0
*

1

HEC-1 INPUT

PAGE 10

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

337 KK LMT5
338 BA 0.539
339 PB 3.26
340 LS 0 88.2
341 UD 0.158
*

342 KK CLMT5
343 KM COMBINE LMT5 AND RCRLMT1
344 HC 2
*

345 KK LMT2
346 BA 0.985
347 PB 3.41
348 LS 0 95.6
349 UD 0.175
*

350 KK RLMT2

351 KM ROUTE LMT2 TO CLMT3
 352 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM
 353 KM FACILITY # = GOLM 0264, 0277
 354 KM LINING = CONCRETE
 355 RD 4430 0.05 0.015 0 TRAP 20 2
 *
 356 KK LMT3
 357 BA 0.328
 358 PB 3.32
 359 LS 0 90.8
 360 UD 0.107
 *
 361 KK CLMT3
 362 KM COMBINE RLMT2 AND LMT3
 363 HC 2
 *
 364 KK RCLMT3
 365 KM ROUTE CLMT3 TO CUVB2
 366 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM
 367 KM FACILITY # = GOLM 0230, 0233, 0236, 0252, 0260, 0262, 0264
 368 KM LINING = CONCRETE
 369 RD 2490 0.036 0.015 0 TRAP 15 0
 *
 370 KK UVB2
 371 BA 0.450
 372 PB 3.26
 373 LS 0 89.9
 374 UD 0.275
 *

1

HEC-1 INPUT

PAGE 11

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

375 KK CUVB2
 376 KM COMBINE RCLMT3 AND UVB2
 377 HC 2
 *
 378 KK CCLMT5
 379 KM COMBINE CUVB2 AND CLMT5
 380 HC 2
 *
 381 KK RCCLMT5
 382 KM ROUTE CCLMT5 TO CGABW
 383 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM
 384 KM FACILITY # = GOLM 0150, 0162, 0174
 385 KM LINING = CONCRETE
 386 RD 3820 0.032 0.015 0 TRAP 28 0
 *
 387 KK GABW
 388 BA 0.204
 389 PB 3.17
 390 LS 0 84.6
 391 UD 0.238
 *
 392 KK CGABW
 393 KM COMBINE RCCLMT5 AND GABW
 394 HC 2
 *
 395 KK CRBW
 396 BA 0.437
 397 PB 3.17
 398 LS 0 84.6
 399 UD 0.315
 *
 400 KK CCRBW
 401 KM COMBINE CRBW AND CGABW
 402 HC 2
 *
 403 KK GRBW
 404 BA 0.300
 405 PB 3.17
 406 LS 0 89.7
 407 UD 0.231
 *

1

HEC-1 INPUT

PAGE 12

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

408 KK GRBW2
 409 BA 0.158
 410 PB 3.10
 411 LS 0 84.7


```

412      UD      0.219
      *

413      KK      LMDB
414      BA      0.120
415      PB      3.10
416      LS      0      80.1
417      UD      0.244
      *

418      KK      LMTNIN
419      KM      COMBINE LMDB, GRBW, GRBW2, AND CCRBW
420      KM      TOTAL INFLOW TO LONE MOUNTAIN DETENTION BASIN
      * KO 1
421      HC      4
      *

422      KK      LMTNDB
423      KM      LONE MOUNTAIN DETENTION BASIN
424      KM      FACILITY = GOWAN/LONE MTN. SYSTEM
425      KM      FACILITY # = GOLM 0146
426      KM      TYPE OF FACILITY = DETENTION BASIN
427      KM      STORAGE VOLUME = 888.02 ACRE-FEET
428      KM      OUTLET = 36" ORIFICE PLATE
429      KM      100-YEAR DISCHARGE =
430      KM      SPILLWAY LENGTH = 825'
431      KM      SPILLWAY HEIGHT =
432      KM      SPILLWAY CREST ELEVATION = 2652.57'
433      KM      SPILLWAY TYPE = LABYRINTH
434      KM      PMF DISCHARGE =
435      KM      TOP OF EMBANKMENT ELEVATION = 2658'
436      KM      INFORMATION REFERENCED FROM "ALEXANDER ROAD/HUALAPUI WAY ROAD IMPROVEMENTS
437      KM      PROJECT: CHEYENE AVENUE TO CIMARRON ROAD" PLANS BY THE CITY OF LAS VEGAS
438      KM      DEPARTMENT OF PUBLIC WORKS: ENGINEERING DESIGN SECTION (8-12-2004)
439      KO      3
440      RS      1      STOR      -1
441      SV      0      1.48      6.45      32.97      130.6      238.38      377.17      558.09      769.02      888.0
442      SV      901.46      946.59      992.2      1038.33      1085      1132.17
443      SE      2621      2622      2623      2625      2630      2635      2640      2645      2650      2652.
444      SE      2653      2654      2655      2656      2657      2658
445      SQ      0      0      24      56      96      120      144      163      182      188
446      SQ      200      300      600      800      20000      31600
      *

447      KK      LMTNOT
448      KM      ROUTE LMTNDB TO CLV15-C
449      KM      FACILITY = GOWAN - LONE MOUNTAIN SYSTEM
450      KM      FACILITY # = GOLM 0000,0049,060,0075,0101,0115,0140,0142,0144,0145
451      KM      LINING = RCP
452      RD      9240      0.0308      0.015      0      CIRC      4
      *

```

1

HEC-1 INPUT

PAGE 13

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

453 ZZ

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

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

50    1-1
      V
      V
64    R1-1
      .
      .
69    .      1-A
      .      .
      .      .
75    .      .      1-2
      .      .      V
      .      .      V
81    .      .      R1-2
      .      .      .
      .      .      .
85    CP1.1.....
      V
      V
88    RCP1.1
      .
      .
92    .      1-3
      .      .
      .      .
98    CP1.2.....
      V
      V
101   RCP1.2
      .
      .
105   .      1-6
      .      V

```

111	.	.	V		
	.	.	R1-6		
115	.	.	.	1-B	
	.	.	.	V	
121	.	.	.	V	
	.	.	R1-B		
125	.	.	.	.	1-5
	.	.	.	V	
131	.	.	.	V	
	.	.	R1-5		
135	.	.	.	.	1-4
	.	.	.	V	
141	.	.	.	V	
	.	.	.	R1-4	
145	CP1.3	.	.	.	.
	V	.	.	.	.
148	RCP1.3	.	.	.	.
152	.	.	1-7	.	.
158	.	.	.	1-3P	.
163	CP1.4	.	.	.	.
	V	.	.	.	.
167	RCP1.4	.	.	.	.
174	.	.	1-12P	.	.
179	CP5	.	.	.	.
182	.	.	1-14	.	.
187	.	.	.	1-15	.
192	.	.	.	.	1-16
197	.	.	.	.	1-17
202	.	.	.	.	1-18
207	CP5B	.	.	.	.
	V	.	.	.	.
210	EXDB	.	.	.	.
220	.	.	2-C	.	.
	.	.	V	.	.
226	.	.	R2-C	.	.
233	CRCSV223	.	.	.	.
236	.	.	1-4R	.	.
241	.	.	.	1-5R	.
246	CP6	.	.	.	.
	V	.	.	.	.
249	R8	.	.	.	.
254	.	.	1-6R	.	.
259	.	.	.	1-7R	.
264	.	.	CP7	.	.

	.	.	V	
	.	.	V	
267	.	.	R9	
	.	.	.	
272	.	.	.	1-8R
	.	.	.	.
277	.	.	.	1-10R
	.	.	.	.
282	.	.	.	CP8.....
	.	.	V	
285	.	.	V	
	.	.	R10	
	.	.	.	
289	.	.	.	1-11P
	.	.	.	.
294	.	.	.	.
	.	CP9.....		
	.	.		
297	.	.	1-13	
	.	.	.	
302	.	.	.	
	.	CP10.....		
	.	V		
	.	V		
305	.	RSV26-3		
	.	.		
314	.	.	LMT1R	
	.	.	.	
319	.	.	.	
	.	CLMT1R.....		
	.	V		
	.	V		
322	.	RCLMT1R		
	.	.		
328	CRCLMT1R.....	.		
	V			
	V			
331	RCRCLMT1	.		
	.	.		
337	.	LMT5		
	.	.		
342	.	.		
	CLMT5.....	.		
	.	.		
345	.	LMT2		
	.	V		
	.	V		
350	.	RLMT2		
	.	.		
356	.	.	LMT3	
	.	.	.	
361	.	.	.	
	.	CLMT3.....		
	.	V		
	.	V		
364	.	RCLMT3		
	.	.		
370	.	.	UVB2	
	.	.	.	
375	.	.	.	
	.	CUVB2.....		
	.	.		
378	.	.		
	CCLMT5.....	.		
	V			
	V			
381	RCCLMT5	.		
	.	.		
387	.	GABW		
	.	.		
392	.	.		
	CGABW.....	.		
	.	.		
395	.	CRBW		
	.	.		
400	.	.		
	CCRBW.....	.		
	.	.		
403	.	GRBW		
	.	.		
	.	.		

```

408      .      .      GRBW2
      .      .      .
      .      .      .
413      .      .      .      LMDB
      .      .      .      .
      .      .      .      .
418      LMTNIN.....
      V
      V
422      LMTNDB
      V
      V
447      LMTNOT

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****
*****
*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
*
* RUN DATE 05OCT17 TIME 16:45:30 *
*
*
*****
*****
*
*
* U.S. ARMY CORPS OF ENGINEERS
*
* HYDROLOGIC ENGINEERING CENTER
*
* 609 SECOND STREET
*
* DAVIS, CALIFORNIA 95616
*
* (916) 756-1104
*
*
*****
*****

```

```

INPUT FILE DATE = JULY 2017
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #3
MODELED BY VTN (SVB)

```

```

*****
* HYDROLOGIC MODEL:3 REFERENCE FILES ARE USED *
* 2017 SUMMERLIN MASTER PLAN BASINS - REMAKE OF SUMMERLIN *
* CCRFCD 2008 MASTER PLAN UPDATE GOWAN WATERSHED *
*
*****
*
* REMAKE OF HYDROLOGIC MODEL:
* SUMMERLIN VILLAGE 26 - RESPONSE TO COMMENTS
* DATED NOVEMBER 2015 START ON PAGE 31/175
* HEC-1 TITLE - SUMMERLIN VILLAGE 26 REVERENCE
*
*
* ***** THIS HEC -1 TO BE USED WITH ALTERNATIVE 1-B ONLY *****
*
*****

```

AREA	DARF
SQ. MI.	
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

```

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN3

```

```

47 IO      OUTPUT CONTROL VARIABLES
          IPRNT      5  PRINT CONTROL
          IPLOT      0  PLOT CONTROL
          QSCAL      0.  HYDROGRAPH PLOT SCALE

IT      HYDROGRAPH TIME DATA
          NMIN      5  MINUTES IN COMPUTATION INTERVAL
          IDATE      1  0  STARTING DATE
          ITIME      0000  STARTING TIME
          NQ      650  NUMBER OF HYDROGRAPH ORDINATES
          NDDATE     3  0  ENDING DATE

```


	NDTIME	0605	ENDING TIME						
	ICENT	19	CENTURY MARK						
	COMPUTATION INTERVAL		.08 HOURS						
	TOTAL TIME BASE		54.08 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								
	.99	.98	.95	.93	.92	.91	.90	.89	
WARNING ---	ROUTED OUTFLOW (	748.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	827.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	889.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	934.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	962.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	974.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	974.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	964.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	946.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	921.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	890.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	855.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	818.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	778.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	737.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	695.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	717.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	788.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	840.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	875.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	894.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	901.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	897.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	884.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	864.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	838.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	808.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	774.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	738.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	701.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	703.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	736.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	756.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	765.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	763.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	754.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				
WARNING ---	ROUTED OUTFLOW (	737.)	IS GREATER THAN MAXIMUM OUTFLOW (	683.)	IN STORAGE-OUTFLOW TABLE				

WARNING --- ROUTED OUTFLOW (716.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (690.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
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ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

* *
422 KK * LMTNDB *
* *

439 KO OUTPUT CONTROL VARIABLES
IPRNT 3 PRINT CONTROL
IPLT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

440 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

441 SV	STORAGE	.0	1.5	6.4	33.0	130.6	238.4	377.2	558.1	769.0
888.0		901.5	946.6	992.2	1038.3	1085.0	1132.2			
443 SE	ELEVATION	2621.00	2622.00	2623.00	2625.00	2630.00	2635.00	2640.00	2645.00	2650.00
2652.00		2653.00	2654.00	2655.00	2656.00	2657.00	2658.00			
445 SQ	DISCHARGE	0.	0.	24.	56.	96.	120.	144.	163.	182.
188.		200.	300.	600.	800.	20000.	31600.			

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 800. TO 20000.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME	6-HR	24-HR	72-HR	54.08-HR
+	(CFS)				
+	448.	393.	246.	191.	191.
	(INCHES)	.341	.857	1.497	1.497
	(AC-FT)	195.	489.	854.	854.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	54.08-HR
+	(AC-FT)				
	969.	961.	866.	652.	652.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	54.08-HR
+	(FEET)				
	2654.49	2654.31	2652.03	2646.49	2646.49

CUMULATIVE AREA = 10.70 SQ MI

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)			24-HR	72-HR	54.08-HR
		(CFS)				
+ 412.	11.33		356.	234.	185.	185.
		(INCHES)	.309	.813	1.453	1.453
		(AC-FT)	176.	464.	829.	829.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)			24-HR	72-HR	54.08-HR
+ 964.	11.33		954.	861.	649.	649.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)			24-HR	72-HR	54.08-HR
+ 2654.37	11.33		2654.17	2651.90	2646.41	2646.41
CUMULATIVE AREA =			10.70 SQ MI			

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)			24-HR	72-HR	54.08-HR
		(CFS)				
+ 333.	12.17		293.	214.	176.	176.
		(INCHES)	.255	.743	1.380	1.380
		(AC-FT)	145.	424.	788.	788.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)			24-HR	72-HR	54.08-HR
+ 952.	12.17		941.	849.	642.	642.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)			24-HR	72-HR	54.08-HR
+ 2654.11	12.17		2653.88	2651.63	2646.23	2646.23
CUMULATIVE AREA =			10.70 SQ MI			

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)			24-HR	72-HR	54.08-HR
		(CFS)				
+ 267.	12.75		242.	198.	169.	169.
		(INCHES)	.210	.688	1.320	1.320
		(AC-FT)	120.	393.	753.	753.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)			24-HR	72-HR	54.08-HR
+ 932.	12.75		920.	831.	628.	628.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)			24-HR	72-HR	54.08-HR
+ 2653.67	12.75		2653.41	2651.21	2645.90	2645.90
CUMULATIVE AREA =			10.70 SQ MI			

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)			24-HR	72-HR	54.08-HR
		(CFS)				
+ 247.	12.83		222.	193.	166.	166.
		(INCHES)	.193	.669	1.299	1.299
		(AC-FT)	110.	382.	741.	741.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)			24-HR	72-HR	54.08-HR
+ 922.	12.83		911.	823.	621.	621.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)			24-HR	72-HR	54.08-HR
+ 2653.47	12.83		2653.12	2651.01	2645.72	2645.72

***		***		***		***	
HYDROGRAPH AT STATION				LMTNDB			
FOR PLAN 1, RATIO =				.91			
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)		24-HR	72-HR		54.08-HR
+	231.	13.00	210.	189.	164.		164.
		(INCHES)	.182	.658	1.285		1.285
		(AC-FT)	104.	375.	733.		733.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE			
+	(AC-FT)	(HR)		24-HR	72-HR		54.08-HR
	916.	13.00	903.	816.	616.		616.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE			
+	(FEET)	(HR)		24-HR	72-HR		54.08-HR
	2653.31	13.00	2652.87	2650.86	2645.59		2645.59
CUMULATIVE AREA =				10.70 SQ MI			

***		***		***		***	
HYDROGRAPH AT STATION				LMTNDB			
FOR PLAN 1, RATIO =				.90			
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW			
				24-HR	72-HR		54.08-HR
+	(CFS)	(HR)					
		(CFS)					
+	220.	13.08	202.	187.	163.		163.
		(INCHES)	.175	.650	1.276		1.276
		(AC-FT)	100.	371.	728.		728.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE			
				24-HR	72-HR		54.08-HR
+	(AC-FT)	(HR)					
	910.	13.08	898.	811.	612.		612.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE			
				24-HR	72-HR		54.08-HR
+	(FEET)	(HR)					
	2653.20	13.08	2652.67	2650.74	2645.48		2645.48
CUMULATIVE AREA =				10.70 SQ MI			

***	***	***	***	***
HYDROGRAPH AT STATION			LMTNDB	
FOR PLAN 1, RATIO =			.89	
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+	(CFS)	(HR)		54.08-HR
		(CFS)		
+	200.	13.17	192.	184.
		(INCHES)	.167	.640
		(AC-FT)	95.	365.
			161.	1.263
			720.	1.263
				720.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+	(AC-FT)	(HR)		54.08-HR
	901.	13.17	889.	803.
			605.	605.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE	
		6-HR	24-HR	72-HR
+	(FEET)	(HR)		54.08-HR
	2652.98	13.17	2652.30	2650.52
			2645.29	2645.29
CUMULATIVE AREA =			10.70 SQ MI	

CUMULATIVE AREA = 10.70 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS

STATION	PEAK FLOW	PEAK STAGE	TIME TO PEAK
	IN CUBIC FEET PER SECOND	AREA IN SQUARE MILES	TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION							
				RATIO 1 .99	RATIO 2 .98	RATIO 3 .95	RATIO 4 .93	RATIO 5 .92	RATIO 6 .91	RATIO 7 .90	RATIO 8 .89
HYDROGRAPH AT											
+	1-1	1.07	1 FLOW TIME	1238. 3.92	1213. 3.92	1170. 3.92	1128. 3.92	1111. 3.92	1100. 3.92	1091. 3.92	1078. 3.92

ROUTED TO												
+	R1-1	1.07	1	FLOW TIME	1239. 4.00	1213. 4.00	1170. 4.00	1127. 4.00	1110. 4.00	1097. 4.00	1089. 4.00	1075. 4.00
HYDROGRAPH AT												
+	1-A	.12	1	FLOW TIME	82. 3.67	79. 3.67	74. 3.67	69. 3.67	68. 3.67	66. 3.67	65. 3.67	64. 3.67
HYDROGRAPH AT												
+	1-2	.92	1	FLOW TIME	1064. 3.92	1041. 3.92	1005. 3.92	968. 3.92	954. 3.92	943. 3.92	936. 3.92	924. 3.92
ROUTED TO												
+	R1-2	.92	1	FLOW TIME	1059. 4.00	1037. 4.00	1001. 4.00	965. 4.00	951. 4.00	940. 4.00	933. 4.00	922. 4.00
3 COMBINED AT												
+	CP1.1	2.12	1	FLOW TIME	2344. 4.00	2295. 4.00	2213. 4.00	2131. 4.00	2099. 4.00	2076. 4.00	2060. 4.00	2034. 4.00
ROUTED TO												
+	RCP1.1	2.12	1	FLOW TIME	2330. 4.00	2283. 4.00	2201. 4.00	2119. 4.00	2083. 4.00	2061. 4.00	2046. 4.00	2020. 4.00
HYDROGRAPH AT												
+	1-3	.33	1	FLOW TIME	579. 3.58	566. 3.58	545. 3.58	524. 3.58	516. 3.58	510. 3.58	506. 3.58	499. 3.58
2 COMBINED AT												
+	CP1.2	2.45	1	FLOW TIME	2481. 4.00	2430. 4.00	2344. 4.00	2256. 4.00	2219. 4.00	2195. 4.00	2179. 4.00	2152. 4.00
ROUTED TO												
+	RCP1.2	2.45	1	FLOW TIME	2463. 4.00	2407. 4.00	2326. 4.00	2233. 4.00	2199. 4.00	2172. 4.00	2153. 4.00	2135. 4.00
HYDROGRAPH AT												
+	1-6	.18	1	FLOW TIME	385. 3.50	378. 3.50	365. 3.50	352. 3.50	347. 3.50	344. 3.50	341. 3.50	337. 3.50
ROUTED TO												
+	R1-6	.18	1	FLOW TIME	343. 3.58	338. 3.58	328. 3.58	318. 3.58	311. 3.58	312. 3.58	309. 3.58	302. 3.58
HYDROGRAPH AT												
+	1-B	.18	1	FLOW TIME	223. 3.67	217. 3.67	208. 3.67	199. 3.67	195. 3.67	193. 3.67	191. 3.67	188. 3.67
ROUTED TO												
+	R1-B	.18	1	FLOW TIME	223. 3.67	217. 3.67	208. 3.67	199. 3.67	195. 3.67	192. 3.67	191. 3.67	188. 3.67
HYDROGRAPH AT												
+	1-5	.24	1	FLOW TIME	268. 3.67	261. 3.67	249. 3.67	237. 3.67	233. 3.67	230. 3.67	227. 3.67	224. 3.67
ROUTED TO												
+	R1-5	.24	1	FLOW TIME	271. 3.75	264. 3.75	252. 3.75	240. 3.75	225. 3.75	222. 3.75	220. 3.75	225. 3.75
HYDROGRAPH AT												
+	1-4	.54	1	FLOW TIME	1062. 3.50	1040. 3.50	1004. 3.50	969. 3.50	954. 3.50	944. 3.50	937. 3.50	926. 3.50
ROUTED TO												
+	R1-4	.54	1	FLOW TIME	1022. 3.58	1000. 3.58	963. 3.58	924. 3.58	909. 3.58	899. 3.58	894. 3.67	884. 3.67
5 COMBINED AT												
+	CP1.3	3.59	1	FLOW TIME	3226. 3.92	3147. 3.92	3036. 3.92	2914. 3.92	2872. 3.92	2834. 3.92	2806. 3.92	2779. 3.92
ROUTED TO												
+	RCP1.3	3.59	1	FLOW TIME	3220. 3.92	3143. 3.92	3028. 3.92	2904. 3.92	2859. 3.92	2823. 3.92	2795. 3.92	2767. 3.92
HYDROGRAPH AT												
+	1-7	.55	1	FLOW TIME	991. 3.58	970. 3.58	936. 3.58	902. 3.58	888. 3.58	878. 3.58	871. 3.58	861. 3.58
HYDROGRAPH AT												
+	1-3P	.03	1	FLOW TIME	62. 3.50	61. 3.50	59. 3.50	57. 3.50	57. 3.50	56. 3.50	56. 3.50	55. 3.50
3 COMBINED AT												
+	CP1.4	4.17	1	FLOW TIME	3832. 3.67	3732. 3.67	3579. 3.67	3416. 3.67	3349. 3.67	3315. 3.67	3283. 3.67	3237. 3.67
ROUTED TO												
+	RCP1.4	4.17	1	FLOW TIME	3770. 3.67	3676. 3.75	3527. 3.75	3372. 3.75	3302. 3.75	3262. 3.75	3234. 3.75	3185. 3.75
HYDROGRAPH AT												
+	1-12P	.18	1	FLOW	227.	221.	213.	204.	200.	198.	196.	193.

				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT												
+	CP5	4.35	1	FLOW TIME	3997. 3.67	3891. 3.67	3730. 3.67	3561. 3.67	3493. 3.67	3457. 3.67	3425. 3.67	3373. 3.67
HYDROGRAPH AT												
+	1-14	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50
HYDROGRAPH AT												
+	1-15	.01	1	FLOW TIME	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50
HYDROGRAPH AT												
+	1-16	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50
HYDROGRAPH AT												
+	1-17	.00	1	FLOW TIME	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50
HYDROGRAPH AT												
+	1-18	.00	1	FLOW TIME	7. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50
6 COMBINED AT												
+	CP5B	4.37	1	FLOW TIME	4017. 3.67	3911. 3.67	3749. 3.67	3580. 3.67	3511. 3.67	3475. 3.67	3443. 3.67	3391. 3.67
ROUTED TO												
+	EXDB	4.37	1	FLOW TIME	974. 5.42	901. 5.42	765. 5.50	661. 5.58	657. 5.58	654. 5.58	652. 5.58	648. 5.58
** PEAK STAGES IN FEET **												
			1	STAGE TIME	3023.18 5.42	3022.88 5.42	3022.33 5.50	3021.58 5.58	3021.21 5.58	3020.97 5.58	3020.77 5.58	3020.50 5.58
HYDROGRAPH AT												
+	2-C	.50	1	FLOW TIME	786. 3.67	772. 3.67	749. 3.67	725. 3.67	716. 3.67	710. 3.67	705. 3.67	698. 3.67
ROUTED TO												
+	R2-C	.50	1	FLOW TIME	785. 3.75	773. 3.75	752. 3.75	731. 3.75	715. 3.75	710. 3.75	709. 3.75	700. 3.75
2 COMBINED AT												
+	CRCSV223	4.86	1	FLOW TIME	1259. 3.75	1242. 3.75	1211. 3.75	1180. 3.75	1160. 3.75	1152. 3.75	1149. 3.75	1137. 3.75
HYDROGRAPH AT												
+	1-4R	.05	1	FLOW TIME	98. 3.50	96. 3.50	93. 3.50	89. 3.50	88. 3.50	87. 3.50	86. 3.50	85. 3.50
HYDROGRAPH AT												
+	1-5R	.03	1	FLOW TIME	62. 3.50	61. 3.50	59. 3.50	57. 3.50	56. 3.50	55. 3.50	55. 3.50	54. 3.50
2 COMBINED AT												
+	CP6	.09	1	FLOW TIME	161. 3.50	157. 3.50	152. 3.50	146. 3.50	144. 3.50	142. 3.50	141. 3.50	139. 3.50
ROUTED TO												
+	R8	.09	1	FLOW TIME	154. 3.50	151. 3.50	145. 3.50	140. 3.50	137. 3.50	136. 3.50	135. 3.50	133. 3.58
HYDROGRAPH AT												
+	1-6R	.02	1	FLOW TIME	28. 3.50	27. 3.50	26. 3.50	25. 3.50	25. 3.50	25. 3.50	24. 3.50	24. 3.50
HYDROGRAPH AT												
+	1-7R	.03	1	FLOW TIME	50. 3.50	49. 3.50	47. 3.50	45. 3.50	44. 3.50	44. 3.50	44. 3.50	43. 3.50
2 COMBINED AT												
+	CP7	.04	1	FLOW TIME	77. 3.50	76. 3.50	73. 3.50	70. 3.50	69. 3.50	68. 3.50	68. 3.50	67. 3.50
ROUTED TO												
+	R9	.04	1	FLOW TIME	75. 3.58	73. 3.58	71. 3.58	68. 3.58	68. 3.58	67. 3.58	66. 3.58	65. 3.58
HYDROGRAPH AT												
+	1-8R	.00	1	FLOW TIME	5. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50
HYDROGRAPH AT												
+	1-10R	.06	1	FLOW TIME	100. 3.50	98. 3.50	94. 3.50	91. 3.50	89. 3.50	88. 3.50	88. 3.50	86. 3.50
2 COMBINED AT												
+	CP8	.06	1	FLOW TIME	105. 3.50	102. 3.50	99. 3.50	95. 3.50	93. 3.50	92. 3.50	92. 3.50	90. 3.50
ROUTED TO												

+		R10	.06	1	FLOW TIME	101. 3.58	98. 3.58	95. 3.58	91. 3.58	90. 3.58	89. 3.58	89. 3.58	87. 3.58
	HYDROGRAPH AT												
+		1-11P	.18	1	FLOW TIME	215. 3.67	210. 3.67	201. 3.67	193. 3.67	189. 3.67	187. 3.67	185. 3.67	182. 3.67
	4 COMBINED AT												
+		CP9	.37	1	FLOW TIME	536. 3.58	523. 3.58	504. 3.58	484. 3.58	476. 3.58	470. 3.58	466. 3.58	459. 3.58
	HYDROGRAPH AT												
+		1-13	.00	1	FLOW TIME	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50
	2 COMBINED AT												
+		CP10	.37	1	FLOW TIME	537. 3.58	524. 3.58	505. 3.58	485. 3.58	477. 3.58	472. 3.58	467. 3.58	461. 3.58
	ROUTED TO												
+		RSV26-3	.37	1	FLOW TIME	529. 3.58	517. 3.58	497. 3.58	477. 3.58	469. 3.58	463. 3.58	459. 3.58	453. 3.58
	HYDROGRAPH AT												
+		LMT1R	1.95	1	FLOW TIME	2158. 3.92	2114. 3.92	2040. 3.92	1966. 3.92	1937. 3.92	1916. 3.92	1902. 3.92	1878. 3.92
	2 COMBINED AT												
+		CLMT1R	2.31	1	FLOW TIME	2468. 3.83	2416. 3.83	2330. 3.83	2244. 3.83	2210. 3.83	2186. 3.83	2169. 3.83	2142. 3.83
	ROUTED TO												
+		RCLMT1R	2.31	1	FLOW TIME	2455. 3.83	2403. 3.83	2318. 3.83	2232. 3.83	2197. 3.83	2174. 3.83	2157. 3.83	2130. 3.83
	2 COMBINED AT												
+		CRCLMT1R	7.18	1	FLOW TIME	3702. 3.83	3636. 3.83	3521. 3.83	3406. 3.83	3352. 3.83	3320. 3.83	3301. 3.83	3260. 3.83
	ROUTED TO												
+		RCRCLMT1	7.18	1	FLOW TIME	3686. 3.83	3622. 3.83	3505. 3.83	3389. 3.83	3335. 3.83	3303. 3.83	3286. 3.83	3246. 3.83
	HYDROGRAPH AT												
+		LMT5	.54	1	FLOW TIME	897. 3.58	879. 3.58	848. 3.58	818. 3.58	805. 3.58	797. 3.58	791. 3.58	781. 3.58
	2 COMBINED AT												
+		CLMT5	7.72	1	FLOW TIME	4163. 3.75	4082. 3.75	3950. 3.75	3814. 3.83	3756. 3.75	3718. 3.83	3698. 3.83	3653. 3.83
	HYDROGRAPH AT												
+		LMT2	.99	1	FLOW TIME	2043. 3.58	2010. 3.58	1954. 3.58	1899. 3.58	1876. 3.58	1861. 3.58	1849. 3.58	1832. 3.58
	ROUTED TO												
+		RLMT2	.99	1	FLOW TIME	1957. 3.58	1931. 3.58	1874. 3.58	1818. 3.58	1796. 3.58	1785. 3.58	1770. 3.58	1752. 3.58
	HYDROGRAPH AT												
+		LMT3	.33	1	FLOW TIME	646. 3.50	634. 3.50	613. 3.50	593. 3.50	585. 3.50	579. 3.50	575. 3.50	569. 3.50
	2 COMBINED AT												
+		CLMT3	1.31	1	FLOW TIME	2581. 3.58	2544. 3.58	2468. 3.58	2392. 3.58	2363. 3.58	2346. 3.58	2328. 3.58	2303. 3.58
	ROUTED TO												
+		RCLMT3	1.31	1	FLOW TIME	2545. 3.58	2510. 3.58	2431. 3.58	2357. 3.58	2328. 3.58	2310. 3.58	2292. 3.58	2268. 3.58
	HYDROGRAPH AT												
+		UVB2	.45	1	FLOW TIME	635. 3.67	622. 3.67	601. 3.67	581. 3.67	572. 3.67	566. 3.67	562. 3.67	556. 3.67
	2 COMBINED AT												
+		CUVB2	1.76	1	FLOW TIME	3105. 3.58	3058. 3.58	2961. 3.58	2867. 3.58	2831. 3.58	2808. 3.58	2786. 3.58	2756. 3.58
	2 COMBINED AT												
+		CCLMT5	9.48	1	FLOW TIME	6949. 3.67	6815. 3.67	6597. 3.67	6381. 3.67	6284. 3.67	6223. 3.67	6181. 3.67	6109. 3.67
	ROUTED TO												
+		RCCLMT5	9.48	1	FLOW TIME	6886. 3.67	6754. 3.67	6534. 3.67	6320. 3.67	6222. 3.67	6164. 3.67	6120. 3.67	6048. 3.67
	HYDROGRAPH AT												
+		GABW	.20	1	FLOW TIME	244. 3.67	238. 3.67	229. 3.67	219. 3.67	216. 3.67	213. 3.67	211. 3.67	208. 3.67
	2 COMBINED AT												
+		CGABW	9.68	1	FLOW TIME	7130. 3.67	6992. 3.67	6763. 3.67	6539. 3.67	6437. 3.67	6377. 3.67	6332. 3.67	6256. 3.67

HYDROGRAPH AT	CRBW	.44	1	FLOW	461.	450.	432.	415.	407.	403.	399.	393.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT	CCRBW	10.12	1	FLOW	7567.	7418.	7172.	6931.	6822.	6757.	6708.	6628.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	GRBW	.30	1	FLOW	436.	427.	413.	399.	393.	389.	386.	382.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	GRBW2	.16	1	FLOW	188.	183.	176.	169.	166.	164.	163.	160.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	LMDB	.12	1	FLOW	112.	109.	104.	99.	97.	96.	95.	93.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
4 COMBINED AT	LMTNIN	10.70	1	FLOW	8302.	8137.	7865.	7597.	7478.	7406.	7352.	7263.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	LMTNDB	10.70	1	FLOW	448.	412.	333.	267.	247.	231.	220.	200.
+				TIME	10.83	11.33	12.17	12.75	12.83	13.00	13.08	13.17
** PEAK STAGES IN FEET **												
1	STAGE	2654.49	2654.37	2654.11	2653.67	2653.47	2653.31	2653.20	2652.98			
	TIME	10.83	11.33	12.17	12.75	12.83	13.00	13.08	13.17			
ROUTED TO	LMTNOT	10.70	1	FLOW	448.	412.	333.	267.	247.	231.	220.	200.
+				TIME	10.92	11.42	12.25	12.83	13.00	13.08	13.17	13.25
SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING												
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)												
	ISTAQ	ELEMENT	DT	PEAK	TIME TO	VOLUME	DT	INTERPOLATED TO	COMPUTATION INTERVAL	PEAK	TIME TO	VOLUME
					PEAK			PEAK	TIME TO	PEAK		
			(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)		(IN)	
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1239.27	240.00	2.32	5.00	1239.27	240.00		2.32	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1324E+03 EXCESS= .0000E+00 OUTFLOW= .1325E+03 BASIN STORAGE= .2590E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1213.32	240.00	2.27	5.00	1213.32	240.00		2.27	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1295E+03 EXCESS= .0000E+00 OUTFLOW= .1297E+03 BASIN STORAGE= .2567E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1170.07	240.00	2.19	5.00	1170.07	240.00		2.19	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1248E+03 EXCESS= .0000E+00 OUTFLOW= .1250E+03 BASIN STORAGE= .2527E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1126.82	240.00	2.11	5.00	1126.82	240.00		2.11	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1201E+03 EXCESS= .0000E+00 OUTFLOW= .1203E+03 BASIN STORAGE= .2488E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1109.52	240.00	2.07	5.00	1109.52	240.00		2.07	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1183E+03 EXCESS= .0000E+00 OUTFLOW= .1184E+03 BASIN STORAGE= .2471E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1097.41	240.00	2.05	5.00	1097.41	240.00		2.05	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1169E+03 EXCESS= .0000E+00 OUTFLOW= .1171E+03 BASIN STORAGE= .2460E-01 PERCENT ERROR= -												
.1												
	FOR PLAN = 1	RATIO=	.00									
	R1-1 MANE		5.00	1088.77	240.00	2.04	5.00	1088.77	240.00		2.04	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1160E+03 EXCESS= .0000E+00 OUTFLOW= .1161E+03 BASIN STORAGE= .2452E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-1 MANE 5.00 1074.93 240.00 2.01 5.00 1074.93 240.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1145E+03 EXCESS= .0000E+00 OUTFLOW= .1146E+03 BASIN STORAGE= .2439E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 1058.86 240.00 2.28 5.00 1058.86 240.00 2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1119E+03 EXCESS= .0000E+00 OUTFLOW= .1120E+03 BASIN STORAGE= .1211E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 1037.18 240.00 2.23 5.00 1037.18 240.00 2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1095E+03 EXCESS= .0000E+00 OUTFLOW= .1096E+03 BASIN STORAGE= .1199E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 1001.07 240.00 2.15 5.00 1001.07 240.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1055E+03 EXCESS= .0000E+00 OUTFLOW= .1055E+03 BASIN STORAGE= .1179E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 964.99 240.00 2.06 5.00 964.99 240.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1015E+03 EXCESS= .0000E+00 OUTFLOW= .1015E+03 BASIN STORAGE= .1159E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 950.56 240.00 2.03 5.00 950.56 240.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9985E+02 EXCESS= .0000E+00 OUTFLOW= .9991E+02 BASIN STORAGE= .1150E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 940.47 240.00 2.01 5.00 940.47 240.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9873E+02 EXCESS= .0000E+00 OUTFLOW= .9879E+02 BASIN STORAGE= .1145E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 933.26 240.00 1.99 5.00 933.26 240.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9793E+02 EXCESS= .0000E+00 OUTFLOW= .9799E+02 BASIN STORAGE= .1141E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R1-2 MANE 5.00 921.73 240.00 1.97 5.00 921.73 240.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9666E+02 EXCESS= .0000E+00 OUTFLOW= .9671E+02 BASIN STORAGE= .1134E-01 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RCP1.1 MANE 1.14 2338.11 241.36 2.22 5.00 2330.44 240.00 2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2507E+03 EXCESS= .0000E+00 OUTFLOW= .2507E+03 BASIN STORAGE= .3128E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.1 MANE 1.15 2290.96 241.12 2.17 5.00 2283.27 240.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2452E+03 EXCESS= .0000E+00 OUTFLOW= .2452E+03 BASIN STORAGE= .3009E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCP1.1	MANE	1.16	2209.43	241.15	2.09	5.00	2201.34	240.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2361E+03 EXCESS= .0000E+00 OUTFLOW= .2361E+03 BASIN STORAGE= .3024E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.1	MANE	1.18	2127.56	241.25	2.01	5.00	2118.57	240.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2270E+03 EXCESS= .0000E+00 OUTFLOW= .2270E+03 BASIN STORAGE= .2989E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.1	MANE	1.19	2092.97	241.56	1.98	5.00	2083.41	240.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2234E+03 EXCESS= .0000E+00 OUTFLOW= .2234E+03 BASIN STORAGE= .3027E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.1	MANE	1.20	2071.16	241.42	1.96	5.00	2061.29	240.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2209E+03 EXCESS= .0000E+00 OUTFLOW= .2209E+03 BASIN STORAGE= .3016E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.1	MANE	1.20	2053.64	240.99	1.94	5.00	2046.45	240.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2191E+03 EXCESS= .0000E+00 OUTFLOW= .2191E+03 BASIN STORAGE= .2862E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.1	MANE	1.21	2027.83	241.01	1.92	5.00	2020.31	240.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2162E+03 EXCESS= .0000E+00 OUTFLOW= .2162E+03 BASIN STORAGE= .3181E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.32	2463.45	239.21	2.20	5.00	2462.91	240.00	2.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2872E+03 EXCESS= .0000E+00 OUTFLOW= .2872E+03 BASIN STORAGE= .4478E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.34	2413.63	241.01	2.15	5.00	2406.77	240.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2809E+03 EXCESS= .0000E+00 OUTFLOW= .2809E+03 BASIN STORAGE= .3722E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.37	2325.66	239.51	2.07	5.00	2325.61	240.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2704E+03 EXCESS= .0000E+00 OUTFLOW= .2704E+03 BASIN STORAGE= .4522E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.40	2241.92	242.88	1.99	5.00	2233.14	240.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2600E+03 EXCESS= .0000E+00 OUTFLOW= .2600E+03 BASIN STORAGE= .4294E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.42	2203.45	244.36	1.96	5.00	2199.12	240.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2558E+03 EXCESS= .0000E+00 OUTFLOW= .2558E+03 BASIN STORAGE= .3916E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP1.2	MANE	2.43	2181.97	242.89	1.94	5.00	2172.48	240.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2529E+03 EXCESS= .0000E+00 OUTFLOW= .2529E+03 BASIN STORAGE= .4017E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP1.2	MANE	2.44	2164.69	243.53	1.92	5.00	2153.08	240.00	1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2508E+03 EXCESS= .0000E+00 OUTFLOW= .2508E+03 BASIN STORAGE= .4402E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP1.2	MANE	2.45	2136.35	244.68	1.90	5.00	2135.30	240.00	1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2476E+03 EXCESS= .0000E+00 OUTFLOW= .2476E+03 BASIN STORAGE= .4328E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.71	364.99	211.54	2.26	5.00	343.23	215.00	2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2106E+02 EXCESS= .0000E+00 OUTFLOW= .2108E+02 BASIN STORAGE= .3420E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.73	366.25	213.11	2.21	5.00	338.46	215.00	2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2064E+02 EXCESS= .0000E+00 OUTFLOW= .2066E+02 BASIN STORAGE= .3350E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.77	355.09	213.04	2.13	5.00	328.27	215.00	2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1989E+02 EXCESS= .0000E+00 OUTFLOW= .1991E+02 BASIN STORAGE= .2323E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.80	343.20	213.03	2.05	5.00	317.68	215.00	2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1916E+02 EXCESS= .0000E+00 OUTFLOW= .1918E+02 BASIN STORAGE= .2635E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.82	325.30	211.35	2.02	5.00	310.81	215.00	2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1883E+02 EXCESS= .0000E+00 OUTFLOW= .1885E+02 BASIN STORAGE= .2917E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.83	330.07	212.15	1.99	5.00	312.03	215.00	2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1863E+02 EXCESS= .0000E+00 OUTFLOW= .1865E+02 BASIN STORAGE= .2234E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.84	333.65	212.73	1.98	5.00	309.26	215.00	1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1851E+02 EXCESS= .0000E+00 OUTFLOW= .1853E+02 BASIN STORAGE= .3028E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-6	MANE	2.85	321.63	213.67	1.95	5.00	302.26	215.00	1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1825E+02 EXCESS= .0000E+00 OUTFLOW= .1827E+02 BASIN STORAGE= .2248E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.60	222.93	216.06	1.60	5.00	222.65	220.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1571E+02 EXCESS= .0000E+00 OUTFLOW= .1571E+02 BASIN STORAGE= .4032E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.60	217.25	219.89	1.56	5.00	217.16	220.00	1.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1531E+02 EXCESS= .0000E+00 OUTFLOW= .1531E+02 BASIN STORAGE= .4166E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.61	207.92	219.73	1.49	5.00	207.82	220.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1464E+02 EXCESS= .0000E+00 OUTFLOW= .1464E+02 BASIN STORAGE= .4048E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.62	198.65	219.64	1.43	5.00	198.61	220.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1397E+02 EXCESS= .0000E+00 OUTFLOW= .1397E+02 BASIN STORAGE= .4208E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.63	195.08	219.88	1.40	5.00	195.02	220.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1370E+02 EXCESS= .0000E+00 OUTFLOW= .1370E+02 BASIN STORAGE= .4000E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.63	192.42	219.68	1.38	5.00	192.38	220.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1352E+02 EXCESS= .0000E+00 OUTFLOW= .1352E+02 BASIN STORAGE= .4212E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.63	190.65	219.82	1.37	5.00	190.59	220.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1339E+02 EXCESS= .0000E+00 OUTFLOW= .1339E+02 BASIN STORAGE= .4125E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-B	MANE	.64	187.71	219.78	1.34	5.00	187.66	220.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1318E+02 EXCESS= .0000E+00 OUTFLOW= .1318E+02 BASIN STORAGE= .4168E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	5.00	271.33	225.00	1.51	5.00	271.33	225.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1928E+02 EXCESS= .0000E+00 OUTFLOW= .1932E+02 BASIN STORAGE= .8533E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	5.00	264.04	225.00	1.47	5.00	264.04	225.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1876E+02 EXCESS= .0000E+00 OUTFLOW= .1881E+02 BASIN STORAGE= .8451E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	5.00	251.92	225.00	1.40	5.00	251.92	225.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1791E+02 EXCESS= .0000E+00 OUTFLOW= .1796E+02 BASIN STORAGE= .8312E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	5.00	239.82	225.00	1.34	5.00	239.82	225.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1707E+02 EXCESS= .0000E+00 OUTFLOW= .1712E+02 BASIN STORAGE= .1206E-01 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	4.75	229.41	228.00	1.31	5.00	225.21	225.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1672E+02 EXCESS= .0000E+00 OUTFLOW= .1676E+02 BASIN STORAGE= .9342E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	4.75	226.40	228.00	1.29	5.00	221.95	225.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1649E+02 EXCESS= .0000E+00 OUTFLOW= .1653E+02 BASIN STORAGE= .9298E-02 PERCENT ERROR=									
.3									

FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	4.75	224.25	228.00	1.28	5.00	219.62	225.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1632E+02 EXCESS= .0000E+00 OUTFLOW= .1636E+02 BASIN STORAGE= .9266E-02 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-5	MANE	5.00	225.37	225.00	1.26	5.00	225.37	225.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1607E+02 EXCESS= .0000E+00 OUTFLOW= .1612E+02 BASIN STORAGE= .1180E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.50	1072.08	217.00	2.26	5.00	1021.55	215.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6537E+02 EXCESS= .0000E+00 OUTFLOW= .6554E+02 BASIN STORAGE= .1613E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.50	1050.40	217.00	2.21	5.00	999.78	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6397E+02 EXCESS= .0000E+00 OUTFLOW= .6414E+02 BASIN STORAGE= .1602E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.50	1014.20	217.00	2.13	5.00	963.47	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6166E+02 EXCESS= .0000E+00 OUTFLOW= .6182E+02 BASIN STORAGE= .1584E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.75	988.89	217.50	2.06	5.00	923.55	215.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5934E+02 EXCESS= .0000E+00 OUTFLOW= .5953E+02 BASIN STORAGE= .1305E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.75	974.48	217.50	2.02	5.00	909.06	215.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5842E+02 EXCESS= .0000E+00 OUTFLOW= .5860E+02 BASIN STORAGE= .1299E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.75	964.38	217.50	2.00	5.00	898.92	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5778E+02 EXCESS= .0000E+00 OUTFLOW= .5796E+02 BASIN STORAGE= .1294E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.75	945.17	217.50	1.98	5.00	894.09	220.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5732E+02 EXCESS= .0000E+00 OUTFLOW= .5748E+02 BASIN STORAGE= .1226E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
R1-4	MANE	3.75	933.61	217.50	1.96	5.00	884.27	220.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5659E+02 EXCESS= .0000E+00 OUTFLOW= .5674E+02 BASIN STORAGE= .1221E-01 PERCENT ERROR= -									
.3									
FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.43	3222.38	236.02	2.14	5.00	3220.01	235.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4089E+03 EXCESS= .0000E+00 OUTFLOW= .4089E+03 BASIN STORAGE= .3134E-02 PERCENT ERROR= -									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.44	3143.62	235.28	2.09	5.00	3142.55	235.00	2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3998E+03 EXCESS= .0000E+00 OUTFLOW= .3998E+03 BASIN STORAGE= .2995E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.46 3030.65 235.49 2.01 5.00 3027.63 235.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3848E+03 EXCESS= .0000E+00 OUTFLOW= .3848E+03 BASIN STORAGE= .2669E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.48 2910.42 236.09 1.93 5.00 2903.85 235.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3699E+03 EXCESS= .0000E+00 OUTFLOW= .3699E+03 BASIN STORAGE= .3038E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.49 2866.87 235.85 1.90 5.00 2858.99 235.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3637E+03 EXCESS= .0000E+00 OUTFLOW= .3637E+03 BASIN STORAGE= .3119E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.50 2826.71 235.51 1.88 5.00 2822.52 235.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3597E+03 EXCESS= .0000E+00 OUTFLOW= .3597E+03 BASIN STORAGE= .2579E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.51 2804.36 236.35 1.86 5.00 2795.43 235.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3564E+03 EXCESS= .0000E+00 OUTFLOW= .3564E+03 BASIN STORAGE= .2802E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.3 MANE 1.51 2773.14 235.70 1.84 5.00 2766.58 235.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3519E+03 EXCESS= .0000E+00 OUTFLOW= .3519E+03 BASIN STORAGE= .2663E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.88 3819.56 221.98 2.14 5.00 3770.38 220.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4759E+03 EXCESS= .0000E+00 OUTFLOW= .4759E+03 BASIN STORAGE= .6301E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.90 3718.52 222.44 2.09 5.00 3675.93 225.00 2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4654E+03 EXCESS= .0000E+00 OUTFLOW= .4654E+03 BASIN STORAGE= .6340E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.93 3566.13 222.34 2.01 5.00 3526.90 225.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4479E+03 EXCESS= .0000E+00 OUTFLOW= .4479E+03 BASIN STORAGE= .6260E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.97 3404.77 222.56 1.94 5.00 3372.28 225.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4306E+03 EXCESS= .0000E+00 OUTFLOW= .4306E+03 BASIN STORAGE= .5961E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.99 3336.34 222.37 1.90 5.00 3301.87 225.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4234E+03 EXCESS= .0000E+00 OUTFLOW= .4234E+03 BASIN STORAGE= .5731E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 1.99 3294.97 223.27 1.88 5.00 3261.92 225.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4188E+03 EXCESS= .0000E+00 OUTFLOW= .4188E+03 BASIN STORAGE= .7229E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 2.00 3270.46 222.15 1.87 5.00 3234.19 225.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4150E+03 EXCESS= .0000E+00 OUTFLOW= .4150E+03 BASIN STORAGE= .6552E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP1.4 MANE 2.01 3216.14 223.39 1.84 5.00 3185.36 225.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4098E+03 EXCESS= .0000E+00 OUTFLOW= .4098E+03 BASIN STORAGE= .5870E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.46 789.73 224.11 2.63 5.00 784.85 225.00 2.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6972E+02 EXCESS= .0000E+00 OUTFLOW= .6973E+02 BASIN STORAGE= .1947E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.48 773.95 225.46 2.59 5.00 773.45 225.00 2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6842E+02 EXCESS= .0000E+00 OUTFLOW= .6843E+02 BASIN STORAGE= .1884E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.50 753.16 225.27 2.50 5.00 752.50 225.00 2.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6624E+02 EXCESS= .0000E+00 OUTFLOW= .6626E+02 BASIN STORAGE= .1933E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.53 731.80 225.14 2.42 5.00 731.33 225.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6409E+02 EXCESS= .0000E+00 OUTFLOW= .6410E+02 BASIN STORAGE= .1960E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.54 717.50 223.57 2.39 5.00 715.47 225.00 2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6320E+02 EXCESS= .0000E+00 OUTFLOW= .6321E+02 BASIN STORAGE= .2079E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.55 713.53 224.26 2.37 5.00 710.01 225.00 2.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6259E+02 EXCESS= .0000E+00 OUTFLOW= .6260E+02 BASIN STORAGE= .1788E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.55 710.67 224.75 2.35 5.00 708.91 225.00 2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6218E+02 EXCESS= .0000E+00 OUTFLOW= .6219E+02 BASIN STORAGE= .2107E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R2-C MANE 2.56 700.87 225.55 2.32 5.00 699.95 225.00 2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6147E+02 EXCESS= .0000E+00 OUTFLOW= .6149E+02 BASIN STORAGE= .2432E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .94 160.11 211.79 2.03 5.00 154.20 210.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9530E+01 EXCESS= .0000E+00 OUTFLOW= .9530E+01 BASIN STORAGE= .1067E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .94 156.71 211.76 1.99 5.00 150.81 210.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9317E+01 EXCESS= .0000E+00 OUTFLOW= .9317E+01 BASIN STORAGE= .1090E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .95 151.06 211.44 1.91 5.00 145.05 210.00 1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8963E+01 EXCESS= .0000E+00 OUTFLOW= .8963E+01 BASIN STORAGE= .1053E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .96 145.39 211.15 1.84 5.00 139.61 210.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8611E+01 EXCESS= .0000E+00 OUTFLOW= .8611E+01 BASIN STORAGE= .9922E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .96 143.15 211.82 1.81 5.00 137.49 210.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8471E+01 EXCESS= .0000E+00 OUTFLOW= .8471E+01 BASIN STORAGE= .1115E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .96 141.55 211.33 1.79 5.00 135.75 210.00 1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8372E+01 EXCESS= .0000E+00 OUTFLOW= .8372E+01 BASIN STORAGE= .1122E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .96 140.44 211.67 1.77 5.00 134.70 210.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8302E+01 EXCESS= .0000E+00 OUTFLOW= .8302E+01 BASIN STORAGE= .9977E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R8 MANE .96 138.60 211.26 1.75 5.00 132.91 215.00 1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8191E+01 EXCESS= .0000E+00 OUTFLOW= .8191E+01 BASIN STORAGE= .9797E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R9 MANE 2.21 76.93 212.31 2.04 5.00 75.47 215.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4596E+01 EXCESS= .0000E+00 OUTFLOW= .4596E+01 BASIN STORAGE= .2595E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R9 MANE 2.22 75.26 213.23 1.99 5.00 73.40 215.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4489E+01 EXCESS= .0000E+00 OUTFLOW= .4490E+01 BASIN STORAGE= .2812E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R9 MANE 2.24 72.56 212.57 1.92 5.00 71.48 215.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4322E+01 EXCESS= .0000E+00 OUTFLOW= .4322E+01 BASIN STORAGE= .2466E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R9 MANE 2.25 69.84 214.21 1.84 5.00 68.31 215.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4153E+01 EXCESS= .0000E+00 OUTFLOW= .4153E+01 BASIN STORAGE= .2135E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R9 MANE 2.26 68.76 212.62 1.81 5.00 67.89 215.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4085E+01 EXCESS= .0000E+00 OUTFLOW= .4086E+01 BASIN STORAGE= .2521E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

R9	MANE	2.27	68.00	213.09	1.79	5.00	66.62	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4036E+01 EXCESS= .0000E+00 OUTFLOW= .4036E+01 BASIN STORAGE= .2151E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R9	MANE	2.27	67.47	213.44	1.77	5.00	65.81	215.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4002E+01 EXCESS= .0000E+00 OUTFLOW= .4002E+01 BASIN STORAGE= .2832E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R9	MANE	2.28	66.61	213.99	1.75	5.00	65.02	215.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3947E+01 EXCESS= .0000E+00 OUTFLOW= .3948E+01 BASIN STORAGE= .2381E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.92	103.90	212.84	2.00	5.00	100.78	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6191E+01 EXCESS= .0000E+00 OUTFLOW= .6192E+01 BASIN STORAGE= .2091E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.93	101.67	213.77	1.95	5.00	98.13	215.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6053E+01 EXCESS= .0000E+00 OUTFLOW= .6053E+01 BASIN STORAGE= .2135E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.94	97.99	213.43	1.88	5.00	94.64	215.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5822E+01 EXCESS= .0000E+00 OUTFLOW= .5822E+01 BASIN STORAGE= .2429E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.96	94.30	213.13	1.80	5.00	91.49	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5592E+01 EXCESS= .0000E+00 OUTFLOW= .5592E+01 BASIN STORAGE= .1982E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.96	92.87	213.81	1.77	5.00	89.82	215.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5499E+01 EXCESS= .0000E+00 OUTFLOW= .5500E+01 BASIN STORAGE= .2235E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.97	91.75	212.32	1.75	5.00	89.29	215.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5434E+01 EXCESS= .0000E+00 OUTFLOW= .5434E+01 BASIN STORAGE= .1907E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.97	91.04	212.67	1.74	5.00	88.71	215.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5388E+01 EXCESS= .0000E+00 OUTFLOW= .5389E+01 BASIN STORAGE= .2367E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R10	MANE	1.97	89.90	213.22	1.72	5.00	87.20	215.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5317E+01 EXCESS= .0000E+00 OUTFLOW= .5317E+01 BASIN STORAGE= .1970E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCLMTIR	MANE	1.01	2459.54	230.45	2.11	5.00	2454.67	230.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2606E+03 EXCESS= .0000E+00 OUTFLOW= .2606E+03 BASIN STORAGE= .2556E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.02	2409.22	231.38	2.07	5.00	2403.24	230.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2549E+03 EXCESS= .0000E+00 OUTFLOW= .2549E+03 BASIN STORAGE= .2988E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.03	2323.71	230.62	1.99	5.00	2317.53	230.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2454E+03 EXCESS= .0000E+00 OUTFLOW= .2454E+03 BASIN STORAGE= .2935E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.05	2241.11	230.96	1.91	5.00	2232.22	230.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2360E+03 EXCESS= .0000E+00 OUTFLOW= .2360E+03 BASIN STORAGE= .2714E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.06	2205.69	231.32	1.88	5.00	2197.47	230.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2323E+03 EXCESS= .0000E+00 OUTFLOW= .2323E+03 BASIN STORAGE= .2850E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.06	2182.20	231.27	1.86	5.00	2173.50	230.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2296E+03 EXCESS= .0000E+00 OUTFLOW= .2296E+03 BASIN STORAGE= .2711E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.06	2165.50	230.95	1.85	5.00	2156.98	230.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2278E+03 EXCESS= .0000E+00 OUTFLOW= .2278E+03 BASIN STORAGE= .3007E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.07	2139.22	231.05	1.82	5.00	2130.05	230.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2248E+03 EXCESS= .0000E+00 OUTFLOW= .2248E+03 BASIN STORAGE= .2850E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.11	3690.14	230.61	2.14	5.00	3685.66	230.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8174E+03 EXCESS= .0000E+00 OUTFLOW= .8174E+03 BASIN STORAGE= .3350E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.12	3629.96	231.14	2.09	5.00	3621.63	230.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7995E+03 EXCESS= .0000E+00 OUTFLOW= .7995E+03 BASIN STORAGE= .3344E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.14	3510.53	230.72	2.01	5.00	3505.23	230.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7696E+03 EXCESS= .0000E+00 OUTFLOW= .7696E+03 BASIN STORAGE= .3310E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.15	3395.09	231.51	1.93	5.00	3388.60	230.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7400E+03 EXCESS= .0000E+00 OUTFLOW= .7400E+03 BASIN STORAGE= .3340E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.16	3341.27	230.68	1.90	5.00	3335.33	230.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7279E+03 EXCESS= .0000E+00 OUTFLOW= .7279E+03 BASIN STORAGE= .3364E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.16	3309.76	231.55	1.88	5.00	3303.00	230.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7198E+03 EXCESS= .0000E+00 OUTFLOW= .7198E+03 BASIN STORAGE= .3349E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.17	3292.43	230.93	1.86	5.00	3285.82	230.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7136E+03 EXCESS= .0000E+00 OUTFLOW= .7136E+03 BASIN STORAGE= .3347E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.17	3251.68	230.90	1.84	5.00	3245.64	230.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7044E+03 EXCESS= .0000E+00 OUTFLOW= .7044E+03 BASIN STORAGE= .3384E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.88	2013.80	217.57	2.88	5.00	1956.66	215.00	2.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1513E+03 EXCESS= .0000E+00 OUTFLOW= .1513E+03 BASIN STORAGE= .2388E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.89	1997.70	216.89	2.83	5.00	1930.78	215.00	2.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1487E+03 EXCESS= .0000E+00 OUTFLOW= .1487E+03 BASIN STORAGE= .2194E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.90	1938.86	217.05	2.75	5.00	1874.14	215.00	2.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1443E+03 EXCESS= .0000E+00 OUTFLOW= .1443E+03 BASIN STORAGE= .2106E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.92	1879.22	217.24	2.66	5.00	1817.52	215.00	2.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1398E+03 EXCESS= .0000E+00 OUTFLOW= .1399E+03 BASIN STORAGE= .1994E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.93	1834.40	216.18	2.63	5.00	1796.48	215.00	2.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .2078E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.94	1842.30	216.78	2.61	5.00	1785.16	215.00	2.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1369E+03 EXCESS= .0000E+00 OUTFLOW= .1369E+03 BASIN STORAGE= .2366E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.94	1831.02	217.22	2.59	5.00	1770.38	215.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1360E+03 EXCESS= .0000E+00 OUTFLOW= .1360E+03 BASIN STORAGE= .2035E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	1.95	1796.82	217.93	2.56	5.00	1751.63	215.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1346E+03 EXCESS= .0000E+00 OUTFLOW= .1346E+03 BASIN STORAGE= .2250E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.72	2566.13	215.93	2.74	5.00	2545.12	215.00	2.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1919E+03 EXCESS= .0000E+00 OUTFLOW= .1919E+03 BASIN STORAGE= .1914E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.72	2536.32	215.75	2.69	5.00	2509.53	215.00	2.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1884E+03 EXCESS= .0000E+00 OUTFLOW= .1884E+03 BASIN STORAGE= .1873E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.73	2450.99	215.44	2.61	5.00	2431.31	215.00	2.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1826E+03 EXCESS= .0000E+00 OUTFLOW= .1826E+03 BASIN STORAGE= .1878E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.74	2379.52	215.92	2.53	5.00	2356.86	215.00	2.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1769E+03 EXCESS= .0000E+00 OUTFLOW= .1769E+03 BASIN STORAGE= .1853E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.75	2347.78	215.48	2.49	5.00	2327.72	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1746E+03 EXCESS= .0000E+00 OUTFLOW= .1746E+03 BASIN STORAGE= .1884E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.75	2327.67	216.09	2.47	5.00	2310.11	215.00	2.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1730E+03 EXCESS= .0000E+00 OUTFLOW= .1730E+03 BASIN STORAGE= .1876E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.75	2312.40	216.03	2.45	5.00	2292.32	215.00	2.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1718E+03 EXCESS= .0000E+00 OUTFLOW= .1718E+03 BASIN STORAGE= .2110E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT3	MANE	.75	2286.87	215.45	2.43	5.00	2268.03	215.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1700E+03 EXCESS= .0000E+00 OUTFLOW= .1700E+03 BASIN STORAGE= .1863E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCLMT5	MANE	.99	6932.87	221.32	2.22	5.00	6886.45	220.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1121E+04 EXCESS= .0000E+00 OUTFLOW= .1121E+04 BASIN STORAGE= .3835E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCLMT5	MANE	1.00	6811.06	221.05	2.17	5.00	6753.64	220.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1097E+04 EXCESS= .0000E+00 OUTFLOW= .1097E+04 BASIN STORAGE= .3877E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCLMT5	MANE	1.01	6589.60	220.93	2.09	5.00	6534.48	220.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1057E+04 EXCESS= .0000E+00 OUTFLOW= .1057E+04 BASIN STORAGE= .3820E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCLMT5	MANE	1.02	6365.90	220.81	2.01	5.00	6319.53	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1018E+04 EXCESS= .0000E+00 OUTFLOW= .1018E+04 BASIN STORAGE= .3853E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCLMT5	MANE	1.03	6279.72	221.15	1.98	5.00	6221.57	220.00	1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1002E+04 EXCESS= .0000E+00 OUTFLOW= .1002E+04 BASIN STORAGE= .3786E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.03	6217.06	220.98	1.96	5.00	6163.89	220.00	1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9913E+03 EXCESS= .0000E+00 OUTFLOW= .9914E+03 BASIN STORAGE= .3770E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.04	6164.89	221.57	1.95	5.00	6120.37	220.00	1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9832E+03 EXCESS= .0000E+00 OUTFLOW= .9832E+03 BASIN STORAGE= .3844E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.04	6093.93	221.58	1.92	5.00	6048.27	220.00	1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9710E+03 EXCESS= .0000E+00 OUTFLOW= .9710E+03 BASIN STORAGE= .3749E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	448.01	655.00	1.49	5.00	448.01	655.00	1.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8546E+03 EXCESS= .0000E+00 OUTFLOW= .8531E+03 BASIN STORAGE= .1569E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	411.93	685.00	1.45	5.00	411.93	685.00	1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8293E+03 EXCESS= .0000E+00 OUTFLOW= .8278E+03 BASIN STORAGE= .1568E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	333.24	735.00	1.38	5.00	333.24	735.00	1.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7881E+03 EXCESS= .0000E+00 OUTFLOW= .7866E+03 BASIN STORAGE= .1565E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	267.30	770.00	1.32	5.00	267.30	770.00	1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7538E+03 EXCESS= .0000E+00 OUTFLOW= .7523E+03 BASIN STORAGE= .1552E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	246.58	780.00	1.30	5.00	246.58	780.00	1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7415E+03 EXCESS= .0000E+00 OUTFLOW= .7400E+03 BASIN STORAGE= .1544E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	231.47	785.00	1.28	5.00	231.47	785.00	1.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7337E+03 EXCESS= .0000E+00 OUTFLOW= .7321E+03 BASIN STORAGE= .1538E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	219.56	790.00	1.27	5.00	219.56	790.00	1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7282E+03 EXCESS= .0000E+00 OUTFLOW= .7267E+03 BASIN STORAGE= .1532E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	199.72	795.00	1.26	5.00	199.72	795.00	1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7208E+03 EXCESS= .0000E+00 OUTFLOW= .7193E+03 BASIN STORAGE= .1523E+01 PERCENT ERROR=.0

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

B.5.1 LMDB-sdn4

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1*****
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*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
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* RUN DATE 05OCT17 TIME 16:34:19 *
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*
*
* U.S. ARMY CORPS OF ENGINEERS
*
* HYDROLOGIC ENGINEERING CENTER
*
* 609 SECOND STREET
*
* DAVIS, CALIFORNIA 95616
*
* (916) 756-1104
*
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X   X   XXXXXX   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   XXXXXX   XXXXX   XXX
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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

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

*** DIAGRAM ***
*** FREE ***
1 ID INPUT FILE DATE = JULY 2017
2 ID DESIGN STORM = 100-YEAR 6-HR STORM
3 ID STORM DISTRIBUTION = SDN #4
4 ID MODELED BY VTN (SVB)
5 ID
6 ID
7 ID
8 ID
9 ID
10 ID *****
11 ID * HYDROLOGIC MODEL:3 REFERENCE FILES ARE USED *
12 ID * 2017 SUMMERLIN MASTER PLAN BASINS - REMAKE OF SUMMERLIN *
13 ID * CCRFCD 2008 MASTER PLAN UPDATE GOWAN WATERSHED *
14 ID *
15 ID *****
16 ID * REMAKE OF HYDROLOGIC MODEL: *
17 ID * SUMMERLIN VILLAGE 26 - RESPONSE TO COMMENTS *
18 ID * DATED NOVEMBER 2015 START ON PAGE 31/175 *
19 ID * HEC-1 TITLE - SUMMERLIN VILLAGE 26 REVERENCE *
20 ID *
21 ID *
22 ID * ***** THIS HEC -1 TO BE USED WITH ALTERNATIVE 1-B ONLY *****
23 ID *
24 ID * *****
25 ID
26 ID
27 ID
28 ID
29 ID
30 ID
31 ID AREA DARF
32 ID SQ. MI.
33 ID 8-9 0.875
34 ID 9-10 0.865
35 ID 10-11 0.857
36 ID 11-12 0.85
37 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
38 ID 100-YEAR, 6-HOUR STORM, SDN3
39 ID
40 ID IT 5 0 0 650
41 ID IO 5 0 0
42 ID IN 5 0 0
43 ID JR PREC 0.875 0.865 0.857 0.85
44 ID *
45 ID KK 1-1
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45	KM	PORTION OF 2008 MPU BASIN 30									
46	BA	1.070									
47	PB	3.66									
48	PC	0	0.02	0.058	0.075	0.099	0.126	0.137	0.145	0.149	0.151
49	PC	0.155	0.156	0.159	0.162	0.169	0.172	0.179	0.189	0.201	0.211
50	PC	0.22	0.228	0.232	0.24	0.246	0.252	0.26	0.269	0.276	0.283
51	PC	0.286	0.292	0.302	0.312	0.321	0.332	0.352	0.376	0.415	0.462
		HEC-1 INPUT									

1

PAGE 2

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
52	PC 0.53 0.61 0.71 0.732 0.756 0.782 0.799 0.813 0.823 0.83
53	PC 0.835 0.844 0.851 0.864 0.885 0.908 0.924 0.944 0.968 0.973
54	PC 0.978 0.982 0.984 0.986 0.988 0.991 0.992 0.993 0.994 0.997
55	PC 0.998 0.999 1
56	LS 0 87.3
57	UD 0.472
	*
58	KK R1-1
59	KM REFERENCED FROM 2008 MPU SEE 30
60	KM ROUTE R1-1 THROUGH 1-A TO CP1.1
61	KM PORTION OF FACILITY GOL30370 (NATURAL WASH)
62	RD 5700 0.085 0.030 0 TRAP 450 0
	*
63	KK 1-A
64	KM PORTION OF 2008 MPU BASIN 30
65	BA 0.1249
66	PB 3.66
67	LS 0 67.1
68	UD 0.229
	*
69	KK 1-2
70	KM PORTION OF 2008 MPU BASIN 30
71	BA 0.922
72	PB 3.66
73	LS 0 86.8
74	UD 0.460
	*
75	KK R1-2
76	KM ROUTE R1-2 THROUGH 1-A TO CP1.1
77	KM PORTION OF FACILITY GOL30370 (NATURAL WASH)
78	RD 2700 0.070 0.030 0 TRAP 450 0
	*
79	KK CP1.1
80	KM COMBINE R1-1, 1-A and R1-2
81	HC 3
	*
82	KK RCP1.1
83	KM ROUTE RCP1.1 THROUGH 1-3 TO CP1.2
84	KM PORTION OF FACILITY GOL30370 (NATURAL WASH)
85	RD 830 0.085 0.030 0 TRAP 450 0
	*
86	KK 1-3
87	KM PORTION OF 2008 MPU BASIN 30
88	BA 0.330
89	PB 3.66
90	LS 0 84.3
91	UD 0.146
	*

1

HEC-1 INPUT

PAGE 3

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
92	KK CP1.2
93	KM COMBINE RCP1-1 and 1-3
94	HC 2
	*
95	KK RCP1.2
96	KM ROUTE RCP1.2 THROUGH 1-B TO CP1.3
97	KM PORTION OF FACILITY GOL30289 (CONC CHANNEL)
98	RD 6100 0.0795 0.013 0 TRAP 50 2
	*
99	KK 1-6
100	KM PORTION OF 2008 MPU BASIN SV26-1
101	BA 0.1753
102	PB 3.52
103	LS 0 88.0
104	UD 0.0753
	*
105	KK R1-6
106	KM ROUTE 1-6 THROUGH 1-B TO CP1.3
107	KM PORTION OF FACILITY GOL30289 (CONC CHANNEL)
108	RD 3600 0.0795 0.013 0 TRAP 50 2
	*

109 KK 1-B
 110 KM PORTION OF 2008 MPU BASIN SV26-1
 111 BA 0.1838
 112 PB 3.52
 113 LS 0 79.7
 114 UD 0.198
 *
 115 KK R1-B
 116 KM ROUTE 1-B TO CP1.3
 117 KM PORTION OF FACILITY GOL30289 (CONC CHANNEL)
 118 RD 650 0.0795 0.013 0 TRAP 50 2
 *
 119 KK 1-5
 120 KM PORTION OF 2008 MPU BASIN SV26-1
 121 BA 0.2400
 122 PB 3.52
 123 LS 0 78.3
 124 UD 0.221
 *
 125 KK R1-5
 126 KM ROUTE R1-5 THROUGH 1-B TO CP1.3
 127 KM PORTION OF FACILITY GOL30290 (NATURAL WASH)
 128 RD 3600 0.225 0.030 0 TRAP 363 0
 *

1

HEC-1 INPUT

PAGE 4

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

129 KK 1-4
 130 KM PORTION OF 2008 MPU BASIN SV26-1
 131 BA 0.5431
 132 PB 3.52
 133 LS 0 88.0
 134 UD 0.106
 *
 135 KK R1-4
 136 KM ROUTE R1-4 THROUGH 1-B TO CP1.3
 137 KM FACILITY GOL30290 (NATURAL WASH)
 138 RD 4850 0.225 0.030 0 TRAP 363 0
 *
 139 KK CP1.3
 140 KM COMBINE RCP1.2, R1-4, R1-5, R1-B and R1-6
 141 HC 5
 *
 142 KK RCP1.3
 143 KM ROUTE RCP1.3 THROUGH 1-7 TO CP1.4
 144 KM FACILITY GOL30216 (CONC CHANNEL)
 145 RD 3800 0.0608 0.013 0 TRAP 50 2
 *
 146 KK 1-7
 147 KM PORTION OF 2008 MPU BASIN SV26-1
 148 BA 0.5542
 149 PB 3.52
 150 LS 0 86.6
 151 UD 0.147
 *
 * START SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE
 *
 152 KK 1-3P
 153 PB 3.36
 154 BA 0.0258
 155 LS 0 94.9
 156 UD 0.084
 *
 157 KK CP1.4
 158 KM PREVIOUSLY CALLED CP4 IN VILLAGE 26 STUDY
 159 KM COMBINE 1-3P, 1-7 AND RCP1.3
 160 HC 3
 *
 161 KK RCP1.4
 162 KM THIS IS RCSV26-1 IN THE 2008 MPU
 163 KM ROUTE CSV26-1 TO VILLAGE 26 DETENTION BASIN
 164 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 3
 165 KM FACILITY # = GOL3 0137
 166 KM LINING = RCB

1

HEC-1 INPUT

PAGE 5

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

167 RD 4334 0.005 0.015 0 TRAP 14 0
 *
 168 KK 1-12P

169 PB 3.32
 170 BA 0.1814
 171 LS 0 83.8
 172 UD 0.234
 *
 173 KK CP5
 174 KM COMBINE CP4 AND 1-12P
 175 HC 2
 *
 176 KK 1-14
 177 PB 3.31
 178 BA 0.0016
 179 LS 0 86.3
 180 UD 0.100
 *
 181 KK 1-15
 182 PB 3.32
 183 BA 0.0057
 184 LS 0 86.1
 185 UD 0.100
 *
 186 KK 1-16
 187 PB 3.31
 188 BA 0.0030
 189 LS 0 86.3
 190 UD 0.100
 *
 191 KK 1-17
 192 PB 3.28
 193 BA 0.0039
 194 LS 0 86.3
 195 UD 0.100
 *
 196 KK 1-18
 197 PB 3.28
 198 BA 0.0038
 199 LS 0 86.3
 200 UD 0.100
 *

1

HEC-1 INPUT

PAGE 6

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

201 KK CP5B
 202 KM COMBINE CP5, 1-14, 1-15, 1-16, 1-17, AND 1-18 AT DETENTION BASIN
 * KO 1
 203 HC 6
 *
 204 KK EXDB
 * KO 1
 205 KM DETENTION BASIN CHEYENNE AND BELTWAY
 206 KM LOW FLOW OUTLET IS 66" PIPE
 207 RS 1 STOR 0
 208 SV 0 0.07 0.80 12.71 18.75 25.05 85.95 95.04 124.21 135.14
 209 SV 200.27 243.11 258.06 273.36 289.00 304.99
 210 SE 2990 2991 2992 2995 2996 2997 3005 3006 3009 3010
 211 SE 3015 3018 3019 3020 3021 3022
 212 SL 2993.7 22.31 0.7 0.5
 213 SS 3021.9 200 2.6 1.5
 *
 214 KK 2-C
 215 KM PORTION OF 2008 MPU BASIN SV22-3
 216 BA 0.4962
 217 PB 3.41
 218 LS 0 93.2
 219 UD 0.293
 *
 220 KK R2-C
 221 KM THIS IS RCSV22-3
 222 KM ROUTE CSV22-3 TO CRCSV223 FROM THE 2008 MPU
 223 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY BRANCH
 224 KM FACILITY # = GOBE 0000, 0001, 0065
 225 KM LINING = CONCRETE
 226 RD 4605 0.065 0.015 0 TRAP 20 2
 *
 227 KKCRCSV223
 228 KM COMBINE RCP2.1, AND EXDB
 229 HC 2
 *
 * RE-START SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE
 *
 230 KK 1-4R
 231 PB 3.44

232 BA 0.0536
233 LS 0 86.3
234 UD 0.100
*

1

HEC-1 INPUT

PAGE 7

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

235 KK 1-5R
236 PB 3.42
237 BA 0.0343
238 LS 0 86.3
239 UD 0.100
*

240 KK CP6
241 KM COMBINBE 1-4R AND 1-5R
242 HC 2
*

243 KK R8
244 KM ROUTE CP6 THROUGH 1-11P TO CP9
245 KM ASSUME RCP
246 KM LEN SLOPE n SHAPE DIAMETER
247 RD 1800 0.0610 0.013 0 CIRC 4
*

248 KK 1-6R
249 PB 3.43
250 BA 0.0152
251 LS 0 86.3
252 UD 0.100
*

253 KK 1-7R
254 PB 3.44
255 BA 0.0271
256 LS 0 86.3
257 UD 0.100
*

258 KK CP7
259 KM COMBINE 1-6R AND 1-7R
260 HC 2
*

261 KK R9
262 KM ROUTE CP7 THROUGH 1-11P TO CP9
263 KM ASSUME RCP
264 KM LEN SLOPE n SHAPE DIAMETER
265 RD 3150 0.0400 0.013 0 CIRC 4.5
*

266 KK 1-8R
267 PB 3.42
268 BA 0.0025
269 LS 0 86.3
270 UD 0.100
*

1

HEC-1 INPUT

PAGE 8

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

271 KK 1-10R
272 PB 3.41
273 BA 0.0556
274 LS 0 86.1
275 UD 0.100
*

276 KK CP8
277 KM COMBINE 1-8R AND 1-10R
278 HC 2
*

279 KK R10
280 KM ASSUME RCP
281 KM LEN SLOPE n SHAPE DIAMETER
282 RD 2900 0.0400 0.013 0 CIRC 4.5
*

283 KK 1-11P
284 PB 3.38
285 BA 0.1775
286 LS 0 81.7
287 UD 0.214
*

288 KK CP9
289 KM COMBINE CP6, CP7, CP8, AND 1-11P
290 HC 4
*

291 KK 1-13
 292 PB 3.34
 293 BA 0.0008
 294 LS 0 86.3
 295 UD 0.100
 *
 296 KK CP10
 297 KM COMBINE CP9, 1-13
 298 HC 2
 *
 * END SUMMERLIN VILLAGE 26 DATED NOVEMBER 2015 BY G.C. WALLACE
 * BEGIN 2008 MPU
 *

299 KK RSV26-3
 300 KM ROUTE SV26-3 TO CLMT1R
 301 KM NATURAL WASH
 302 KM TRAVEL LENGTH = 1,200
 303 KM SLOPE = 3.3%
 304 KM N = 0.040
 305 KM HYDRAULIC RADIUS = 1.5
 306 KM VELOCITY = 14.2
 307 RM 0 0.024 0.15
 *
 * END OF G.C. WALLACE'S HYDROLOGY
 *

1 HEC-1 INPUT PAGE 9

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

308 KK LMT1R
 309 BA 1.945
 310 PB 3.45
 311 LS 0 87.7
 312 UD 0.447
 *
 313 KK CLMT1R
 314 KM COMBINE RSV26-3 AND LMT1R
 315 HC 2
 *
 316 KK RCLMT1R
 317 KM ROUTE CLMT1R TO CRCLMT1R
 318 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 4
 319 KM FACILITY # = GOL4 0000, 0010, 0025
 320 KM LINING = RCB
 321 RD 3000 0.025 0.015 0 TRAP 16 0
 *

322 KKCRCLMT1R
 323 KM COMBINE RCRCV22 AND RCLMT1R
 324 HC 2
 *

325 KKRCRCLMT1
 326 KM ROUTE CRCLMT1R TO CLMT5
 327 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BRANCH 3
 328 KM FACILITY # = GOL3 0000, 0010, 0068
 329 KM LINING = CONCRETE
 330 RD 3640 0.027 0.015 0 TRAP 20 0
 *

331 KK LMT5
 332 BA 0.539
 333 PB 3.26
 334 LS 0 88.2
 335 UD 0.158
 *

336 KK CLMT5
 337 KM COMBINE LMT5 AND RCRCCLMT1
 338 HC 2
 *

339 KK LMT2
 340 BA 0.985
 341 PB 3.41
 342 LS 0 95.6
 343 UD 0.175
 *

1 HEC-1 INPUT PAGE 10

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

344 KK RLMT2
 345 KM ROUTE LMT2 TO CLMT3
 346 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM
 347 KM FACILITY # = GOLM 0264, 0277
 348 KM LINING = CONCRETE
 349 RD 4430 0.05 0.015 0 TRAP 20 2
 *

412 KK LMTNIN
 413 KM COMBINE LMDB, GREW, GRBW2, AND CCRBW
 414 KM TOTAL INFLOW TO LONE MOUNTAIN DETENTION BASIN
 * KO 1
 415 HC 4
 *

1

HEC-1 INPUT

PAGE 12

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

416 KK LMTNDB
 417 KM LONE MOUNTAIN DETENTION BASIN
 418 KM FACILITY = GOWAN/LONE MTN. SYSTEM
 419 KM FACILITY # = GOLM 0146
 420 KM TYPE OF FACILITY = DETENTION BASIN
 421 KM STORAGE VOLUME = 888.02 ACRE-FEET
 422 KM OUTLET = 36" ORIFICE PLATE
 423 KM 100-YEAR DISCHARGE =
 424 KM SPILLWAY LENGTH = 825'
 425 KM SPILLWAY HEIGHT =
 426 KM SPILLWAY CREST ELEVATION = 2652.57'
 427 KM SPILLWAY TYPE = LABYRINTH
 428 KM PMF DISCHARGE =
 429 KM TOP OF EMBANKMENT ELEVATION = 2658'
 430 KM INFORMATION REFERENCED FROM "ALEXANDER ROAD/HUALAPUI WAY ROAD IMPROVEMENTS
 431 KM PROJECT: CHEYENE AVENUE TO CIMARRON ROAD" PLANS BY THE CITY OF LAS VEGAS
 432 KM DEPARTMENT OF PUBLIC WORKS: ENGINEERING DESIGN SECTION (8-12-2004)
 433 KO 3
 434 RS 1 STOR -1
 435 SV 0 1.48 6.45 32.97 130.6 238.38 377.17 558.09 769.02 888.0
 436 SV 901.46 946.59 992.2 1038.33 1085 1132.17
 437 SE 2621 2622 2623 2625 2630 2635 2640 2645 2650 2652.
 438 SE 2653 2654 2655 2656 2657 2658
 439 SQ 0 0 24 56 96 120 144 163 182 188
 440 SQ 200 300 600 800 20000 31600
 *

441 KK LMTNOT
 442 KM ROUTE LMTNDB TO CLV15-C
 443 KM FACILITY = GOWAN - LONE MOUNTAIN SYSTEM
 444 KM FACILITY # = GOLM 0000,0049,060,0075,0101,0115,0140,0142,0144,0145
 445 KM LINING = RCP
 446 RD 9240 0.0308 0.015 0 CIRC 4
 *
 447 ZZ

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
 LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
 NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

44 1-1
 V
 V
 58 R1-1
 .
 .
 63 . 1-A
 .
 .
 69 . . 1-2
 . . V
 . . V
 75 . . R1-2
 . .
 . .
 79 CP1.1.....
 V
 V
 82 RCP1.1
 .
 .
 86 . 1-3
 .
 .
 92 CP1.2.....
 V
 V
 95 RCP1.2
 .
 .
 99 . 1-6
 . V
 . V
 105 . R1-6
 .
 .
 109 . . 1-B
 . . V
 . . V
 115 . . R1-B
 . .
 . .

119	.	.	.	1-5	
	.	.	.	V	
	.	.	.	V	
125	.	.	.	R1-5	
	.	.	.	.	
129	.	.	.	.	1-4
	.	.	.	.	V
	.	.	.	.	V
135	.	.	.	.	R1-4
	.	.	.	.	.
	.	.	.	.	.
139	CP1.3	.....			
	V				
	V				
142	RCP1.3				
	.				
146	.	1-7			
	.	.			
	.	.			
152	.	.	1-3P		
	.	.	.		
	.	.	.		
157	CP1.4	.....			
	V				
	V				
161	RCP1.4				
	.				
	.				
168	.	1-12P			
	.	.			
	.	.			
173	CP5	.....			
	.				
	.				
176	.	1-14			
	.	.			
	.	.			
181	.	.	1-15		
	.	.	.		
	.	.	.		
186	.	.	.	1-16	
	.	.	.	.	
	.	.	.	.	
191	.	.	.	.	1-17
	.	.	.	.	.
	.	.	.	.	.
196	.	.	.	.	1-18
	.	.	.	.	.
	.	.	.	.	.
201	CP5B	.....			
	V				
	V				
204	EXDB				
	.				
	.				
214	.	2-C			
	.	V			
	.	V			
220	.	R2-C			
	.	.			
	.	.			
227	CRCSV223	.....			
	.				
	.				
230	.	1-4R			
	.	.			
	.	.			
235	.	.	1-5R		
	.	.	.		
	.	.	.		
240	.	CP6	.....		
	.	V			
	.	V			
243	.	R8			
	.	.			
	.	.			
248	.	.	1-6R		
	.	.	.		
	.	.	.		
253	.	.	.	1-7R	
	.	.	.	.	
	.	.	.	.	
258	.	.	CP7	.....	
	.	.	V		
	.	.	V		
261	.	.	R9		
	.	.	.		
	.	.	.		
266	.	.	.	1-8R	
	.	.	.	.	
	.	.	.	.	
271	.	.	.	.	1-10R
	.	.	.	.	.

276	.	.	.	.	CP8.....
	.	.	.	.	V
	.	.	.	.	V
279	.	.	.	.	R10
	.	.	.	.	.
283	.	.	.	.	1-11P
	.	.	.	.	.
	.	.	.	.	.
288	.	CP9.....	.	.	.
	.	.	.	.	.
291	.	.	1-13	.	.
	.	.	.	.	.
	.	.	.	.	.
296	.	CP10.....	.	.	.
	.	V	.	.	.
	.	V	.	.	.
299	.	RSV26-3	.	.	.
	.	.	.	.	.
308	.	.	LMT1R	.	.
	.	.	.	.	.
	.	.	.	.	.
313	.	CLMT1R.....	.	.	.
	.	V	.	.	.
	.	V	.	.	.
316	.	RCLMT1R	.	.	.
	.	.	.	.	.
	.	.	.	.	.
322	CRCLMT1R.....	.	.	.	.
	V	.	.	.	.
	V	.	.	.	.
325	RCRCLMT1	.	.	.	.
	.	.	.	.	.
331	.	LMT5	.	.	.
	.	.	.	.	.
	.	.	.	.	.
336	CLMT5.....	.	.	.	.
	.	.	.	.	.
339	.	LMT2	.	.	.
	.	V	.	.	.
	.	V	.	.	.
344	.	RLMT2	.	.	.
	.	.	.	.	.
	.	.	.	.	.
350	.	.	LMT3	.	.
	.	.	.	.	.
	.	.	.	.	.
355	.	CLMT3.....	.	.	.
	.	V	.	.	.
	.	V	.	.	.
358	.	RCLMT3	.	.	.
	.	.	.	.	.
	.	.	.	.	.
364	.	.	UVB2	.	.
	.	.	.	.	.
	.	.	.	.	.
369	.	CUVB2.....	.	.	.
	.	.	.	.	.
	.	.	.	.	.
372	CCLMT5.....	.	.	.	.
	V	.	.	.	.
	V	.	.	.	.
375	RCCLMT5	.	.	.	.
	.	.	.	.	.
	.	.	.	.	.
381	.	GABW	.	.	.
	.	V	.	.	.
	.	.	.	.	.
386	CGABW.....	.	.	.	.
	.	.	.	.	.
	.	.	.	.	.
389	.	CRBW	.	.	.
	.	.	.	.	.
	.	.	.	.	.
394	CCRBW.....	.	.	.	.
	.	.	.	.	.
	.	.	.	.	.
397	.	GRBW	.	.	.
	.	.	.	.	.
	.	.	.	.	.
402	.	.	GRBW2	.	.
	.	.	.	.	.
	.	.	.	.	.
407	.	.	.	LMDB	.
	.	.	.	.	.
	.	.	.	.	.
412	LMTNIN.....	.	.	.	.
	V	.	.	.	.
	V	.	.	.	.
416	LMTNDB	.	.	.	.

V
V
441 LMTNOT

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*****
*****
*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
*
* RUN DATE 05OCT17 TIME 16:34:19 *
*
*
*****
*****
```

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

INPUT FILE DATE = JULY 2017
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #4
MODELED BY VTN (SVB)

```
*****
* HYDROLOGIC MODEL:3 REFERENCE FILES ARE USED *
* 2017 SUMMERLIN MASTER PLAN BASINS - REMAKE OF SUMMERLIN *
* CCRFCD 2008 MASTER PLAN UPDATE GOWAN WATERSHED *
*
*****
*
* REMAKE OF HYDROLOGIC MODEL:
* SUMMERLIN VILLAGE 26 - RESPONSE TO COMMENTS
* DATED NOVEMBER 2015 START ON PAGE 31/175
* HEC-1 TITLE - SUMMERLIN VILLAGE 26 REVERENCE
*
*
* ***** THIS HEC -1 TO BE USED WITH ALTERNATIVE 1-B ONLY *****
*
*****
```

AREA	DARF
SQ. MI.	
8-9	0.875
9-10	0.865
10-11	0.857
11-12	0.85

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN3

41 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL
IDATE	1	0 STARTING DATE
ITIME	0000	STARTING TIME
NQ	650	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	3	0 ENDING DATE
NDTIME	0605	ENDING TIME
ICENT	19	CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 54.08 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
              .88      .87      .86      .85
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RSV26-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

*** **
***

*****
*      *
416 KK  *      LMTNDB  *
*      *
*****

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

HYDROGRAPH ROUTING DATA

434 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

435 SV      STORAGE      .0      1.5      6.4      33.0      130.6      238.4      377.2      558.1      769.0
888.0
            901.5      946.6      992.2      1038.3      1085.0      1132.2

437 SE      ELEVATION     2621.00  2622.00  2623.00  2625.00  2630.00  2635.00  2640.00  2645.00  2650.00
2652.00
            2653.00  2654.00  2655.00  2656.00  2657.00  2658.00

439 SQ      DISCHARGE      0.      0.      24.      56.      96.      120.      144.      163.      182.
188.
            200.      300.      600.      800.      20000.      31600.

***

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN      800. TO      20000.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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

HYDROGRAPH AT STATION      LMTNDB
FOR PLAN 1, RATIO =      .88

PEAK FLOW      TIME          MAXIMUM AVERAGE FLOW
+ (CFS)      (HR)          6-HR      24-HR      72-HR      54.08-HR
+      187.      12.92      (CFS)      187.      181.      159.      159.
      (INCHES)      .162      .629      1.244      1.244
      (AC-FT)      92.      359.      710.      710.

PEAK STORAGE      TIME          MAXIMUM AVERAGE STORAGE
+ (AC-FT)      (HR)          6-HR      24-HR      72-HR      54.08-HR
+      871.      13.00      859.      773.      579.      579.

PEAK STAGE      TIME          MAXIMUM AVERAGE STAGE
+ (FEET)      (HR)          6-HR      24-HR      72-HR      54.08-HR
+      2651.72      13.00      2651.51      2649.87      2644.67      2644.67

CUMULATIVE AREA =      10.70 SQ MI

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

HYDROGRAPH AT STATION      LMTNDB
FOR PLAN 1, RATIO =      .87

PEAK FLOW      TIME          MAXIMUM AVERAGE FLOW
+ (CFS)      (HR)          6-HR      24-HR      72-HR      54.08-HR
+      186.      12.83      (CFS)      186.      180.      158.      158.
      (INCHES)      .161      .626      1.234      1.234
      (AC-FT)      92.      357.      704.      704.

```

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE	STORAGE	54.08-HR
+ (AC-FT)	(HR)		24-HR	72-HR	
856.	12.83	844.	758.	566.	566.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE	STAGE	54.08-HR
+ (FEET)	(HR)		24-HR	72-HR	
2651.47	12.83	2651.26	2649.57	2644.35	2644.35

CUMULATIVE AREA = 10.70 SQ MI

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .86

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE	FLOW	54.08-HR
+ (CFS)	(HR)		24-HR	72-HR	
186.	12.75	(CFS)			
		185.	179.	157.	157.
		(INCHES)	.161	.623	1.227
		(AC-FT)	92.	355.	700.
				700.	700.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE	STORAGE	54.08-HR
+ (AC-FT)	(HR)		24-HR	72-HR	
845.	12.83	832.	747.	555.	555.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE	STAGE	54.08-HR
+ (FEET)	(HR)		24-HR	72-HR	
2651.27	12.75	2651.06	2649.33	2644.10	2644.10

CUMULATIVE AREA = 10.70 SQ MI

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

HYDROGRAPH AT STATION LMTNDB
FOR PLAN 1, RATIO = .85

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE	FLOW	54.08-HR
+ (CFS)	(HR)		24-HR	72-HR	
185.	12.67	(CFS)			
		185.	178.	156.	156.
		(INCHES)	.160	.620	1.220
		(AC-FT)	92.	354.	696.
				696.	696.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE	STORAGE	54.08-HR
+ (AC-FT)	(HR)		24-HR	72-HR	
834.	12.75	822.	736.	546.	546.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE	STAGE	54.08-HR
+ (FEET)	(HR)		24-HR	72-HR	
2651.10	12.75	2650.88	2649.12	2643.87	2643.87

CUMULATIVE AREA = 10.70 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

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION			
					RATIO 1	RATIO 2	RATIO 3	RATIO 4
					.88	.87	.86	.85
HYDROGRAPH AT								
+ 1-1	1.07	1	FLOW	895.	880.	869.	859.	
			TIME	3.92	3.92	3.92	3.92	
ROUTED TO								
+ R1-1	1.07	1	FLOW	900.	885.	873.	863.	
			TIME	4.00	4.00	4.00	4.00	
HYDROGRAPH AT								
+ 1-A	.12	1	FLOW	53.	51.	50.	49.	
			TIME	3.67	3.67	3.67	3.67	
HYDROGRAPH AT								
+ 1-2	.92	1	FLOW	766.	753.	743.	734.	
			TIME	3.83	3.83	3.83	3.83	
ROUTED TO								
+ R1-2	.92	1	FLOW	769.	756.	746.	737.	
			TIME	3.92	3.92	3.92	3.92	

3 COMBINED AT								
+	CP1.1	2.12	1	FLOW TIME	1694. 4.00	1666. 4.00	1644. 4.00	1625. 4.00
ROUTED TO								
+	RCP1.1	2.12	1	FLOW TIME	1685. 4.00	1659. 4.00	1636. 4.00	1616. 4.00
HYDROGRAPH AT								
+	1-3	.33	1	FLOW TIME	410. 3.58	403. 3.58	398. 3.58	393. 3.58
2 COMBINED AT								
+	CP1.2	2.45	1	FLOW TIME	1806. 4.00	1777. 4.00	1753. 4.00	1732. 4.00
ROUTED TO								
+	RCP1.2	2.45	1	FLOW TIME	1800. 4.00	1762. 4.00	1746. 4.00	1716. 4.00
HYDROGRAPH AT								
+	1-6	.18	1	FLOW TIME	279. 3.50	275. 3.50	272. 3.50	269. 3.50
ROUTED TO								
+	R1-6	.18	1	FLOW TIME	248. 3.58	246. 3.58	242. 3.58	239. 3.58
HYDROGRAPH AT								
+	1-B	.18	1	FLOW TIME	157. 3.58	153. 3.58	151. 3.58	149. 3.58
ROUTED TO								
+	R1-B	.18	1	FLOW TIME	153. 3.58	150. 3.58	147. 3.58	145. 3.58
HYDROGRAPH AT								
+	1-5	.24	1	FLOW TIME	183. 3.67	179. 3.67	176. 3.67	173. 3.67
ROUTED TO								
+	R1-5	.24	1	FLOW TIME	187. 3.75	183. 3.75	179. 3.75	177. 3.75
HYDROGRAPH AT								
+	1-4	.54	1	FLOW TIME	772. 3.50	760. 3.50	750. 3.50	742. 3.50
ROUTED TO								
+	R1-4	.54	1	FLOW TIME	716. 3.67	706. 3.67	697. 3.67	690. 3.67
5 COMBINED AT								
+	CP1.3	3.59	1	FLOW TIME	2337. 3.92	2293. 3.92	2264. 3.92	2233. 3.92
ROUTED TO								
+	RCP1.3	3.59	1	FLOW TIME	2324. 3.92	2280. 3.92	2251. 4.00	2217. 4.00
HYDROGRAPH AT								
+	1-7	.55	1	FLOW TIME	707. 3.58	696. 3.58	686. 3.58	678. 3.58
HYDROGRAPH AT								
+	1-3P	.03	1	FLOW TIME	46. 3.50	45. 3.50	45. 3.50	44. 3.50
3 COMBINED AT								
+	CP1.4	4.17	1	FLOW TIME	2770. 3.67	2721. 3.67	2671. 3.67	2638. 3.67
ROUTED TO								
+	RCP1.4	4.17	1	FLOW TIME	2731. 3.67	2688. 3.67	2641. 3.67	2598. 3.67
HYDROGRAPH AT								
+	1-12P	.18	1	FLOW TIME	159. 3.67	156. 3.67	154. 3.67	152. 3.67
2 COMBINED AT								
+	CP5	4.35	1	FLOW TIME	2889. 3.67	2844. 3.67	2794. 3.67	2750. 3.67
HYDROGRAPH AT								
+	1-14	.00	1	FLOW TIME	2. 3.50	2. 3.50	2. 3.50	2. 3.50
HYDROGRAPH AT								
+	1-15	.01	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50
HYDROGRAPH AT								
+	1-16	.00	1	FLOW	4.	4.	4.	4.

				TIME	3.50	3.50	3.50	3.50
HYDROGRAPH AT								
+	1-17	.00	1	FLOW TIME	5.3.50	5.3.50	5.3.50	5.3.50
HYDROGRAPH AT								
+	1-18	.00	1	FLOW TIME	5.3.50	5.3.50	5.3.50	4.3.50
6 COMBINED AT								
+	CP5B	4.37	1	FLOW TIME	2902.3.67	2856.3.67	2807.3.67	2762.3.67
ROUTED TO								
+	EXDB	4.37	1	FLOW TIME	631.5.67	627.5.67	623.5.67	620.5.67
				** PEAK STAGES IN FEET **				
			1	STAGE TIME	3019.105.67	3018.735.67	3018.465.67	3018.195.67
HYDROGRAPH AT								
+	2-C	.50	1	FLOW TIME	580.3.67	572.3.67	565.3.67	560.3.67
ROUTED TO								
+	R2-C	.50	1	FLOW TIME	571.3.75	565.3.75	561.3.75	552.3.75
2 COMBINED AT								
+	CRCV223	4.86	1	FLOW TIME	1001.3.75	991.3.75	983.3.75	971.3.75
HYDROGRAPH AT								
+	1-4R	.05	1	FLOW TIME	71.3.50	70.3.50	69.3.50	68.3.50
HYDROGRAPH AT								
+	1-5R	.03	1	FLOW TIME	45.3.50	44.3.50	44.3.50	43.3.50
2 COMBINED AT								
+	CP6	.09	1	FLOW TIME	116.3.50	114.3.50	113.3.50	111.3.50
ROUTED TO								
+	R8	.09	1	FLOW TIME	111.3.50	109.3.50	107.3.50	106.3.50
HYDROGRAPH AT								
+	1-6R	.02	1	FLOW TIME	20.3.50	20.3.50	19.3.50	19.3.50
HYDROGRAPH AT								
+	1-7R	.03	1	FLOW TIME	36.3.50	35.3.50	35.3.50	34.3.50
2 COMBINED AT								
+	CP7	.04	1	FLOW TIME	56.3.50	55.3.50	54.3.50	54.3.50
ROUTED TO								
+	R9	.04	1	FLOW TIME	54.3.58	52.3.58	52.3.58	51.3.58
HYDROGRAPH AT								
+	1-8R	.00	1	FLOW TIME	3.3.50	3.3.50	3.3.50	3.3.50
HYDROGRAPH AT								
+	1-10R	.06	1	FLOW TIME	72.3.50	71.3.50	70.3.50	69.3.50
2 COMBINED AT								
+	CP8	.06	1	FLOW TIME	75.3.50	74.3.50	73.3.50	72.3.50
ROUTED TO								
+	R10	.06	1	FLOW TIME	72.3.58	70.3.58	69.3.58	69.3.58
HYDROGRAPH AT								
+	1-11P	.18	1	FLOW TIME	148.3.67	146.3.67	143.3.67	141.3.67
4 COMBINED AT								
+	CP9	.37	1	FLOW TIME	380.3.58	372.3.58	367.3.58	363.3.58
HYDROGRAPH AT								
+	1-13	.00	1	FLOW TIME	1.3.50	1.3.50	1.3.50	1.3.50
2 COMBINED AT								

+	CP10	.37	1	FLOW TIME	381. 3.58	373. 3.58	368. 3.58	364. 3.58
ROUTED TO								
+	RSV26-3	.37	1	FLOW TIME	378. 3.58	370. 3.58	365. 3.58	361. 3.58
HYDROGRAPH AT								
+	LMT1R	1.95	1	FLOW TIME	1565. 3.83	1540. 3.83	1520. 3.83	1502. 3.83
2 COMBINED AT								
+	CLMT1R	2.31	1	FLOW TIME	1776. 3.83	1747. 3.83	1724. 3.83	1704. 3.83
ROUTED TO								
+	RCLMT1R	2.31	1	FLOW TIME	1771. 3.83	1743. 3.83	1720. 3.83	1699. 3.83
2 COMBINED AT								
+	CRCLMT1R	7.18	1	FLOW TIME	2758. 3.83	2722. 3.83	2689. 3.83	2659. 3.83
ROUTED TO								
+	RCRCLMT1	7.18	1	FLOW TIME	2751. 3.83	2715. 3.83	2682. 3.83	2654. 3.83
HYDROGRAPH AT								
+	LMT5	.54	1	FLOW TIME	643. 3.58	633. 3.58	625. 3.58	618. 3.58
2 COMBINED AT								
+	CLMT5	7.72	1	FLOW TIME	3085. 3.75	3040. 3.75	3005. 3.75	2972. 3.75
HYDROGRAPH AT								
+	LMT2	.99	1	FLOW TIME	1503. 3.58	1484. 3.58	1469. 3.58	1456. 3.58
ROUTED TO								
+	RLMT2	.99	1	FLOW TIME	1440. 3.58	1427. 3.58	1405. 3.58	1396. 3.58
HYDROGRAPH AT								
+	LMT3	.33	1	FLOW TIME	473. 3.50	466. 3.50	460. 3.50	455. 3.50
2 COMBINED AT								
+	CLMT3	1.31	1	FLOW TIME	1883. 3.58	1864. 3.58	1837. 3.58	1823. 3.58
ROUTED TO								
+	RCLMT3	1.31	1	FLOW TIME	1856. 3.58	1837. 3.58	1811. 3.58	1799. 3.58
HYDROGRAPH AT								
+	UVB2	.45	1	FLOW TIME	460. 3.67	453. 3.67	448. 3.67	443. 3.67
2 COMBINED AT								
+	CUVB2	1.76	1	FLOW TIME	2274. 3.58	2248. 3.58	2217. 3.58	2200. 3.58
2 COMBINED AT								
+	CCLMT5	9.48	1	FLOW TIME	5138. 3.67	5068. 3.67	5010. 3.67	4954. 3.67
ROUTED TO								
+	RCCLMT5	9.48	1	FLOW TIME	5111. 3.67	5041. 3.67	4981. 3.67	4924. 3.67
HYDROGRAPH AT								
+	GABW	.20	1	FLOW TIME	171. 3.67	168. 3.67	165. 3.67	163. 3.67
2 COMBINED AT								
+	CGABW	9.68	1	FLOW TIME	5282. 3.67	5209. 3.67	5146. 3.67	5087. 3.67
HYDROGRAPH AT								
+	CRBW	.44	1	FLOW TIME	323. 3.75	317. 3.75	312. 3.75	308. 3.75
2 COMBINED AT								
+	CCRBW	10.12	1	FLOW TIME	5597. 3.67	5518. 3.67	5451. 3.67	5388. 3.67
HYDROGRAPH AT								
+	GRBW	.30	1	FLOW TIME	311. 3.67	307. 3.67	303. 3.67	299. 3.67
HYDROGRAPH AT								
+	GRBW2	.16	1	FLOW TIME	131. 3.67	128. 3.67	127. 3.67	125. 3.67

HYDROGRAPH AT
+ LMDB .12 1 FLOW 77. 75. 74. 73.
TIME 3.67 3.67 3.67 3.67

4 COMBINED AT
+ LMTNIN 10.70 1 FLOW 6116. 6029. 5954. 5885.
TIME 3.67 3.67 3.67 3.67

ROUTED TO
+ LMTNDB 10.70 1 FLOW 187. 186. 186. 185.
TIME 12.92 12.83 12.75 12.67

** PEAK STAGES IN FEET **
1 STAGE 2651.72 2651.47 2651.27 2651.10
TIME 13.00 12.83 12.75 12.75

ROUTED TO
+ LMTNOT 10.70 1 FLOW 187. 186. 186. 185.
TIME 13.08 12.92 12.83 12.83

1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL			
						DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)
FOR PLAN = 1	RATIO=	.00							
R1-1	MANE	5.00	899.77	240.00	1.94	5.00	899.77	240.00	1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1108E+03 EXCESS= .0000E+00 OUTFLOW= .1109E+03 BASIN STORAGE= .2514E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-1	MANE	5.00	885.09	240.00	1.91	5.00	885.09	240.00	1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1089E+03 EXCESS= .0000E+00 OUTFLOW= .1090E+03 BASIN STORAGE= .2497E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-1	MANE	5.00	873.34	240.00	1.88	5.00	873.34	240.00	1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1075E+03 EXCESS= .0000E+00 OUTFLOW= .1076E+03 BASIN STORAGE= .2484E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-1	MANE	5.00	863.06	240.00	1.86	5.00	863.06	240.00	1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1062E+03 EXCESS= .0000E+00 OUTFLOW= .1063E+03 BASIN STORAGE= .2473E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-2	MANE	5.00	769.10	235.00	1.90	5.00	769.10	235.00	1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9348E+02 EXCESS= .0000E+00 OUTFLOW= .9352E+02 BASIN STORAGE= .1209E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-2	MANE	5.00	756.44	235.00	1.87	5.00	756.44	235.00	1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9189E+02 EXCESS= .0000E+00 OUTFLOW= .9194E+02 BASIN STORAGE= .1200E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-2	MANE	5.00	746.32	235.00	1.84	5.00	746.32	235.00	1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9063E+02 EXCESS= .0000E+00 OUTFLOW= .9067E+02 BASIN STORAGE= .1193E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R1-2	MANE	5.00	737.47	235.00	1.82	5.00	737.47	235.00	1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8952E+02 EXCESS= .0000E+00 OUTFLOW= .8957E+02 BASIN STORAGE= .1186E-01 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCP1.1	MANE	1.30	1690.59	241.13	1.85	5.00	1685.44	240.00	1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2090E+03 EXCESS= .0000E+00 OUTFLOW= .2090E+03 BASIN STORAGE= .3241E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.1 MANE 1.30 1662.21 241.41 1.82 5.00 1658.73 240.00 1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2055E+03 EXCESS= .0000E+00 OUTFLOW= .2055E+03 BASIN STORAGE= .2830E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.1 MANE 1.31 1640.66 241.39 1.79 5.00 1636.40 240.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2026E+03 EXCESS= .0000E+00 OUTFLOW= .2026E+03 BASIN STORAGE= .3182E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.1 MANE 1.32 1622.19 241.22 1.77 5.00 1616.04 240.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2001E+03 EXCESS= .0000E+00 OUTFLOW= .2001E+03 BASIN STORAGE= .3173E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.2 MANE 2.61 1800.66 240.04 1.83 5.00 1800.16 240.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2392E+03 EXCESS= .0000E+00 OUTFLOW= .2392E+03 BASIN STORAGE= .4464E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.2 MANE 2.62 1769.58 241.45 1.80 5.00 1761.97 240.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2350E+03 EXCESS= .0000E+00 OUTFLOW= .2350E+03 BASIN STORAGE= .4226E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.2 MANE 2.64 1746.26 240.01 1.78 5.00 1746.18 240.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2318E+03 EXCESS= .0000E+00 OUTFLOW= .2318E+03 BASIN STORAGE= .4142E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP1.2 MANE 2.65 1725.32 241.10 1.75 5.00 1716.02 240.00 1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2289E+03 EXCESS= .0000E+00 OUTFLOW= .2289E+03 BASIN STORAGE= .4170E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R1-6 MANE 3.05 266.29 213.59 1.89 5.00 247.88 215.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1767E+02 EXCESS= .0000E+00 OUTFLOW= .1768E+02 BASIN STORAGE= .2337E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R1-6 MANE 3.07 256.84 211.73 1.86 5.00 245.93 215.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1736E+02 EXCESS= .0000E+00 OUTFLOW= .1737E+02 BASIN STORAGE= .2758E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R1-6 MANE 3.08 261.44 212.71 1.84 5.00 241.89 215.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1716E+02 EXCESS= .0000E+00 OUTFLOW= .1717E+02 BASIN STORAGE= .3261E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R1-6 MANE 3.10 256.46 213.58 1.81 5.00 239.04 215.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1692E+02 EXCESS= .0000E+00 OUTFLOW= .1693E+02 BASIN STORAGE= .2638E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00

R1-B	MANE	.68	156.54	215.92	1.29	5.00	153.06	215.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1266E+02 EXCESS= .0000E+00 OUTFLOW= .1266E+02 BASIN STORAGE= .4232E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R1-B	MANE	.69	153.31	216.18	1.26	5.00	149.93	215.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1240E+02 EXCESS= .0000E+00 OUTFLOW= .1240E+02 BASIN STORAGE= .3972E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R1-B	MANE	.69	150.81	216.12	1.24	5.00	147.40	215.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1219E+02 EXCESS= .0000E+00 OUTFLOW= .1219E+02 BASIN STORAGE= .4021E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R1-B	MANE	.69	148.65	215.90	1.23	5.00	145.23	215.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1201E+02 EXCESS= .0000E+00 OUTFLOW= .1201E+02 BASIN STORAGE= .4262E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R1-5	MANE	5.00	186.63	225.00	1.21	5.00	186.63	225.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1541E+02 EXCESS= .0000E+00 OUTFLOW= .1544E+02 BASIN STORAGE= .1111E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-5	MANE	5.00	182.60	225.00	1.18	5.00	182.60	225.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1509E+02 EXCESS= .0000E+00 OUTFLOW= .1511E+02 BASIN STORAGE= .1103E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-5	MANE	5.00	179.37	225.00	1.16	5.00	179.37	225.00	1.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1483E+02 EXCESS= .0000E+00 OUTFLOW= .1485E+02 BASIN STORAGE= .1097E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-5	MANE	5.00	176.55	225.00	1.14	5.00	176.55	225.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1460E+02 EXCESS= .0000E+00 OUTFLOW= .1462E+02 BASIN STORAGE= .1091E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-4	MANE	4.75	758.05	218.50	1.89	5.00	715.99	220.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5474E+02 EXCESS= .0000E+00 OUTFLOW= .5483E+02 BASIN STORAGE= .1348E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-4	MANE	4.75	746.64	218.50	1.86	5.00	705.70	220.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5383E+02 EXCESS= .0000E+00 OUTFLOW= .5392E+02 BASIN STORAGE= .1341E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-4	MANE	4.75	737.50	218.50	1.84	5.00	697.45	220.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5311E+02 EXCESS= .0000E+00 OUTFLOW= .5319E+02 BASIN STORAGE= .1336E-01 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
R1-4	MANE	4.75	729.49	218.50	1.81	5.00	690.23	220.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5247E+02 EXCESS= .0000E+00 OUTFLOW= .5255E+02 BASIN STORAGE= .1332E-01 PERCENT ERROR=									
.2									

FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.61	2336.33	236.63	1.78	5.00	2323.69	235.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3399E+03 EXCESS= .0000E+00 OUTFLOW= .3399E+03 BASIN STORAGE= .2786E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.62	2291.64	236.68	1.74	5.00	2279.51	235.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3338E+03 EXCESS= .0000E+00 OUTFLOW= .3338E+03 BASIN STORAGE= .2610E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.63	2261.87	237.79	1.72	5.00	2250.94	240.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3292E+03 EXCESS= .0000E+00 OUTFLOW= .3292E+03 BASIN STORAGE= .2782E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.3	MANE	1.64	2230.09	237.37	1.70	5.00	2216.90	240.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3249E+03 EXCESS= .0000E+00 OUTFLOW= .3249E+03 BASIN STORAGE= .3020E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.4	MANE	2.14	2747.85	222.75	1.78	5.00	2730.80	220.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3957E+03 EXCESS= .0000E+00 OUTFLOW= .3957E+03 BASIN STORAGE= .6440E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.4	MANE	2.16	2704.48	222.20	1.75	5.00	2688.01	220.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3887E+03 EXCESS= .0000E+00 OUTFLOW= .3887E+03 BASIN STORAGE= .7124E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.4	MANE	2.17	2646.62	221.67	1.72	5.00	2640.58	220.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3834E+03 EXCESS= .0000E+00 OUTFLOW= .3834E+03 BASIN STORAGE= .6718E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1.4	MANE	2.18	2615.97	222.80	1.70	5.00	2598.07	220.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3784E+03 EXCESS= .0000E+00 OUTFLOW= .3784E+03 BASIN STORAGE= .6308E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R2-C	MANE	2.73	574.81	223.66	2.26	5.00	570.70	225.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5973E+02 EXCESS= .0000E+00 OUTFLOW= .5974E+02 BASIN STORAGE= .2113E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R2-C	MANE	2.74	567.29	224.69	2.22	5.00	565.19	225.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5887E+02 EXCESS= .0000E+00 OUTFLOW= .5888E+02 BASIN STORAGE= .2378E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R2-C	MANE	2.75	562.40	222.77	2.20	5.00	560.60	225.00	2.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5820E+02 EXCESS= .0000E+00 OUTFLOW= .5821E+02 BASIN STORAGE= .1877E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R2-C	MANE	2.76	555.19	223.50	2.18	5.00	551.94	225.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5758E+02 EXCESS= .0000E+00 OUTFLOW= .5759E+02 BASIN STORAGE= .2151E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R8	MANE	1.00	115.53	211.02	1.69	5.00	111.00	210.00	1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7913E+01 EXCESS= .0000E+00 OUTFLOW= .7913E+01 BASIN STORAGE= .1101E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R8	MANE	1.00	113.17	211.72	1.66	5.00	108.89	210.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7775E+01 EXCESS= .0000E+00 OUTFLOW= .7775E+01 BASIN STORAGE= .1030E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R8	MANE	1.01	111.92	211.29	1.63	5.00	107.40	210.00	1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7664E+01 EXCESS= .0000E+00 OUTFLOW= .7664E+01 BASIN STORAGE= .1012E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R8	MANE	1.01	110.28	211.80	1.61	5.00	106.14	210.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7567E+01 EXCESS= .0000E+00 OUTFLOW= .7567E+01 BASIN STORAGE= .1018E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.36	55.49	212.41	1.69	5.00	53.95	215.00	1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3819E+01 EXCESS= .0000E+00 OUTFLOW= .3819E+01 BASIN STORAGE= .2458E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.37	54.30	213.12	1.66	5.00	52.49	215.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3747E+01 EXCESS= .0000E+00 OUTFLOW= .3747E+01 BASIN STORAGE= .2917E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.37	53.34	213.70	1.64	5.00	51.52	215.00	1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3694E+01 EXCESS= .0000E+00 OUTFLOW= .3694E+01 BASIN STORAGE= .2427E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.38	52.51	214.21	1.62	5.00	51.11	215.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3648E+01 EXCESS= .0000E+00 OUTFLOW= .3648E+01 BASIN STORAGE= .2056E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.05	74.42	212.86	1.66	5.00	71.54	215.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5136E+01 EXCESS= .0000E+00 OUTFLOW= .5136E+01 BASIN STORAGE= .2082E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.05	72.89	213.57	1.63	5.00	69.74	215.00	1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5043E+01 EXCESS= .0000E+00 OUTFLOW= .5043E+01 BASIN STORAGE= .2327E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.06	72.57	212.10	1.61	5.00	69.20	215.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4973E+01 EXCESS= .0000E+00 OUTFLOW= .4974E+01 BASIN STORAGE= .1911E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.06	71.45	212.61	1.58	5.00	68.69	215.00	1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4909E+01 EXCESS= .0000E+00 OUTFLOW= .4909E+01 BASIN STORAGE= .2312E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.15	1772.11	230.55	1.76	5.00	1770.68	230.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2173E+03 EXCESS= .0000E+00 OUTFLOW= .2173E+03 BASIN STORAGE= .2550E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.16	1743.47	230.92	1.73	5.00	1742.60	230.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2136E+03 EXCESS= .0000E+00 OUTFLOW= .2136E+03 BASIN STORAGE= .2598E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.17	1720.70	230.98	1.71	5.00	1719.67	230.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2106E+03 EXCESS= .0000E+00 OUTFLOW= .2107E+03 BASIN STORAGE= .3022E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCLMT1R	MANE	1.17	1700.29	230.89	1.69	5.00	1699.35	230.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2081E+03 EXCESS= .0000E+00 OUTFLOW= .2081E+03 BASIN STORAGE= .3010E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.25	2754.33	230.58	1.78	5.00	2751.28	230.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6806E+03 EXCESS= .0000E+00 OUTFLOW= .6806E+03 BASIN STORAGE= .3389E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.26	2718.36	230.53	1.75	5.00	2714.83	230.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6687E+03 EXCESS= .0000E+00 OUTFLOW= .6687E+03 BASIN STORAGE= .3310E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.27	2685.61	230.41	1.72	5.00	2682.34	230.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6595E+03 EXCESS= .0000E+00 OUTFLOW= .6595E+03 BASIN STORAGE= .3317E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCRCLMT1	MANE	1.27	2655.88	230.18	1.70	5.00	2653.88	230.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6511E+03 EXCESS= .0000E+00 OUTFLOW= .6511E+03 BASIN STORAGE= .3282E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	2.08	1465.08	216.25	2.50	5.00	1439.71	215.00	2.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1311E+03 EXCESS= .0000E+00 OUTFLOW= .1311E+03 BASIN STORAGE= .2484E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	2.09	1466.01	217.16	2.46	5.00	1427.49	215.00	2.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1293E+03 EXCESS= .0000E+00 OUTFLOW= .1293E+03 BASIN STORAGE= .2614E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	2.10	1432.90	217.90	2.43	5.00	1405.33	215.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1279E+03 EXCESS= .0000E+00 OUTFLOW= .1279E+03 BASIN STORAGE= .2052E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RLMT2	MANE	2.10	1423.67	216.46	2.41	5.00	1395.68	215.00	2.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1267E+03 EXCESS= .0000E+00 OUTFLOW= .1267E+03 BASIN STORAGE= .2360E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCLMT3	MANE		.82	1870.76	215.56	2.36	5.00	1856.19	215.00	2.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1654E+03 EXCESS= .0000E+00 OUTFLOW= .1654E+03 BASIN STORAGE= .2195E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCLMT3	MANE		.82	1852.75	215.60	2.33	5.00	1836.92	215.00	2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1631E+03 EXCESS= .0000E+00 OUTFLOW= .1631E+03 BASIN STORAGE= .2131E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCLMT3	MANE		.82	1822.81	216.05	2.30	5.00	1810.69	215.00	2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1612E+03 EXCESS= .0000E+00 OUTFLOW= .1613E+03 BASIN STORAGE= .1904E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCLMT3	MANE		.83	1814.18	215.88	2.28	5.00	1798.82	215.00	2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1596E+03 EXCESS= .0000E+00 OUTFLOW= .1596E+03 BASIN STORAGE= .1956E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.11	5117.39	220.74	1.86	5.00	5110.78	220.00	1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9393E+03 EXCESS= .0000E+00 OUTFLOW= .9393E+03 BASIN STORAGE= .3765E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.12	5048.98	220.84	1.83	5.00	5041.31	220.00	1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9236E+03 EXCESS= .0000E+00 OUTFLOW= .9236E+03 BASIN STORAGE= .3830E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.13	4988.07	220.73	1.80	5.00	4980.84	220.00	1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9114E+03 EXCESS= .0000E+00 OUTFLOW= .9114E+03 BASIN STORAGE= .3880E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCCLMT5	MANE		1.13	4930.53	220.59	1.78	5.00	4924.15	220.00	1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9004E+03 EXCESS= .0000E+00 OUTFLOW= .9004E+03 BASIN STORAGE= .3851E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	187.16	785.00	1.24	5.00	187.16	785.00	1.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7102E+03 EXCESS= .0000E+00 OUTFLOW= .7087E+03 BASIN STORAGE= .1486E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	186.40	780.00	1.23	5.00	186.40	780.00	1.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7047E+03 EXCESS= .0000E+00 OUTFLOW= .7032E+03 BASIN STORAGE= .1468E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	185.82	775.00	1.22	5.00	185.82	775.00	1.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7002E+03 EXCESS= .0000E+00 OUTFLOW= .6988E+03 BASIN STORAGE= .1454E+01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
LMTNOT	MANE		5.00	185.29	770.00	1.22	5.00	185.29	770.00	1.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6962E+03 EXCESS= .0000E+00 OUTFLOW= .6948E+03 BASIN STORAGE= .1441E+01 PERCENT ERROR=
.0

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

B.5.2 100-YEAR DB5/ALTA TRIBUTARY

B.5.2 Alta-sdn3

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* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
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* JUN 1998 *
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* VERSION 4.1 *
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* RUN DATE 21SEP17 TIME 09:12:15 *
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* U.S. ARMY CORPS OF ENGINEERS
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* HYDROLOGIC ENGINEERING CENTER
*
* 609 SECOND STREET
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* DAVIS, CALIFORNIA 95616
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* (916) 756-1104
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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 ***

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1 ID THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
2 ID TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
3 ID DOWNSTREAM HOLDING FACILITIES
4 ID
5 ID MODELED BY VTN, NEVADA SVB/JYA
6 ID MAY 9, 2017
7 ID
8 ID
9 ID CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
10 ID GOWAN WATERSHED (ALL)
11 ID RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
12 ID INPUT FILE = ALT1-SDN3.DAT
13 ID INPUT FILE DATE = MAY 5, 2008
14 ID DESIGN STORM = 100-YEAR 6-HR STORM
15 ID STORM DISTRIBUTION = SDN #5
16 ID MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
17 ID CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
18 ID STORM CENTERING = FULL WATERSHED
19 ID
20 ID REFERENCED HYDROLOGIC MODELS:
21 ID CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
22 ID NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
23 ID RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
24 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
25 ID 3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
26 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
27 ID SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
28 ID MASTER PLAN UPDATE (G.C. WALLACE 2006)
29 ID GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
30 ID (G.C. WALLACE 2007)
31 ID LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
32 ID FROM G.C. WALLACE ON JANUARY 31, 2008)
33 ID US 95/RANCHO FIS RESTUDY (PBS&J 1998)
34 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
35 ID
36 ID AREA DARF
37 ID SQ. MI.
38 ID 0-0.5 0.99
39 ID 0.5-1 0.975
40 ID 1-2 0.95
41 ID 2-3 0.925
42 ID 3-4 0.915
43 ID 4-5 0.908
44 ID 5-6 0.903
45 ID 6-7 0.895
46 ID 7-8 0.885
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47 ID
 48 ID
 49 ID
 50 ID
 51 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
 52 ID
 53 ID 100-YEAR, 6-HOUR STORM, SDN3
 HEC-1 INPUT

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PAGE 2

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

54 ID
 55 IT 5 0 0 300
 56 IO 5 0 0
 57 IN 5 0 0
 58 ID 0-0.5 0.5-1 1-2 2-3 3-4 4-5 5-6 6-7 7-8
 59 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
 *

60 KK 3-1
 61 KM COMPARE TO MPU BASIN DB54-1 (CURVE NUMBER CHANGED FROM 87.2)
 62 BA 2.22
 63 PB 3.72
 64 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.130
 65 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
 66 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
 67 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
 68 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
 69 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
 70 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
 71 PC 0.998 0.999 1
 72 LS 0 87.0
 73 UD 0.582
 *

74 KK R3-1
 75 KM ROUTE R3-1 THROUGH 3-2
 76 KM EXISTING NATURAL WASH
 77 RD 3322 0.092 0.030 0 TRAP 125 0
 *

78 KK 3-2
 79 KM COMPARE TO MPU BASIN DB54-5 (CURVE NUMBER CHANGED FROM 85.2)
 80 BA 0.226
 81 PB 3.67
 82 LS 0 83.9
 83 UD 0.110
 *

84 KK CP3.1
 85 KM COMBINE R3-1 AND 3-2
 86 HC 2
 *

87 KK RCP3.1
 88 KM ROUTE CP3.1 TO CP3.3 THROUGH 3-E VIA
 89 KM (PORTION OF FACILITY APM50059)
 90 RD 7900 0.070 0.013 0 TRAP 125 2
 *

91 KK 3-D
 92 KM PORTION OF BASINS DB54-6R (PB=3.56)
 93 BA 0.3329
 94 PB 3.56
 95 LS 0 84.6
 96 UD 0.223
 *

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PAGE 3

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

97 KK CP3.3
 98 KM COMBINE 3-D, RCP3.1,
 99 HC 2
 *

100 KK RCP3.3
 101 KM ROUTE CP3.3 TO CP3.4 THROUGH 3-E VIA A
 102 KM (PORTION OF FACILITY APM50059)
 103 RD 1000 0.070 0.013 0 TRAP 125 2
 *

104 KK 3-3
 105 KM PORTION OF MPU BASIN DB54-3
 106 BA 0.1737
 107 PB 3.67
 108 LS 0 88.0
 109 UD 0.081
 *

110 KK R3-3
 111 KM ROUTE R3-3 THROUGH A PORTION OF 3-E TO CP3.2
 112 KM NATURAL WASH
 113 RD 2233 0.054 0.030 0 TRAP 100 0

```

*
114      KK      3-4
115      KM      PORTION OF MPU BASIN DB54-3
116      BA      0.3457
117      PB      3.67
118      LS      0      88.0
119      UD      0.092
*
120      KK      R3-4
121      KM      ROUTE R3-4 THROUGH A PORTION OF 3-E TO CP3.2
122      KM      NATURAL WASH
123      RD      3300  0.097  0.030      0      TRAP      100      0
*
124      KK      3-5
125      KM      COMPARE TO MPU BASIN DB54-2 (SLIGHTLY LARGER PORTION OF DB54-4)
126      BA      0.2936
127      PB      3.66
128      LS      0      87.7
129      UD      0.094
*
130      KK      R3-5
131      KM      ROUTE R3-5 THROUGH A PORTION OF 3-E TO CP3.2
132      KM      (PORTION OF FACILITY APM50057)
133      RD      4400  0.068  0.013      0      TRAP      50      2
*

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HEC-1 INPUT

PAGE 4

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

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134      KK      CP3.2
135      KM      COMBINE R3-5 , R3-4 AND R3-3
136      HC      3
*
137      KK      RCP3.2
138      KM      ROUTE RCP3.2 THROUGH A PORTION OF 3-E TO CP3.4
139      KM      (PORTION OF FACILITY APM50057)
140      RD      5500  0.068  0.013      0      TRAP      50      2
*
141      KK      3-E
142      KM      PORTION OF BASINS DB54-4 (PB=3.60) AND DB54-6R (PB=3.56)
143      BA      0.5442
144      PB      3.60
145      LS      0      85.8
146      UD      0.238
*
147      KK      CP3.4
148      KM      COMBINE 3-E, RCP3.2 AND RCP3.3
149      HC      3
*
150      KK      RCP3.4
151      KM      ROUTE RCP3.4 THROUGH A PORTION OF 3-N TO CPDB3
152      KM      (FACILITIES APM50056, APM50047 AND APM50008)
153      RD      3365  0.052  0.013      0      TRAP      80      2
*
154      KK      3-6
155      KM      PORTION OF MPU BASIN DB55-3 AND DB55-4
156      BA      0.0887
157      PB      3.61
158      LS      0      88.0
159      UD      0.074
*
160      KK      R3-6
161      KM      ROUTE 3-6 THROUGH A PORTION OF 3-J AND A PORTION OF 3-K TO CP3.5
162      KM      EXISTING NATURAL WASHES
163      RD      4500  0.080  0.030      0      TRAP      100      0
*
164      KK      3-7
165      KM      PORTION OF MPU BASIN DB55-3 AND DB55-4
166      BA      0.1714
167      PB      3.61
168      LS      0      87.2
169      UD      0.048
*

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HEC-1 INPUT

PAGE 5

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

```

170      KK      R3-7
171      KM      ROUTE 3-7 THROUGH A PORTION OF 3-K TO CP3.5
172      KM      PORTION OF FACILITY ID APM50213
173      RD      4340  0.073  0.013      0      TRAP      50      2
*

```

174	KK	3-J							
175	KM	PORTION OF MPU BASIN DB55-4							
176	BA	0.1529							
177	PB	3.58							
178	LS	0	78.6						
179	UD	0.168							
	*								
180	KK	R3-J							
181	KM	ROUTE 3-J THROUGH A PORTION OF 3-K TO CP3.5							
182	KM	NATURAL WASHES							
183	RD	2700	0.074	0.030	0	TRAP	100	0	
	*								
184	KK	CP3.5							
185	KM	COMBINE R3-J, R3-7 AND R3-6							
186	HC	3							
	*								
187	KK	RCP3.5							
188	KM	ROUTE CP3.5 THROUGH A PORTION OF 3-K TO CP3.6							
189	KM	PORTION OF FACILITY ID APM50213							
190	RD	2100	0.073	0.013	0	TRAP	50	2	
	*								
191	KK	3-8							
192	KM	COMPARE TO MPU BASIN DB55-1							
193	BA	0.6386							
194	PB	3.68							
195	LS	0	87.8						
196	UD	0.196							
	*								
197	KK	R3-8							
198	KM	ROUTE 3-8 THROUGH A PORTION OF 3-K TO CP3.6							
199	KM	FACILITY ID APM50212							
200	RD	6695	0.075	0.013	0	TRAP	30	2	
	*								
201	KK	3-K							
202	KM	COMPARE TO MPU BASIN DB55-7							
203	BA	0.8890							
204	PB	3.54							
205	LS	0	87.6						
206	UD	0.296							
	*								
1									
HEC-1 INPUT									
PAGE 6									
LINE	ID	1.....2.....3.....4.....5.....6.....7.....8.....9.....10							
207	KK	CP3.6							
208	KM	COMBINE 3-K, R3-8 AND RCP3.5							
209	HC	3							
	*								
210	KK	RCP3.6							
211	KM	ROUTE CP3.6 THROUGH A PORTION OF 3-N TO CPDB3							
212	KM	FACILITY ID APM500009							
213	RD	4180	0.058	0.013	0	TRAP	50	2	
	*								
214	KK	3-N							
215	KM	COMPARE TO MPU BASIN DB55-8							
216	BA	0.4557							
217	PB	3.46							
218	LS	0	88.9						
219	UD	0.269							
	*								
220	KK	3-M							
221	KM	COMPARE TO MPU BASIN DB55-8							
222	BA	0.1924							
223	PB	3.46							
224	LS	0	88.8						
225	UD	0.147							
	*								
226	KK	R3-M							
227	KM	ROUTE 3-M THROUGH A PORTION OF 3-N TO CP3.7							
228	KM	FACILITY ID PORTION OF APM500009							
229	RD	4500	0.0528	0.013	0	TRAP	7	0	
	*								
230	KK	CPDB5							
231	KM	COMBINE 3-M, 3-N, RCP3.6 AND RCP3.4							
232	KM	TOTAL INFLOW TO SUMMERLIN #5 DETENTION BASIN							
233	KO	0							
234	HC	4							
	*								
235	KK	DB5							
236	KM	SUMMERLIN DETENTION BASIN 5							
237	KM	FACILITY = ANGEL PARK - MIDDLE 5 BRANCH							

1 238 KM FACILITY # = APM5 0000
239 KM STORAGE VOLUME = 384.1 ACRE-FEET
240 KM OUTLET = 2: 7' x 5.5' RCBS
241 KM 100-YEAR DISCHARGE = 2,150 CFS
242 KM SPILLWAY LENGTH = 453.6'
243 KM SPILLWAY HEIGHT =
244 KM SPILLWAY CREST ELEVATION = 3563'
245 KM SPILLWAY TYPE = CONCRETE BROAD CRESTED WEIR
246 KM PMF DISCHARGE = 12,153 CFS
247 KM TOP OF EMBANKMENT ELEVATION = 3569'
248 KM DETENTION BASIN PARAMETERS REFERENCED FROM "DETENTION BASIN NO. 5
HEC-1 INPUT

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

249 KM EXPANSION AND DIVERSION BERM" PLANS BY G.C. WALLACE (5-23-2001)
250 KM STAGE-STORAGE-DISCHARGE CURVE REFERENCED FROM "2006 SUMMERLIN WEST
251 KM CONCEPTUAL DRAINAGE STUDY MASTER PLAN AMENDMENT: EXISTING OFFSITE/PROPOSED
252 KM ONSITE DRAINAGE CONDITION" HYDROLOGIC MODEL DATED 8-7-2006 AND SUBMITTED
253 KM WITH THE SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
254 KM CONTROL MASTER PLAN UPDATE BY G.C. WALLACE (08-2006)
255 KO 0
256 RS 1 STOR -1
257 SV 0 1.73 4.55 8.45 13.08 18.2 23.81 29.96 36.7 43.93
258 SV 59.55 77.49 99.82 127.17 159.39 196.38 240.07 384.05 405.65 535.25
259 SQ 0 192 276 391 505 616 725 813 900 982
260 SQ 1176 1368 1534 1683 1804 1920 2033 2315 3725 23201
261 SE 3532.5 3535 3536 3537 3538 3539 3540 3541 3542 3543
262 SE 3543 3547 3549 3551 3553 3555 3557 3563 3564 3569
263 SS 3563 435.6 3 1.5
*

264 KK 3-L
265 KM COMPARE TO MPU BASIN SWAA-1
266 BA 0.3227
267 PB 3.44
268 LS 0 88.4
269 UD 0.160
*

270 KK CP3-L
271 KM COMBINE 3-L AND DB3
272 KM THIS IS CSWAA-1 IN GOWAN MPU HEC-1
273 HC 2
*
* END OF SECTION MODELED BY VTN, NEVADA SVB
* TIE VTN SECTION TO 2008 MPU HEC-1
*

274 KKRCSWAA-1
275 KM ROUTE CSWAA-1 TO CSWAA-2
276 KM FACILITY = ANGEL PARK - ALTA DRIVE
277 KM FACILITY # = APAD 0115, 0146
278 KM LINING = RCB
279 RD 4640 0.044 0.015 0 TRAP 10 0
*

280 KK SWAA-2
281 BA 0.700
282 PB 3.39
283 LS 0 90.9
284 UD 0.346
*

285 KK CSWAA-2
286 KM COMBINE RCSWAA-1 AND SWAA-2
287 HC 2
*

1 HEC-1 INPUT

PAGE 8

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

288 KKRCSWAA-2
289 KM ROUTE CSWAA-2 TO CSWAA-3
290 KM FACILITY = ANGEL PARK - ALTA DRIVE
291 KM FACILITY # = APAD 0000, 0018, 0044, 0073
292 KM LINING = RCB
293 RD 6120 0.035 0.015 0 TRAP 11 0
*

294 KK SWAA-3
295 BA 0.581
296 PB 3.31
297 LS 0 87.8
298 UD 0.361
*

299 KK CSWAA-3
300 KM COMBINE RCSWAA-2 AND SWAA-3
301 HC 2
*
* THE FOLLOWING SECTION OF HYDROLOGY IS NOT PART OF THE 2008 MPU
* THIS SECTION IS MODELED BASED ON THE 2017 CONDITION OF THE SUMMERLIN MASTER PL
* MODELED BY VTN, NEVADA SVB


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*
*
302      KK      3-F
303      KM      COMPARE TO MPU BASIN SWFH-5
304      BA      0.2815
305      PB      3.50
306      LS      0      88.9
307      UD      0.152
*

308      KK      R3-F
309      KM      ROUTE 3-F THROUGH 3-G2 TO CP3.8
310      KM      LINING RCB
311      RD      2650      0.055      0.013      0      TRAP      6      0
*

312      KK      3-G2
313      KM      COMPARE TO MPU BASIN SWFH-6
314      BA      0.1285
315      PB      3.46
316      LS      0      93.2
317      UD      0.107
*

318      KK      CP3.8
319      KM      COMBINES 3-F AND 3-G2
320      HC      2
*

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

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321      KK      RCP3.8
322      KM      ROUTE CP3.8 TO CP3.9
323      KM      FACILITIES APD6000 AND APDF0000
324      RD      4500      0.075      0.013      0      TRAP      12      0
*

325      KK      3-A
326      KM      COMPARE TO MPU BASIN SWFH-1
327      BA      0.3392
328      PB      3.57
329      LS      0      80.8
330      UD      0.234
*

331      KK      R3-A
332      KM      ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
333      RD      3000      0.032      0.013      0      TRAP      5      0
*

334      KK      3-B
335      KM      COMPARE TO MPU BASIN SWFH-1
336      BA      0.6973
337      PB      3.57
338      LS      0      83.1
339      UD      0.274
*

340      KK      R3-B
341      KM      ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
342      RD      3000      0.024      0.013      0      TRAP      5      0
*

343      KK      3-C
344      KM      COMPARE TO MPU BASIN SWFH-2
345      BA      0.2212
346      PB      3.49
347      LS      0      88.4
348      UD      0.200
*

349      KK      CPDBA-B
350      KO      0
351      KM      COMBINE 3-A, 3-B, AND 3-C
352      KM      PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
353      HC      3
*

354      KK      GPDB
355      KM      VILLAGE 22 DETENTION BASIN
356      KM      FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
357      KM      FACILITY # = 0001
358      KM      STORAGE VOLUME = 123 AC-FT
359      KM      OUTLET = 60" RCP
360      KM      100-YEAR DISCHARGE =

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HEC-1 INPUT

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

```

361      KM      SPILLWAY LENGTH = 1053'
362      KM      SPILLWAY HEIGHT =
363      KM      SPILLWAY CREST ELEVATION = 1007.9'

```

364 KM SPILLWAY TYPE =
 365 KM PMF DISCHARGE =
 366 KM TOP OF EMBANKMENT ELEVATION =
 367 KM INFORMATION REFERENCED FROM "SUMMERLIN VILLAGE 26 ULTIMATE/PROPOSED
 368 KM CONDITIONS" HYDRAOLOGIC MODEL BY G.C. WALLACE INC. (9-5-06)
 369 KM ELEVATIONS WITHIN THE STAGE-STORAGE-DISCHARGE CURVE WERE REDUCED BY 1000'
 370 KM IN ORDER FOR THE HYDROLOGIC MODEL TO RUN
 371 KO 3
 372 RS 1 STOR 0
 373 SV 6.54 12.78 19.92 28.03 37.17 46.61 59.93 75.75 94.29 115.85
 374 SV 129.61
 375 SE 10 12 14 16 18 20 22 24 26 28
 376 SE 30
 377 SQ 0 26.06 58.28 78.18 93.97 107.45 119.43 130.31 140.35 149.71
 378 SQ 158.53
 *

379 KK 3-G1
 380 KM COMPARE TO MPU BASIN SWFH-6
 381 BA 0.2406
 382 PB 3.46
 383 LS 0 90
 384 UD 0.131
 *

385 KK R3-G1
 386 KM ROUTE 3-G1 TO CP3-G1
 387 KM LINING RCB
 388 RD 1000 0.044 0.013 0 TRAP 6 0
 *

389 KK CP3-G1
 390 KM COMBINE 3-G1, AND GPDB
 391 HC 2
 *

392 KK RCP3-G1
 393 KM ROUTE 3P3-G1 TO CP3-H1
 394 KM LINING RCB
 395 RD 2603 0.044 0.013 0 TRAP 8 0
 *

396 KK 3-H1
 397 KM COMPARE TO MPU BASIN SWFH-9
 398 BA 0.0429
 399 PB 3.33
 400 LS 0 90.7
 401 UD 0.088
 *

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HEC-1 INPUT

PAGE 11

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

402 KK CP3-H1
 403 KM COMBINE RCP3-G1, AND 3-H1
 404 HC 2
 *

405 KK RCP3-H1
 406 KM ROUTE CP3-H1 TO CP3.9
 407 KM LINING RCB
 408 RD 3510 0.044 0.013 0 TRAP 8 0
 *

409 KK 3-I1
 410 KM COMPARE TO MPU BASIN SWFH-7
 411 BA 0.2934
 412 PB 3.41
 413 LS 0 88.8
 414 UD 0.209
 *

415 KK CP3.9
 416 KM COMBINE CP3.8, CP3-H1 AND C-I1
 417 HC 3
 *

418 KK RCP9
 419 KM ROUTE CP3.9 TO CP3.10
 420 RD 2390 0.027 0.013 0 TRAP 6 0
 *

421 KK 3-O
 422 KM COMPARE TO MPU BASIN SV22-2
 423 BA 0.1124
 424 PB 3.46
 425 LS 0 92.6
 426 UD 0.123
 *

427 KK R3-O
 428 KM ROUTE 3-O TO CP3-P
 429 KM LINING RCB
 430 RD 3260 0.028 0.013 0 TRAP 4 0

*
431 KK 3-P2
432 KM COMPARE TO MPU BASIN SV22-2
433 BA 0.1466
434 PB 3.46
435 LS 0 87.1
436 UD 0.148
*

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HEC-1 INPUT

PAGE 12

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

437 KK R3-P2
438 KM ROUTE 3-P2 TO CP3-P
439 KM LINING RCB
440 RD 3260 0.028 0.013 0 TRAP 4 0
*

441 KK 3-P1
442 KM COMPARE TO MPU BASIN SV22-2
443 BA 0.2441
444 PB 3.46
445 LS 0 92.0
446 UD 0.117
*

447 KK CP3-P
448 HC 3
*

449 KK RCP3-P
450 KM ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q
451 RD 2750 0.033 0.013 0 TRAP 10 0
*

452 KK 3-Q
453 KM COMPARE TO MPU BASIN SV22-2
454 BA 0.1974
455 PB 3.46
456 LS 0 92.8
457 UD 0.162
*

458 KK CP3-Q
459 KM COMBINES CP3-P AND 3-Q
460 HC 2
*

461 KK RCP3-Q
462 KM ROUTE CP3-Q THROUGH STORM DRAIN TO CP3-H2
463 KM LINING RCB
464 RD 3000 0.015 0.013 0 TRAP 20 0
*

465 KK 3-H2
466 BA 0.1834
467 PB 3.33
468 LS 0 92.7
469 UD 0.134
*

1

HEC-1 INPUT

PAGE 13

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

470 KK CP3-H2
471 HC 2
*

472 KK RCPH-2
473 KM ROUTE CP3-H2 TO CP3.10
474 KM LINING RCB
475 RD 1725 0.019 0.013 0 TRAP 20 0
*

476 KK 3-I2
477 KM COMPARE TO MPU BASIN SWFH-7
478 BA 0.1185
479 PB 3.41
480 LS 0 90.5
481 UD 0.205
*

482 KK CP3.10
483 KM COMBINE CP3.9, CP3-H2, 3-I2
484 HC 3
*

485 KK RCP3.10
486 KM ROUTE CP3.10 TO CP3.11
487 KM FACILITIES APFH0000
488 KM LINING RCB
489 RD 1000 0.0350 0.013 0 TRAP 16 0

```

*
490      KK      3-H3
491      KM      COMPARE TO MPU BASIN SWFH-9
492      BA      0.1403
493      PB      3.33
494      LS      0      94.3
495      UD      0.206
*

496      KK      CP3.11
497      KM      COMBINE 3-H3 AND RCP3.10
498      KM      THIS IS CSWFH-9 IN 2008 MPU HEC-1
499      HC      2
*
* END OF SECTION MODELED BY VTN, NEVADA
* TIE VTN SECTION TO 2008 MPU HEC-1
*

500      KKRCSHFH-9
501      KM      ROUTE CSWFH-9 TO CRCSWFH9
502      KM      FACILITY = ANGEL PARK - BELTWAY BRANCH
503      KM      FACILITY # = APBE 0000, 0013, 0022, 0051
504      KM      LINING = CONCRETE
505      RD      4338 0.0181 0.015      0      TRAP      20      2
*
1                                     HEC-1 INPUT                                     PAGE 14

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

506      KKRCRCSWFH9
507      KM      COMBINE RCSWFH9 AND CSWAA-3
508      HC      2
*
* END OF G.C. WALLACE'S HYDROLOGIC MODEL
*

509      KKRCRCSWFH
510      KM      ROUTE CRCSWFH9 TO C11A-1
511      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
512      KM      FACILITY # = APMD 0230,0233,0237,0247,0248,0253,0258
513      KM      LINING = CONCRETE
514      RD      1418 0.04 0.015      0      TRAP      76      2
*

515      KK      11A-1
516      BA      0.208
517      PB      3.25
518      LS      0      85.3
519      UD      0.292
*

520      KK      C11A-1
521      KM      COMBINE RCRCSWFH AND 11A-1
522      KM      ANGEL PARK MIDDLE BRANCH @ PAVILLION CENTER DRIVE
523      HC      2
*

524      KK      RC11A-1
525      KM      ROUTE C11A-1 TO C11A-3
526      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
527      KM      FACILITY # = APMD 0190,0195,0198,0208,0218,0227
528      KM      LINING = CONCRETE
529      RD      2065 0.0281 0.015      0      TRAP      62      2
*

530      KK      11A-3
531      BA      0.195
532      PB      3.21
533      LS      0      89.3
534      UD      0.229
*

535      KK      C11A-3
536      KM      COMBINE RC11A-1 AND 11A-3
537      KM      ANGEL PARK MIDDLE BRANCH @ TOWN CENTER DRIVE
538      HC      2
*
1                                     HEC-1 INPUT                                     PAGE 15

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

539      KK      RC11A-3
540      KM      ROUTE C11A-3 TO C3A
541      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
542      KM      FACILITY # = APMD 0132, 0133
543      KM      LENGTH = 3,164
544      KM      SLOPE = 3.0%
545      KM      N = 0.040
546      KM      HYDRAULIC RADIUS = 1.5
547      KM      VELOCITY = 13.5
548      KM      NATURAL WASH
549      RM      1      0.065      0.15

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*
550      KK      3A
551      BA      0.178
552      PB      3.15
553      LS      0      84.0
554      UD      0.244
*
555      KK      C3A
556      KM      COMBINE RCC11A-3 AND 3A
557      KM      ANGEL PARK MIDDLE BRANCH @ HUALAPAI WAY
558      HC      2
*
559      KK      RC3A
560      KM      ROUTE C3A TO C3B-1
561      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
562      KM      FACILITY # = APMD 0027, 0030
563      KM      LENGTH = 6,500
564      KM      SLOPE = 3.0%
565      KM      N = 0.040
566      KM      HYDRAULIC RADIUS = 1.5
567      KM      VELOCITY = 13.5
568      KM      NATURAL WASH
569      RM      2      0.133      0.15
*
570      KK      3B-1
571      BA      0.258
572      PB      3.04
573      LS      0      82.0
574      UD      0.257
*
575      KK      C3B-1
576      KM      COMBINE RC3A AND 3B-1
577      HC      2
*

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

```

578      KK      RC3B-1
579      KM      ROUTE C3B-1 TO CC3B-2B
580      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
581      KM      FACILITY # = APMD 0000,0027,0030
582      KM      LINING = UNLINED
583      KM      CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
584      RD      940      0.029      0.04      0      TRAP      100      3
*
585      KK      11B-2
586      BA      0.441
587      PB      3.25
588      LS      0      85.7
589      UD      0.423
*
590      KK      R11B-2
591      KM      ROUTE 11B-2 TO C11B-1
592      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
593      KM      FACILITY # = APSP 0177,0183
594      KM      LINING = CONCRETE
595      RD      1900      0.017      0.015      0      TRAP      10      2
*
596      KK      11B-1
597      BA      0.394
598      PB      3.26
599      LS      0      87.2
600      UD      0.267
*
601      KK      C11B-1
602      KM      COMBINE R11B-2 AND 11B-1
603      KM      ANGEL PARK-SUMMERLIN PARKWAY @ ANASAZI DRIVE
604      HC      2
*
605      KK      RC11B-1
606      KM      ROUTE C11B-1 TO C8B-1
607      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
608      KM      FACILITY # = APSP 0135,0177
609      KM      LINING = CONCRETE
610      RD      2150      0.024      0.015      0      TRAP      10      2
*
611      KK      8B-1
612      BA      0.304
613      PB      3.17
614      LS      0      87.8
615      UD      0.288
*

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

616      KK      C8B-1
617      KM      COMBINE RC11B-1 AND 8B-1
618      KM      ANGEL PARK-SUMMERLIN PARKWAY @ CRESTDALE DRIVE
619      HC      2
        *

620      KK      RC8B-1
621      KM      ROUTE C8B-1 TO C8B-2
622      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
623      KM      FACILITY # = APSP 0066,0069,0133
624      KM      LINING = CONCRETE
625      RD      3575  0.024  0.015      0      TRAP      10      2
        *

626      KK      8B-2
627      BA      0.420
628      PB      3.10
629      LS      0      93.7
630      UD      0.336
        *

631      KK      C8B-2
632      KM      COMBINE 8B-2 AND RC8B-1
633      KM      ANGEL PARK-SUMMERLIN PARKWAY @ TOWN CENTER DRIVE
634      HC      2
        *

635      KK      RC8B-2
636      KM      ROUTE C8B-2 TO CC3B-2A
637      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
638      KM      FACILITY # = APSP 0002
639      KM      LINING = UNLINED
640      RD      1424  0.035  0.025      0      TRAP      50      3
        *

641      KK      11A-2
642      BA      0.290
643      PB      3.20
644      LS      0      88.3
645      UD      0.194
        *

646      KK      R11A-2
647      KM      ROUTE 11A-2 TO C8A
648      KM      TOWN CENTER DRIVE AND HUALAPAI WAY
649      RD      2900  0.017  0.016      0      TRAP      0      50
        *

650      KK      8A
651      BA      0.306
652      PB      3.16
653      LS      0      86.0
654      UD      0.239
        *

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

655      KK      C8A
656      KM      COMBINE 8A AND R11A-2
657      HC      2
        *

658      KK      RC8A
659      KM      ROUTE C8A TO C3B-2A
660      KM      NATURAL WASH
661      KM      TRAVEL LENGTH = 4,500
662      KM      SLOPE = 2.8%
663      KM      N = 0.040
664      KM      HYDRAULIC RADIUS = 1.5
665      KM      VELOCITY = 13.1
666      RM      1  0.096  0.15
        *

667      KK      3B-2A
668      BA      0.243
669      PB      3.06
670      LS      0      88.5
671      UD      0.213
        *

672      KK      C3B-2A
673      KM      COMBINE 3B-2A AND RC8A
674      HC      2
        *

675      KK      CC3B-2A
676      KM      COMBINE C3B-2A AND RC8B-2
677      HC      2

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*
678      KKRCC3B-2A
679      KM  ROUTE CC3B-2A TO C3B-2B
680      KM  FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
681      KM  FACILITY # = APSP 0001
682      KM  LINING = UNLINED
683      RD   3924    0.03    0.025        0    TRAP        20        2
*
684      KK   3B-2B
685      BA   0.273
686      PB   2.99
687      LS    0      85.1
688      UD   0.309
*
689      KK   C3B-2B
690      KM  COMBINE RCC3B-2A AND 3B-2B
691      HC    2
*
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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692      KK  CC3B-2B
693      KM  COMBINE RC3B-1 AND C3B-2B
694      HC    2
*
695      KKRCC3B-2B
696      KM  ROUTE CC3B-2B TO CSF2-C
697      KM  FACILITY = ANGEL PARK NORTH
698      KM  FACILITY # = APNO 0012,0013,0015 APSP 0000
699      KM  LINING = UNLINED (NATURAL WASH)
700      KM  CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
701      RD   1854    0.025    0.04        0    TRAP        100        3
*
702      KK   SF2-C
703      BA   0.388
704      PB   2.91
705      LS    0      84.2
706      UD   0.443
*
707      KK   CSF2-C
708      KM  COMBINE SF2-C AND RCC3B-2B
709      HC    2
*
710      KK  RCSF2-C
711      KM  ROUTE CSF2-C TO ANGLPKIN
712      KM  FACILITY = ANGEL PARK NORTH
713      KM  FACILITY # = APNO 0005
714      KM  LINING = UNLINED (NATURAL WASH)
715      KM  CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
716      RD   1559    0.02    0.04        0    TRAP        100        3
*
717      KK   SW11
718      BA   0.589
719      PB   3.34
720      LS    0      87.8
721      UD   0.311
*
722      KK   RSW11
723      KM  ROUTE SW11 TO CSW17
724      KM  FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
725      KM  FACILITY # = APCB 0064, 0080
726      KM  LINING = RCB
727      RD   2338    0.0167    0.015        0    TRAP        7        0
*

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

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728      KK   SW17
729      BA   0.356
730      PB   3.30
731      LS    0      87.8
732      UD   0.271
*
733      KK   CSW17
734      KM  COMBINE RSW11 AND SW17
735      HC    2
*
736      KK   RCSW17
737      KM  ROUTE CSW17 TO CSW18
738      KM  FACILITY = ANGEL PARK - CHARLESTON BOULEVARD

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739      KM  FACILITY # = APCB 0000,0001,0019,0050
740      KM  LINING = RCB
741      RD    3600    0.014    0.015        0    TRAP        11        0
      *

742      KK    SW18
743      BA    0.405
744      PB    3.27
745      LS        0    86.8
746      UD    0.271
      *

747      KK    CSW18
748      KM    COMBINE RCSW17 AND SW18
749      HC        2
      *

750      KK    RCSW18
751      KM    ROUTE CSW18 TO C12A
752      KM    FACILITY = ANGEL PARK SOUTH
753      KM    FACILITY # = APSO 0254,0255,0258,0345,0346; APCB 0000
754      KM    NATURAL WASH
755      KM    LENGTH = 5,200
756      KM    SLOPE = 1.4%
757      KM    N = 0.040
758      KM    HYDRAULIC RADIUS = 1.5
759      KM    VELOCITY = 9.2
760      RM        2    0.157    0.15
      *

761      KK    12A
762      BA    0.392
763      PB    3.20
764      LS        0    91.2
765      UD    0.264
      *

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

```

766      KK    C12A
767      KM    COMBINE 12A AND RCSW18
768      HC        2
      *

769      KK    RC12A
770      KM    ROUTE THRU 12B
771      KM    FACILITY = ANGEL PARK SOUTH
772      KM    FACILITY # = APSO 0204, 0205
773      KM    NATURAL WASH
774      KM    LENGTH = 2,600
775      KM    SLOPE = 3.5%
776      KM    N = 0.040
777      KM    HYDRAULIC RADIUS = 1.5
778      KM    VELOCITY = 14.5
779      RM        1    0.05    0.15
      *

780      KK    12B
781      BA    0.260
782      PB    3.13
783      LS        0    91.0
784      UD    0.233
      *

785      KK    C12B
786      KM    COMBINE 12B AND RC12A
787      HC        2
      *

788      KK    RC12B
789      KM    ROUTE C12B TO C57B-3
790      KM    FACILITY = ANGEL PARK SOUTH
791      KM    FACILITY # = APSO 0067
792      KM    NATURAL WASH
793      KM    LENGTH = 6,000
794      KM    SLOPE = 2.3%
795      KM    N = 0.040
796      KM    HYDRAULIC RADIUS = 1.5
797      KM    VELOCITY = 11.8
798      RM        2    0.141    0.15
      *

799      KK    57B-3
800      BA    0.310
801      PB    3.04
802      LS        0    82.1
803      UD    0.332
      *

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

804 KK C57B-3
 805 KM COMBINE RC12B AND 57B-3
 806 HC 2
 *
 807 KK RC57B-3
 808 KM ROUTE C57B-3 TO C57B-2
 809 KM FACILITY = ANGEL PARK SOUTH
 810 KM FACILITY # = APSO 0067
 811 KM NATURAL WASH
 812 KM LENGTH = 1,300
 813 KM SLOPE = 1.7%
 814 KM N = 0.040
 815 KM HYDRAULIC RADIUS = 1.5
 816 KM VELOCITY = 10.2
 817 RM 0 0.035 0.15
 *
 818 KK 57B-2
 819 BA 0.362
 820 PB 3.02
 821 LS 0 84.1
 822 UD 0.332
 *
 823 KK C57B-2
 824 KM COMBINE 57B-2 AND RC57B-3
 825 HC 2
 *
 826 KK RC57B-2
 827 KM ROUTE C57B-2 TO CC57B-1
 828 KM FACILITY = ANGEL PARK SOUTH
 829 KM FACILITY # = APSO 0067
 830 KM NATURAL WASH
 831 KM LENGTH = 1,000
 832 KM SLOPE = 1.8%
 833 KM N = 0.040
 834 KM HYDRAULIC RADIUS = 1.5
 835 KM VELOCITY = 10.5
 836 RM 0 0.027 0.15
 *
 837 KK 13B-1
 838 BA 0.249
 839 PB 3.19
 840 LS 0 91.6
 841 UD 0.284
 *

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

842 KK RC13B-1
 843 KM ROUTE 13B-1 TO C13B-2
 844 KM GRIFFITH PARK DRIVE AND HUALAPAI WAY
 845 RD 3000 0.018 0.016 0 TRAP 0 50
 *
 846 KK 13B-2
 847 BA 0.216
 848 PB 3.14
 849 LS 0 89.7
 850 UD 0.231
 *
 851 KK C13B-2
 852 KM COMBINE 13B-2 AND RC13B-1
 853 KM HUALAPAI WAY AND LOCAL FACILITY
 854 HC 2
 *
 855 KK RC13B-2
 856 KM ROUTE C13B-2 TO CCPIC-A
 857 KM LINING = GRASS
 858 RD 4900 0.021 0.03 0 TRAP 40 6
 *
 859 KK 19A
 860 BA 0.253
 861 PB 3.25
 862 LS 0 89.9
 863 UD 0.351
 *
 864 KK R19A
 865 KM ROUTE 19A TO C13A-1
 866 KM UNNAMED ROAD
 867 RD 4300 0.021 0.016 0 TRAP 0 50
 *
 868 KK 13A-1
 869 BA 0.224
 870 PB 3.19

871 LS 0 91.4
872 UD 0.302
*

873 KK C13A-1
874 KM COMBINE 13A-1 AND R19A
875 KM TOWN CENTER DRIVE AND SWALE
876 HC 2
*

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

877 KK RC13A-1
878 KM ROUTE C13A-1 TO C13A-2
879 KM NATURAL WASH
880 KM TRAVEL LENGTH = 2,800
881 KM SLOPE = 2.1%
882 KM N = 0.040
883 KM HYDRAULIC RADIUS = 1.5
884 KM VELOCITY = 11.4
885 RM 1 0.068 0.15
*

886 KK 13A-2
887 BA 0.188
888 PB 3.15
889 LS 0 90.0
890 UD 0.236
*

891 KK C13A-2
892 KM COMBINE 13A-2 AND RC13A-1
893 HC 2
*

894 KK RC13A-2
895 KM ROUTE C13A-2 TO CPIC-C
896 KM LINING = GRASS
897 RD 5200 0.015 0.03 0 TRAP 40 4
*

898 KK PIC-C
899 BA 0.243
900 PB 3.08
901 LS 0 90.4
902 UD 0.373
*

903 KK CPIC-C
904 KM COMBINE PIC-C AND RC13A-2
905 HC 2
*

906 KK RCPIC-C
907 KM ROUTE CPIC-C TO CPIC-A
908 KM LINING = GRASS
909 RD 2200 0.025 0.03 0 TRAP 40 4
*

910 KK PIC-A
911 BA 0.359
912 PB 3.03
913 LS 0 91.1
914 UD 0.499
*

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

915 KK CPIC-A
916 KM COMBINE RCPIC-C AND PIC-A
917 HC 2
*

918 KK CCPIC-A
919 KM COMBINE CPIC-A AND RC13B-2
920 HC 2
*

921 KKRCPPIC-A
922 KM ROUTE CCPIC-A TO C57B-1
923 KM FACILITY = ANGEL PARK - PECCOLE 2
924 KM FACILITY # = APP2 0000
925 KM LINING = GRASS
926 RD 4793 0.021 0.03 0 TRAP 10 2
*

927 KK 57B-1
928 BA 0.197
929 PB 2.92
930 LS 0 85.5
931 UD 0.277


```

*
932      KK  C57B-1
933      KM  COMBINE 57B-1 AND RCCPIC-A
934      HC      2
*
935      KK  CC57B-1
936      KM  COMBINE C57B-1 AND RC57B-2
937      HC      2
*
938      KKRCC57B-1
939      KM  ROUTE CC57B-1 TO C57B-4
940      KM  FACILITY = ANGEL PARK - SOUTH BRANCH
941      KM  FACILITY # = APSO 0050
942      KM  LINING = NATURAL WASH
943      RD      300  0.0184  0.04      0  TRAP      100      3
*
944      KK  57B-4
945      BA  0.200
946      PB  2.91
947      LS      0      90.0
948      UD  0.233
*

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

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949      KK  C57B-4
950      KM  COMBINE RCC57B-1 AND 57B-4
951      HC      2
*
952      KK  PIC-B
953      BA  0.441
954      PB  2.98
955      LS      0      91.1
956      UD  0.471
*
957      KK  RPIC-B
958      KM  ROUTE PIC-B TO CC57B-4
959      KM  FACILITY = ANGEL PARK - PECCOLE 1
960      KM  FACILITY # = APP1 0000
961      KM  LINING = RCP
962      RD      2982  0.024  0.013      0  CIRC      6
*
963      KK  CC57B-4
964      KM  COMBINE RPIC-B AND C57B-4
965      HC      2
*
966      KKRCC57B-4
967      KM  ROUTE CC57B-4 TO ANGLPKIN
968      KM  FACILITY = ANGEL PARK SOUTH
969      KM  FACILITY # = APSO 0000, 0020
970      KM  LINING = RCB
971      RD      2857  0.0162  0.015      0  TRAP      24      0
*
972      KK  38A
973      BA  0.353
974      PB  2.86
975      LS      0      91.6
976      UD  0.399
*
977      KK  R38A
978      KM  ROUTE 38A TO C38B
979      KM  FACILITY = ANGEL PARK - DURANGO
980      KM  FACILITY # = APDG 0000,0060
981      KM  LINING = RCP
982      RD      4500  0.0096  0.015      0  CIRC      6
*
983      KK  38B
984      BA  0.440
985      PB  2.82
986      LS      0      92.9
987      UD  0.375
*

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

```

988      KK  C38B
989      KM  COMBINE 38B AND R38A
990      KM  DUCHARME AND DURANGO
991      HC      2
*

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992      KK      57BA
993      BA      0.317
994      PB      2.96
995      LS      0      78.2
996      UD      0.436
          *

997      KK      R57BA
998      KM      ROUTE 57BA TO C3C
999      KM      RAMPART BOULEVARD
1000     RD      500      0.02      0.016      0      TRAP      0      50
          *

1001     KK      3C
1002     BA      0.153
1003     PB      2.90
1004     LS      0      93.1
1005     UD      0.246
          *

1006     KK      C3C
1007     KM      COMBINE 3C AND R57BA
1008     KM      RAMPART AND REGENT LAS VEGAS
1009     HC      2
          *

1010     KK      RC3C
1011     KM      ROUTE C3C TO ANGLPKIN
1012     KM      LINING = UNLINED
1013     KM      CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
1014     RD      2300      0.0326      0.04      0      TRAP      50      4
          *

1015     KK      AP
1016     BA      0.668
1017     PB      2.81
1018     LS      0      81.6
1019     UD      0.392
          *

1020     KKANGLPKIN
1021     KM      COMBINE AP,RC3C,C38B,RCC57B-4, AND RCSF2-2
1022     KM      TOTAL INFLOW TO ANGEL PARK DETENTION BASIN
1023     KO      1
1024     HC      5
          *

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

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1025     KKANGLPKDB
1026     KM      ANGEL PARK DETENTION BASIN
1027     KM      FACILITY = ANGEL PARK NORTH
1028     KM      FACILITY # = APNO 0000,0001
1029     KM      STORAGE VOLUME = 1512 AC-FT (2002 MPU VOLUME = 1400 AC-FT; 8% INCREASE)
1030     KM      OUTLET = 54" RCP
1031     KM      100-YEAR DISCHARGE =
1032     KM      SPILLWAY LENGTH =
1033     KM      SPILLWAY HEIGHT =
1034     KM      SPILLWAY CREST ELEVATION = 2619'
1035     KM      SPILLWAY TYPE =
1036     KM      PMF DISCHARGE =
1037     KM      TOP OF EMBANKMENT ELEVATION =
1038     KO      1
1039     RS      1      STOR      -1
1040     SV      0      10.8      43.2      113.4      222.48      411.48      640.44      910.44      1239.84      1470.9
1041     SV      1512      1554.12      1596.24      1640.52      1684.8      1730.16      1775.52      1823.04      1875.96      1919.1
1042     SE      2576      2580      2585      2590      2595      2600      2605      2610      2616      2618
1043     SE      2619      2619.5      2620      2620.5      2621      2621.5      2622      2622.5      2623      2623.5
1044     SQ      0      89      194      232      285      316      343      370      392      405
1045     SQ      407      1852      4491      7909      11955      16545      21620      27137      33064      39373
          *
1046     ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

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

60      3-1
          V
          V
74      R3-1
          .
          .
78      .      3-2
          .
          .
84      CP3.1.....
          V
          V
87      RCP3.1

```

	.		
91	.	3-D	
	.		
97	CP3.3.....		
	V		
	V		
100	RCP3.3		
	.		
104	.	3-3	
	.	V	
	.	V	
110	.	R3-3	
	.		
114	.	.	3-4
	.	.	V
	.	.	V
120	.	.	R3-4
	.	.	.
124	.	.	.
	.	.	3-5
	.	.	V
	.	.	V
130	.	.	R3-5
	.	.	.
	.	.	.
134	.	CP3.2.....	
	.	V	
	.	V	
137	.	RCP3.2	
	.	.	
141	.	.	3-E
	.	.	.
	.	.	.
147	CP3.4.....		
	V		
	V		
150	RCP3.4		
	.		
154	.	3-6	
	.	V	
	.	V	
160	.	R3-6	
	.	.	
164	.	.	3-7
	.	.	V
	.	.	V
170	.	.	R3-7
	.	.	.
	.	.	.
174	.	.	.
	.	.	3-J
	.	.	V
	.	.	V
180	.	.	R3-J
	.	.	.
	.	.	.
184	.	CP3.5.....	
	.	V	
	.	V	
187	.	RCP3.5	
	.	.	
191	.	.	3-8
	.	.	V
	.	.	V
197	.	.	R3-8
	.	.	.
	.	.	.
201	.	.	.
	.	.	3-K
	.	.	.
	.	.	.
207	.	CP3.6.....	
	.	V	
	.	V	
210	.	RCP3.6	
	.	.	
214	.	.	3-N
	.	.	.
	.	.	.
220	.	.	.
	.	.	3-M
	.	.	V
	.	.	V
226	.	.	R3-M
	.	.	.
	.	.	.
230	CPDB5.....		
	V		
	V		

235	DB5			
	.			
264	.	3-L		
	.			
270	CP3-L.....			
	V			
	V			
274	RCSWAA-1			
	.			
280	.	SWAA-2		
	.			
	.			
285	CSWAA-2.....			
	V			
	V			
288	RCSWAA-2			
	.			
294	.	SWAA-3		
	.			
	.			
299	CSWAA-3.....			
	.			
302	.	3-F		
	.	V		
	.	V		
308	.	R3-F		
	.			
	.			
312	.	.	3-G2	
	.	.		
	.	.		
318	.	CP3.8.....		
	.	V		
	.	V		
321	.	RCP3.8		
	.			
	.			
325	.	.	3-A	
	.	.	V	
	.	.	V	
331	.	.	R3-A	
	.	.		
	.	.		
334	.	.	.	3-B
	.	.	V	
	.	.	V	
340	.	.	R3-B	
	.	.		
	.	.		
343	.	.	.	3-C
	.	.	.	.
	.	.	.	.
349	.	.	CPDBA-B.....	
	.	.	V	
	.	.	V	
354	.	.	GPDB	
	.	.		
	.	.		
379	.	.	.	3-G1
	.	.	V	
	.	.	V	
385	.	.	.	R3-G1
	.	.	.	
	.	.	.	
389	.	.	CP3-G1.....	
	.	.	V	
	.	.	V	
392	.	.	RCP3-G1	
	.	.		
	.	.		
396	.	.	.	3-H1
	.	.	.	
	.	.	.	
402	.	.	CP3-H1.....	
	.	.	V	
	.	.	V	
405	.	.	RCP3-H1	
	.	.		
	.	.		
409	.	.	.	3-I1
	.	.	.	.
	.	.	.	.
415	.	.	CP3.9.....	
	.	.	V	
	.	.	V	
418	.	.	RCP9	
	.	.		
	.	.		
421	.	.	3-O	
	.	.	V	

427	.	.	V	
	.	.	R3-O	
	.	.	.	
431	.	.	.	3-P2
	.	.	V	
	.	.	V	
437	.	.	.	R3-P2
	.	.	.	
	.	.	.	
441	.	.	.	3-P1
	.	.	.	
	.	.	.	
447	.	.	CP3-P	
	.	.	V	
	.	.	V	
449	.	.	RCP3-P	
	.	.	.	
	.	.	.	
452	.	.	.	3-Q
	.	.	.	
	.	.	.	
458	.	.	CP3-Q	
	.	.	V	
	.	.	V	
461	.	.	RCP3-Q	
	.	.	.	
	.	.	.	
465	.	.	.	3-H2
	.	.	.	
	.	.	.	
470	.	.	CP3-H2	
	.	.	V	
	.	.	V	
472	.	.	RCPH-2	
	.	.	.	
	.	.	.	
476	.	.	.	3-I2
	.	.	.	
	.	.	.	
482	.	.	CP3.10	
	.	.	V	
	.	.	V	
485	.	.	RCP3.10	
	.	.	.	
	.	.	.	
490	.	.	.	3-H3
	.	.	.	
	.	.	.	
496	.	.	CP3.11	
	.	.	V	
	.	.	V	
500	.	.	RCSHFH-9	
	.	.	.	
	.	.	.	
506	CRCSWFH9	.	.	
	.	.	V	
	.	.	V	
509	RCRCSWFH	.	.	
	.	.	.	
	.	.	.	
515	.	.	11A-1	
	.	.	.	
	.	.	.	
520	C11A-1	.	.	
	.	.	V	
	.	.	V	
524	RC11A-1	.	.	
	.	.	.	
	.	.	.	
530	.	.	11A-3	
	.	.	.	
	.	.	.	
535	C11A-3	.	.	
	.	.	V	
	.	.	V	
539	RC11A-3	.	.	
	.	.	.	
	.	.	.	
550	.	.	3A	
	.	.	.	
	.	.	.	
555	C3A	.	.	
	.	.	V	
	.	.	V	
559	RC3A	.	.	
	.	.	.	
	.	.	.	
570	.	.	3B-1	
	.	.	.	
	.	.	.	
575	C3B-1	.	.	
	.	.	V	
	.	.	V	
578	RC3B-1	.	.	

585	.	11B-2	
	.	V	
	.	V	
590	.	R11B-2	
	.	.	
596	.	.	11B-1
	.	.	.
601	.	C11B-1.....	
	.	V	
	.	V	
605	.	RC11B-1	
	.	.	
611	.	.	8B-1
	.	.	.
616	.	C8B-1.....	
	.	V	
	.	V	
620	.	RC8B-1	
	.	.	
626	.	.	8B-2
	.	.	.
631	.	C8B-2.....	
	.	V	
	.	V	
635	.	RC8B-2	
	.	.	
641	.	.	11A-2
	.	.	V
	.	.	V
646	.	R11A-2	
	.	.	.
650	.	.	8A
	.	.	.
655	.	.	C8A.....
	.	.	V
	.	.	V
658	.	RC8A	
	.	.	.
667	.	.	3B-2A
	.	.	.
672	.	C3B-2A.....	
	.	.	.
675	.	CC3B-2A.....	
	.	V	
	.	V	
678	.	RCC3B-2A	
	.	.	
684	.	.	3B-2B
	.	.	.
689	.	C3B-2B.....	
	.	.	.
692	CC3B-2B.....		
	V		
	V		
695	RCC3B-2B		
	.		
702	.	SF2-C	
	.	.	
707	CSF2-C.....		
	V		
	V		
710	RCSF2-C		
	.		
717	.	SW11	
	.	V	
	.	V	
722	.	RSW11	
	.	.	
728	.	.	SW17
	.	.	.
733	.	CSW17.....	
	.	V	
	.	V	

736	.	RCSW17	.
	.	.	.
742	.	.	SW18
	.	.	.
747	.	CSW18.....	.
	.	V	.
	.	V	.
750	.	RCSW18	.
	.	.	.
761	.	.	12A
	.	.	.
766	.	C12A.....	.
	.	V	.
	.	V	.
769	.	RC12A	.
	.	.	.
780	.	.	12B
	.	.	.
785	.	C12B.....	.
	.	V	.
	.	V	.
788	.	RC12B	.
	.	.	.
799	.	.	57B-3
	.	.	.
804	.	C57B-3.....	.
	.	V	.
	.	V	.
807	.	RC57B-3	.
	.	.	.
818	.	.	57B-2
	.	.	.
823	.	C57B-2.....	.
	.	V	.
	.	V	.
826	.	RC57B-2	.
	.	.	.
837	.	.	13B-1
	.	.	V
	.	.	V
842	.	RC13B-1	.
	.	.	.
846	.	.	13B-2
	.	.	.
851	.	C13B-2.....	.
	.	V	.
	.	V	.
855	.	RC13B-2	.
	.	.	.
859	.	.	19A
	.	.	V
	.	.	V
864	.	.	R19A
	.	.	.
868	.	.	13A-1
	.	.	.
873	.	.	C13A-1.....
	.	.	V
	.	.	V
877	.	.	RC13A-1
	.	.	.
886	.	.	13A-2
	.	.	.
891	.	.	C13A-2.....
	.	.	V
	.	.	V
894	.	.	RC13A-2
	.	.	.
898	.	.	PIC-C
	.	.	.
903	.	.	CPIC-C.....
	.	.	V
	.	.	V
906	.	.	RCPIC-C
	.	.	.

```

910      .      .      .      .      .      PIC-A
      .      .      .      .      .
915      .      .      .      .      .      CPIC-A.....
      .      .      .      .      .
918      .      .      .      .      .      CCPIC-A.....
      .      .      .      .      .      V
      .      .      .      .      .      V
921      .      .      .      .      .      RCCPIC-A
      .      .      .      .      .
927      .      .      .      .      .      57B-1
      .      .      .      .      .
932      .      .      .      .      .      C57B-1.....
      .      .      .      .      .
935      .      .      .      .      .      CC57B-1.....
      .      .      .      .      .      V
      .      .      .      .      .      V
938      .      .      .      .      .      RCC57B-1
      .      .      .      .      .
944      .      .      .      .      .      57B-4
      .      .      .      .      .
949      .      .      .      .      .      C57B-4.....
      .      .      .      .      .
952      .      .      .      .      .      PIC-B
      .      .      .      .      .      V
      .      .      .      .      .      V
957      .      .      .      .      .      RPIC-B
      .      .      .      .      .
963      .      .      .      .      .      CC57B-4.....
      .      .      .      .      .      V
      .      .      .      .      .      V
966      .      .      .      .      .      RCC57B-4
      .      .      .      .      .
972      .      .      .      .      .      38A
      .      .      .      .      .      V
      .      .      .      .      .      V
977      .      .      .      .      .      R38A
      .      .      .      .      .
983      .      .      .      .      .      38B
      .      .      .      .      .
988      .      .      .      .      .      C38B.....
      .      .      .      .      .
992      .      .      .      .      .      57BA
      .      .      .      .      .      V
      .      .      .      .      .      V
997      .      .      .      .      .      R57BA
      .      .      .      .      .
1001     .      .      .      .      .      3C
      .      .      .      .      .
1006     .      .      .      .      .      C3C.....
      .      .      .      .      .      V
      .      .      .      .      .      V
1010     .      .      .      .      .      RC3C
      .      .      .      .      .
1015     .      .      .      .      .      AP
      .      .      .      .      .
1020     .      .      .      .      .      ANGLPKIN.....
      .      .      .      .      .      V
      .      .      .      .      .      V
1025     .      .      .      .      .      ANGLPKDB

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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1*****
*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
*
* RUN DATE 21SEP17 TIME 09:12:15 *
*
*
*

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

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THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
DOWNSTREAM HOLDING FACILITIES

MODELED BY VTN, NEVADA SVB/JYA
MAY 9, 2017

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
GOWAN WATERSHED (ALL)
RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
INPUT FILE = ALT1-SDN3.DAT
INPUT FILE DATE = MAY 5, 2008
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #5
MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
STORM CENTERING = FULL WATERSHED

REFERENCED HYDROLOGIC MODELS:
CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
MASTER PLAN UPDATE (G.C. WALLACE 2006)
GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
(G.C. WALLACE 2007)
LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
FROM G.C. WALLACE ON JANUARY 31, 2008)
US 95/RANCHO FIS RESTUDY (PBS&J 1998)
JR CARDS CONTAIN DARF'S BASED ON THE FOLLOWING VALUES:

AREA	DARF
SQ. MI.	
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN3

56 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL							
IPLOT	0	PLOT CONTROL							
QSCAL	0.	HYDROGRAPH PLOT SCALE							
	0-0.5	0.5-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL							
IDATE	1	STARTING DATE							
ITIME	0000	STARTING TIME							
NQ	300	NUMBER OF HYDROGRAPH ORDINATES							
NDDATE	2	ENDING DATE							
NDTIME	0055	ENDING TIME							
ICENT	19	CENTURY MARK							

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 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									
.99	.98	.95	.93	.92	.91	.90	.89	.88	

*** **

230 KK *****
* *
* CPDB5 *
* *

233 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*** **

235 KK *****
* *
* DB5 *
* *

255 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*** **

349 KK *****
* *
* CPDBA-B *
* *

350 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*** **

354 KK *****
* *
* GPDB *
* *

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

HYDROGRAPH ROUTING DATA

372 RS	STORAGE ROUTING									
	NSTPS	1	NUMBER OF SUBREACHES							
	ITYP	STOR	TYPE OF INITIAL CONDITION							
	RSVRIC	.00	INITIAL CONDITION							
	X	.00	WORKING R AND D COEFFICIENT							
373 SV	STORAGE	6.5	12.8	19.9	28.0	37.2	46.6	59.9	75.8	94.3
115.8		129.6								
375 SE	ELEVATION	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
28.00		30.00								
377 SQ	DISCHARGE	0.	26.	58.	78.	94.	107.	119.	130.	140.
150.		159.								

*** **

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	144.	5.42	(CFS)	134.	61.	59.	59.
			(INCHES)	.990	1.811	1.811	1.811
			(AC-FT)	66.	121.	121.	121.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	102.	5.42		84.	34.	33.	33.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	26.76	5.42		24.77	16.00	15.78	15.78
CUMULATIVE AREA =				1.26 SQ MI			

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	143.	5.42	(CFS)	133.	60.	58.	58.
			(INCHES)	.980	1.766	1.766	1.766
			(AC-FT)	66.	118.	118.	118.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	100.	5.42		81.	33.	32.	32.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	26.51	5.42		24.50	15.82	15.60	15.60
CUMULATIVE AREA =				1.26 SQ MI			

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	141.	5.42	(CFS)	130.	57.	55.	55.
			(INCHES)	.962	1.692	1.692	1.692
			(AC-FT)	65.	113.	113.	113.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	95.	5.42		77.	31.	30.	30.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	26.10	5.42		24.04	15.52	15.31	15.31
CUMULATIVE AREA =				1.26 SQ MI			

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	139.	5.42	(CFS)	128.	55.	53.	53.
			(INCHES)	.944	1.618	1.618	1.618
			(AC-FT)	63.	109.	109.	109.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	91.	5.42		73.	29.	28.	28.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					

25.65	5.42		23.57	15.22	15.03	15.03	
CUMULATIVE AREA =			1.26 SQ MI				
***	***	***	***	***	***	***	
HYDROGRAPH AT STATION			GPDB				
FOR PLAN 1, RATIO =			.92				
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	138.	5.33	(CFS)	127.	54.	52.	52.
			(INCHES)	.936	1.589	1.589	1.589
			(AC-FT)	63.	107.	107.	107.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	89.	5.33		72.	29.	28.	28.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	25.46	5.33		23.37	15.10	14.91	14.91
CUMULATIVE AREA =			1.26 SQ MI				
***	***	***	***	***	***	***	
HYDROGRAPH AT STATION			GPDB				
FOR PLAN 1, RATIO =			.91				
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	137.	5.33	(CFS)	126.	53.	51.	51.
			(INCHES)	.931	1.568	1.568	1.568
			(AC-FT)	62.	105.	105.	105.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	88.	5.33		70.	28.	27.	27.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	25.33	5.33		23.24	15.02	14.84	14.84
CUMULATIVE AREA =			1.26 SQ MI				
***	***	***	***	***	***	***	
HYDROGRAPH AT STATION			GPDB				
FOR PLAN 1, RATIO =			.90				
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	137.	5.33	(CFS)	125.	53.	51.	51.
			(INCHES)	.927	1.554	1.554	1.554
			(AC-FT)	62.	104.	104.	104.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	87.	5.33		70.	28.	27.	27.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	25.24	5.33		23.14	14.96	14.78	14.78
CUMULATIVE AREA =			1.26 SQ MI				
***	***	***	***	***	***	***	
HYDROGRAPH AT STATION			GPDB				
FOR PLAN 1, RATIO =			.89				
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	136.	5.33	(CFS)	125.	52.	50.	50.
			(INCHES)	.920	1.530	1.530	1.530
			(AC-FT)	62.	103.	103.	103.

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1024 HC          HYDROGRAPH COMBINATION
                   ICOMP          5  NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .99

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
19.	1		0000	1	0.	*	1		0615	76	2847.	*	1		1230	151	97.	*	1		1845	226
18.	1		0005	2	0.	*	1		0620	77	2748.	*	1		1235	152	96.	*	1		1850	227
18.	1		0010	3	0.	*	1		0625	78	2652.	*	1		1240	153	95.	*	1		1855	228
17.	1		0015	4	0.	*	1		0630	79	2559.	*	1		1245	154	94.	*	1		1900	229
17.	1		0020	5	1.	*	1		0635	80	2469.	*	1		1250	155	93.	*	1		1905	230
16.	1		0025	6	3.	*	1		0640	81	2383.	*	1		1255	156	92.	*	1		1910	231
16.	1		0030	7	11.	*	1		0645	82	2303.	*	1		1300	157	91.	*	1		1915	232
15.	1		0035	8	26.	*	1		0650	83	2231.	*	1		1305	158	90.	*	1		1920	233
15.	1		0040	9	55.	*	1		0655	84	2166.	*	1		1310	159	89.	*	1		1925	234
14.	1		0045	10	101.	*	1		0700	85	2107.	*	1		1315	160	88.	*	1		1930	235
14.	1		0050	11	164.	*	1		0705	86	2052.	*	1		1320	161	87.	*	1		1935	236
14.	1		0055	12	237.	*	1		0710	87	1999.	*	1		1325	162	86.	*	1		1940	237
13.	1		0100	13	306.	*	1		0715	88	1949.	*	1		1330	163	85.	*	1		1945	238
13.	1		0105	14	354.	*	1		0720	89	1898.	*	1		1335	164	84.	*	1		1950	239
12.	1		0110	15	374.	*	1		0725	90	1845.	*	1		1340	165	83.	*	1		1955	240
12.	1		0115	16	367.	*	1		0730	91	1789.	*	1		1345	166	82.	*	1		2000	241
12.	1		0120	17	343.	*	1		0735	92	1729.	*	1		1350	167	81.	*	1		2005	242
11.	1		0125	18	315.	*	1		0740	93	1661.	*	1		1355	168	80.	*	1		2010	243
11.	1		0130	19	296.	*	1		0745	94	1581.	*	1		1400	169	79.	*	1		2015	244
11.	1		0135	20	299.	*	1		0750	95	1486.	*	1		1405	170	78.	*	1		2020	245
11.	1		0140	21	336.	*	1		0755	96	1379.	*	1		1410	171	77.	*	1		2025	246
10.	1		0145	22	411.	*	1		0800	97	1274.	*	1		1415	172	76.	*	1		2030	247
10.	1		0150	23	523.	*	1		0805	98	1186.	*	1		1420	173	75.	*	1		2035	248
10.	1		0155	24	659.	*	1		0810	99	1120.	*	1		1425	174	73.	*	1		2040	249
9.	1		0200	25	799.	*	1		0815	100	1071.	*	1		1430	175	72.	*	1		2045	250
9.	1		0205	26	917.	*	1		0820	101	1025.	*	1		1435	176	71.	*	1		2050	251
9.	1		0210	27	995.	*	1		0825	102	974.	*	1		1440	177	70.	*	1		2055	252
9.	1		0215	28	1029.	*	1		0830	103	914.	*	1		1445	178	69.	*	1		2100	253
8.	1		0220	29	1034.	*	1		0835	104	846.	*	1		1450	179	67.	*	1		2105	254
8.	1		0225	30	1036.	*	1		0840	105	774.	*	1		1455	180	66.	*	1		2110	255
8.	1		0230	31	1059.	*	1		0845	106	700.	*	1		1500	181	65.	*	1		2115	256
8.	1		0235	32	1120.	*	1		0850	107	627.	*	1		1505	182	64.	*	1		2120	257
7.	1		0240	33	1222.	*	1		0855	108	558.	*	1		1510	183	63.	*	1		2125	258
7.	1		0245	34	1356.	*	1		0900	109	493.	*	1		1515	184	62.	*	1		2130	259
7.	1		0250	35	1493.	*	1		0905	110	431.	*	1		1520	185	61.	*	1		2135	260
7.	1		0255	36	1605.	*	1		0910	111	372.	*	1		1525	186	60.	*	1		2140	261
7.	1		0300	37	1682.	*	1		0915	112	315.	*	1		1530	187	59.	*	1		2145	262
6.	1		0305	38	1740.	*	1		0920	113	261.	*	1		1535	188	57.	*	1		2150	263

6.	1	0310	39	1814.	*	1	0925	114	214.	*	1	1540	189	56.	*	1	2155	264
6.	1	0315	40	1966.	*	1	0930	115	179.	*	1	1545	190	54.	*	1	2200	265
6.	1	0320	41	2323.	*	1	0935	116	154.	*	1	1550	191	53.	*	1	2205	266
6.	1	0325	42	3129.	*	1	0940	117	139.	*	1	1555	192	51.	*	1	2210	267
6.	1	0330	43	4736.	*	1	0945	118	131.	*	1	1600	193	50.	*	1	2215	268
6.	1	0335	44	7330.	*	1	0950	119	126.	*	1	1605	194	48.	*	1	2220	269
5.	1	0340	45	10651.	*	1	0955	120	124.	*	1	1610	195	47.	*	1	2225	270
5.	1	0345	46	13918.	*	1	1000	121	122.	*	1	1615	196	45.	*	1	2230	271
5.	1	0350	47	16291.	*	1	1005	122	121.	*	1	1620	197	44.	*	1	2235	272
5.	1	0355	48	17312.	*	1	1010	123	120.	*	1	1625	198	43.	*	1	2240	273
5.	1	0400	49	17073.	*	1	1015	124	119.	*	1	1630	199	41.	*	1	2245	274
5.	1	0405	50	15961.	*	1	1020	125	119.	*	1	1635	200	40.	*	1	2250	275
5.	1	0410	51	14397.	*	1	1025	126	118.	*	1	1640	201	39.	*	1	2255	276
4.	1	0415	52	12710.	*	1	1030	127	117.	*	1	1645	202	38.	*	1	2300	277
4.	1	0420	53	11089.	*	1	1035	128	116.	*	1	1650	203	37.	*	1	2305	278
4.	1	0425	54	9649.	*	1	1040	129	116.	*	1	1655	204	35.	*	1	2310	279
4.	1	0430	55	8467.	*	1	1045	130	115.	*	1	1700	205	34.	*	1	2315	280
4.	1	0435	56	7574.	*	1	1050	131	114.	*	1	1705	206	33.	*	1	2320	281
4.	1	0440	57	6986.	*	1	1055	132	113.	*	1	1710	207	32.	*	1	2325	282
4.	1	0445	58	6683.	*	1	1100	133	113.	*	1	1715	208	31.	*	1	2330	283
4.	1	0450	59	6598.	*	1	1105	134	112.	*	1	1720	209	30.	*	1	2335	284
4.	1	0455	60	6642.	*	1	1110	135	111.	*	1	1725	210	30.	*	1	2340	285
3.	1	0500	61	6716.	*	1	1115	136	111.	*	1	1730	211	29.	*	1	2345	286
3.	1	0505	62	6732.	*	1	1120	137	110.	*	1	1735	212	28.	*	1	2350	287
3.	1	0510	63	6640.	*	1	1125	138	109.	*	1	1740	213	27.	*	1	2355	288
3.	1	0515	64	6419.	*	1	1130	139	109.	*	1	1745	214	26.	*	2	0000	289
3.	1	0520	65	6076.	*	1	1135	140	108.	*	1	1750	215	25.	*	2	0005	290
3.	1	0525	66	5646.	*	1	1140	141	107.	*	1	1755	216	25.	*	2	0010	291
3.	1	0530	67	5180.	*	1	1145	142	106.	*	1	1800	217	24.	*	2	0015	292
3.	1	0535	68	4725.	*	1	1150	143	105.	*	1	1805	218	23.	*	2	0020	293
3.	1	0540	69	4312.	*	1	1155	144	104.	*	1	1810	219	23.	*	2	0025	294
3.	1	0545	70	3956.	*	1	1200	145	103.	*	1	1815	220	22.	*	2	0030	295
3.	1	0550	71	3661.	*	1	1205	146	102.	*	1	1820	221	21.	*	2	0035	296
3.	1	0555	72	3423.	*	1	1210	147	101.	*	1	1825	222	21.	*	2	0040	297
2.	1	0600	73	3231.	*	1	1215	148	100.	*	1	1830	223	20.	*	2	0045	298
2.	1	0605	74	3078.	*	1	1220	149	99.	*	1	1835	224	20.	*	2	0050	299
2.	1	0610	75	2954.	*	1	1225	150	98.	*	1	1840	225	19.	*	2	0055	300

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	17312.	3.92	(CFS)	4693.	1265.	1218.
			(INCHES)	1.915	2.064	2.064
			(AC-FT)	2327.	2509.	2509.
CUMULATIVE AREA = 22.79 SQ MI						

HYDROGRAPH AT STATION ANGLPKIN

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
FLOW																						
	1		0000	1	0.	*	1		0615	76	2815.	*	1		1230	151	95.	*	1		1845	226
17.	1		0005	2	0.	*	1		0620	77	2717.	*	1		1235	152	94.	*	1		1850	227
17.	1		0010	3	0.	*	1		0625	78	2623.	*	1		1240	153	93.	*	1		1855	228
16.	1		0015	4	0.	*	1		0630	79	2530.	*	1		1245	154	92.	*	1		1900	229
16.	1		0020	5	1.	*	1		0635	80	2440.	*	1		1250	155	91.	*	1		1905	230
15.	1		0025	6	3.	*	1		0640	81	2353.	*	1		1255	156	89.	*	1		1910	231
15.	1		0030	7	10.	*	1		0645	82	2274.	*	1		1300	157	88.	*	1		1915	232
15.	1		0035	8	24.	*	1		0650	83	2201.	*	1		1305	158	87.	*	1		1920	233
14.	1		0040	9	51.	*	1		0655	84	2135.	*	1		1310	159	86.	*	1		1925	234
14.	1		0045	10	94.	*	1		0700	85	2075.	*	1		1315	160	85.	*	1		1930	235
13.	1		0050	11	152.	*	1		0705	86	2019.	*	1		1320	161	84.	*	1		1935	236
13.	1		0055	12	221.	*	1		0710	87	1965.	*	1		1325	162	83.	*	1		1940	237
13.	1		0100	13	286.	*	1		0715	88	1913.	*	1		1330	163	82.	*	1		1945	238
12.	1		0105	14	332.	*	1		0720	89	1859.	*	1		1335	164	81.	*	1		1950	239
12.	1		0110	15	352.	*	1		0725	90	1803.	*	1		1340	165	80.	*	1		1955	240
12.	1		0115	16	346.	*	1		0730	91	1743.	*	1		1345	166	79.	*	1		2000	241
11.	1		0120	17	324.	*	1		0735	92	1677.	*	1		1350	167	78.	*	1		2005	242
11.	1		0125	18	297.	*	1		0740	93	1601.	*	1		1355	168	77.	*	1		2010	243
11.	1		0130	19	280.	*	1		0745	94	1508.	*	1		1400	169	76.	*	1		2015	244
10.	1		0135	20	284.	*	1		0750	95	1403.	*	1		1405	170	75.	*	1		2020	245
10.	1		0140	21	319.	*	1		0755	96	1297.	*	1		1410	171	74.	*	1		2025	246
10.	1		0145	22	390.	*	1		0800	97	1204.	*	1		1415	172	72.	*	1		2030	247
9.	1		0150	23	497.	*	1		0805	98	1134.	*	1		1420	173	71.	*	1		2035	248
9.	1		0155	24	628.	*	1		0810	99	1082.	*	1		1425	174	70.	*	1		2040	249
9.	1		0200	25	765.	*	1		0815	100	1036.	*	1		1430	175	69.	*	1		2045	250
9.	1		0205	26	881.	*	1															

5.	1	0330	43	4584.	*	1	0945	118	126.	*	1	1600	193	46.	*	1	2215	268
5.	1	0335	44	7128.	*	1	0950	119	123.	*	1	1605	194	44.	*	1	2220	269
5.	1	0340	45	10378.	*	1	0955	120	121.	*	1	1610	195	43.	*	1	2225	270
5.	1	0345	46	13604.	*	1	1000	121	120.	*	1	1615	196	42.	*	1	2230	271
5.	1	0350	47	15961.	*	1	1005	122	119.	*	1	1620	197	40.	*	1	2235	272
5.	1	0355	48	16973.	*	1	1010	123	118.	*	1	1625	198	39.	*	1	2240	273
5.	1	0400	49	16751.	*	1	1015	124	117.	*	1	1630	199	38.	*	1	2245	274
4.	1	0405	50	15674.	*	1	1020	125	117.	*	1	1635	200	37.	*	1	2250	275
4.	1	0410	51	14151.	*	1	1025	126	116.	*	1	1640	201	36.	*	1	2255	276
4.	1	0415	52	12500.	*	1	1030	127	115.	*	1	1645	202	35.	*	1	2300	277
4.	1	0420	53	10911.	*	1	1035	128	114.	*	1	1650	203	34.	*	1	2305	278
4.	1	0425	54	9501.	*	1	1040	129	114.	*	1	1655	204	33.	*	1	2310	279
4.	1	0430	55	8335.	*	1	1045	130	113.	*	1	1700	205	32.	*	1	2315	280
4.	1	0435	56	7455.	*	1	1050	131	112.	*	1	1705	206	31.	*	1	2320	281
4.	1	0440	57	6881.	*	1	1055	132	112.	*	1	1710	207	30.	*	1	2325	282
4.	1	0445	58	6586.	*	1	1100	133	111.	*	1	1715	208	29.	*	1	2330	283
3.	1	0450	59	6501.	*	1	1105	134	110.	*	1	1720	209	28.	*	1	2335	284
3.	1	0455	60	6541.	*	1	1110	135	110.	*	1	1725	210	27.	*	1	2340	285
3.	1	0500	61	6614.	*	1	1115	136	109.	*	1	1730	211	26.	*	1	2345	286
3.	1	0505	62	6631.	*	1	1120	137	108.	*	1	1735	212	26.	*	1	2350	287
3.	1	0510	63	6541.	*	1	1125	138	107.	*	1	1740	213	25.	*	1	2355	288
3.	1	0515	64	6325.	*	1	1130	139	106.	*	1	1745	214	24.	*	2	0000	289
3.	1	0520	65	5990.	*	1	1135	140	105.	*	1	1750	215	23.	*	2	0005	290
3.	1	0525	66	5570.	*	1	1140	141	104.	*	1	1755	216	23.	*	2	0010	291
3.	1	0530	67	5112.	*	1	1145	142	103.	*	1	1800	217	22.	*	2	0015	292
3.	1	0535	68	4665.	*	1	1150	143	102.	*	1	1805	218	22.	*	2	0020	293
3.	1	0540	69	4258.	*	1	1155	144	101.	*	1	1810	219	21.	*	2	0025	294
2.	1	0545	70	3907.	*	1	1200	145	100.	*	1	1815	220	20.	*	2	0030	295
2.	1	0550	71	3617.	*	1	1205	146	99.	*	1	1820	221	20.	*	2	0035	296
2.	1	0555	72	3382.	*	1	1210	147	99.	*	1	1825	222	19.	*	2	0040	297
2.	1	0600	73	3194.	*	1	1215	148	98.	*	1	1830	223	19.	*	2	0045	298
2.	1	0605	74	3043.	*	1	1220	149	97.	*	1	1835	224	18.	*	2	0050	299
2.	1	0610	75	2921.	*	1	1225	150	96.	*	1	1840	225	18.	*	2	0055	300
2.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	16973.	3.92	(CFS)	4603.	1237.	1192.	1192.
			(INCHES)	1.878	2.019	2.019	2.019
			(AC-FT)	2283.	2454.	2454.	2454.
CUMULATIVE AREA = 22.79 SQ MI							

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .95

* * *

4.	1	0350	47	15357.	*	1	1005	122	116.	*	1	1620	197	35.	*	1	2235	272
4.	1	0355	48	16405.	*	1	1010	123	115.	*	1	1625	198	34.	*	1	2240	273
4.	1	0400	49	16233.	*	1	1015	124	114.	*	1	1630	199	33.	*	1	2245	274
4.	1	0405	50	15191.	*	1	1020	125	113.	*	1	1635	200	32.	*	1	2250	275
4.	1	0410	51	13732.	*	1	1025	126	113.	*	1	1640	201	31.	*	1	2255	276
4.	1	0415	52	12148.	*	1	1030	127	112.	*	1	1645	202	30.	*	1	2300	277
4.	1	0420	53	10619.	*	1	1035	128	111.	*	1	1650	203	29.	*	1	2305	278
3.	1	0425	54	9254.	*	1	1040	129	111.	*	1	1655	204	28.	*	1	2310	279
3.	1	0430	55	8127.	*	1	1045	130	110.	*	1	1700	205	28.	*	1	2315	280
3.	1	0435	56	7279.	*	1	1050	131	109.	*	1	1705	206	27.	*	1	2320	281
3.	1	0440	57	6716.	*	1	1055	132	108.	*	1	1710	207	26.	*	1	2325	282
3.	1	0445	58	6422.	*	1	1100	133	108.	*	1	1715	208	25.	*	1	2330	283
3.	1	0450	59	6337.	*	1	1105	134	107.	*	1	1720	209	24.	*	1	2335	284
3.	1	0455	60	6376.	*	1	1110	135	106.	*	1	1725	210	24.	*	1	2340	285
3.	1	0500	61	6446.	*	1	1115	136	105.	*	1	1730	211	23.	*	1	2345	286
3.	1	0505	62	6463.	*	1	1120	137	104.	*	1	1735	212	22.	*	1	2350	287
3.	1	0510	63	6378.	*	1	1125	138	103.	*	1	1740	213	22.	*	1	2355	288
3.	1	0515	64	6170.	*	1	1130	139	102.	*	1	1745	214	21.	*	2	0000	289
3.	1	0520	65	5848.	*	1	1135	140	101.	*	1	1750	215	21.	*	2	0005	290
2.	1	0525	66	5441.	*	1	1140	141	100.	*	1	1755	216	20.	*	2	0010	291
2.	1	0530	67	4997.	*	1	1145	142	99.	*	1	1800	217	20.	*	2	0015	292
2.	1	0535	68	4564.	*	1	1150	143	98.	*	1	1805	218	19.	*	2	0020	293
2.	1	0540	69	4169.	*	1	1155	144	97.	*	1	1810	219	18.	*	2	0025	294
2.	1	0545	70	3828.	*	1	1200	145	96.	*	1	1815	220	18.	*	2	0030	295
2.	1	0550	71	3545.	*	1	1205	146	95.	*	1	1820	221	17.	*	2	0035	296
2.	1	0555	72	3317.	*	1	1210	147	94.	*	1	1825	222	17.	*	2	0040	297
2.	1	0600	73	3133.	*	1	1215	148	93.	*	1	1830	223	16.	*	2	0045	298
2.	1	0605	74	2985.	*	1	1220	149	92.	*	1	1835	224	16.	*	2	0050	299
2.	1	0610	75	2866.	*	1	1225	150	91.	*	1	1840	225	16.	*	2	0055	300
2.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	16405.	3.92	(CFS)	4454.	1192.	1148.
			(INCHES)	1.817	1.945	1.945
			(AC-FT)	2209.	2364.	2364.
CUMULATIVE AREA = 22.79 SQ MI						

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	
13.	1	0000	1	0.	*	1	0615	76	2707.	*	1	1230	151	85.	*	1	1845	226				
13.	1	0005	2	0.	*	1	0620	77	2611.	*	1	1235	152	84.	*	1	1850	227				
13.	1	0010	3	0.	*	1	0625	78	2517.	*	1	1240	153	83.	*	1	1855	228				

12.	1	0015	4	0.	*	1	0630	79	2424.	*	1	1245	154	82.	*	1	1900	229
12.	1	0020	5	0.	*	1	0635	80	2334.	*	1	1250	155	81.	*	1	1905	230
12.	1	0025	6	2.	*	1	0640	81	2247.	*	1	1255	156	80.	*	1	1910	231
12.	1	0030	7	7.	*	1	0645	82	2166.	*	1	1300	157	79.	*	1	1915	232
11.	1	0035	8	18.	*	1	0650	83	2092.	*	1	1305	158	78.	*	1	1920	233
11.	1	0040	9	39.	*	1	0655	84	2024.	*	1	1310	159	77.	*	1	1925	234
11.	1	0045	10	71.	*	1	0700	85	1960.	*	1	1315	160	76.	*	1	1930	235
10.	1	0050	11	116.	*	1	0705	86	1899.	*	1	1320	161	75.	*	1	1935	236
10.	1	0055	12	171.	*	1	0710	87	1838.	*	1	1325	162	74.	*	1	1940	23
10.	1	0100	13	224.	*	1	0715	88	1776.	*	1	1330	163	72.	*	1	1945	238
9.	1	0105	14	263.	*	1	0720	89	1709.	*	1	1335	164	71.	*	1	1950	239
9.	1	0110	15	282.	*	1	0725	90	1635.	*	1	1340	165	70.	*	1	1955	240
9.	1	0115	16	280.	*	1	0730	91	1548.	*	1	1345	166	69.	*	1	2000	241
8.	1	0120	17	264.	*	1	0735	92	1446.	*	1	1350	167	68.	*	1	2005	242
8.	1	0125	18	244.	*	1	0740	93	1337.	*	1	1355	168	67.	*	1	2010	243
8.	1	0130	19	230.	*	1	0745	94	1237.	*	1	1400	169	65.	*	1	2015	244
8.	1	0135	20	234.	*	1	0750	95	1157.	*	1	1405	170	64.	*	1	2020	245
8.	1	0140	21	263.	*	1	0755	96	1099.	*	1	1410	171	63.	*	1	2025	246
8.	1	0145	22	323.	*	1	0800	97	1052.	*	1	1415	172	62.	*	1	2030	247
7.	1	0150	23	414.	*	1	0805	98	1005.	*	1	1420	173	61.	*	1	2035	248
7.	1	0155	24	528.	*	1	0810	99	952.	*	1	1425	174	60.	*	1	2040	249
7.	1	0200	25	650.	*	1	0815	100	889.	*	1	1430	175	59.	*	1	2045	250
7.	1	0205	26	760.	*	1	0820	101	820.	*	1	1435	176	58.	*	1	2050	251
6.	1	0210	27	838.	*	1	0825	102	748.	*	1	1440	177	56.	*	1	2055	252
6.	1	0215	28	878.	*	1	0830	103	676.	*	1	1445	178	55.	*	1	2100	253
6.	1	0220	29	890.	*	1	0835	104	604.	*	1	1450	179	53.	*	1	2105	254
6.	1	0225	30	894.	*	1	0840	105	537.	*	1	1455	180	51.	*	1	2110	255
6.	1	0230	31	913.	*	1	0845	106	473.	*	1	1500	181	50.	*	1	2115	256
6.	1	0235	32	962.	*	1	0850	107	413.	*	1	1505	182	48.	*	1	2120	257
5.	1	0240	33	1045.	*	1	0855	108	355.	*	1	1510	183	47.	*	1	2125	258
5.	1	0245	34	1158.	*	1	0900	109	299.	*	1	1515	184	46.	*	1	2130	259
5.	1	0250	35	1281.	*	1	0905	110	246.	*	1	1520	185	44.	*	1	2135	260
5.	1	0255	36	1385.	*	1	0910	111	201.	*	1	1525	186	43.	*	1	2140	261
5.	1	0300	37	1461.	*	1	0915	112	168.	*	1	1530	187	42.	*	1	2145	262
5.	1	0305	38	1517.	*	1	0920	113	146.	*	1	1535	188	40.	*	1	2150	263
5.	1	0310	39	1585.	*	1	0925	114	132.	*	1	1540	189	39.	*	1	2155	264
4.	1	0315	40	1717.	*	1	0930	115	125.	*	1	1545	190	38.	*	1	2200	265
4.	1	0320	41	2020.	*	1	0935	116	120.	*	1	1550	191	37.	*	1	2205	266
4.	1	0325	42	2709.	*	1	0940	117	118.	*	1	1555	192	36.	*	1	2210	267
4.	1	0330	43	4120.	*	1	0945	118	116.	*	1	1600	193	35.	*	1	2215	268
4.	1	0335	44	6454.	*	1	0950	119	115.	*	1	1605	194	34.	*	1	2220	269
4.	1	0340	45	9471.	*	1	0955	120	114.	*	1	1610	195	33.	*	1	2225	270
4.	1	0345	46	12504.	*	1	1000	121	113.	*	1	1615	196	32.	*	1	2230	271
4.	1	0350	47	14764.	*	1	1005	122	112.	*	1	1620	197	31.	*	1	2235	272
4.	1	0355	48	15801.	*	1	1010	123	112.	*	1	1625	198	30.	*	1	2240	273
3.	1	0400	49	15653.	*	1	1015	124	111.	*	1	1630	199	29.	*	1	2245	274
3.	1	0405	50	14697.	*	1	1020	125	110.	*	1	1635	200	28.	*	1	2250	275

3.	1	0410	51	13316.	*	1	1025	126	109.	*	1	1640	201	27.	*	1	2255	276
3.	1	0415	52	11794.	*	1	1030	127	109.	*	1	1645	202	26.	*	1	2300	277
3.	1	0420	53	10319.	*	1	1035	128	108.	*	1	1650	203	26.	*	1	2305	278
3.	1	0425	54	9006.	*	1	1040	129	107.	*	1	1655	204	25.	*	1	2310	279
3.	1	0430	55	7915.	*	1	1045	130	106.	*	1	1700	205	24.	*	1	2315	280
3.	1	0435	56	7087.	*	1	1050	131	105.	*	1	1705	206	23.	*	1	2320	281
3.	1	0440	57	6542.	*	1	1055	132	104.	*	1	1710	207	23.	*	1	2325	282
3.	1	0445	58	6253.	*	1	1100	133	103.	*	1	1715	208	22.	*	1	2330	283
3.	1	0450	59	6172.	*	1	1105	134	102.	*	1	1720	209	22.	*	1	2335	284
3.	1	0455	60	6212.	*	1	1110	135	101.	*	1	1725	210	21.	*	1	2340	285
2.	1	0500	61	6280.	*	1	1115	136	100.	*	1	1730	211	20.	*	1	2345	286
2.	1	0505	62	6296.	*	1	1120	137	99.	*	1	1735	212	20.	*	1	2350	287
2.	1	0510	63	6215.	*	1	1125	138	98.	*	1	1740	213	19.	*	1	2355	288
2.	1	0515	64	6015.	*	1	1130	139	97.	*	1	1745	214	19.	*	2	0000	289
2.	1	0520	65	5704.	*	1	1135	140	97.	*	1	1750	215	18.	*	2	0005	290
2.	1	0525	66	5311.	*	1	1140	141	96.	*	1	1755	216	18.	*	2	0010	291
2.	1	0530	67	4884.	*	1	1145	142	95.	*	1	1800	217	17.	*	2	0015	292
2.	1	0535	68	4464.	*	1	1150	143	94.	*	1	1805	218	17.	*	2	0020	293
2.	1	0540	69	4080.	*	1	1155	144	93.	*	1	1810	219	16.	*	2	0025	294
2.	1	0545	70	3749.	*	1	1200	145	91.	*	1	1815	220	16.	*	2	0030	295
2.	1	0550	71	3474.	*	1	1205	146	90.	*	1	1820	221	15.	*	2	0035	296
2.	1	0555	72	3251.	*	1	1210	147	89.	*	1	1825	222	15.	*	2	0040	297
2.	1	0600	73	3071.	*	1	1215	148	88.	*	1	1830	223	14.	*	2	0045	298
2.	1	0605	74	2927.	*	1	1220	149	87.	*	1	1835	224	14.	*	2	0050	299
2.	1	0610	75	2810.	*	1	1225	150	86.	*	1	1840	225	14.	*	2	0055	300
2.					*				*					*				

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	15801.	3.92	(CFS)	4303.	1146.	1104.	1104.
			(INCHES)	1.755	1.871	1.871	1.871
			(AC-FT)	2134.	2274.	2274.	2274.
CUMULATIVE AREA = 22.79 SQ MI							

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .92

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
13.	1	0000	1	0.	*	1	0615	76	2687.	*	1	1230	151	83.	*	1	1845	226			
12.	1	0005	2	0.	*	1	0620	77	2591.	*	1	1235	152	82.	*	1	1850	227			
12.	1	0010	3	0.	*	1	0625	78	2496.	*	1	1240	153	81.	*	1	1855	228			
12.	1	0015	4	0.	*	1	0630	79	2404.	*	1	1245	154	80.	*	1	1900	229			
11.	1	0020	5	0.	*	1	0635	80	2313.	*	1	1250	155	79.	*	1	1905	230			
11.	1	0025	6	2.	*	1	0640	81	2226.	*	1	1255	156	78.	*	1	1910	231			
11.	1	0030	7	7.	*	1	0645	82	2145.	*	1	1300	157	77.	*	1	1915	232			

10.	1	0035	8	17.	*	1	0650	83	2070.	*	1	1305	158	76.	*	1	1920	233
10.	1	0040	9	37.	*	1	0655	84	2002.	*	1	1310	159	75.	*	1	1925	234
10.	1	0045	10	67.	*	1	0700	85	1937.	*	1	1315	160	74.	*	1	1930	235
10.	1	0050	11	110.	*	1	0705	86	1874.	*	1	1320	161	72.	*	1	1935	236
10.	1	0055	12	161.	*	1	0710	87	1811.	*	1	1325	162	71.	*	1	1940	237
9.	1	0100	13	211.	*	1	0715	88	1745.	*	1	1330	163	70.	*	1	1945	238
9.	1	0105	14	248.	*	1	0720	89	1675.	*	1	1335	164	69.	*	1	1950	239
9.	1	0110	15	266.	*	1	0725	90	1595.	*	1	1340	165	68.	*	1	1955	240
8.	1	0115	16	265.	*	1	0730	91	1500.	*	1	1345	166	67.	*	1	2000	241
8.	1	0120	17	252.	*	1	0735	92	1393.	*	1	1350	167	66.	*	1	2005	242
8.	1	0125	18	234.	*	1	0740	93	1286.	*	1	1355	168	64.	*	1	2010	243
8.	1	0130	19	222.	*	1	0745	94	1195.	*	1	1400	169	63.	*	1	2015	244
8.	1	0135	20	226.	*	1	0750	95	1126.	*	1	1405	170	62.	*	1	2020	245
7.	1	0140	21	254.	*	1	0755	96	1075.	*	1	1410	171	61.	*	1	2025	246
7.	1	0145	22	311.	*	1	0800	97	1029.	*	1	1415	172	60.	*	1	2030	247
7.	1	0150	23	398.	*	1	0805	98	979.	*	1	1420	173	59.	*	1	2035	248
7.	1	0155	24	507.	*	1	0810	99	920.	*	1	1425	174	58.	*	1	2040	249
7.	1	0200	25	625.	*	1	0815	100	853.	*	1	1430	175	56.	*	1	2045	250
6.	1	0205	26	731.	*	1	0820	101	782.	*	1	1435	176	55.	*	1	2050	251
6.	1	0210	27	809.	*	1	0825	102	710.	*	1	1440	177	53.	*	1	2055	252
6.	1	0215	28	852.	*	1	0830	103	638.	*	1	1445	178	52.	*	1	2100	253
6.	1	0220	29	867.	*	1	0835	104	568.	*	1	1450	179	50.	*	1	2105	254
6.	1	0225	30	873.	*	1	0840	105	503.	*	1	1455	180	49.	*	1	2110	255
6.	1	0230	31	893.	*	1	0845	106	442.	*	1	1500	181	47.	*	1	2115	256
5.	1	0235	32	940.	*	1	0850	107	383.	*	1	1505	182	46.	*	1	2120	257
5.	1	0240	33	1020.	*	1	0855	108	326.	*	1	1510	183	44.	*	1	2125	258
5.	1	0245	34	1129.	*	1	0900	109	271.	*	1	1515	184	43.	*	1	2130	259
5.	1	0250	35	1247.	*	1	0905	110	222.	*	1	1520	185	42.	*	1	2135	260
5.	1	0255	36	1350.	*	1	0910	111	182.	*	1	1525	186	41.	*	1	2140	261
5.	1	0300	37	1426.	*	1	0915	112	155.	*	1	1530	187	39.	*	1	2145	262
5.	1	0305	38	1484.	*	1	0920	113	137.	*	1	1535	188	38.	*	1	2150	263
4.	1	0310	39	1552.	*	1	0925	114	127.	*	1	1540	189	37.	*	1	2155	264
4.	1	0315	40	1683.	*	1	0930	115	121.	*	1	1545	190	36.	*	1	2200	265
4.	1	0320	41	1982.	*	1	0935	116	118.	*	1	1550	191	35.	*	1	2205	266
4.	1	0325	42	2655.	*	1	0940	117	116.	*	1	1555	192	34.	*	1	2210	267
4.	1	0330	43	4032.	*	1	0945	118	115.	*	1	1600	193	33.	*	1	2215	268
4.	1	0335	44	6312.	*	1	0950	119	113.	*	1	1605	194	32.	*	1	2220	269
4.	1	0340	45	9299.	*	1	0955	120	113.	*	1	1610	195	31.	*	1	2225	270
4.	1	0345	46	12300.	*	1	1000	121	112.	*	1	1615	196	30.	*	1	2230	271
4.	1	0350	47	14546.	*	1	1005	122	111.	*	1	1620	197	29.	*	1	2235	272
3.	1	0355	48	15591.	*	1	1010	123	110.	*	1	1625	198	28.	*	1	2240	273
3.	1	0400	49	15466.	*	1	1015	124	110.	*	1	1630	199	27.	*	1	2245	274
3.	1	0405	50	14510.	*	1	1020	125	109.	*	1	1635	200	26.	*	1	2250	275
3.	1	0410	51	13150.	*	1	1025	126	108.	*	1	1640	201	26.	*	1	2255	276
3.	1	0415	52	11653.	*	1	1030	127	107.	*	1	1645	202	25.	*	1	2300	277
3.	1	0420	53	10200.	*	1	1035	128	106.	*	1	1650	203	24.	*	1	2305	278
3.	1	0425	54	8903.	*	1	1040	129	105.	*	1	1655	204	24.	*	1	2310	279

3.	1	0430	55	7831.	*	1	1045	130	105.	*	1	1700	205	23.	*	1	2315	280
3.	1	0435	56	7018.	*	1	1050	131	104.	*	1	1705	206	22.	*	1	2320	281
3.	1	0440	57	6481.	*	1	1055	132	103.	*	1	1710	207	22.	*	1	2325	282
3.	1	0445	58	6195.	*	1	1100	133	102.	*	1	1715	208	21.	*	1	2330	283
3.	1	0450	59	6109.	*	1	1105	134	101.	*	1	1720	209	20.	*	1	2335	284
2.	1	0455	60	6143.	*	1	1110	135	100.	*	1	1725	210	20.	*	1	2340	285
2.	1	0500	61	6210.	*	1	1115	136	99.	*	1	1730	211	19.	*	1	2345	286
2.	1	0505	62	6229.	*	1	1120	137	98.	*	1	1735	212	19.	*	1	2350	287
2.	1	0510	63	6151.	*	1	1125	138	97.	*	1	1740	213	18.	*	1	2355	288
2.	1	0515	64	5955.	*	1	1130	139	96.	*	1	1745	214	18.	*	2	0000	289
2.	1	0520	65	5650.	*	1	1135	140	95.	*	1	1750	215	17.	*	2	0005	290
2.	1	0525	66	5262.	*	1	1140	141	94.	*	1	1755	216	17.	*	2	0010	291
2.	1	0530	67	4839.	*	1	1145	142	93.	*	1	1800	217	16.	*	2	0015	292
2.	1	0535	68	4424.	*	1	1150	143	92.	*	1	1805	218	16.	*	2	0020	293
2.	1	0540	69	4046.	*	1	1155	144	91.	*	1	1810	219	15.	*	2	0025	294
2.	1	0545	70	3718.	*	1	1200	145	90.	*	1	1815	220	15.	*	2	0030	295
2.	1	0550	71	3446.	*	1	1205	146	88.	*	1	1820	221	15.	*	2	0035	296
2.	1	0555	72	3226.	*	1	1210	147	87.	*	1	1825	222	14.	*	2	0040	297
2.	1	0600	73	3049.	*	1	1215	148	86.	*	1	1830	223	14.	*	2	0045	298
2.	1	0605	74	2907.	*	1	1220	149	85.	*	1	1835	224	13.	*	2	0050	299
2.	1	0610	75	2790.	*	1	1225	150	84.	*	1	1840	225	13.	*	2	0055	300
2.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
(CFS)	(HR)	(CFS)					
15591.	3.92		4245.	1129.	1088.	1088.	
		(INCHES)	1.732	1.843	1.843	1.843	
		(AC-FT)	2105.	2239.	2240.	2240.	
CUMULATIVE AREA =			22.79 SQ MI				

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	
12.	1	0000	1	0.	*	1	0615	76	2670.	*	1	1230	151	82.	*	1	1845	226				
12.	1	0005	2	0.	*	1	0620	77	2573.	*	1	1235	152	81.	*	1	1850	227				
12.	1	0010	3	0.	*	1	0625	78	2479.	*	1	1240	153	80.	*	1	1855	228				
11.	1	0015	4	0.	*	1	0630	79	2386.	*	1	1245	154	79.	*	1	1900	229				
11.	1	0020	5	0.	*	1	0635	80	2296.	*	1	1250	155	78.	*	1	1905	230				
11.	1	0025	6	2.	*	1	0640	81	2209.	*	1	1255	156	77.	*	1	1910	231				
11.	1	0030	7	6.	*	1	0645	82	2128.	*	1	1300	157	76.	*	1	1915	232				
10.	1	0035	8	17.	*	1	0650	83	2053.	*	1	1305	158	75.	*	1	1920	233				
10.	1	0040	9	35.	*	1	0655	84	1983.	*	1	1310	159	73.	*	1	1925	234				
10.	1	0045	10	65.	*	1	0700	85	1917.	*	1	1315	160	72.	*	1	1930	235				
9.	1	0050	11	106.	*	1	0705	86	1853.	*	1	1320	161	71.	*	1	1935	236				

9.	1	0055	12	155.	*	1	0710	87	1788.	*	1	1325	162	70.	*	1	1940	237
9.	1	0100	13	203.	*	1	0715	88	1720.	*	1	1330	163	69.	*	1	1945	238
8.	1	0105	14	240.	*	1	0720	89	1645.	*	1	1335	164	67.	*	1	1950	239
8.	1	0110	15	257.	*	1	0725	90	1558.	*	1	1340	165	66.	*	1	1955	240
8.	1	0115	16	257.	*	1	0730	91	1457.	*	1	1345	166	65.	*	1	2000	241
8.	1	0120	17	244.	*	1	0735	92	1348.	*	1	1350	167	64.	*	1	2005	242
8.	1	0125	18	227.	*	1	0740	93	1246.	*	1	1355	168	63.	*	1	2010	243
7.	1	0130	19	216.	*	1	0745	94	1163.	*	1	1400	169	62.	*	1	2015	244
7.	1	0135	20	220.	*	1	0750	95	1103.	*	1	1405	170	61.	*	1	2020	245
7.	1	0140	21	247.	*	1	0755	96	1056.	*	1	1410	171	60.	*	1	2025	246
7.	1	0145	22	303.	*	1	0800	97	1010.	*	1	1415	172	59.	*	1	2030	247
7.	1	0150	23	387.	*	1	0805	98	958.	*	1	1420	173	57.	*	1	2035	248
6.	1	0155	24	494.	*	1	0810	99	896.	*	1	1425	174	56.	*	1	2040	249
6.	1	0200	25	609.	*	1	0815	100	828.	*	1	1430	175	54.	*	1	2045	250
6.	1	0205	26	715.	*	1	0820	101	756.	*	1	1435	176	53.	*	1	2050	251
6.	1	0210	27	792.	*	1	0825	102	684.	*	1	1440	177	51.	*	1	2055	252
6.	1	0215	28	836.	*	1	0830	103	612.	*	1	1445	178	50.	*	1	2100	253
5.	1	0220	29	851.	*	1	0835	104	544.	*	1	1450	179	48.	*	1	2105	254
5.	1	0225	30	858.	*	1	0840	105	481.	*	1	1455	180	47.	*	1	2110	255
5.	1	0230	31	877.	*	1	0845	106	420.	*	1	1500	181	45.	*	1	2115	256
5.	1	0235	32	923.	*	1	0850	107	362.	*	1	1505	182	44.	*	1	2120	257
5.	1	0240	33	1001.	*	1	0855	108	305.	*	1	1510	183	43.	*	1	2125	258
5.	1	0245	34	1108.	*	1	0900	109	252.	*	1	1515	184	41.	*	1	2130	259
5.	1	0250	35	1225.	*	1	0905	110	206.	*	1	1520	185	40.	*	1	2135	260
5.	1	0255	36	1327.	*	1	0910	111	171.	*	1	1525	186	39.	*	1	2140	261
4.	1	0300	37	1402.	*	1	0915	112	147.	*	1	1530	187	38.	*	1	2145	262
4.	1	0305	38	1460.	*	1	0920	113	133.	*	1	1535	188	37.	*	1	2150	263
4.	1	0310	39	1528.	*	1	0925	114	124.	*	1	1540	189	36.	*	1	2155	264
4.	1	0315	40	1657.	*	1	0930	115	119.	*	1	1545	190	34.	*	1	2200	265
4.	1	0320	41	1949.	*	1	0935	116	117.	*	1	1550	191	33.	*	1	2205	266
4.	1	0325	42	2606.	*	1	0940	117	115.	*	1	1555	192	32.	*	1	2210	267
4.	1	0330	43	3956.	*	1	0945	118	113.	*	1	1600	193	31.	*	1	2215	268
4.	1	0335	44	6213.	*	1	0950	119	113.	*	1	1605	194	31.	*	1	2220	269
3.	1	0340	45	9160.	*	1	0955	120	112.	*	1	1610	195	30.	*	1	2225	270
3.	1	0345	46	12134.	*	1	1000	121	111.	*	1	1615	196	29.	*	1	2230	271
3.	1	0350	47	14375.	*	1	1005	122	110.	*	1	1620	197	28.	*	1	2235	272
3.	1	0355	48	15416.	*	1	1010	123	109.	*	1	1625	198	27.	*	1	2240	273
3.	1	0400	49	15303.	*	1	1015	124	109.	*	1	1630	199	26.	*	1	2245	274
3.	1	0405	50	14379.	*	1	1020	125	108.	*	1	1635	200	25.	*	1	2250	275
3.	1	0410	51	13031.	*	1	1025	126	107.	*	1	1640	201	25.	*	1	2255	276
3.	1	0415	52	11552.	*	1	1030	127	106.	*	1	1645	202	24.	*	1	2300	277
3.	1	0420	53	10119.	*	1	1035	128	105.	*	1	1650	203	23.	*	1	2305	278
3.	1	0425	54	8835.	*	1	1040	129	104.	*	1	1655	204	23.	*	1	2310	279
3.	1	0430	55	7769.	*	1	1045	130	103.	*	1	1700	205	22.	*	1	2315	280
3.	1	0435	56	6961.	*	1	1050	131	102.	*	1	1705	206	21.	*	1	2320	281
2.	1	0440	57	6427.	*	1	1055	132	101.	*	1	1710	207	21.	*	1	2325	282
2.	1	0445	58	6147.	*	1	1100	133	100.	*	1	1715	208	20.	*	1	2330	283

2.	1	0450	59	6063.	*	1	1105	134	99.	*	1	1720	209	20.	*	1	2335	284
2.	1	0455	60	6098.	*	1	1110	135	98.	*	1	1725	210	19.	*	1	2340	285
2.	1	0500	61	6164.	*	1	1115	136	97.	*	1	1730	211	19.	*	1	2345	286
2.	1	0505	62	6182.	*	1	1120	137	96.	*	1	1735	212	18.	*	1	2350	287
2.	1	0510	63	6103.	*	1	1125	138	95.	*	1	1740	213	18.	*	1	2355	288
2.	1	0515	64	5909.	*	1	1130	139	94.	*	1	1745	214	17.	*	2	0000	289
2.	1	0520	65	5606.	*	1	1135	140	93.	*	1	1750	215	17.	*	2	0005	290
2.	1	0525	66	5224.	*	1	1140	141	92.	*	1	1755	216	16.	*	2	0010	291
2.	1	0530	67	4807.	*	1	1145	142	91.	*	1	1800	217	16.	*	2	0015	292
2.	1	0535	68	4395.	*	1	1150	143	90.	*	1	1805	218	15.	*	2	0020	293
2.	1	0540	69	4020.	*	1	1155	144	89.	*	1	1810	219	15.	*	2	0025	294
2.	1	0545	70	3695.	*	1	1200	145	88.	*	1	1815	220	14.	*	2	0030	295
2.	1	0550	71	3425.	*	1	1205	146	87.	*	1	1820	221	14.	*	2	0035	296
2.	1	0555	72	3206.	*	1	1210	147	86.	*	1	1825	222	14.	*	2	0040	297
2.	1	0600	73	3030.	*	1	1215	148	85.	*	1	1830	223	13.	*	2	0045	298
2.	1	0605	74	2889.	*	1	1220	149	84.	*	1	1835	224	13.	*	2	0050	299
2.	1	0610	75	2773.	*	1	1225	150	83.	*	1	1840	225	13.	*	2	0055	300
1.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	15416.	3.92	(CFS)	4201.	1116.	1075.	1075.
			(INCHES)	1.714	1.821	1.821	1.821
			(AC-FT)	2083.	2213.	2213.	2213.
CUMULATIVE AREA = 22.79 SQ MI							

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .90

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	
12.	1	0000	1	0.	*	1	0615	76	2658.	*	1	1230	151	81.	*	1	1845	226				
12.	1	0005	2	0.	*	1	0620	77	2562.	*	1	1235	152	80.	*	1	1850	227				
11.	1	0010	3	0.	*	1	0625	78	2468.	*	1	1240	153	79.	*	1	1855	228				
11.	1	0015	4	0.	*	1	0630	79	2375.	*	1	1245	154	78.	*	1	1900	229				
11.	1	0020	5	0.	*	1	0635	80	2284.	*	1	1250	155	77.	*	1	1905	230				
11.	1	0025	6	2.	*	1	0640	81	2197.	*	1	1255	156	76.	*	1	1910	231				
10.	1	0030	7	6.	*	1	0645	82	2116.	*	1	1300	157	75.	*	1	1915	232				
10.	1	0035	8	16.	*	1	0650	83	2041.	*	1	1305	158	73.	*	1	1920	233				
10.	1	0040	9	34.	*	1	0655	84	1970.	*	1	1310	159	72.	*	1	1925	234				
9.	1	0045	10	63.	*	1	0700	85	1904.	*	1	1315	160	71.	*	1	1930	235				
9.	1	0050	11	103.	*	1	0705	86	1838.	*	1	1320	161	70.	*	1	1935	236				
9.	1	0055	12	151.	*	1	0710	87	1772.	*	1	1325	162	69.	*	1	1940	237				
9.	1	0100	13	198.	*	1	0715	88	1703.	*	1	1330	163	68.	*	1	1945	238				
8.	1	0105	14	234.	*	1	0720	89	1625.	*	1	1335	164	66.	*	1	1950	239				
8.	1	0110	15	251.	*	1	0725	90	1534.	*	1	1340	165	65.	*	1	1955	240				

8.	1	0115	16	251.	*	1	0730	91	1429.	*	1	1345	166	64.	*	1	2000	241
8.	1	0120	17	239.	*	1	0735	92	1321.	*	1	1350	167	63.	*	1	2005	242
7.	1	0125	18	222.	*	1	0740	93	1224.	*	1	1355	168	62.	*	1	2010	243
7.	1	0130	19	211.	*	1	0745	94	1147.	*	1	1400	169	61.	*	1	2015	244
7.	1	0135	20	215.	*	1	0750	95	1091.	*	1	1405	170	60.	*	1	2020	245
7.	1	0140	21	242.	*	1	0755	96	1044.	*	1	1410	171	59.	*	1	2025	246
7.	1	0145	22	296.	*	1	0800	97	997.	*	1	1415	172	58.	*	1	2030	247
6.	1	0150	23	379.	*	1	0805	98	941.	*	1	1420	173	56.	*	1	2035	248
6.	1	0155	24	485.	*	1	0810	99	878.	*	1	1425	174	55.	*	1	2040	249
6.	1	0200	25	599.	*	1	0815	100	808.	*	1	1430	175	53.	*	1	2045	250
6.	1	0205	26	703.	*	1	0820	101	736.	*	1	1435	176	51.	*	1	2050	251
6.	1	0210	27	781.	*	1	0825	102	664.	*	1	1440	177	50.	*	1	2055	252
6.	1	0215	28	824.	*	1	0830	103	594.	*	1	1445	178	48.	*	1	2100	253
5.	1	0220	29	840.	*	1	0835	104	527.	*	1	1450	179	47.	*	1	2105	254
5.	1	0225	30	847.	*	1	0840	105	464.	*	1	1455	180	46.	*	1	2110	255
5.	1	0230	31	866.	*	1	0845	106	405.	*	1	1500	181	44.	*	1	2115	256
5.	1	0235	32	912.	*	1	0850	107	347.	*	1	1505	182	43.	*	1	2120	257
5.	1	0240	33	988.	*	1	0855	108	291.	*	1	1510	183	42.	*	1	2125	258
5.	1	0245	34	1093.	*	1	0900	109	239.	*	1	1515	184	40.	*	1	2130	259
5.	1	0250	35	1209.	*	1	0905	110	195.	*	1	1520	185	39.	*	1	2135	260
4.	1	0255	36	1310.	*	1	0910	111	163.	*	1	1525	186	38.	*	1	2140	261
4.	1	0300	37	1385.	*	1	0915	112	142.	*	1	1530	187	37.	*	1	2145	262
4.	1	0305	38	1443.	*	1	0920	113	129.	*	1	1535	188	36.	*	1	2150	263
4.	1	0310	39	1510.	*	1	0925	114	122.	*	1	1540	189	35.	*	1	2155	264
4.	1	0315	40	1636.	*	1	0930	115	118.	*	1	1545	190	34.	*	1	2200	265
4.	1	0320	41	1923.	*	1	0935	116	116.	*	1	1550	191	33.	*	1	2205	266
4.	1	0325	42	2571.	*	1	0940	117	114.	*	1	1555	192	32.	*	1	2210	267
4.	1	0330	43	3908.	*	1	0945	118	113.	*	1	1600	193	31.	*	1	2215	268
4.	1	0335	44	6136.	*	1	0950	119	112.	*	1	1605	194	30.	*	1	2220	269
3.	1	0340	45	9069.	*	1	0955	120	111.	*	1	1610	195	29.	*	1	2225	270
3.	1	0345	46	12024.	*	1	1000	121	110.	*	1	1615	196	28.	*	1	2230	271
3.	1	0350	47	14227.	*	1	1005	122	110.	*	1	1620	197	27.	*	1	2235	272
3.	1	0355	48	15286.	*	1	1010	123	109.	*	1	1625	198	26.	*	1	2240	273
3.	1	0400	49	15195.	*	1	1015	124	108.	*	1	1630	199	26.	*	1	2245	274
3.	1	0405	50	14281.	*	1	1020	125	107.	*	1	1635	200	25.	*	1	2250	275
3.	1	0410	51	12949.	*	1	1025	126	106.	*	1	1640	201	24.	*	1	2255	276
3.	1	0415	52	11481.	*	1	1030	127	105.	*	1	1645	202	23.	*	1	2300	277
3.	1	0420	53	10057.	*	1	1035	128	104.	*	1	1650	203	23.	*	1	2305	278
3.	1	0425	54	8784.	*	1	1040	129	103.	*	1	1655	204	22.	*	1	2310	279
3.	1	0430	55	7723.	*	1	1045	130	102.	*	1	1700	205	22.	*	1	2315	280
2.	1	0435	56	6923.	*	1	1050	131	101.	*	1	1705	206	21.	*	1	2320	281
2.	1	0440	57	6395.	*	1	1055	132	100.	*	1	1710	207	20.	*	1	2325	282
2.	1	0445	58	6116.	*	1	1100	133	99.	*	1	1715	208	20.	*	1	2330	283
2.	1	0450	59	6032.	*	1	1105	134	98.	*	1	1720	209	19.	*	1	2335	284
2.	1	0455	60	6064.	*	1	1110	135	97.	*	1	1725	210	19.	*	1	2340	285
2.	1	0500	61	6130.	*	1	1115	136	96.	*	1	1730	211	18.	*	1	2345	286
2.	1	0505	62	6148.	*	1	1120	137	96.	*	1	1735	212	18.	*	1	2350	287

2.	1	0510	63	6070.	*	1	1125	138	95.	*	1	1740	213	17.	*	1	2355	288
2.	1	0515	64	5880.	*	1	1130	139	94.	*	1	1745	214	17.	*	2	0000	289
2.	1	0520	65	5579.	*	1	1135	140	92.	*	1	1750	215	16.	*	2	0005	290
2.	1	0525	66	5199.	*	1	1140	141	91.	*	1	1755	216	16.	*	2	0010	291
2.	1	0530	67	4783.	*	1	1145	142	90.	*	1	1800	217	15.	*	2	0015	292
2.	1	0535	68	4375.	*	1	1150	143	89.	*	1	1805	218	15.	*	2	0020	293
2.	1	0540	69	4001.	*	1	1155	144	88.	*	1	1810	219	14.	*	2	0025	294
2.	1	0545	70	3679.	*	1	1200	145	87.	*	1	1815	220	14.	*	2	0030	295
2.	1	0550	71	3411.	*	1	1205	146	86.	*	1	1820	221	14.	*	2	0035	296
2.	1	0555	72	3194.	*	1	1210	147	85.	*	1	1825	222	13.	*	2	0040	297
2.	1	0600	73	3019.	*	1	1215	148	84.	*	1	1830	223	13.	*	2	0045	298
2.	1	0605	74	2877.	*	1	1220	149	83.	*	1	1835	224	13.	*	2	0050	299
1.	1	0610	75	2760.	*	1	1225	150	82.	*	1	1840	225	12.	*	2	0055	300
1.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	15286.	3.92	(CFS)	4170.	1107.	1066.	1066.
			(INCHES)	1.701	1.806	1.806	1.806
			(AC-FT)	2068.	2195.	2195.	2195.
CUMULATIVE AREA =				22.79 SQ MI			

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .89

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	
11.	1	0000	1	0.	*	1	0615	76	2640.	*	1	1230	151	80.	*	1	1845	226				
11.	1	0005	2	0.	*	1	0620	77	2543.	*	1	1235	152	79.	*	1	1850	227				
11.	1	0010	3	0.	*	1	0625	78	2449.	*	1	1240	153	78.	*	1	1855	228				
11.	1	0015	4	0.	*	1	0630	79	2357.	*	1	1245	154	77.	*	1	1900	229				
10.	1	0020	5	0.	*	1	0635	80	2267.	*	1	1250	155	75.	*	1	1905	230				
10.	1	0025	6	2.	*	1	0640	81	2180.	*	1	1255	156	74.	*	1	1910	231				
10.	1	0030	7	6.	*	1	0645	82	2098.	*	1	1300	157	73.	*	1	1915	232				
10.	1	0035	8	15.	*	1	0650	83	2023.	*	1	1305	158	72.	*	1	1920	233				
9.	1	0040	9	33.	*	1	0655	84	1952.	*	1	1310	159	70.	*	1	1925	234				
9.	1	0045	10	60.	*	1	0700	85	1884.	*	1	1315	160	69.	*	1	1930	235				
9.	1	0050	11	98.	*	1	0705	86	1817.	*	1	1320	161	68.	*	1	1935	236				
9.	1	0055	12	144.	*	1	0710	87	1748.	*	1	1325	162	67.	*	1	1940	237				
8.	1	0100	13	190.	*	1	0715	88	1676.	*	1	1330	163	66.	*	1	1945	238				
8.	1	0105	14	225.	*	1	0720	89	1594.	*	1	1335	164	65.	*	1	1950	239				
8.	1	0110	15	242.	*	1	0725	90	1497.	*	1	1340	165	64.	*	1	1955	240				
8.	1	0115	16	242.	*	1	0730	91	1389.	*	1	1345	166	63.	*	1	2000	241				
7.	1	0120	17	230.	*	1	0735	92	1282.	*	1	1350	167	62.	*	1	2005	242				
7.	1	0125	18	214.	*	1	0740	93	1192.	*	1	1355	168	61.	*	1	2010	243				
7.	1	0130	19	204.	*	1	0745	94	1123.	*	1	1400	169	59.	*	1	2015	244				

7.	1	0135	20	208.	*	1	0750	95	1072.	*	1	1405	170	58.	*	1	2020	245
6.	1	0140	21	234.	*	1	0755	96	1027.	*	1	1410	171	57.	*	1	2025	246
6.	1	0145	22	287.	*	1	0800	97	977.	*	1	1415	172	55.	*	1	2030	247
6.	1	0150	23	368.	*	1	0805	98	918.	*	1	1420	173	54.	*	1	2035	248
6.	1	0155	24	470.	*	1	0810	99	851.	*	1	1425	174	52.	*	1	2040	249
6.	1	0200	25	582.	*	1	0815	100	780.	*	1	1430	175	51.	*	1	2045	250
6.	1	0205	26	685.	*	1	0820	101	708.	*	1	1435	176	49.	*	1	2050	251
5.	1	0210	27	762.	*	1	0825	102	636.	*	1	1440	177	48.	*	1	2055	252
5.	1	0215	28	806.	*	1	0830	103	567.	*	1	1445	178	46.	*	1	2100	253
5.	1	0220	29	823.	*	1	0835	104	502.	*	1	1450	179	45.	*	1	2105	254
5.	1	0225	30	831.	*	1	0840	105	441.	*	1	1455	180	44.	*	1	2110	255
5.	1	0230	31	850.	*	1	0845	106	382.	*	1	1500	181	42.	*	1	2115	256
5.	1	0235	32	894.	*	1	0850	107	325.	*	1	1505	182	41.	*	1	2120	257
5.	1	0240	33	968.	*	1	0855	108	270.	*	1	1510	183	40.	*	1	2125	258
4.	1	0245	34	1069.	*	1	0900	109	221.	*	1	1515	184	39.	*	1	2130	259
4.	1	0250	35	1183.	*	1	0905	110	181.	*	1	1520	185	37.	*	1	2135	260
4.	1	0255	36	1283.	*	1	0910	111	153.	*	1	1525	186	36.	*	1	2140	261
4.	1	0300	37	1358.	*	1	0915	112	136.	*	1	1530	187	35.	*	1	2145	262
4.	1	0305	38	1416.	*	1	0920	113	125.	*	1	1535	188	34.	*	1	2150	263
4.	1	0310	39	1482.	*	1	0925	114	119.	*	1	1540	189	33.	*	1	2155	264
4.	1	0315	40	1606.	*	1	0930	115	116.	*	1	1545	190	32.	*	1	2200	265
4.	1	0320	41	1890.	*	1	0935	116	114.	*	1	1550	191	31.	*	1	2205	266
4.	1	0325	42	2533.	*	1	0940	117	113.	*	1	1555	192	30.	*	1	2210	267
3.	1	0330	43	3853.	*	1	0945	118	112.	*	1	1600	193	29.	*	1	2215	268
3.	1	0335	44	6046.	*	1	0950	119	111.	*	1	1605	194	28.	*	1	2220	269
3.	1	0340	45	8912.	*	1	0955	120	110.	*	1	1610	195	28.	*	1	2225	270
3.	1	0345	46	11842.	*	1	1000	121	109.	*	1	1615	196	27.	*	1	2230	271
3.	1	0350	47	14065.	*	1	1005	122	108.	*	1	1620	197	26.	*	1	2235	272
3.	1	0355	48	15096.	*	1	1010	123	108.	*	1	1625	198	25.	*	1	2240	273
3.	1	0400	49	15014.	*	1	1015	124	107.	*	1	1630	199	24.	*	1	2245	274
3.	1	0405	50	14126.	*	1	1020	125	106.	*	1	1635	200	24.	*	1	2250	275
3.	1	0410	51	12819.	*	1	1025	126	105.	*	1	1640	201	23.	*	1	2255	276
3.	1	0415	52	11371.	*	1	1030	127	104.	*	1	1645	202	22.	*	1	2300	277
3.	1	0420	53	9964.	*	1	1035	128	103.	*	1	1650	203	22.	*	1	2305	278
3.	1	0425	54	8709.	*	1	1040	129	102.	*	1	1655	204	21.	*	1	2310	279
2.	1	0430	55	7666.	*	1	1045	130	101.	*	1	1700	205	21.	*	1	2315	280
2.	1	0435	56	6870.	*	1	1050	131	100.	*	1	1705	206	20.	*	1	2320	281
2.	1	0440	57	6342.	*	1	1055	132	99.	*	1	1710	207	19.	*	1	2325	282
2.	1	0445	58	6061.	*	1	1100	133	98.	*	1	1715	208	19.	*	1	2330	283
2.	1	0450	59	5981.	*	1	1105	134	97.	*	1	1720	209	18.	*	1	2335	284
2.	1	0455	60	6015.	*	1	1110	135	96.	*	1	1725	210	18.	*	1	2340	285
2.	1	0500	61	6079.	*	1	1115	136	95.	*	1	1730	211	17.	*	1	2345	286
2.	1	0505	62	6098.	*	1	1120	137	94.	*	1	1735	212	17.	*	1	2350	287
2.	1	0510	63	6021.	*	1	1125	138	93.	*	1	1740	213	16.	*	1	2355	288
2.	1	0515	64	5832.	*	1	1130	139	92.	*	1	1745	214	16.	*	2	0000	289
2.	1	0520	65	5534.	*	1	1135	140	91.	*	1	1750	215	16.	*	2	0005	290
2.	1	0525	66	5158.	*	1	1140	141	90.	*	1	1755	216	15.	*	2	0010	291

2.	1	0530	67	4748.	*	1	1145	142	89.	*	1	1800	217	15.	*	2	0015	292
2.	1	0535	68	4344.	*	1	1150	143	88.	*	1	1805	218	14.	*	2	0020	293
2.	1	0540	69	3974.	*	1	1155	144	87.	*	1	1810	219	14.	*	2	0025	294
2.	1	0545	70	3654.	*	1	1200	145	86.	*	1	1815	220	13.	*	2	0030	295
2.	1	0550	71	3388.	*	1	1205	146	85.	*	1	1820	221	13.	*	2	0035	296
2.	1	0555	72	3173.	*	1	1210	147	84.	*	1	1825	222	13.	*	2	0040	297
2.	1	0600	73	3000.	*	1	1215	148	83.	*	1	1830	223	12.	*	2	0045	298
1.	1	0605	74	2859.	*	1	1220	149	82.	*	1	1835	224	12.	*	2	0050	299
1.	1	0610	75	2742.	*	1	1225	150	81.	*	1	1840	225	12.	*	2	0055	300
1.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
(CFS)	(HR)						
+	15096.	3.92					
			(CFS)				
			4123.	1093.	1053.	1053.	
			(INCHES)	1.682	1.784	1.784	1.784
			(AC-FT)	2045.	2168.	2168.	2168.
CUMULATIVE AREA = 22.79 SQ MI							

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .88

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	
11.	1	0000	1	0.	*	1	0615	76	2614.	*	1	1230	151	78.	*	1	1845	226				
10.	1	0005	2	0.	*	1	0620	77	2518.	*	1	1235	152	77.	*	1	1850	227				
10.	1	0010	3	0.	*	1	0625	78	2424.	*	1	1240	153	76.	*	1	1855	228				
10.	1	0015	4	0.	*	1	0630	79	2332.	*	1	1245	154	74.	*	1	1900	229				
10.	1	0020	5	0.	*	1	0635	80	2241.	*	1	1250	155	73.	*	1	1905	230				
9.	1	0025	6	2.	*	1	0640	81	2154.	*	1	1255	156	72.	*	1	1910	231				
9.	1	0030	7	5.	*	1	0645	82	2072.	*	1	1300	157	71.	*	1	1915	232				
9.	1	0035	8	14.	*	1	0650	83	1996.	*	1	1305	158	70.	*	1	1920	233				
9.	1	0040	9	31.	*	1	0655	84	1923.	*	1	1310	159	68.	*	1	1925	234				
8.	1	0045	10	56.	*	1	0700	85	1853.	*	1	1315	160	67.	*	1	1930	235				
8.	1	0050	11	92.	*	1	0705	86	1784.	*	1	1320	161	66.	*	1	1935	236				
8.	1	0055	12	136.	*	1	0710	87	1712.	*	1	1325	162	65.	*	1	1940	237				
8.	1	0100	13	180.	*	1	0715	88	1632.	*	1	1330	163	64.	*	1	1945	238				
7.	1	0105	14	213.	*	1	0720	89	1541.	*	1	1335	164	63.	*	1	1950	239				
7.	1	0110	15	230.	*	1	0725	90	1436.	*	1	1340	165	62.	*	1	1955	240				
7.	1	0115	16	230.	*	1	0730	91	1327.	*	1	1345	166	61.	*	1	2000	241				
7.	1	0120	17	219.	*	1	0735	92	1228.	*	1	1350	167	60.	*	1	2005	242				
7.	1	0125	18	205.	*	1	0740	93	1150.	*	1	1355	168	58.	*	1	2010	243				
6.	1	0130	19	195.	*	1	0745	94	1093.	*	1	1400	169	57.	*	1	2015	244				
6.	1	0135	20	199.	*	1	0750	95	1047.	*	1	1405	170	56.	*	1	2020	245				
6.	1	0140	21	224.	*	1	0755	96	1000.	*	1	1410	171	54.	*	1	2025	246				
6.	1	0145	22	274.	*	1	0800	97	945.	*	1	1415	172	52.	*	1	2030	247				
6.	1	0150	23	352.	*	1	0805	98	882.	*	1	1420	173	51.	*	1	2035	248				

6.	1	0155	24	452.	*	1	0810	99	813.	*	1	1425	174	49.	*	1	2040	249
5.	1	0200	25	561.	*	1	0815	100	741.	*	1	1430	175	48.	*	1	2045	250
5.	1	0205	26	661.	*	1	0820	101	669.	*	1	1435	176	46.	*	1	2050	251
5.	1	0210	27	737.	*	1	0825	102	599.	*	1	1440	177	45.	*	1	2055	252
5.	1	0215	28	783.	*	1	0830	103	532.	*	1	1445	178	44.	*	1	2100	253
5.	1	0220	29	802.	*	1	0835	104	469.	*	1	1450	179	42.	*	1	2105	254
5.	1	0225	30	810.	*	1	0840	105	409.	*	1	1455	180	41.	*	1	2110	255
5.	1	0230	31	828.	*	1	0845	106	352.	*	1	1500	181	40.	*	1	2115	256
4.	1	0235	32	871.	*	1	0850	107	295.	*	1	1505	182	39.	*	1	2120	257
4.	1	0240	33	943.	*	1	0855	108	243.	*	1	1510	183	38.	*	1	2125	258
4.	1	0245	34	1042.	*	1	0900	109	198.	*	1	1515	184	36.	*	1	2130	259
4.	1	0250	35	1153.	*	1	0905	110	165.	*	1	1520	185	35.	*	1	2135	260
4.	1	0255	36	1251.	*	1	0910	111	143.	*	1	1525	186	34.	*	1	2140	261
4.	1	0300	37	1324.	*	1	0915	112	129.	*	1	1530	187	33.	*	1	2145	262
4.	1	0305	38	1381.	*	1	0920	113	121.	*	1	1535	188	32.	*	1	2150	263
4.	1	0310	39	1447.	*	1	0925	114	117.	*	1	1540	189	31.	*	1	2155	264
4.	1	0315	40	1570.	*	1	0930	115	114.	*	1	1545	190	30.	*	1	2200	265
3.	1	0320	41	1846.	*	1	0935	116	112.	*	1	1550	191	29.	*	1	2205	266
3.	1	0325	42	2469.	*	1	0940	117	111.	*	1	1555	192	28.	*	1	2210	267
3.	1	0330	43	3752.	*	1	0945	118	110.	*	1	1600	193	28.	*	1	2215	268
3.	1	0335	44	5909.	*	1	0950	119	109.	*	1	1605	194	27.	*	1	2220	269
3.	1	0340	45	8736.	*	1	0955	120	109.	*	1	1610	195	26.	*	1	2225	270
3.	1	0345	46	11620.	*	1	1000	121	108.	*	1	1615	196	25.	*	1	2230	271
3.	1	0350	47	13812.	*	1	1005	122	107.	*	1	1620	197	25.	*	1	2235	272
3.	1	0355	48	14839.	*	1	1010	123	106.	*	1	1625	198	24.	*	1	2240	273
3.	1	0400	49	14778.	*	1	1015	124	105.	*	1	1630	199	23.	*	1	2245	274
3.	1	0405	50	13920.	*	1	1020	125	104.	*	1	1635	200	23.	*	1	2250	275
3.	1	0410	51	12646.	*	1	1025	126	103.	*	1	1640	201	22.	*	1	2255	276
3.	1	0415	52	11224.	*	1	1030	127	102.	*	1	1645	202	21.	*	1	2300	277
2.	1	0420	53	9839.	*	1	1035	128	101.	*	1	1650	203	21.	*	1	2305	278
2.	1	0425	54	8604.	*	1	1040	129	100.	*	1	1655	204	20.	*	1	2310	279
2.	1	0430	55	7574.	*	1	1045	130	99.	*	1	1700	205	20.	*	1	2315	280
2.	1	0435	56	6794.	*	1	1050	131	98.	*	1	1705	206	19.	*	1	2320	281
2.	1	0440	57	6273.	*	1	1055	132	97.	*	1	1710	207	18.	*	1	2325	282
2.	1	0445	58	5997.	*	1	1100	133	96.	*	1	1715	208	18.	*	1	2330	283
2.	1	0450	59	5911.	*	1	1105	134	95.	*	1	1720	209	17.	*	1	2335	284
2.	1	0455	60	5944.	*	1	1110	135	94.	*	1	1725	210	17.	*	1	2340	285
2.	1	0500	61	6010.	*	1	1115	136	93.	*	1	1730	211	17.	*	1	2345	286
2.	1	0505	62	6027.	*	1	1120	137	92.	*	1	1735	212	16.	*	1	2350	287
2.	1	0510	63	5953.	*	1	1125	138	91.	*	1	1740	213	16.	*	1	2355	288
2.	1	0515	64	5769.	*	1	1130	139	90.	*	1	1745	214	15.	*	2	0000	289
2.	1	0520	65	5478.	*	1	1135	140	89.	*	1	1750	215	15.	*	2	0005	290
2.	1	0525	66	5108.	*	1	1140	141	88.	*	1	1755	216	14.	*	2	0010	291
2.	1	0530	67	4702.	*	1	1145	142	87.	*	1	1800	217	14.	*	2	0015	292
2.	1	0535	68	4303.	*	1	1150	143	86.	*	1	1805	218	14.	*	2	0020	293
2.	1	0540	69	3938.	*	1	1155	144	85.	*	1	1810	219	13.	*	2	0025	294
2.	1	0545	70	3622.	*	1	1200	145	84.	*	1	1815	220	13.	*	2	0030	295

DA MON HRMN ORD					STAGE *					DA MON HRMN ORD					STAGE *								
STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	
1							*								*								
2616.7	0000	1		0.	.0	2576.0	*	1		0820	101		1300.	1538.0	2619.3	*	1		1640	201		397.	1326.2
1							*								*								
2616.7	0005	2		0.	.0	2576.0	*	1		0825	102		1236.	1536.2	2619.3	*	1		1645	202		397.	1323.8
1							*								*								
2616.7	0010	3		0.	.0	2576.0	*	1		0830	103		1174.	1534.4	2619.3	*	1		1650	203		397.	1321.3
1							*								*								
2616.7	0015	4		0.	.0	2576.0	*	1		0835	104		1112.	1532.6	2619.2	*	1		1655	204		396.	1318.8
1							*								*								
2616.7	0020	5		0.	.0	2576.0	*	1		0840	105		1048.	1530.7	2619.2	*	1		1700	205		396.	1316.3
1							*								*								
2616.6	0025	6		0.	.0	2576.0	*	1		0845	106		982.	1528.8	2619.2	*	1		1705	206		396.	1313.8

1	0030	7	1.	.1	2576.0	*	1	0850	107	915.	1526.8	2619.2	*	1	1710	207	396.	1311.3	
2616.6	1	0035	8	2.	.2	2576.1	*	1	0855	108	847.	1524.8	2619.2	*	1	1715	208	396.	1308.8
2616.6	1	0040	9	4.	.4	2576.2	*	1	0900	109	779.	1522.8	2619.1	*	1	1720	209	396.	1306.3
2616.6	1	0045	10	8.	.9	2576.4	*	1	0905	110	712.	1520.9	2619.1	*	1	1725	210	396.	1303.8
2616.6	1	0050	11	15.	1.8	2576.7	*	1	0910	111	646.	1519.0	2619.1	*	1	1730	211	395.	1301.3
2616.5	1	0055	12	25.	3.0	2577.1	*	1	0915	112	582.	1517.1	2619.1	*	1	1735	212	395.	1298.7
2616.5	1	0100	13	39.	4.7	2577.7	*	1	0920	113	520.	1515.3	2619.0	*	1	1740	213	395.	1296.2
2616.5	1	0105	14	55.	6.6	2578.5	*	1	0925	114	460.	1513.6	2619.0	*	1	1745	214	395.	1293.7
2616.5	1	0110	15	72.	8.7	2579.2	*	1	0930	115	407.	1511.9	2619.0	*	1	1750	215	395.	1291.
2616.4	1	0115	16	88.	10.7	2580.0	*	1	0935	116	407.	1510.3	2619.0	*	1	1755	216	395.	1288.6
2616.4	1	0120	17	95.	12.5	2580.3	*	1	0940	117	407.	1508.5	2618.9	*	1	1800	217	395.	1286.0
2616.4	1	0125	18	100.	14.1	2580.5	*	1	0945	118	407.	1506.6	2618.9	*	1	1805	218	394.	1283.5
2616.4	1	0130	19	104.	15.5	2580.7	*	1	0950	119	407.	1504.7	2618.8	*	1	1810	219	394.	1280.9
2616.4	1	0135	20	109.	16.8	2580.9	*	1	0955	120	407.	1502.8	2618.8	*	1	1815	220	394.	1278.4
2616.3	1	0140	21	113.	18.3	2581.2	*	1	1000	121	406.	1500.8	2618.7	*	1	1820	221	394.	1275.8
2616.3	1	0145	22	119.	20.0	2581.4	*	1	1005	122	406.	1498.8	2618.7	*	1	1825	222	394.	1273.2
2616.3	1	0150	23	127.	22.4	2581.8	*	1	1010	123	406.	1496.9	2618.6	*	1	1830	223	394.	1270.7
2616.3	1	0155	24	137.	25.6	2582.3	*	1	1015	124	406.	1494.9	2618.6	*	1	1835	224	394.	1268.1
2616.2	1	0200	25	150.	29.6	2582.9	*	1	1020	125	406.	1492.9	2618.5	*	1	1840	225	393.	1265.5
2616.2	1	0205	26	166.	34.4	2583.6	*	1	1025	126	406.	1490.9	2618.5	*	1	1845	226	393.	1262.9
2616.2	1	0210	27	183.	39.8	2584.5	*	1	1030	127	406.	1488.9	2618.4	*	1	1850	227	393.	1260.3
2616.2	1	0215	28	195.	45.5	2585.2	*	1	1035	128	406.	1487.0	2618.4	*	1	1855	228	393.	1257.8
2616.2	1	0220	29	198.	51.2	2585.6	*	1	1040	129	406.	1485.0	2618.3	*	1	1900	229	393.	1255.2
2616.1	1	0225	30	201.	57.0	2586.0	*	1	1045	130	406.	1483.0	2618.3	*	1	1905	230	393.	1252.6
2616.1	1	0230	31	205.	62.8	2586.4	*	1	1050	131	405.	1481.0							

1	0425	54	387.	1163.1	2614.6	*	1	1245	154	403.	1433.6	2617.7	*	1	2105	254	389.	1190.0	
2615.1	1	0430	55	391.	1222.8	2615.7	*	1	1250	155	403.	1431.4	2617.7	*	1	2110	255	388.	1187.4
2615.0	1	0435	56	394.	1275.3	2616.3	*	1	1255	156	403.	1429.3	2617.6	*	1	2115	256	388.	1184.7
2615.0	1	0440	57	397.	1322.7	2616.7	*	1	1300	157	403.	1427.2	2617.6	*	1	2120	257	388.	1182.1
2614.9	1	0445	58	399.	1367.0	2617.1	*	1	1305	158	402.	1425.0	2617.6	*	1	2125	258	388.	1179.5
2614.9	1	0450	59	402.	1410.0	2617.5	*	1	1310	159	402.	1422.9	2617.6	*	1	2130	259	388.	1176.9
2614.9	1	0455	60	404.	1452.8	2617.8	*	1	1315	160	402.	1420.7	2617.6	*	1	2135	260	388.	1174.3
2614.8	1	0500	61	406.	1496.1	2618.6	*	1	1320	161	402.	1418.5	2617.5	*	1	2140	261	387.	1171.6
2614.8	1	0505	62	1253.	1536.7	2619.3	*	1	1325	162	402.	1416.4	2617.5	*	1	2145	262	387.	1169.0
2614.7	1	0510	63	2774.	1568.8	2619.7	*	1	1330	163	402.	1414.2	2617.5	*	1	2150	263	387.	1166.4
2614.7	1	0515	64	4107.	1590.1	2619.9	*	1	1335	164	402.	1412.0	2617.5	*	1	2155	264	387.	1163.8
2614.6	1	0520	65	4935.	1602.0	2620.1	*	1	1340	165	402.	1409.8	2617.5	*	1	2200	265	387.	1161.2
2614.6	1	0525	66	5324.	1607.0	2620.1	*	1	1345	166	401.	1407.6	2617.5	*	1	2205	266	387.	1158.5
2614.5	1	0530	67	5361.	1607.5	2620.1	*	1	1350	167	401.	1405.4	2617.4	*	1	2210	267	386.	1155.9
2614.5	1	0535	68	5190.	1605.3	2620.1	*	1	1355	168	401.	1403.2	2617.4	*	1	2215	268	386.	1153.3
2614.4	1	0540	69	4908.	1601.6	2620.1	*	1	1400	169	401.	1401.0	2617.4	*	1	2220	269	386.	1150.7
2614.4	1	0545	70	4583.	1597.4	2620.0	*	1	1405	170	401.	1398.8	2617.4	*	1	2225	270	386.	1148.1
2614.3	1	0550	71	4294.	1593.1	2620.0	*	1	1410	171	401.	1396.5	2617.4	*	1	2230	271	386.	1145.4
2614.3	1	0555	72	4027.	1588.8	2619.9	*	1	1415	172	401.	1394.3	2617.3	*	1	2235	272	386.	1142.8
2614.2	1	0600	73	3778.	1584.9	2619.9	*	1	1420	173	401.	1392.1	2617.3	*	1	2240	273	385.	1140.2
2614.2	1	0605	74	3557.	1581.3	2619.8	*	1	1425	174	400.	1389.8	2617.3	*	1	2245	274	385.	1137.6
2614.1	1	0610	75	3365.	1578.3	2619.8	*	1	1430	175	400.	1387.6	2617.3	*	1	2250	275	385.	1134.9
2614.1	1	0615	76	3200.	1575.6	2619.8	*	1	1435	176	400.	1385.3	2617.3	*	1	2255	276	385.	1132.3
2614.0	1	0620	77	3057.	1573.4	2619.7	*	1	1440	177	400.	1383.0	2617.2	*	1	2300	277	385.	1129.7
2614.0	1	0625	78	2930.	1571.3	2619.7	*	1	1445	178	400.	1380.7	2617.2	*	1	2305	278	384.	1127.1
2613.9	1	0630	79	2815.	1569.5	2619.7	*	1	1450	179	400.	1378.5	2617.2	*	1	2310	279	384.	1124.5
2613.9	1	0635	80	2708.	1567.8	2619.7	*	1	1455	180	400.	1376.2	2617.2	*	1	2315	280	384.	1121.9
2613.9	1	0640	81	2608.	1566.2	2619.6	*	1	1500	181	400.	1373.9	2617.2	*	1	2320	281	384.	1119.2
2613.8	1	0645	82	2514.	1564.7	2619.6	*	1	1505	182	399.	1371.6	2617.1	*	1	2325	282	384.	1116.6
2613.8	1	0650	83	2426.	1563.3	2619.6	*	1	1510	183	399.	1369.3	2617.1	*	1	2330	283	384.	1114.0
2613.7	1	0655	84	2346.	1562.0	2619.6	*	1	1515	184	399.	1366.9	2617.1	*	1	2335	284	383.	1111.4
2613.7	1	0700	85	2271.	1560.8	2619.6	*	1	1520	185	399.	1364.6	2617.1	*	1	2340	285	383.	1108.8
2613.6	1	0705	86	2203.	1559.7	2619.6	*	1	1525	186	399.	1362.3	2617.1	*	1	2345	286	383.	1106.2
2613.6	1	0710	87	2140.	1558.7	2619.6	*	1	1530	187	399.	1359.9	2617.0	*	1	2350	287	383.	1103.5
2613.5	1	0715	88	2081.	1557.8	2619.5	*	1	1535	188	399.	1357.6	2617.0	*	1	2355	288	383.	1100.9
2613.5	1	0720	89	2025.	1556.9	2619.5	*	1	1540	189	398.	1355.2	2617.0	*	2	0000	289	383.	1098.3
2613.4	1	0725	90	1971.	1556.0	2619.5	*	1	1545	190	398.	1352.9	2617.0	*	2	0005	290	382.	1095.7
2613.4	1	0730	91	1916.	1555.1	2619.5	*	1	1550	191	398.	1350.5	2617.0	*	2	0010	291	382.	1093.1
2613.3	1	0735	92	1860.	1554.3	2619.5	*	1	1555	192	398.	1348.1	2616.9	*	2	0015	292	382.	1090.5
2613.3	1	0740	93	1822.	1553.2	2619.5	*	1	1600	193	398.	1345.7	2616.9	*	2	0020	293	382.	1087.9
2613.2	1	0745	94	1780.	1552.0	2619.5	*	1	1605	194	398.	1343.3	2616.9	*	2	0025	294	382.	1085.3
2613.2	1	0750	95	1728.	1550.5	2619.5	*	1	1610	195	398.	1340.9	2616.9	*	2	0030	295	382.	1082.6
2613.1	1	0755	96	1665.	1548.7	2619.4	*	1	1615	196	398.	1338.5	2616.9	*	2	0035	296	381.	1080.0
2613.1	1	0800	97	1594.	1546.6	2619.4	*	1	1620	197	397.	1336.1	2616.8	*	2	0040	297	381.	1077.4
2613.0	1	0805	98	1517.	1544.4	2619.4	*	1	1625	198	397.	1333.6	2616.8	*	2	0045	298	381.	1074.8
2613.0	1	0810	99	1440.	1542.1	2619.4	*	1	1630	199	397.	1331.2	2616.8	*	2	0050	299	381.	1072.2
2612.9	1	0815	100	1367.	1540.0	2619.3	*	1	1635	200	397.	1328.7	2616.8	*	2	0055	300	381.	1069.6
2612.9																			

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2616.1	1	0220	29	197.	48.6	2585.4	*	1	1040	129	406.	1483.3	2618.3	*	1	1900	229	393.	1251.7
2616.1	1	0225	30	200.	54.1	2585.8	*	1	1045	130	406.	1481.3	2618.3	*	1	1905	230	393.	1249.1
2616.1	1	0230	31	203.	59.7	2586.2	*	1	1050	131	405.	1479.2	2618.2	*	1	1910	231	392.	1246.5
2616.1	1	0235	32	206.	65.6	2586.6	*	1	1055	132	405.	1477.2	2618.2	*	1	1915	232	392.	1243.9
2616.0	1	0240	33	210.	71.9	2587.0	*	1	1100	133	405.	1475.2	2618.1	*	1	1920	233	392.	1241.3
2616.0	1	0245	34	213.	79.0	2587.6	*	1	1105	134	405.	1473.2	2618.1	*	1	1925	234	392.	1238.7
2615.9	1	0250	35	218.	87.0	2588.1	*	1	1110	135	405.	1471.1	2618.0	*	1	1930	235	392.	1236.1
2615.9	1	0255	36	222.	95.8	2588.7	*	1	1115	136	405.	1469.1	2618.0	*	1	1935	236	392.	1233.5
2615.8	1	0300	37	228.	105.3	2589.4	*	1	1120	137	405.	1467.1	2618.0	*	1	1940	237	391.	1230.9
2615.8	1	0305	38	233.	115.1	2590.1	*	1	1125	138	405.	1465.0	2617.9	*	1	1945	238	391.	1228.3
2615.7	1	0310	39	238.	125.4	2590.5	*	1	1130	139	405.	1463.0	2617.9	*	1	1950	239	391.	1225.7
2615.7	1	0315	40	243.	136.3	2591.1	*	1	1135	140	404.	1460.9	2617.9	*	1	1955	240	391.	1223.1
2615.6	1	0320	41	249.	148.9	2591.6	*	1	1140	141	404.	1458.8	2617.9	*	1	2000	241	391.	1220.5
2615.6	1	0325	42	257.	165.4	2592.4	*	1	1145	142	404.	1456.8	2617.9	*	1	2005	242	391.	1217.9
2615.6	1	0330	43	269.	189.7	2593.5	*	1	1150	143	404.	1454.7	2617.9	*	1	2010	243	390.	1215.2
2615.5	1	0335	44	286.	228.2	2595.2	*	1	1155	144	404.	1452.6	2617.8	*	1	2015	244	390.	1212.6
2615.5	1	0340	45	295.	286.4	2596.7	*	1	1200	145	404.	1450.5	2617.8	*	1	2020	245	390.	1210.0
2615.4	1	0345	46	309.	366.9	2598.8	*	1	1205	146	404.	1448.4	2617.8	*	1	2025	246	390.	1207.4
2615.4	1	0350	47	322.	466.6	2601.2	*	1	1210	147	404.	1446.3	2617.8	*	1	2030	247	390.	1204.8
2615.3	1	0355	48	336.	577.7	2603.6	*	1	1215	148	403.	1444.2	2617.8	*	1	2035	248	389.	1202.2
2615.3	1	0400	49	348.	691.5	2605.9	*	1	1220	149	403.	1442.1	2617.8	*	1	2040	249	389.	1199.5
2615.2	1	0405	50	359.	800.7	2608.0	*	1	1225	150	403.	1440.0	2617.7	*	1	2045	250	389.	1196.9
2615.2	1	0410	51	369.	900.9	2609.8	*	1	1230	151	403.	1437.9	2617.7	*	1	2050	251	389.	1194.3
2615.1	1	0415	52	375.	990.1	2611.5	*	1	1235	152	403.	1435.8	2617.7	*	1	2055	252	389.	1191.7
2615.1	1	0420	53	381.	1														

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CUMULATIVE AREA = 22.79 SQ MI

[illegible]

1	0010	3	0.	.0	2576.0	*	1	0830	103	1043.	1530.5	2619.2	*	1	1650	203	396.	1313.0	
2616.6	1	0015	4	0.	.0	2576.0	*	1	0835	104	978.	1528.6	2619.2	*	1	1655	204	396.	1310.5
2616.6	1	0020	5	0.	.0	2576.0	*	1	0840	105	910.	1526.7	2619.2	*	1	1700	205	396.	1307.9
2616.6	1	0025	6	0.	.0	2576.0	*	1	0845	106	843.	1524.7	2619.2	*	1	1705	206	396.	1305.4
2616.6	1	0030	7	0.	.0	2576.0	*	1	0850	107	775.	1522.7	2619.1	*	1	1710	207	396.	1302.9
2616.5	1	0035	8	1.	.1	2576.1	*	1	0855	108	708.	1520.8	2619.1	*	1	1715	208	395.	1300.3
2616.5	1	0040	9	3.	.4	2576.1	*	1	0900	109	643.	1518.9	2619.1	*	1	1720	209	395.	1297.8
2616.5	1	0045	10	6.	.8	2576.3	*	1	0905	110	579.	1517.0	2619.1	*	1	1725	210	395.	1295.2
2616.5	1	0050	11	12.	1.4	2576.5	*	1	0910	111	517.	1515.2	2619.0	*	1	1730	211	395.	1292.6
2616.5	1	0055	12	20.	2.5	2576.9	*	1	0915	112	458.	1513.5	2619.0	*	1	1735	212	395.	1290.1
2616.4	1	0100	13	31.	3.8	2577.4	*	1	0920	113	407.	1511.8	2619.0	*	1	1740	213	395.	1287.5
2616.4	1	0105	14	45.	5.4	2578.0	*	1	0925	114	407.	1510.2	2619.0	*	1	1745	214	395.	1285.0
2616.4	1	0110	15	59.	7.2	2578.7	*	1	0930	115	407.	1508.4	2618.9	*	1	1750	215	394.	1282.4
2616.3	1	0115	16	73.	8.9	2579.3	*	1	0935	116	407.	1506.5	2618.9	*	1	1755	216	394.	1279.8
2616.3	1	0120	17	86.	10.4	2579.9	*	1	0940	117	407.	1504.5	2618.8	*	1	1800	217	394.	1277.2
2616.3	1	0125	18	92.	11.8	2580.2	*	1	0945	118	407.	1502.6	2618.8	*	1	1805	218	394.	1274.6
2616.3	1	0130	19	96.	12.9	2580.3	*	1	0950	119	406.	1500.6	2618.7	*	1	1810	219	394.	1272.1
2616.3	1	0135	20	99.	14.0	2580.5	*	1	0955	120	406.	1498.6	2618.7	*	1	1815	220	394.	1269.5
2616.3	1	0140	21	103.	15.2	2580.7	*	1	1000	121	406.	1496.6	2618.6	*	1	1820	221	394.	1266.9
2616.2	1	0145	22	108.	16.7	2580.9	*	1	1005	122	406.	1494.6	2618.6	*	1	1825	222	393.	1264.3
2616.2	1	0150	23	115.	18.7	2581.2	*	1	1010	123	406.	1492.6	2618.5	*	1	1830	223	393.	1261.7
2616.2	1	0155	24	124.	21.5	2581.6	*	1	1015	124	406.	1490.6	2618.5	*	1	1835	224	393.	1259.1
2616.1	1	0200	25	135.	25.0	2582.2	*	1	1020	125	406.	1488.6	2618.4	*	1	1840	225	393.	1256.5
2616.1	1	0205	26	149.	29.3	2582.8	*	1	1025	126	406.	1486.6	2618.4	*	1	1845	226	393.	1253.9
2616.1	1	0210	27	164.	34.1	2583.6	*	1	1030	127	406.	1484.6	2618.3	*	1	185			

1	0405	50	355.	764.9	2607.3	*	1	1225	150	403.	1436.7	2617.7	*	1	2045	250	389.	1191.1	
2615.1	1	0410	51	365.	862.0	2609.1	*	1	1230	151	403.	1434.5	2617.7	*	1	2050	251	389.	1188.5
2615.1	1	0415	52	373.	948.6	2610.7	*	1	1235	152	403.	1432.4	2617.7	*	1	2055	252	388.	1185.9
2615.0	1	0420	53	378.	1024.4	2612.1	*	1	1240	153	403.	1430.2	2617.6	*	1	2100	253	388.	1183.2
2615.0	1	0425	54	382.	1090.2	2613.3	*	1	1245	154	403.	1428.0	2617.6	*	1	2105	254	388.	1180.6
2614.9	1	0430	55	386.	1147.4	2614.3	*	1	1250	155	402.	1425.9	2617.6	*	1	2110	255	388.	1178.0
2614.9	1	0435	56	389.	1197.8	2615.2	*	1	1255	156	402.	1423.7	2617.6	*	1	2115	256	388.	1175.4
2614.8	1	0440	57	392.	1243.3	2616.0	*	1	1300	157	402.	1421.5	2617.6	*	1	2120	257	388.	1172.7
2614.8	1	0445	58	395.	1285.8	2616.4	*	1	1305	158	402.	1419.3	2617.6	*	1	2125	258	387.	1170.
2614.7	1	0450	59	397.	1327.0	2616.8	*	1	1310	159	402.	1417.1	2617.5	*	1	2130	259	387.	1167.5
2614.7	1	0455	60	399.	1368.1	2617.1	*	1	1315	160	402.	1414.9	2617.5	*	1	2135	260	387.	1164.9
2614.6	1	0500	61	402.	1409.5	2617.5	*	1	1320	161	402.	1412.7	2617.5	*	1	2140	261	387.	1162.2
2614.6	1	0505	62	404.	1451.1	2617.8	*	1	1325	162	402.	1410.4	2617.5	*	1	2145	262	387.	1159.6
2614.5	1	0510	63	406.	1492.6	2618.5	*	1	1330	163	401.	1408.2	2617.5	*	1	2150	263	386.	1157.0
2614.5	1	0515	64	1051.	1530.8	2619.2	*	1	1335	164	401.	1406.0	2617.4	*	1	2155	264	386.	1154.4
2614.4	1	0520	65	2266.	1560.7	2619.6	*	1	1340	165	401.	1403.7	2617.4	*	1	2200	265	386.	1151.7
2614.4	1	0525	66	3465.	1579.9	2619.8	*	1	1345	166	401.	1401.5	2617.4	*	1	2205	266	386.	1149.1
2614.3	1	0530	67	4088.	1589.8	2619.9	*	1	1350	167	401.	1399.2	2617.4	*	1	2210	267	386.	1146.5
2614.3	1	0535	68	4333.	1593.7	2620.0	*	1	1355	168	401.	1397.0	2617.4	*	1	2215	268	386.	1143.9
2614.3	1	0540	69	4345.	1593.9	2620.0	*	1	1400	169	401.	1394.7	2617.3	*	1	2220	269	385.	1141.2
2614.2	1	0545	70	4222.	1591.9	2619.9	*	1	1405	170	401.	1392.4	2617.3	*	1	2225	270	385.	1138.6
2614.2	1	0550	71	4032.	1588.9	2619.9	*	1	1410	171	400.	1390.1	2617.3	*	1	2230	271	385.	1136.0
2614.1	1	0555	72	3819.	1585.5	2619.9	*	1	1415	172	400.	1387.9	2617.3	*	1	2235	272	385.	1133.4
2614.1	1	0600	73	3608.	1582.1	2619.8	*	1	1420	173	400.	1385.6	2617.3	*	1	2240	273	385.	1130.7
2614.0	1																		

1	0155	24	116.	19.1	2581.3	*	1	1015	124	406.	1487.9	2618.4	*	1	1835	224	393.	1253.5	
2616.1	1	0200	25	126.	22.3	2581.8	*	1	1020	125	406.	1485.8	2618.4	*	1	1840	225	393.	1250.9
2616.1	1	0205	26	139.	26.3	2582.4	*	1	1025	126	406.	1483.8	2618.3	*	1	1845	226	392.	1248.3
2616.1	1	0210	27	154.	30.8	2583.1	*	1	1030	127	406.	1481.7	2618.3	*	1	1850	227	392.	1245.6
2616.1	1	0215	28	169.	35.6	2583.8	*	1	1035	128	405.	1479.7	2618.2	*	1	1855	228	392.	1243.0
2616.0	1	0220	29	185.	40.4	2584.6	*	1	1040	129	405.	1477.7	2618.2	*	1	1900	229	392.	1240.4
2616.0	1	0225	30	195.	45.3	2585.1	*	1	1045	130	405.	1475.6	2618.1	*	1	1905	230	392.	1237.8
2616.0	1	0230	31	198.	50.1	2585.5	*	1	1050	131	405.	1473.5	2618.1	*	1	1910	231	392.	1235.2
2615.9	1	0235	32	201.	55.2	2585.9	*	1	1055	132	405.	1471.5	2618.0	*	1	1915	232	392.	1232.6
2615.9	1	0240	33	203.	60.7	2586.2	*	1	1100	133	405.	1469.4	2618.0	*	1	1920	233	391.	1229.9
2615.8	1	0245	34	207.	66.9	2586.7	*	1	1105	134	405.	1467.3	2618.0	*	1	1925	234	391.	1227.3
2615.8	1	0250	35	211.	73.9	2587.2	*	1	1110	135	405.	1465.2	2618.0	*	1	1930	235	391.	1224.7
2615.7	1	0255	36	215.	81.6	2587.7	*	1	1115	136	405.	1463.1	2617.9	*	1	1935	236	391.	1222.1
2615.7	1	0300	37	219.	89.9	2588.3	*	1	1120	137	404.	1461.0	2617.9	*	1	1940	237	391.	1219.4
2615.6	1	0305	38	224.	98.6	2588.9	*	1	1125	138	404.	1458.9	2617.9	*	1	1945	238	390.	1216.8
2615.6	1	0310	39	229.	107.7	2589.6	*	1	1130	139	404.	1456.8	2617.9	*	1	1950	239	390.	1214.2
2615.5	1	0315	40	234.	117.5	2590.2	*	1	1135	140	404.	1454.7	2617.9	*	1	1955	240	390.	1211.6
2615.5	1	0320	41	239.	128.8	2590.7	*	1	1140	141	404.	1452.6	2617.8	*	1	2000	241	390.	1209.0
2615.4	1	0325	42	247.	143.4	2591.4	*	1	1145	142	404.	1450.5	2617.8	*	1	2005	242	390.	1206.3
2615.4	1	0330	43	257.	165.1	2592.4	*	1	1150	143	404.	1448.3	2617.8	*	1	2010	243	390.	1203.7
2615.3	1	0335	44	274.	199.7	2594.0	*	1	1155	144	404.	1446.2	2617.8	*	1	2015	244	389.	1201.1
2615.3	1	0340	45	290.	252.6	2595.8	*	1	1200	145	403.	1444.0	2617.8	*	1	2020	245	389.	1198.4
2615.2	1	0345	46	302.	326.3	2597.7	*	1	1205	146	403.	1441.9	2617.7	*	1	2025	246	389.	1195.8
2615.2	1	0350	47	317.	418.0	2600.1	*	1	1210	147	403.	1439.7	2617.7	*	1	2030	247	389.	1193.2
2615.2	1	0355	48	329.	521.1	2602.4													

1	0550	71	3696.	1583.5	2619.8	*	1	1410	171	400.	1386.0	2617.3	*	1	2230	271	385.	1130.1	
2614.0	1	0555	72	3577.	1581.7	2619.8	*	1	1415	172	400.	1383.7	2617.2	*	1	2235	272	384.	1127.5
2614.0	1	0600	73	3430.	1579.3	2619.8	*	1	1420	173	400.	1381.3	2617.2	*	1	2240	273	384.	1124.9
2613.9	1	0605	74	3277.	1576.9	2619.8	*	1	1425	174	400.	1379.0	2617.2	*	1	2245	274	384.	1122.3
2613.9	1	0610	75	3132.	1574.5	2619.7	*	1	1430	175	400.	1376.7	2617.2	*	1	2250	275	384.	1119.6
2613.8	1	0615	76	2999.	1572.4	2619.7	*	1	1435	176	400.	1374.3	2617.2	*	1	2255	276	384.	1117.0
2613.8	1	0620	77	2879.	1570.5	2619.7	*	1	1440	177	399.	1371.9	2617.1	*	1	2300	277	384.	1114.4
2613.7	1	0625	78	2767.	1568.7	2619.7	*	1	1445	178	399.	1369.6	2617.1	*	1	2305	278	383.	1111.8
2613.7	1	0630	79	2662.	1567.0	2619.7	*	1	1450	179	399.	1367.2	2617.1	*	1	2310	279	383.	1109.2
2613.6	1	0635	80	2561.	1565.4	2619.6	*	1	1455	180	399.	1364.8	2617.1	*	1	2315	280	383.	1106.5
2613.6	1	0640	81	2465.	1563.9	2619.6	*	1	1500	181	399.	1362.4	2617.1	*	1	2320	281	383.	1103.9
2613.5	1	0645	82	2373.	1562.4	2619.6	*	1	1505	182	399.	1360.0	2617.0	*	1	2325	282	383.	1101.3
2613.5	1	0650	83	2287.	1561.1	2619.6	*	1	1510	183	399.	1357.6	2617.0	*	1	2330	283	383.	1098.7
2613.4	1	0655	84	2205.	1559.8	2619.6	*	1	1515	184	398.	1355.2	2617.0	*	1	2335	284	382.	1096.1
2613.4	1	0700	85	2130.	1558.6	2619.6	*	1	1520	185	398.	1352.7	2617.0	*	1	2340	285	382.	1093.5
2613.3	1	0705	86	2059.	1557.4	2619.5	*	1	1525	186	398.	1350.3	2617.0	*	1	2345	286	382.	1090.8
2613.3	1	0710	87	1991.	1556.3	2619.5	*	1	1530	187	398.	1347.8	2616.9	*	1	2350	287	382.	1088.2
2613.2	1	0715	88	1926.	1555.3	2619.5	*	1	1535	188	398.	1345.4	2616.9	*	1	2355	288	382.	1085.6
2613.2	1	0720	89	1861.	1554.3	2619.5	*	1	1540	189	398.	1342.9	2616.9	*	2	0000	289	382.	1083.0
2613.1	1	0725	90	1817.	1553.1	2619.5	*	1	1545	190	398.	1340.4	2616.9	*	2	0005	290	381.	1080.4
2613.1	1	0730	91	1770.	1551.7	2619.5	*	1	1550	191	398.	1338.0	2616.8	*	2	0010	291	381.	1077.8
2613.0	1	0735	92	1712.	1550.0	2619.5	*	1	1555	192	397.	1335.5	2616.8	*	2	0015	292	381.	1075.2
2613.0	1	0740	93	1644.	1548.1	2619.4	*	1	1600	193	397.	1333.0	2616.8	*	2	0020	293	381.	1072.6
2613.0	1	0745	94	1569.	1545.9	2619.4	*	1	1605	194	397.	1330.5	2616.8	*	2	0025	294	381.	1070.0
2612.9	1	0750	95	1490.	1543.6	2619.4	*	1	1610	195	397.	1328.0	2616.8	*	2	0030	295	380.	1067.3
2612.9	1	0755	96	1414.	1541.3	2619.3	*	1	1615	196	397.	1325.5	2616.7	*	2	0035	296	380.	1064.7
2612.8	1	0800	97	1342.	1539.3	2619.3	*	1	1620	197	397.	1322.9	2616.7	*	2	0040	297	380.	1062.1
2612.8	1	0805	98	1276.	1537.3	2619.3	*	1	1625	198	397.	1320.4	2616.7	*	2	0045	298	380.	1059.5
2612.7	1	0810	99	1213.	1535.5	2619.3	*	1	1630	199	396.	1317.9	2616.7	*	2	0050	299	380.	1056.9
2612.7	1	0815	100	1151.	1533.7	2619.3	*	1	1635	200	396.	1315.3	2616.7	*	2	0055	300	380.	1054.3
2612.6																			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	3742.	5.75	(CFS)	1394.	615.	592.	592.
			(INCHES)	.569	1.003	1.004	1.004
			(AC-FT)	691.	1220.	1220.	1220.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	1584.	5.75		1529.	1174.	1131.	1131.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	2619.86	5.75		2619.10	2612.72	2611.38	2611.38

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLFKDB
PLAN 1, RATIO = .92

							*							*								
	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	2576.0	*	1		0820	101	1056.	1530.9	2619.2	*	1		1640	201	396.	1310.7
2616.6																						
1			0005	2	0.	.0	2576.0	*	1		0825	102	991.	1529.0	2619.2	*	1		1645	202	396.	1308.1
2616.6																						
1			0010	3	0.	.0	2576.0	*	1		0830	103	924.	1527.1	2619.2	*	1		1650	203	396.	1305.6
2616.6																						
1			0015	4	0.	.0	2576.0	*	1		0835	104	856.	1525.1	2619.2	*	1		1655	204	396.	1303.0
2616.5																						
1			0020	5	0.	.0	2576.0	*	1		0840	105	788.	1523.1	2619.1	*	1		1700	205	395.	1300.5
2616.5																						
1			0025	6	0.	.0	2576.0	*	1		0845	106	721.	1521.2	2619.1	*	1		1705	206	395.	1297.9
2616.5																						
1			0030	7	0.	.0	2576.0	*	1		0850	107	656.	1519.3	2619.1	*	1		1710	207	395.	1295.3
2616.5																						
1			0035	8	1.	.1	2576.0	*	1		0855	108	592.	1517.4	2619.1	*	1		1715	208	395.	1292.7
2616.5																						
1			0040	9	2.	.3	2576.1	*	1		0900	109	530.	1515.6	2619.0	*	1		1720	209	395.	1290.2
2616.4																						
1			0045	10	5.	.6	2576.2	*	1		0905	110	470.	1513.8	2619.0	*	1		1725	210	395.	1287.6
2616.4																						
1			0050	11	10.	1.2	2576.4	*	1		0910	111	414.	1512.2	2619.0	*	1		1730	211	395.	1285.0
2616.4																						
1			0055	12	17.	2.0	2576.8	*	1		0915	112	407.	1510.5	2619.0	*	1		1735	212	394.	1282.4
2616.4																						
1			0100	13	26.	3.2	2577.2	*	1		0920	113	407.	1508.7	2618.9	*	1		1740	213	394.	1279.8
2616.3																						
1			0105	14	37.	4.5	2577.7	*	1		0925	114	407.	1506.8	2618.9	*	1		1745	214	394.	1277.2
2616.3																						
1			0110	15	49.	6.0	2578.2	*	1		0930	115	407.	1504.9	2618.8	*	1		1750	215	394.	1274.6
2616.3																						
1			0115	16	61.	7.4	2578.8	*	1		0935	116	407.	1502.9	2618.8	*	1		1755	216	394.	1272.0
2616.3																						
1			0120	17	72.	8.8	2579.2	*	1		0940	117	406.	1500.9	2618.7	*	1		1800	217	394.	1269.5
2616.3																						
1			0125	18	82.	9.9	2579.7	*	1		0945	118	406.	1498.9	2618.7	*	1		1805	218	394.	1266.9
2616.2																						
1			0130	19	89.	10.9	2580.0	*	1		0950	119	406.	1496.9	2618.6	*	1		1810	219	393.	1264.2
2616.2																						
1			0135	20	92.	11.8	2580.2	*	1		0955	120	406.	1494.9	2618.6	*	1		1815	220	393.	1261.6
2616.2																						
1			0140	21	96.	12.8	2580.3	*	1		1000	121	406.	1492.9	2618.5	*	1		1820	221	393.	1259.0
2616.2																						
1			0145	22	100.	14.1	2580.5	*	1		1005	122	406.	1490.8	2618.5	*	1		1825	222	393.	1256.4
2616.1																						
1			0150	23	105.	15.8	2580.8	*	1		1010	123	406.	1488.8	2618.4	*	1		1830	223	393.	1253.8
2616.1																						
1			0155	24	113.	18.2	2581.1	*	1		1015	124	406.	1486.8	2618.4	*	1		1835	224	393.	1251.2
2616.1																						
1			0200	25	123.	21.3	2581.6	*	1		1020	125	406.	1484.7	2618.3	*	1		1840	225	392.	1248.6
2616.1																						
1			0205	26	135.	25.1	2582.2	*	1		1025	126	406.	1482.7	2618.3	*	1		1845	226	392.	1246.0
2616.1																						
1			0210	27	149.	29.4	2582.9	*	1		1030	127	405.	1480.6	2618.2	*	1		1850	227	392.	1243.4
2616.0																						
1			0215	28	164.	34.0	2583.6	*	1		1035	128	405.	1478.6	2618.2	*	1		1855	228	392.	1240.7
2616.0																						
1			0220	29	180.	38.8	2584.3	*	1		1040	129	405.	1476.5	2618.1	*	1		1900	229	392.	1238.1
2616.0																						
1			0225	30	194.	43.5	2585.0	*	1		1045	130	405.	1474.4	2618.1	*	1		1905	230	392.	1235.5
2615.9																						
1			0230	31	197.	48.2	2585.4	*	1		1050	131	405.	1472.4	2618.0	*	1		1910	231	392.	1232.9
2615.9																						
1			0235	32	199.	53.1	2585.7	*	1		1055	132	405.	1470.3	2618.0	*	1		1915	232	391.	1230.3
2615.8																						
1			0240	33	202.	58.5	2586.1	*	1		1100	133	405.	1468.2	2618.0	*	1		1920	233	391.	1227.6
2615.8																						
1			0245	34	206.	64.5	2586.5	*	1		1105	134	405.	1466.1	2618.0	*	1		1925	234	391.	1225.0
2615.7																						
1			0250	35	209.	71.3	2587.0	*	1		1110	135	405.	1464.0	2617.9	*	1		1930	235	391.	1222.4
2615.7																						
1			0255	36	213.	78.7	2587.5	*	1		1115	136	404.	1461.9	2617.9	*	1		1935	236	391.	1219.8
2615.6																						
1			0300	37	218.	86.8	2588.1	*	1		1120	137	404.	1459.8	2617.9	*	1		1940	237	390.	1217.1
2615.6																						
1			0305	38	222.	95.3	2588.7	*	1		1125	138	404.	1457.7	2617.9	*	1		1945	238	390.	1214.5
2615.5																						
1			0310	39	227.	104.2	2589.3	*	1		1130	139	404.	1455.5	2617.9	*	1		1950	239	390.	1211.9
2615.5																						
1			0315	40	232.	113.8	2590.0	*	1		1135	140	404.	1453.4	2617.8	*	1		1955	240	390.	1209.3
2615.4																						
1			0320	41	238.	124.8	2590.5	*	1		1140	141	404.	1451.3	2617.8	*	1		2000	241	390.	1206.6
2615.4																						
1			0325	42	244.	139.1	2591.2	*	1		1145	142	404.	1449.2	2617.8	*	1		2005	242	390.	1204.0
2615.3																						
1			0330	43	255.	160.4	2592.2	*	1		1150	143	404.	1447.0	2617.8	*	1		2010	243	389.	1201.4
2615.3																						
1			0335	44	271.	194.2	2593.7	*	1		1155	144	404.	1444.9	2617.8	*	1		2015	244	389.	1198.8
2615.																						

1	0340	45	289.	246.0	2595.6	*	1	1200	145	403.	1442.7	2617.8	*	1	2020	245	389.	1196.1	
2615.2	1	0345	46	301.	318.4	2597.5	*	1	1205	146	403.	1440.5	2617.7	*	1	2025	246	389.	1193.5
2615.2	1	0350	47	316.	408.7	2599.9	*	1	1210	147	403.	1438.4	2617.7	*	1	2030	247	389.	1190.9
2615.1	1	0355	48	328.	510.3	2602.2	*	1	1215	148	403.	1436.2	2617.7	*	1	2035	248	389.	1188.2
2615.1	1	0400	49	340.	614.9	2604.4	*	1	1220	149	403.	1434.0	2617.7	*	1	2040	249	388.	1185.6
2615.0	1	0405	50	351.	715.8	2606.4	*	1	1225	150	403.	1431.8	2617.7	*	1	2045	250	388.	1183.0
2614.9	1	0410	51	360.	808.6	2608.1	*	1	1230	151	403.	1429.6	2617.6	*	1	2050	251	388.	1180.4
2614.9	1	0415	52	368.	891.5	2609.6	*	1	1235	152	403.	1427.4	2617.6	*	1	2055	252	388.	1177.7
2614.8	1	0420	53	374.	964.2	2611.0	*	1	1240	153	402.	1425.2	2617.6	*	1	2100	253	388.	1175.
2614.8	1	0425	54	378.	1027.3	2612.1	*	1	1245	154	402.	1423.0	2617.6	*	1	2105	254	387.	1172.5
2614.8	1	0430	55	381.	1082.4	2613.1	*	1	1250	155	402.	1420.8	2617.6	*	1	2110	255	387.	1169.8
2614.7	1	0435	56	385.	1130.9	2614.0	*	1	1255	156	402.	1418.5	2617.5	*	1	2115	256	387.	1167.2
2614.7	1	0440	57	388.	1174.7	2614.8	*	1	1300	157	402.	1416.3	2617.5	*	1	2120	257	387.	1164.6
2614.6	1	0445	58	390.	1215.7	2615.6	*	1	1305	158	402.	1414.1	2617.5	*	1	2125	258	387.	1161.9
2614.6	1	0450	59	393.	1255.3	2616.1	*	1	1310	159	402.	1411.8	2617.5	*	1	2130	259	387.	1159.3
2614.5	1	0455	60	395.	1294.8	2616.5	*	1	1315	160	402.	1409.6	2617.5	*	1	2135	260	386.	1156.7
2614.5	1	0500	61	397.	1334.6	2616.8	*	1	1320	161	401.	1407.3	2617.4	*	1	2140	261	386.	1154.1
2614.4	1	0505	62	400.	1374.7	2617.2	*	1	1325	162	401.	1405.0	2617.4	*	1	2145	262	386.	1151.4
2614.4	1	0510	63	402.	1414.6	2617.5	*	1	1330	163	401.	1402.8	2617.4	*	1	2150	263	386.	1148.8
2614.3	1	0515	64	404.	1453.5	2617.8	*	1	1335	164	401.	1400.5	2617.4	*	1	2155	264	386.	1146.2
2614.3	1	0520	65	406.	1490.7	2618.5	*	1	1340	165	401.	1398.2	2617.4	*	1	2200	265	386.	1143.6
2614.2	1	0525	66	819.	1524.0	2619.1	*	1	1345	166	401.	1395.9	2617.4	*	1	2205	266	385.	1140.9
2614.2	1	0530	67	1713.	1550.1	2619.5	*	1	1350	167	401.	1393.6	2617.3	*	1	2210	267	385.	1138.3
2614.1	1	0535	68	2655.	1566.9	2619.7	*	1	1355	168	401.	1391.3	2617.3	*	1	2215	268	385.	1135.7
2614.1	1	0540	69																

1	0130	19	87.	10.5	2579.9	*	1	0950	119	406.	1496.1	2618.6	*	1	1810	219	393.	1262.7
2616.2 1	0135	20	91.	11.4	2580.1	*	1	0955	120	406.	1494.1	2618.6	*	1	1815	220	393.	1260.1
2616.2 1	0140	21	94.	12.4	2580.2	*	1	1000	121	406.	1492.1	2618.5	*	1	1820	221	393.	1257.4
2616.2 1	0145	22	98.	13.6	2580.4	*	1	1005	122	406.	1490.0	2618.5	*	1	1825	222	393.	1254.8
2616.1 1	0150	23	104.	15.3	2580.7	*	1	1010	123	406.	1488.0	2618.4	*	1	1830	223	393.	1252.2
2616.1 1	0155	24	111.	17.6	2581.0	*	1	1015	124	406.	1486.0	2618.4	*	1	1835	224	393.	1249.6
2616.1 1	0200	25	121.	20.6	2581.5	*	1	1020	125	406.	1483.9	2618.3	*	1	1840	225	392.	1247.0
2616.0 1	0205	26	133.	24.3	2582.1	*	1	1025	126	406.	1481.9	2618.3	*	1	1845	226	392.	1244.4
2616.0 1	0210	27	146.	28.5	2582.7	*	1	1030	127	405.	1479.8	2618.2	*	1	1850	227	392.	1241.8
2616.0 1	0215	28	161.	33.1	2583.4	*	1	1035	128	405.	1477.7	2618.2	*	1	1855	228	392.	1239.1
2616.0 1	0220	29	176.	37.7	2584.2	*	1	1040	129	405.	1475.7	2618.1	*	1	1900	229	392.	1236.5
2615.9 1	0225	30	191.	42.3	2584.9	*	1	1045	130	405.	1473.6	2618.1	*	1	1905	230	392.	1233.9
2615.9 1	0230	31	196.	47.0	2585.3	*	1	1050	131	405.	1471.5	2618.0	*	1	1910	231	391.	1231.3
2615.8 1	0235	32	199.	51.8	2585.6	*	1	1055	132	405.	1469.4	2618.0	*	1	1915	232	391.	1228.6
2615.8 1	0240	33	201.	57.0	2586.0	*	1	1100	133	405.	1467.3	2618.0	*	1	1920	233	391.	1226.0
2615.7 1	0245	34	205.	62.9	2586.4	*	1	1105	134	405.	1465.2	2618.0	*	1	1925	234	391.	1223.4
2615.7 1	0250	35	208.	69.5	2586.9	*	1	1110	135	405.	1463.1	2617.9	*	1	1930	235	391.	1220.8
2615.7 1	0255	36	212.	76.9	2587.4	*	1	1115	136	404.	1461.0	2617.9	*	1	1935	236	391.	1218.1
2615.6 1	0300	37	217.	84.8	2588.0	*	1	1120	137	404.	1458.9	2617.9	*	1	1940	237	390.	1215.5
2615.6 1	0305	38	221.	93.1	2588.6	*	1	1125	138	404.	1456.8	2617.9	*	1	1945	238	390.	1212.9
2615.5 1	0310	39	226.	101.9	2589.2	*	1	1130	139	404.	1454.6	2617.9	*	1	1950	239	390.	1210.3
2615.5 1	0315	40	231.	111.3	2589.8	*	1	1135	140	404.	1452.5	2617.8	*	1	1955	240	390.	1207.6
2615.4 1	0320	41	236.	122.1	2590.4	*	1	1140	141	404.	1450.4	2617.8	*	1	2000	241	390.	1205.0
2615.4 1	0325	42	243.	136.1	2591.0	*	1	1145	142	404.	1448.2	2617.8	*	1	2005	242	389.	1202.4
2615.3 1	0330	43	253.	157.0	2592.0	*	1	1150	143	404.	1446.0	2617.8	*	1	2010	243		

1	0525	66	407.	1508.3	2618.9	*	1	1345	166	401.	1394.7	2617.3	*	1	2205	266	385.	1139.3	
2614.2	1	0530	67	1269.	1537.1	2619.3	*	1	1350	167	401.	1392.4	2617.3	*	1	2210	267	385.	1136.6
2614.1	1	0535	68	2055.	1557.4	2619.5	*	1	1355	168	400.	1390.1	2617.3	*	1	2215	268	385.	1134.0
2614.1	1	0540	69	2819.	1569.6	2619.7	*	1	1400	169	400.	1387.8	2617.3	*	1	2220	269	385.	1131.4
2614.0	1	0545	70	3188.	1575.4	2619.8	*	1	1405	170	400.	1385.4	2617.3	*	1	2225	270	385.	1128.8
2614.0	1	0550	71	3320.	1577.5	2619.8	*	1	1410	171	400.	1383.1	2617.2	*	1	2230	271	384.	1126.1
2613.9	1	0555	72	3318.	1577.5	2619.8	*	1	1415	172	400.	1380.7	2617.2	*	1	2235	272	384.	1123.5
2613.9	1	0600	73	3247.	1576.4	2619.8	*	1	1420	173	400.	1378.4	2617.2	*	1	2240	273	384.	1120.9
2613.8	1	0605	74	3145.	1574.8	2619.7	*	1	1425	174	400.	1376.0	2617.2	*	1	2245	274	384.	1118.3
2613.8	1	0610	75	3034.	1573.0	2619.7	*	1	1430	175	400.	1373.7	2617.2	*	1	2250	275	384.	1115.7
2613.7	1	0615	76	2923.	1571.2	2619.7	*	1	1435	176	399.	1371.3	2617.1	*	1	2255	276	384.	1113.0
2613.7	1	0620	77	2816.	1569.5	2619.7	*	1	1440	177	399.	1368.9	2617.1	*	1	2300	277	383.	1110.4
2613.6	1	0625	78	2713.	1567.9	2619.7	*	1	1445	178	399.	1366.5	2617.1	*	1	2305	278	383.	1107.8
2613.6	1	0630	79	2614.	1566.3	2619.6	*	1	1450	179	399.	1364.1	2617.1	*	1	2310	279	383.	1105.2
2613.5	1	0635	80	2517.	1564.7	2619.6	*	1	1455	180	399.	1361.7	2617.1	*	1	2315	280	383.	1102.6
2613.5	1	0640	81	2423.	1563.2	2619.6	*	1	1500	181	399.	1359.2	2617.0	*	1	2320	281	383.	1099.9
2613.5	1	0645	82	2333.	1561.8	2619.6	*	1	1505	182	399.	1356.8	2617.0	*	1	2325	282	382.	1097.3
2613.4	1	0650	83	2247.	1560.4	2619.6	*	1	1510	183	398.	1354.3	2617.0	*	1	2330	283	382.	1094.7
2613.4	1	0655	84	2165.	1559.1	2619.6	*	1	1515	184	398.	1351.9	2617.0	*	1	2335	284	382.	1092.1
2613.3	1	0700	85	2089.	1557.9	2619.5	*	1	1520	185	398.	1349.4	2616.9	*	1	2340	285	382.	1089.5
2613.3	1	0705	86	2017.	1556.7	2619.5	*	1	1525	186	398.	1347.0	2616.9	*	1	2345	286	382.	1086.9
2613.2	1	0710	87	1947.	1555.6	2619.5	*	1	1530	187	398.	1344.5	2616.9	*	1	2350	287	382.	1084.2
2613.2	1	0715	88	1878.	1554.5	2619.5	*	1	1535	188	398.	1342.0	2616.9	*	1	2355	288	381.	1081.6
2613.1	1	0720	89	1826.	1553.4	2619.5	*	1	1540	189	398.	1339.5	2616.9	*	2	0000	289	381.	1079.0
2613.1	1	0725	90	1779.	1552.0	2619.5	*	1	1545	190	397.	1337.0	2616.8	*	2	0005	290	381.	1076.4
2613.0	1	0730	91	1722.	1550.3	2619.5	*	1	1550	191	397.	1334.5	2616.8	*	2	0010	291	381.	1073.8
2613.0	1	0735	92	1654.	1548.4	2619.4	*	1	1555	192	397.	1332.0	2616.8	*	2	0015	292	381.	1071.2
2612.9	1	0740	93	1579.	1546.1	2619.4	*	1	1600	193	397.	1329.5	2616.8	*	2	0020	293	381.	1068.6
2612.9	1	0745	94	1500.	1543.8	2619.4	*	1	1605	194	397.	1327.0	2616.8	*	2	0025	294	380.	1066.0
2612.8	1	0750	95	1422.	1541.6	2619.4	*	1	1610	195	397.	1324.4	2616.7	*	2	0030	295	380.	1063.4
2612.8	1	0755	96	1350.	1539.5	2619.3	*	1	1615	196	397.	1321.9	2616.7	*	2	0035	296	380.	1060.8
2612.7	1	0800	97	1283.	1537.5	2619.3	*	1	1620	197	396.	1319.4	2616.7	*	2	0040	297	380.	1058.1
2612.7	1	0805	98	1220.	1535.7	2619.3	*	1	1625	198	396.	1316.8	2616.7	*	2	0045	298	380.	1055.5
2612.6	1	0810	99	1158.	1533.9	2619.3	*	1	1630	199	396.	1314.3	2616.6	*	2	0050	299	380.	1052.9
2612.6	1	0815	100	1095.	1532.1	2619.2	*	1	1635	200	396.	1311.7	2616.6	*	2	0055	300	379.	1050.3
2612.5																			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW			24.92-HR
+	(CFS)	(HR)		24-HR	72-HR		
			(CFS)				
+	3320.	5.83	1283.	586.	565.	565.	
			.523	.957	.957	.957	
			(INCHES)				
			(AC-FT)	1163.	1163.	1163.	
			636.				
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE			24.92-HR
+	(AC-FT)	(HR)		24-HR	72-HR		
	1578.	5.83	1525.	1169.	1126.	1126.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE			24.92-HR
+	(FEET)	(HR)		24-HR	72-HR		
	2619.78	5.83	2619.04	2612.62	2611.28	2611.28	
CUMULATIVE AREA =				22.79	SQ MI		

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .90

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
STAGE																					
2616.6	1	0000	1	0.	.0	2576.0	*	1	0820	101	1014.	1529.7	2619.2	*	1	1640	201	396.	1308.1		
2616.6	1	0005	2	0.	.0	2576.0	*	1	0825	102	947.	1527.8	2619.2	*	1	1645	202	396.	1305.5		
2616.6	1	0010	3	0.	.0	2576.0	*	1	0830	103	880.	1525.8	2619.2	*	1	1650	203	396.	1302.9		
2616.5	1	0015	4	0.	.0	2576.0	*	1	0835	104	813.	1523.8	2619.1	*	1	1655	204	395.	1300.4		
2616.5	1	0020	5	0.	.0	2576.0	*	1	0840	105	746.	1521.9	2619.1	*	1	1700	205	395.	1297.8		
2616.5	1	0025	6	0.	.0	2576.0	*	1	0845	106	680.	1520.0	2619.1	*	1	1705	206	395.	1295.2		
2616.5	1	0030	7	0.	.0	2576.0	*	1	0850	107	616.	1518.1	2619.1	*	1	1710	207	395.	1292.6		
2616.4	1	0035	8	1.	.1	2576.0	*	1	0855	108	553.	1516.3	2619.1	*	1	1715	208	395.	1290.1		
2616.4	1	0040	9	2.	.3	2576.1	*	1	0900	109	492.	1514.5	2619.0	*	1	1720	209	395.	1287.5		
2616.4	1	0045	10	5.	.6	2576.2	*	1	0905	110	434.	1512.8	2619.0	*	1	1725	210	395.	1284.9		
2616.4	1	0050	11	9.	1.1	2576.4	*	1	0910	111	407.	1511.1	2619.0	*	1	1730	211	394.	1282.3		
2616.4	1	0055	12	16.	1.9	2576.7	*	1	0915	112	407.	1509.4	2618.9	*	1	1735	212	394.	1279.7		
2616.3	1	0100	13	24.	3.0	2577.1	*	1	0920	113	407.	1507.5	2618.9	*	1	1740	213	394.	1277.1		
2616.3	1	0105	14	35.	4.2	2577.6	*	1	0925	114	407.	1505.6	2618.8	*	1	1745	214	394.	1274.5		
2616.3	1	0110	15	46.	5.6	2578.1	*	1	0930	115	407.	1503.6	2618.8	*	1	1750	215	394.	1271.9		
2616.3	1	0115	16	58.	7.0	2578.6	*	1	0935	116	406.	1501.6	2618.7	*	1	1755	216	394.	1269.3		
2616.3	1	0120	17	68.	8.3	2579.1	*	1	0940	117	406.	1499.6	2618.7	*	1	1800	217	394.	1266.7		
2616.2	1	0125	18	77.	9.3	2579.5	*	1	0945	118	406.	1497.6	2618.6	*	1	1805	218	393.	1264.1		
2616.2	1	0130	19	85.	10.3	2579.8	*	1	0950	119	406.	1495.6	2618.6	*	1	1810	219	393.	1261.5		
2616.2	1	0135	20	90.	11.1	2580.1	*	1	0955	120	406.	1493.5	2618.6	*	1	1815	220	393.	1258.9		
2616.2	1	0140	21	93.	12.1	2580.2	*	1	1000	121	406.	1491.5	2618.5	*	1	1820	221	393.	1256.3		
2616.1	1	0145	22	97.	13.3	2580.4	*	1	1005	122	406.	1489.4	2618.5	*	1	1825	222	393.	1253.7		
2616.1	1	0150	23	102.	14.9	2580.6	*	1	1010	123	406.	1487.4	2618.4	*	1	1830	223	393.	1251.1		
2616.1	1	0155	24	110.	17.2	2581.0	*	1	1015	124	406.	1485.4	2618.4	*	1	1835	224	392.	1248.4		
2616.1	1	0200	25	119.	20.1	2581.4	*	1	1020	125	406.	1483.3	2618.3	*	1	1840	225	392.	1245.8		
2616.1	1	0205	26	131.	23.7	2582.0	*	1	1025	126	406.	1481.2	2618.3	*	1	1845	226	392.	1243.2		
2616.0	1	0210	27	144.	27.9	2582.6	*	1	1030	127	405.	1479.2	2618.2	*	1	1850	227	392.	1240.6		
2616.0	1	0215	28	159.	32.4	2583.3	*	1	1035	128	405.	1477.1	2618.2	*	1	1855	228	392.	1238.0		
2616.0	1	0220	29	174.	37.0	2584.0	*	1	1040	129	405.	1475.0	2618.1	*	1	1900	229	392.	1235.3		
2615.9	1	0225	30	189.	41.5	2584.7	*	1	1045	130	405.	1473.0	2618.1	*	1	1905	230	392.	1232.7		
2615.9	1	0230	31	196.	46.1	2585.2	*	1	1050	131	405.	1470.9	2618.0	*	1	1910	231	391.	1230.1		
2615.8	1	0235	32	198.	50.9	2585.5	*	1	1055	132	405.	1468.8	2618.0	*	1	1915	232	391.	1227.5		
2615.8	1	0240	33	201.	56.0	2585.9	*	1	1100	133	405.	1466.7	2618.0	*	1	1920	233	391.	1224.8		
2615.7	1	0245	34	204.	61.8	2586.3	*	1	1105	134	405.	1464.6	2617.9	*	1	1925	234	391.	1222.2		
2615.7	1	0250	35	208.	68.3	2586.8	*	1	1110	135	405.	1462.5	2617.9	*	1	1930	235	391.	1219.6		
2615.6	1	0255	36	212.	75.5	2587.3	*	1	1115	136	404.	1460.3	2617.9	*	1	1935	236	390.	1217.0		
2615.6	1	0300	37	216.	83.4	2587.9	*	1	1120	137	404.	1458.2	2617.9	*	1	1940	237	390.	1214.3		
2615.5	1	0305	38	220.	91.6	2588.4	*	1	1125	138	404.	1456.1	2617.9	*	1	1945	238	390.	1211.7		
2615.5	1	0310	39	225.	100.2	2589.1	*	1	1130	139	404.	1453.9	2617.9	*	1	1950	239	390.	1209.1		
2615.4	1	0315	40	230.	109.5	2589.7	*	1	1135	140	404.	1451.8	2617.8	*	1	1955	240	390.	1206.4		

1	0320	41	235.	120.1	2590.3	*	1	1140	141	404.	1449.7	2617.8	*	1	2000	241	390.	1203.8	
2615.3	1	0325	42	242.	134.0	2590.9	*	1	1145	142	404.	1447.5	2617.8	*	1	2005	242	389.	1201.2
2615.3	1	0330	43	252.	154.6	2591.9	*	1	1150	143	404.	1445.3	2617.8	*	1	2010	243	389.	1198.6
2615.2	1	0335	44	268.	187.4	2593.4	*	1	1155	144	403.	1443.2	2617.8	*	1	2015	244	389.	1195.9
2615.2	1	0340	45	288.	237.8	2595.4	*	1	1200	145	403.	1441.0	2617.7	*	1	2020	245	389.	1193.3
2615.1	1	0345	46	299.	308.4	2597.3	*	1	1205	146	403.	1438.8	2617.7	*	1	2025	246	389.	1190.7
2615.1	1	0350	47	314.	396.7	2599.6	*	1	1210	147	403.	1436.6	2617.7	*	1	2030	247	389.	1188.0
2615.0	1	0355	48	326.	496.2	2601.8	*	1	1215	148	403.	1434.4	2617.7	*	1	2035	248	388.	1185.4
2615.0	1	0400	49	338.	598.8	2604.1	*	1	1220	149	403.	1432.2	2617.7	*	1	2040	249	388.	1182.8
2614.9	1	0405	50	349.	698.0	2606.1	*	1	1225	150	403.	1430.0	2617.6	*	1	2045	250	388.	1180.1
2614.9	1	0410	51	358.	789.3	2607.8	*	1	1230	151	403.	1427.8	2617.6	*	1	2050	251	388.	1177.5
2614.8	1	0415	52	366.	870.9	2609.3	*	1	1235	152	402.	1425.6	2617.6	*	1	2055	252	388.	1174.9
2614.8	1	0420	53	372.	942.6	2610.6	*	1	1240	153	402.	1423.4	2617.6	*	1	2100	253	387.	1172.2
2614.7	1	0425	54	376.	1004.9	2611.7	*	1	1245	154	402.	1421.2	2617.6	*	1	2105	254	387.	1169.6
2614.7	1	0430	55	380.	1059.1	2612.7	*	1	1250	155	402.	1418.9	2617.6	*	1	2110	255	387.	1167.0
2614.6	1	0435	56	383.	1106.9	2613.6	*	1	1255	156	402.	1416.7	2617.5	*	1	2115	256	387.	1164.4
2614.6	1	0440	57	386.	1150.1	2614.4	*	1	1300	157	402.	1414.4	2617.5	*	1	2120	257	387.	1161.7
2614.5	1	0445	58	389.	1190.5	2615.1	*	1	1305	158	402.	1412.2	2617.5	*	1	2125	258	387.	1159.1
2614.5	1	0450	59	391.	1229.7	2615.8	*	1	1310	159	402.	1409.9	2617.5	*	1	2130	259	386.	1156.5
2614.4	1	0455	60	394.	1268.6	2616.2	*	1	1315	160	401.	1407.6	2617.5	*	1	2135	260	386.	1153.8
2614.4	1	0500	61	396.	1307.9	2616.6	*	1	1320	161	401.	1405.4	2617.4	*	1	2140	261	386.	1151.2
2614.3	1	0505	62	398.	1347.4	2616.9	*	1	1325	162	401.	1403.1	2617.4	*	1	2145	262	386.	1148.6
2614.3	1	0510	63	400.	1386.8	2617.3	*	1	1330	163	401.	1400.8	2617.4	*	1	2150	263	386.	1146.0
2614.2	1	0515	64	402.	1425.2	2617.6	*	1	1335	164	401.	1398.5	2617.4	*	1	2155	264	386.	1143.3
2614.2	1	0520	65	4															

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)				
+ 3205.	5.92	1249.	578.	557.	557.	
		(INCHES)	.510	.943	.943	.943
		(AC-FT)	619.	1146.	1146.	1146.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
1576.	5.92	1524.	1168.	1125.	1125.	
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
2619.76	5.92	2619.02	2612.59	2611.25	2611.25	
		CUMULATIVE AREA =	22.79	SQ MI		

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .89

DA STAGE	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
1		0000	1	0.	.0	2576.0	*	1		0820	101	989.	1529.0	2619.2	*	1		1640	201	396.	1306.4
2616.6	1	0005	2	0.	.0	2576.0	*	1		0825	102	922.	1527.0	2619.2	*	1		1645	202	396.	1303.9
2616.6	1	0010	3	0.	.0	2576.0	*	1		0830	103	854.	1525.0	2619.2	*	1		1650	203	395.	1301.3
2616.5	1	0015	4	0.	.0	2576.0	*	1		0835	104	786.	1523.1	2619.1	*	1		1655	204	395.	1298.7
2616.5	1	0020	5	0.	.0	2576.0	*	1		0840	105	720.	1521.1	2619.1	*	1		1700	205	395.	1296.1
2616.5	1	0025	6	0.	.0	2576.0	*	1		0845	106	655.	1519.2	2619.1	*	1		1705	206	395.	1293.6
2616.4	1	0030	7	0.	.0	2576.0	*	1		0850	107	591.	1517.4	2619.1	*	1		1710	207	395.	1291.0
2616.4	1	0035	8	1.	.1	2576.0	*	1		0855	108	529.	1515.6	2619.0	*	1		1715	208	395.	1288.4
2616.4	1	0040	9	2.	.3	2576.1	*	1		0900	109	469.	1513.8	2619.0	*	1		1720	209	395.	1285.8
2616.4	1	0045	10	5.	.6	2576.2	*	1		0905	110	413.	1512.2	2619.0	*	1		1725	210	394.	1283.2
2616.4	1	0050	11	9.	1.0	2576.4	*	1		0910	111	407.	1510.5	2619.0	*	1		1730	211	394.	1280.6
2616.3	1	0055	12	15.	1.8	2576.7	*	1		0915	112	407.	1508.7	2618.9	*	1		1735	212	394.	1278.0
2616.3	1	0100	13	23.	2.8	2577.0	*	1		0920	113	407.	1506.8	2618.9	*	1		1740	213	394.	1275.4
2616.3	1	0105	14	33.	4.1	2577.5	*	1		0925	114	407.	1504.8	2618.8	*	1		1745	214	394.	1272.8

1	0110	15	44.	5.4	2578.0	*	1	0930	115	407.	1502.8	2618.8	*	1	1750	215	394.	1270.2
2616.3 1	0115	16	55.	6.7	2578.5	*	1	0935	116	406.	1500.8	2618.7	*	1	1755	216	394.	1267.6
2616.2 1	0120	17	65.	7.9	2578.9	*	1	0940	117	406.	1498.8	2618.7	*	1	1800	217	393.	1265.0
2616.2 1	0125	18	74.	9.0	2579.3	*	1	0945	118	406.	1496.8	2618.6	*	1	1805	218	393.	1262.4
2616.2 1	0130	19	81.	9.9	2579.7	*	1	0950	119	406.	1494.8	2618.6	*	1	1810	219	393.	1259.8
2616.1 1	0135	20	88.	10.7	2580.0	*	1	0955	120	406.	1492.7	2618.5	*	1	1815	220	393.	1257.2
2616.1 1	0140	21	92.	11.6	2580.1	*	1	1000	121	406.	1490.7	2618.5	*	1	1820	221	393.	1254.5
2616.1 1	0145	22	95.	12.8	2580.3	*	1	1005	122	406.	1488.6	2618.4	*	1	1825	222	393.	1251.9
2616.1 1	0150	23	100.	14.3	2580.5	*	1	1010	123	406.	1486.6	2618.4	*	1	1830	223	393.	1249.
2616.1 1	0155	24	107.	16.5	2580.9	*	1	1015	124	406.	1484.5	2618.3	*	1	1835	224	392.	1246.7
2616.1 1	0200	25	117.	19.4	2581.3	*	1	1020	125	406.	1482.5	2618.3	*	1	1840	225	392.	1244.1
2616.0 1	0205	26	128.	22.9	2581.9	*	1	1025	126	405.	1480.4	2618.2	*	1	1845	226	392.	1241.5
2616.0 1	0210	27	141.	26.9	2582.5	*	1	1030	127	405.	1478.3	2618.2	*	1	1850	227	392.	1238.8
2615.9 1	0215	28	155.	31.3	2583.2	*	1	1035	128	405.	1476.2	2618.1	*	1	1855	228	392.	1236.2
2615.9 1	0220	29	170.	35.8	2583.9	*	1	1040	129	405.	1474.2	2618.1	*	1	1900	229	392.	1233.6
2615.8 1	0225	30	184.	40.3	2584.5	*	1	1045	130	405.	1472.1	2618.0	*	1	1905	230	391.	1231.0
2615.8 1	0230	31	195.	44.7	2585.1	*	1	1050	131	405.	1470.0	2618.0	*	1	1910	231	391.	1228.3
2615.8 1	0235	32	197.	49.4	2585.4	*	1	1055	132	405.	1467.9	2618.0	*	1	1915	232	391.	1225.7
2615.7 1	0240	33	200.	54.4	2585.8	*	1	1100	133	405.	1465.8	2618.0	*	1	1920	233	391.	1223.1
2615.7 1	0245	34	203.	60.1	2586.2	*	1	1105	134	405.	1463.6	2617.9	*	1	1925	234	391.	1220.5
2615.6 1	0250	35	207.	66.4	2586.7	*	1	1110	135	404.	1461.5	2617.9	*	1	1930	235	391.	1217.8
2615.6 1	0255	36	210.	73.5	2587.2	*	1	1115	136	404.	1459.4	2617.9	*	1	1935	236	390.	1215.2
2615.5 1	0300	37	215.	81.1	2587.7	*	1	1120	137	404.	1457.3	2617.9	*	1	1940	237	390.	1212.6
2615.5 1	0305	38	219.	89.2	2588.3	*	1	1125	138	404.	1455.1	2617.9	*	1	1945	238	390.	1209.9
2615.5 1	0310	39	223.	97.6	2588.9	*	1	1130	139	404.	1453.0	2617.8	*	1	1950	239	390.	120

1	0505	62	397.	1330.6	2616.8	*	1	1325	162	401.	1401.9	2617.4	*	1	2145	262	386.	1146.8	
2614.3	1	0510	63	399.	1369.6	2617.1	*	1	1330	163	401.	1399.6	2617.4	*	1	2150	263	386.	1144.2
2614.3	1	0515	64	401.	1407.7	2617.5	*	1	1335	164	401.	1397.2	2617.4	*	1	2155	264	385.	1141.5
2614.2	1	0520	65	403.	1444.0	2617.8	*	1	1340	165	401.	1394.9	2617.3	*	1	2200	265	385.	1138.9
2614.2	1	0525	66	405.	1478.1	2618.2	*	1	1345	166	401.	1392.6	2617.3	*	1	2205	266	385.	1136.3
2614.1	1	0530	67	407.	1509.4	2618.9	*	1	1350	167	400.	1390.3	2617.3	*	1	2210	267	385.	1133.7
2614.1	1	0535	68	1201.	1535.2	2619.3	*	1	1355	168	400.	1387.9	2617.3	*	1	2215	268	385.	1131.0
2614.0	1	0540	69	1826.	1553.4	2619.5	*	1	1400	169	400.	1385.6	2617.3	*	1	2220	269	385.	1128.4
2614.0	1	0545	70	2515.	1564.7	2619.6	*	1	1405	170	400.	1383.2	2617.2	*	1	2225	270	384.	1125.8
2613.9	1	0550	71	2872.	1570.4	2619.7	*	1	1410	171	400.	1380.9	2617.2	*	1	2230	271	384.	1123.1
2613.9	1	0555	72	3017.	1572.7	2619.7	*	1	1415	172	400.	1378.5	2617.2	*	1	2235	272	384.	1120.5
2613.8	1	0600	73	3042.	1573.1	2619.7	*	1	1420	173	400.	1376.1	2617.2	*	1	2240	273	384.	1117.9
2613.8	1	0605	74	3002.	1572.5	2619.7	*	1	1425	174	400.	1373.8	2617.2	*	1	2245	274	384.	1115.3
2613.7	1	0610	75	2930.	1571.3	2619.7	*	1	1430	175	399.	1371.4	2617.1	*	1	2250	275	384.	1112.7
2613.7	1	0615	76	2845.	1570.0	2619.7	*	1	1435	176	399.	1368.9	2617.1	*	1	2255	276	383.	1110.0
2613.6	1	0620	77	2755.	1568.5	2619.7	*	1	1440	177	399.	1366.5	2617.1	*	1	2300	277	383.	1107.4
2613.6	1	0625	78	2663.	1567.1	2619.7	*	1	1445	178	399.	1364.1	2617.1	*	1	2305	278	383.	1104.8
2613.5	1	0630	79	2571.	1565.6	2619.6	*	1	1450	179	399.	1361.7	2617.1	*	1	2310	279	383.	1102.2
2613.5	1	0635	80	2479.	1564.1	2619.6	*	1	1455	180	399.	1359.2	2617.0	*	1	2315	280	383.	1099.6
2613.4	1	0640	81	2388.	1562.7	2619.6	*	1	1500	181	399.	1356.8	2617.0	*	1	2320	281	382.	1096.9
2613.4	1	0645	82	2300.	1561.3	2619.6	*	1	1505	182	398.	1354.3	2617.0	*	1	2325	282	382.	1094.3
2613.3	1	0650	83	2215.	1559.9	2619.6	*	1	1510	183	398.	1351.9	2617.0	*	1	2330	283	382.	1091.7
2613.3	1	0655	84	2134.	1558.6	2619.6	*	1	1515	184	398.	1349.4	2616.9	*	1	2335	284	382.	1089.1
2613.3	1	0700	85	2057.	1557.4	2619.5	*	1	1520	185	398.	1346.9	2616.9	*	1	2340	285	382.	1086.5
2613.2	1	0705	86	1984.	1556.2	2619.5	*	1	1525	186	398.	1344.4	2616.9	*	1	2345	286	382.	1083.9
2613.2	1	0710	87	1912.	1555.1	2619.5	*	1	1530	187	398.	1341.9	2616.9	*	1	2350	287	381.	1081.2
2613.1	1	0715	88	1846.	1553.9	2619.5	*	1	1535	188	398.	1339.4	2616.9	*	1	2355	288	381.	1078.6
2613.1	1	0720	89	1801.	1552.6	2619.5	*	1	1540	189	397.	1336.9	2616.8	*	2	0000	289	381.	1076.0
2613.0	1	0725	90	1747.	1551.1	2619.5	*	1	1545	190	397.	1334.4	2616.8	*	2	0005	290	381.	1073.4
2613.0	1	0730	91	1683.	1549.2	2619.4	*	1	1550	191	397.	1331.9	2616.8	*	2	0010	291	381.	1070.8
2612.9	1	0735	92	1610.	1547.1	2619.4	*	1	1555	192	397.	1329.4	2616.8	*	2	0015	292	381.	1068.2
2612.9	1	0740	93	1531.	1544.8	2619.4	*	1	1600	193	397.	1326.8	2616.8	*	2	0020	293	380.	1065.6
2612.8	1	0745	94	1452.	1542.5	2619.4	*	1	1605	194	397.	1324.3	2616.7	*	2	0025	294	380.	1063.0
2612.8	1	0750	95	1377.	1540.3	2619.3	*	1	1610	195	397.	1321.8	2616.7	*	2	0030	295	380.	1060.4
2612.7	1	0755	96	1308.	1538.3	2619.3	*	1	1615	196	396.	1319.2	2616.7	*	2	0035	296	380.	1057.8
2612.7	1	0800	97	1243.	1536.4	2619.3	*	1	1620	197	396.	1316.7	2616.7	*	2	0040	297	380.	1055.2
2612.6	1	0805	98	1181.	1534.6	2619.3	*	1	1625	198	396.	1314.1	2616.6	*	2	0045	298	379.	1052.6
2612.6	1	0810	99	1118.	1532.7	2619.2	*	1	1630	199	396.	1311.6	2616.6	*	2	0050	299	379.	1050.0
2612.5	1	0815	100	1054.	1530.9	2619.2	*	1	1635	200	396.	1309.0	2616.6	*	2	0055	300	379.	1047.4
2612.5																			
							*							*					

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
		(CFS)					
+	3042.	6.00	1199.	565.	544.	544.	
		(INCHES)	.489	.922	.922	.922	
		(AC-FT)	595.	1120.	1121.	1121.	
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	1573.	6.00	1522.	1165.	1122.	1122.	

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .88

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	2576.0	*	1		0820	101	952.	1527.9	2619.2	*	1		1640	201	396.	1304.2
2616.6	1	0005	2	0.	.0	2576.0	*	1		0825	102	885.	1525.9	2619.2	*	1		1645	202	395.	1301.6
2616.5	1	0010	3	0.	.0	2576.0	*	1		0830	103	817.	1524.0	2619.1	*	1		1650	203	395.	1299.1
2616.5	1	0015	4	0.	.0	2576.0	*	1		0835	104	750.	1522.0	2619.1	*	1		1655	204	395.	1296.5
2616.5	1	0020	5	0.	.0	2576.0	*	1		0840	105	685.	1520.1	2619.1	*	1		1700	205	395.	1293.9
2616.5	1	0025	6	0.	.0	2576.0	*	1		0845	106	620.	1518.2	2619.1	*	1		1705	206	395.	1291.3
2616.4	1	0030	7	0.	.0	2576.0	*	1		0850	107	558.	1516.4	2619.1	*	1		1710	207	395.	1288.7
2616.4	1	0035	8	1.	.1	2576.0	*	1		0855	108	497.	1514.6	2619.0	*	1		1715	208	395.	1286.1
2616.4	1	0040	9	2.	.2	2576.1	*	1		0900	109	438.	1512.9	2619.0	*	1		1720	209	394.	1283.5
2616.4	1	0045	10	4.	.5	2576.2	*	1		0905	110	407.	1511.3	2619.0	*	1		1725	210	394.	1280.9
2616.4	1	0050	11	8.	1.0	2576.4	*	1		0910	111	407.	1509.5	2618.9	*	1		1730	211	394.	1278.3
2616.3	1	0055	12	14.	1.7	2576.6	*	1		0915	112	407.	1507.6	2618.9	*	1		1735	212	394.	1275.7
2616.3	1	0100	13	22.	2.7	2577.0	*	1		0920	113	407.	1505.7	2618.8	*	1		1740	213	394.	1273.1
2616.3	1	0105	14	32.	3.8	2577.4	*	1		0925	114	407.	1503.7	2618.8	*	1		1745	214	394.	1270.5
2616.3	1	0110	15	42.	5.1	2577.9	*	1		0930	115	406.	1501.7	2618.7	*	1		1750	215	394.	1267.9
2616.2	1	0115	16	52.	6.4	2578.4	*	1		0935	116	406.	1499.7	2618.7	*	1		1755	216	393.	1265.3
2616.2	1	0120	17	62.	7.5	2578.8	*	1		0940	117	406.	1497.7	2618.7	*	1		1800	217	393.	1262.7
2616.2	1	0125	18	70.	8.5	2579.2	*	1		0945	118	406.	1495.6	2618.6	*	1		1805	218	393.	1260.1
2616.2	1	0130	19	77.	9.4	2579.5	*	1		0950	119	406.	1493.6	2618.6	*	1		1810	219	393.	1257.5
2616.2	1	0135	20	84.	10.2	2579.8	*	1		0955	120	406.	1491.6	2618.5	*	1		1815	220	393.	1254.8
2616.1	1	0140	21	90.	11.0	2580.0	*	1		1000	121	406.	1489.5	2618.5	*	1		1820	221	393.	1252.2
2616.1	1	0145	22	93.	12.1	2580.2	*	1		1005	122	406.	1487.4	2618.4	*	1		1825	222	393.	1249.6
2616.1	1	0150	23	98.	13.6	2580.4	*	1													

2615.5	1	0300	37	213.	78.3	2587.5	*	1	1120	137	404.	1455.9	2617.9	*	1	1940	237	390.	1210.2
2615.5	1	0305	38	217.	86.2	2588.1	*	1	1125	138	404.	1453.7	2617.9	*	1	1945	238	390.	1207.6
2615.4	1	0310	39	222.	94.4	2588.6	*	1	1130	139	404.	1451.6	2617.8	*	1	1950	239	390.	1204.9
2615.4	1	0315	40	226.	103.2	2589.3	*	1	1135	140	404.	1449.4	2617.8	*	1	1955	240	389.	1202.3
2615.3	1	0320	41	232.	113.4	2590.0	*	1	1140	141	404.	1447.2	2617.8	*	1	2000	241	389.	1199.7
2615.3	1	0325	42	238.	126.7	2590.6	*	1	1145	142	404.	1445.1	2617.8	*	1	2005	242	389.	1197.0
2615.2	1	0330	43	248.	146.4	2591.5	*	1	1150	143	403.	1442.9	2617.8	*	1	2010	243	389.	1194.4
2615.2	1	0335	44	263.	177.9	2593.0	*	1	1155	144	403.	1440.7	2617.7	*	1	2015	244	389.	1191.8
2615.1	1	0340	45	286.	226.5	2595.1	*	1	1200	145	403.	1438.5	2617.7	*	1	2020	245	389.	1189.
2615.1	1	0345	46	297.	294.5	2596.9	*	1	1205	146	403.	1436.3	2617.7	*	1	2025	246	388.	1186.5
2615.0	1	0350	47	311.	380.0	2599.2	*	1	1210	147	403.	1434.1	2617.7	*	1	2030	247	388.	1183.9
2615.0	1	0355	48	324.	476.5	2601.4	*	1	1215	148	403.	1431.9	2617.7	*	1	2035	248	388.	1181.2
2614.9	1	0400	49	335.	576.2	2603.6	*	1	1220	149	403.	1429.7	2617.6	*	1	2040	249	388.	1178.6
2614.9	1	0405	50	346.	672.7	2605.6	*	1	1225	150	403.	1427.4	2617.6	*	1	2045	250	388.	1176.0
2614.8	1	0410	51	355.	761.8	2607.2	*	1	1230	151	402.	1425.2	2617.6	*	1	2050	251	388.	1173.3
2614.8	1	0415	52	363.	841.5	2608.7	*	1	1235	152	402.	1423.0	2617.6	*	1	2055	252	387.	1170.7
2614.7	1	0420	53	370.	911.5	2610.0	*	1	1240	153	402.	1420.7	2617.6	*	1	2100	253	387.	1168.1
2614.7	1	0425	54	374.	972.4	2611.1	*	1	1245	154	402.	1418.5	2617.5	*	1	2105	254	387.	1165.4
2614.6	1	0430	55	378.	1025.5	2612.1	*	1	1250	155	402.	1416.2	2617.5	*	1	2110	255	387.	1162.8
2614.6	1	0435	56	381.	1072.4	2613.0	*	1	1255	156	402.	1413.9	2617.5	*	1	2115	256	387.	1160.2
2614.5	1	0440	57	384.	1114.8	2613.7	*	1	1300	157	402.	1411.6	2617.5	*	1	2120	257	387.	1157.5
2614.5	1	0445	58	386.	1154.4	2614.4	*	1	1305	158	402.	1409.4	2617.5	*	1	2125	258	386.	1154.9
2614.5	1	0450	59	389.	1192.7	2615.1	*	1	1310	159	401.	1407.1	2617.4	*	1	2130	259	386.	1152.3
2614.4	1	0455	60	391.	1230.8	2615.8	*	1	1315	160	401.	1404.8	2617.4	*	1	2135	260	386.	1149.7
2614.4	1	0500	61																

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1570.	6.08	1519.	1162.	1119.	1119.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
2619.69	6.08	2618.96	2612.48	2611.14	2611.14

CUMULATIVE AREA = 22.79 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

OPERATION RATIO 9	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION							
				RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6	RATIO 7	RATIO 8
				.99	.98	.95	.93	.92	.91	.90	.89

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ROUTED TO + 2012.	RCP3.1	2.45	1	FLOW	2360.	2296.	2222.	2152.	2102.	2079.	2066.	2050.
4.08				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT + 408.	3-D	.33	1	FLOW	482.	471.	454.	436.	429.	424.	421.	415.
3.67				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT + 2158.	CP3.3	2.78	1	FLOW	2529.	2462.	2382.	2307.	2255.	2230.	2216.	2198.
4.08				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
ROUTED TO + 2154.	RCP3.3	2.78	1	FLOW	2526.	2459.	2379.	2303.	2251.	2226.	2212.	2195.
4.08				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT + 340.	3-3	.17	1	FLOW	395.	387.	374.	361.	356.	352.	350.	345.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO + 323.	R3-3	.17	1	FLOW	371.	366.	354.	342.	337.	334.	332.	328.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT + 649.	3-4	.35	1	FLOW	754.	739.	714.	689.	679.	672.	667.	659.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO + 629.	R3-4	.35	1	FLOW	727.	713.	690.	667.	658.	651.	646.	639.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT + 540.	3-5	.29	1	FLOW	628.	615.	594.	573.	565.	559.	555.	548.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO + 519.	R3-5	.29	1	FLOW	603.	587.	567.	548.	547.	537.	533.	526.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT + 1472.	CP3.2	.81	1	FLOW	1701.	1666.	1611.	1557.	1542.	1523.	1511.	1492.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO + 1401.	RCP3.2	.81	1	FLOW	1648.	1596.	1540.	1485.	1480.	1454.	1438.	1430.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT + 697.	3-E	.54	1	FLOW	819.	801.	772.	743.	732.	723.	718.	708.
3.67				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT + 3436.	CP3.4	4.14	1	FLOW	4060.	3947.	3805.	3659.	3635.	3573.	3531.	3506.
3.67				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO + 3362.	RCP3.4	4.14	1	FLOW	4002.	3882.	3740.	3598.	3563.	3505.	3469.	3435.
3.67				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT + 175.	3-6	.09	1	FLOW	202.	199.	192.	185.	183.	181.	179.	177.

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+ 6684. 3.67	CPDB5	6.72	1	FLOW TIME	7890. 3.67	7696. 3.67	7415. 3.67	7132. 3.67	7048. 3.67	6952. 3.67	6894. 3.67	6813. 3.67
ROUTED TO + 2117. 5.00	DB5	6.72	1	FLOW TIME	2268. 5.08	2246. 5.08	2209. 5.08	2173. 5.08	2160. 5.08	2149. 5.08	2142. 5.00	2132. 5.00
				** PEAK STAGES IN FEET **								
3558.79 5.00			1	STAGE TIME	3562.00 5.08	3561.52 5.08	3560.75 5.08	3559.99 5.08	3559.70 5.08	3559.47 5.08	3559.32 5.00	3559.11 5.00
HYDROGRAPH AT + 498. 3.58	3-L	.32	1	FLOW TIME	579. 3.58	567. 3.58	548. 3.58	528. 3.58	521. 3.58	515. 3.58	511. 3.58	505. 3.58
2 COMBINED AT + 2214. 4.92	CP3-L	7.05	1	FLOW TIME	2375. 4.92	2351. 4.92	2312. 4.92	2274. 4.92	2260. 4.92	2248. 4.92	2241. 4.92	2230. 4.92
ROUTED TO + 2213. 4.92	RCSWAA-1	7.05	1	FLOW TIME	2373. 4.92	2349. 4.92	2311. 4.92	2273. 4.92	2258. 4.92	2247. 4.92	2240. 4.92	2229. 4.92
HYDROGRAPH AT + 839. 3.75	SWAA-2	.70	1	FLOW TIME	967. 3.75	948. 3.75	918. 3.75	887. 3.75	875. 3.75	867. 3.75	861. 3.75	851. 3.75
2 COMBINED AT + 2915. 3.83	CSWAA-2	7.75	1	FLOW TIME	3209. 3.75	3166. 3.75	3096. 3.75	3025. 3.83	2999. 3.83	2979. 3.83	2965. 3.83	2944. 3.83
ROUTED TO + 2909. 3.83	RCSWAA-2	7.75	1	FLOW TIME	3200. 3.83	3159. 3.83	3094. 3.83	3023. 3.83	2996. 3.83	2975. 3.83	2960. 3.83	2940. 3.83
HYDROGRAPH AT + 582. 3.75	SWAA-3	.58	1	FLOW TIME	682. 3.75	668. 3.75	644. 3.75	620. 3.75	611. 3.75	604. 3.75	599. 3.75	592. 3.75
2 COMBINED AT + 3491. 3.83	CSWAA-3	8.33	1	FLOW TIME	3880. 3.83	3825. 3.83	3737. 3.83	3642. 3.83	3606. 3.83	3579. 3.83	3559. 3.83	3532. 3.83
HYDROGRAPH AT + 459. 3.58	3-F	.28	1	FLOW TIME	532. 3.58	521. 3.58	504. 3.58	487. 3.58	480. 3.58	475. 3.58	471. 3.58	466. 3.58
ROUTED TO + 452. 3.58	R3-F	.28	1	FLOW TIME	523. 3.58	513. 3.58	496. 3.58	479. 3.58	472. 3.58	467. 3.58	464. 3.58	458. 3.58
HYDROGRAPH AT + 249. 3.50	3-G2	.13	1	FLOW TIME	284. 3.50	279. 3.50	271. 3.50	262. 3.50	259. 3.50	257. 3.50	255. 3.50	252. 3.50
2 COMBINED AT + 690. 3.58	CP3.8	.41	1	FLOW TIME	795. 3.58	780. 3.58	755. 3.58	731. 3.58	720. 3.58	713. 3.58	708. 3.58	700. 3.58
ROUTED TO + 677. 3.58	RCP3.8	.41	1	FLOW TIME	780. 3.58	767. 3.58	741. 3.58	716. 3.58	704. 3.58	699. 3.58	693. 3.58	686. 3.58

HYDROGRAPH AT + 350. 3.67	3-A	.34	1	FLOW TIME	422. 3.67	412. 3.67	394. 3.67	377. 3.67	370. 3.67	366. 3.67	362. 3.67	357. 3.67
ROUTED TO + 345. 3.67	R3-A	.34	1	FLOW TIME	415. 3.67	405. 3.67	388. 3.67	372. 3.67	364. 3.67	360. 3.67	356. 3.67	351. 3.67
HYDROGRAPH AT + 734. 3.67	3-B	.70	1	FLOW TIME	877. 3.67	856. 3.67	822. 3.67	788. 3.67	775. 3.67	765. 3.67	759. 3.67	748. 3.67
ROUTED TO + 731. 3.75	R3-B	.70	1	FLOW TIME	869. 3.75	849. 3.75	816. 3.75	783. 3.75	770. 3.75	761. 3.75	754. 3.75	744. 3.75
HYDROGRAPH AT + 315. 3.58	3-C	.22	1	FLOW TIME	367. 3.58	359. 3.58	347. 3.58	335. 3.58	330. 3.58	326. 3.58	324. 3.58	320. 3.58
3 COMBINED AT + 1372. 3.67	CPDBA-B	1.26	1	FLOW TIME	1633. 3.67	1595. 3.67	1533. 3.67	1471. 3.67	1446. 3.67	1428. 3.67	1416. 3.67	1396. 3.67
ROUTED TO + 135. 5.33	GPDB	1.26	1	FLOW TIME	144. 5.42	143. 5.42	141. 5.42	139. 5.42	138. 5.33	137. 5.33	137. 5.33	136. 5.33
				** PEAK STAGES IN FEET **								
24.91			1	STAGE	26.76	26.51	26.10	25.65	25.46	25.33	25.24	25.09
5.33				TIME	5.42	5.42	5.42	5.42	5.33	5.33	5.33	5.33
HYDROGRAPH AT + 411. 3.58	3-G1	.24	1	FLOW TIME	474. 3.58	465. 3.58	450. 3.58	435. 3.58	429. 3.58	425. 3.58	422. 3.58	417. 3.58
ROUTED TO + 409. 3.58	R3-G1	.24	1	FLOW TIME	472. 3.58	463. 3.58	448. 3.58	433. 3.58	428. 3.58	423. 3.58	420. 3.58	416. 3.58
2 COMBINED AT + 479. 3.58	CP3-G1	1.50	1	FLOW TIME	554. 3.58	544. 3.58	526. 3.58	508. 3.58	501. 3.58	495. 3.58	492. 3.58	486. 3.58
ROUTED TO + 470. 3.58	RCP3-G1	1.50	1	FLOW TIME	546. 3.58	536. 3.58	518. 3.58	500. 3.58	492. 3.58	487. 3.58	483. 3.58	478. 3.58
HYDROGRAPH AT + 79. 3.50	3-H1	.04	1	FLOW TIME	91. 3.50	89. 3.50	86. 3.50	83. 3.50	82. 3.50	81. 3.50	81. 3.50	80. 3.50
2 COMBINED AT + 538. 3.58	CP3-H1	1.54	1	FLOW TIME	624. 3.58	613. 3.58	592. 3.58	572. 3.58	563. 3.58	557. 3.58	553. 3.58	547. 3.58
ROUTED TO + 526. 3.58	RCP3-H1	1.54	1	FLOW TIME	614. 3.58	602. 3.58	585. 3.58	561. 3.58	552. 3.58	547. 3.58	542. 3.58	535. 3.58
HYDROGRAPH AT + 401. 3.67	3-I1	.29	1	FLOW TIME	465. 3.58	456. 3.58	441. 3.67	425. 3.67	419. 3.67	415. 3.67	412. 3.67	407. 3.67

3 COMBINED AT												
+ 1603.	CP3-9	2.24	1	FLOW	1860.	1825.	1766.	1701.	1675.	1659.	1646.	1626.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 1582.	RCP9	2.24	1	FLOW	1837.	1802.	1743.	1680.	1653.	1639.	1625.	1606.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 208.	3-O	.11	1	FLOW	237.	233.	226.	219.	216.	214.	213.	211.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 206.	R3-O	.11	1	FLOW	235.	230.	224.	217.	214.	212.	210.	208.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 222.	3-P2	.15	1	FLOW	260.	254.	245.	237.	233.	230.	229.	226.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 216.	R3-P2	.15	1	FLOW	253.	248.	239.	229.	226.	224.	222.	219.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 444.	3-P1	.24	1	FLOW	507.	498.	483.	468.	462.	457.	454.	450.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT												
+ 865.	CP3-P	.50	1	FLOW	994.	976.	945.	914.	902.	893.	886.	877.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 856.	RCP3-P	.50	1	FLOW	984.	967.	936.	905.	892.	884.	877.	867.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 352.	3-Q	.20	1	FLOW	402.	395.	383.	371.	366.	363.	361.	357.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT												
+ 1208.	CP3-Q	.70	1	FLOW	1386.	1361.	1319.	1276.	1258.	1247.	1237.	1224.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 1175.	RCP3-Q	.70	1	FLOW	1350.	1325.	1285.	1243.	1226.	1213.	1206.	1190.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 323.	3-H2	.18	1	FLOW	369.	362.	352.	341.	336.	333.	331.	328.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT												
+ 1498.	CP3-H2	.88	1	FLOW	1719.	1688.	1636.	1584.	1563.	1546.	1537.	1518.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 1476.	RCPH-2	.88	1	FLOW	1696.	1664.	1614.	1560.	1540.	1523.	1516.	1494.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 174.	3-I2	.12	1	FLOW	201.	197.	191.	184.	182.	180.	179.	177.

3.58					TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT												
+ 3232.	CP3.10	3.25	1	FLOW		3734.	3663.	3548.	3425.	3374.	3341.	3320.
				TIME		3.58	3.58	3.58	3.58	3.58	3.58	3.58
3.58												
ROUTED TO												
+ 3214.	RCP3.10	3.25	1	FLOW		3715.	3645.	3528.	3406.	3355.	3321.	3300.
				TIME		3.58	3.58	3.58	3.58	3.58	3.58	3.58
3.58												
HYDROGRAPH AT												
+ 226.	3-H3	.14	1	FLOW		256.	252.	245.	237.	234.	232.	231.
				TIME		3.58	3.58	3.58	3.58	3.58	3.58	3.58
3.58												
2 COMBINED AT												
+ 3439.	CP3.11	3.39	1	FLOW		3972.	3897.	3772.	3644.	3589.	3554.	3531.
				TIME		3.58	3.58	3.58	3.58	3.58	3.58	3.58
3.58												
ROUTED TO												
+ 3301.	RCSHFH-9	3.39	1	FLOW		3787.	3735.	3617.	3486.	3455.	3414.	3383.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 6465.	CRCSWFH9	11.72	1	FLOW		7399.	7289.	7071.	6836.	6763.	6695.	6637.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
ROUTED TO												
+ 6407.	RCRCSWFH	11.72	1	FLOW		7343.	7231.	7014.	6781.	6705.	6638.	6579.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
HYDROGRAPH AT												
+ 203.	11A-1	.21	1	FLOW		241.	235.	227.	218.	214.	212.	210.
				TIME		3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
2 COMBINED AT												
+ 6606.	C11A-1	11.92	1	FLOW		7579.	7462.	7236.	6994.	6915.	6845.	6785.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
ROUTED TO												
+ 6559.	RC11A-1	11.92	1	FLOW		7477.	7361.	7136.	6894.	6813.	6756.	6708.
				TIME		3.67	3.67	3.67	3.75	3.75	3.75	3.75
3.75												
HYDROGRAPH AT												
+ 245.	11A-3	.19	1	FLOW		285.	279.	270.	260.	257.	254.	252.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 6781.	C11A-3	12.12	1	FLOW		7762.	7641.	7406.	7151.	7065.	6993.	6936.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.75
3.75												
ROUTED TO												
+ 6655.	RC11A-3	12.12	1	FLOW		7632.	7508.	7283.	7040.	6955.	6887.	6834.
				TIME		3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
HYDROGRAPH AT												
+ 170.	3A	.18	1	FLOW		203.	198.	190.	182.	179.	177.	176.
				TIME		3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 6816.	C3A	12.30	1	FLOW		7824.	7695.	7463.	7213.	7125.	7055.	7000.
				TIME		3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
ROUTED TO												

HYDROGRAPH AT + 6599. 3.92	RC3A	12.30	1	FLOW TIME	7538. 3.92	7412. 3.92	7196. 3.92	6966. 3.92	6880. 3.92	6816. 3.92	6768. 3.92	6700. 3.92
HYDROGRAPH AT + 204. 3.67	3B-1	.26	1	FLOW TIME	248. 3.67	242. 3.67	231. 3.67	221. 3.67	216. 3.67	213. 3.67	211. 3.67	208. 3.67
2 COMBINED AT + 6743. 3.92	C3B-1	12.55	1	FLOW TIME	7711. 3.92	7581. 3.92	7358. 3.92	7121. 3.92	7033. 3.92	6967. 3.92	6917. 3.92	6847. 3.92
ROUTED TO + 6697. 3.92	RC3B-1	12.55	1	FLOW TIME	7672. 3.92	7540. 3.92	7316. 3.92	7080. 3.92	6988. 3.92	6922. 3.92	6875. 3.92	6803. 3.92
HYDROGRAPH AT + 365. 3.83	11B-2	.44	1	FLOW TIME	433. 3.83	423. 3.83	407. 3.83	391. 3.83	384. 3.83	380. 3.83	377. 3.83	371. 3.83
ROUTED TO + 362. 3.92	R11B-2	.44	1	FLOW TIME	428. 3.92	419. 3.92	403. 3.92	387. 3.92	381. 3.92	377. 3.92	374. 3.92	368. 3.92
HYDROGRAPH AT + 437. 3.67	11B-1	.39	1	FLOW TIME	514. 3.67	503. 3.67	485. 3.67	467. 3.67	459. 3.67	454. 3.67	451. 3.67	445. 3.67
2 COMBINED AT + 750. 3.75	C11B-1	.84	1	FLOW TIME	886. 3.75	867. 3.75	834. 3.75	802. 3.75	789. 3.75	780. 3.75	773. 3.75	763. 3.75
ROUTED TO + 737. 3.83	RC11B-1	.84	1	FLOW TIME	872. 3.75	853. 3.75	820. 3.75	788. 3.75	776. 3.75	767. 3.75	761. 3.75	750. 3.75
HYDROGRAPH AT + 319. 3.75	8B-1	.30	1	FLOW TIME	373. 3.75	366. 3.75	353. 3.75	340. 3.75	335. 3.75	331. 3.75	328. 3.75	324. 3.75
2 COMBINED AT + 1056. 3.75	C8B-1	1.14	1	FLOW TIME	1246. 3.75	1219. 3.75	1173. 3.75	1128. 3.75	1111. 3.75	1098. 3.75	1089. 3.75	1075. 3.75
ROUTED TO + 1040. 3.83	RC8B-1	1.14	1	FLOW TIME	1222. 3.83	1195. 3.75	1152. 3.83	1110. 3.83	1090. 3.83	1081. 3.83	1071. 3.83	1055. 3.83
HYDROGRAPH AT + 503. 3.75	8B-2	.42	1	FLOW TIME	574. 3.75	564. 3.75	547. 3.75	530. 3.75	523. 3.75	518. 3.75	515. 3.75	510. 3.75
2 COMBINED AT + 1533. 3.75	C8B-2	1.56	1	FLOW TIME	1795. 3.75	1758. 3.75	1697. 3.75	1632. 3.75	1610. 3.75	1593. 3.75	1578. 3.75	1562. 3.75
ROUTED TO + 1522. 3.83	RC8B-2	1.56	1	FLOW TIME	1774. 3.83	1736. 3.83	1681. 3.83	1618. 3.83	1593. 3.83	1582. 3.83	1565. 3.83	1547. 3.83
HYDROGRAPH AT + 370. 3.58	11A-2	.29	1	FLOW TIME	433. 3.58	424. 3.58	409. 3.58	394. 3.58	388. 3.58	384. 3.58	381. 3.58	376. 3.58

ROUTED TO + 354. 3.67	R11A-2	.29	1	FLOW TIME	422. 3.67	413. 3.67	393. 3.67	378. 3.67	372. 3.67	368. 3.67	365. 3.67	360. 3.67
HYDROGRAPH AT + 324. 3.67	8A	.31	1	FLOW TIME	384. 3.67	375. 3.67	361. 3.67	347. 3.67	341. 3.67	337. 3.67	335. 3.67	330. 3.67
2 COMBINED AT + 679. 3.67	C8A	.60	1	FLOW TIME	805. 3.67	788. 3.67	755. 3.67	725. 3.67	713. 3.67	705. 3.67	700. 3.67	690. 3.67
ROUTED TO + 632. 3.75	RC8A	.60	1	FLOW TIME	751. 3.75	734. 3.75	704. 3.75	675. 3.75	664. 3.75	657. 3.75	651. 3.75	643. 3.75
HYDROGRAPH AT + 282. 3.67	3B-2A	.24	1	FLOW TIME	329. 3.67	322. 3.67	311. 3.67	300. 3.67	295. 3.67	292. 3.67	290. 3.67	286. 3.67
2 COMBINED AT + 880. 3.75	C3B-2A	.84	1	FLOW TIME	1040. 3.75	1018. 3.75	977. 3.75	939. 3.75	924. 3.75	914. 3.75	907. 3.75	895. 3.75
2 COMBINED AT + 2384. 3.75	CC3B-2A	2.40	1	FLOW TIME	2803. 3.75	2743. 3.75	2644. 3.75	2540. 3.75	2505. 3.75	2476. 3.75	2453. 3.75	2428. 3.75
ROUTED TO + 2367. 3.83	RCC3B-2A	2.40	1	FLOW TIME	2769. 3.83	2725. 3.83	2623. 3.83	2515. 3.83	2493. 3.83	2463. 3.83	2431. 3.83	2413. 3.83
HYDROGRAPH AT + 227. 3.75	3B-2B	.27	1	FLOW TIME	271. 3.75	265. 3.75	254. 3.75	244. 3.75	240. 3.75	237. 3.75	235. 3.75	231. 3.75
2 COMBINED AT + 2582. 3.83	C3B-2B	2.67	1	FLOW TIME	3025. 3.83	2975. 3.83	2863. 3.83	2746. 3.83	2720. 3.83	2687. 3.83	2653. 3.83	2632. 3.83
2 COMBINED AT + 9111. 3.92	CC3B-2B	15.23	1	FLOW TIME	10482. 3.92	10306. 3.92	9982. 3.92	9643. 3.92	9529. 3.92	9428. 3.92	9355. 3.92	9264. 3.92
ROUTED TO + 9037. 3.92	RCC3B-2B	15.23	1	FLOW TIME	10434. 3.92	10254. 3.92	9918. 3.92	9574. 3.92	9467. 3.92	9364. 3.92	9291. 3.92	9196. 3.92
HYDROGRAPH AT + 245. 3.92	SF2-C	.39	1	FLOW TIME	294. 3.92	287. 3.92	275. 3.92	263. 3.92	259. 3.92	255. 3.92	253. 3.92	249. 3.92
2 COMBINED AT + 9281. 3.92	CSF2-C	15.61	1	FLOW TIME	10728. 3.92	10540. 3.92	10193. 3.92	9837. 3.92	9725. 3.92	9619. 3.92	9544. 3.92	9445. 3.92
ROUTED TO + 9171. 3.92	RCSF2-C	15.61	1	FLOW TIME	10637. 3.92	10445. 3.92	10097. 3.92	9749. 3.92	9620. 3.92	9516. 3.92	9443. 3.92	9336. 3.92
HYDROGRAPH AT + 649. 3.75	SW11	.59	1	FLOW TIME	759. 3.75	743. 3.75	717. 3.75	691. 3.75	680. 3.75	673. 3.75	668. 3.75	660. 3.75

ROUTED TO												
+ 644.	RSW11	.59	1	FLOW	754.	738.	712.	686.	676.	668.	663.	655.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
HYDROGRAPH AT												
+ 409.	SW17	.36	1	FLOW	479.	469.	452.	436.	429.	424.	421.	416.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 1044.	CSW17	.94	1	FLOW	1221.	1196.	1153.	1111.	1095.	1083.	1075.	1061.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
ROUTED TO												
+ 1035.	RCSW17	.94	1	FLOW	1211.	1186.	1143.	1101.	1083.	1073.	1063.	1051.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
HYDROGRAPH AT												
+ 440.	SW18	.41	1	FLOW	519.	507.	489.	470.	463.	457.	454.	448.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 1467.	CSW18	1.35	1	FLOW	1718.	1682.	1622.	1562.	1537.	1521.	1508.	1490.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
ROUTED TO												
+ 1375.	RCSW18	1.35	1	FLOW	1610.	1576.	1520.	1464.	1441.	1426.	1414.	1397.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
3.92												
HYDROGRAPH AT												
+ 500.	12A	.39	1	FLOW	576.	565.	547.	529.	521.	516.	513.	507.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 1748.	C12A	1.74	1	FLOW	2046.	2003.	1932.	1861.	1832.	1813.	1798.	1776.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
3.83												
ROUTED TO												
+ 1732.	RC12A	1.74	1	FLOW	2025.	1983.	1913.	1843.	1815.	1796.	1782.	1760.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
3.92												
HYDROGRAPH AT												
+ 335.	12B	.26	1	FLOW	387.	380.	367.	355.	350.	347.	344.	340.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3.67												
2 COMBINED AT												
+ 1931.	C12B	2.00	1	FLOW	2259.	2212.	2134.	2056.	2024.	2002.	1987.	1962.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
3.83												
ROUTED TO												
+ 1877.	RC12B	2.00	1	FLOW	2194.	2148.	2073.	1998.	1967.	1946.	1931.	1907.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
4.00												
HYDROGRAPH AT												
+ 219.	57B-3	.31	1	FLOW	267.	260.	248.	237.	233.	230.	227.	224.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3.75												
2 COMBINED AT												
+ 2044.	C57B-3	2.31	1	FLOW	2394.	2344.	2261.	2177.	2144.	2120.	2104.	2077.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
4.00												
ROUTED TO												
+ 2025.	RC57B-3	2.31	1	FLOW	2375.	2325.	2242.	2158.	2125.	2101.	2085.	2058.

+ 670. 3.92	RC13A-2	.66	1	FLOW TIME	781. 3.92	765. 3.92	738. 3.92	712. 3.92	702. 3.92	694. 3.92	689. 3.92	681. 3.92
+ 241. 3.83	PIC-C	.24	1	FLOW TIME	280. 3.83	274. 3.83	265. 3.83	256. 3.83	252. 3.83	250. 3.83	248. 3.83	245. 3.83
+ 895. 3.92	CPIC-C	.91	1	FLOW TIME	1041. 3.92	1020. 3.92	985. 3.92	951. 3.92	937. 3.92	927. 3.92	920. 3.92	909. 3.92
+ 881. 3.92	RCPIC-C	.91	1	FLOW TIME	1030. 3.92	1009. 3.92	975. 3.92	940. 3.92	922. 3.92	915. 3.92	908. 3.92	896. 3.92
+ 308. 3.92	PIC-A	.36	1	FLOW TIME	356. 3.92	349. 3.92	338. 3.92	326. 3.92	322. 3.92	318. 3.92	316. 3.92	312. 3.92
+ 1188. 3.92	CPIC-A	1.27	1	FLOW TIME	1386. 3.92	1359. 3.92	1313. 3.92	1266. 3.92	1243. 3.92	1233. 3.92	1224. 3.92	1208. 3.92
+ 1723. 3.92	CCPIC-A	1.73	1	FLOW TIME	1997. 3.92	1959. 3.92	1895. 3.92	1830. 3.92	1800. 3.92	1785. 3.92	1772. 3.92	1750. 3.92
+ 1690. 4.00	RCCPIC-A	1.73	1	FLOW TIME	1974. 4.00	1921. 4.00	1874. 4.00	1792. 4.00	1776. 4.00	1769. 4.00	1758. 4.00	1721. 4.00
+ 167. 3.75	57B-1	.20	1	FLOW TIME	199. 3.67	194. 3.67	186. 3.67	179. 3.67	176. 3.75	174. 3.75	172. 3.75	170. 3.75
+ 1791. 4.00	C57B-1	1.93	1	FLOW TIME	2106. 3.92	2049. 3.92	2004. 3.92	1912. 3.92	1900. 3.92	1876. 3.92	1862. 4.00	1824. 4.00
+ 4011. 4.00	CC57B-1	4.60	1	FLOW TIME	4702. 4.00	4591. 4.00	4447. 4.00	4268. 4.00	4213. 4.00	4179. 4.00	4148. 4.00	4080. 4.00
+ 4002. 4.00	RCC57B-1	4.60	1	FLOW TIME	4694. 4.00	4583. 4.00	4439. 4.00	4260. 4.00	4205. 4.00	4170. 4.00	4139. 4.00	4071. 4.00
+ 225. 3.67	57B-4	.20	1	FLOW TIME	262. 3.67	257. 3.67	248. 3.67	239. 3.67	236. 3.67	233. 3.67	231. 3.67	229. 3.67
+ 4107. 4.00	C57B-4	4.80	1	FLOW TIME	4813. 4.00	4700. 4.00	4553. 4.00	4371. 4.00	4314. 4.00	4278. 4.00	4246. 4.00	4177. 4.00
+ 382. 3.92	PIC-B	.44	1	FLOW TIME	442. 3.92	433. 3.92	419. 3.92	405. 3.92	399. 3.92	395. 3.92	392. 3.92	388. 3.92
+ 379. 3.92	RPIC-B	.44	1	FLOW TIME	439. 3.92	431. 3.92	416. 3.92	402. 3.92	396. 3.92	392. 3.92	390. 3.92	385. 3.92

2 COMBINED AT												
+ 4479.	CC57B-4	5.24	1	FLOW	5243.	5122.	4961.	4765.	4702.	4663.	4628.	4554.
4.00				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
ROUTED TO												
+ 4460.	RCC57B-4	5.24	1	FLOW	5225.	5104.	4944.	4747.	4686.	4644.	4606.	4534.
4.00				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT												
+ 324.	38A	.35	1	FLOW	374.	367.	355.	343.	338.	335.	333.	329.
3.83				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
ROUTED TO												
+ 320.	R38A	.35	1	FLOW	368.	364.	350.	337.	333.	331.	330.	327.
3.92				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT												
+ 428.	38B	.44	1	FLOW	492.	483.	467.	452.	446.	442.	439.	434.
3.83				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
2 COMBINED AT												
+ 740.	C38B	.79	1	FLOW	856.	842.	810.	784.	775.	769.	764.	753.
3.83				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT												
+ 149.	57BA	.32	1	FLOW	186.	180.	171.	163.	159.	157.	155.	152.
3.92				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO												
+ 148.	R57BA	.32	1	FLOW	185.	179.	171.	162.	158.	156.	154.	151.
3.92				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT												
+ 190.	3C	.15	1	FLOW	218.	214.	207.	201.	198.	196.	195.	193.
3.67				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT												
+ 299.	C3C	.47	1	FLOW	358.	350.	335.	322.	316.	312.	309.	305.
3.75				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO												
+ 300.	RC3C	.47	1	FLOW	358.	350.	336.	322.	316.	312.	310.	305.
3.83				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT												
+ 367.	AP	.67	1	FLOW	450.	438.	418.	398.	390.	385.	381.	375.
3.83				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
5 COMBINED AT												
+ 14839.	ANGLPKIN	22.79	1	FLOW	17312.	16973.	16405.	15801.	15591.	15416.	15286.	15096.
3.92				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO												
+ 2831.	ANGLPKDB	22.79	1	FLOW	5361.	5016.	4345.	3742.	3498.	3320.	3205.	3042.
6.08				TIME	5.50	5.50	5.67	5.75	5.83	5.83	5.92	6.00
** PEAK STAGES IN FEET **												
2619.69			1	STAGE	2620.13	2620.08	2619.97	2619.86	2619.81	2619.78	2619.76	2619.73
6.08				TIME	5.50	5.50	5.67	5.75	5.83	5.83	5.92	6.00
1	SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)											
	ISTAQ	ELEMENT	DT	PEAK	TIME TO	VOLUME	DT	INTERPOLATED TO COMPUTATION INTERVAL				
								PEAK	TIME TO	VOLUME		

		PEAK				PEAK			
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.69	2290.81	244.47	2.35	5.00	2286.11	245.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2779E+03 EXCESS= .0000E+00 OUTFLOW= .2779E+03 BASIN STORAGE= .7257E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.71	2240.97	243.82	2.30	5.00	2236.98	245.00	2.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2720E+03 EXCESS= .0000E+00 OUTFLOW= .2720E+03 BASIN STORAGE= .7880E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.75	2164.19	244.58	2.21	5.00	2160.95	245.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2620E+03 EXCESS= .0000E+00 OUTFLOW= .2620E+03 BASIN STORAGE= .8138E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.79	2088.84	242.66	2.13	5.00	2086.89	245.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2521E+03 EXCESS= .0000E+00 OUTFLOW= .2521E+03 BASIN STORAGE= .8285E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.81	2052.35	241.34	2.10	5.00	2049.06	245.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2482E+03 EXCESS= .0000E+00 OUTFLOW= .2482E+03 BASIN STORAGE= .7914E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.82	2034.74	242.38	2.07	5.00	2032.88	245.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2454E+03 EXCESS= .0000E+00 OUTFLOW= .2454E+03 BASIN STORAGE= .8240E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.83	2017.86	243.13	2.06	5.00	2016.25	245.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2435E+03 EXCESS= .0000E+00 OUTFLOW= .2435E+03 BASIN STORAGE= .7052E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.84	1990.50	241.51	2.03	5.00	1986.97	245.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2403E+03 EXCESS= .0000E+00 OUTFLOW= .2404E+03 BASIN STORAGE= .7118E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.86	1963.00	243.05	2.00	5.00	1960.52	245.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2364E+03 EXCESS= .0000E+00 OUTFLOW= .2364E+03 BASIN STORAGE= .6719E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3.1	MANE	4.29	2360.59	244.58	2.32	5.00	2359.64	245.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3026E+03 EXCESS= .0000E+00 OUTFLOW= .3026E+03 BASIN STORAGE= .1147E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3.1	MANE	4.33	2307.04	246.63	2.27	5.00	2296.21	245.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2960E+03 EXCESS= .0000E+00 OUTFLOW= .2961E+03 BASIN STORAGE= .1114E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3.1	MANE	4.38	2228.68	245.55	2.19	5.00	2221.90	245.00	2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2851E+03 EXCESS= .0000E+00 OUTFLOW= .2852E+03 BASIN STORAGE= .1236E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.44 2153.00 244.42 2.10 5.00 2152.20 245.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2743E+03 EXCESS= .0000E+00 OUTFLOW= .2744E+03 BASIN STORAGE= .9969E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.48 2113.26 246.14 2.07 5.00 2102.43 245.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2700E+03 EXCESS= .0000E+00 OUTFLOW= .2700E+03 BASIN STORAGE= .1047E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.49 2092.12 246.89 2.05 5.00 2078.66 245.00 2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2669E+03 EXCESS= .0000E+00 OUTFLOW= .2670E+03 BASIN STORAGE= .8636E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.50 2075.90 247.67 2.03 5.00 2066.11 245.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2648E+03 EXCESS= .0000E+00 OUTFLOW= .2649E+03 BASIN STORAGE= .1146E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.53 2050.86 244.53 2.00 5.00 2050.18 245.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2614E+03 EXCESS= .0000E+00 OUTFLOW= .2615E+03 BASIN STORAGE= .8635E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.55 2021.94 245.80 1.97 5.00 2011.92 245.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2570E+03 EXCESS= .0000E+00 OUTFLOW= .2571E+03 BASIN STORAGE= .1049E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .53 2527.27 245.34 2.28 5.00 2525.81 245.00 2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3383E+03 EXCESS= .0000E+00 OUTFLOW= .3383E+03 BASIN STORAGE= .1122E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .53 2460.31 245.21 2.23 5.00 2459.32 245.00 2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3308E+03 EXCESS= .0000E+00 OUTFLOW= .3308E+03 BASIN STORAGE= .1171E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .54 2380.53 245.64 2.15 5.00 2378.78 245.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3187E+03 EXCESS= .0000E+00 OUTFLOW= .3187E+03 BASIN STORAGE= .1106E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .55 2305.20 245.42 2.07 5.00 2303.20 245.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3064E+03 EXCESS= .0000E+00 OUTFLOW= .3064E+03 BASIN STORAGE= .1121E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .55 2253.24 245.37 2.03 5.00 2251.46 245.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3015E+03 EXCESS= .0000E+00 OUTFLOW= .3015E+03 BASIN STORAGE= .1114E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .56 2227.61 245.33 2.01 5.00 2225.76 245.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2981E+03 EXCESS= .0000E+00 OUTFLOW= .2981E+03 BASIN STORAGE= .1158E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .56 2214.00 245.35 2.00 5.00 2212.25 245.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2957E+03 EXCESS= .0000E+00 OUTFLOW= .2957E+03 BASIN STORAGE= .1105E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .56 2196.98 245.56 1.97 5.00 2194.95 245.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2920E+03 EXCESS= .0000E+00 OUTFLOW= .2920E+03 BASIN STORAGE= .1181E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .56 2156.21 245.63 1.94 5.00 2153.64 245.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2870E+03 EXCESS= .0000E+00 OUTFLOW= .2870E+03 BASIN STORAGE= .1181E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.25 377.49 214.50 2.39 5.00 370.65 215.00 2.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2213E+02 EXCESS= .0000E+00 OUTFLOW= .2218E+02 BASIN STORAGE= .6428E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.50 379.12 213.50 2.35 5.00 365.61 215.00 2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2172E+02 EXCESS= .0000E+00 OUTFLOW= .2177E+02 BASIN STORAGE= .5219E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.50 366.14 213.50 2.27 5.00 353.73 215.00 2.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2095E+02 EXCESS= .0000E+00 OUTFLOW= .2099E+02 BASIN STORAGE= .5151E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.75 353.80 213.75 2.18 5.00 342.25 215.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2018E+02 EXCESS= .0000E+00 OUTFLOW= .2023E+02 BASIN STORAGE= .6942E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.75 348.62 213.75 2.15 5.00 337.45 215.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1987E+02 EXCESS= .0000E+00 OUTFLOW= .1992E+02 BASIN STORAGE= .6904E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.75 345.00 213.75 2.13 5.00 334.09 215.00 2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1966E+02 EXCESS= .0000E+00 OUTFLOW= .1971E+02 BASIN STORAGE= .6877E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.75 342.41 213.75 2.11 5.00 331.69 215.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1950E+02 EXCESS= .0000E+00 OUTFLOW= .1955E+02 BASIN STORAGE= .6859E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
R3-3 MANE 3.75 338.26 213.75 2.08 5.00 327.84 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1926E+02 EXCESS= .0000E+00 OUTFLOW= .1930E+02 BASIN STORAGE= .6828E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00

R3-3	MANE	3.75	333.08	213.75	2.05	5.00	323.04	215.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1895E+02 EXCESS= .0000E+00 OUTFLOW= .1900E+02 BASIN STORAGE= .6789E-02 PERCENT ERROR= -									
.3									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.50	746.86	213.50	2.40	5.00	727.20	215.00	2.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4414E+02 EXCESS= .0000E+00 OUTFLOW= .4423E+02 BASIN STORAGE= .8464E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.50	731.74	213.50	2.35	5.00	713.13	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4321E+02 EXCESS= .0000E+00 OUTFLOW= .4329E+02 BASIN STORAGE= .8398E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.50	706.52	213.50	2.26	5.00	689.65	215.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4166E+02 EXCESS= .0000E+00 OUTFLOW= .4174E+02 BASIN STORAGE= .8287E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	684.12	213.75	2.18	5.00	667.27	215.00	2.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4013E+02 EXCESS= .0000E+00 OUTFLOW= .4020E+02 BASIN STORAGE= .6843E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	674.03	213.75	2.15	5.00	657.79	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3951E+02 EXCESS= .0000E+00 OUTFLOW= .3959E+02 BASIN STORAGE= .6806E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	666.96	213.75	2.12	5.00	651.16	215.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3909E+02 EXCESS= .0000E+00 OUTFLOW= .3916E+02 BASIN STORAGE= .6780E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	661.92	213.75	2.11	5.00	646.42	215.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3878E+02 EXCESS= .0000E+00 OUTFLOW= .3885E+02 BASIN STORAGE= .6761E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	653.85	213.75	2.08	5.00	638.84	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3829E+02 EXCESS= .0000E+00 OUTFLOW= .3836E+02 BASIN STORAGE= .6731E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	3.75	643.75	213.75	2.05	5.00	629.35	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3768E+02 EXCESS= .0000E+00 OUTFLOW= .3775E+02 BASIN STORAGE= .6694E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	2.91	617.10	212.64	2.36	5.00	602.77	215.00	2.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3688E+02 EXCESS= .0000E+00 OUTFLOW= .3692E+02 BASIN STORAGE= .3765E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	2.93	600.41	214.22	2.30	5.00	587.18	215.00	2.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3605E+02 EXCESS= .0000E+00 OUTFLOW= .3608E+02 BASIN STORAGE= .3750E-02 PERCENT ERROR= -									
.1									

FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	2.97	582.17	213.98	2.22	5.00	567.25	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3473E+02 EXCESS= .0000E+00 OUTFLOW= .3477E+02 BASIN STORAGE= .4166E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.01	563.35	213.80	2.14	5.00	547.96	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3344E+02 EXCESS= .0000E+00 OUTFLOW= .3348E+02 BASIN STORAGE= .2951E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.03	547.28	214.96	2.11	5.00	546.52	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3300E+02 EXCESS= .0000E+00 OUTFLOW= .3303E+02 BASIN STORAGE= .3514E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.04	549.58	212.74	2.09	5.00	537.26	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3264E+02 EXCESS= .0000E+00 OUTFLOW= .3267E+02 BASIN STORAGE= .4220E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.05	548.78	213.33	2.07	5.00	532.67	215.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3234E+02 EXCESS= .0000E+00 OUTFLOW= .3237E+02 BASIN STORAGE= .3696E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.06	536.07	214.28	2.04	5.00	525.64	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3191E+02 EXCESS= .0000E+00 OUTFLOW= .3195E+02 BASIN STORAGE= .4326E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-5	MANE	3.08	524.10	212.41	2.01	5.00	519.12	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3146E+02 EXCESS= .0000E+00 OUTFLOW= .3149E+02 BASIN STORAGE= .3089E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.53	1652.75	217.30	2.38	5.00	1648.49	215.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1033E+03 EXCESS= .0000E+00 OUTFLOW= .1034E+03 BASIN STORAGE= .4215E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.55	1619.25	216.40	2.33	5.00	1595.67	215.00	2.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1010E+03 EXCESS= .0000E+00 OUTFLOW= .1011E+03 BASIN STORAGE= .4006E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.58	1564.95	216.52	2.25	5.00	1540.43	215.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9737E+02 EXCESS= .0000E+00 OUTFLOW= .9743E+02 BASIN STORAGE= .3731E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.61	1512.85	216.59	2.16	5.00	1485.46	215.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9378E+02 EXCESS= .0000E+00 OUTFLOW= .9383E+02 BASIN STORAGE= .4776E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.62	1500.18	217.40	2.14	5.00	1479.89	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9253E+02 EXCESS= .0000E+00 OUTFLOW= .9258E+02 BASIN STORAGE= .3990E-02 PERCENT ERROR= -									
.1									

FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.63	1476.26	215.77	2.11	5.00	1453.68	215.00	2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9134E+02 EXCESS= .0000E+00 OUTFLOW= .9140E+02 BASIN STORAGE= .4294E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.64	1466.39	216.38	2.09	5.00	1437.82	215.00	2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9056E+02 EXCESS= .0000E+00 OUTFLOW= .9062E+02 BASIN STORAGE= .3523E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.65	1452.02	217.36	2.07	5.00	1430.00	215.00	2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8961E+02 EXCESS= .0000E+00 OUTFLOW= .8966E+02 BASIN STORAGE= .4088E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCP3.2	MANE	2.66	1425.21	215.82	2.03	5.00	1400.51	215.00	2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8805E+02 EXCESS= .0000E+00 OUTFLOW= .8811E+02 BASIN STORAGE= .4351E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.40	4046.12	221.54	2.28	5.00	4002.16	220.00	2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5038E+03 EXCESS= .0000E+00 OUTFLOW= .5038E+03 BASIN STORAGE= .3490E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.42	3934.58	221.07	2.23	5.00	3882.20	220.00	2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4926E+03 EXCESS= .0000E+00 OUTFLOW= .4926E+03 BASIN STORAGE= .3402E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.44	3796.93	221.27	2.15	5.00	3740.14	220.00	2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4745E+03 EXCESS= .0000E+00 OUTFLOW= .4745E+03 BASIN STORAGE= .3541E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.46	3647.86	221.66	2.07	5.00	3597.55	220.00	2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4564E+03 EXCESS= .0000E+00 OUTFLOW= .4564E+03 BASIN STORAGE= .3690E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.46	3609.40	220.74	2.04	5.00	3562.79	220.00	2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4496E+03 EXCESS= .0000E+00 OUTFLOW= .4496E+03 BASIN STORAGE= .3730E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.47	3546.72	220.72	2.01	5.00	3504.96	220.00	2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4440E+03 EXCESS= .0000E+00 OUTFLOW= .4440E+03 BASIN STORAGE= .3246E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.48	3520.15	221.70	2.00	5.00	3469.16	220.00	2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4403E+03 EXCESS= .0000E+00 OUTFLOW= .4403E+03 BASIN STORAGE= .3457E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.48	3483.80	220.82	1.97	5.00	3435.13	220.00	1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4353E+03 EXCESS= .0000E+00 OUTFLOW= .4353E+03 BASIN STORAGE= .3718E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.49	3422.22	221.02	1.94	5.00	3362.33	220.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4274E+03 EXCESS= .0000E+00 OUTFLOW= .4274E+03 BASIN STORAGE= .3154E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	189.02	217.00	2.35	5.00	186.93	220.00	2.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1108E+02 EXCESS= .0000E+00 OUTFLOW= .1114E+02 BASIN STORAGE= .9501E-02 PERCENT ERROR=									
.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	185.03	217.00	2.30	5.00	183.57	220.00	2.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1085E+02 EXCESS= .0000E+00 OUTFLOW= .1090E+02 BASIN STORAGE= .9445E-02 PERCENT ERROR=									
.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	178.39	217.00	2.22	5.00	177.92	220.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1046E+02 EXCESS= .0000E+00 OUTFLOW= .1051E+02 BASIN STORAGE= .9348E-02 PERCENT ERROR=									
.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	172.29	220.50	2.14	5.00	172.21	220.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1013E+02 BASIN STORAGE= .9250E-02 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	170.06	220.50	2.11	5.00	169.92	220.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9913E+01 EXCESS= .0000E+00 OUTFLOW= .9970E+01 BASIN STORAGE= .9209E-02 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	168.49	220.50	2.08	5.00	168.31	220.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9804E+01 EXCESS= .0000E+00 OUTFLOW= .9862E+01 BASIN STORAGE= .9181E-02 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	167.36	220.50	2.07	5.00	167.15	220.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9727E+01 EXCESS= .0000E+00 OUTFLOW= .9784E+01 BASIN STORAGE= .9161E-02 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.75	164.31	217.50	2.04	5.00	162.54	220.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9612E+01 EXCESS= .0000E+00 OUTFLOW= .9667E+01 BASIN STORAGE= .1161E-01 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.75	161.76	217.50	2.01	5.00	160.24	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9458E+01 EXCESS= .0000E+00 OUTFLOW= .9511E+01 BASIN STORAGE= .1156E-01 PERCENT ERROR=									
.7									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	374.64	214.27	2.27	5.00	356.78	210.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2068E+02 EXCESS= .0000E+00 OUTFLOW= .2072E+02 BASIN STORAGE= .3650E-02 PERCENT ERROR=									
.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	367.86	211.25	2.22	5.00	348.18	210.00	2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2023E+02 EXCESS= .0000E+00 OUTFLOW= .2027E+02 BASIN STORAGE= .3287E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.31 363.28 211.94 2.13 5.00 334.32 210.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1947E+02 EXCESS= .0000E+00 OUTFLOW= .1951E+02 BASIN STORAGE= .3053E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 341.63 211.25 2.05 5.00 323.08 210.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1875E+02 EXCESS= .0000E+00 OUTFLOW= .1878E+02 BASIN STORAGE= .3202E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 336.39 211.25 2.02 5.00 318.77 215.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1845E+02 EXCESS= .0000E+00 OUTFLOW= .1849E+02 BASIN STORAGE= .3185E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 332.73 211.25 2.00 5.00 315.77 215.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1825E+02 EXCESS= .0000E+00 OUTFLOW= .1828E+02 BASIN STORAGE= .3173E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 330.11 211.25 1.98 5.00 313.63 215.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1810E+02 EXCESS= .0000E+00 OUTFLOW= .1814E+02 BASIN STORAGE= .3164E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 325.92 211.25 1.96 5.00 310.20 215.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1787E+02 EXCESS= .0000E+00 OUTFLOW= .1790E+02 BASIN STORAGE= .3150E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.25 320.69 211.25 1.93 5.00 305.91 215.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1758E+02 EXCESS= .0000E+00 OUTFLOW= .1761E+02 BASIN STORAGE= .3132E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.50 195.45 220.50 1.57 5.00 192.72 220.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1282E+02 EXCESS= .0000E+00 OUTFLOW= .1284E+02 BASIN STORAGE= .7258E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.50 190.32 220.50 1.53 5.00 187.60 220.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1249E+02 EXCESS= .0000E+00 OUTFLOW= .1250E+02 BASIN STORAGE= .7192E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.25 180.70 221.00 1.46 5.00 176.76 220.00 1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1191E+02 EXCESS= .0000E+00 OUTFLOW= .1192E+02 BASIN STORAGE= .5728E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.25 172.42 221.00 1.39 5.00 168.44 220.00 1.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1136E+02 EXCESS= .0000E+00 OUTFLOW= .1137E+02 BASIN STORAGE= .5633E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.25 169.11 221.00 1.37 5.00 165.12 220.00 1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1114E+02 EXCESS= .0000E+00 OUTFLOW= .1115E+02 BASIN STORAGE= .5594E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	4.25	166.81	221.00	1.35	5.00	162.80	220.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1098E+02 EXCESS= .0000E+00 OUTFLOW= .1100E+02 BASIN STORAGE= .5567E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	4.25	165.16	221.00	1.34	5.00	161.15	220.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1088E+02 EXCESS= .0000E+00 OUTFLOW= .1089E+02 BASIN STORAGE= .5548E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	4.25	162.53	221.00	1.31	5.00	158.51	220.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1070E+02 EXCESS= .0000E+00 OUTFLOW= .1072E+02 BASIN STORAGE= .7368E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	4.50	159.90	220.50	1.29	5.00	157.21	220.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1050E+02 EXCESS= .0000E+00 OUTFLOW= .1052E+02 BASIN STORAGE= .6775E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.31	675.96	215.60	2.03	5.00	665.22	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4481E+02 EXCESS= .0000E+00 OUTFLOW= .4481E+02 BASIN STORAGE= .1512E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.33	664.84	216.00	1.99	5.00	650.59	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4379E+02 EXCESS= .0000E+00 OUTFLOW= .4379E+02 BASIN STORAGE= .1585E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.34	638.45	216.53	1.91	5.00	624.83	215.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4203E+02 EXCESS= .0000E+00 OUTFLOW= .4203E+02 BASIN STORAGE= .1517E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.36	610.03	216.85	1.83	5.00	598.79	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4036E+02 EXCESS= .0000E+00 OUTFLOW= .4037E+02 BASIN STORAGE= .1338E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.37	601.33	216.78	1.80	5.00	588.87	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3970E+02 EXCESS= .0000E+00 OUTFLOW= .3970E+02 BASIN STORAGE= .1346E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.38	600.39	216.33	1.78	5.00	583.16	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3924E+02 EXCESS= .0000E+00 OUTFLOW= .3924E+02 BASIN STORAGE= .1530E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.38	587.56	215.62	1.77	5.00	575.72	215.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3889E+02 EXCESS= .0000E+00 OUTFLOW= .3890E+02 BASIN STORAGE= .1532E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.39	586.38	216.55	1.74	5.00	569.53	215.00	1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3835E+02 EXCESS= .0000E+00 OUTFLOW= .3836E+02 BASIN STORAGE= .1466E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.40 577.30 216.51 1.71 5.00 559.81 215.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3774E+02 EXCESS= .0000E+00 OUTFLOW= .3774E+02 BASIN STORAGE= .1585E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.01 1119.69 219.65 2.38 5.00 1114.77 220.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8112E+02 EXCESS= .0000E+00 OUTFLOW= .8115E+02 BASIN STORAGE= .3873E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.03 1100.03 218.20 2.33 5.00 1094.10 220.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7941E+02 EXCESS= .0000E+00 OUTFLOW= .7945E+02 BASIN STORAGE= .3839E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.07 1057.10 217.83 2.25 5.00 1056.92 220.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7656E+02 EXCESS= .0000E+00 OUTFLOW= .7660E+02 BASIN STORAGE= .4210E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.11 1020.55 220.62 2.16 5.00 1018.52 220.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7370E+02 EXCESS= .0000E+00 OUTFLOW= .7373E+02 BASIN STORAGE= .3197E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.12 1008.38 218.65 2.13 5.00 1002.04 220.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7258E+02 EXCESS= .0000E+00 OUTFLOW= .7261E+02 BASIN STORAGE= .3521E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.14 995.11 219.46 2.11 5.00 990.47 220.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7177E+02 EXCESS= .0000E+00 OUTFLOW= .7180E+02 BASIN STORAGE= .4194E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.14 988.72 220.04 2.09 5.00 988.37 220.00 2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7122E+02 EXCESS= .0000E+00 OUTFLOW= .7125E+02 BASIN STORAGE= .3688E-02 PERCENT ERROR= .1

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.16 974.52 220.99 2.07 5.00 974.01 220.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7031E+02 EXCESS= .0000E+00 OUTFLOW= .7035E+02 BASIN STORAGE= .4260E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.17 962.24 219.03 2.03 5.00 956.53 220.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6917E+02 EXCESS= .0000E+00 OUTFLOW= .6920E+02 BASIN STORAGE= .3274E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.6 MANE 1.65 2929.13 221.04 2.24 5.00 2890.73 220.00 2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2321E+03 EXCESS= .0000E+00 OUTFLOW= .2321E+03 BASIN STORAGE= .3191E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCP3.6	MANE	1.66	2867.97	220.93	2.19	5.00	2836.62	220.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2271E+03 EXCESS= .0000E+00 OUTFLOW= .2271E+03 BASIN STORAGE= .3221E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.68	2773.27	222.25	2.11	5.00	2731.51	220.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2187E+03 EXCESS= .0000E+00 OUTFLOW= .2187E+03 BASIN STORAGE= .3626E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.71	2686.91	221.90	2.03	5.00	2623.08	220.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2104E+03 EXCESS= .0000E+00 OUTFLOW= .2105E+03 BASIN STORAGE= .2919E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.72	2637.73	221.46	2.00	5.00	2585.71	220.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2071E+03 EXCESS= .0000E+00 OUTFLOW= .2072E+03 BASIN STORAGE= .3225E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.72	2604.95	222.31	1.98	5.00	2558.29	220.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2048E+03 EXCESS= .0000E+00 OUTFLOW= .2048E+03 BASIN STORAGE= .3198E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.73	2577.79	221.10	1.96	5.00	2541.48	220.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2031E+03 EXCESS= .0000E+00 OUTFLOW= .2032E+03 BASIN STORAGE= .3714E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.74	2556.33	222.23	1.94	5.00	2505.72	220.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2005E+03 EXCESS= .0000E+00 OUTFLOW= .2005E+03 BASIN STORAGE= .3172E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.75	2525.87	221.81	1.91	5.00	2461.31	220.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1973E+03 EXCESS= .0000E+00 OUTFLOW= .1973E+03 BASIN STORAGE= .2882E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-M	MANE	1.73	351.52	215.69	2.27	5.00	348.22	215.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2330E+02 EXCESS= .0000E+00 OUTFLOW= .2330E+02 BASIN STORAGE= .2187E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-M	MANE	1.74	344.31	215.66	2.22	5.00	341.21	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2281E+02 EXCESS= .0000E+00 OUTFLOW= .2281E+02 BASIN STORAGE= .2231E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-M	MANE	1.76	337.45	216.85	2.15	5.00	329.80	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2201E+02 EXCESS= .0000E+00 OUTFLOW= .2201E+02 BASIN STORAGE= .2134E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-M	MANE	1.79	324.10	216.34	2.07	5.00	318.35	215.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2119E+02 EXCESS= .0000E+00 OUTFLOW= .2119E+02 BASIN STORAGE= .2008E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.80	316.57	215.79	2.03	5.00	313.32	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2086E+02 EXCESS= .0000E+00 OUTFLOW= .2087E+02 BASIN STORAGE= .2317E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.81	317.67	216.67	2.01	5.00	310.71	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2064E+02 EXCESS= .0000E+00 OUTFLOW= .2065E+02 BASIN STORAGE= .2449E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.81	312.08	217.31	2.00	5.00	307.46	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2048E+02 EXCESS= .0000E+00 OUTFLOW= .2049E+02 BASIN STORAGE= .2033E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.82	310.76	216.53	1.97	5.00	304.60	215.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2022E+02 EXCESS= .0000E+00 OUTFLOW= .2023E+02 BASIN STORAGE= .1995E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.83	303.42	216.00	1.94	5.00	299.55	215.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1990E+02 EXCESS= .0000E+00 OUTFLOW= .1991E+02 BASIN STORAGE= .2289E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.11	2373.51	295.31	2.27	5.00	2373.08	295.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8531E+03 EXCESS= .0000E+00 OUTFLOW= .8531E+03 BASIN STORAGE= .2863E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.11	2349.95	295.38	2.22	5.00	2349.48	295.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8344E+03 EXCESS= .0000E+00 OUTFLOW= .8344E+03 BASIN STORAGE= .2737E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.12	2311.62	296.22	2.14	5.00	2311.20	295.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8037E+03 EXCESS= .0000E+00 OUTFLOW= .8037E+03 BASIN STORAGE= .3052E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.13	2273.57	295.94	2.06	5.00	2273.02	295.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7732E+03 EXCESS= .0000E+00 OUTFLOW= .7732E+03 BASIN STORAGE= .2912E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.13	2258.91	295.57	2.03	5.00	2258.44	295.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7615E+03 EXCESS= .0000E+00 OUTFLOW= .7615E+03 BASIN STORAGE= .2743E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.13	2247.58	296.17	2.00	5.00	2247.23	295.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7525E+03 EXCESS= .0000E+00 OUTFLOW= .7525E+03 BASIN STORAGE= .3035E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.14	2239.91	295.43	1.99	5.00	2239.55	295.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7464E+03 EXCESS= .0000E+00 OUTFLOW= .7464E+03 BASIN STORAGE= .2753E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.14	2229.30	296.00	1.96	5.00	2228.90	295.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7374E+03 EXCESS= .0000E+00 OUTFLOW= .7374E+03 BASIN STORAGE= .2799E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.14	2213.35	295.71	1.93	5.00	2212.93	295.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7245E+03 EXCESS= .0000E+00 OUTFLOW= .7245E+03 BASIN STORAGE= .2754E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.44	3209.37	226.78	2.28	5.00	3199.56	230.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9426E+03 EXCESS= .0000E+00 OUTFLOW= .9426E+03 BASIN STORAGE= .4162E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.45	3168.78	226.54	2.23	5.00	3159.29	230.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9221E+03 EXCESS= .0000E+00 OUTFLOW= .9222E+03 BASIN STORAGE= .4114E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.47	3097.23	228.59	2.15	5.00	3094.06	230.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8885E+03 EXCESS= .0000E+00 OUTFLOW= .8885E+03 BASIN STORAGE= .4265E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.48	3024.95	227.74	2.07	5.00	3022.99	230.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8550E+03 EXCESS= .0000E+00 OUTFLOW= .8550E+03 BASIN STORAGE= .4011E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.48	2996.86	228.54	2.04	5.00	2995.91	230.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8421E+03 EXCESS= .0000E+00 OUTFLOW= .8421E+03 BASIN STORAGE= .4295E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.49	2976.25	230.66	2.01	5.00	2975.27	230.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8323E+03 EXCESS= .0000E+00 OUTFLOW= .8323E+03 BASIN STORAGE= .4126E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.49	2963.13	231.09	2.00	5.00	2959.97	230.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8256E+03 EXCESS= .0000E+00 OUTFLOW= .8256E+03 BASIN STORAGE= .4289E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.49	2940.26	230.23	1.97	5.00	2940.17	230.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8157E+03 EXCESS= .0000E+00 OUTFLOW= .8157E+03 BASIN STORAGE= .4291E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.50	2913.70	231.15	1.94	5.00	2909.41	230.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8016E+03 EXCESS= .0000E+00 OUTFLOW= .8016E+03 BASIN STORAGE= .4111E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.81	527.60	215.55	2.32	5.00	523.41	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3477E+02 EXCESS= .0000E+00 OUTFLOW= .3477E+02 BASIN STORAGE= .1129E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.81	517.70	215.63	2.27	5.00	513.30	215.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+02 EXCESS= .0000E+00 OUTFLOW= .3405E+02 BASIN STORAGE= .1120E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.82	498.43	215.27	2.19	5.00	495.77	215.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3284E+02 EXCESS= .0000E+00 OUTFLOW= .3284E+02 BASIN STORAGE= .1138E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	484.02	215.79	2.11	5.00	479.43	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3164E+02 EXCESS= .0000E+00 OUTFLOW= .3164E+02 BASIN STORAGE= .1137E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	474.73	215.35	2.08	5.00	471.52	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3115E+02 EXCESS= .0000E+00 OUTFLOW= .3116E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	470.08	215.38	2.05	5.00	466.67	215.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3082E+02 EXCESS= .0000E+00 OUTFLOW= .3082E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.85	467.16	216.01	2.04	5.00	463.75	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3058E+02 EXCESS= .0000E+00 OUTFLOW= .3059E+02 BASIN STORAGE= .1092E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.85	460.86	215.33	2.01	5.00	457.79	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3020E+02 EXCESS= .0000E+00 OUTFLOW= .3020E+02 BASIN STORAGE= .1236E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.86	456.28	215.77	1.98	5.00	451.58	215.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2972E+02 EXCESS= .0000E+00 OUTFLOW= .2973E+02 BASIN STORAGE= .1247E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.40	787.58	216.09	2.43	5.00	780.03	215.00	2.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5320E+02 EXCESS= .0000E+00 OUTFLOW= .5321E+02 BASIN STORAGE= .2760E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.41	772.94	216.30	2.38	5.00	766.72	215.00	2.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5214E+02 EXCESS= .0000E+00 OUTFLOW= .5215E+02 BASIN STORAGE= .2510E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.43	748.03	216.31	2.30	5.00	741.15	215.00	2.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5035E+02 EXCESS= .0000E+00 OUTFLOW= .5036E+02 BASIN STORAGE= .2708E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.45	724.25	216.23	2.22	5.00	716.08	215.00	2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4859E+02 EXCESS= .0000E+00 OUTFLOW= .4860E+02 BASIN STORAGE= .2826E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.46 713.42 216.09 2.19 5.00 704.49 215.00 2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4787E+02 EXCESS= .0000E+00 OUTFLOW= .4788E+02 BASIN STORAGE= .2308E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.47 703.52 215.47 2.17 5.00 698.88 215.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4737E+02 EXCESS= .0000E+00 OUTFLOW= .4738E+02 BASIN STORAGE= .2245E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.47 702.03 216.01 2.15 5.00 692.76 215.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4703E+02 EXCESS= .0000E+00 OUTFLOW= .4704E+02 BASIN STORAGE= .2406E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.48 691.25 215.58 2.12 5.00 685.65 215.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4645E+02 EXCESS= .0000E+00 OUTFLOW= .4646E+02 BASIN STORAGE= .2871E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.48 679.29 215.25 2.09 5.00 677.03 215.00 2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4576E+02 EXCESS= .0000E+00 OUTFLOW= .4577E+02 BASIN STORAGE= .2476E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.10 419.14 221.47 1.72 5.00 415.44 220.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3115E+02 EXCESS= .0000E+00 OUTFLOW= .3115E+02 BASIN STORAGE= .1477E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.11 408.92 221.47 1.68 5.00 405.14 220.00 1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3036E+02 EXCESS= .0000E+00 OUTFLOW= .3037E+02 BASIN STORAGE= .1481E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.13 391.42 220.77 1.61 5.00 388.45 220.00 1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2907E+02 EXCESS= .0000E+00 OUTFLOW= .2907E+02 BASIN STORAGE= .1524E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.15 375.68 221.27 1.54 5.00 371.57 220.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2779E+02 EXCESS= .0000E+00 OUTFLOW= .2779E+02 BASIN STORAGE= .1544E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.15 367.40 221.73 1.51 5.00 364.31 220.00 1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2728E+02 EXCESS= .0000E+00 OUTFLOW= .2728E+02 BASIN STORAGE= .1379E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.16 362.76 221.72 1.49 5.00 359.55 220.00 1.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+02 EXCESS= .0000E+00 OUTFLOW= .2692E+02 BASIN STORAGE= .1385E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.17 360.49 221.38 1.47 5.00 356.48 220.00 1.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2667E+02 EXCESS= .0000E+00 OUTFLOW= .2667E+02 BASIN STORAGE= .1517E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.17 354.61 221.54 1.45 5.00 350.82 220.00 1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2626E+02 EXCESS= .0000E+00 OUTFLOW= .2626E+02 BASIN STORAGE= .1436E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.18 347.64 220.88 1.42 5.00 344.62 220.00 1.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2576E+02 EXCESS= .0000E+00 OUTFLOW= .2576E+02 BASIN STORAGE= .1495E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .89 877.18 221.21 1.90 5.00 868.79 225.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7048E+02 EXCESS= .0000E+00 OUTFLOW= .7048E+02 BASIN STORAGE= .1519E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .90 856.91 221.51 1.85 5.00 849.44 225.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6880E+02 EXCESS= .0000E+00 OUTFLOW= .6880E+02 BASIN STORAGE= .1562E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .92 822.92 221.48 1.78 5.00 816.34 225.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6602E+02 EXCESS= .0000E+00 OUTFLOW= .6602E+02 BASIN STORAGE= .1543E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .93 789.13 221.52 1.70 5.00 783.31 225.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6326E+02 EXCESS= .0000E+00 OUTFLOW= .6326E+02 BASIN STORAGE= .1492E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .94 775.50 221.18 1.67 5.00 770.15 225.00 1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6215E+02 EXCESS= .0000E+00 OUTFLOW= .6216E+02 BASIN STORAGE= .1674E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .94 766.16 221.33 1.65 5.00 761.12 225.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6139E+02 EXCESS= .0000E+00 OUTFLOW= .6139E+02 BASIN STORAGE= .1548E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .95 759.35 221.17 1.64 5.00 754.45 225.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6084E+02 EXCESS= .0000E+00 OUTFLOW= .6084E+02 BASIN STORAGE= .1661E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .95 748.81 221.49 1.61 5.00 743.97 225.00 1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5996E+02 EXCESS= .0000E+00 OUTFLOW= .5997E+02 BASIN STORAGE= .1716E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .96 735.21 221.19 1.58 5.00 731.03 225.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5887E+02 EXCESS= .0000E+00 OUTFLOW= .5888E+02 BASIN STORAGE= .1571E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .34 472.40 215.21 2.38 5.00 471.96 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3052E+02 EXCESS= .0000E+00 OUTFLOW= .3052E+02 BASIN STORAGE= .4403E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .34 463.48 215.14 2.33 5.00 463.02 215.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2990E+02 EXCESS= .0000E+00 OUTFLOW= .2990E+02 BASIN STORAGE= .4694E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .35 448.60 215.18 2.25 5.00 448.12 215.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2886E+02 EXCESS= .0000E+00 OUTFLOW= .2886E+02 BASIN STORAGE= .4581E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .35 433.75 215.27 2.17 5.00 433.36 215.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2783E+02 EXCESS= .0000E+00 OUTFLOW= .2783E+02 BASIN STORAGE= .4634E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .35 427.74 215.04 2.14 5.00 427.54 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2742E+02 EXCESS= .0000E+00 OUTFLOW= .2742E+02 BASIN STORAGE= .4467E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .36 423.60 215.17 2.11 5.00 423.12 215.00 2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2713E+02 EXCESS= .0000E+00 OUTFLOW= .2714E+02 BASIN STORAGE= .4647E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .36 420.60 215.06 2.10 5.00 420.32 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2693E+02 EXCESS= .0000E+00 OUTFLOW= .2693E+02 BASIN STORAGE= .4588E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .36 415.92 215.32 2.07 5.00 415.66 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2660E+02 EXCESS= .0000E+00 OUTFLOW= .2660E+02 BASIN STORAGE= .4471E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .36 409.90 215.13 2.04 5.00 409.47 215.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2619E+02 EXCESS= .0000E+00 OUTFLOW= .2619E+02 BASIN STORAGE= .4641E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .94 549.48 216.10 1.90 5.00 546.36 215.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1520E+03 EXCESS= .0000E+00 OUTFLOW= .1520E+03 BASIN STORAGE= .2887E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .94 541.08 215.87 1.86 5.00 535.92 215.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1484E+03 EXCESS= .0000E+00 OUTFLOW= .1484E+03 BASIN STORAGE= .2760E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .96 523.56 215.84 1.78 5.00 518.16 215.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1424E+03 EXCESS= .0000E+00 OUTFLOW= .1424E+03 BASIN STORAGE= .2546E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCP3-G1	MANE	.97	505.31	216.01	1.71	5.00	500.06	215.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1364E+03 EXCESS= .0000E+00 OUTFLOW= .1364E+03 BASIN STORAGE= .2353E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	.97	494.87	216.28	1.68	5.00	492.20	215.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1340E+03 EXCESS= .0000E+00 OUTFLOW= .1340E+03 BASIN STORAGE= .2280E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	.98	490.06	216.25	1.66	5.00	486.80	215.00	1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1324E+03 EXCESS= .0000E+00 OUTFLOW= .1324E+03 BASIN STORAGE= .2232E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	.98	489.35	215.88	1.64	5.00	483.30	215.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1312E+03 EXCESS= .0000E+00 OUTFLOW= .1312E+03 BASIN STORAGE= .2194E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	.99	483.77	215.92	1.62	5.00	477.53	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1293E+03 EXCESS= .0000E+00 OUTFLOW= .1293E+03 BASIN STORAGE= .2137E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	.99	473.12	216.29	1.59	5.00	469.64	215.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1269E+03 EXCESS= .0000E+00 OUTFLOW= .1269E+03 BASIN STORAGE= .2073E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.20	617.24	215.29	1.91	5.00	614.30	215.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1573E+03 EXCESS= .0000E+00 OUTFLOW= .1573E+03 BASIN STORAGE= .3948E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.21	606.38	215.74	1.87	5.00	602.04	215.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1536E+03 EXCESS= .0000E+00 OUTFLOW= .1536E+03 BASIN STORAGE= .3765E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.23	587.62	216.19	1.79	5.00	584.57	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1475E+03 EXCESS= .0000E+00 OUTFLOW= .1475E+03 BASIN STORAGE= .3472E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.25	565.44	215.52	1.72	5.00	560.75	215.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1413E+03 EXCESS= .0000E+00 OUTFLOW= .1413E+03 BASIN STORAGE= .3209E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.25	556.91	215.61	1.69	5.00	551.74	215.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1388E+03 EXCESS= .0000E+00 OUTFLOW= .1388E+03 BASIN STORAGE= .3115E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	1.26	549.91	215.29	1.67	5.00	546.66	215.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1371E+03 EXCESS= .0000E+00 OUTFLOW= .1371E+03 BASIN STORAGE= .3046E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.26	547.82	215.90	1.65	5.00	542.22	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1359E+03 EXCESS= .0000E+00 OUTFLOW= .1359E+03 BASIN STORAGE= .2993E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.27	540.57	215.66	1.63	5.00	534.96	215.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1340E+03 EXCESS= .0000E+00 OUTFLOW= .1340E+03 BASIN STORAGE= .2920E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.28	532.21	215.80	1.60	5.00	526.10	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1315E+03 EXCESS= .0000E+00 OUTFLOW= .1315E+03 BASIN STORAGE= .2833E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.55	1851.71	215.74	2.05	5.00	1837.32	215.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2455E+03 EXCESS= .0000E+00 OUTFLOW= .2455E+03 BASIN STORAGE= .2796E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.55	1817.12	215.74	2.00	5.00	1802.31	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2399E+03 EXCESS= .0000E+00 OUTFLOW= .2399E+03 BASIN STORAGE= .2665E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.56	1757.66	215.79	1.93	5.00	1743.48	215.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2308E+03 EXCESS= .0000E+00 OUTFLOW= .2308E+03 BASIN STORAGE= .2459E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.57	1697.31	215.63	1.85	5.00	1680.50	215.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2216E+03 EXCESS= .0000E+00 OUTFLOW= .2216E+03 BASIN STORAGE= .2274E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.57	1665.75	215.87	1.82	5.00	1652.56	215.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2180E+03 EXCESS= .0000E+00 OUTFLOW= .2180E+03 BASIN STORAGE= .2208E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.57	1655.02	215.51	1.80	5.00	1638.68	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2154E+03 EXCESS= .0000E+00 OUTFLOW= .2154E+03 BASIN STORAGE= .2158E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.57	1641.75	215.65	1.78	5.00	1625.00	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2136E+03 EXCESS= .0000E+00 OUTFLOW= .2136E+03 BASIN STORAGE= .2122E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.58	1622.31	215.52	1.76	5.00	1605.89	215.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2107E+03 EXCESS= .0000E+00 OUTFLOW= .2107E+03 BASIN STORAGE= .2069E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.58	1599.17	215.63	1.73	5.00	1581.94	215.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2071E+03 EXCESS= .0000E+00 OUTFLOW= .2071E+03 BASIN STORAGE= .2006E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.43	235.57	215.72	2.62	5.00	234.51	215.00	2.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1573E+02 EXCESS= .0000E+00 OUTFLOW= .1573E+02 BASIN STORAGE= .1509E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.44	231.25	215.81	2.57	5.00	230.27	215.00	2.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1543E+02 EXCESS= .0000E+00 OUTFLOW= .1543E+02 BASIN STORAGE= .1508E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.46	224.33	215.51	2.49	5.00	223.79	215.00	2.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1493E+02 EXCESS= .0000E+00 OUTFLOW= .1493E+02 BASIN STORAGE= .1408E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.47	217.26	215.26	2.41	5.00	217.07	215.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1443E+02 EXCESS= .0000E+00 OUTFLOW= .1444E+02 BASIN STORAGE= .1552E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.48	214.08	214.88	2.38	5.00	214.05	215.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1424E+02 EXCESS= .0000E+00 OUTFLOW= .1424E+02 BASIN STORAGE= .1442E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.49	212.59	215.65	2.35	5.00	212.00	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1409E+02 EXCESS= .0000E+00 OUTFLOW= .1410E+02 BASIN STORAGE= .1444E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.49	210.72	216.21	2.34	5.00	210.38	215.00	2.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1400E+02 EXCESS= .0000E+00 OUTFLOW= .1400E+02 BASIN STORAGE= .1524E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.50	208.93	215.62	2.31	5.00	208.43	215.00	2.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1384E+02 EXCESS= .0000E+00 OUTFLOW= .1384E+02 BASIN STORAGE= .1485E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.51	206.04	215.26	2.28	5.00	205.90	215.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1364E+02 EXCESS= .0000E+00 OUTFLOW= .1365E+02 BASIN STORAGE= .1707E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.38	257.27	216.22	2.12	5.00	253.05	215.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1661E+02 EXCESS= .0000E+00 OUTFLOW= .1661E+02 BASIN STORAGE= .1665E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.39	250.39	216.64	2.08	5.00	247.81	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1624E+02 EXCESS= .0000E+00 OUTFLOW= .1625E+02 BASIN STORAGE= .1500E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.41	241.44	215.53	2.00	5.00	238.50	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1564E+02 EXCESS= .0000E+00 OUTFLOW= .1564E+02 BASIN STORAGE= .1446E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.43	233.57	215.88	1.92	5.00	229.36	215.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1504E+02 EXCESS= .0000E+00 OUTFLOW= .1504E+02 BASIN STORAGE= .1654E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.44	229.77	215.75	1.89	5.00	225.87	215.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1480E+02 EXCESS= .0000E+00 OUTFLOW= .1480E+02 BASIN STORAGE= .1430E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.44	227.15	216.68	1.87	5.00	224.03	215.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1463E+02 EXCESS= .0000E+00 OUTFLOW= .1463E+02 BASIN STORAGE= .1657E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.45	225.86	215.90	1.86	5.00	221.58	215.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1451E+02 EXCESS= .0000E+00 OUTFLOW= .1451E+02 BASIN STORAGE= .1401E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.46	221.74	215.53	1.83	5.00	219.10	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1432E+02 EXCESS= .0000E+00 OUTFLOW= .1432E+02 BASIN STORAGE= .1533E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.47	217.84	216.90	1.80	5.00	215.68	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1408E+02 EXCESS= .0000E+00 OUTFLOW= .1409E+02 BASIN STORAGE= .1630E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.93	986.89	215.41	2.45	5.00	983.98	215.00	2.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6577E+02 EXCESS= .0000E+00 OUTFLOW= .6578E+02 BASIN STORAGE= .1708E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.94	967.78	215.16	2.40	5.00	966.54	215.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6446E+02 EXCESS= .0000E+00 OUTFLOW= .6446E+02 BASIN STORAGE= .1638E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.95	936.68	215.08	2.32	5.00	936.06	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6228E+02 EXCESS= .0000E+00 OUTFLOW= .6229E+02 BASIN STORAGE= .1741E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.96	905.64	215.06	2.24	5.00	905.18	215.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6011E+02 EXCESS= .0000E+00 OUTFLOW= .6012E+02 BASIN STORAGE= .1785E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.97	893.72	215.28	2.21	5.00	891.93	215.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5924E+02 EXCESS= .0000E+00 OUTFLOW= .5925E+02 BASIN STORAGE= .1720E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	.97	884.97	215.09	2.19	5.00	884.36	215.00	2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5864E+02 EXCESS= .0000E+00 OUTFLOW= .5865E+02 BASIN STORAGE= .1814E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-P	MANE		.98	879.84	215.77	2.17	5.00	876.67	215.00	2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5821E+02 EXCESS= .0000E+00 OUTFLOW= .5822E+02 BASIN STORAGE= .1753E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-P	MANE		.98	870.31	215.70	2.14	5.00	867.22	215.00	2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5751E+02 EXCESS= .0000E+00 OUTFLOW= .5752E+02 BASIN STORAGE= .1782E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-P	MANE		.99	858.86	215.90	2.11	5.00	855.67	215.00	2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5665E+02 EXCESS= .0000E+00 OUTFLOW= .5666E+02 BASIN STORAGE= .1706E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.49	1370.57	215.91	2.51	5.00	1350.04	215.00	2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9369E+02 EXCESS= .0000E+00 OUTFLOW= .9371E+02 BASIN STORAGE= .3660E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.50	1346.42	215.96	2.46	5.00	1325.24	215.00	2.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9184E+02 EXCESS= .0000E+00 OUTFLOW= .9186E+02 BASIN STORAGE= .3682E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.52	1298.71	215.67	2.38	5.00	1284.74	215.00	2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8879E+02 EXCESS= .0000E+00 OUTFLOW= .8880E+02 BASIN STORAGE= .3278E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.54	1252.03	215.44	2.30	5.00	1243.18	215.00	2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8574E+02 EXCESS= .0000E+00 OUTFLOW= .8576E+02 BASIN STORAGE= .3623E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.55	1244.35	216.67	2.26	5.00	1226.37	215.00	2.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8453E+02 EXCESS= .0000E+00 OUTFLOW= .8455E+02 BASIN STORAGE= .3191E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.55	1230.06	215.87	2.24	5.00	1213.13	215.00	2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8367E+02 EXCESS= .0000E+00 OUTFLOW= .8369E+02 BASIN STORAGE= .3227E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.56	1227.89	216.57	2.22	5.00	1205.95	215.00	2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8309E+02 EXCESS= .0000E+00 OUTFLOW= .8311E+02 BASIN STORAGE= .3366E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.56	1207.93	215.94	2.20	5.00	1190.25	215.00	2.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8209E+02 EXCESS= .0000E+00 OUTFLOW= .8211E+02 BASIN STORAGE= .3218E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCP3-Q	MANE		1.57	1184.71	215.53	2.17	5.00	1175.12	215.00	2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8088E+02 EXCESS= .0000E+00 OUTFLOW= .8090E+02 BASIN STORAGE= .3727E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .73 1708.78 215.85 2.51 5.00 1696.12 215.00 2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1183E+03 EXCESS= .0000E+00 OUTFLOW= .1183E+03 BASIN STORAGE= .1687E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .74 1673.72 215.97 2.46 5.00 1663.95 215.00 2.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1160E+03 EXCESS= .0000E+00 OUTFLOW= .1160E+03 BASIN STORAGE= .1652E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .75 1628.99 215.67 2.38 5.00 1613.96 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1122E+03 EXCESS= .0000E+00 OUTFLOW= .1122E+03 BASIN STORAGE= .1592E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .76 1572.32 215.48 2.30 5.00 1559.87 215.00 2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1083E+03 EXCESS= .0000E+00 OUTFLOW= .1083E+03 BASIN STORAGE= .1638E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .76 1553.40 215.88 2.27 5.00 1539.89 215.00 2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1068E+03 EXCESS= .0000E+00 OUTFLOW= .1068E+03 BASIN STORAGE= .1588E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .76 1533.22 216.02 2.24 5.00 1522.83 215.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1057E+03 EXCESS= .0000E+00 OUTFLOW= .1057E+03 BASIN STORAGE= .1720E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .77 1531.14 215.78 2.23 5.00 1515.97 215.00 2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1050E+03 EXCESS= .0000E+00 OUTFLOW= .1050E+03 BASIN STORAGE= .1628E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .77 1503.63 215.33 2.20 5.00 1494.33 215.00 2.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1038E+03 EXCESS= .0000E+00 OUTFLOW= .1038E+03 BASIN STORAGE= .1712E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .77 1491.02 215.67 2.17 5.00 1476.34 215.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1022E+03 EXCESS= .0000E+00 OUTFLOW= .1022E+03 BASIN STORAGE= .1592E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .24 3730.60 215.26 2.19 5.00 3715.33 215.00 2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3791E+03 EXCESS= .0000E+00 OUTFLOW= .3791E+03 BASIN STORAGE= .1607E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .24 3660.27 215.25 2.14 5.00 3644.52 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3710E+03 EXCESS= .0000E+00 OUTFLOW= .3710E+03 BASIN STORAGE= .1533E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .24 3540.61 215.36 2.06 5.00 3527.63 215.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3574E+03 EXCESS= .0000E+00 OUTFLOW= .3574E+03 BASIN STORAGE= .1415E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3422.14 215.25 1.99 5.00 3406.29 215.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3439E+03 EXCESS= .0000E+00 OUTFLOW= .3439E+03 BASIN STORAGE= .1308E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3370.02 215.30 1.95 5.00 3354.51 215.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3385E+03 EXCESS= .0000E+00 OUTFLOW= .3385E+03 BASIN STORAGE= .1271E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3333.66 215.40 1.93 5.00 3321.48 215.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3348E+03 EXCESS= .0000E+00 OUTFLOW= .3348E+03 BASIN STORAGE= .1241E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3315.36 215.22 1.92 5.00 3300.32 215.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3321E+03 EXCESS= .0000E+00 OUTFLOW= .3321E+03 BASIN STORAGE= .1221E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3271.49 215.34 1.89 5.00 3256.98 215.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3278E+03 EXCESS= .0000E+00 OUTFLOW= .3278E+03 BASIN STORAGE= .1191E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .25 3229.63 215.27 1.86 5.00 3213.62 215.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3225E+03 EXCESS= .0000E+00 OUTFLOW= .3225E+03 BASIN STORAGE= .1154E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.06 3920.62 218.31 2.21 5.00 3786.91 220.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3992E+03 EXCESS= .0000E+00 OUTFLOW= .3993E+03 BASIN STORAGE= .8422E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.07 3860.90 217.65 2.16 5.00 3734.51 220.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3907E+03 EXCESS= .0000E+00 OUTFLOW= .3907E+03 BASIN STORAGE= .7966E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.10 3733.14 217.93 2.08 5.00 3616.68 220.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3766E+03 EXCESS= .0000E+00 OUTFLOW= .3766E+03 BASIN STORAGE= .7309E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.12 3599.46 218.36 2.01 5.00 3485.88 220.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3624E+03 EXCESS= .0000E+00 OUTFLOW= .3625E+03 BASIN STORAGE= .6689E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.13 3562.18 217.34 1.98 5.00 3455.12 220.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3568E+03 EXCESS= .0000E+00 OUTFLOW= .3568E+03 BASIN STORAGE= .6485E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCSHFH-9	MANE	2.14	3516.98	218.06	1.95	5.00	3414.28	220.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3529E+03 EXCESS= .0000E+00 OUTFLOW= .3529E+03 BASIN STORAGE= .6314E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.14	3487.20	218.53	1.94	5.00	3382.57	220.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3501E+03 EXCESS= .0000E+00 OUTFLOW= .3501E+03 BASIN STORAGE= .6223E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.15	3460.23	217.34	1.91	5.00	3363.18	220.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3456E+03 EXCESS= .0000E+00 OUTFLOW= .3456E+03 BASIN STORAGE= .6050E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.16	3400.31	218.31	1.88	5.00	3300.95	220.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3400E+03 EXCESS= .0000E+00 OUTFLOW= .3400E+03 BASIN STORAGE= .5834E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.55	7388.74	220.75	2.25	5.00	7342.81	220.00	2.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1405E+04 EXCESS= .0000E+00 OUTFLOW= .1405E+04 BASIN STORAGE= .4069E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.55	7273.86	220.89	2.20	5.00	7231.04	220.00	2.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1375E+04 EXCESS= .0000E+00 OUTFLOW= .1375E+04 BASIN STORAGE= .3863E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.56	7066.18	220.63	2.12	5.00	7014.41	220.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1325E+04 EXCESS= .0000E+00 OUTFLOW= .1325E+04 BASIN STORAGE= .3567E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.57	6832.76	220.62	2.04	5.00	6781.13	220.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1275E+04 EXCESS= .0000E+00 OUTFLOW= .1275E+04 BASIN STORAGE= .3279E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.57	6751.57	220.94	2.01	5.00	6705.01	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1256E+04 EXCESS= .0000E+00 OUTFLOW= .1256E+04 BASIN STORAGE= .3185E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.57	6691.89	220.64	1.99	5.00	6638.30	220.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1241E+04 EXCESS= .0000E+00 OUTFLOW= .1241E+04 BASIN STORAGE= .3108E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.57	6631.32	220.79	1.97	5.00	6579.32	220.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1231E+04 EXCESS= .0000E+00 OUTFLOW= .1231E+04 BASIN STORAGE= .3067E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.58	6571.90	220.93	1.95	5.00	6521.08	220.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1216E+04 EXCESS= .0000E+00 OUTFLOW= .1216E+04 BASIN STORAGE= .2986E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCRCSWFH	MANE	.58	6462.92	220.67	1.91	5.00	6406.83	220.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1195E+04 EXCESS= .0000E+00 OUTFLOW= .1195E+04 BASIN STORAGE= .2885E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.84	7567.74	221.38	2.24	5.00	7477.09	220.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1425E+04 EXCESS= .0000E+00 OUTFLOW= .1425E+04 BASIN STORAGE= .6051E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.84	7455.66	220.98	2.19	5.00	7361.43	220.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1395E+04 EXCESS= .0000E+00 OUTFLOW= .1395E+04 BASIN STORAGE= .5751E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.85	7232.06	220.96	2.11	5.00	7135.92	220.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1344E+04 EXCESS= .0000E+00 OUTFLOW= .1344E+04 BASIN STORAGE= .5303E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.86	6990.21	221.19	2.03	5.00	6894.46	225.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1293E+04 EXCESS= .0000E+00 OUTFLOW= .1293E+04 BASIN STORAGE= .4877E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.87	6909.88	221.26	2.00	5.00	6812.85	225.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1273E+04 EXCESS= .0000E+00 OUTFLOW= .1273E+04 BASIN STORAGE= .4737E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.87	6842.42	221.22	1.98	5.00	6756.23	225.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1259E+04 EXCESS= .0000E+00 OUTFLOW= .1259E+04 BASIN STORAGE= .4621E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.87	6783.03	221.08	1.96	5.00	6707.93	225.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1249E+04 EXCESS= .0000E+00 OUTFLOW= .1249E+04 BASIN STORAGE= .4556E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.88	6722.73	220.95	1.94	5.00	6644.17	225.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1233E+04 EXCESS= .0000E+00 OUTFLOW= .1233E+04 BASIN STORAGE= .4428E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.88	6608.76	221.52	1.91	5.00	6559.28	225.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1212E+04 EXCESS= .0000E+00 OUTFLOW= .1212E+04 BASIN STORAGE= .4288E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.82	7692.97	235.56	2.21	5.00	7672.09	235.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1482E+04 EXCESS= .0000E+00 OUTFLOW= .1482E+04 BASIN STORAGE= .6418E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.82	7558.94	235.42	2.17	5.00	7540.48	235.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1450E+04 EXCESS= .0000E+00 OUTFLOW= .1450E+04 BASIN STORAGE= .6106E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.83	7339.90	235.58	2.09	5.00	7316.12	235.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1397E+04 EXCESS= .0000E+00 OUTFLOW= .1397E+04 BASIN STORAGE= .5642E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.84	7107.43	235.96	2.01	5.00	7080.16	235.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1344E+04 EXCESS= .0000E+00 OUTFLOW= .1344E+04 BASIN STORAGE= .5189E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.85	7010.89	236.22	1.98	5.00	6988.46	235.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1323E+04 EXCESS= .0000E+00 OUTFLOW= .1323E+04 BASIN STORAGE= .5035E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.85	6946.78	236.20	1.95	5.00	6922.02	235.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1308E+04 EXCESS= .0000E+00 OUTFLOW= .1308E+04 BASIN STORAGE= .4918E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.85	6904.41	235.99	1.94	5.00	6874.90	235.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1298E+04 EXCESS= .0000E+00 OUTFLOW= .1298E+04 BASIN STORAGE= .4842E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.86	6832.91	236.04	1.91	5.00	6803.07	235.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1282E+04 EXCESS= .0000E+00 OUTFLOW= .1282E+04 BASIN STORAGE= .4707E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.86	6728.74	235.67	1.88	5.00	6697.41	235.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1260E+04 EXCESS= .0000E+00 OUTFLOW= .1260E+04 BASIN STORAGE= .4554E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.74	432.82	231.81	1.83	5.00	428.05	235.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4297E+02 EXCESS= .0000E+00 OUTFLOW= .4297E+02 BASIN STORAGE= .7517E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.76	422.64	231.68	1.78	5.00	418.53	235.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4198E+02 EXCESS= .0000E+00 OUTFLOW= .4198E+02 BASIN STORAGE= .7518E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.78	406.68	232.69	1.71	5.00	403.18	235.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4033E+02 EXCESS= .0000E+00 OUTFLOW= .4033E+02 BASIN STORAGE= .8417E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.80	390.91	231.99	1.65	5.00	387.28	235.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3870E+02 EXCESS= .0000E+00 OUTFLOW= .3870E+02 BASIN STORAGE= .7641E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.81	384.08	233.18	1.62	5.00	381.04	235.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3805E+02 EXCESS= .0000E+00 OUTFLOW= .3805E+02 BASIN STORAGE= .8572E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.81	380.16	232.20	1.60	5.00	376.74	235.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3759E+02 EXCESS= .0000E+00 OUTFLOW= .3759E+02 BASIN STORAGE= .8574E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.82	376.67	232.81	1.58	5.00	373.68	235.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3727E+02 EXCESS= .0000E+00 OUTFLOW= .3727E+02 BASIN STORAGE= .7490E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.83	371.60	231.96	1.56	5.00	368.48	235.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3675E+02 EXCESS= .0000E+00 OUTFLOW= .3675E+02 BASIN STORAGE= .8736E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.84	365.07	233.20	1.54	5.00	362.28	235.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3611E+02 EXCESS= .0000E+00 OUTFLOW= .3611E+02 BASIN STORAGE= .7971E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.40	883.38	226.09	1.89	5.00	872.46	225.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8405E+02 EXCESS= .0000E+00 OUTFLOW= .8405E+02 BASIN STORAGE= .8520E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.41	864.78	226.22	1.84	5.00	853.32	225.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8215E+02 EXCESS= .0000E+00 OUTFLOW= .8215E+02 BASIN STORAGE= .7761E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.43	831.15	226.04	1.77	5.00	820.48	225.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7899E+02 EXCESS= .0000E+00 OUTFLOW= .7900E+02 BASIN STORAGE= .7591E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.45	798.42	227.34	1.70	5.00	788.39	225.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7585E+02 EXCESS= .0000E+00 OUTFLOW= .7586E+02 BASIN STORAGE= .8747E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.46	786.55	227.03	1.68	5.00	776.20	225.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7460E+02 EXCESS= .0000E+00 OUTFLOW= .7460E+02 BASIN STORAGE= .7608E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.46	779.08	226.36	1.66	5.00	767.11	225.00	1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7373E+02 EXCESS= .0000E+00 OUTFLOW= .7373E+02 BASIN STORAGE= .8798E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.46	771.33	226.96	1.64	5.00	760.85	225.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7310E+02 EXCESS= .0000E+00 OUTFLOW= .7310E+02 BASIN STORAGE= .7538E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.47	762.60	226.40	1.62	5.00	750.48	225.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7211E+02 EXCESS= .0000E+00 OUTFLOW= .7211E+02 BASIN STORAGE= .8373E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC11B-1	MANE	1.48	747.99	226.12	1.59	5.00	737.12	230.00	1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7087E+02 EXCESS= .0000E+00 OUTFLOW= .7087E+02 BASIN STORAGE= .8673E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.10	1240.77	227.14	1.90	5.00	1221.66	230.00	1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1153E+03 EXCESS= .0000E+00 OUTFLOW= .1153E+03 BASIN STORAGE= .1547E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.12	1212.24	228.67	1.86	5.00	1194.55	225.00	1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1127E+03 EXCESS= .0000E+00 OUTFLOW= .1127E+03 BASIN STORAGE= .1282E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.14	1166.96	227.09	1.78	5.00	1152.27	230.00	1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1084E+03 EXCESS= .0000E+00 OUTFLOW= .1084E+03 BASIN STORAGE= .1347E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.17	1123.17	227.67	1.71	5.00	1110.05	230.00	1.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+03 EXCESS= .0000E+00 OUTFLOW= .1041E+03 BASIN STORAGE= .1393E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.18	1105.92	228.75	1.69	5.00	1089.75	230.00	1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1024E+03 EXCESS= .0000E+00 OUTFLOW= .1024E+03 BASIN STORAGE= .1371E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.19	1092.65	227.38	1.67	5.00	1080.77	230.00	1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+03 EXCESS= .0000E+00 OUTFLOW= .1012E+03 BASIN STORAGE= .1478E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.19	1084.40	227.94	1.65	5.00	1070.88	230.00	1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1004E+03 EXCESS= .0000E+00 OUTFLOW= .1004E+03 BASIN STORAGE= .1266E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.20	1069.79	228.88	1.63	5.00	1055.43	230.00	1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9903E+02 EXCESS= .0000E+00 OUTFLOW= .9904E+02 BASIN STORAGE= .1265E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-1	MANE	2.21	1051.40	227.91	1.60	5.00	1040.19	230.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9734E+02 EXCESS= .0000E+00 OUTFLOW= .9734E+02 BASIN STORAGE= .1560E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-2	MANE	1.25	1793.62	226.62	2.03	5.00	1774.04	230.00	2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1688E+03 EXCESS= .0000E+00 OUTFLOW= .1688E+03 BASIN STORAGE= .1643E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO= .00								
RC8B-2	MANE	1.25	1756.43	227.06	1.99	5.00	1736.01	230.00	1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1652E+03 EXCESS= .0000E+00 OUTFLOW= .1652E+03 BASIN STORAGE= .1642E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.27 1696.43 227.39 1.91 5.00 1681.17 230.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1592E+03 EXCESS= .0000E+00 OUTFLOW= .1592E+03 BASIN STORAGE= .1632E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.29 1631.27 226.73 1.84 5.00 1618.15 230.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1532E+03 EXCESS= .0000E+00 OUTFLOW= .1532E+03 BASIN STORAGE= .1801E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.29 1608.59 226.52 1.81 5.00 1593.49 230.00 1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1509E+03 EXCESS= .0000E+00 OUTFLOW= .1509E+03 BASIN STORAGE= .1853E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.30 1592.83 227.42 1.79 5.00 1581.64 230.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1492E+03 EXCESS= .0000E+00 OUTFLOW= .1492E+03 BASIN STORAGE= .1649E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.30 1577.06 226.88 1.78 5.00 1564.58 230.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1480E+03 EXCESS= .0000E+00 OUTFLOW= .1480E+03 BASIN STORAGE= .1608E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.31 1560.43 226.40 1.76 5.00 1546.77 230.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1461E+03 EXCESS= .0000E+00 OUTFLOW= .1461E+03 BASIN STORAGE= .1804E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.32 1532.83 227.88 1.73 5.00 1522.44 230.00 1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1438E+03 EXCESS= .0000E+00 OUTFLOW= .1438E+03 BASIN STORAGE= .1582E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.50 427.96 220.50 2.00 5.00 421.61 220.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3084E+02 EXCESS= .0000E+00 OUTFLOW= .3086E+02 BASIN STORAGE= .1671E-02 PERCENT ERROR= .1 -

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.50 418.94 220.50 1.95 5.00 412.66 220.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3017E+02 EXCESS= .0000E+00 OUTFLOW= .3019E+02 BASIN STORAGE= .1651E-02 PERCENT ERROR= .1 -

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.25 403.33 221.00 1.88 5.00 393.43 220.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2903E+02 EXCESS= .0000E+00 OUTFLOW= .2904E+02 BASIN STORAGE= .1456E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 389.43 223.25 1.81 5.00 377.89 220.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2792E+02 EXCESS= .0000E+00 OUTFLOW= .2794E+02 BASIN STORAGE= .1715E-02 PERCENT ERROR= .1 -

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 383.70 223.25 1.78 5.00 372.03 220.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2748E+02 EXCESS= .0000E+00 OUTFLOW= .2750E+02 BASIN STORAGE= .1701E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 379.69 223.25 1.76 5.00 367.92 220.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2717E+02 EXCESS= .0000E+00 OUTFLOW= .2719E+02 BASIN STORAGE= .1691E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 376.83 223.25 1.74 5.00 364.99 220.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2695E+02 EXCESS= .0000E+00 OUTFLOW= .2697E+02 BASIN STORAGE= .1684E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 372.24 223.25 1.72 5.00 360.30 220.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2660E+02 EXCESS= .0000E+00 OUTFLOW= .2662E+02 BASIN STORAGE= .1672E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 4.75 366.52 223.25 1.69 5.00 354.44 220.00 1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2616E+02 EXCESS= .0000E+00 OUTFLOW= .2618E+02 BASIN STORAGE= .1658E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.49 2790.80 228.73 1.98 5.00 2769.18 230.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2531E+03 EXCESS= .0000E+00 OUTFLOW= .2532E+03 BASIN STORAGE= .3124E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.50 2725.89 227.87 1.94 5.00 2725.04 230.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2477E+03 EXCESS= .0000E+00 OUTFLOW= .2477E+03 BASIN STORAGE= .2796E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.54 2629.50 228.17 1.87 5.00 2622.87 230.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2385E+03 EXCESS= .0000E+00 OUTFLOW= .2385E+03 BASIN STORAGE= .3179E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.57 2528.90 228.71 1.79 5.00 2515.19 230.00 1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2293E+03 EXCESS= .0000E+00 OUTFLOW= .2293E+03 BASIN STORAGE= .3620E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.58 2500.10 229.76 1.77 5.00 2493.37 230.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2259E+03 EXCESS= .0000E+00 OUTFLOW= .2259E+03 BASIN STORAGE= .3724E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.59 2463.34 230.66 1.75 5.00 2462.72 230.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2233E+03 EXCESS= .0000E+00 OUTFLOW= .2233E+03 BASIN STORAGE= .2905E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 2.60 2442.90 228.80 1.73 5.00 2430.63 230.00 1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2214E+03 EXCESS= .0000E+00 OUTFLOW= .2214E+03 BASIN STORAGE= .3234E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCC3B-2A	MANE	2.61	2422.44	229.57	1.71	5.00	2412.75	230.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2187E+03 EXCESS= .0000E+00 OUTFLOW= .2187E+03 BASIN STORAGE= .3704E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2A	MANE	2.62	2371.07	228.35	1.68	5.00	2367.37	230.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2150E+03 EXCESS= .0000E+00 OUTFLOW= .2151E+03 BASIN STORAGE= .3535E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.51	10453.94	236.46	2.16	5.00	10433.94	235.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1758E+04 EXCESS= .0000E+00 OUTFLOW= .1758E+04 BASIN STORAGE= .1348E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.52	10278.38	236.45	2.12	5.00	10253.75	235.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1720E+04 EXCESS= .0000E+00 OUTFLOW= .1720E+04 BASIN STORAGE= .1282E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.53	9958.60	236.23	2.04	5.00	9918.08	235.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1657E+04 EXCESS= .0000E+00 OUTFLOW= .1657E+04 BASIN STORAGE= .1185E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.55	9620.90	236.21	1.96	5.00	9573.84	235.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1594E+04 EXCESS= .0000E+00 OUTFLOW= .1594E+04 BASIN STORAGE= .1089E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.56	9488.12	235.70	1.93	5.00	9466.68	235.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1570E+04 EXCESS= .0000E+00 OUTFLOW= .1570E+04 BASIN STORAGE= .1059E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.57	9401.13	236.64	1.91	5.00	9363.95	235.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1551E+04 EXCESS= .0000E+00 OUTFLOW= .1551E+04 BASIN STORAGE= .1036E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.57	9315.34	235.76	1.89	5.00	9290.86	235.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1539E+04 EXCESS= .0000E+00 OUTFLOW= .1539E+04 BASIN STORAGE= .1016E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.58	9240.06	236.63	1.87	5.00	9195.85	235.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1520E+04 EXCESS= .0000E+00 OUTFLOW= .1520E+04 BASIN STORAGE= .9910E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC3B-2B	MANE	1.59	9093.51	236.52	1.84	5.00	9036.86	235.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1494E+04 EXCESS= .0000E+00 OUTFLOW= .1494E+04 BASIN STORAGE= .9594E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSF2-C	MANE	1.35	10681.28	235.59	2.15	5.00	10636.62	235.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1788E+04 EXCESS= .0000E+00 OUTFLOW= .1788E+04 BASIN STORAGE= .1236E+00 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.36	10499.74	235.79	2.10	5.00	10445.37	235.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1749E+04 EXCESS= .0000E+00 OUTFLOW= .1749E+04 BASIN STORAGE= .1176E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.37	10160.93	236.03	2.02	5.00	10097.22	235.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1685E+04 EXCESS= .0000E+00 OUTFLOW= .1685E+04 BASIN STORAGE= .1087E+00 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.39	9818.01	236.41	1.95	5.00	9748.57	235.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1620E+04 EXCESS= .0000E+00 OUTFLOW= .1620E+04 BASIN STORAGE= .9993E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.40	9692.84	236.03	1.92	5.00	9619.79	235.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1596E+04 EXCESS= .0000E+00 OUTFLOW= .1596E+04 BASIN STORAGE= .9712E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.40	9569.17	235.60	1.89	5.00	9515.64	235.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1577E+04 EXCESS= .0000E+00 OUTFLOW= .1577E+04 BASIN STORAGE= .9486E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.41	9523.50	236.30	1.88	5.00	9443.28	235.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1564E+04 EXCESS= .0000E+00 OUTFLOW= .1564E+04 BASIN STORAGE= .9347E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.41	9403.53	235.81	1.86	5.00	9336.39	235.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1545E+04 EXCESS= .0000E+00 OUTFLOW= .1545E+04 BASIN STORAGE= .9109E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.42	9245.97	235.94	1.82	5.00	9171.21	235.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1518E+04 EXCESS= .0000E+00 OUTFLOW= .1518E+04 BASIN STORAGE= .8819E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.02	755.16	226.24	2.08	5.00	753.82	225.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6522E+02 EXCESS= .0000E+00 OUTFLOW= .6522E+02 BASIN STORAGE= .1654E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.03	740.95	226.07	2.03	5.00	738.42	225.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6380E+02 EXCESS= .0000E+00 OUTFLOW= .6381E+02 BASIN STORAGE= .1696E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.05	714.15	226.19	1.96	5.00	712.14	225.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6145E+02 EXCESS= .0000E+00 OUTFLOW= .6145E+02 BASIN STORAGE= .1622E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.06	686.99	226.38	1.88	5.00	685.95	225.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5911E+02 EXCESS= .0000E+00 OUTFLOW= .5911E+02 BASIN STORAGE= .1763E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.07	677.33	225.62	1.85	5.00	675.73	225.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5818E+02 EXCESS= .0000E+00 OUTFLOW= .5818E+02 BASIN STORAGE= .1832E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.07	669.72	225.52	1.83	5.00	668.38	225.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5752E+02 EXCESS= .0000E+00 OUTFLOW= .5752E+02 BASIN STORAGE= .1613E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.08	665.29	226.22	1.82	5.00	663.31	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5706E+02 EXCESS= .0000E+00 OUTFLOW= .5706E+02 BASIN STORAGE= .1791E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.08	656.69	226.27	1.79	5.00	654.91	225.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5631E+02 EXCESS= .0000E+00 OUTFLOW= .5632E+02 BASIN STORAGE= .1761E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.09	645.82	225.54	1.76	5.00	644.50	225.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5539E+02 EXCESS= .0000E+00 OUTFLOW= .5539E+02 BASIN STORAGE= .1816E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.65	1211.98	225.57	2.06	5.00	1210.68	225.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1040E+03 EXCESS= .0000E+00 OUTFLOW= .1040E+03 BASIN STORAGE= .3928E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.66	1187.90	225.78	2.02	5.00	1185.71	225.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1018E+03 EXCESS= .0000E+00 OUTFLOW= .1018E+03 BASIN STORAGE= .3507E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.68	1144.91	225.68	1.94	5.00	1143.40	225.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9799E+02 EXCESS= .0000E+00 OUTFLOW= .9800E+02 BASIN STORAGE= .3522E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.71	1102.37	225.64	1.87	5.00	1101.22	225.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9424E+02 EXCESS= .0000E+00 OUTFLOW= .9424E+02 BASIN STORAGE= .3477E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.72	1087.77	227.00	1.84	5.00	1083.30	225.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9278E+02 EXCESS= .0000E+00 OUTFLOW= .9279E+02 BASIN STORAGE= .3927E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.73	1077.08	226.26	1.82	5.00	1072.79	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9172E+02 EXCESS= .0000E+00 OUTFLOW= .9173E+02 BASIN STORAGE= .3817E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.73	1069.06	226.95	1.81	5.00	1062.80	225.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9100E+02 EXCESS= .0000E+00 OUTFLOW= .9101E+02 BASIN STORAGE= .3937E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.74	1055.75	226.36	1.78	5.00	1050.97	225.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8979E+02 EXCESS= .0000E+00 OUTFLOW= .8980E+02 BASIN STORAGE= .3511E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.75	1037.25	226.05	1.75	5.00	1034.51	225.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8830E+02 EXCESS= .0000E+00 OUTFLOW= .8831E+02 BASIN STORAGE= .3912E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	353.60	225.00	2.27	5.00	353.60	225.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3020E+02 EXCESS= .0000E+00 OUTFLOW= .3021E+02 BASIN STORAGE= .1566E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	346.83	225.00	2.23	5.00	346.83	225.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2960E+02 EXCESS= .0000E+00 OUTFLOW= .2961E+02 BASIN STORAGE= .1548E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	335.54	225.00	2.15	5.00	335.54	225.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2860E+02 EXCESS= .0000E+00 OUTFLOW= .2861E+02 BASIN STORAGE= .1518E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	324.25	225.00	2.08	5.00	324.25	225.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2760E+02 EXCESS= .0000E+00 OUTFLOW= .2762E+02 BASIN STORAGE= .1489E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	319.73	225.00	2.05	5.00	319.73	225.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2721E+02 EXCESS= .0000E+00 OUTFLOW= .2722E+02 BASIN STORAGE= .1476E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	316.57	225.00	2.03	5.00	316.57	225.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2693E+02 EXCESS= .0000E+00 OUTFLOW= .2694E+02 BASIN STORAGE= .1468E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	314.32	230.00	2.01	5.00	314.32	230.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2673E+02 EXCESS= .0000E+00 OUTFLOW= .2675E+02 BASIN STORAGE= .1462E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	310.89	230.00	1.99	5.00	310.89	230.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2641E+02 EXCESS= .0000E+00 OUTFLOW= .2643E+02 BASIN STORAGE= .1452E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	306.61	230.00	1.96	5.00	306.61	230.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2602E+02 EXCESS= .0000E+00 OUTFLOW= .2603E+02 BASIN STORAGE= .1440E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-2	MANE	5.00	640.80	230.00	2.18	5.00	640.80	230.00	2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5392E+02 EXCESS= .0000E+00 OUTFLOW= .5398E+02 BASIN STORAGE= .5817E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 628.20 230.00 2.13 5.00 628.20 230.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5282E+02 EXCESS= .0000E+00 OUTFLOW= .5288E+02 BASIN STORAGE= .5767E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 607.17 230.00 2.06 5.00 607.17 230.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5100E+02 EXCESS= .0000E+00 OUTFLOW= .5105E+02 BASIN STORAGE= .5683E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 586.10 230.00 1.99 5.00 586.10 230.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4918E+02 EXCESS= .0000E+00 OUTFLOW= .4923E+02 BASIN STORAGE= .5597E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 578.31 230.00 1.96 5.00 578.31 230.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4845E+02 EXCESS= .0000E+00 OUTFLOW= .4850E+02 BASIN STORAGE= .7165E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 572.39 230.00 1.94 5.00 572.39 230.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4794E+02 EXCESS= .0000E+00 OUTFLOW= .4799E+02 BASIN STORAGE= .7136E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 568.15 230.00 1.92 5.00 568.15 230.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4758E+02 EXCESS= .0000E+00 OUTFLOW= .4763E+02 BASIN STORAGE= .7115E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 561.38 230.00 1.90 5.00 561.38 230.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4700E+02 EXCESS= .0000E+00 OUTFLOW= .4705E+02 BASIN STORAGE= .6748E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 552.90 230.00 1.87 5.00 552.90 230.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4628E+02 EXCESS= .0000E+00 OUTFLOW= .4632E+02 BASIN STORAGE= .6707E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 318.89 235.00 2.18 5.00 318.89 235.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2936E+02 EXCESS= .0000E+00 OUTFLOW= .2938E+02 BASIN STORAGE= .2006E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 312.72 235.00 2.13 5.00 312.72 235.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2875E+02 EXCESS= .0000E+00 OUTFLOW= .2877E+02 BASIN STORAGE= .1983E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 302.45 235.00 2.06 5.00 302.45 235.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2774E+02 EXCESS= .0000E+00 OUTFLOW= .2776E+02 BASIN STORAGE= .1945E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 292.17 235.00 1.98 5.00 292.17 235.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2673E+02 EXCESS= .0000E+00 OUTFLOW= .2675E+02 BASIN STORAGE= .1906E-02 PERCENT ERROR=										-	
.1											
	FOR PLAN = 1	RATIO=	.00								
	R19A	MANE	5.00	288.05	235.00	1.95	5.00	288.05	235.00	1.95	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2633E+02 EXCESS= .0000E+00 OUTFLOW= .2635E+02 BASIN STORAGE= .1891E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	R19A	MANE	5.00	285.17	235.00	1.93	5.00	285.17	235.00	1.93	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2605E+02 EXCESS= .0000E+00 OUTFLOW= .2606E+02 BASIN STORAGE= .1880E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	R19A	MANE	5.00	283.11	235.00	1.92	5.00	283.11	235.00	1.92	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2585E+02 EXCESS= .0000E+00 OUTFLOW= .2586E+02 BASIN STORAGE= .1872E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	R19A	MANE	5.00	279.82	235.00	1.89	5.00	279.82	235.00	1.89	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2553E+02 EXCESS= .0000E+00 OUTFLOW= .2554E+02 BASIN STORAGE= .1860E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	R19A	MANE	5.00	275.71	235.00	1.86	5.00	275.71	235.00	1.86	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2513E+02 EXCESS= .0000E+00 OUTFLOW= .2514E+02 BASIN STORAGE= .1844E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	780.51	235.00	2.18	5.00	780.51	235.00	2.18	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7731E+02 EXCESS= .0000E+00 OUTFLOW= .7736E+02 BASIN STORAGE= .8795E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	764.75	235.00	2.14	5.00	764.75	235.00	2.14	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7572E+02 EXCESS= .0000E+00 OUTFLOW= .7577E+02 BASIN STORAGE= .8721E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	738.48	235.00	2.06	5.00	738.48	235.00	2.06	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7309E+02 EXCESS= .0000E+00 OUTFLOW= .7314E+02 BASIN STORAGE= .8303E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	712.20	235.00	1.99	5.00	712.20	235.00	1.99	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7047E+02 EXCESS= .0000E+00 OUTFLOW= .7051E+02 BASIN STORAGE= .8180E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	701.68	235.00	1.96	5.00	701.68	235.00	1.96	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6942E+02 EXCESS= .0000E+00 OUTFLOW= .6947E+02 BASIN STORAGE= .8130E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	694.32	235.00	1.94	5.00	694.32	235.00	1.94	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6869E+02 EXCESS= .0000E+00 OUTFLOW= .6873E+02 BASIN STORAGE= .8095E-02 PERCENT ERROR=											-
.1											
	FOR PLAN = 1	RATIO=	.00								
	RC13A-2	MANE	5.00	689.06	235.00	1.92	5.00	689.06	235.00	1.92	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6817E+02 EXCESS= .0000E+00 OUTFLOW= .6821E+02 BASIN STORAGE= .7878E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 680.64 235.00 1.90 5.00 680.64 235.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6733E+02 EXCESS= .0000E+00 OUTFLOW= .6738E+02 BASIN STORAGE= .7838E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 670.12 235.00 1.87 5.00 670.12 235.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6629E+02 EXCESS= .0000E+00 OUTFLOW= .6633E+02 BASIN STORAGE= .7789E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 2.90 1036.21 237.50 2.15 5.00 1029.58 235.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+03 EXCESS= .0000E+00 OUTFLOW= .1041E+03 BASIN STORAGE= .2599E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 2.92 1018.48 236.21 2.11 5.00 1009.34 235.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1020E+03 EXCESS= .0000E+00 OUTFLOW= .1020E+03 BASIN STORAGE= .2441E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 2.95 983.10 236.05 2.03 5.00 975.10 235.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9842E+02 EXCESS= .0000E+00 OUTFLOW= .9843E+02 BASIN STORAGE= .3029E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 2.99 947.55 235.94 1.96 5.00 940.20 235.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9487E+02 EXCESS= .0000E+00 OUTFLOW= .9488E+02 BASIN STORAGE= .2774E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.00 935.30 237.12 1.93 5.00 921.65 235.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9346E+02 EXCESS= .0000E+00 OUTFLOW= .9347E+02 BASIN STORAGE= .2840E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.01 923.69 237.96 1.91 5.00 914.93 235.00 1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9247E+02 EXCESS= .0000E+00 OUTFLOW= .9248E+02 BASIN STORAGE= .2450E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.02 912.75 235.55 1.90 5.00 907.94 235.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9176E+02 EXCESS= .0000E+00 OUTFLOW= .9177E+02 BASIN STORAGE= .2737E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.03 906.65 236.52 1.87 5.00 895.54 235.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9064E+02 EXCESS= .0000E+00 OUTFLOW= .9064E+02 BASIN STORAGE= .3045E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.05 892.96 237.75 1.84 5.00 880.60 235.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8923E+02 EXCESS= .0000E+00 OUTFLOW= .8924E+02 BASIN STORAGE= .3103E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCCPIC-A	MANE	4.13	1983.36	239.55	2.14	5.00	1973.76	240.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1978E+03 EXCESS= .0000E+00 OUTFLOW= .1979E+03 BASIN STORAGE= .3981E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.15	1938.89	236.82	2.10	5.00	1921.27	240.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1939E+03 EXCESS= .0000E+00 OUTFLOW= .1939E+03 BASIN STORAGE= .2994E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.20	1889.16	239.25	2.03	5.00	1874.09	240.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1871E+03 EXCESS= .0000E+00 OUTFLOW= .1871E+03 BASIN STORAGE= .3573E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.24	1811.73	237.58	1.95	5.00	1792.10	240.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1805E+03 EXCESS= .0000E+00 OUTFLOW= .1805E+03 BASIN STORAGE= .3152E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.26	1795.60	238.80	1.93	5.00	1776.02	240.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1778E+03 EXCESS= .0000E+00 OUTFLOW= .1778E+03 BASIN STORAGE= .3529E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.28	1779.47	239.42	1.90	5.00	1769.23	240.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1759E+03 EXCESS= .0000E+00 OUTFLOW= .1759E+03 BASIN STORAGE= .3261E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.28	1758.35	239.96	1.89	5.00	1757.54	240.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1745E+03 EXCESS= .0000E+00 OUTFLOW= .1745E+03 BASIN STORAGE= .2864E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.30	1727.34	236.58	1.87	5.00	1721.00	240.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1723E+03 EXCESS= .0000E+00 OUTFLOW= .1723E+03 BASIN STORAGE= .3422E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCCPIC-A	MANE	4.32	1705.19	237.71	1.84	5.00	1690.03	240.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1698E+03 EXCESS= .0000E+00 OUTFLOW= .1698E+03 BASIN STORAGE= .4075E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC57B-1	MANE	.36	4696.43	240.17	1.99	5.00	4693.50	240.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4889E+03 EXCESS= .0000E+00 OUTFLOW= .4889E+03 BASIN STORAGE= .8249E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC57B-1	MANE	.37	4585.21	240.14	1.95	5.00	4582.56	240.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4785E+03 EXCESS= .0000E+00 OUTFLOW= .4785E+03 BASIN STORAGE= .8494E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCC57B-1	MANE	.37	4441.03	240.44	1.88	5.00	4439.00	240.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4612E+03 EXCESS= .0000E+00 OUTFLOW= .4612E+03 BASIN STORAGE= .8307E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4263.77	240.41	1.81	5.00	4260.36	240.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4438E+03 EXCESS= .0000E+00 OUTFLOW= .4438E+03 BASIN STORAGE= .8574E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4207.76	240.45	1.78	5.00	4205.23	240.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4371E+03 EXCESS= .0000E+00 OUTFLOW= .4371E+03 BASIN STORAGE= .8613E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4173.99	240.43	1.76	5.00	4170.37	240.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4321E+03 EXCESS= .0000E+00 OUTFLOW= .4321E+03 BASIN STORAGE= .8610E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4143.67	240.34	1.75	5.00	4138.73	240.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4285E+03 EXCESS= .0000E+00 OUTFLOW= .4285E+03 BASIN STORAGE= .8379E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4075.89	240.30	1.72	5.00	4070.98	240.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4228E+03 EXCESS= .0000E+00 OUTFLOW= .4228E+03 BASIN STORAGE= .8264E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4006.97	240.31	1.70	5.00	4002.45	240.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4161E+03 EXCESS= .0000E+00 OUTFLOW= .4161E+03 BASIN STORAGE= .8657E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.74	439.87	237.27	2.03	5.00	439.01	235.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4783E+02 EXCESS= .0000E+00 OUTFLOW= .4783E+02 BASIN STORAGE= .2578E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.75	432.13	236.45	1.99	5.00	430.53	235.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4685E+02 EXCESS= .0000E+00 OUTFLOW= .4685E+02 BASIN STORAGE= .2499E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.76	417.58	236.27	1.92	5.00	416.38	235.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4522E+02 EXCESS= .0000E+00 OUTFLOW= .4522E+02 BASIN STORAGE= .2493E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.78	403.10	236.14	1.85	5.00	402.16	235.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4360E+02 EXCESS= .0000E+00 OUTFLOW= .4360E+02 BASIN STORAGE= .2464E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.78	398.34	236.81	1.83	5.00	396.16	235.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4296E+02 EXCESS= .0000E+00 OUTFLOW= .4296E+02 BASIN STORAGE= .2533E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.78	393.51	237.29	1.81	5.00	392.22	235.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4251E+02 EXCESS= .0000E+00 OUTFLOW= .4250E+02 BASIN STORAGE= .2248E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.79	390.10	235.85	1.79	5.00	389.58	235.00	1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4218E+02 EXCESS= .0000E+00 OUTFLOW= .4218E+02 BASIN STORAGE= .2523E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.79	386.39	236.40	1.77	5.00	385.05	235.00	1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4167E+02 EXCESS= .0000E+00 OUTFLOW= .4167E+02 BASIN STORAGE= .2662E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.80	380.91	237.10	1.74	5.00	378.99	235.00	1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4102E+02 EXCESS= .0000E+00 OUTFLOW= .4102E+02 BASIN STORAGE= .2250E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.95	5230.75	240.36	1.99	5.00	5225.39	240.00	1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5569E+03 EXCESS= .0000E+00 OUTFLOW= .5569E+03 BASIN STORAGE= .3258E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.96	5112.86	240.70	1.95	5.00	5103.68	240.00	1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5451E+03 EXCESS= .0000E+00 OUTFLOW= .5451E+03 BASIN STORAGE= .3352E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.98	4953.03	240.87	1.88	5.00	4943.52	240.00	1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5254E+03 EXCESS= .0000E+00 OUTFLOW= .5254E+03 BASIN STORAGE= .3569E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.99	4756.99	240.82	1.81	5.00	4747.09	240.00	1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5057E+03 EXCESS= .0000E+00 OUTFLOW= .5057E+03 BASIN STORAGE= .3477E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4693.23	241.10	1.78	5.00	4685.74	240.00	1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4980E+03 EXCESS= .0000E+00 OUTFLOW= .4981E+03 BASIN STORAGE= .3239E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4655.65	240.91	1.76	5.00	4643.76	240.00	1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4924E+03 EXCESS= .0000E+00 OUTFLOW= .4924E+03 BASIN STORAGE= .3626E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4616.52	240.64	1.75	5.00	4606.15	240.00	1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4883E+03 EXCESS= .0000E+00 OUTFLOW= .4884E+03 BASIN STORAGE= .3343E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.01	4544.81	241.17	1.72	5.00	4533.81	240.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4819E+03 EXCESS= .0000E+00 OUTFLOW= .4819E+03 BASIN STORAGE= .3307E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.02	4470.09	240.76	1.70	5.00	4459.73	240.00	1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4743E+03 EXCESS= .0000E+00 OUTFLOW= .4743E+03 BASIN STORAGE= .3536E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.40	371.82	233.33	1.97	5.00	367.72	235.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3705E+02 EXCESS= .0000E+00 OUTFLOW= .3704E+02 BASIN STORAGE= .5912E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.42	366.20	234.24	1.93	5.00	363.58	235.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3630E+02 EXCESS= .0000E+00 OUTFLOW= .3629E+02 BASIN STORAGE= .7495E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.45	349.81	235.80	1.86	5.00	349.76	235.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3500E+02 EXCESS= .0000E+00 OUTFLOW= .3500E+02 BASIN STORAGE= .5442E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.48	340.07	232.95	1.79	5.00	336.62	235.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3377E+02 EXCESS= .0000E+00 OUTFLOW= .3377E+02 BASIN STORAGE= .5890E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.49	336.35	233.61	1.77	5.00	333.04	235.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3329E+02 EXCESS= .0000E+00 OUTFLOW= .3329E+02 BASIN STORAGE= .7849E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.50	334.09	234.08	1.75	5.00	331.35	235.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3295E+02 EXCESS= .0000E+00 OUTFLOW= .3295E+02 BASIN STORAGE= .7228E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.51	331.85	234.41	1.74	5.00	330.02	235.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3270E+02 EXCESS= .0000E+00 OUTFLOW= .3269E+02 BASIN STORAGE= .6781E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.52	326.91	234.96	1.71	5.00	326.77	235.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3229E+02 EXCESS= .0000E+00 OUTFLOW= .3229E+02 BASIN STORAGE= .5949E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.53	319.99	235.65	1.69	5.00	319.72	235.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3177E+02 EXCESS= .0000E+00 OUTFLOW= .3177E+02 BASIN STORAGE= .7877E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.09	185.09	236.35	1.09	5.00	184.77	235.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1845E+02 EXCESS= .0000E+00 OUTFLOW= .1845E+02 BASIN STORAGE= .2006E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.10	179.87	235.88	1.06	5.00	179.47	235.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1792E+02 EXCESS= .0000E+00 OUTFLOW= .1792E+02 BASIN STORAGE= .2150E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.12	170.79	235.52	1.01	5.00	170.52	235.00	1.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1704E+02 EXCESS= .0000E+00 OUTFLOW= .1704E+02 BASIN STORAGE= .1980E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.13	162.17	236.38	.96	5.00	161.73	235.00	.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1618E+02 EXCESS= .0000E+00 OUTFLOW= .1618E+02 BASIN STORAGE= .1994E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.14	158.59	236.53	.94	5.00	158.22	235.00	.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1584E+02 EXCESS= .0000E+00 OUTFLOW= .1584E+02 BASIN STORAGE= .2130E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.14	156.34	236.30	.92	5.00	155.84	235.00	.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1560E+02 EXCESS= .0000E+00 OUTFLOW= .1560E+02 BASIN STORAGE= .2186E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.14	154.51	235.81	.91	5.00	154.13	235.00	.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1543E+02 EXCESS= .0000E+00 OUTFLOW= .1543E+02 BASIN STORAGE= .2141E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.15	151.69	235.72	.90	5.00	151.34	235.00	.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1516E+02 EXCESS= .0000E+00 OUTFLOW= .1516E+02 BASIN STORAGE= .2144E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
R57BA	MANE		1.16	148.37	235.92	.88	5.00	147.94	235.00	.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1482E+02 EXCESS= .0000E+00 OUTFLOW= .1482E+02 BASIN STORAGE= .2018E-03 PERCENT ERROR= .0

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	358.38	230.00	1.43	5.00	358.38	230.00	1.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3592E+02 EXCESS= .0000E+00 OUTFLOW= .3594E+02 BASIN STORAGE= .4407E-02 PERCENT ERROR= -.1

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	349.93	230.00	1.40	5.00	349.93	230.00	1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3505E+02 EXCESS= .0000E+00 OUTFLOW= .3507E+02 BASIN STORAGE= .4350E-02 PERCENT ERROR= -.1

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	335.78	230.00	1.34	5.00	335.78	230.00	1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3361E+02 EXCESS= .0000E+00 OUTFLOW= .3364E+02 BASIN STORAGE= .4259E-02 PERCENT ERROR= -.1

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	321.84	230.00	1.29	5.00	321.84	230.00	1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3219E+02 EXCESS= .0000E+00 OUTFLOW= .3221E+02 BASIN STORAGE= .3966E-02 PERCENT ERROR= -.1

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	316.25	230.00	1.26	5.00	316.25	230.00	1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3162E+02 EXCESS= .0000E+00 OUTFLOW= .3165E+02 BASIN STORAGE= .3929E-02 PERCENT ERROR= -.1

FOR PLAN	= 1	RATIO=	.00							
RC3C	MANE		5.00	312.34	230.00	1.25	5.00	312.34	230.00	1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3123E+02 EXCESS= .0000E+00 OUTFLOW= .3125E+02 BASIN STORAGE= .3902E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	309.53	230.00	1.24	5.00	309.53	230.00	1.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3094E+02 EXCESS= .0000E+00 OUTFLOW= .3097E+02 BASIN STORAGE= .3885E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	305.12	230.00	1.22	5.00	305.12	230.00	1.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3049E+02 EXCESS= .0000E+00 OUTFLOW= .3052E+02 BASIN STORAGE= .3854E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	299.57	230.00	1.20	5.00	299.57	230.00	1.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2993E+02 EXCESS= .0000E+00 OUTFLOW= .2996E+02 BASIN STORAGE= .3817E-02 PERCENT ERROR= -
.1

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

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1 *****
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*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
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* RUN DATE 21SEP17 TIME 09:25:32 *
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X	X	XXXXXXX	XXXXX		X
X	X	X	X	X	XX
X	X	X	X		X
XXXXXXXX	XXXX	X		XXXXX	X
X	X	X	X		X
X	X	X	X	X	X
X	X	XXXXXXXX	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 -RMSKK- 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

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LINE          1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*** FREE ***
1             ID   THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
2             ID   TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
3             ID   DOWNSTREAM HOLDING FACILITIES
4             ID
5             ID   MODELED BY VTN, NEVADA SVB/JYA
6             ID   MAY 9, 2017
7             ID
8             ID
9             ID   CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
10            ID   GOWAN WATERSHED (ALL)
11            ID   RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
12            ID   INPUT FILE = ALT1-SDN3.DAT
13            ID   INPUT FILE DATE = MAY 5, 2008
14            ID   DESIGN STORM = 100-YEAR 6-HR STORM
15            ID   STORM DISTRIBUTION = SDN #5
16            ID   MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
17            ID   CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
18            ID   STORM CENTERING = FULL WATERSHED
19            ID
20            ID   REFERENCED HYDROLOGIC MODELS:
21            ID   CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
22            ID   NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
23            ID   RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
24            ID   CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
25            ID   3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
26            ID   CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
27            ID   SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
28            ID   MASTER PLAN UPDATE (G.C. WALLACE 2006)
29            ID   GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
30            ID   (G.C. WALLACE 2007)
31            ID   LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
32            ID   FROM G.C. WALLACE ON JANUARY 31, 2008)
33            ID   US 95/RANCHO FIS RESTUDY (PBS&J 1998)
34            ID   JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
35            ID
36            ID
37            ID           AREA   DARF
38            ID           SQ. MI.
39            ID           8-9     0.875
40            ID           9-10    0.865
41            ID           10-11   0.857
42            ID           11-12   0.85
43            ID
44            ID
45            ID
46            ID   JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

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47 ID
 48 ID 100-YEAR, 6-HOUR STORM, SDN4
 49 ID
 50 IT 5 0 0 300
 51 IO 5 0 0
 52 IN 5 0 0
 53 JR PREC 0.875 0.865 0.857 0.85
 *

HEC-1 INPUT

PAGE 2

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

54 KK 3-1
 55 KM COMPARE TO MPU BASIN DB54-1 (CURVE NUMBER CHANGED FROM 87.2)
 56 BA 2.22
 57 PB 3.72
 58 PC 0 0.02 0.058 0.075 0.099 0.126 0.137 0.145 0.149 0.151
 59 PC 0.155 0.156 0.159 0.162 0.169 0.172 0.179 0.189 0.201 0.211
 60 PC 0.22 0.228 0.232 0.24 0.246 0.252 0.26 0.269 0.276 0.283
 61 PC 0.286 0.292 0.302 0.312 0.321 0.332 0.352 0.376 0.415 0.462
 62 PC 0.53 0.61 0.71 0.732 0.756 0.782 0.799 0.813 0.823 0.83
 63 PC 0.835 0.844 0.851 0.864 0.885 0.908 0.924 0.944 0.968 0.973
 64 PC 0.978 0.982 0.984 0.986 0.988 0.991 0.992 0.993 0.994 0.997
 65 PC 0.998 0.999 1
 66 LS 0 87.0
 67 UD 0.582
 *

68 KK R3-1
 69 KM ROUTE R3-1 THROUGH 3-2
 70 KM EXISTING NATURAL WASH
 71 RD 3322 0.092 0.030 0 TRAP 125 0
 *

72 KK 3-2
 73 KM COMPARE TO MPU BASIN DB54-5 (CURVE NUMBER CHANGED FROM 85.2)
 74 BA 0.226
 75 PB 3.67
 76 LS 0 83.9
 77 UD 0.110
 *

78 KK CP3.1
 79 KM COMBINE R3-1 AND 3-2
 80 HC 2
 *

81 KK RCP3.1
 82 KM ROUTE CP3.1 TO CP3.3 THROUGH 3-E VIA
 83 KM (PORTION OF FACILITY APM50059)
 84 RD 7900 0.070 0.013 0 TRAP 125 2
 *

85 KK 3-D
 86 KM PORTION OF BASINS DB54-6R (PB=3.56)
 87 BA 0.3329
 88 PB 3.56
 89 LS 0 84.6
 90 UD 0.223
 *

HEC-1 INPUT

PAGE 3

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

91 KK CP3.3
 92 KM COMBINE 3-D, RCP3.1,
 93 HC 2
 *

94 KK RCP3.3
 95 KM ROUTE CP3.3 TO CP3.4 THROUGH 3-E VIA A
 96 KM (PORTION OF FACILITY APM50059)
 97 RD 1000 0.070 0.013 0 TRAP 125 2
 *

98 KK 3-3
 99 KM PORTION OF MPU BASIN DB54-3
 100 BA 0.1737
 101 PB 3.67
 102 LS 0 88.0
 103 UD 0.081
 *

104 KK R3-3
 105 KM ROUTE R3-3 THROUGH A PORTION OF 3-E TO CP3.2
 106 KM NATURAL WASH
 107 RD 2233 0.054 0.030 0 TRAP 100 0
 *

108 KK 3-4
 109 KM PORTION OF MPU BASIN DB54-3
 110 BA 0.3457
 111 PB 3.67

112	LS	0	88.0				
113	UD	0.092					
	*						
114	KK	R3-4					
115	KM	ROUTE R3-4 THROUGH A PORTION OF 3-E TO CP3.2					
116	KM	NATURAL WASH					
117	RD	3300	0.097	0.030	0	TRAP	100 0
	*						
118	KK	3-5					
119	KM	COMPARE TO MPU BASIN DB54-2 (SLIGHTLY LARGER PORTION OF DB54-4)					
120	BA	0.2936					
121	PB	3.66					
122	LS	0	87.7				
123	UD	0.094					
	*						
124	KK	R3-5					
125	KM	ROUTE R3-5 THROUGH A PORTION OF 3-E TO CP3.2					
126	KM	(PORTION OF FACILITY APM50057)					
127	RD	4400	0.068	0.013	0	TRAP	50 2
	*						

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HEC-1 INPUT

PAGE 4

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

128	KK	CP3.2					
129	KM	COMBINE R3-5 , R3-4 AND R3-3					
130	HC	3					
	*						
131	KK	RCP3.2					
132	KM	ROUTE RCP3.2 THROUGH A PORTION OF 3-E TO CP3.4					
133	KM	(PORTION OF FACILITY APM50057)					
134	RD	5500	0.068	0.013	0	TRAP	50 2
	*						
135	KK	3-E					
136	KM	PORTION OF BASINS DB54-4 (PB=3.60) AND DB54-6R (PB=3.56)					
137	BA	0.5442					
138	PB	3.60					
139	LS	0	85.8				
140	UD	0.238					
	*						
141	KK	CP3.4					
142	KM	COMBINE 3-E, RCP3.2 AND RCP3.3					
143	HC	3					
	*						
144	KK	RCP3.4					
145	KM	ROUTE RCP3.4 THROUGH A PORTION OF 3-N TO CPDB3					
146	KM	(FACILITIES APM50056, APM50047 AND APM50008)					
147	RD	3365	0.052	0.013	0	TRAP	80 2
	*						
148	KK	3-6					
149	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4					
150	BA	0.0887					
151	PB	3.61					
152	LS	0	88.0				
153	UD	0.074					
	*						
154	KK	R3-6					
155	KM	ROUTE 3-6 THROUGH A PORTION OF 3-J AND A PORTION OF 3-K TO CP3.5					
156	KM	EXISTING NATURAL WASHES					
157	RD	4500	0.080	0.030	0	TRAP	100 0
	*						
158	KK	3-7					
159	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4					
160	BA	0.1714					
161	PB	3.61					
162	LS	0	87.2				
163	UD	0.048					
	*						

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HEC-1 INPUT

PAGE 5

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

164	KK	R3-7					
165	KM	ROUTE 3-7 THROUGH A PORTION OF 3-K TO CP3.5					
166	KM	PORTION OF FACILITY ID APM50213					
167	RD	4340	0.073	0.013	0	TRAP	50 2
	*						
168	KK	3-J					
169	KM	PORTION OF MPU BASIN DB55-4					
170	BA	0.1529					
171	PB	3.58					
172	LS	0	78.6				

173	UD	0.168					
	*						
174	KK	R3-J					
175	KM	ROUTE 3-J THROUGH A PORTION OF 3-K TO CP3.5					
176	KM	NATURAL WASHES					
177	RD	2700 0.074 0.030 0 TRAP 100 0					
	*						
178	KK	CP3.5					
179	KM	COMBINE R3-J, R3-7 AND R3-6					
180	HC	3					
	*						
181	KK	RCP3.5					
182	KM	ROUTE CP3.5 THROUGH A PORTION OF 3-K TO CP3.6					
183	KM	PORTION OF FACILITY ID APM50213					
184	RD	2100 0.073 0.013 0 TRAP 50 2					
	*						
185	KK	3-8					
186	KM	COMPARE TO MPU BASIN DB55-1					
187	BA	0.6386					
188	PB	3.68					
189	LS	0 87.8					
190	UD	0.196					
	*						
191	KK	R3-8					
192	KM	ROUTE 3-8 THROUGH A PORTION OF 3-K TO CP3.6					
193	KM	FACILITY ID APM50212					
194	RD	6695 0.075 0.013 0 TRAP 30 2					
	*						
195	KK	3-K					
196	KM	COMPARE TO MPU BASIN DB55-7					
197	BA	0.8890					
198	PB	3.54					
199	LS	0 87.6					
200	UD	0.296					
	*						

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HEC-1 INPUT

PAGE 6

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

201	KK	CP3.6					
202	KM	COMBINE 3-K, R3-8 AND RCP3.5					
203	HC	3					
	*						
204	KK	RCP3.6					
205	KM	ROUTE CP3.6 THROUGH A PORTION OF 3-N TO CPDB3					
206	KM	FACILITY ID APM500009					
207	RD	4180 0.058 0.013 0 TRAP 50 2					
	*						
208	KK	3-N					
209	KM	COMPARE TO MPU BASIN DB55-8					
210	BA	0.4557					
211	PB	3.46					
212	LS	0 88.9					
213	UD	0.269					
	*						
214	KK	3-M					
215	KM	COMPARE TO MPU BASIN DB55-8					
216	BA	0.1924					
217	PB	3.46					
218	LS	0 88.8					
219	UD	0.147					
	*						
220	KK	R3-M					
221	KM	ROUTE 3-M THROUGH A PORTION OF 3-N TO CP3.7					
222	KM	FACILITY ID PORTION OF APM500009					
223	RD	4500 0.0528 0.013 0 TRAP 7 0					
	*						
224	KK	CPDB5					
225	KM	COMBINE 3-M, 3-N, RCP3.6 AND RCP3.4					
226	KM	TOTAL INFLOW TO SUMMERLIN #5 DETENTION BASIN					
227	KO	0					
228	HC	4					
	*						
229	KK	DB5					
230	KM	SUMMERLIN DETENTION BASIN 5					
231	KM	FACILITY = ANGEL PARK - MIDDLE 5 BRANCH					
232	KM	FACILITY # = APM5 0000					
233	KM	STORAGE VOLUME = 384.1 ACRE-FEET					
234	KM	OUTLET = 2: 7' x 5.5' RCBS					
235	KM	100-YEAR DISCHARGE = 2,150 CFS					
236	KM	SPILLWAY LENGTH = 453.6'					
237	KM	SPILLWAY HEIGHT =					

1
238 KM SPILLWAY CREST ELEVATION = 3563'
239 KM SPILLWAY TYPE = CONCRETE BROAD CRESTED WEIR
240 KM PMF DISCHARGE = 12,153 CFS
241 KM TOP OF EMBANKMENT ELEVATION = 3569'
242 KM DETENTION BASIN PARAMETERS REFERENCED FROM "DETENTION BASIN NO. 5
HEC-1 INPUT
PAGE 7

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

243 KM EXPANSION AND DIVERSION BERM" PLANS BY G.C. WALLACE (5-23-2001)
244 KM STAGE-STORAGE-DISCHARGE CURVE REFERENCED FROM "2006 SUMMERLIN WEST
245 KM CONCEPTUAL DRAINAGE STUDY MASTER PLAN AMENDMENT: EXISTING OFFSITE/PROPOSED
246 KM ONSITE DRAINAGE CONDITION" HYDROLOGIC MODEL DATED 8-7-2006 AND SUBMITTED
247 KM WITH THE SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
248 KM CONTROL MASTER PLAN UPDATE BY G.C. WALLACE (08-2006)
249 KO 0
250 RS 1 STOR -1
251 SV 0 1.73 4.55 8.45 13.08 18.2 23.81 29.96 36.7 43.93
252 SV 59.55 77.49 99.82 127.17 159.39 196.38 240.07 384.05 405.65 535.25
253 SQ 0 192 276 391 505 616 725 813 900 982
254 SQ 1176 1368 1534 1683 1804 1920 2033 2315 3725 23201
255 SE 3532.5 3535 3536 3537 3538 3539 3540 3541 3542 3543
256 SE 3543 3547 3549 3551 3553 3555 3557 3563 3564 3569
257 SS 3563 435.6 3 1.5
*

258 KK 3-L
259 KM COMPARE TO MPU BASIN SWAA-1
260 BA 0.3227
261 PB 3.44
262 LS 0 88.4
263 UD 0.398
*
264 KK CP3-L
265 KM COMBINE 3-L AND DB3
266 KM THIS IS CSWAA-1 IN GOWAN MPU HEC-1
267 HC 2
*
* END OF SECTION MODELED BY VTN, NEVADA SVB
* TIE VTN SECTION TO 2008 MPU HEC-1
*

268 KKRCSWAA-1
269 KM ROUTE CSWAA-1 TO CSWAA-2
270 KM FACILITY = ANGEL PARK - ALTA DRIVE
271 KM FACILITY # = APAD 0115, 0146
272 KM LINING = RCB
273 RD 4640 0.044 0.015 0 TRAP 10 0
*

274 KK SWAA-2
275 BA 0.700
276 PB 3.39
277 LS 0 90.9
278 UD 0.346
*

279 KK CSWAA-2
280 KM COMBINE RCSWAA-1 AND SWAA-2
281 HC 2
*

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HEC-1 INPUT
PAGE 8

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

282 KKRCSWAA-2
283 KM ROUTE CSWAA-2 TO CSWAA-3
284 KM FACILITY = ANGEL PARK - ALTA DRIVE
285 KM FACILITY # = APAD 0000, 0018, 0044, 0073
286 KM LINING = RCB
287 RD 6120 0.035 0.015 0 TRAP 11 0
*

288 KK SWAA-3
289 BA 0.581
290 PB 3.31
291 LS 0 87.8
292 UD 0.361
*

293 KK CSWAA-3
294 KM COMBINE RCSWAA-2 AND SWAA-3
295 HC 2
*
* THE FOLLOWING SECTION OF HYDROLOGY IS NOT PART OF THE 2008 MPU
* THIS SECTION IS MODELED BASED ON THE 2017 CONDITION OF THE SUMMERLIN MASTER PL
* MODELED BY VTN, NEVADA SVB
*
*

296 KK 3-F
297 KM COMPARE TO MPU BASIN SWFH-5
298 BA 0.2815

299 PB 3.50
 300 LS 0 88.9
 301 UD 0.152
 *
 302 KK R3-F
 303 KM ROUTE 3-F THROUGH 3-G2 TO CP3.8
 304 KM LINING RCB
 305 RD 2650 0.055 0.013 0 TRAP 6 0
 *
 306 KK 3-G2
 307 KM COMPARE TO MPU BASIN SWFH-6
 308 BA 0.1285
 309 PB 3.46
 310 LS 0 93.2
 311 UD 0.107
 *
 312 KK CP3.8
 313 KM COMBINES 3-F AND 3-G2
 314 HC 2
 *

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PAGE 9

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

315 KK RCP3.8
 316 KM ROUTE CP3.8 TO CP3.9
 317 KM FACILITIES APD6000 AND APDF0000
 318 RD 4500 0.075 0.013 0 TRAP 12 0
 *
 319 KK 3-A
 320 KM COMPARE TO MPU BASIN SWFH-1
 321 BA 0.3392
 322 PB 3.57
 323 LS 0 80.8
 324 UD 0.234
 *
 325 KK R3-A
 326 KM ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
 327 RD 3000 0.032 0.013 0 TRAP 5 0
 *
 328 KK 3-B
 329 KM COMPARE TO MPU BASIN SWFH-1
 330 BA 0.6973
 331 PB 3.57
 332 LS 0 83.1
 333 UD 0.274
 *
 334 KK R3-B
 335 KM ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
 336 RD 3000 0.024 0.013 0 TRAP 5 0
 *
 337 KK 3-C
 338 KM COMPARE TO MPU BASIN SWFH-2
 339 BA 0.2212
 340 PB 3.49
 341 LS 0 88.4
 342 UD 0.200
 *
 343 KK CPDBA-B
 344 KO 0
 345 KM COMBINE 3-A, 3-B, AND 3-C
 346 KM PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
 347 HC 3
 *
 348 KK GPDB
 349 KM VILLAGE 22 DETENTION BASIN
 350 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
 351 KM FACILITY # = 0001
 352 KM STORAGE VOLUME = 123 AC-FT
 353 KM OUTLET = 60" RCP
 354 KM 100-YEAR DISCHARGE =

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HEC-1 INPUT

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

355 KM SPILLWAY LENGTH = 1053'
 356 KM SPILLWAY HEIGHT =
 357 KM SPILLWAY CREST ELEVATION = 1007.9'
 358 KM SPILLWAY TYPE =
 359 KM PMF DISCHARGE =
 360 KM TOP OF EMBANKMENT ELEVATION =
 361 KM INFORMATION REFERENCED FROM "SUMMERLIN VILLAGE 26 ULTIMATE/PROPOSED
 362 KM CONDITIONS" HYDRAOLOGIC MODEL BY G.C. WALLACE INC. (9-5-06)
 363 KM ELEVATIONS WITHIN THE STAGE-STORAGE-DISCHARGE CURVE WERE REDUCED BY 1000'

364 KM IN ORDER FOR THE HYDROLOGIC MODEL TO RUN
 365 KO 3
 366 RS 1 STOR 0
 367 SV 6.54 12.78 19.92 28.03 37.17 46.61 59.93 75.75 94.29 115.85
 368 SV 129.61
 369 SE 10 12 14 16 18 20 22 24 26 28
 370 SE 30
 371 SQ 0 26.06 58.28 78.18 93.97 107.45 119.43 130.31 140.35 149.71
 372 SQ 158.53
 *

373 KK 3-G1
 374 KM COMPARE TO MPU BASIN SWFH-6
 375 BA 0.2406
 376 PB 3.46
 377 LS 0 90
 378 UD 0.131
 *

379 KK R3-G1
 380 KM ROUTE 3-G1 TO CP3-G1
 381 KM LINING RCB
 382 RD 1000 0.044 0.013 0 TRAP 6 0
 *

383 KK CP3-G1
 384 KM COMBINE 3-G1, AND GPDB
 385 HC 2
 *

386 KK RCP3-G1
 387 KM ROUTE 3P3-G1 TO CP3-H1
 388 KM LINING RCB
 389 RD 2603 0.044 0.013 0 TRAP 8 0
 *

390 KK 3-H1
 391 KM COMPARE TO MPU BASIN SWFH-9
 392 BA 0.0429
 393 PB 3.33
 394 LS 0 90.7
 395 UD 0.088
 *

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HEC-1 INPUT

PAGE 11

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

396 KK CP3-H1
 397 KM COMBINE RCP3-G1, AND 3-H1
 398 HC 2
 *

399 KK RCP3-H1
 400 KM ROUTE CP3-H1 TO CP3.9
 401 KM LINING RCB
 402 RD 3510 0.044 0.013 0 TRAP 8 0
 *

403 KK 3-I1
 404 KM COMPARE TO MPU BASIN SWFH-7
 405 BA 0.2934
 406 PB 3.41
 407 LS 0 88.8
 408 UD 0.209
 *

409 KK CP3.9
 410 KM COMBINE CP3.8, CP3-H1 AND C-I1
 411 HC 3
 *

412 KK RCP9
 413 KM ROUTE CP3.9 TO CP3.10
 414 RD 2390 0.027 0.013 0 TRAP 6 0
 *

415 KK 3-O
 416 KM COMPARE TO MPU BASIN SV22-2
 417 BA 0.1124
 418 PB 3.46
 419 LS 0 92.6
 420 UD 0.123
 *

421 KK R3-O
 422 KM ROUTE 3-O TO CP3-P
 423 KM LINING RCB
 424 RD 3260 0.028 0.013 0 TRAP 4 0
 *

425 KK 3-P2
 426 KM COMPARE TO MPU BASIN SV22-2
 427 BA 0.1466
 428 PB 3.46

429 LS 0 87.1
430 UD 0.148
*

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HEC-1 INPUT

PAGE 12

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

431 KK R3-P2
432 KM ROUTE 3-P2 TO CP3-P
433 KM LINING RCB
434 RD 3260 0.028 0.013 0 TRAP 4 0
*

435 KK 3-P1
436 KM COMPARE TO MPU BASIN SV22-2
437 BA 0.2441
438 PB 3.46
439 LS 0 92.0
440 UD 0.117
*

441 KK CP3-P
442 HC 3
*

443 KK RCP3-P
444 KM ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q
445 RD 2750 0.033 0.013 0 TRAP 10 0
*

446 KK 3-Q
447 KM COMPARE TO MPU BASIN SV22-2
448 BA 0.1974
449 PB 3.46
450 LS 0 92.8
451 UD 0.162
*

452 KK CP3-Q
453 KM COMBINES CP3-P AND 3-Q
454 HC 2
*

455 KK RCP3-Q
456 KM ROUTE CP3-Q THROUGH STORM DRAIN TO CP3-H2
457 KM LINING RCB
458 RD 3000 0.015 0.013 0 TRAP 20 0
*

459 KK 3-H2
460 BA 0.1834
461 PB 3.33
462 LS 0 92.7
463 UD 0.134
*

1

HEC-1 INPUT

PAGE 13

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

464 KK CP3-H2
465 HC 2
*

466 KK RCPH-2
467 KM ROUTE CP3-H2 TO CP3.10
468 KM LINING RCB
469 RD 1725 0.019 0.013 0 TRAP 20 0
*

470 KK 3-I2
471 KM COMPARE TO MPU BASIN SWFH-7
472 BA 0.1185
473 PB 3.41
474 LS 0 90.5
475 UD 0.205
*

476 KK CP3.10
477 KM COMBINE CP3.9, CP3-H2, 3-I2
478 HC 3
*

479 KK RCP3.10
480 KM ROUTE CP3.10 TO CP3.11
481 KM FACILITIES APFH0000
482 KM LINING RCB
483 RD 1000 0.0350 0.013 0 TRAP 16 0
*

484 KK 3-H3
485 KM COMPARE TO MPU BASIN SWFH-9
486 BA 0.1403
487 PB 3.33

```

488      LS      0      94.3
489      UD      0.206
      *

490      KK      CP3.11
491      KM      COMBINE 3-H3 AND RCP3.10
492      KM      THIS IS CSWFH-9 IN 2008 MPU HEC-1
493      HC      2
      *
      * END OF SECTION MODELED BY VTN, NEVADA
      * TIE VTN SECTION TO 2008 MPU HEC-1
      *

494      KKRCSHFH-9
495      KM      ROUTE CSWFH-9 TO CRCSWFH9
496      KM      FACILITY = ANGEL PARK - BELTWAY BRANCH
497      KM      FACILITY # = APBE 0000, 0013, 0022, 0051
498      KM      LINING = CONCRETE
499      RD      4338  0.0181  0.015      0      TRAP      20      2
      *

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

500      KKRCRCSWFH9
501      KM      COMBINE RCSWFH9 AND CSWAA-3
502      HC      2
      *
      * END OF G.C. WALLACE'S HYDROLOGIC MODEL
      *

503      KKRCRCSWFH
504      KM      ROUTE CRCSWFH9 TO C11A-1
505      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
506      KM      FACILITY # = APMD 0230,0233,0237,0247,0248,0253,0258
507      KM      LINING = CONCRETE
508      RD      1418  0.04  0.015      0      TRAP      76      2
      *

509      KK      11A-1
510      BA      0.208
511      PB      3.25
512      LS      0      85.3
513      UD      0.292
      *

514      KK      C11A-1
515      KM      COMBINE RCRCSWFH AND 11A-1
516      KM      ANGEL PARK MIDDLE BRANCH @ PAVILLION CENTER DRIVE
517      HC      2
      *

518      KK      RC11A-1
519      KM      ROUTE C11A-1 TO C11A-3
520      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
521      KM      FACILITY # = APMD 0190,0195,0198,0208,0218,0227
522      KM      LINING = CONCRETE
523      RD      2065  0.0281  0.015      0      TRAP      62      2
      *

524      KK      11A-3
525      BA      0.195
526      PB      3.21
527      LS      0      89.3
528      UD      0.229
      *

529      KK      C11A-3
530      KM      COMBINE RC11A-1 AND 11A-3
531      KM      ANGEL PARK MIDDLE BRANCH @ TOWN CENTER DRIVE
532      HC      2
      *

1                                HEC-1 INPUT                                PAGE 15

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

533      KK      RC11A-3
534      KM      ROUTE C11A-3 TO C3A
535      KM      FACILITY = ANGEL PARK MIDDLE BRANCH
536      KM      FACILITY # = APMD 0132, 0133
537      KM      LENGTH = 3,164
538      KM      SLOPE = 3.0%
539      KM      N = 0.040
540      KM      HYDRAULIC RADIUS = 1.5
541      KM      VELOCITY = 13.5
542      KM      NATURAL WASH
543      RM      1      0.065  0.15
      *

544      KK      3A
545      BA      0.178
546      PB      3.15
547      LS      0      84.0

```

548 UD 0.244
 *
 549 KK C3A
 550 KM COMBINE RCC11A-3 AND 3A
 551 KM ANGEL PARK MIDDLE BRANCH @ HUALAPAI WAY
 552 HC 2
 *
 553 KK RC3A
 554 KM ROUTE C3A TO C3B-1
 555 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 556 KM FACILITY # = APMD 0027, 0030
 557 KM LENGTH = 6,500
 558 KM SLOPE = 3.0%
 559 KM N = 0.040
 560 KM HYDRAULIC RADIUS = 1.5
 561 KM VELOCITY = 13.5
 562 KM NATURAL WASH
 563 RM 2 0.133 0.15
 *
 564 KK 3B-1
 565 BA 0.258
 566 PB 3.04
 567 LS 0 82.0
 568 UD 0.257
 *
 569 KK C3B-1
 570 KM COMBINE RC3A AND 3B-1
 571 HC 2
 *

1

HEC-1 INPUT

PAGE 16

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

572 KK RC3B-1
 573 KM ROUTE C3B-1 TO CC3B-2B
 574 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 575 KM FACILITY # = APMD 0000,0027,0030
 576 KM LINING = UNLINED
 577 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 578 RD 940 0.029 0.04 0 TRAP 100 3
 *
 579 KK 11B-2
 580 BA 0.441
 581 PB 3.25
 582 LS 0 85.7
 583 UD 0.423
 *
 584 KK R11B-2
 585 KM ROUTE 11B-2 TO C11B-1
 586 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 587 KM FACILITY # = APSP 0177,0183
 588 KM LINING = CONCRETE
 589 RD 1900 0.017 0.015 0 TRAP 10 2
 *
 590 KK 11B-1
 591 BA 0.394
 592 PB 3.26
 593 LS 0 87.2
 594 UD 0.267
 *
 595 KK C11B-1
 596 KM COMBINE R11B-2 AND 11B-1
 597 KM ANGEL PARK-SUMMERLIN PARKWAY @ ANASAZI DRIVE
 598 HC 2
 *
 599 KK RC11B-1
 600 KM ROUTE C11B-1 TO C8B-1
 601 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 602 KM FACILITY # = APSP 0135,0177
 603 KM LINING = CONCRETE
 604 RD 2150 0.024 0.015 0 TRAP 10 2
 *
 605 KK 8B-1
 606 BA 0.304
 607 PB 3.17
 608 LS 0 87.8
 609 UD 0.288
 *

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HEC-1 INPUT

PAGE 17

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

610 KK C8B-1

611 KM COMBINE RC11B-1 AND 8B-1
 612 KM ANGEL PARK-SUMMERLIN PARKWAY @ CRESTDALE DRIVE
 613 HC 2
 *
 614 KK RC8B-1
 615 KM ROUTE C8B-1 TO C8B-2
 616 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 617 KM FACILITY # = APSP 0066,0069,0133
 618 KM LINING = CONCRETE
 619 RD 3575 0.024 0.015 0 TRAP 10 2
 *
 620 KK 8B-2
 621 BA 0.420
 622 PB 3.10
 623 LS 0 93.7
 624 UD 0.336
 *
 625 KK C8B-2
 626 KM COMBINE 8B-2 AND RC8B-1
 627 KM ANGEL PARK-SUMMERLIN PARKWAY @ TOWN CENTER DRIVE
 628 HC 2
 *
 629 KK RC8B-2
 630 KM ROUTE C8B-2 TO CC3B-2A
 631 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 632 KM FACILITY # = APSP 0002
 633 KM LINING = UNLINED
 634 RD 1424 0.035 0.025 0 TRAP 50 3
 *
 635 KK 11A-2
 636 BA 0.290
 637 PB 3.20
 638 LS 0 88.3
 639 UD 0.194
 *
 640 KK R11A-2
 641 KM ROUTE 11A-2 TO C8A
 642 KM TOWN CENTER DRIVE AND HUALAPAI WAY
 643 RD 2900 0.017 0.016 0 TRAP 0 50
 *
 644 KK 8A
 645 BA 0.306
 646 PB 3.16
 647 LS 0 86.0
 648 UD 0.239
 *
 649 KK C8A
 650 KM COMBINE 8A AND R11A-2
 651 HC 2
 *
 652 KK RC8A
 653 KM ROUTE C8A TO C3B-2A
 654 KM NATURAL WASH
 655 KM TRAVEL LENGTH = 4,500
 656 KM SLOPE = 2.8%
 657 KM N = 0.040
 658 KM HYDRAULIC RADIUS = 1.5
 659 KM VELOCITY = 13.1
 660 RM 1 0.096 0.15
 *
 661 KK 3B-2A
 662 BA 0.243
 663 PB 3.06
 664 LS 0 88.5
 665 UD 0.213
 *
 666 KK C3B-2A
 667 KM COMBINE 3B-2A AND RC8A
 668 HC 2
 *
 669 KK CC3B-2A
 670 KM COMBINE C3B-2A AND RC8B-2
 671 HC 2
 *
 672 KKRCC3B-2A
 673 KM ROUTE CC3B-2A TO C3B-2B
 674 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 675 KM FACILITY # = APSP 0001

1

HEC-1 INPUT

PAGE 18

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

676 KM LINING = UNLINED
 677 RD 3924 0.03 0.025 0 TRAP 20 2
 *
 678 KK 3B-2B
 679 BA 0.273
 680 PB 2.99
 681 LS 0 85.1
 682 UD 0.309
 *
 683 KK C3B-2B
 684 KM COMBINE RCC3B-2A AND 3B-2B
 685 HC 2
 *

1

HEC-1 INPUT

PAGE 19

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

686 KK CC3B-2B
 687 KM COMBINE RC3B-1 AND C3B-2B
 688 HC 2
 *
 689 KKRCC3B-2B
 690 KM ROUTE CC3B-2B TO CSF2-C
 691 KM FACILITY = ANGEL PARK NORTH
 692 KM FACILITY # = APNO 0012,0013,0015 APSP 0000
 693 KM LINING = UNLINED (NATURAL WASH)
 694 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 695 RD 1854 0.025 0.04 0 TRAP 100 3
 *
 696 KK SF2-C
 697 BA 0.388
 698 PB 2.91
 699 LS 0 84.2
 700 UD 0.443
 *
 701 KK CSF2-C
 702 KM COMBINE SF2-C AND RCC3B-2B
 703 HC 2
 *
 704 KK RCSF2-C
 705 KM ROUTE CSF2-C TO ANGLPKIN
 706 KM FACILITY = ANGEL PARK NORTH
 707 KM FACILITY # = APNO 0005
 708 KM LINING = UNLINED (NATURAL WASH)
 709 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 710 RD 1559 0.02 0.04 0 TRAP 100 3
 *
 711 KK SW11
 712 BA 0.589
 713 PB 3.34
 714 LS 0 87.8
 715 UD 0.311
 *
 716 KK RSW11
 717 KM ROUTE SW11 TO CSW17
 718 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 719 KM FACILITY # = APCB 0064, 0080
 720 KM LINING = RCB
 721 RD 2338 0.0167 0.015 0 TRAP 7 0
 *

1

HEC-1 INPUT

PAGE 20

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

722 KK SW17
 723 BA 0.356
 724 PB 3.30
 725 LS 0 87.8
 726 UD 0.271
 *
 727 KK CSW17
 728 KM COMBINE RSW11 AND SW17
 729 HC 2
 *
 730 KK RCSW17
 731 KM ROUTE CSW17 TO CSW18
 732 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 733 KM FACILITY # = APCB 0000,0001,0019,0050
 734 KM LINING = RCB
 735 RD 3600 0.014 0.015 0 TRAP 11 0
 *
 736 KK SW18

737 BA 0.405
 738 PB 3.27
 739 LS 0 86.8
 740 UD 0.271
 *
 741 KK CSW18
 742 KM COMBINE RCSW17 AND SW18
 743 HC 2
 *
 744 KK RCSW18
 745 KM ROUTE CSW18 TO C12A
 746 KM FACILITY = ANGEL PARK SOUTH
 747 KM FACILITY # = APSO 0254,0255,0258,0345,0346; APCB 0000
 748 KM NATURAL WASH
 749 KM LENGTH = 5,200
 750 KM SLOPE = 1.4%
 751 KM N = 0.040
 752 KM HYDRAULIC RADIUS = 1.5
 753 KM VELOCITY = 9.2
 754 RM 2 0.157 0.15
 *
 755 KK 12A
 756 BA 0.392
 757 PB 3.20
 758 LS 0 91.2
 759 UD 0.264
 *

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HEC-1 INPUT

PAGE 21

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

760 KK C12A
 761 KM COMBINE 12A AND RCSW18
 762 HC 2
 *
 763 KK RC12A
 764 KM ROUTE THRU 12B
 765 KM FACILITY = ANGEL PARK SOUTH
 766 KM FACILITY # = APSO 0204, 0205
 767 KM NATURAL WASH
 768 KM LENGTH = 2,600
 769 KM SLOPE = 3.5%
 770 KM N = 0.040
 771 KM HYDRAULIC RADIUS = 1.5
 772 KM VELOCITY = 14.5
 773 RM 1 0.05 0.15
 *
 774 KK 12B
 775 BA 0.260
 776 PB 3.13
 777 LS 0 91.0
 778 UD 0.233
 *
 779 KK C12B
 780 KM COMBINE 12B AND RC12A
 781 HC 2
 *
 782 KK RC12B
 783 KM ROUTE C12B TO C57B-3
 784 KM FACILITY = ANGEL PARK SOUTH
 785 KM FACILITY # = APSO 0067
 786 KM NATURAL WASH
 787 KM LENGTH = 6,000
 788 KM SLOPE = 2.3%
 789 KM N = 0.040
 790 KM HYDRAULIC RADIUS = 1.5
 791 KM VELOCITY = 11.8
 792 RM 2 0.141 0.15
 *
 793 KK 57B-3
 794 BA 0.310
 795 PB 3.04
 796 LS 0 82.1
 797 UD 0.332
 *

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HEC-1 INPUT

PAGE 22

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

798 KK C57B-3
 799 KM COMBINE RC12B AND 57B-3
 800 HC 2
 *
 801 KK RC57B-3

802 KM ROUTE C57B-3 TO C57B-2
 803 KM FACILITY = ANGEL PARK SOUTH
 804 KM FACILITY # = APSO 0067
 805 KM NATURAL WASH
 806 KM LENGTH = 1,300
 807 KM SLOPE = 1.7%
 808 KM N = 0.040
 809 KM HYDRAULIC RADIUS = 1.5
 810 KM VELOCITY = 10.2
 811 RM 0 0.035 0.15
 *

812 KK 57B-2
 813 BA 0.362
 814 PB 3.02
 815 LS 0 84.1
 816 UD 0.332
 *

817 KK C57B-2
 818 KM COMBINE 57B-2 AND RC57B-3
 819 HC 2
 *

820 KK RC57B-2
 821 KM ROUTE C57B-2 TO CC57B-1
 822 KM FACILITY = ANGEL PARK SOUTH
 823 KM FACILITY # = APSO 0067
 824 KM NATURAL WASH
 825 KM LENGTH = 1,000
 826 KM SLOPE = 1.8%
 827 KM N = 0.040
 828 KM HYDRAULIC RADIUS = 1.5
 829 KM VELOCITY = 10.5
 830 RM 0 0.027 0.15
 *

831 KK 13B-1
 832 BA 0.249
 833 PB 3.19
 834 LS 0 91.6
 835 UD 0.284
 *

1

HEC-1 INPUT

PAGE 23

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

836 KK RC13B-1
 837 KM ROUTE 13B-1 TO C13B-2
 838 KM GRIFFITH PARK DRIVE AND HUALAPAI WAY
 839 RD 3000 0.018 0.016 0 TRAP 0 50
 *

840 KK 13B-2
 841 BA 0.216
 842 PB 3.14
 843 LS 0 89.7
 844 UD 0.231
 *

845 KK C13B-2
 846 KM COMBINE 13B-2 AND RC13B-1
 847 KM HUALAPAI WAY AND LOCAL FACILITY
 848 HC 2
 *

849 KK RC13B-2
 850 KM ROUTE C13B-2 TO CCPIC-A
 851 KM LINING = GRASS
 852 RD 4900 0.021 0.03 0 TRAP 40 6
 *

853 KK 19A
 854 BA 0.253
 855 PB 3.25
 856 LS 0 89.9
 857 UD 0.351
 *

858 KK R19A
 859 KM ROUTE 19A TO C13A-1
 860 KM UNNAMED ROAD
 861 RD 4300 0.021 0.016 0 TRAP 0 50
 *

862 KK 13A-1
 863 BA 0.224
 864 PB 3.19
 865 LS 0 91.4
 866 UD 0.302
 *

867 KK C13A-1
 868 KM COMBINE 13A-1 AND R19A

1

869 KM TOWN CENTER DRIVE AND SWALE
870 HC 2
*

HEC-1 INPUT PAGE 24

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

871 KK RC13A-1
872 KM ROUTE C13A-1 TO C13A-2
873 KM NATURAL WASH
874 KM TRAVEL LENGTH = 2,800
875 KM SLOPE = 2.1%
876 KM N = 0.040
877 KM HYDRAULIC RADIUS = 1.5
878 KM VELOCITY = 11.4
879 RM 1 0.068 0.15
*

880 KK 13A-2
881 BA 0.188
882 PB 3.15
883 LS 0 90.0
884 UD 0.236
*

885 KK C13A-2
886 KM COMBINE 13A-2 AND RC13A-1
887 HC 2
*

888 KK RC13A-2
889 KM ROUTE C13A-2 TO CPIC-C
890 KM LINING = GRASS
891 RD 5200 0.015 0.03 0 TRAP 40 4
*

892 KK PIC-C
893 BA 0.243
894 PB 3.08
895 LS 0 90.4
896 UD 0.373
*

897 KK CPIC-C
898 KM COMBINE PIC-C AND RC13A-2
899 HC 2
*

900 KK RCPIC-C
901 KM ROUTE CPIC-C TO CPIC-A
902 KM LINING = GRASS
903 RD 2200 0.025 0.03 0 TRAP 40 4
*

904 KK PIC-A
905 BA 0.359
906 PB 3.03
907 LS 0 91.1
908 UD 0.499
*

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HEC-1 INPUT PAGE 25

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

909 KK CPIC-A
910 KM COMBINE RCPIC-C AND PIC-A
911 HC 2
*

912 KK CCPIC-A
913 KM COMBINE CPIC-A AND RC13B-2
914 HC 2
*

915 KK RCPIC-A
916 KM ROUTE CCPIC-A TO C57B-1
917 KM FACILITY = ANGEL PARK - PECCOLE 2
918 KM FACILITY # = APP2 0000
919 KM LINING = GRASS
920 RD 4793 0.021 0.03 0 TRAP 10 2
*

921 KK 57B-1
922 BA 0.197
923 PB 2.92
924 LS 0 85.5
925 UD 0.277
*

926 KK C57B-1
927 KM COMBINE 57B-1 AND RCPIC-A
928 HC 2
*

929 KK CC57B-1
 930 KM COMBINE C57B-1 AND RC57B-2
 931 HC 2
 *
 932 KKRCC57B-1
 933 KM ROUTE CC57B-1 TO C57B-4
 934 KM FACILITY = ANGEL PARK - SOUTH BRANCH
 935 KM FACILITY # = APSO 0050
 936 KM LINING = NATURAL WASH
 937 RD 300 0.0184 0.04 0 TRAP 100 3
 *
 938 KK 57B-4
 939 BA 0.200
 940 PB 2.91
 941 LS 0 90.0
 942 UD 0.233
 *

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HEC-1 INPUT

PAGE 26

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

943 KK C57B-4
 944 KM COMBINE RCC57B-1 AND 57B-4
 945 HC 2
 *
 946 KK PIC-B
 947 BA 0.441
 948 PB 2.98
 949 LS 0 91.1
 950 UD 0.471
 *
 951 KK RPIC-B
 952 KM ROUTE PIC-B TO CC57B-4
 953 KM FACILITY = ANGEL PARK - PECCOLE 1
 954 KM FACILITY # = APP1 0000
 955 KM LINING = RCP
 956 RD 2982 0.024 0.013 0 CIRC 6
 *

957 KK CC57B-4
 958 KM COMBINE RPIC-B AND C57B-4
 959 HC 2
 *

960 KKRCC57B-4
 961 KM ROUTE CC57B-4 TO ANGLPKIN
 962 KM FACILITY = ANGEL PARK SOUTH
 963 KM FACILITY # = APSO 0000, 0020
 964 KM LINING = RCB
 965 RD 2857 0.0162 0.015 0 TRAP 24 0
 *

966 KK 38A
 967 BA 0.353
 968 PB 2.86
 969 LS 0 91.6
 970 UD 0.399
 *

971 KK R38A
 972 KM ROUTE 38A TO C38B
 973 KM FACILITY = ANGEL PARK - DURANGO
 974 KM FACILITY # = APDG 0000,0060
 975 KM LINING = RCP
 976 RD 4500 0.0096 0.015 0 CIRC 6
 *

977 KK 38B
 978 BA 0.440
 979 PB 2.82
 980 LS 0 92.9
 981 UD 0.375
 *

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HEC-1 INPUT

PAGE 27

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

982 KK C38B
 983 KM COMBINE 38B AND R38A
 984 KM DUCHARME AND DURANGO
 985 HC 2
 *

986 KK 57BA
 987 BA 0.317
 988 PB 2.96
 989 LS 0 78.2
 990 UD 0.436

```

*
991      KK      R57BA
992      KM      ROUTE 57BA TO C3C
993      KM      RAMPART BOULEVARD
994      RD      500      0.02      0.016      0      TRAP      0      50
*
995      KK      3C
996      BA      0.153
997      PB      2.90
998      LS      0      93.1
999      UD      0.246
*
1000     KK      C3C
1001     KM      COMBINE 3C AND R57BA
1002     KM      RAMPART AND REGENT LAS VEGAS
1003     HC      2
*
1004     KK      RC3C
1005     KM      ROUTE C3C TO ANGLPKIN
1006     KM      LINING = UNLINED
1007     KM      CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
1008     RD      2300      0.0326      0.04      0      TRAP      50      4
*
1009     KK      AP
1010     BA      0.668
1011     PB      2.81
1012     LS      0      81.6
1013     UD      0.392
*
1014     KK      KKANGLPKIN
1015     KM      COMBINE AP,RC3C,C38B,RCC57B-4, AND RCSF2-2
1016     KM      TOTAL INFLOW TO ANGEL PARK DETENTION BASIN
1017     KO      1
1018     HC      5
*

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HEC-1 INPUT

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

1019      KKANGLPKDB
1020      KM      ANGEL PARK DETENTION BASIN
1021      KM      FACILITY = ANGEL PARK NORTH
1022      KM      FACILITY # = APNO 0000,0001
1023      KM      STORAGE VOLUME = 1512 AC-FT (2002 MPU VOLUME = 1400 AC-FT; 8% INCREASE)
1024      KM      OUTLET = 54" RCP
1025      KM      100-YEAR DISCHARGE =
1026      KM      SPILLWAY LENGTH =
1027      KM      SPILLWAY HEIGHT =
1028      KM      SPILLWAY CREST ELEVATION = 2619'
1029      KM      SPILLWAY TYPE =
1030      KM      PMF DISCHARGE =
1031      KM      TOP OF EMBANKMENT ELEVATION =
1032      KO      1
1033      RS      1      STOR      -1
1034      SV      0      10.8      43.2      113.4      222.48      411.48      640.44      910.44      1239.84      1470.9
1035      SV      1512      1554.12      1596.24      1640.52      1684.8      1730.16      1775.52      1823.04      1875.96      1919.1
1036      SE      2576      2580      2585      2590      2595      2600      2605      2610      2616      2618
1037      SE      2619      2619.5      2620      2620.5      2621      2621.5      2622      2622.5      2623      2623.5
1038      SQ      0      89      194      232      285      316      343      370      392      405
1039      SQ      407      1852      4491      7909      11955      16545      21620      27137      33064      39373
*
1040      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

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

54      3-1
        V
        V
68      R3-1
        .
        .
72      .      3-2
        .
        .
78      CP3.1.....
        V
        V
81      RCP3.1
        .
        .
85      .      3-D
        .
        .
91      CP3.3.....

```

	V		
	V		
94	RCP3.3		
	.		
	.		
98	.	3-3	
	.	V	
	.	V	
104	.	R3-3	
	.	.	
	.	.	
108	.	.	3-4
	.	.	V
	.	.	V
114	.	.	R3-4
	.	.	.
	.	.	.
118	.	.	.
	.	.	3-5
	.	.	V
	.	.	V
124	.	.	R3-5
	.	.	.
	.	.	.
128	.	CP3.2	.....
	.	V	
	.	V	
131	.	RCP3.2	
	.	.	
	.	.	
135	.	.	3-E
	.	.	.
	.	.	.
141	CP3.4	.....	
	V		
	V		
144	RCP3.4		
	.		
	.		
148	.	3-6	
	.	V	
	.	V	
154	.	R3-6	
	.	.	
	.	.	
158	.	.	3-7
	.	.	V
	.	.	V
164	.	.	R3-7
	.	.	.
	.	.	.
168	.	.	.
	.	.	3-J
	.	.	V
	.	.	V
174	.	.	R3-J
	.	.	.
	.	.	.
178	.	CP3.5	.....
	.	V	
	.	V	
181	.	RCP3.5	
	.	.	
	.	.	
185	.	.	3-8
	.	.	V
	.	.	V
191	.	.	R3-8
	.	.	.
	.	.	.
195	.	.	.
	.	.	3-K
	.	.	.
	.	.	.
201	.	CP3.6	.....
	.	V	
	.	V	
204	.	RCP3.6	
	.	.	
	.	.	
208	.	.	3-N
	.	.	.
	.	.	.
214	.	.	.
	.	.	3-M
	.	.	V
	.	.	V
220	.	.	R3-M
	.	.	.
	.	.	.
224	CPDB5	.....	
	V		
	V		
229	DB5		
	.		
	.		
258	.	3-L	
	.	.	
	.	.	

264	CP3-L.....			
	V			
	V			
268	RCSWAA-1			
	.			
	.			
274		SWAA-2		
	.			
	.			
279	CSWAA-2.....			
	V			
	V			
282	RCSWAA-2			
	.			
	.			
288		SWAA-3		
	.			
	.			
293	CSWAA-3.....			
	.			
	.			
296		3-F		
		V		
		V		
302		R3-F		
	.			
	.			
306			3-G2	
	.			
	.			
	.			
312		CP3.8.....		
		V		
		V		
315		RCP3.8		
	.			
	.			
319			3-A	
			V	
			V	
325			R3-A	
	.			
	.			
328				3-B
	.			V
	.			V
334			R3-B	
	.			
	.			
337				3-C
	.			
	.			
	.			
343		CPDBA-B.....		
		V		
		V		
348		GPDB		
	.			
	.			
373			3-G1	
	.		V	
	.		V	
379			R3-G1	
	.			
	.			
383		CP3-G1.....		
		V		
		V		
386		RCP3-G1		
	.			
	.			
390			3-H1	
	.			
	.			
396		CP3-H1.....		
		V		
		V		
399		RCP3-H1		
	.			
	.			
403			3-I1	
	.			
	.			
409		CP3.9.....		
		V		
		V		
412		RCP9		
	.			
	.			
415			3-O	
	.		V	
	.		V	
421			R3-O	
	.			
	.			
425			3-P2	
	.		V	

431	.	.	.	V
	.	.	R3-P2	.
	.	.	.	.
435	.	.	.	3-P1
	.	.	.	.
	.	.	.	.
441	.	.	CP3-P	.....
	.	.	V	.
	.	.	V	.
443	.	.	RCP3-P	.
	.	.	.	.
	.	.	.	.
446	.	.	.	3-Q
	.	.	.	.
	.	.	.	.
452	.	.	CP3-Q	.....
	.	.	V	.
	.	.	V	.
455	.	.	RCP3-Q	.
	.	.	.	.
	.	.	.	.
459	.	.	.	3-H2
	.	.	.	.
	.	.	.	.
464	.	.	CP3-H2	.....
	.	.	V	.
	.	.	V	.
466	.	.	RCPH-2	.
	.	.	.	.
	.	.	.	.
470	.	.	.	3-I2
	.	.	.	.
	.	.	.	.
476	.	CP3.10	.....	.
	.	V	.	.
	.	V	.	.
479	.	RCP3.10	.	.
	.	.	.	.
	.	.	.	.
484	.	.	3-H3	.
	.	.	.	.
	.	.	.	.
490	.	CP3.11	.....	.
	.	V	.	.
	.	V	.	.
494	.	RCSHFH-9	.	.
	.	.	.	.
	.	.	.	.
500	CRCSWFH9	.....	.	.
	V	.	.	.
	V	.	.	.
503	RCRCSWFH	.	.	.
	.	.	.	.
509	.	11A-1	.	.
	.	.	.	.
	.	.	.	.
514	C11A-1	.....	.	.
	V	.	.	.
	V	.	.	.
518	RC11A-1	.	.	.
	.	.	.	.
	.	.	.	.
524	.	11A-3	.	.
	.	.	.	.
	.	.	.	.
529	C11A-3	.....	.	.
	V	.	.	.
	V	.	.	.
533	RC11A-3	.	.	.
	.	.	.	.
	.	.	.	.
544	.	3A	.	.
	.	.	.	.
	.	.	.	.
549	C3A	.....	.	.
	V	.	.	.
	V	.	.	.
553	RC3A	.	.	.
	.	.	.	.
	.	.	.	.
564	.	3B-1	.	.
	.	.	.	.
	.	.	.	.
569	C3B-1	.....	.	.
	V	.	.	.
	V	.	.	.
572	RC3B-1	.	.	.
	.	.	.	.
	.	.	.	.
579	.	11B-2	.	.
	.	V	.	.
	.	V	.	.
584	.	R11B-2	.	.

590	.	.	11B-1	.
	.	.	.	.
595	.	C11B-1.....	.	.
	.	V	.	.
	.	V	.	.
599	.	RC11B-1	.	.
	.	.	.	.
605	.	.	8B-1	.
	.	.	.	.
610	.	C8B-1.....	.	.
	.	V	.	.
	.	V	.	.
614	.	RC8B-1	.	.
	.	.	.	.
620	.	.	8B-2	.
	.	.	.	.
625	.	C8B-2.....	.	.
	.	V	.	.
	.	V	.	.
629	.	RC8B-2	.	.
	.	.	.	.
635	.	.	11A-2	.
	.	.	V	.
	.	.	V	.
640	.	.	R11A-2	.
	.	.	.	.
644	.	.	.	8A
	.	.	.	.
649	.	.	C8A.....	.
	.	.	V	.
	.	.	V	.
652	.	.	RC8A	.
	.	.	.	.
661	.	.	.	3B-2A
	.	.	.	.
666	.	.	C3B-2A.....	.
	.	.	.	.
669	.	CC3B-2A.....	.	.
	.	V	.	.
	.	V	.	.
672	.	RCC3B-2A	.	.
	.	.	.	.
678	.	.	3B-2B	.
	.	.	.	.
683	.	C3B-2B.....	.	.
	.	.	.	.
686	.	CC3B-2B.....	.	.
	.	V	.	.
	.	V	.	.
689	.	RCC3B-2B	.	.
	.	.	.	.
696	.	SF2-C	.	.
	.	.	.	.
701	.	CSF2-C.....	.	.
	.	V	.	.
	.	V	.	.
704	.	RCSF2-C	.	.
	.	.	.	.
711	.	SW11	.	.
	.	V	.	.
	.	V	.	.
716	.	RSW11	.	.
	.	.	.	.
722	.	.	SW17	.
	.	.	.	.
727	.	CSW17.....	.	.
	.	V	.	.
	.	V	.	.
730	.	RCSW17	.	.
	.	.	.	.
736	.	.	SW18	.
	.	.	.	.
	.	.	.	.

741	.	CSW18.....	
	.	V	
	.	V	
744	.	RCSW18	
	.	.	
	.	.	12A
755	.	.	.
	.	.	.
760	.	C12A.....	
	.	V	
	.	V	
763	.	RC12A	
	.	.	
	.	.	12B
774	.	.	.
	.	.	.
779	.	C12B.....	
	.	V	
	.	V	
782	.	RC12B	
	.	.	
	.	.	57B-3
793	.	.	.
	.	.	.
798	.	C57B-3.....	
	.	V	
	.	V	
801	.	RC57B-3	
	.	.	
	.	.	57B-2
812	.	.	.
	.	.	.
817	.	C57B-2.....	
	.	V	
	.	V	
820	.	RC57B-2	
	.	.	
	.	.	13B-1
831	.	.	V
	.	.	V
836	.	RC13B-1	
	.	.	
	.	.	13B-2
840	.	.	.
	.	.	.
845	.	C13B-2.....	
	.	V	
	.	V	
849	.	RC13B-2	
	.	.	
	.	.	19A
853	.	.	V
	.	.	V
858	.	.	R19A
	.	.	.
	.	.	.
862	.	.	13A-1
	.	.	.
	.	.	.
867	.	C13A-1.....	
	.	V	
	.	V	
871	.	RC13A-1	
	.	.	
	.	.	13A-2
880	.	.	.
	.	.	.
	.	.	.
885	.	C13A-2.....	
	.	V	
	.	V	
888	.	RC13A-2	
	.	.	
	.	.	PIC-C
892	.	.	.
	.	.	.
897	.	CPIC-C.....	
	.	V	
	.	V	
900	.	RCPIC-C	
	.	.	
	.	.	PIC-A
904	.	.	.
	.	.	.
909	.	CPIC-A.....	
	.	.	.

THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
DOWNSTREAM HOLDING FACILITIES

MODELED BY VTN, NEVADA SVB/JYA
MAY 9, 2017

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
GOWAN WATERSHED (ALL)
RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
INPUT FILE = ALT1-SDN3.DAT
INPUT FILE DATE = MAY 5, 2008
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #5
MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
STORM CENTERING = FULL WATERSHED

REFERENCED HYDROLOGIC MODELS:
CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
MASTER PLAN UPDATE (G.C. WALLACE 2006)
GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
(G.C. WALLACE 2007)
LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
FROM G.C. WALLACE ON JANUARY 31, 2008)
US 95/RANCHO FIS RESTUDY (PBS&J 1998)
JR CARDS CONTAIN DARF'S BASED ON THE FOLLOWING VALUES:

AREA	DARF
SQ. MI.	
8-9	0.875
9-10	0.865
10-11	0.857
11-12	0.85

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN4

51 IO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
 NMIN 5 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 0055 ENDING TIME
 ICENT 19 CENTURY MARK

 COMPUTATION INTERVAL .08 HOURS
 TOTAL TIME BASE 24.92 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
 .88 .87 .86 .85

*** **

224 KK *****
 * *
 * CPDB5 *
 * *

HYDROGRAPH ROUTING DATA

***	***	***	***	***
HYDROGRAPH AT STATION GPDB				
FOR PLAN 1, RATIO = .88				
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+ (CFS)	(HR)			24.92-HR
+ 133.	5.42	121.	50.	48.
	(INCHES)	.898	1.472	1.472
	(AC-FT)	60.	99.	99.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+ (AC-FT)	(HR)			24.92-HR

CUMULATIVE AREA = 1.26 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .87

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW
+	(CFS)	(HR)	6-HR 24-HR 72-HR 24.92-HR
+	132.	5.42	(CFS) 120. 49. 47. 47.
			(INCHES) .889 1.443 1.443 1.443
			(AC-FT) 60. 97. 97. 97.

PEAK STORAGE	TIME	MAXIMUM	AVERAGE	STORAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
80.	5.42	63.	25.	24.	24.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
24.41	5.42	22.23	14.50	14.34	14.34

CUMULATIVE AREA = 1.26 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .86

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	132.	5.42	119.	48.	46.	46.
		(INCHES)	.882	1.420	1.420	1.420
		(AC-FT)	59.	95.	95.	95.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
78.	5.42	61.	25.	24.	24.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
	(HR)				
	24.27	5.42	22.06	14.42	14.25

CUMULATIVE AREA = 1.26 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .85

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	131.	5.42	(CFS)			
			118.	47.	46.	46.
		(INCHES)	.876	1.400	1.400	1.400
		(AC-FT)	59.	94.	94.	94.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
77.	5.42	60.	24.	23.	23.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
24.14	5.42	21.92	14.34	14.18	14.18

CUMULATIVE AREA = 1.26 SQ MI

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***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
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***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

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1017 KO          OUTPUT CONTROL VARIABLES
                   IPRNT      1  PRINT CONTROL
                   IPLOT      0  PLOT CONTROL
                   QSCAL      0.  HYDROGRAPH PLOT SCALE

1018 HC          HYDROGRAPH COMBINATION
                   ICOMP      5  NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .88

	DA	MON	HRMN	ORD		FLOW	*	DA	MON	HRMN	ORD		FLOW	*	DA	MON	HRMN	ORD		FLOW	*	DA	MON	HRMN	ORD		FLOW	*	DA	MON	HRMN	ORD
FLOW																																
10.	1		0000	1	0.	*	1	0615	76	2653.	*	1	1230	151	75.	*	1	1845	226													
10.	1		0005	2	0.	*	1	0620	77	2545.	*	1	1235	152	74.	*	1	1850	227													
10.	1		0010	3	0.	*	1	0625	78	2440.	*	1	1240	153	73.	*	1	1855	228													
9.	1		0015	4	0.	*	1	0630	79	2336.	*	1	1245	154	72.	*	1	1900	229													
9.	1		0020	5	1.	*	1	0635	80	2234.	*	1	1250	155	70.	*	1	1905	230													
9.	1		0025	6	3.	*	1	0640	81	2136.	*	1	1255	156	69.	*	1	1910	231													
9.	1		0030	7	10.	*	1	0645	82	2042.	*	1	1300	157	68.	*	1	1915	232													
8.	1		0035	8	24.	*	1	0650	83	1954.	*	1	1305	158	67.	*	1	1920	233													
8.	1		0040	9	49.	*	1	0655	84	1870.	*	1	1310	159	66.	*	1	1925	234													
8.	1		0045	10	88.	*	1	0700	85	1789.	*	1	1315	160	65.	*	1	1930	235													
8.	1		0050	11	144.	*	1	0705	86	1708.	*	1	1320	161	64.	*	1	1935	236													
7.	1		0055	12	212.	*	1	0710	87	1620.	*	1	1325	162	63.	*	1	1940	237													
7.	1		0100	13	284.	*	1	0715	88	1520.	*	1	1330	163	62.	*	1	1945	238													
7.	1		0105	14	346.	*	1	0720	89	1410.	*	1	1335	164	60.	*	1	1950	239													
7.	1		0110	15	390.	*	1	0725	90	1301.	*	1	1340	165	59.	*	1	1955	240													
7.	1		0115	16	415.	*	1	0730	91	1206.	*	1	1345	166	58.	*	1	2000	241													
6.	1		0120	17	424.	*	1	0735	92	1135.	*	1	1350	167	57.	*	1	2005	242													
6.	1		0125	18	423.	*	1	0740	93	1082.	*	1	1355	168	55.	*	1	2010	243													
6.	1		0130	19	422.	*	1	0745	94	1037.	*	1	1400	169	54.	*	1	2015	244													
6.	1		0135	20	432.	*	1	0750	95	988.	*	1	1405	170	52.	*	1	2020	245													
6.	1		0140	21	461.	*	1	0755	96	931.	*	1	1410	171	51.	*	1	2025	246													
6.	1		0145	22	515.	*	1	0800	97	865.	*	1	1415	172	49.	*	1	2030	247													
5.	1		0150	23	594.	*	1	0805	98	795.	*	1	1420	173	48.	*	1	2035	248													
5.	1		0155	24	696.	*	1	0810	99	723.	*	1	1425	174	46.	*	1	2040	249													

5.	1	0200	25	809.	*	1	0815	100	652.	*	1	1430	175	45.	*	1	2045	250
5.	1	0205	26	924.	*	1	0820	101	585.	*	1	1435	176	43.	*	1	2050	251
5.	1	0210	27	1024.	*	1	0825	102	521.	*	1	1440	177	42.	*	1	2055	252
5.	1	0215	28	1099.	*	1	0830	103	460.	*	1	1445	178	41.	*	1	2100	253
5.	1	0220	29	1152.	*	1	0835	104	402.	*	1	1450	179	40.	*	1	2105	254
4.	1	0225	30	1193.	*	1	0840	105	346.	*	1	1455	180	38.	*	1	2110	255
4.	1	0230	31	1229.	*	1	0845	106	290.	*	1	1500	181	37.	*	1	2115	256
4.	1	0235	32	1265.	*	1	0850	107	238.	*	1	1505	182	36.	*	1	2120	257
4.	1	0240	33	1302.	*	1	0855	108	194.	*	1	1510	183	35.	*	1	2125	258
4.	1	0245	34	1341.	*	1	0900	109	162.	*	1	1515	184	34.	*	1	2130	259
4.	1	0250	35	1381.	*	1	0905	110	140.	*	1	1520	185	33.	*	1	2135	260
4.	1	0255	36	1425.	*	1	0910	111	128.	*	1	1525	186	32.	*	1	2140	261
4.	1	0300	37	1480.	*	1	0915	112	120.	*	1	1530	187	31.	*	1	2145	262
4.	1	0305	38	1565.	*	1	0920	113	116.	*	1	1535	188	30.	*	1	2150	263
3.	1	0310	39	1712.	*	1	0925	114	113.	*	1	1540	189	29.	*	1	2155	264
3.	1	0315	40	1970.	*	1	0930	115	112.	*	1	1545	190	28.	*	1	2200	265
3.	1	0320	41	2416.	*	1	0935	116	111.	*	1	1550	191	27.	*	1	2205	266
3.	1	0325	42	3171.	*	1	0940	117	110.	*	1	1555	192	27.	*	1	2210	267
3.	1	0330	43	4402.	*	1	0945	118	109.	*	1	1600	193	26.	*	1	2215	268
3.	1	0335	44	6176.	*	1	0950	119	108.	*	1	1605	194	25.	*	1	2220	269
3.	1	0340	45	8319.	*	1	0955	120	107.	*	1	1610	195	24.	*	1	2225	270
3.	1	0345	46	10403.	*	1	1000	121	106.	*	1	1615	196	24.	*	1	2230	271
3.	1	0350	47	11923.	*	1	1005	122	105.	*	1	1620	197	23.	*	1	2235	272
3.	1	0355	48	12633.	*	1	1010	123	104.	*	1	1625	198	22.	*	1	2240	273
3.	1	0400	49	12542.	*	1	1015	124	103.	*	1	1630	199	22.	*	1	2245	274
3.	1	0405	50	11879.	*	1	1020	125	102.	*	1	1635	200	21.	*	1	2250	275
2.	1	0410	51	10918.	*	1	1025	126	101.	*	1	1640	201	21.	*	1	2255	276
2.	1	0415	52	9837.	*	1	1030	127	100.	*	1	1645	202	20.	*	1	2300	277
2.	1	0420	53	8763.	*	1	1035	128	99.	*	1	1650	203	19.	*	1	2305	278
2.	1	0425	54	7781.	*	1	1040	129	98.	*	1	1655	204	19.	*	1		

1.	1	0555	72	3252.	*	1	1210	147	80.	*	1	1825	222	11.	*	2	0040	297
1.	1	0600	73	3058.	*	1	1215	148	79.	*	1	1830	223	11.	*	2	0045	298
1.	1	0605	74	2900.	*	1	1220	149	78.	*	1	1835	224	11.	*	2	0050	299
1.	1	0610	75	2769.	*	1	1225	150	76.	*	1	1840	225	10.	*	2	0055	300
1.					*					*					*			

PEAK FLOW		TIME	MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	12633.	3.92	(CFS)			
			3958.	1056.	1017.	1017.
			(INCHES)	1.615	1.723	1.723
			(AC-FT)	1963.	2094.	2095.
CUMULATIVE AREA =			22.79 SQ MI			

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .87

DA MON HRMN ORD				FLOW	*	DA MON HRMN ORD				FLOW	*	DA MON HRMN ORD				FLOW	*	DA MON HRMN ORD			
10.	1	0000	1	0.	*	1	0615	76	2628.	*	1	1230	151	73.	*	1	1845	226			
9.	1	0005	2	0.	*	1	0620	77	2520.	*	1	1235	152	72.	*	1	1850	227			
9.	1	0010	3	0.	*	1	0625	78	2416.	*	1	1240	153	71.	*	1	1855	228			
9.	1	0015	4	0.	*	1	0630	79	2312.	*	1	1245	154	69.	*	1	1900	229			
9.	1	0020	5	1.	*	1	0635	80	2210.	*	1	1250	155	68.	*	1	1905	230			
9.	1	0025	6	3.	*	1	0640	81	2112.	*	1	1255	156	67.	*	1	1910	231			
8.	1	0030	7	9.	*	1	0645	82	2017.	*	1	1300	157	66.	*	1	1915	232			
8.	1	0035	8	23.	*	1	0650	83	1928.	*	1	1305	158	65.	*	1	1920	233			
8.	1	0040	9	47.	*	1	0655	84	1842.	*	1	1310	159	64.	*	1	1925	234			
7.	1	0045	10	84.	*	1	0700	85	1759.	*	1	1315	160	63.	*	1	1930	235			
7.	1	0050	11	136.	*	1	0705	86	1672.	*	1	1320	161	62.	*	1	1935	236			
7.	1	0055	12	201.	*	1	0710	87	1576.	*	1	1325	162	61.	*	1	1940	237			
7.	1	0100	13	269.	*	1	0715	88	1469.	*	1	1330	163	60.	*	1	1945	238			
7.	1	0105	14	328.	*	1	0720	89	1356.	*	1	1335	164	58.	*	1	1950	239			
6.	1	0110	15	370.	*	1	0725	90	1252.	*	1	1340	165	57.	*	1	1955	240			
6.	1	0115	16	394.	*	1	0730	91	1169.	*	1	1345	166	55.	*	1	2000	241			
6.	1	0120	17	404.	*	1	0735	92	1107.	*	1	1350	167	54.	*	1	2005	242			
6.	1	0125	18	405.	*	1	0740	93	1060.	*	1	1355	168	52.	*	1	2010	243			
6.	1	0130	19	406.	*	1	0745	94	1015.	*	1	1400	169	51.	*	1	2015	244			
6.	1	0135	20	416.	*	1	0750	95	963.	*	1	1405	170	49.	*	1	2020	245			
5.	1	0140	21	444.	*	1	0755	96	903.	*	1	1410	171	48.	*	1	2025	246			
5.	1	0145	22	496.	*	1	0800	97	835.	*	1	1415	172	46.	*	1	2030	247			
5.	1	0150	23	574.	*	1	0805	98	764.	*	1	1420	173	45.	*	1	2035	248			
5.	1	0155	24	672.	*	1	0810	99	692.	*	1	1425	174	44.	*	1	2040	249			
5.	1	0200	25	783.	*	1	0815	100	623.	*	1	1430	175	42.	*	1	2045	250			
5.	1	0205	26	895.	*	1	0820	101	557.	*	1	1435	176	41.	*	1	2050	251			
5.	1	0210	27	995.	*	1	0825	102	494.	*	1	1440	177	40.	*	1	2055	252			
4.	1	0215	28	1069.	*	1	0830	103	434.	*	1	1445	178	39.	*	1	2100	253			

4.	1	0220	29	1122.	*	1	0835	104	377.	*	1	1450	179	37.	*	1	2105	254
4.	1	0225	30	1163.	*	1	0840	105	321.	*	1	1455	180	36.	*	1	2110	255
4.	1	0230	31	1198.	*	1	0845	106	267.	*	1	1500	181	35.	*	1	2115	256
4.	1	0235	32	1234.	*	1	0850	107	219.	*	1	1505	182	34.	*	1	2120	257
4.	1	0240	33	1271.	*	1	0855	108	180.	*	1	1510	183	33.	*	1	2125	258
4.	1	0245	34	1309.	*	1	0900	109	152.	*	1	1515	184	32.	*	1	2130	259
4.	1	0250	35	1349.	*	1	0905	110	134.	*	1	1520	185	31.	*	1	2135	260
4.	1	0255	36	1392.	*	1	0910	111	123.	*	1	1525	186	30.	*	1	2140	261
4.	1	0300	37	1447.	*	1	0915	112	117.	*	1	1530	187	29.	*	1	2145	262
3.	1	0305	38	1531.	*	1	0920	113	114.	*	1	1535	188	28.	*	1	2150	263
3.	1	0310	39	1674.	*	1	0925	114	112.	*	1	1540	189	28.	*	1	2155	264
3.	1	0315	40	1924.	*	1	0930	115	110.	*	1	1545	190	27.	*	1	2200	265
3.	1	0320	41	2359.	*	1	0935	116	109.	*	1	1550	191	26.	*	1	2205	266
3.	1	0325	42	3106.	*	1	0940	117	108.	*	1	1555	192	25.	*	1	2210	267
3.	1	0330	43	4320.	*	1	0945	118	107.	*	1	1600	193	25.	*	1	2215	268
3.	1	0335	44	6056.	*	1	0950	119	106.	*	1	1605	194	24.	*	1	2220	269
3.	1	0340	45	8156.	*	1	0955	120	105.	*	1	1610	195	23.	*	1	2225	270
3.	1	0345	46	10202.	*	1	1000	121	104.	*	1	1615	196	23.	*	1	2230	271
3.	1	0350	47	11717.	*	1	1005	122	103.	*	1	1620	197	22.	*	1	2235	272
3.	1	0355	48	12433.	*	1	1010	123	102.	*	1	1625	198	21.	*	1	2240	273
3.	1	0400	49	12352.	*	1	1015	124	101.	*	1	1630	199	21.	*	1	2245	274
2.	1	0405	50	11712.	*	1	1020	125	100.	*	1	1635	200	20.	*	1	2250	275
2.	1	0410	51	10771.	*	1	1025	126	99.	*	1	1640	201	20.	*	1	2255	276
2.	1	0415	52	9711.	*	1	1030	127	98.	*	1	1645	202	19.	*	1	2300	277
2.	1	0420	53	8656.	*	1	1035	128	97.	*	1	1650	203	18.	*	1	2305	278
2.	1	0425	54	7689.	*	1	1040	129	96.	*	1	1655	204	18.	*	1	2310	279
2.	1	0430	55	6872.	*	1	1045	130	95.	*	1	1700	205	17.	*	1	2315	280
2.	1	0435	56	6257.	*	1	1050	131	94.	*	1	1705	206	17.	*	1	2320	281
2.	1	0440	57	5871.	*	1	1055	132	93.	*	1	1710	207	17.	*	1	2325	282
2.	1	0445	58	5717.	*	1	1100	133	92.	*	1	1715	208	16.	*	1	2330	283
2.	1	0450	59	5772.	*	1	1105	134	91.	*	1	1720	209	16.	*	1	2335	284
2.	1	0455	60	5973.	*	1	1110	135	90.	*	1	1725	210	15.	*	1	2340	285
2.	1	0500	61	6217.	*	1	1115	136	89.	*	1	1730	211	15.	*	1	2345	286
2.	1	0505	62	6390.	*	1	1120	137	88.	*	1	1735	212	14.	*	1	2350	287
2.	1	0510	63	6409.	*	1	1125	138	87.	*	1	1740	213	14.	*	1	2355	288
2.	1	0515	64	6244.	*	1	1130	139	86.	*	1	1745	214	14.	*	2	0000	289
2.	1	0520	65	5915.	*	1	1135	140	85.	*	1	1750	215	13.	*	2	0005	290
2.	1	0525	66	5474.	*	1	1140	141	84.	*	1	1755	216	13.	*	2	0010	291
2.	1	0530	67	4994.	*	1	1145	142	83.	*	1	1800	217	12.	*	2	0015	292
1.	1	0535	68	4529.	*	1	1150	143	82.	*	1	1805	218	12.	*	2	0020	293
1.	1	0540	69	4110.	*	1	1155	144	81.	*	1	1810	219	12.	*	2	0025	294
1.	1	0545	70	3754.	*	1	1200	145	80.	*	1	1815	220	11.	*	2	0030	295
1.	1	0550	71	3460.	*	1	1205	146	79.	*	1	1820	221	11.	*	2	0035	296
1.	1	0555	72	3222.	*	1	1210	147	78.	*	1	1825	222	11.	*	2	0040	297
1.	1	0600	73	3031.	*	1	1215	148	77.	*	1	1830	223	10.	*	2	0045	298
1.	1	0605	74	2875.	*	1	1220	149	75.	*	1	1835	224	10.	*	2	0050	299
1.	1	0610	75	2744.	*	1	1225	150	74.	*	1	1840	225	10.	*	2	0055	300
1.				*					*					*				

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
(CFS)	(HR)						
+	12433.	3.92					
		(CFS)	3899.	1038.	1000.	1000.	
		(INCHES)	1.591	1.695	1.695	1.695	
		(AC-FT)	1933.	2060.	2060.	2060.	
CUMULATIVE AREA =			22.79 SQ MI				

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .86

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
9.	1	0000	1	0.	*	1	0615	76	2605.	*	1	1230	151	71.	*	1	1845	226			
9.	1	0005	2	0.	*	1	0620	77	2498.	*	1	1235	152	70.	*	1	1850	227			
9.	1	0010	3	0.	*	1	0625	78	2394.	*	1	1240	153	69.	*	1	1855	228			
9.	1	0015	4	0.	*	1	0630	79	2291.	*	1	1245	154	68.	*	1	1900	229			
8.	1	0020	5	1.	*	1	0635	80	2189.	*	1	1250	155	67.	*	1	1905	230			
8.	1	0025	6	3.	*	1	0640	81	2090.	*	1	1255	156	65.	*	1	1910	231			
8.	1	0030	7	9.	*	1	0645	82	1995.	*	1	1300	157	64.	*	1	1915	232			
8.	1	0035	8	22.	*	1	0650	83	1904.	*	1	1305	158	63.	*	1	1920	233			
7.	1	0040	9	44.	*	1	0655	84	1816.	*	1	1310	159	62.	*	1	1925	234			
7.	1	0045	10	80.	*	1	0700	85	1730.	*	1	1315	160	61.	*	1	1930	235			
7.	1	0050	11	130.	*	1	0705	86	1639.	*	1	1320	161	60.	*	1	1935	236			
7.	1	0055	12	192.	*	1	0710	87	1538.	*	1	1325	162	59.	*	1	1940	237			
7.	1	0100	13	258.	*	1	0715	88	1426.	*	1	1330	163	58.	*	1	1945	238			
6.	1	0105	14	316.	*	1	0720	89	1315.	*	1	1335	164	56.	*	1	1950	239			
6.	1	0110	15	356.	*	1	0725	90	1218.	*	1	1340	165	55.	*	1	1955	240			
6.	1	0115	16	380.	*	1	0730	91	1144.	*	1	1345	166	53.	*	1	2000	241			
6.	1	0120	17	390.	*	1	0735	92	1089.	*	1	1350	167	52.	*	1	2005	242			
6.	1	0125	18	391.	*	1	0740	93	1043.	*	1	1355	168	50.	*	1	2010	243			
6.	1	0130	19	392.	*	1	0745	94	995.	*	1	1400	169	49.	*	1	2015	244			
6.	1	0135	20	401.	*	1	0750	95	939.	*	1	1405	170	47.	*	1	2020	245			
5.	1	0140	21	429.	*	1	0755	96	875.	*	1	1410	171	46.	*	1	2025	246			
5.	1	0145	22	481.	*	1	0800	97	805.	*	1	1415	172	44.	*	1	2030	247			
5.	1	0150	23	557.	*	1	0805	98	733.	*	1	1420	173	43.	*	1	2035	248			
5.	1	0155	24	654.	*	1	0810	99	662.	*	1	1425	174	42.	*	1	2040	249			
5.	1	0200	25	762.	*	1	0815	100	595.	*	1	1430	175	41.	*	1	2045	250			
5.	1	0205	26	873.	*	1	0820	101	530.	*	1	1435	176	39.	*	1	2050	251			
4.	1	0210	27	971.	*	1	0825	102	469.	*	1	1440	177	38.	*	1	2055	252			
4.	1	0215	28	1046.	*	1	0830	103	411.	*	1	1445	178	37.	*	1	2100	253			
4.	1	0220	29	1098.	*	1	0835	104	354.	*	1	1450	179	36.	*	1	2105	254			
4.	1	0225	30	1138.	*	1	0840	105	299.	*	1	1455	180	35.	*	1	2110	255			
4.	1	0230	31	1174.	*	1	0845	106	246.	*	1	1500	181	34.	*	1	2115	256			
4.	1	0235	32	1209.	*	1	0850	107	201.	*	1	1505	182	33.	*	1	2120	257			

4.	1	0240	33	1245.	*	1	0855	108	167.	*	1	1510	183	32.	*	1	2125	258
4.	1	0245	34	1283.	*	1	0900	109	143.	*	1	1515	184	31.	*	1	2130	259
4.	1	0250	35	1323.	*	1	0905	110	129.	*	1	1520	185	30.	*	1	2135	260
4.	1	0255	36	1366.	*	1	0910	111	120.	*	1	1525	186	29.	*	1	2140	261
3.	1	0300	37	1420.	*	1	0915	112	115.	*	1	1530	187	28.	*	1	2145	262
3.	1	0305	38	1502.	*	1	0920	113	112.	*	1	1535	188	27.	*	1	2150	263
3.	1	0310	39	1642.	*	1	0925	114	111.	*	1	1540	189	26.	*	1	2155	264
3.	1	0315	40	1887.	*	1	0930	115	109.	*	1	1545	190	26.	*	1	2200	265
3.	1	0320	41	2316.	*	1	0935	116	108.	*	1	1550	191	25.	*	1	2205	266
3.	1	0325	42	3046.	*	1	0940	117	107.	*	1	1555	192	24.	*	1	2210	267
3.	1	0330	43	4231.	*	1	0945	118	106.	*	1	1600	193	24.	*	1	2215	268
3.	1	0335	44	5952.	*	1	0950	119	105.	*	1	1605	194	23.	*	1	2220	269
3.	1	0340	45	8036.	*	1	0955	120	104.	*	1	1610	195	22.	*	1	2225	270
3.	1	0345	46	10053.	*	1	1000	121	103.	*	1	1615	196	22.	*	1	2230	271
3.	1	0350	47	11568.	*	1	1005	122	102.	*	1	1620	197	21.	*	1	2235	272
3.	1	0355	48	12293.	*	1	1010	123	100.	*	1	1625	198	20.	*	1	2240	273
2.	1	0400	49	12215.	*	1	1015	124	99.	*	1	1630	199	20.	*	1	2245	274
2.	1	0405	50	11589.	*	1	1020	125	99.	*	1	1635	200	19.	*	1	2250	275
2.	1	0410	51	10657.	*	1	1025	126	98.	*	1	1640	201	19.	*	1	2255	276
2.	1	0415	52	9610.	*	1	1030	127	97.	*	1	1645	202	18.	*	1	2300	277
2.	1	0420	53	8569.	*	1	1035	128	96.	*	1	1650	203	18.	*	1	2305	278
2.	1	0425	54	7614.	*	1	1040	129	95.	*	1	1655	204	17.	*	1	2310	279
2.	1	0430	55	6808.	*	1	1045	130	94.	*	1	1700	205	17.	*	1	2315	280
2.	1	0435	56	6200.	*	1	1050	131	93.	*	1	1705	206	16.	*	1	2320	281
2.	1	0440	57	5815.	*	1	1055	132	92.	*	1	1710	207	16.	*	1	2325	282
2.	1	0445	58	5663.	*	1	1100	133	90.	*	1	1715	208	15.	*	1	2330	283
2.	1	0450	59	5718.	*	1	1105	134	89.	*	1	1720	209	15.	*	1	2335	284
2.	1	0455	60	5915.	*	1	1110	135	88.	*	1	1725	210	15.	*	1	2340	285
2.	1	0500	61	6157.	*	1	1115	136	87.	*	1	1730	211	14.	*	1	2345	286
2.	1	0505	62	6327.	*	1	1120	137	86.	*	1	1735	212	14.	*	1	2350	287
2.	1	0510	63	6342.	*	1	1125	138	85.	*	1	1740	213	13.	*	1	2355	288
2.	1	0515	64	6179.	*	1	1130	139	84.	*	1	1745	214	13.	*	2	0000	289
2.	1	0520	65	5855.	*	1	1135	140	83.	*	1	1750	215	13.	*	2	0005	290
2.	1	0525	66	5422.	*	1	1140	141	82.	*	1	1755	216	12.	*	2	0010	291
1.	1	0530	67	4949.	*	1	1145	142	81.	*	1	1800	217	12.	*	2	0015	292
1.	1	0535	68	4491.	*	1	1150	143	80.	*	1	1805	218	12.	*	2	0020	293
1.	1	0540	69	4077.	*	1	1155	144	79.	*	1	1810	219	11.	*	2	0025	294
1.	1	0545	70	3724.	*	1	1200	145	78.	*	1	1815	220	11.	*	2	0030	295
1.	1	0550	71	3432.	*	1	1205	146	77.	*	1	1820	221	11.	*	2	0035	296
1.	1	0555	72	3196.	*	1	1210	147	76.	*	1	1825	222	10.	*	2	0040	297
1.	1	0600	73	3006.	*	1	1215	148	75.	*	1	1830	223	10.	*	2	0045	298
1.	1	0605	74	2851.	*	1	1220	149	74.	*	1	1835	224	10.	*	2	0050	299
1.	1	0610	75	2721.	*	1	1225	150	72.	*	1	1840	225	10.	*	2	0055	300
1.					*					*					*			

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW
+	(CFS)	(HR)	6-HR 24-HR 72-HR 24.92-HR
		(CFS)	

+ 12293. 3.92 (INCHES) 3851. 1024. 987. 987.
(AC-FT) 1.571 1.671 1.672 1.672
1910. 2031. 2032. 2032.

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .85

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
9.	1	0000	1	0.	*	1	0615	76	2587.	*	1	1230	151	70.	*	1	1845	226				
9.	1	0005	2	0.	*	1	0620	77	2480.	*	1	1235	152	69.	*	1	1850	227				
9.	1	0010	3	0.	*	1	0625	78	2376.	*	1	1240	153	67.	*	1	1855	228				
8.	1	0015	4	0.	*	1	0630	79	2273.	*	1	1245	154	66.	*	1	1900	229				
8.	1	0020	5	1.	*	1	0635	80	2171.	*	1	1250	155	65.	*	1	1905	230				
8.	1	0025	6	3.	*	1	0640	81	2071.	*	1	1255	156	64.	*	1	1910	231				
8.	1	0030	7	9.	*	1	0645	82	1975.	*	1	1300	157	63.	*	1	1915	232				
8.	1	0035	8	21.	*	1	0650	83	1883.	*	1	1305	158	62.	*	1	1920	233				
7.	1	0040	9	43.	*	1	0655	84	1794.	*	1	1310	159	61.	*	1	1925	234				
7.	1	0045	10	76.	*	1	0700	85	1704.	*	1	1315	160	60.	*	1	1930	235				
7.	1	0050	11	125.	*	1	0705	86	1608.	*	1	1320	161	59.	*	1	1935	236				
7.	1	0055	12	185.	*	1	0710	87	1502.	*	1	1325	162	57.	*	1	1940	237				
6.	1	0100	13	249.	*	1	0715	88	1388.	*	1	1330	163	56.	*	1	1945	238				
6.	1	0105	14	305.	*	1	0720	89	1280.	*	1	1335	164	54.	*	1	1950	239				
6.	1	0110	15	344.	*	1	0725	90	1191.	*	1	1340	165	53.	*	1	1955	240				
6.	1	0115	16	368.	*	1	0730	91	1124.	*	1	1345	166	51.	*	1	2000	241				
6.	1	0120	17	378.	*	1	0735	92	1074.	*	1	1350	167	50.	*	1	2005	242				
6.	1	0125	18	379.	*	1	0740	93	1029.	*	1	1355	168	48.	*	1	2010	243				
5.	1	0130	19	380.	*	1	0745	94	979.	*	1	1400	169	47.	*	1	2015	244				
5.	1	0135	20	390.	*	1	0750	95	920.	*	1	1405	170	45.	*	1	2020	245				
5.	1	0140	21	418.	*	1	0755	96	853.	*	1	1410	171	44.	*	1	2025	246				
5.	1	0145	22	468.	*	1	0800	97	782.	*	1	1415	172	43.	*	1	2030	247				
5.	1	0150	23	543.	*	1	0805	98	710.	*	1	1420	173	41.	*	1	2035	248				
5.	1	0155	24	637.	*	1	0810	99	640.	*	1	1425	174	40.	*	1	2040	249				
5.	1	0200	25	744.	*	1	0815	100	573.	*	1	1430	175	39.	*	1	2045	250				
4.	1	0205	26	853.	*	1	0820	101	510.	*	1	1435	176	38.	*	1	2050	251				
4.	1	0210	27	951.	*	1	0825	102	450.	*	1	1440	177	37.	*	1	2055	252				
4.	1	0215	28	1026.	*	1	0830	103	393.	*	1	1445	178	36.	*	1	2100	253				
4.	1	0220	29	1079.	*	1	0835	104	338.	*	1	1450	179	34.	*	1	2105	254				
4.	1	0225	30	1118.	*	1	0840	105	283.	*	1	1455	180	33.	*	1	2110	255				
4.	1	0230	31	1153.	*	1	0845	106	232.	*	1	1500	181	32.	*	1	2115	256				
4.	1	0235	32	1187.	*	1	0850	107	189.	*	1	1505	182	31.	*	1	2120	257				
4.	1	0240	33	1223.	*	1	0855	108	157.	*	1	1510	183	31.	*	1	2125	258				
4.	1	0245	34	1261.	*	1	0900	109	137.	*	1	1515	184	30.	*	1	2130	259				
3.	1	0250	35	1300.	*	1	0905	110	125.	*	1	1520	185	29.	*	1	2135	260				
3.	1	0255	36	1342.	*	1	0910	111	118.	*	1	1525	186	28.	*	1	2140	261				

3.	1	0300	37	1396.	*	1	0915	112	114.	*	1	1530	187	27.	*	1	2145	262
3.	1	0305	38	1476.	*	1	0920	113	111.	*	1	1535	188	26.	*	1	2150	263
3.	1	0310	39	1614.	*	1	0925	114	109.	*	1	1540	189	25.	*	1	2155	264
3.	1	0315	40	1857.	*	1	0930	115	108.	*	1	1545	190	25.	*	1	2200	265
3.	1	0320	41	2277.	*	1	0935	116	107.	*	1	1550	191	24.	*	1	2205	266
3.	1	0325	42	2993.	*	1	0940	117	106.	*	1	1555	192	23.	*	1	2210	267
3.	1	0330	43	4166.	*	1	0945	118	104.	*	1	1600	193	23.	*	1	2215	268
3.	1	0335	44	5865.	*	1	0950	119	103.	*	1	1605	194	22.	*	1	2220	269
3.	1	0340	45	7918.	*	1	0955	120	102.	*	1	1610	195	21.	*	1	2225	270
3.	1	0345	46	9917.	*	1	1000	121	101.	*	1	1615	196	21.	*	1	2230	271
2.	1	0350	47	11410.	*	1	1005	122	100.	*	1	1620	197	20.	*	1	2235	272
2.	1	0355	48	12121.	*	1	1010	123	99.	*	1	1625	198	20.	*	1	2240	273
2.	1	0400	49	12074.	*	1	1015	124	98.	*	1	1630	199	19.	*	1	2245	274
2.	1	0405	50	11461.	*	1	1020	125	97.	*	1	1635	200	19.	*	1	2250	275
2.	1	0410	51	10547.	*	1	1025	126	96.	*	1	1640	201	18.	*	1	2255	276
2.	1	0415	52	9519.	*	1	1030	127	95.	*	1	1645	202	18.	*	1	2300	277
2.	1	0420	53	8492.	*	1	1035	128	94.	*	1	1650	203	17.	*	1	2305	278
2.	1	0425	54	7548.	*	1	1040	129	93.	*	1	1655	204	17.	*	1	2310	279
2.	1	0430	55	6750.	*	1	1045	130	92.	*	1	1700	205	16.	*	1	2315	280
2.	1	0435	56	6147.	*	1	1050	131	91.	*	1	1705	206	16.	*	1	2320	281
2.	1	0440	57	5768.	*	1	1055	132	90.	*	1	1710	207	15.	*	1	2325	282
2.	1	0445	58	5618.	*	1	1100	133	89.	*	1	1715	208	15.	*	1	2330	283
2.	1	0450	59	5671.	*	1	1105	134	88.	*	1	1720	209	14.	*	1	2335	284
2.	1	0455	60	5864.	*	1	1110	135	87.	*	1	1725	210	14.	*	1	2340	285
2.	1	0500	61	6102.	*	1	1115	136	86.	*	1	1730	211	14.	*	1	2345	286
2.	1	0505	62	6272.	*	1	1120	137	85.	*	1	1735	212	13.	*	1	2350	287
2.	1	0510	63	6292.	*	1	1125	138	84.	*	1	1740	213	13.	*	1	2355	288
2.	1	0515	64	6134.	*	1	1130	139	83.	*	1	1745	214	13.	*	2	0000	289
1.	1	0520	65	5813.	*	1	1135	140	82.	*	1	1750	215	12.	*	2	0005	290
1.	1	0525	66	5383.	*	1	1140	141	81.	*	1	1755	216	12.	*	2	0010	291
1.	1	0530	67	4914.	*	1	1145	142	80.	*	1	1800	217	12.	*	2	0015	292
1.	1	0535	68	4459.	*	1	1150	143	79.	*	1	1805	218	11.	*	2	0020	293
1.	1	0540	69	4049.	*	1	1155	144	78.	*	1	1810	219	11.	*	2	0025	294
1.	1	0545	70	3698.	*	1	1200	145	77.	*	1	1815	220	11.	*	2	0030	295
1.	1	0550	71	3409.	*	1	1205	146	76.	*	1	1820	221	10.	*	2	0035	296
1.	1	0555	72	3174.	*	1	1210	147	74.	*	1	1825	222	10.	*	2	0040	297
1.	1	0600	73	2985.	*	1	1215	148	73.	*	1	1830	223	10.	*	2	0045	298
1.	1	0605	74	2831.	*	1	1220	149	72.	*	1	1835	224	9.	*	2	0050	299
1.	1	0610	75	2701.	*	1	1225	150	71.	*	1	1840	225	9.	*	2	0055	300

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	12121.	3.92	3808.	1012.	974.	974.
			1.554	1.651	1.651	1.651
			1888.	2007.	2007.	2007.

CUMULATIVE AREA = 22.79 SQ MI


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*****
*
1019 KK * ANGLPKDB *
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1032 KO          OUTPUT CONTROL VARIABLES
                   IPRNT      1  PRINT CONTROL
                   IPLOT      0  PLOT CONTROL
                   QSCAL      0.  HYDROGRAPH PLOT SCALE

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HYDROGRAPH ROUTING DATA

1033 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

[illegible]

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .88

STAGE	2016.5					2016.4					2016.3					2016.2				
	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
2016.5	1		0000	1	0.	.0	2576.0	*	1	0820	101	869.	1525.5	2016.2	*	1	1640	201	395.	1300.6
2016.5	1		0005	2	0.	.0	2576.0	*	1	0825	102	802.	1523.5	2016.1	*	1	1645	202	395.	1298.0
2016.5	1		0010	3	0.	.0	2576.0	*	1	0830	103	736.	1521.6	2016.1	*	1	1650	203	395.	1295.4
2016.5	1		0015	4	0.	.0	2576.0	*	1	0835	104	672.	1519.7	2016.1	*	1	1655	204	395.	1292.8
2016.5	1		0020	5	0.	.0	2576.0	*	1	0840	105	609.	1517.9	2016.1	*	1	1700	205	395.	1290.3
2016.4	1		0025	6	0.	.0	2576.0	*	1	0845	106	547.	1516.1	2016.0	*	1	1705	206	395.	1287.7
2016.4	1		0030	7	0.	.1	2576.0	*	1	0850	107	488.	1514.3	2016.0	*	1	1710	207	395.	1285.1
2016.4	1		0035	8	1.	.2	2576.1	*	1	0855	108	430.	1512.7	2016.0	*	1	1715	208	394.	1282.5
2016.4	1		0040	9	3.	.4	2576.2	*	1	0900	109	407.	1511.0	2016.0	*	1	1720	209	394.	1279.9
2016.3	1		0045	10	7.	.8	2576.3	*	1	0905	110	407.	1509.3	2016.9	*	1	1725	210	394.	1277.3
2016.3	1		0050	11	13.	1.6	2576.6	*	1	0910	111	407.	1507.4	2016.9	*	1	1730	211	394.	1274.7
2016.3	1		0055	12	22.	2.7	2577.0	*	1	0915	112	407.	1505.4	2016.8	*	1	1735	212	394.	1272.1
2016.3	1		0100	13	35.	4.2	2577.6	*	1	0920	113	407.	1503.4	2016.8	*	1	1740	213	394.	1269.4
2016.3	1		0105	14	50.	6.1	2578.2	*	1	0925	114	406.	1501.4	2016.7	*	1	1745	214	394.	1266.8
2016.2	1		0110	15	68.	8.2	2579.0	*	1	0930	115	406.	1499.4	2016.7	*	1	1750	215	393.	1264.2
2016.2	1		0115	16	86.	10.4	2579.9	*	1	0935	116	406.	1497.4	2016.6	*	1	1755	216	393.	1261.6
2016.2	1		0120	17	95.	12.7	2580.3	*	1	0940	117	406.	1495.3	2016.6	*	1	1800	217	393.	1259.0
2016.2	1		0125	18	102.	14.9	2580.6	*	1	0945	118	406.	1493.3	2016.5	*	1	1805	218	393.	1256.4
2016.1	1		0130	19	110.	17.1	2581.0	*	1	0950	119	406.	1491.2	2016.5	*	1	1810	219	393.	1253.8
2016.1	1		0135	20	117.	19.3	2581.3	*	1	0955	120	406.	1489.2	2016.4	*	1	1815	220	393.	1251.1

1	0140	21	124.	21.5	2581.7	*	1	1000	121	406.	1487.1	2618.4	*	1	1820	221	392.	1248.5
2616.1 1	0145	22	132.	24.0	2582.0	*	1	1005	122	406.	1485.1	2618.3	*	1	1825	222	392.	1245.9
2616.1 1	0150	23	141.	26.9	2582.5	*	1	1010	123	406.	1483.0	2618.3	*	1	1830	223	392.	1243.3
2616.0 1	0155	24	152.	30.3	2583.0	*	1	1015	124	405.	1480.9	2618.2	*	1	1835	224	392.	1240.6
2616.0 1	0200	25	166.	34.4	2583.6	*	1	1020	125	405.	1478.8	2618.2	*	1	1840	225	392.	1238.0
2615.9 1	0205	26	181.	39.2	2584.4	*	1	1025	126	405.	1476.7	2618.1	*	1	1845	226	392.	1235.4
2615.9 1	0210	27	195.	44.6	2585.1	*	1	1030	127	405.	1474.6	2618.1	*	1	1850	227	392.	1232.8
2615.8 1	0215	28	198.	50.6	2585.5	*	1	1035	128	405.	1472.5	2618.0	*	1	1855	228	391.	1230.1
2615.8 1	0220	29	201.	56.9	2586.0	*	1	1040	129	405.	1470.4	2618.0	*	1	1900	229	391.	1227.5
2615.8 1	0225	30	205.	63.6	2586.5	*	1	1045	130	405.	1468.3	2618.0	*	1	1905	230	391.	1224.9
2615.7 1	0230	31	209.	70.5	2586.9	*	1	1050	131	405.	1466.2	2618.0	*	1	1910	231	391.	1222.2
2615.7 1	0235	32	213.	77.7	2587.5	*	1	1055	132	405.	1464.0	2617.9	*	1	1915	232	391.	1219.6
2615.6 1	0240	33	217.	85.0	2588.0	*	1	1100	133	404.	1461.9	2617.9	*	1	1920	233	390.	1217.0
2615.6 1	0245	34	221.	92.6	2588.5	*	1	1105	134	404.	1459.7	2617.9	*	1	1925	234	390.	1214.3
2615.5 1	0250	35	225.	100.4	2589.1	*	1	1110	135	404.	1457.6	2617.9	*	1	1930	235	390.	1211.7
2615.5 1	0255	36	229.	108.5	2589.7	*	1	1115	136	404.	1455.4	2617.9	*	1	1935	236	390.	1209.1
2615.4 1	0300	37	234.	116.9	2590.2	*	1	1120	137	404.	1453.3	2617.8	*	1	1940	237	390.	1206.4
2615.4 1	0305	38	238.	125.8	2590.6	*	1	1125	138	404.	1451.1	2617.8	*	1	1945	238	390.	1203.8
2615.3 1	0310	39	243.	135.4	2591.0	*	1	1130	139	404.	1448.9	2617.8	*	1	1950	239	389.	1201.2
2615.3 1	0315	40	248.	146.4	2591.5	*	1	1135	140	404.	1446.8	2617.8	*	1	1955	240	389.	1198.5
2615.2 1	0320	41	255.	159.8	2592.1	*	1	1140	141	404.	1444.6	2617.8	*	1	2000	241	389.	1195.9
2615.2 1	0325	42	263.	177.3	2592.9	*	1	1145	142	403.	1442.4	2617.8	*	1	2005	242	389.	1193.3
2615.2 1	0330	43	275.	201.5	2594.0	*	1	1150	143	403.	1440.2	2617.7	*	1	2010	243	389.	1190.6
2615.1 1	0335	44	287.	236.0	2595.4	*	1	1155	144	403.	1438.0	2617.7	*	1	2015	244	389.	1188.0
2615.1 1	0340	45	295.	283.9	2596.6	*	1	1200	145	403.	1435.8	2617.7	*	1	20			

1	0535	68	405.	1479.7	2618.2	*	1	1355	168	400.	1383.1	2617.2	*	1	2215	268	384.	1124.9	
2613.9	1	0540	69	407.	1506.9	2618.9	*	1	1400	169	400.	1380.7	2617.2	*	1	2220	269	384.	1122.2
2613.9	1	0545	70	1005.	1529.4	2619.2	*	1	1405	170	400.	1378.3	2617.2	*	1	2225	270	384.	1119.6
2613.8	1	0550	71	1562.	1545.7	2619.4	*	1	1410	171	400.	1375.9	2617.2	*	1	2230	271	384.	1117.0
2613.8	1	0555	72	2007.	1556.6	2619.5	*	1	1415	172	400.	1373.5	2617.2	*	1	2235	272	384.	1114.4
2613.7	1	0600	73	2415.	1563.1	2619.6	*	1	1420	173	399.	1371.1	2617.1	*	1	2240	273	383.	1111.7
2613.7	1	0605	74	2615.	1566.3	2619.6	*	1	1425	174	399.	1368.6	2617.1	*	1	2245	274	383.	1109.1
2613.6	1	0610	75	2693.	1567.5	2619.7	*	1	1430	175	399.	1366.2	2617.1	*	1	2250	275	383.	1106.5
2613.6	1	0615	76	2699.	1567.6	2619.7	*	1	1435	176	399.	1363.8	2617.1	*	1	2255	276	383.	1103.9
2613.5	1	0620	77	2664.	1567.1	2619.7	*	1	1440	177	399.	1361.3	2617.1	*	1	2300	277	383.	1101.3
2613.5	1	0625	78	2603.	1566.1	2619.6	*	1	1445	178	399.	1358.8	2617.0	*	1	2305	278	383.	1098.6
2613.4	1	0630	79	2527.	1564.9	2619.6	*	1	1450	179	399.	1356.4	2617.0	*	1	2310	279	382.	1096.0
2613.4	1	0635	80	2441.	1563.5	2619.6	*	1	1455	180	398.	1353.9	2617.0	*	1	2315	280	382.	1093.4
2613.3	1	0640	81	2350.	1562.1	2619.6	*	1	1500	181	398.	1351.4	2617.0	*	1	2320	281	382.	1090.8
2613.3	1	0645	82	2258.	1560.6	2619.6	*	1	1505	182	398.	1348.9	2616.9	*	1	2325	282	382.	1088.2
2613.2	1	0650	83	2166.	1559.1	2619.6	*	1	1510	183	398.	1346.4	2616.9	*	1	2330	283	382.	1085.6
2613.2	1	0655	84	2076.	1557.7	2619.5	*	1	1515	184	398.	1343.9	2616.9	*	1	2335	284	382.	1082.9
2613.1	1	0700	85	1988.	1556.3	2619.5	*	1	1520	185	398.	1341.4	2616.9	*	1	2340	285	381.	1080.3
2613.1	1	0705	86	1903.	1554.9	2619.5	*	1	1525	186	398.	1338.9	2616.9	*	1	2345	286	381.	1077.7
2613.0	1	0710	87	1832.	1553.5	2619.5	*	1	1530	187	397.	1336.4	2616.8	*	1	2350	287	381.	1075.1
2613.0	1	0715	88	1777.	1551.9	2619.5	*	1	1535	188	397.	1333.9	2616.8	*	1	2355	288	381.	1072.5
2613.0	1	0720	89	1711.	1550.0	2619.5	*	1	1540	189	397.	1331.3	2616.8	*	2	0000	289	381.	1069.9
2612.9	1	0725	90	1636.	1547.8	2619.4	*	1	1545	190	397.	1328.8	2616.8	*	2	0005	290	380.	1067.3
2612.9	1	0730	91	1555.	1545.5	2619.4	*	1	1550	191	397.	1326.2	2616.7	*	2	0010	291	380.	1064.7
2612.8	1	0735	92	1474.	1543.1	2619.4	*	1	1555	192	397.	1323.7	2616.7	*	2	0015	292	380.	1062.1
2612.8	1	0740	93	1397.	1540.8	2619.3	*	1	1600	193	397.	1321.1	2616.7	*	2	0020	293	380.	1059.4
2612.7	1	0745	94	1325.	1538.8	2619.3	*	1	1605	194	396.	1318.6	2616.7	*	2	0025	294	380.	1056.8
2612.7	1	0750	95	1259.	1536.8	2619.3	*	1	1610	195	396.	1316.0	2616.7	*	2	0030	295	380.	1054.2
2612.6	1	0755	96	1196.	1535.0	2619.3	*	1	1615	196	396.	1313.5	2616.6	*	2	0035	296	379.	1051.6
2612.6	1	0800	97	1133.	1533.2	2619.3	*	1	1620	197	396.	1310.9	2616.6	*	2	0040	297	379.	1049.0
2612.5	1	0805	98	1069.	1531.3	2619.2	*	1	1625	198	396.	1308.3	2616.6	*	2	0045	298	379.	1046.4
2612.5	1	0810	99	1003.	1529.4	2619.2	*	1	1630	199	396.	1305.8	2616.6	*	2	0050	299	379.	1043.8
2612.4	1	0815	100	937.	1527.4	2619.2	*	1	1635	200	396.	1303.2	2616.5	*	2	0055	300	379.	1041.2
2612.4																			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	2699.	6.25	(CFS)	1053.	531.	512.	512.
			(INCHES)	.430	.866	.867	.867
			(AC-FT)	522.	1053.	1053.	1053.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	1568.	6.25		1515.	1160.	1117.	1117.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	2619.66	6.25		2618.89	2612.64	2611.30	2611.30

CUMULATIVE AREA = 22.79 SQ MI

STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
2616.5	1		0000	1	0.	.0	2576.0	*	1		0820	101	840.	1524.6	2619.1	*	1		1640	201	395.	1298.7
2616.5	1		0005	2	0.	.0	2576.0	*	1		0825	102	773.	1522.7	2619.1	*	1		1645	202	395.	1296.1
2616.5	1		0010	3	0.	.0	2576.0	*	1		0830	103	708.	1520.8	2619.1	*	1		1650	203	395.	1293.5
2616.5	1		0015	4	0.	.0	2576.0	*	1		0835	104	644.	1518.9	2619.1	*	1		1655	204	395.	1290.9
2616.4	1		0020	5	0.	.0	2576.0	*	1		0840	105	582.	1517.1	2619.1	*	1		1700	205	395.	1288.3
2616.4	1		0025	6	0.	.0	2576.0	*	1		0845	106	521.	1515.3	2619.0	*	1		1705	206	395.	1285.7
2616.4	1		0030	7	0.	.1	2576.0	*	1		0850	107	462.	1513.6	2619.0	*	1		1710	207	394.	1283.1
2616.4	1		0035	8	1.	.2	2576.1	*	1		0855	108	407.	1512.0	2619.0	*	1		1715	208	394.	1280.5
2616.4	1		0040	9	3.	.4	2576.1	*	1		0900	109	407.	1510.3	2619.0	*	1		1720	209	394.	1277.9
2616.3	1		0045	10	7.	.8	2576.3	*	1		0905	110	407.	1508.5	2618.9	*	1		1725	210	394.	1275.3
2616.3	1		0050	11	12.	1.5	2576.6	*	1		0910	111	407.	1506.6	2618.9	*	1		1730	211	394.	1272.7
2616.3	1		0055	12	21.	2.5	2576.9	*	1		0915	112	407.	1504.6	2618.8	*	1		1735	212	394.	1270.1
2616.2	1		0100	13	33.	4.0	2577.5	*	1		0920	113	407.	1502.6	2618.8	*	1		1740	213	394.	1267.4
2616.2	1		0105	14	47.	5.8	2578.1	*	1		0925	114	406.	1500.6	2618.7	*	1		1745	214	393.	1264.8
2616.2	1		0110	15	64.	7.8	2578.9	*	1		0930	115	406.	1498.6	2618.7	*	1		1750	215	393.	1262.2
2616.2	1		0115	16	82.	9.9	2579.7	*	1		0935	116	406.	1496.5	2618.6	*	1		1755	216	393.	1259.6
2616.2	1		0120	17	93.	12.1	2580.2	*	1		0940	117	406.	1494.5	2618.6	*	1		1800	217	393.	1257.0
2616.1	1		0125	18	100.	14.2	2580.5	*	1		0945	118	406.	1492.4	2618.5	*	1		1805	218	393.	1254.4
2616.1	1		0130	19	107.	16.3	2580.8	*	1		0950	119	406.	1490.4	2618.5	*	1		1810	219	393.	1251.7
2616.1	1		0135	20	113.	18.3	2581.2	*	1		0955	120	406.	1488.3	2618.4	*	1		1815	220	393.	1249.1

1	0330	43	272.	195.7	2593.8	*	1	1150	143	403.	1439.0	2617.7	*	1	2010	243	389.	1188.6	
2615.1	1	0335	44	286.	229.5	2595.2	*	1	1155	144	403.	1436.8	2617.7	*	1	2015	244	388.	1185.9
2615.0	1	0340	45	294.	276.4	2596.4	*	1	1200	145	403.	1434.6	2617.7	*	1	2020	245	388.	1183.3
2615.0	1	0345	46	304.	337.6	2598.0	*	1	1205	146	403.	1432.3	2617.7	*	1	2025	246	388.	1180.7
2614.9	1	0350	47	316.	410.9	2600.0	*	1	1210	147	403.	1430.1	2617.6	*	1	2030	247	388.	1178.0
2614.9	1	0355	48	325.	491.9	2601.8	*	1	1215	148	403.	1427.9	2617.6	*	1	2035	248	388.	1175.4
2614.8	1	0400	49	335.	574.9	2603.6	*	1	1220	149	402.	1425.6	2617.6	*	1	2040	249	388.	1172.8
2614.8	1	0405	50	345.	655.5	2605.3	*	1	1225	150	402.	1423.4	2617.6	*	1	2045	250	387.	1170.1
2614.7	1	0410	51	352.	730.5	2606.7	*	1	1230	151	402.	1421.1	2617.6	*	1	2050	251	387.	1167.5
2614.7	1	0415	52	359.	798.6	2607.9	*	1	1235	152	402.	1418.8	2617.5	*	1	2055	252	387.	1164.9
2614.6	1	0420	53	365.	859.3	2609.1	*	1	1240	153	402.	1416.5	2617.5	*	1	2100	253	387.	1162.2
2614.6	1	0425	54	370.	913.1	2610.0	*	1	1245	154	402.	1414.3	2617.5	*	1	2105	254	387.	1159.6
2614.5	1	0430	55	373.	960.7	2610.9	*	1	1250	155	402.	1412.0	2617.5	*	1	2110	255	386.	1157.0
2614.5	1	0435	56	376.	1003.3	2611.7	*	1	1255	156	402.	1409.7	2617.5	*	1	2115	256	386.	1154.3
2614.4	1	0440	57	379.	1042.4	2612.4	*	1	1300	157	401.	1407.4	2617.4	*	1	2120	257	386.	1151.7
2614.4	1	0445	58	381.	1079.7	2613.1	*	1	1305	158	401.	1405.0	2617.4	*	1	2125	258	386.	1149.1
2614.3	1	0450	59	384.	1116.6	2613.8	*	1	1310	159	401.	1402.7	2617.4	*	1	2130	259	386.	1146.4
2614.3	1	0455	60	386.	1154.4	2614.4	*	1	1315	160	401.	1400.4	2617.4	*	1	2135	260	386.	1143.8
2614.3	1	0500	61	389.	1193.8	2615.2	*	1	1320	161	401.	1398.1	2617.4	*	1	2140	261	385.	1141.2
2614.2	1	0505	62	392.	1234.5	2615.9	*	1	1325	162	401.	1395.7	2617.3	*	1	2145	262	385.	1138.5
2614.2	1	0510	63	394.	1275.8	2616.3	*	1	1330	163	401.	1393.4	2617.3	*	1	2150	263	385.	1135.9
2614.1	1	0515	64	396.	1316.7	2616.7	*	1	1335	164	401.	1391.0	2617.3	*	1	2155	264	385.	1133.3
2614.1	1	0520	65	399.	1355.8	2617.0	*	1	1340	165	400.	1388.7	2617.3	*	1	2200	265	385.	1130.7
2614.0	1	0525	66	401.	1392.3	2617.3	*	1	1345	166	400.	1386.3	2617.3	*	1	2205	266	385.	1128.0
2614.0	1	0530	67	402.	1425.6	2617.6	*	1	1350	167	400.	1383.9	2617.2	*	1	2210	267	384.	1125.4
2613.9	1	0535	68	404.	1455.6	2617.9	*	1	1355	168	400.	1381.5	2617.2	*	1	2215	268	384.	1122.8
2613.9	1	0540	69	406.	1482.5	2618.3	*	1	1400	169	400.	1379.1	2617.2	*	1	2220	269	384.	1120.2
2613.8	1	0545	70	407.	1506.8	2618.9	*	1	1405	170	400.	1376.7	2617.2	*	1	2225	270	384.	1117.5
2613.8	1	0550	71	925.	1527.1	2619.2	*	1	1410	171	400.	1374.3	2617.2	*	1	2230	271	384.	1114.9
2613.7	1	0555	72	1435.	1542.0	2619.4	*	1	1415	172	399.	1371.9	2617.1	*	1	2235	272	383.	1112.3
2613.7	1	0600	73	1793.	1552.4	2619.5	*	1	1420	173	399.	1369.4	2617.1	*	1	2240	273	383.	1109.7
2613.6	1	0605	74	2164.	1559.1	2619.6	*	1	1425	174	399.	1367.0	2617.1	*	1	2245	274	383.	1107.0
2613.6	1	0610	75	2393.	1562.8	2619.6	*	1	1430	175	399.	1364.5	2617.1	*	1	2250	275	383.	1104.4
2613.5	1	0615	76	2497.	1564.4	2619.6	*	1	1435	176	399.	1362.1	2617.1	*	1	2255	276	383.	1101.8
2613.5	1	0620	77	2524.	1564.9	2619.6	*	1	1440	177	399.	1359.6	2617.0	*	1	2300	277	383.	1099.2
2613.4	1	0625	78	2504.	1564.5	2619.6	*	1	1445	178	399.	1357.1	2617.0	*	1	2305	278	382.	1096.6
2613.4	1	0630	79	2455.	1563.7	2619.6	*	1	1450	179	398.	1354.7	2617.0	*	1	2310	279	382.	1093.9
2613.3	1	0635	80	2386.	1562.6	2619.6	*	1	1455	180	398.	1352.2	2617.0	*	1	2315	280	382.	1091.3
2613.3	1	0640	81	2306.	1561.4	2619.6	*	1	1500	181	398.	1349.7	2617.0	*	1	2320	281	382.	1088.7
2613.2	1	0645	82	2220.	1560.0	2619.6	*	1	1505	182	398.	1347.2	2616.9	*	1	2325	282	382.	1086.1
2613.2	1	0650	83	2132.	1558.6	2619.6	*	1	1510	183	398.	1344.7	2616.9	*	1	2330	283	382.	1083.5
2613.2	1	0655	84	2045.	1557.2	2619.5	*	1	1515	184	398.	1342.1	2616.9	*	1	2335	284	381.	1080.9
2613.1	1	0700	85	1958.	1555.8	2619.5	*	1	1520	185	398.	1339.6	2616.9	*	1	2340	285	381.	1078.2
2613.1	1	0705	86	1872.	1554.4	2619.5	*	1	1525	186	397.	1337.1	2616.8	*	1	2345	286	381.	1075.6
2613.0	1	0710	87	1811.	1552.9	2619.5	*	1	1530	187	397.	1334.6	2616.8	*	1	2350	287	381.	1073.0
2613.0	1	0715	88	1750.	1551.2	2619.5	*	1	1535	188	397.	1332.0	2616.8	*	1	2355	288	381.	1070.4
2612.9	1	0720	89	1679.	1549.1	2619.4	*	1	1540	189	397.	1329.5	2616.8	*	2	0000	289	381.	1067.8

1	0725	90	1600.	1546.8	2619.4	*	1	1545	190	397.	1326.9	2616.8	*	2	0005	290	380.	1065.2	
2612.8	1	0730	91	1517.	1544.4	2619.4	*	1	1550	191	397.	1324.4	2616.7	*	2	0010	291	380.	1062.6
2612.8	1	0735	92	1437.	1542.0	2619.4	*	1	1555	192	397.	1321.8	2616.7	*	2	0015	292	380.	1060.0
2612.7	1	0740	93	1363.	1539.9	2619.3	*	1	1600	193	396.	1319.3	2616.7	*	2	0020	293	380.	1057.4
2612.7	1	0745	94	1294.	1537.9	2619.3	*	1	1605	194	396.	1316.7	2616.7	*	2	0025	294	380.	1054.8
2612.6	1	0750	95	1229.	1536.0	2619.3	*	1	1610	195	396.	1314.1	2616.6	*	2	0030	295	379.	1052.2
2612.6	1	0755	96	1167.	1534.1	2619.3	*	1	1615	196	396.	1311.6	2616.6	*	2	0035	296	379.	1049.6
2612.5	1	0800	97	1104.	1532.3	2619.2	*	1	1620	197	396.	1309.0	2616.6	*	2	0040	297	379.	1047.0
2612.5	1	0805	98	1040.	1530.4	2619.2	*	1	1625	198	396.	1306.4	2616.6	*	2	0045	298	379.	1044.4
2612.4	1	0810	99	974.	1528.5	2619.2	*	1	1630	199	396.	1303.8	2616.6	*	2	0050	299	379.	1041.7
2612.4	1	0815	100	907.	1526.6	2619.2	*	1	1635	200	395.	1301.3	2616.5	*	2	0055	300	379.	1039.2
2612.3																			

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PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	2524.	6.33	(CFS)			
			(INCHES)			
			(AC-FT)			
			989.	514.	496.	496.
			.403	.840	.840	.840
			490.	1020.	1021.	1021.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	1565.	6.33	1513.	1156.	1114.	1114.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	2619.63	6.33	2618.85	2612.58	2611.24	2611.24

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKDB PLAN 1, RATIO = .86

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
1	0000	1	0.	.0	2576.0	*	1	0820	101	812.	1523.8	2619.1	*	1	1640	201	395.	1296.9			
2616.5	1	0005	2	0.	.0	2576.0	*	1	0825	102	746.	1521.9	2619.1	*	1	1645	202	395.	1294.3		
2616.5	1	0010	3	0.	.0	2576.0	*	1	0830	103	681.	1520.0	2619.1	*	1	1650	203	395.	1291.7		
2616.4	1	0015	4	0.	.0	2576.0	*	1	0835	104	618.	1518.2	2619.1	*	1	1655	204	395.	1289.1		
2616.4	1	0020	5	0.	.0	2576.0	*	1	0840	105	557.	1516.4	2619.1	*	1	1700	205	395.	1286.5		
2616.4	1	0025	6	0.	.0	2576.0	*	1	0845	106	497.	1514.6	2619.0	*	1	1705	206	394.	1283.9		
2616.4	1	0030	7	0.	.1	2576.0	*	1	0850	107	439.	1512.9	2619.0	*	1	1710	207	394.	1281.3		
2616.4	1	0035	8	1.	.2	2576.1	*	1	0855	108	407.	1511.3	2619.0	*	1	1715	208	394.	1278.7		
2616.3	1	0040	9	3.	.4	2576.1	*	1	0900	109	407.	1509.5	2618.9	*	1	1720	209	394.	1276.1		
2616.3	1	0045	10	6.	.8	2576.3	*	1	0905	110	407.	1507.7	2618.9	*	1	1725	210	394.	1273.5		
2616.3	1	0050	11	12.	1.4	2576.5	*	1	0910	111	407.	1505.7	2618.8	*	1	1730	211	394.	1270.9		
2616.3	1	0055	12	20.	2.4	2576.9	*	1	0915	112	407.	1503.7	2618.8	*	1	1735	212	394.	1268.3		
2616.2	1	0100	13	31.	3.8	2577.4	*	1	0920	113	407.	1501.7	2618.8	*	1	1740	213	393.	1265.6		
2616.2	1	0105	14	45.	5.5	2578.0	*	1	0925	114	406.	1499.7	2618.7	*	1	1745	214	393.	1263.0		
2616.2	1	0110	15	61.	7.5	2578.8	*	1	0930	115	406.	1497.7	2618.7	*	1	1750	215	393.	1260.4		
2616.2	1	0115	16	78.	9.5	2579.5	*	1	0935	116	406.	1495.6	2618.6	*	1	1755	216	393.	1257.8		

1	0120	17	92.	11.6	2580.1	*	1	0940	117	406.	1493.6	2618.6	*	1	1800	217	393.	1255.2	
2616.1	1	0125	18	98.	13.6	2580.4	*	1	0945	118	406.	1491.5	2618.5	*	1	1805	218	393.	1252.5
2616.1	1	0130	19	105.	15.6	2580.7	*	1	0950	119	406.	1489.4	2618.5	*	1	1810	219	393.	1249.9
2616.1	1	0135	20	111.	17.6	2581.0	*	1	0955	120	406.	1487.3	2618.4	*	1	1815	220	392.	1247.3
2616.1	1	0140	21	118.	19.7	2581.4	*	1	1000	121	406.	1485.3	2618.3	*	1	1820	221	392.	1244.6
2616.0	1	0145	22	125.	22.0	2581.7	*	1	1005	122	406.	1483.2	2618.3	*	1	1825	222	392.	1242.0
2616.0	1	0150	23	134.	24.7	2582.1	*	1	1010	123	405.	1481.1	2618.2	*	1	1830	223	392.	1239.4
2616.0	1	0155	24	144.	27.9	2582.6	*	1	1015	124	405.	1479.0	2618.2	*	1	1835	224	392.	1236.8
2615.9	1	0200	25	157.	31.7	2583.2	*	1	1020	125	405.	1476.9	2618.1	*	1	1840	225	392.	1234.1
2615.9	1	0205	26	171.	36.2	2583.9	*	1	1025	126	405.	1474.7	2618.1	*	1	1845	226	391.	1231.5
2615.8	1	0210	27	188.	41.3	2584.7	*	1	1030	127	405.	1472.6	2618.0	*	1	1850	227	391.	1228.9
2615.8	1	0215	28	196.	46.9	2585.3	*	1	1035	128	405.	1470.5	2618.0	*	1	1855	228	391.	1226.2
2615.8	1	0220	29	199.	53.0	2585.7	*	1	1040	129	405.	1468.4	2618.0	*	1	1900	229	391.	1223.6
2615.7	1	0225	30	203.	59.3	2586.1	*	1	1045	130	405.	1466.2	2618.0	*	1	1905	230	391.	1221.0
2615.7	1	0230	31	206.	65.8	2586.6	*	1	1050	131	405.	1464.1	2617.9	*	1	1910	231	391.	1218.3
2615.6	1	0235	32	210.	72.6	2587.1	*	1	1055	132	404.	1461.9	2617.9	*	1	1915	232	390.	1215.7
2615.6	1	0240	33	214.	79.6	2587.6	*	1	1100	133	404.	1459.8	2617.9	*	1	1920	233	390.	1213.1
2615.5	1	0245	34	218.	86.8	2588.1	*	1	1105	134	404.	1457.6	2617.9	*	1	1925	234	390.	1210.4
2615.5	1	0250	35	222.	94.3	2588.6	*	1	1110	135	404.	1455.4	2617.9	*	1	1930	235	390.	1207.8
2615.4	1	0255	36	226.	102.0	2589.2	*	1	1115	136	404.	1453.2	2617.8	*	1	1935	236	390.	1205.2
2615.4	1	0300	37	230.	110.0	2589.8	*	1	1120	137	404.	1451.1	2617.8	*	1	1940	237	390.	1202.5
2615.3	1	0305	38	234.	118.5	2590.2	*	1	1125	138	404.	1448.9	2617.8	*	1	1945	238	389.	1199.9
2615.3	1	0310	39	239.	127.7	2590.7	*	1	1130	139	404.	1446.7	2617.8	*	1	1950	239	389.	1197.2
2615.2	1	0315	40	244.	138.2	2591.1	*	1	1135	140	404.	1444.5	2617.8	*	1	1955	240	389.	1194.6
2615.2	1	0320	41	250.	150.9	2591.7	*	1	1140	141	403.	1442.3	2617.8	*	1	2000	241	389.	1192.0
2615.1	1	0325	42	258.	167.7	2592.5	*	1	1145	142	403.	1440.0	2617.7	*	1	2005	242	389.	1189.3
2615.1	1	0330	43	270.	190.9	2593.6	*	1	1150	143	403.	1437.8	2617.7	*	1	2010	243	388.	1186.7
2615.0	1	0335	44	285.	224.0	2595.0	*	1	1155	144	403.	1435.6	2617.7	*	1	2015	244	388.	1184.1
2615.0	1	0340	45	293.	270.2	2596.3	*	1	1200	145	403.	1433.4	2617.7	*	1	2020	245	388.	1181.4
2614.9	1	0345	46	303.	330.5	2597.9	*	1	1205	146	403.	1431.1	2617.7	*	1	2025	246	388.	1178.8
2614.9	1	0350	47	315.	402.8	2599.8	*	1	1210	147	403.	1428.9	2617.6	*	1	2030	247	388.	1176.2
2614.8	1	0355	48	324.	482.8	2601.6	*	1	1215	148	403.	1426.6	2617.6	*	1	2035	248	388.	1173.5
2614.8	1	0400	49	334.	564.9	2603.3	*	1	1220	149	402.	1424.4	2617.6	*	1	2040	249	387.	1170.9
2614.7	1	0405	50	343.	644.5	2605.1	*	1	1225	150	402.	1422.1	2617.6	*	1	2045	250	387.	1168.3
2614.7	1	0410	51	351.	718.7	2606.4	*	1	1230	151	402.	1419.8	2617.6	*	1	2050	251	387.	1165.6
2614.6	1	0415	52	358.	786.1	2607.7	*	1	1235	152	402.	1417.5	2617.5	*	1	2055	252	387.	1163.0
2614.6	1	0420	53	364.	846.2	2608.8	*	1	1240	153	402.	1415.3	2617.5	*	1	2100	253	387.	1160.4
2614.6	1	0425	54	369.	899.4	2609.8	*	1	1245	154	402.	1413.0	2617.5	*	1	2105	254	387.	1157.7
2614.5	1	0430	55	372.	946.5	2610.7	*	1	1250	155	402.	1410.7	2617.5	*	1	2110	255	386.	1155.1
2614.5	1	0435	56	375.	988.7	2611.4	*	1	1255	156	401.	1408.3	2617.5	*	1	2115	256	386.	1152.5
2614.4	1	0440	57	378.	1027.5	2612.1	*	1	1300	157	401.	1406.0	2617.4	*	1	2120	257	386.	1149.8
2614.4	1	0445	58	380.	1064.4	2612.8	*	1	1305	158	401.	1403.7	2617.4	*	1	2125	258	386.	1147.2
2614.3	1	0450	59	383.	1101.0	2613.5	*	1	1310	159	401.	1401.4	2617.4	*	1	2130	259	386.	1144.6
2614.3	1	0455	60	385.	1138.4	2614.2	*	1	1315	160	401.	1399.0	2617.4	*	1	2135	260	385.	1141.9
2614.2	1	0500	61	388.	1177.3	2614.9	*	1	1320	161	401.	1396.7	2617.4	*	1	2140	261	385.	1139.3
2614.2	1	0505	62	391.	1217.6	2615.6	*	1	1325	162	401.	1394.3	2617.3	*	1	2145	262	385.	1136.7
2614.1	1	0510	63	393.	1258.5	2616.2	*	1	1330	163	401.	1392.0	2617.3	*	1	2150	263	385.	1134.0

1	0515	64	395.	1298.9	2616.5	*	1	1335	164	400.	1389.6	2617.3	*	1	2155	264	385.	1131.4	
2614.0	1	0520	65	398.	1337.7	2616.8	*	1	1340	165	400.	1387.2	2617.3	*	1	2200	265	385.	1128.8
2614.0	1	0525	66	400.	1373.7	2617.2	*	1	1345	166	400.	1384.9	2617.3	*	1	2205	266	384.	1126.2
2613.9	1	0530	67	401.	1406.7	2617.4	*	1	1350	167	400.	1382.5	2617.2	*	1	2210	267	384.	1123.5
2613.9	1	0535	68	403.	1436.4	2617.7	*	1	1355	168	400.	1380.1	2617.2	*	1	2215	268	384.	1120.9
2613.8	1	0540	69	405.	1463.2	2617.9	*	1	1400	169	400.	1377.6	2617.2	*	1	2220	269	384.	1118.3
2613.8	1	0545	70	406.	1487.2	2618.4	*	1	1405	170	400.	1375.2	2617.2	*	1	2225	270	384.	1115.7
2613.7	1	0550	71	407.	1509.1	2618.9	*	1	1410	171	399.	1372.8	2617.2	*	1	2230	271	384.	1113.0
2613.7	1	0555	72	932.	1527.3	2619.2	*	1	1415	172	399.	1370.4	2617.1	*	1	2235	272	383.	1110.4
2613.6	1	0600	73	1390.	1540.7	2619.3	*	1	1420	173	399.	1367.9	2617.1	*	1	2240	273	383.	1107.8
2613.6	1	0605	74	1715.	1550.1	2619.5	*	1	1425	174	399.	1365.4	2617.1	*	1	2245	274	383.	1105.2
2613.5	1	0610	75	2002.	1556.5	2619.5	*	1	1430	175	399.	1363.0	2617.1	*	1	2250	275	383.	1102.5
2613.5	1	0615	76	2237.	1560.3	2619.6	*	1	1435	176	399.	1360.5	2617.0	*	1	2255	276	383.	1099.9
2613.5	1	0620	77	2349.	1562.0	2619.6	*	1	1440	177	399.	1358.0	2617.0	*	1	2300	277	382.	1097.3
2613.4	1	0625	78	2383.	1562.6	2619.6	*	1	1445	178	399.	1355.5	2617.0	*	1	2305	278	382.	1094.7
2613.4	1	0630	79	2369.	1562.4	2619.6	*	1	1450	179	398.	1353.1	2617.0	*	1	2310	279	382.	1092.1
2613.3	1	0635	80	2323.	1561.6	2619.6	*	1	1455	180	398.	1350.6	2617.0	*	1	2315	280	382.	1089.4
2613.3	1	0640	81	2258.	1560.6	2619.6	*	1	1500	181	398.	1348.0	2616.9	*	1	2320	281	382.	1086.8
2613.2	1	0645	82	2181.	1559.4	2619.6	*	1	1505	182	398.	1345.5	2616.9	*	1	2325	282	382.	1084.2
2613.2	1	0650	83	2099.	1558.1	2619.5	*	1	1510	183	398.	1343.0	2616.9	*	1	2330	283	381.	1081.6
2613.1	1	0655	84	2014.	1556.7	2619.5	*	1	1515	184	398.	1340.5	2616.9	*	1	2335	284	381.	1079.0
2613.1	1	0700	85	1929.	1555.3	2619.5	*	1	1520	185	398.	1338.0	2616.8	*	1	2340	285	381.	1076.4
2613.0	1	0705	86	1846.	1553.9	2619.5	*	1	1525	186	397.	1335.4	2616.8	*	1	2345	286	381.	1073.8
2613.0	1	0710	87	1792.	1552.4	2619.5	*	1	1530	187	397.	1332.9	2616.8	*	1	2350	287	381.	1071.2
2612.9	1	0715	88	1726.	1550.5	2619.5	*	1	1535	188	397.	1330.3	2616.8	*	1	2355	288	381.	1068.5
2612.9	1	0720	89	1651.	1548.3	2619.4	*	1	1540	189	397.	1327.8	2616.8	*	2	0000	289	380.	1065.9
2612.8	1	0725	90	1570.	1545.9	2619.4	*	1	1545	190	397.	1325.2	2616.7	*	2	0005	290	380.	1063.3
2612.8	1	0730	91	1488.	1543.5	2619.4	*	1	1550	191	397.	1322.7	2616.7	*	2	0010	291	380.	1060.7
2612.7	1	0735	92	1409.	1541.2	2619.3	*	1	1555	192	397.	1320.1	2616.7	*	2	0015	292	380.	1058.1
2612.7	1	0740	93	1337.	1539.1	2619.3	*	1	1600	193	396.	1317.6	2616.7	*	2	0020	293	380.	1055.5
2612.6	1	0745	94	1270.	1537.1	2619.3	*	1	1605	194	396.	1315.0	2616.7	*	2	0025	294	380.	1052.9
2612.6	1	0750	95	1206.	1535.3	2619.3	*	1	1610	195	396.	1312.4	2616.6	*	2	0030	295	379.	1050.3
2612.5	1	0755	96	1143.	1533.4	2619.3	*	1	1615	196	396.	1309.8	2616.6	*	2	0035	296	379.	1047.7
2612.5	1	0800	97	1079.	1531.6	2619.2	*	1	1620	197	396.	1307.3	2616.6	*	2	0040	297	379.	1045.1
2612.5	1	0805	98	1013.	1529.7	2619.2	*	1	1625	198	396.	1304.7	2616.6	*	2	0045	298	379.	1042.5
2612.4	1	0810	99	947.	1527.7	2619.2	*	1	1630	199	396.	1302.1	2616.5	*	2	0050	299	379.	1039.9
2612.4	1	0815	100	879.	1525.8	2619.2	*	1	1635	200	395.	1299.5	2616.5	*	2	0055	300	378.	1037.3
2612.3																			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	2383.	6.42	(CFS)	937.	501.	483.	483.
			(INCHES)	.382	.818	.818	.818
			(AC-FT)	465.	994.	994.	994.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	1563.	6.42		1510.	1153.	1111.	1111.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .85

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	2576.0	*	1		0820	101	791.	1523.2	2619.1	*	1		1640	201	395.	1295.5
2616.5	1	0005	2	0.	.0	2576.0	*	1		0825	102	725.	1521.3	2619.1	*	1		1645	202	395.	1292.9
2616.5	1	0010	3	0.	.0	2576.0	*	1		0830	103	661.	1519.4	2619.1	*	1		1650	203	395.	1290.3
2616.4	1	0015	4	0.	.0	2576.0	*	1		0835	104	599.	1517.6	2619.1	*	1		1655	204	395.	1287.7
2616.4	1	0020	5	0.	.0	2576.0	*	1		0840	105	538.	1515.8	2619.0	*	1		1700	205	395.	1285.1
2616.4	1	0025	6	0.	.0	2576.0	*	1		0845	106	479.	1514.1	2619.0	*	1		1705	206	394.	1282.5
2616.4	1	0030	7	0.	.0	2576.0	*	1		0850	107	422.	1512.4	2619.0	*	1		1710	207	394.	1279.9
2616.3	1	0035	8	1.	.1	2576.1	*	1		0855	108	407.	1510.8	2619.0	*	1		1715	208	394.	1277.3
2616.3	1	0040	9	3.	.4	2576.1	*	1		0900	109	407.	1509.0	2618.9	*	1		1720	209	394.	1274.6
2616.3	1	0045	10	6.	.7	2576.3	*	1		0905	110	407.	1507.1	2618.9	*	1		1725	210	394.	1272.0
2616.3	1	0050	11	11.	1.4	2576.5	*	1		0910	111	407.	1505.1	2618.8	*	1		1730	211	394.	1269.4
2616.3	1	0055	12	19.	2.3	2576.9	*	1		0915	112	407.	1503.1	2618.8	*	1		1735	212	394.	1266.8
2616.2	1	0100	13	30.	3.6	2577.4	*	1		0920	113	406.	1501.1	2618.7	*	1		1740	213	393.	1264.2
2616.2	1	0105	14	44.	5.3	2578.0	*	1		0925	114	406.	1499.0	2618.7	*	1		1745	214	393.	1261.6
2616.2	1	0110	15	59.	7.2	2578.7	*	1		0930	115	406.	1497.0	2618.6	*	1		1750	215	393.	1258.9
2616.2	1	0115	16	76.	9.2	2579.4	*	1		0935	116	406.	1494.9	2618.6	*	1		1755	216	393.	1256.3
2616.1	1	0120	17	90.	11.2	2580.1	*	1		0940	117	406.	1492.9	2618.5	*	1		1800	217	393.	1253.7
2616.1	1	0125	18	97.	13.1	2580.4	*	1		0945	118	406.	1490.8	2618.5	*	1		1805	218	393.	1251.1
2616.1	1	0130	19	103.	15.1	2580.7	*	1		0950	119	406.	1488.7	2618.4	*	1		1810	219	392.	1248.4
2616.1	1	0135	20	109.	17.0	2581.0	*	1		0955	120	406.	1486.6	2618.4	*	1		1815	220	392.	1245.8
2616.1	1	0140	21	116.	19.0	2581.3	*	1		1000	121	406.	1484.5	2618.3	*	1		1820	221	392.	1243.2
2616.0	1	0145	22	123.	21.2	2581.6	*	1		1005	122	406.	1482.4	2618.3	*	1		1825	222	392.	1240.5
2616.0	1	0150	23	131.	23.8	2582.0															

1	0310	39	237.	124.7	2590.5	*	1	1130	139	404.	1445.8	2617.8	*	1	1950	239	389.	1195.7	
2615.2	1	0315	40	243.	135.0	2591.0	*	1	1135	140	403.	1443.6	2617.8	*	1	1955	240	389.	1193.1
2615.1	1	0320	41	249.	147.6	2591.6	*	1	1140	141	403.	1441.4	2617.7	*	1	2000	241	389.	1190.5
2615.1	1	0325	42	257.	164.0	2592.3	*	1	1145	142	403.	1439.2	2617.7	*	1	2005	242	389.	1187.8
2615.1	1	0330	43	268.	186.8	2593.4	*	1	1150	143	403.	1436.9	2617.7	*	1	2010	243	388.	1185.2
2615.0	1	0335	44	284.	219.5	2594.9	*	1	1155	144	403.	1434.7	2617.7	*	1	2015	244	388.	1182.6
2615.0	1	0340	45	292.	264.9	2596.1	*	1	1200	145	403.	1432.4	2617.7	*	1	2020	245	388.	1179.9
2614.9	1	0345	46	302.	324.3	2597.7	*	1	1205	146	403.	1430.2	2617.6	*	1	2025	246	388.	1177.3
2614.9	1	0350	47	313.	395.6	2599.6	*	1	1210	147	403.	1427.9	2617.6	*	1	2030	247	388.	1174.
2614.8	1	0355	48	323.	474.5	2601.4	*	1	1215	148	402.	1425.7	2617.6	*	1	2035	248	387.	1172.0
2614.8	1	0400	49	333.	555.5	2603.1	*	1	1220	149	402.	1423.4	2617.6	*	1	2040	249	387.	1169.4
2614.7	1	0405	50	342.	634.2	2604.9	*	1	1225	150	402.	1421.1	2617.6	*	1	2045	250	387.	1166.7
2614.7	1	0410	51	350.	707.7	2606.2	*	1	1230	151	402.	1418.8	2617.5	*	1	2050	251	387.	1164.1
2614.6	1	0415	52	356.	774.3	2607.5	*	1	1235	152	402.	1416.6	2617.5	*	1	2055	252	387.	1161.5
2614.6	1	0420	53	362.	833.9	2608.6	*	1	1240	153	402.	1414.3	2617.5	*	1	2100	253	387.	1158.8
2614.5	1	0425	54	368.	886.6	2609.6	*	1	1245	154	402.	1411.9	2617.5	*	1	2105	254	386.	1156.2
2614.5	1	0430	55	372.	933.3	2610.4	*	1	1250	155	402.	1409.6	2617.5	*	1	2110	255	386.	1153.6
2614.4	1	0435	56	374.	975.1	2611.2	*	1	1255	156	401.	1407.3	2617.4	*	1	2115	256	386.	1150.9
2614.4	1	0440	57	377.	1013.6	2611.9	*	1	1300	157	401.	1405.0	2617.4	*	1	2120	257	386.	1148.3
2614.3	1	0445	58	379.	1050.2	2612.5	*	1	1305	158	401.	1402.7	2617.4	*	1	2125	258	386.	1145.7
2614.3	1	0450	59	382.	1086.4	2613.2	*	1	1310	159	401.	1400.3	2617.4	*	1	2130	259	386.	1143.0
2614.2	1	0455	60	384.	1123.5	2613.9	*	1	1315	160	401.	1398.0	2617.4	*	1	2135	260	385.	1140.4
2614.2	1	0500	61	387.	1162.1	2614.6	*	1	1320	161	401.	1395.6	2617.3	*	1	2140	261	385.	1137.8
2614.1	1	0505	62	389.	1202.0	2615.3	*	1	1325	162	401.	1393.3	2617.3	*	1	2145	262	385.	1135.2
2614.1	1	0510	63	392.															

1	0705	86	1829.	1553.5	2619.5	*	1	1525	186	397.	1334.1	2616.8	*	1	2345	286	381.	1072.3	
2612.9	1	0710	87	1771.	1551.8	2619.5	*	1	1530	187	397.	1331.5	2616.8	*	1	2350	287	381.	1069.6
2612.9	1	0715	88	1702.	1549.8	2619.4	*	1	1535	188	397.	1329.0	2616.8	*	1	2355	288	380.	1067.0
2612.9	1	0720	89	1625.	1547.5	2619.4	*	1	1540	189	397.	1326.4	2616.7	*	2	0000	289	380.	1064.4
2612.8	1	0725	90	1542.	1545.1	2619.4	*	1	1545	190	397.	1323.9	2616.7	*	2	0005	290	380.	1061.8
2612.8	1	0730	91	1461.	1542.7	2619.4	*	1	1550	191	397.	1321.3	2616.7	*	2	0010	291	380.	1059.2
2612.7	1	0735	92	1384.	1540.5	2619.3	*	1	1555	192	396.	1318.7	2616.7	*	2	0015	292	380.	1056.6
2612.7	1	0740	93	1314.	1538.4	2619.3	*	1	1600	193	396.	1316.2	2616.7	*	2	0020	293	380.	1054.0
2612.6	1	0745	94	1248.	1536.5	2619.3	*	1	1605	194	396.	1313.6	2616.6	*	2	0025	294	379.	1051.4
2612.6	1	0750	95	1185.	1534.7	2619.3	*	1	1610	195	396.	1311.0	2616.6	*	2	0030	295	379.	1048.8
2612.5	1	0755	96	1122.	1532.8	2619.2	*	1	1615	196	396.	1308.4	2616.6	*	2	0035	296	379.	1046.2
2612.5	1	0800	97	1058.	1531.0	2619.2	*	1	1620	197	396.	1305.9	2616.6	*	2	0040	297	379.	1043.6
2612.4	1	0805	98	992.	1529.0	2619.2	*	1	1625	198	396.	1303.3	2616.5	*	2	0045	298	379.	1041.0
2612.4	1	0810	99	925.	1527.1	2619.2	*	1	1630	199	395.	1300.7	2616.5	*	2	0050	299	379.	1038.4
2612.3	1	0815	100	858.	1525.1	2619.2	*	1	1635	200	395.	1298.1	2616.5	*	2	0055	300	378.	1035.8
2612.3																			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	2258.	6.50	(CFS)	891.	489.	471.	471.
			(INCHES)	.364	.799	.799	.799
			(AC-FT)	442.	971.	971.	971.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	1561.	6.50		1508.	1151.	1109.	1109.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	2619.58	6.50		2618.78	2612.47	2611.13	2611.13
CUMULATIVE AREA =				22.79 SQ MI			

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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

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION			
				RATIO 1	RATIO 2	RATIO 3	RATIO 4
				.88	.87	.86	.85
HYDROGRAPH AT							
+	3-1	2.22	1 FLOW	1685.	1657.	1636.	1617.
			TIME	4.00	4.00	4.00	4.00
ROUTED TO							
+	R3-1	2.22	1 FLOW	1670.	1642.	1623.	1602.
			TIME	4.08	4.08	4.08	4.00
HYDROGRAPH AT							
+	3-2	.23	1 FLOW	288.	283.	279.	276.
			TIME	3.50	3.50	3.50	3.50
2 COMBINED AT							
+	CP3.1	2.45	1 FLOW	1737.	1708.	1686.	1668.
			TIME	4.00	4.00	4.00	4.00
ROUTED TO							
+	RCP3.1	2.45	1 FLOW	1728.	1696.	1681.	1670.
			TIME	4.08	4.08	4.08	4.08
HYDROGRAPH AT							
+	3-D	.33	1 FLOW	338.	333.	328.	324.
			TIME	3.67	3.67	3.67	3.67
2 COMBINED AT							
+	CP3.3	2.78	1 FLOW	1855.	1822.	1805.	1792.
			TIME	4.08	4.08	4.08	4.08
ROUTED TO							

+	RCP3.3	2.78	1	FLOW TIME	1855. 4.08	1821. 4.08	1804. 4.08	1792. 4.08
HYDROGRAPH AT								
+	3-3	.17	1	FLOW TIME	287. 3.50	282. 3.50	279. 3.50	276. 3.50
ROUTED TO								
+	R3-3	.17	1	FLOW TIME	264. 3.58	265. 3.58	253. 3.58	250. 3.58
HYDROGRAPH AT								
+	3-4	.35	1	FLOW TIME	548. 3.50	540. 3.50	533. 3.50	527. 3.50
ROUTED TO								
+	R3-4	.35	1	FLOW TIME	507. 3.58	521. 3.58	504. 3.58	486. 3.58
HYDROGRAPH AT								
+	3-5	.29	1	FLOW TIME	456. 3.50	449. 3.50	443. 3.50	438. 3.50
ROUTED TO								
+	R3-5	.29	1	FLOW TIME	430. 3.58	425. 3.58	424. 3.58	413. 3.58
3 COMBINED AT								
+	CP3.2	.81	1	FLOW TIME	1201. 3.58	1211. 3.58	1181. 3.58	1149. 3.58
ROUTED TO								
+	RCP3.2	.81	1	FLOW TIME	1155. 3.58	1151. 3.58	1115. 3.58	1097. 3.58
HYDROGRAPH AT								
+	3-E	.54	1	FLOW TIME	581. 3.67	571. 3.67	563. 3.67	557. 3.67
3 COMBINED AT								
+	CP3.4	4.14	1	FLOW TIME	2998. 3.67	2978. 3.67	2932. 3.67	2868. 3.67
ROUTED TO								
+	RCP3.4	4.14	1	FLOW TIME	2947. 3.67	2924. 3.67	2873. 3.67	2816. 3.67
HYDROGRAPH AT								
+	3-6	.09	1	FLOW TIME	147. 3.50	145. 3.50	143. 3.50	141. 3.50
ROUTED TO								
+	R3-6	.09	1	FLOW TIME	132. 3.67	130. 3.67	128. 3.67	127. 3.67
HYDROGRAPH AT								
+	3-7	.17	1	FLOW TIME	304. 3.50	300. 3.50	296. 3.50	293. 3.50
ROUTED TO								
+	R3-7	.17	1	FLOW TIME	253. 3.50	254. 3.50	248. 3.58	243. 3.50
HYDROGRAPH AT								
+	3-J	.15	1	FLOW TIME	139. 3.58	136. 3.58	134. 3.58	132. 3.58
ROUTED TO								
+	R3-J	.15	1	FLOW TIME	137. 3.67	134. 3.67	132. 3.67	130. 3.67
3 COMBINED AT								
+	CP3.5	.41	1	FLOW TIME	474. 3.58	477. 3.58	466. 3.58	454. 3.58
ROUTED TO								
+	RCP3.5	.41	1	FLOW TIME	457. 3.58	459. 3.58	448. 3.58	436. 3.58
HYDROGRAPH AT								
+	3-8	.64	1	FLOW TIME	817. 3.58	805. 3.58	794. 3.58	786. 3.58
ROUTED TO								
+	R3-8	.64	1	FLOW TIME	798. 3.67	785. 3.67	773. 3.67	769. 3.67
HYDROGRAPH AT								
+	3-K	.89	1	FLOW TIME	897. 3.67	883. 3.67	871. 3.67	861. 3.67
3 COMBINED AT								
+	CP3.6	1.94	1	FLOW TIME	2114. 3.67	2084. 3.67	2057. 3.67	2037. 3.67

ROUTED TO								
+	RCP3.6	1.94	1	FLOW TIME	2072. 3.67	2045. 3.67	2013. 3.67	1996. 3.67
HYDROGRAPH AT								
+	3-N	.46	1	FLOW TIME	493. 3.67	485. 3.67	479. 3.67	474. 3.67
HYDROGRAPH AT								
+	3-M	.19	1	FLOW TIME	258. 3.58	255. 3.58	251. 3.58	249. 3.58
ROUTED TO								
+	R3-M	.19	1	FLOW TIME	251. 3.58	246. 3.58	244. 3.58	240. 3.58
4 COMBINED AT								
+	CPDB5	6.72	1	FLOW TIME	5732. 3.67	5673. 3.67	5582. 3.67	5499. 3.67
ROUTED TO								
+	DB5	6.72	1	FLOW TIME	2052. 5.17	2040. 5.17	2028. 5.17	2016. 5.17
** PEAK STAGES IN FEET **								
			1	STAGE TIME	3557.39 5.17	3557.14 5.17	3556.91 5.17	3556.71 5.17
HYDROGRAPH AT								
+	3-L	.32	1	FLOW TIME	281. 3.83	277. 3.83	273. 3.83	270. 3.83
2 COMBINED AT								
+	CP3-L	7.05	1	FLOW TIME	2159. 5.08	2146. 5.08	2133. 5.08	2120. 5.08
ROUTED TO								
+	RCSWAA-1	7.05	1	FLOW TIME	2158. 5.08	2145. 5.08	2132. 5.08	2120. 5.08
HYDROGRAPH AT								
+	SWAA-2	.70	1	FLOW TIME	703. 3.75	692. 3.75	684. 3.75	677. 3.75
2 COMBINED AT								
+	CSWAA-2	7.75	1	FLOW TIME	2724. 3.83	2700. 3.83	2676. 3.83	2658. 3.83
ROUTED TO								
+	RCSWAA-2	7.75	1	FLOW TIME	2715. 3.92	2692. 3.92	2669. 3.92	2651. 3.92
HYDROGRAPH AT								
+	SWAA-3	.58	1	FLOW TIME	493. 3.75	485. 3.75	479. 3.75	473. 3.75
2 COMBINED AT								
+	CSWAA-3	8.33	1	FLOW TIME	3185. 3.83	3155. 3.83	3123. 3.83	3100. 3.83
HYDROGRAPH AT								
+	3-F	.28	1	FLOW TIME	383. 3.58	377. 3.58	372. 3.58	368. 3.58
ROUTED TO								
+	R3-F	.28	1	FLOW TIME	376. 3.58	371. 3.58	367. 3.58	363. 3.58
HYDROGRAPH AT								
+	3-G2	.13	1	FLOW TIME	209. 3.50	206. 3.50	204. 3.50	202. 3.50
2 COMBINED AT								
+	CP3.8	.41	1	FLOW TIME	571. 3.58	563. 3.58	556. 3.58	551. 3.58
ROUTED TO								
+	RCP3.8	.41	1	FLOW TIME	560. 3.58	553. 3.58	546. 3.58	540. 3.58
HYDROGRAPH AT								
+	3-A	.34	1	FLOW TIME	293. 3.67	287. 3.67	283. 3.67	279. 3.67
ROUTED TO								
+	R3-A	.34	1	FLOW TIME	290. 3.67	285. 3.67	280. 3.67	276. 3.67
HYDROGRAPH AT								
+	3-B	.70	1	FLOW TIME	623. 3.67	612. 3.67	603. 3.67	595. 3.67
ROUTED TO								
+	R3-B	.70	1	FLOW TIME	612. 3.67	600. 3.67	592. 3.67	584. 3.67

HYDROGRAPH AT								
+	3-C	.22	1	FLOW	266.	262.	259.	256.
				TIME	3.58	3.58	3.58	3.58
3 COMBINED AT								
+	CPDBA-B	1.26	1	FLOW	1154.	1134.	1118.	1103.
				TIME	3.67	3.67	3.67	3.67
ROUTED TO								
+	GPDB	1.26	1	FLOW	133.	132.	132.	131.
				TIME	5.42	5.42	5.42	5.42
** PEAK STAGES IN FEET **								
			1	STAGE	24.59	24.41	24.27	24.14
				TIME	5.42	5.42	5.42	5.42
HYDROGRAPH AT								
+	3-G1	.24	1	FLOW	340.	335.	331.	328.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	R3-G1	.24	1	FLOW	339.	334.	330.	327.
				TIME	3.58	3.58	3.58	3.58
2 COMBINED AT								
+	CP3-G1	1.50	1	FLOW	415.	408.	403.	399.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	RCP3-G1	1.50	1	FLOW	409.	402.	397.	393.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-H1	.04	1	FLOW	66.	65.	65.	64.
				TIME	3.50	3.50	3.50	3.50
2 COMBINED AT								
+	CP3-H1	1.54	1	FLOW	463.	456.	450.	445.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	RCP3-H1	1.54	1	FLOW	456.	448.	444.	438.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-I1	.29	1	FLOW	339.	333.	329.	325.
				TIME	3.58	3.58	3.58	3.58
3 COMBINED AT								
+	CP3.9	2.24	1	FLOW	1354.	1334.	1319.	1303.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	RCP9	2.24	1	FLOW	1337.	1317.	1303.	1286.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-O	.11	1	FLOW	171.	169.	167.	165.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	R3-O	.11	1	FLOW	169.	167.	165.	164.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-P2	.15	1	FLOW	186.	183.	180.	178.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	R3-P2	.15	1	FLOW	180.	177.	175.	173.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-P1	.24	1	FLOW	370.	365.	361.	357.
				TIME	3.50	3.50	3.50	3.50
3 COMBINED AT								
+	CP3-P	.50	1	FLOW	713.	703.	695.	688.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	RCP3-P	.50	1	FLOW	707.	697.	689.	683.
				TIME	3.58	3.58	3.58	3.58
HYDROGRAPH AT								
+	3-Q	.20	1	FLOW	293.	289.	286.	283.
				TIME	3.58	3.58	3.58	3.58
2 COMBINED AT								
+	CP3-Q	.70	1	FLOW	1000.	986.	975.	966.
				TIME	3.58	3.58	3.58	3.58
ROUTED TO								
+	RCP3-Q	.70	1	FLOW	974.	960.	949.	940.

+	11B-2	.44	1	FLOW TIME	309. 3.83	304. 3.83	300. 3.83	296. 3.83
ROUTED TO								
+	R11B-2	.44	1	FLOW TIME	305. 3.83	300. 3.83	295. 3.83	292. 3.83
HYDROGRAPH AT								
+	11B-1	.39	1	FLOW TIME	369. 3.67	362. 3.67	358. 3.67	353. 3.67
2 COMBINED AT								
+	C11B-1	.84	1	FLOW TIME	633. 3.75	622. 3.75	613. 3.75	606. 3.75
ROUTED TO								
+	RC11B-1	.84	1	FLOW TIME	626. 3.75	616. 3.75	606. 3.75	599. 3.75
HYDROGRAPH AT								
+	8B-1	.30	1	FLOW TIME	269. 3.67	264. 3.67	261. 3.67	257. 3.67
2 COMBINED AT								
+	C8B-1	1.14	1	FLOW TIME	889. 3.75	874. 3.75	861. 3.75	851. 3.75
ROUTED TO								
+	RC8B-1	1.14	1	FLOW TIME	877. 3.75	865. 3.75	849. 3.75	843. 3.75
HYDROGRAPH AT								
+	8B-2	.42	1	FLOW TIME	419. 3.75	413. 3.75	408. 3.75	404. 3.75
2 COMBINED AT								
+	C8B-2	1.56	1	FLOW TIME	1295. 3.75	1278. 3.75	1257. 3.75	1247. 3.75
ROUTED TO								
+	RC8B-2	1.56	1	FLOW TIME	1276. 3.75	1258. 3.75	1237. 3.75	1227. 3.75
HYDROGRAPH AT								
+	11A-2	.29	1	FLOW TIME	313. 3.58	308. 3.58	304. 3.58	300. 3.58
ROUTED TO								
+	R11A-2	.29	1	FLOW TIME	310. 3.67	305. 3.67	301. 3.67	297. 3.67
HYDROGRAPH AT								
+	8A	.31	1	FLOW TIME	271. 3.67	266. 3.67	263. 3.67	259. 3.67
2 COMBINED AT								
+	C8A	.60	1	FLOW TIME	581. 3.67	571. 3.67	563. 3.67	556. 3.67
ROUTED TO								
+	RC8A	.60	1	FLOW TIME	541. 3.75	532. 3.75	524. 3.75	518. 3.75
HYDROGRAPH AT								
+	3B-2A	.24	1	FLOW TIME	235. 3.58	232. 3.58	228. 3.58	226. 3.58
2 COMBINED AT								
+	C3B-2A	.84	1	FLOW TIME	737. 3.75	725. 3.75	715. 3.75	707. 3.75
2 COMBINED AT								
+	CC3B-2A	2.40	1	FLOW TIME	2014. 3.75	1983. 3.75	1953. 3.75	1934. 3.75
ROUTED TO								
+	RCC3B-2A	2.40	1	FLOW TIME	1985. 3.83	1945. 3.83	1926. 3.83	1904. 3.83
HYDROGRAPH AT								
+	3B-2B	.27	1	FLOW TIME	189. 3.75	186. 3.75	183. 3.75	181. 3.75
2 COMBINED AT								
+	C3B-2B	2.67	1	FLOW TIME	2160. 3.83	2117. 3.83	2096. 3.83	2072. 3.83
2 COMBINED AT								
+	CC3B-2B	15.23	1	FLOW TIME	7735. 3.92	7611. 3.92	7534. 3.92	7434. 3.92
ROUTED TO								
+	RCC3B-2B	15.23	1	FLOW TIME	7686. 3.92	7562. 3.92	7479. 3.92	7382. 3.92

HYDROGRAPH AT								
+	SF2-C	.39	1	FLOW TIME	206. 3.83	202. 3.83	199. 3.83	196. 3.83
2 COMBINED AT								
+	CSF2-C	15.61	1	FLOW TIME	7892. 3.92	7763. 3.92	7678. 3.92	7578. 3.92
ROUTED TO								
+	RCSF2-C	15.61	1	FLOW TIME	7813. 3.92	7683. 3.92	7597. 3.92	7492. 3.92
HYDROGRAPH AT								
+	SW11	.59	1	FLOW TIME	539. 3.75	530. 3.75	523. 3.75	517. 3.75
ROUTED TO								
+	RSW11	.59	1	FLOW TIME	538. 3.75	529. 3.75	522. 3.75	516. 3.75
HYDROGRAPH AT								
+	SW17	.36	1	FLOW TIME	345. 3.67	339. 3.67	335. 3.67	331. 3.67
2 COMBINED AT								
+	CSW17	.94	1	FLOW TIME	865. 3.67	852. 3.67	840. 3.67	830. 3.67
ROUTED TO								
+	RCSW17	.94	1	FLOW TIME	863. 3.75	850. 3.75	837. 3.75	829. 3.75
HYDROGRAPH AT								
+	SW18	.41	1	FLOW TIME	372. 3.67	366. 3.67	361. 3.67	356. 3.67
2 COMBINED AT								
+	CSW18	1.35	1	FLOW TIME	1217. 3.75	1197. 3.75	1180. 3.75	1168. 3.75
ROUTED TO								
+	RCSW18	1.35	1	FLOW TIME	1144. 3.92	1125. 3.92	1110. 3.92	1097. 3.92
HYDROGRAPH AT								
+	12A	.39	1	FLOW TIME	418. 3.67	412. 3.67	407. 3.67	403. 3.67
2 COMBINED AT								
+	C12A	1.74	1	FLOW TIME	1468. 3.83	1444. 3.83	1425. 3.83	1408. 3.83
ROUTED TO								
+	RC12A	1.74	1	FLOW TIME	1446. 3.92	1423. 3.92	1405. 3.92	1388. 3.92
HYDROGRAPH AT								
+	12B	.26	1	FLOW TIME	278. 3.67	274. 3.67	270. 3.67	267. 3.67
2 COMBINED AT								
+	C12B	2.00	1	FLOW TIME	1631. 3.83	1605. 3.83	1584. 3.83	1565. 3.83
ROUTED TO								
+	RC12B	2.00	1	FLOW TIME	1585. 4.00	1559. 4.00	1539. 4.00	1521. 4.00
HYDROGRAPH AT								
+	57B-3	.31	1	FLOW TIME	185. 3.75	181. 3.75	179. 3.75	176. 3.75
2 COMBINED AT								
+	C57B-3	2.31	1	FLOW TIME	1723. 4.00	1695. 4.00	1673. 4.00	1653. 4.00
ROUTED TO								
+	RC57B-3	2.31	1	FLOW TIME	1718. 4.00	1690. 4.00	1668. 4.00	1648. 4.00
HYDROGRAPH AT								
+	57B-2	.36	1	FLOW TIME	237. 3.75	232. 3.75	229. 3.75	225. 3.75
2 COMBINED AT								
+	C57B-2	2.67	1	FLOW TIME	1892. 4.00	1861. 4.00	1836. 4.00	1814. 4.00
ROUTED TO								
+	RC57B-2	2.67	1	FLOW TIME	1887. 4.00	1856. 4.00	1831. 4.00	1809. 4.00
HYDROGRAPH AT								
+	13B-1	.25	1	FLOW TIME	259. 3.67	255. 3.67	252. 3.67	249. 3.67

ROUTED TO								
+	RC13B-1	.25	1	FLOW TIME	258. 3.75	254. 3.75	251. 3.75	249. 3.75
HYDROGRAPH AT								
+	13B-2	.22	1	FLOW TIME	221. 3.67	218. 3.67	215. 3.67	213. 3.67
2 COMBINED AT								
+	C13B-2	.47	1	FLOW TIME	452. 3.75	446. 3.75	440. 3.75	436. 3.75
ROUTED TO								
+	RC13B-2	.47	1	FLOW TIME	460. 3.83	453. 3.83	447. 3.83	442. 3.83
HYDROGRAPH AT								
+	19A	.25	1	FLOW TIME	230. 3.75	227. 3.75	224. 3.75	222. 3.75
ROUTED TO								
+	R19A	.25	1	FLOW TIME	230. 3.92	226. 3.92	223. 3.92	221. 3.92
HYDROGRAPH AT								
+	13A-1	.22	1	FLOW TIME	223. 3.67	220. 3.67	217. 3.67	215. 3.67
2 COMBINED AT								
+	C13A-1	.48	1	FLOW TIME	427. 3.83	421. 3.83	416. 3.83	411. 3.83
ROUTED TO								
+	RC13A-1	.48	1	FLOW TIME	417. 3.83	411. 3.83	406. 3.92	401. 3.92
HYDROGRAPH AT								
+	13A-2	.19	1	FLOW TIME	195. 3.67	192. 3.67	190. 3.67	188. 3.67
2 COMBINED AT								
+	C13A-2	.66	1	FLOW TIME	560. 3.83	551. 3.83	544. 3.83	538. 3.83
ROUTED TO								
+	RC13A-2	.66	1	FLOW TIME	562. 3.92	554. 3.92	546. 3.92	540. 3.92
HYDROGRAPH AT								
+	PIC-C	.24	1	FLOW TIME	203. 3.75	200. 3.75	198. 3.75	196. 3.75
2 COMBINED AT								
+	CPIC-C	.91	1	FLOW TIME	747. 3.92	736. 3.92	726. 3.92	718. 3.92
ROUTED TO								
+	RCPIC-C	.91	1	FLOW TIME	744. 3.92	730. 3.92	720. 3.92	714. 3.92
HYDROGRAPH AT								
+	PIC-A	.36	1	FLOW TIME	261. 3.92	257. 3.92	254. 3.92	251. 3.92
2 COMBINED AT								
+	CPIC-A	1.27	1	FLOW TIME	1005. 3.92	987. 3.92	974. 3.92	966. 3.92
2 COMBINED AT								
+	CCPIC-A	1.73	1	FLOW TIME	1445. 3.92	1421. 3.92	1404. 3.92	1390. 3.92
ROUTED TO								
+	RCCPIC-A	1.73	1	FLOW TIME	1417. 4.00	1396. 4.00	1391. 4.00	1382. 4.00
HYDROGRAPH AT								
+	57B-1	.20	1	FLOW TIME	141. 3.67	139. 3.67	137. 3.67	135. 3.67
2 COMBINED AT								
+	C57B-1	1.93	1	FLOW TIME	1507. 3.92	1494. 3.92	1488. 3.92	1463. 3.92
2 COMBINED AT								
+	CC57B-1	4.60	1	FLOW TIME	3389. 4.00	3336. 4.00	3304. 4.00	3272. 4.00
ROUTED TO								
+	RCC57B-1	4.60	1	FLOW TIME	3385. 4.00	3331. 4.00	3300. 4.00	3266. 4.00
HYDROGRAPH AT								
+	57B-4	.20	1	FLOW	187.	184.	182.	180.

				TIME	3.67	3.67	3.67	3.67
2 COMBINED AT								
+	C57B-4	4.80	1	FLOW TIME	3474. 4.00	3420. 4.00	3387. 4.00	3353. 4.00
HYDROGRAPH AT								
+	PIC-B	.44	1	FLOW TIME	321. 3.92	317. 3.92	313. 3.92	309. 3.92
ROUTED TO								
+	RPIC-B	.44	1	FLOW TIME	321. 3.92	316. 3.92	312. 3.92	309. 3.92
2 COMBINED AT								
+	CC57B-4	5.24	1	FLOW TIME	3786. 4.00	3726. 4.00	3690. 4.00	3653. 4.00
ROUTED TO								
+	RCC57B-4	5.24	1	FLOW TIME	3777. 4.00	3718. 4.00	3681. 4.00	3641. 4.00
HYDROGRAPH AT								
+	38A	.35	1	FLOW TIME	271. 3.83	267. 3.83	264. 3.83	261. 3.83
ROUTED TO								
+	R38A	.35	1	FLOW TIME	269. 3.92	264. 3.92	259. 3.92	256. 3.92
HYDROGRAPH AT								
+	38B	.44	1	FLOW TIME	361. 3.75	356. 3.75	352. 3.75	348. 3.75
2 COMBINED AT								
+	C38B	.79	1	FLOW TIME	624. 3.83	612. 3.83	604. 3.83	597. 3.83
HYDROGRAPH AT								
+	57BA	.32	1	FLOW TIME	125. 3.92	122. 3.92	120. 3.92	118. 3.92
ROUTED TO								
+	R57BA	.32	1	FLOW TIME	125. 3.92	122. 3.92	120. 3.92	118. 3.92
HYDROGRAPH AT								
+	3C	.15	1	FLOW TIME	158. 3.67	155. 3.67	154. 3.67	152. 3.67
2 COMBINED AT								
+	C3C	.47	1	FLOW TIME	252. 3.75	248. 3.75	244. 3.75	241. 3.75
ROUTED TO								
+	RC3C	.47	1	FLOW TIME	253. 3.83	248. 3.83	244. 3.83	241. 3.83
HYDROGRAPH AT								
+	AP	.67	1	FLOW TIME	309. 3.83	303. 3.83	298. 3.83	293. 3.83
5 COMBINED AT								
+	ANGLPKIN	22.79	1	FLOW TIME	12633. 3.92	12433. 3.92	12293. 3.92	12121. 3.92
ROUTED TO								
+	ANGLPKDB	22.79	1	FLOW TIME	2699. 6.25	2524. 6.33	2383. 6.42	2258. 6.50

*** PEAK STAGES IN FEET ***

	STAGE	2619.66	2619.63	2619.60	2619.58
1	TIME	6.25	6.33	6.42	6.50

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	DT	INTERPOLATED TO COMPUTATION INTERVAL		VOLUME
							PEAK	TIME TO PEAK	
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	3.04	1679.64	243.39	1.96	5.00	1670.28	245.00	1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2325E+03 EXCESS= .0000E+00 OUTFLOW= .2325E+03 BASIN STORAGE= .8804E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	3.06	1654.78	241.91	1.93	5.00	1641.72	245.00	1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2286E+03 EXCESS= .0000E+00 OUTFLOW= .2286E+03 BASIN STORAGE= .8436E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-1 MANE 3.08 1633.79 243.18 1.90 5.00 1622.89 245.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2255E+03 EXCESS= .0000E+00 OUTFLOW= .2255E+03 BASIN STORAGE= .8591E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-1 MANE 3.09 1610.68 241.23 1.88 5.00 1601.88 240.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2228E+03 EXCESS= .0000E+00 OUTFLOW= .2228E+03 BASIN STORAGE= .6817E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.83 1732.60 246.16 1.94 5.00 1727.75 245.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2528E+03 EXCESS= .0000E+00 OUTFLOW= .2528E+03 BASIN STORAGE= .1251E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.86 1697.09 242.90 1.90 5.00 1695.84 245.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2484E+03 EXCESS= .0000E+00 OUTFLOW= .2485E+03 BASIN STORAGE= .9951E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.88 1684.23 244.11 1.88 5.00 1681.05 245.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2451E+03 EXCESS= .0000E+00 OUTFLOW= .2451E+03 BASIN STORAGE= .1156E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.90 1670.65 245.11 1.86 5.00 1669.83 245.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2423E+03 EXCESS= .0000E+00 OUTFLOW= .2423E+03 BASIN STORAGE= .1011E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .60 1854.62 244.83 1.90 5.00 1854.53 245.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2822E+03 EXCESS= .0000E+00 OUTFLOW= .2822E+03 BASIN STORAGE= .1139E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .60 1820.88 244.77 1.87 5.00 1820.74 245.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2773E+03 EXCESS= .0000E+00 OUTFLOW= .2773E+03 BASIN STORAGE= .1147E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .60 1804.40 245.02 1.85 5.00 1804.37 245.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2735E+03 EXCESS= .0000E+00 OUTFLOW= .2735E+03 BASIN STORAGE= .1164E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .60 1791.64 245.08 1.83 5.00 1791.52 245.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2705E+03 EXCESS= .0000E+00 OUTFLOW= .2705E+03 BASIN STORAGE= .1114E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-3 MANE 4.46 272.40 213.87 2.01 5.00 263.76 215.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1863E+02 EXCESS= .0000E+00 OUTFLOW= .1865E+02 BASIN STORAGE= .6584E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-3 MANE 4.48 266.50 215.18 1.98 5.00 265.44 215.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1829E+02 EXCESS= .0000E+00 OUTFLOW= .1831E+02 BASIN STORAGE= .5075E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	4.50	255.03	216.00	1.95	5.00	252.65	215.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1801E+02 EXCESS= .0000E+00 OUTFLOW= .1803E+02 BASIN STORAGE= .6979E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	4.50	252.36	216.00	1.92	5.00	249.94	215.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1780E+02 EXCESS= .0000E+00 OUTFLOW= .1782E+02 BASIN STORAGE= .6953E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.26	518.11	213.10	2.01	5.00	507.25	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3700E+02 EXCESS= .0000E+00 OUTFLOW= .3704E+02 BASIN STORAGE= .5967E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.29	529.28	214.42	1.98	5.00	520.62	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3650E+02 EXCESS= .0000E+00 OUTFLOW= .3654E+02 BASIN STORAGE= .7027E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.31	508.71	215.50	1.95	5.00	503.92	215.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3587E+02 EXCESS= .0000E+00 OUTFLOW= .3591E+02 BASIN STORAGE= .5896E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.33	489.23	216.45	1.92	5.00	485.67	215.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3544E+02 EXCESS= .0000E+00 OUTFLOW= .3547E+02 BASIN STORAGE= .7372E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.27	443.06	212.83	1.98	5.00	430.05	215.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3092E+02 EXCESS= .0000E+00 OUTFLOW= .3094E+02 BASIN STORAGE= .3974E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.29	437.31	214.05	1.94	5.00	424.78	215.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3040E+02 EXCESS= .0000E+00 OUTFLOW= .3042E+02 BASIN STORAGE= .2844E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.31	424.28	215.04	1.92	5.00	424.15	215.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3000E+02 EXCESS= .0000E+00 OUTFLOW= .3001E+02 BASIN STORAGE= .3604E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.32	421.90	212.60	1.89	5.00	413.03	215.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2964E+02 EXCESS= .0000E+00 OUTFLOW= .2965E+02 BASIN STORAGE= .4386E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
RCP3.2	MANE	2.87	1163.94	215.27	2.00	5.00	1155.36	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8656E+02 EXCESS= .0000E+00 OUTFLOW= .8659E+02 BASIN STORAGE= .4769E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.2	MANE	2.86	1176.47	217.49	1.97	5.00	1151.19	215.00	1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8546E+02 EXCESS= .0000E+00 OUTFLOW= .8549E+02 BASIN STORAGE= .3968E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.89 1144.25 216.62 1.94 5.00 1114.84 215.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8395E+02 EXCESS= .0000E+00 OUTFLOW= .8398E+02 BASIN STORAGE= .5025E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.92 1117.59 215.90 1.91 5.00 1097.09 215.00 1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8280E+02 EXCESS= .0000E+00 OUTFLOW= .8283E+02 BASIN STORAGE= .4173E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.57 2990.62 221.67 1.91 5.00 2946.53 220.00 1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4203E+03 EXCESS= .0000E+00 OUTFLOW= .4203E+03 BASIN STORAGE= .3347E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.58 2945.69 220.65 1.87 5.00 2924.07 220.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4135E+03 EXCESS= .0000E+00 OUTFLOW= .4135E+03 BASIN STORAGE= .3360E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.59 2910.31 221.97 1.85 5.00 2873.06 220.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4075E+03 EXCESS= .0000E+00 OUTFLOW= .4075E+03 BASIN STORAGE= .3830E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.60 2839.86 222.21 1.82 5.00 2816.08 220.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4026E+03 EXCESS= .0000E+00 OUTFLOW= .4026E+03 BASIN STORAGE= .3441E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-6 MANE 4.50 132.61 220.50 1.96 5.00 131.71 220.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9257E+01 EXCESS= .0000E+00 OUTFLOW= .9282E+01 BASIN STORAGE= .1190E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
R3-6 MANE 4.50 130.72 220.50 1.93 5.00 129.78 220.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9104E+01 EXCESS= .0000E+00 OUTFLOW= .9128E+01 BASIN STORAGE= .1185E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
R3-6 MANE 4.50 129.20 220.50 1.90 5.00 128.24 220.00 1.91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8982E+01 EXCESS= .0000E+00 OUTFLOW= .9006E+01 BASIN STORAGE= .1181E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
R3-6 MANE 4.50 127.87 220.50 1.88 5.00 126.88 220.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8875E+01 EXCESS= .0000E+00 OUTFLOW= .8899E+01 BASIN STORAGE= .1178E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
R3-7 MANE 3.66 275.87 212.47 1.89 5.00 253.29 210.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1730E+02 EXCESS= .0000E+00 OUTFLOW= .1731E+02 BASIN STORAGE= .3020E-02 PERCENT ERROR= .1

FOR PLAN = 1 RATIO= .00

R3-7	MANE	3.68	280.94	213.68	1.87	5.00	254.36	210.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1709E+02 EXCESS= .0000E+00 OUTFLOW= .1710E+02 BASIN STORAGE= .3802E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-7	MANE	3.70	257.16	210.97	1.84	5.00	247.65	215.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1677E+02 EXCESS= .0000E+00 OUTFLOW= .1679E+02 BASIN STORAGE= .2926E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-7	MANE	3.72	259.85	211.83	1.81	5.00	242.65	210.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1658E+02 EXCESS= .0000E+00 OUTFLOW= .1659E+02 BASIN STORAGE= .3965E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	5.00	137.33	220.00	1.26	5.00	137.33	220.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1028E+02 EXCESS= .0000E+00 OUTFLOW= .1030E+02 BASIN STORAGE= .7091E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	5.00	134.42	220.00	1.24	5.00	134.42	220.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1008E+02 BASIN STORAGE= .7043E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	5.00	132.09	220.00	1.22	5.00	132.09	220.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9899E+01 EXCESS= .0000E+00 OUTFLOW= .9910E+01 BASIN STORAGE= .7004E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-J	MANE	5.00	130.06	220.00	1.20	5.00	130.06	220.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9750E+01 EXCESS= .0000E+00 OUTFLOW= .9761E+01 BASIN STORAGE= .6970E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.51	463.86	217.04	1.67	5.00	456.52	215.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3682E+02 EXCESS= .0000E+00 OUTFLOW= .3682E+02 BASIN STORAGE= .1438E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.50	473.44	216.50	1.65	5.00	459.26	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3636E+02 EXCESS= .0000E+00 OUTFLOW= .3636E+02 BASIN STORAGE= .1364E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.52	461.42	216.71	1.62	5.00	448.45	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3575E+02 EXCESS= .0000E+00 OUTFLOW= .3575E+02 BASIN STORAGE= .1585E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.5	MANE	1.53	445.45	215.76	1.60	5.00	436.50	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3525E+02 EXCESS= .0000E+00 OUTFLOW= .3526E+02 BASIN STORAGE= .1325E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.37	807.64	218.95	2.00	5.00	797.73	220.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6806E+02 EXCESS= .0000E+00 OUTFLOW= .6808E+02 BASIN STORAGE= .3931E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	3.39	785.11	220.16	1.97	5.00	784.61	220.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6694E+02 EXCESS= .0000E+00 OUTFLOW= .6696E+02 BASIN STORAGE= .4363E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	3.40	780.02	217.75	1.94	5.00	772.73	220.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6603E+02 EXCESS= .0000E+00 OUTFLOW= .6605E+02 BASIN STORAGE= .3541E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	3.42	779.36	218.61	1.92	5.00	768.55	220.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6527E+02 EXCESS= .0000E+00 OUTFLOW= .6529E+02 BASIN STORAGE= .4258E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	1.86	2103.49	221.91	1.87	5.00	2071.95	220.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1937E+03 EXCESS= .0000E+00 OUTFLOW= .1937E+03 BASIN STORAGE= .3153E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	1.87	2058.69	221.20	1.84	5.00	2045.30	220.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1906E+03 EXCESS= .0000E+00 OUTFLOW= .1907E+03 BASIN STORAGE= .2927E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	1.88	2041.93	222.25	1.82	5.00	2013.12	220.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1879E+03 EXCESS= .0000E+00 OUTFLOW= .1879E+03 BASIN STORAGE= .3642E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	1.89	2008.59	221.17	1.79	5.00	1995.60	220.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1856E+03 EXCESS= .0000E+00 OUTFLOW= .1856E+03 BASIN STORAGE= .2907E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.97	253.41	216.65	1.91	5.00	251.14	215.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1958E+02 EXCESS= .0000E+00 OUTFLOW= .1958E+02 BASIN STORAGE= .2059E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.98	247.60	216.00	1.88	5.00	246.24	215.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1926E+02 EXCESS= .0000E+00 OUTFLOW= .1926E+02 BASIN STORAGE= .2549E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	1.99	246.65	217.07	1.85	5.00	244.37	215.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1900E+02 EXCESS= .0000E+00 OUTFLOW= .1901E+02 BASIN STORAGE= .2531E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	2.00	241.80	216.03	1.83	5.00	240.46	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1878E+02 EXCESS= .0000E+00 OUTFLOW= .1878E+02 BASIN STORAGE= .2578E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.15	2158.39	304.48	1.89	5.00	2158.37	305.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7122E+03 EXCESS= .0000E+00 OUTFLOW= .7122E+03 BASIN STORAGE= .2776E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.16	2145.39	305.22	1.86	5.00	2145.34	305.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7008E+03 EXCESS= .0000E+00 OUTFLOW= .7008E+03 BASIN STORAGE= .3032E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.16	2132.19	304.81	1.84	5.00	2132.18	305.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6907E+03 EXCESS= .0000E+00 OUTFLOW= .6907E+03 BASIN STORAGE= .2827E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.16	2119.79	305.52	1.82	5.00	2119.69	305.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6824E+03 EXCESS= .0000E+00 OUTFLOW= .6825E+03 BASIN STORAGE= .3015E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.54	2724.36	231.33	1.91	5.00	2714.56	235.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7881E+03 EXCESS= .0000E+00 OUTFLOW= .7881E+03 BASIN STORAGE= .4277E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.55	2700.16	232.16	1.88	5.00	2691.55	235.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7755E+03 EXCESS= .0000E+00 OUTFLOW= .7755E+03 BASIN STORAGE= .4401E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.55	2677.63	231.43	1.85	5.00	2668.92	235.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7645E+03 EXCESS= .0000E+00 OUTFLOW= .7645E+03 BASIN STORAGE= .4103E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.56	2658.71	232.08	1.83	5.00	2651.42	235.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7554E+03 EXCESS= .0000E+00 OUTFLOW= .7554E+03 BASIN STORAGE= .4299E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.92	378.95	215.46	1.95	5.00	376.26	215.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2925E+02 EXCESS= .0000E+00 OUTFLOW= .2925E+02 BASIN STORAGE= .1145E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.93	374.30	215.85	1.92	5.00	371.11	215.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2877E+02 EXCESS= .0000E+00 OUTFLOW= .2877E+02 BASIN STORAGE= .1229E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.93	369.23	215.98	1.89	5.00	366.68	215.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2839E+02 EXCESS= .0000E+00 OUTFLOW= .2839E+02 BASIN STORAGE= .1152E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.94	365.14	215.99	1.87	5.00	362.62	215.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2806E+02 EXCESS= .0000E+00 OUTFLOW= .2806E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.60	565.20	216.28	2.06	5.00	559.63	215.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4504E+02 EXCESS= .0000E+00 OUTFLOW= .4505E+02 BASIN STORAGE= .2408E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.61	555.66	215.85	2.03	5.00	552.69	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4433E+02 EXCESS= .0000E+00 OUTFLOW= .4434E+02 BASIN STORAGE= .2922E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.62	546.70	215.23	2.00	5.00	546.17	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4378E+02 EXCESS= .0000E+00 OUTFLOW= .4378E+02 BASIN STORAGE= .2646E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.63	544.29	216.14	1.98	5.00	540.02	215.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4327E+02 EXCESS= .0000E+00 OUTFLOW= .4328E+02 BASIN STORAGE= .2590E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.27	291.19	220.68	1.40	5.00	289.51	220.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2525E+02 EXCESS= .0000E+00 OUTFLOW= .2525E+02 BASIN STORAGE= .1555E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.28	285.68	221.12	1.37	5.00	284.59	220.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2476E+02 EXCESS= .0000E+00 OUTFLOW= .2476E+02 BASIN STORAGE= .1382E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.29	281.26	221.23	1.35	5.00	280.42	220.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2436E+02 EXCESS= .0000E+00 OUTFLOW= .2436E+02 BASIN STORAGE= .1589E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.29	277.37	221.18	1.33	5.00	276.24	220.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2401E+02 EXCESS= .0000E+00 OUTFLOW= .2401E+02 BASIN STORAGE= .1369E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.02	621.04	220.84	1.55	5.00	612.01	220.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5779E+02 EXCESS= .0000E+00 OUTFLOW= .5779E+02 BASIN STORAGE= .1489E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.03	610.27	221.44	1.52	5.00	600.45	220.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5670E+02 EXCESS= .0000E+00 OUTFLOW= .5670E+02 BASIN STORAGE= .1705E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.04	600.30	221.74	1.50	5.00	591.57	220.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5584E+02 EXCESS= .0000E+00 OUTFLOW= .5584E+02 BASIN STORAGE= .1519E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.04	592.38	220.83	1.48	5.00	583.87	220.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5509E+02 EXCESS= .0000E+00 OUTFLOW= .5509E+02 BASIN STORAGE= .1725E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.39	339.17	214.99	2.01	5.00	339.15	215.00	2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2578E+02 EXCESS= .0000E+00 OUTFLOW= .2579E+02 BASIN STORAGE= .4716E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.39	334.15	215.08	1.98	5.00	334.00	215.00	1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2538E+02 EXCESS= .0000E+00 OUTFLOW= .2538E+02 BASIN STORAGE= .4665E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.39	330.06	214.92	1.95	5.00	330.03	215.00	1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2505E+02 EXCESS= .0000E+00 OUTFLOW= .2505E+02 BASIN STORAGE= .4675E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.40	326.79	215.03	1.93	5.00	326.70	215.00	1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2477E+02 EXCESS= .0000E+00 OUTFLOW= .2477E+02 BASIN STORAGE= .4509E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.05	409.91	215.32	1.56	5.00	408.60	215.00	1.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1245E+03 EXCESS= .0000E+00 OUTFLOW= .1245E+03 BASIN STORAGE= .1985E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.06	404.42	215.67	1.53	5.00	402.23	215.00	1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1222E+03 EXCESS= .0000E+00 OUTFLOW= .1222E+03 BASIN STORAGE= .1922E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.06	399.37	215.71	1.51	5.00	397.12	215.00	1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1203E+03 EXCESS= .0000E+00 OUTFLOW= .1203E+03 BASIN STORAGE= .1879E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.07	394.55	215.58	1.49	5.00	392.58	215.00	1.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1187E+03 EXCESS= .0000E+00 OUTFLOW= .1187E+03 BASIN STORAGE= .1836E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.36	459.30	215.49	1.57	5.00	455.58	215.00	1.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1291E+03 EXCESS= .0000E+00 OUTFLOW= .1291E+03 BASIN STORAGE= .2710E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.36	452.15	215.47	1.54	5.00	448.43	215.00	1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1266E+03 EXCESS= .0000E+00 OUTFLOW= .1266E+03 BASIN STORAGE= .2627E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.37	444.97	215.20	1.52	5.00	443.51	215.00	1.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1247E+03 EXCESS= .0000E+00 OUTFLOW= .1247E+03 BASIN STORAGE= .2569E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.38	441.66	216.17	1.50	5.00	437.63	215.00	1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1230E+03 EXCESS= .0000E+00 OUTFLOW= .1230E+03 BASIN STORAGE= .2513E-01 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.62	1346.06	215.81	1.70	5.00	1337.12	215.00	1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2034E+03 EXCESS= .0000E+00 OUTFLOW= .2034E+03 BASIN STORAGE= .1923E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .62 1326.93 215.81 1.67 5.00 1317.49 215.00 1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1998E+03 EXCESS= .0000E+00 OUTFLOW= .1998E+03 BASIN STORAGE= .1865E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .63 1314.65 215.58 1.64 5.00 1302.95 215.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1969E+03 EXCESS= .0000E+00 OUTFLOW= .1969E+03 BASIN STORAGE= .1821E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .63 1294.77 215.36 1.62 5.00 1285.88 215.00 1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1944E+03 EXCESS= .0000E+00 OUTFLOW= .1944E+03 BASIN STORAGE= .1780E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.63 171.68 213.29 2.24 5.00 169.22 215.00 2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1345E+02 EXCESS= .0000E+00 OUTFLOW= .1345E+02 BASIN STORAGE= .1429E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.64 169.02 212.81 2.21 5.00 167.26 215.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1325E+02 EXCESS= .0000E+00 OUTFLOW= .1325E+02 BASIN STORAGE= .1696E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.64 166.86 213.74 2.18 5.00 165.46 215.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1309E+02 EXCESS= .0000E+00 OUTFLOW= .1309E+02 BASIN STORAGE= .1602E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.65 165.61 212.92 2.16 5.00 163.78 215.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1295E+02 EXCESS= .0000E+00 OUTFLOW= .1295E+02 BASIN STORAGE= .1618E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.58 182.51 215.83 1.77 5.00 180.19 215.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1384E+02 EXCESS= .0000E+00 OUTFLOW= .1385E+02 BASIN STORAGE= .1638E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.59 179.07 215.64 1.74 5.00 177.34 215.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1361E+02 EXCESS= .0000E+00 OUTFLOW= .1361E+02 BASIN STORAGE= .1403E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.59 177.36 216.77 1.72 5.00 175.13 215.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1342E+02 EXCESS= .0000E+00 OUTFLOW= .1342E+02 BASIN STORAGE= .1571E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.60 175.84 216.17 1.70 5.00 172.77 215.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1326E+02 EXCESS= .0000E+00 OUTFLOW= .1326E+02 BASIN STORAGE= .1518E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.07 707.46 215.16 2.08 5.00 707.11 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5578E+02 EXCESS= .0000E+00 OUTFLOW= .5578E+02 BASIN STORAGE= .1650E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.07 696.95 215.28 2.05 5.00 696.73 215.00 2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5492E+02 EXCESS= .0000E+00 OUTFLOW= .5492E+02 BASIN STORAGE= .1670E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.08 689.56 215.19 2.02 5.00 689.10 215.00 2.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5422E+02 EXCESS= .0000E+00 OUTFLOW= .5423E+02 BASIN STORAGE= .1645E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.08 683.04 215.05 2.00 5.00 682.82 215.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5363E+02 EXCESS= .0000E+00 OUTFLOW= .5364E+02 BASIN STORAGE= .1751E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 1.70 978.16 215.46 2.13 5.00 974.08 215.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7965E+02 EXCESS= .0000E+00 OUTFLOW= .7966E+02 BASIN STORAGE= .3190E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 1.71 976.38 216.71 2.10 5.00 960.43 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7848E+02 EXCESS= .0000E+00 OUTFLOW= .7849E+02 BASIN STORAGE= .3760E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 1.71 957.79 215.95 2.07 5.00 949.33 215.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7745E+02 EXCESS= .0000E+00 OUTFLOW= .7746E+02 BASIN STORAGE= .3612E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 1.72 955.47 216.76 2.05 5.00 940.20 215.00 2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7665E+02 EXCESS= .0000E+00 OUTFLOW= .7667E+02 BASIN STORAGE= .3701E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .83 1233.61 215.88 2.13 5.00 1224.49 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1006E+03 EXCESS= .0000E+00 OUTFLOW= .1006E+03 BASIN STORAGE= .1921E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .84 1212.99 215.42 2.10 5.00 1204.86 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9909E+02 EXCESS= .0000E+00 OUTFLOW= .9909E+02 BASIN STORAGE= .1909E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .84 1200.79 215.57 2.08 5.00 1190.92 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9789E+02 EXCESS= .0000E+00 OUTFLOW= .9790E+02 BASIN STORAGE= .1812E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .85 1189.01 215.56 2.05 5.00 1179.43 215.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9683E+02 EXCESS= .0000E+00 OUTFLOW= .9683E+02 BASIN STORAGE= .1818E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCP3.10	MANE	.27	2700.97	215.16	1.83	5.00	2692.43	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3169E+03 EXCESS= .0000E+00 OUTFLOW= .3169E+03 BASIN STORAGE= .1108E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.10	MANE	.27	2659.01	215.40	1.80	5.00	2650.90	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3116E+03 EXCESS= .0000E+00 OUTFLOW= .3116E+03 BASIN STORAGE= .1074E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.10	MANE	.27	2633.23	215.30	1.77	5.00	2621.70	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3073E+03 EXCESS= .0000E+00 OUTFLOW= .3073E+03 BASIN STORAGE= .1048E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.10	MANE	.27	2600.87	215.20	1.75	5.00	2591.02	215.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3036E+03 EXCESS= .0000E+00 OUTFLOW= .3036E+03 BASIN STORAGE= .1024E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.29	2838.61	217.91	1.85	5.00	2748.82	220.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3342E+03 EXCESS= .0000E+00 OUTFLOW= .3342E+03 BASIN STORAGE= .5592E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.31	2778.73	216.73	1.82	5.00	2696.57	220.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3286E+03 EXCESS= .0000E+00 OUTFLOW= .3286E+03 BASIN STORAGE= .5388E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.31	2774.25	217.53	1.79	5.00	2689.39	220.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3242E+03 EXCESS= .0000E+00 OUTFLOW= .3242E+03 BASIN STORAGE= .5227E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.32	2722.20	218.38	1.77	5.00	2637.30	220.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3202E+03 EXCESS= .0000E+00 OUTFLOW= .3202E+03 BASIN STORAGE= .5118E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.61	5534.52	221.01	1.88	5.00	5484.69	220.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1175E+04 EXCESS= .0000E+00 OUTFLOW= .1175E+04 BASIN STORAGE= .2774E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.62	5441.17	220.60	1.85	5.00	5393.37	220.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1156E+04 EXCESS= .0000E+00 OUTFLOW= .1156E+04 BASIN STORAGE= .2680E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.62	5397.04	220.68	1.82	5.00	5344.79	220.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1140E+04 EXCESS= .0000E+00 OUTFLOW= .1140E+04 BASIN STORAGE= .2608E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCRCSWFH	MANE	.62	5313.81	220.74	1.80	5.00	5261.80	225.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+04 EXCESS= .0000E+00 OUTFLOW= .1126E+04 BASIN STORAGE= .2555E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.94	5658.08	221.62	1.87	5.00	5619.56	225.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1192E+04 EXCESS= .0000E+00 OUTFLOW= .1192E+04 BASIN STORAGE= .4119E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.94	5563.15	221.13	1.84	5.00	5530.96	225.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1172E+04 EXCESS= .0000E+00 OUTFLOW= .1172E+04 BASIN STORAGE= .3984E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.94	5517.99	221.89	1.82	5.00	5487.14	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1156E+04 EXCESS= .0000E+00 OUTFLOW= .1156E+04 BASIN STORAGE= .3876E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11A-1	MANE	.95	5429.74	221.29	1.80	5.00	5420.18	225.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1142E+04 EXCESS= .0000E+00 OUTFLOW= .1142E+04 BASIN STORAGE= .3790E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.91	5773.33	236.02	1.85	5.00	5742.85	235.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1238E+04 EXCESS= .0000E+00 OUTFLOW= .1238E+04 BASIN STORAGE= .4383E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.92	5676.13	236.50	1.82	5.00	5650.16	235.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1218E+04 EXCESS= .0000E+00 OUTFLOW= .1218E+04 BASIN STORAGE= .4247E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.92	5623.30	236.43	1.79	5.00	5594.68	235.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1201E+04 EXCESS= .0000E+00 OUTFLOW= .1201E+04 BASIN STORAGE= .4130E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	.92	5552.73	235.75	1.77	5.00	5521.75	235.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1186E+04 EXCESS= .0000E+00 OUTFLOW= .1186E+04 BASIN STORAGE= .4037E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.93	308.61	231.84	1.51	5.00	305.31	230.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3546E+02 EXCESS= .0000E+00 OUTFLOW= .3546E+02 BASIN STORAGE= .9062E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.94	302.68	233.10	1.48	5.00	299.94	230.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3482E+02 EXCESS= .0000E+00 OUTFLOW= .3482E+02 BASIN STORAGE= .8444E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.95	299.03	232.18	1.46	5.00	295.41	230.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3431E+02 EXCESS= .0000E+00 OUTFLOW= .3431E+02 BASIN STORAGE= .8002E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	1.96	294.73	233.08	1.44	5.00	291.86	230.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3386E+02 EXCESS= .0000E+00 OUTFLOW= .3386E+02 BASIN STORAGE= .8012E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.56	629.65	225.81	1.56	5.00	626.34	225.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6963E+02 EXCESS= .0000E+00 OUTFLOW= .6963E+02 BASIN STORAGE= .8905E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.57	618.94	227.02	1.54	5.00	615.56	225.00	1.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6839E+02 EXCESS= .0000E+00 OUTFLOW= .6839E+02 BASIN STORAGE= .7641E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.57	612.55	226.41	1.51	5.00	606.11	225.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6741E+02 EXCESS= .0000E+00 OUTFLOW= .6741E+02 BASIN STORAGE= .8753E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.58	601.96	225.71	1.49	5.00	599.37	225.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6654E+02 EXCESS= .0000E+00 OUTFLOW= .6654E+02 BASIN STORAGE= .8446E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.33	879.34	226.29	1.57	5.00	876.58	225.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9563E+02 EXCESS= .0000E+00 OUTFLOW= .9563E+02 BASIN STORAGE= .1276E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.35	866.50	225.13	1.55	5.00	865.42	225.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9397E+02 EXCESS= .0000E+00 OUTFLOW= .9397E+02 BASIN STORAGE= .1241E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.36	852.31	226.16	1.52	5.00	848.88	225.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9259E+02 EXCESS= .0000E+00 OUTFLOW= .9259E+02 BASIN STORAGE= .1241E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.36	842.75	224.58	1.51	5.00	842.53	225.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9146E+02 EXCESS= .0000E+00 OUTFLOW= .9146E+02 BASIN STORAGE= .1330E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.40	1292.07	226.62	1.70	5.00	1276.42	225.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1414E+03 EXCESS= .0000E+00 OUTFLOW= .1414E+03 BASIN STORAGE= .1809E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.41	1275.99	226.28	1.67	5.00	1258.09	225.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1391E+03 EXCESS= .0000E+00 OUTFLOW= .1392E+03 BASIN STORAGE= .1589E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.41	1254.35	226.21	1.65	5.00	1237.29	225.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1371E+03 EXCESS= .0000E+00 OUTFLOW= .1371E+03 BASIN STORAGE= .1873E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.42	1242.45	226.87	1.63	5.00	1227.32	225.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1356E+03 EXCESS= .0000E+00 OUTFLOW= .1356E+03 BASIN STORAGE= .1831E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	5.00	309.69	220.00	1.67	5.00	309.69	220.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2575E+02 EXCESS= .0000E+00 OUTFLOW= .2576E+02 BASIN STORAGE= .1402E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	5.00	304.59	220.00	1.64	5.00	304.59	220.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2531E+02 EXCESS= .0000E+00 OUTFLOW= .2532E+02 BASIN STORAGE= .1390E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	5.00	300.50	220.00	1.61	5.00	300.50	220.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2496E+02 EXCESS= .0000E+00 OUTFLOW= .2497E+02 BASIN STORAGE= .1381E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	5.00	296.94	220.00	1.60	5.00	296.94	220.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2466E+02 EXCESS= .0000E+00 OUTFLOW= .2467E+02 BASIN STORAGE= .1372E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.78	2000.40	227.78	1.65	5.00	1985.15	230.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2115E+03 EXCESS= .0000E+00 OUTFLOW= .2115E+03 BASIN STORAGE= .2826E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.79	1957.96	228.95	1.63	5.00	1945.11	230.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2080E+03 EXCESS= .0000E+00 OUTFLOW= .2080E+03 BASIN STORAGE= .2950E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.81	1936.51	227.34	1.60	5.00	1926.07	230.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2050E+03 EXCESS= .0000E+00 OUTFLOW= .2050E+03 BASIN STORAGE= .2912E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.82	1917.35	228.07	1.58	5.00	1904.45	230.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2027E+03 EXCESS= .0000E+00 OUTFLOW= .2027E+03 BASIN STORAGE= .3246E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.69	7712.58	236.31	1.81	5.00	7686.15	235.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1468E+04 EXCESS= .0000E+00 OUTFLOW= .1468E+04 BASIN STORAGE= .9233E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.70	7581.82	236.04	1.78	5.00	7561.78	235.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1444E+04 EXCESS= .0000E+00 OUTFLOW= .1444E+04 BASIN STORAGE= .8928E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.70	7511.63	236.94	1.75	5.00	7479.31	235.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1424E+04 EXCESS= .0000E+00 OUTFLOW= .1424E+04 BASIN STORAGE= .8682E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.71	7414.86	236.41	1.73	5.00	7382.25	235.00	1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1407E+04 EXCESS= .0000E+00 OUTFLOW= .1407E+04 BASIN STORAGE= .8513E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSF2-C	MANE		1.51	7859.38	237.14	1.79	5.00	7813.16	235.00	1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1493E+04 EXCESS= .0000E+00 OUTFLOW= .1493E+04 BASIN STORAGE= .8493E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSF2-C	MANE		1.52	7737.12	237.08	1.76	5.00	7683.30	235.00	1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1468E+04 EXCESS= .0000E+00 OUTFLOW= .1468E+04 BASIN STORAGE= .8216E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSF2-C	MANE		1.53	7670.67	236.54	1.74	5.00	7597.21	235.00	1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1448E+04 EXCESS= .0000E+00 OUTFLOW= .1448E+04 BASIN STORAGE= .8003E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSF2-C	MANE		1.53	7559.75	236.17	1.72	5.00	7491.82	235.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1430E+04 EXCESS= .0000E+00 OUTFLOW= .1430E+04 BASIN STORAGE= .7840E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RSW11	MANE		1.17	537.61	225.40	1.73	5.00	537.50	225.00	1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5446E+02 EXCESS= .0000E+00 OUTFLOW= .5446E+02 BASIN STORAGE= .1620E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RSW11	MANE		1.18	529.38	224.50	1.70	5.00	528.94	225.00	1.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5354E+02 EXCESS= .0000E+00 OUTFLOW= .5354E+02 BASIN STORAGE= .1715E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RSW11	MANE		1.19	522.38	224.49	1.68	5.00	522.00	225.00	1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5280E+02 EXCESS= .0000E+00 OUTFLOW= .5280E+02 BASIN STORAGE= .1703E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RSW11	MANE		1.19	515.81	224.35	1.66	5.00	515.81	225.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5215E+02 EXCESS= .0000E+00 OUTFLOW= .5216E+02 BASIN STORAGE= .1806E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSW17	MANE		1.89	869.30	222.94	1.72	5.00	863.33	225.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8683E+02 EXCESS= .0000E+00 OUTFLOW= .8683E+02 BASIN STORAGE= .3408E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSW17	MANE		1.90	854.93	222.47	1.69	5.00	849.84	225.00	1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8535E+02 EXCESS= .0000E+00 OUTFLOW= .8536E+02 BASIN STORAGE= .3921E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSW17	MANE		1.91	844.46	223.68	1.67	5.00	837.30	225.00	1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8418E+02 EXCESS= .0000E+00 OUTFLOW= .8418E+02 BASIN STORAGE= .3482E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSW17	MANE		1.92	833.98	222.87	1.65	5.00	828.66	225.00	1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8314E+02 EXCESS= .0000E+00 OUTFLOW= .8315E+02 BASIN STORAGE= .3353E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 257.82 225.00 1.93 5.00 257.82 225.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2562E+02 EXCESS= .0000E+00 OUTFLOW= .2563E+02 BASIN STORAGE= .1569E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 254.38 225.00 1.90 5.00 254.38 225.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2523E+02 EXCESS= .0000E+00 OUTFLOW= .2523E+02 BASIN STORAGE= .1774E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 251.35 225.00 1.88 5.00 251.35 225.00 1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2491E+02 EXCESS= .0000E+00 OUTFLOW= .2492E+02 BASIN STORAGE= .1762E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 248.69 225.00 1.86 5.00 248.69 225.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2464E+02 EXCESS= .0000E+00 OUTFLOW= .2464E+02 BASIN STORAGE= .1752E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 460.31 230.00 1.84 5.00 460.31 230.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4555E+02 EXCESS= .0000E+00 OUTFLOW= .4559E+02 BASIN STORAGE= .5102E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 452.89 230.00 1.81 5.00 452.89 230.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4483E+02 EXCESS= .0000E+00 OUTFLOW= .4486E+02 BASIN STORAGE= .5236E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 447.25 230.00 1.79 5.00 447.25 230.00 1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4425E+02 EXCESS= .0000E+00 OUTFLOW= .4428E+02 BASIN STORAGE= .5211E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 442.31 230.00 1.77 5.00 442.31 230.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4375E+02 EXCESS= .0000E+00 OUTFLOW= .4378E+02 BASIN STORAGE= .5189E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 229.50 235.00 1.83 5.00 229.50 235.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2473E+02 EXCESS= .0000E+00 OUTFLOW= .2474E+02 BASIN STORAGE= .2025E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 226.08 235.00 1.80 5.00 226.08 235.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2433E+02 EXCESS= .0000E+00 OUTFLOW= .2434E+02 BASIN STORAGE= .2008E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 223.27 235.00 1.78 5.00 223.27 235.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2401E+02 EXCESS= .0000E+00 OUTFLOW= .2402E+02 BASIN STORAGE= .2229E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 220.87 235.00 1.76 5.00 220.87 235.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2374E+02 EXCESS= .0000E+00 OUTFLOW= .2374E+02 BASIN STORAGE= .2216E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 562.30 235.00 1.84 5.00 562.30 235.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6525E+02 EXCESS= .0000E+00 OUTFLOW= .6528E+02 BASIN STORAGE= .8893E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 553.55 235.00 1.81 5.00 553.55 235.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6421E+02 EXCESS= .0000E+00 OUTFLOW= .6424E+02 BASIN STORAGE= .8835E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 546.33 235.00 1.79 5.00 546.33 235.00 1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6337E+02 EXCESS= .0000E+00 OUTFLOW= .6341E+02 BASIN STORAGE= .9465E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 540.20 235.00 1.77 5.00 540.20 235.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6265E+02 EXCESS= .0000E+00 OUTFLOW= .6268E+02 BASIN STORAGE= .9422E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.24 747.65 236.58 1.81 5.00 744.20 235.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8783E+02 EXCESS= .0000E+00 OUTFLOW= .8783E+02 BASIN STORAGE= .2504E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.26 735.49 237.83 1.78 5.00 729.76 235.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8641E+02 EXCESS= .0000E+00 OUTFLOW= .8642E+02 BASIN STORAGE= .2590E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.27 722.81 235.60 1.76 5.00 720.41 235.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8528E+02 EXCESS= .0000E+00 OUTFLOW= .8529E+02 BASIN STORAGE= .2612E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPIC-C MANE 3.28 717.97 236.49 1.74 5.00 714.38 235.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8432E+02 EXCESS= .0000E+00 OUTFLOW= .8433E+02 BASIN STORAGE= .2863E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCCPIC-A MANE 4.56 1436.54 237.19 1.81 5.00 1416.85 240.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1669E+03 EXCESS= .0000E+00 OUTFLOW= .1670E+03 BASIN STORAGE= .2910E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCCPIC-A MANE 4.59 1412.90 238.43 1.78 5.00 1396.42 240.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1644E+03 EXCESS= .0000E+00 OUTFLOW= .1644E+03 BASIN STORAGE= .3294E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCCPIC-A MANE 4.60 1400.49 239.33 1.76 5.00 1390.78 240.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1624E+03 EXCESS= .0000E+00 OUTFLOW= .1624E+03 BASIN STORAGE= .3030E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCCPIC-A	MANE	4.62	1381.62	240.02	1.74	5.00	1381.60	240.00	1.74
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1605E+03 EXCESS= .0000E+00 OUTFLOW= .1606E+03 BASIN STORAGE= .3652E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.41	3386.23	240.41	1.67	5.00	3385.01	240.00	1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4090E+03 EXCESS= .0000E+00 OUTFLOW= .4090E+03 BASIN STORAGE= .8511E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.41	3332.78	240.19	1.64	5.00	3331.47	240.00	1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4023E+03 EXCESS= .0000E+00 OUTFLOW= .4023E+03 BASIN STORAGE= .8673E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.41	3300.98	240.23	1.62	5.00	3299.69	240.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3972E+03 EXCESS= .0000E+00 OUTFLOW= .3972E+03 BASIN STORAGE= .8550E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.42	3268.34	240.29	1.60	5.00	3266.45	240.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3925E+03 EXCESS= .0000E+00 OUTFLOW= .3925E+03 BASIN STORAGE= .8666E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.86	321.59	232.41	1.72	5.00	321.14	235.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4038E+02 EXCESS= .0000E+00 OUTFLOW= .4038E+02 BASIN STORAGE= .2416E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.86	317.07	233.11	1.69	5.00	316.19	235.00	1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3974E+02 EXCESS= .0000E+00 OUTFLOW= .3974E+02 BASIN STORAGE= .2491E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.87	313.47	233.68	1.67	5.00	312.20	235.00	1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3922E+02 EXCESS= .0000E+00 OUTFLOW= .3922E+02 BASIN STORAGE= .2645E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.87	309.58	234.19	1.65	5.00	309.08	235.00	1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3878E+02 EXCESS= .0000E+00 OUTFLOW= .3878E+02 BASIN STORAGE= .2314E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.09	3777.50	240.11	1.67	5.00	3776.55	240.00	1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4662E+03 EXCESS= .0000E+00 OUTFLOW= .4663E+03 BASIN STORAGE= .3361E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.09	3718.29	240.55	1.64	5.00	3717.77	240.00	1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4586E+03 EXCESS= .0000E+00 OUTFLOW= .4586E+03 BASIN STORAGE= .3304E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.10	3681.88	240.39	1.62	5.00	3680.97	240.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4527E+03 EXCESS= .0000E+00 OUTFLOW= .4527E+03 BASIN STORAGE= .3262E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.10	3643.34	240.27	1.60	5.00	3641.35	240.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4474E+03 EXCESS= .0000E+00 OUTFLOW= .4474E+03 BASIN STORAGE= .3442E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.70	269.75	230.17	1.66	5.00	269.04	235.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3133E+02 EXCESS= .0000E+00 OUTFLOW= .3133E+02 BASIN STORAGE= .6744E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.71	265.73	230.86	1.64	5.00	263.62	235.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3080E+02 EXCESS= .0000E+00 OUTFLOW= .3079E+02 BASIN STORAGE= .5792E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.72	262.53	231.42	1.61	5.00	259.40	235.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3038E+02 EXCESS= .0000E+00 OUTFLOW= .3037E+02 BASIN STORAGE= .8073E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.73	259.73	231.92	1.59	5.00	256.08	235.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3002E+02 EXCESS= .0000E+00 OUTFLOW= .3002E+02 BASIN STORAGE= .7345E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.21	125.19	235.38	.86	5.00	125.10	235.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1449E+02 EXCESS= .0000E+00 OUTFLOW= .1449E+02 BASIN STORAGE= .1984E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.21	122.27	235.54	.84	5.00	122.18	235.00	.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1416E+02 EXCESS= .0000E+00 OUTFLOW= .1416E+02 BASIN STORAGE= .2125E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.22	119.97	235.44	.82	5.00	119.87	235.00	.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1389E+02 EXCESS= .0000E+00 OUTFLOW= .1389E+02 BASIN STORAGE= .2130E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.23	117.99	235.21	.81	5.00	117.91	235.00	.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1366E+02 EXCESS= .0000E+00 OUTFLOW= .1366E+02 BASIN STORAGE= .2184E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	252.64	230.00	1.17	5.00	252.64	230.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2937E+02 EXCESS= .0000E+00 OUTFLOW= .2939E+02 BASIN STORAGE= .4414E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	247.98	230.00	1.15	5.00	247.98	230.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2882E+02 EXCESS= .0000E+00 OUTFLOW= .2883E+02 BASIN STORAGE= .4370E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	244.23	230.00	1.13	5.00	244.23	230.00	1.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2838E+02 EXCESS= .0000E+00 OUTFLOW= .2839E+02 BASIN STORAGE= .4334E-02 PERCENT ERROR=									
.1									

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 240.99 230.00 1.12 5.00 240.99 230.00 1.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2799E+02 EXCESS= .0000E+00 OUTFLOW= .2801E+02 BASIN STORAGE= .4301E-02 PERCENT ERROR= -
.1

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

B.5.2 Alta-sdn5

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*****
*
*
*   FLOOD HYDROGRAPH PACKAGE   (HEC-1)
*
*       JUN   1998
*
*       VERSION 4.1
*
*
*
*   RUN DATE   21SEP17   TIME  09:25:34
*
*
*
*****
*****

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X	X	XXXXXXXX	XXXXXX		X
X	X	X	X	X	XX
X	X	X	X		X
XXXXXXXX	XXXX	X		XXXXX	X
X	X	X	X		X
X	X	X	X	X	X
X	X	XXXXXXXX	XXXXXX		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 -AMSK- 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

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1                                     HEC-1 INPUT                                     PAGE  1

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LINE                                ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
                                     *DIAGRAM
*** FREE ***
1      ID      THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
2      ID      TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
3      ID      DOWNSTREAM HOLDING FACILITIES
4      ID
5      ID      MODELED BY VTN, NEVADA SVB/JYA
6      ID      MAY 9, 2017
7      ID
8      ID
9      ID      CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
10     ID      GOWAN WATERSHED (ALL)
11     ID      RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
12     ID      INPUT FILE = ALT1-SDN3.DAT
13     ID      INPUT FILE DATE = MAY 5, 2008
14     ID      DESIGN STORM = 100-YEAR 6-HR STORM
15     ID      STORM DISTRIBUTION = SDN #5
16     ID      MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
17     ID      CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
18     ID      STORM CENTERING = FULL WATERSHED
19     ID
20     ID      REFERENCED HYDROLOGIC MODELS:
21     ID      CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
22     ID      NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
23     ID      RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
24     ID      CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
25     ID      3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
26     ID      CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
27     ID      SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
28     ID      MASTER PLAN UPDATE (G.C. WALLACE 2006)
29     ID      GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
30     ID      (G.C. WALLACE 2007)
31     ID      LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
32     ID      FROM G.C. WALLACE ON JANUARY 31, 2008)
33     ID      US 95/RANCHO FIS RESTUDY (PBS&J 1998)
34     ID      JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
35     ID
36     ID
37     ID      AREA      DARF
38     ID      SQ. MI.
39     ID      12-16      0.832
40     ID      16-20      0.804
41     ID      20-30      0.765
42     ID      30-40      0.725
43     ID      40-50      0.695
44     ID      50-75      0.66
45     ID      75-100     0.62
46     ID
47     ID

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47 ID
 48 ID
 49 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
 50 ID
 51 ID 100-YEAR, 6-HOUR STORM, SDN5
 52 ID
 53 IT 5 0 0 300
 HEC-1 INPUT

1 PAGE 2

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

 54 IO 5 0 0
 55 IN 5 0 0
 56 JR PREC 0.832 0.804 0.765
 *

 57 KK 3-1
 58 KM COMPARE TO MPU BASIN DB54-1 (CURVE NUMBER CHANGED FROM 87.2)
 59 BA 2.22
 60 PB 3.72
 61 PC 0 0.02 0.059 0.08 0.11 0.144 0.15 0.16 0.168 0.171
 62 PC 0.18 0.182 0.187 0.19 0.197 0.202 0.21 0.22 0.23 0.241
 63 PC 0.25 0.259 0.265 0.28 0.29 0.3 0.305 0.309 0.31 0.317
 64 PC 0.321 0.327 0.333 0.346 0.361 0.381 0.408 0.43 0.477 0.514
 65 PC 0.561 0.63 0.71 0.72 0.731 0.752 0.779 0.79 0.795 0.804
 66 PC 0.81 0.82 0.826 0.84 0.859 0.889 0.91 0.938 0.966 0.97
 67 PC 0.974 0.979 0.981 0.983 0.985 0.989 0.99 0.992 0.993 0.996
 68 PC 0.997 0.999 1
 69 LS 0 87.0
 70 UD 0.582
 *

 71 KK R3-1
 72 KM ROUTE R3-1 THROUGH 3-2
 73 KM EXISTING NATURAL WASH
 74 RD 3322 0.092 0.030 0 TRAP 125 0
 *

 75 KK 3-2
 76 KM COMPARE TO MPU BASIN DB54-5 (CURVE NUMBER CHANGED FROM 85.2)
 77 BA 0.226
 78 PB 3.67
 79 LS 0 83.9
 80 UD 0.110
 *

 81 KK CP3.1
 82 KM COMBINE R3-1 AND 3-2
 83 HC 2
 *

 84 KK RCP3.1
 85 KM ROUTE CP3.1 TO CP3.3 THROUGH 3-E VIA
 86 KM (PORTION OF FACILITY APM50059)
 87 RD 7900 0.070 0.013 0 TRAP 125 2
 *

 88 KK 3-D
 89 KM PORTION OF BASINS DB54-6R (PB=3.56)
 90 BA 0.3329
 91 PB 3.56
 92 LS 0 84.6
 93 UD 0.223
 *

1 HEC-1 INPUT PAGE 3

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

 94 KK CP3.3
 95 KM COMBINE 3-D, RCP3.1,
 96 HC 2
 *

 97 KK RCP3.3
 98 KM ROUTE CP3.3 TO CP3.4 THROUGH 3-E VIA A
 99 KM (PORTION OF FACILITY APM50059)
 100 RD 1000 0.070 0.013 0 TRAP 125 2
 *

 101 KK 3-3
 102 KM PORTION OF MPU BASIN DB54-3
 103 BA 0.1737
 104 PB 3.67
 105 LS 0 88.0
 106 UD 0.081
 *

 107 KK R3-3
 108 KM ROUTE R3-3 THROUGH A PORTION OF 3-E TO CP3.2
 109 KM NATURAL WASH
 110 RD 2233 0.054 0.030 0 TRAP 100 0
 *

 111 KK 3-4

112	KM	PORTION OF MPU BASIN DB54-3						
113	BA	0.3457						
114	PB	3.67						
115	LS	0	88.0					
116	UD	0.092						
	*							
117	KK	R3-4						
118	KM	ROUTE R3-4 THROUGH A PORTION OF 3-E TO CP3.2						
119	KM	NATURAL WASH						
120	RD	3300	0.097	0.030	0	TRAP	100	0
	*							
121	KK	3-5						
122	KM	COMPARE TO MPU BASIN DB54-2 (SLIGHTLY LARGER PORTION OF DB54-4)						
123	BA	0.2936						
124	PB	3.66						
125	LS	0	87.7					
126	UD	0.094						
	*							
127	KK	R3-5						
128	KM	ROUTE R3-5 THROUGH A PORTION OF 3-E TO CP3.2						
129	KM	(PORTION OF FACILITY APM50057)						
130	RD	4400	0.068	0.013	0	TRAP	50	2
	*							

1

HEC-1 INPUT

PAGE 4

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

131	KK	CP3.2						
132	KM	COMBINE R3-5 , R3-4 AND R3-3						
133	HC	3						
	*							
134	KK	RCP3.2						
135	KM	ROUTE RCP3.2 THROUGH A PORTION OF 3-E TO CP3.4						
136	KM	(PORTION OF FACILITY APM50057)						
137	RD	5500	0.068	0.013	0	TRAP	50	2
	*							
138	KK	3-E						
139	KM	PORTION OF BASINS DB54-4 (PB=3.60) AND DB54-6R (PB=3.56)						
140	BA	0.5442						
141	PB	3.60						
142	LS	0	85.8					
143	UD	0.238						
	*							
144	KK	CP3.4						
145	KM	COMBINE 3-E, RCP3.2 AND RCP3.3						
146	HC	3						
	*							
147	KK	RCP3.4						
148	KM	ROUTE RCP3.4 THROUGH A PORTION OF 3-N TO CPDB3						
149	KM	(FACILITIES APM50056, APM50047 AND APM50008)						
150	RD	3365	0.052	0.013	0	TRAP	80	2
	*							
151	KK	3-6						
152	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4						
153	BA	0.0887						
154	PB	3.61						
155	LS	0	88.0					
156	UD	0.074						
	*							
157	KK	R3-6						
158	KM	ROUTE 3-6 THROUGH A PORTION OF 3-J AND A PORTION OF 3-K TO CP3.5						
159	KM	EXISTING NATURAL WASHES						
160	RD	4500	0.080	0.030	0	TRAP	100	0
	*							
161	KK	3-7						
162	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4						
163	BA	0.1714						
164	PB	3.61						
165	LS	0	87.2					
166	UD	0.048						
	*							

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PAGE 5

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

167	KK	R3-7						
168	KM	ROUTE 3-7 THROUGH A PORTION OF 3-K TO CP3.5						
169	KM	PORTION OF FACILITY ID APM50213						
170	RD	4340	0.073	0.013	0	TRAP	50	2
	*							
171	KK	3-J						
172	KM	PORTION OF MPU BASIN DB55-4						

173	BA	0.1529						
174	PB	3.58						
175	LS	0	78.6					
176	UD	0.168						
	*							
177	KK	R3-J						
178	KM	ROUTE 3-J THROUGH A PORTION OF 3-K TO CP3.5						
179	KM	NATURAL WASHES						
180	RD	2700	0.074	0.030	0	TRAP	100	0
	*							
181	KK	CP3.5						
182	KM	COMBINE R3-J, R3-7 AND R3-6						
183	HC	3						
	*							
184	KK	RCP3.5						
185	KM	ROUTE CP3.5 THROUGH A PORTION OF 3-K TO CP3.6						
186	KM	PORTION OF FACILITY ID APM50213						
187	RD	2100	0.073	0.013	0	TRAP	50	2
	*							
188	KK	3-8						
189	KM	COMPARE TO MPU BASIN DB55-1						
190	BA	0.6386						
191	PB	3.68						
192	LS	0	87.8					
193	UD	0.196						
	*							
194	KK	R3-8						
195	KM	ROUTE 3-8 THROUGH A PORTION OF 3-K TO CP3.6						
196	KM	FACILITY ID APM50212						
197	RD	6695	0.075	0.013	0	TRAP	30	2
	*							
198	KK	3-K						
199	KM	COMPARE TO MPU BASIN DB55-7						
200	BA	0.8890						
201	PB	3.54						
202	LS	0	87.6					
203	UD	0.296						
	*							

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PAGE 6

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
204	KK CP3.6
205	KM COMBINE 3-K, R3-8 AND RCP3.5
206	HC 3
	*
207	KK RCP3.6
208	KM ROUTE CP3.6 THROUGH A PORTION OF 3-N TO CPDB3
209	KM FACILITY ID APM500009
210	RD 4180 0.058 0.013 0 TRAP 50 2
	*
211	KK 3-N
212	KM COMPARE TO MPU BASIN DB55-8
213	BA 0.4557
214	PB 3.46
215	LS 0 88.9
216	UD 0.269
	*
217	KK 3-M
218	KM COMPARE TO MPU BASIN DB55-8
219	BA 0.1924
220	PB 3.46
221	LS 0 88.8
222	UD 0.147
	*
223	KK R3-M
224	KM ROUTE 3-M THROUGH A PORTION OF 3-N TO CP3.7
225	KM FACILITY ID PORTION OF APM500009
226	RD 4500 0.0528 0.013 0 TRAP 7 0
	*
227	KK CPDB5
228	KM COMBINE 3-M, 3-N, RCP3.6 AND RCP3.4
229	KM TOTAL INFLOW TO SUMMERLIN #5 DETENTION BASIN
230	KO 0
231	HC 4
	*
232	KK DB5
233	KM SUMMERLIN DETENTION BASIN 5
234	KM FACILITY = ANGEL PARK - MIDDLE 5 BRANCH
235	KM FACILITY # = APM5 0000
236	KM STORAGE VOLUME = 384.1 ACRE-FEET
237	KM OUTLET = 2: 7' x 5.5' RCBS

238 KM 100-YEAR DISCHARGE = 2,150 CFS
 239 KM SPILLWAY LENGTH = 453.6'
 240 KM SPILLWAY HEIGHT =
 241 KM SPILLWAY CREST ELEVATION = 3563'
 242 KM SPILLWAY TYPE = CONCRETE BROAD CRESTED WEIR
 243 KM PMF DISCHARGE = 12,153 CFS
 244 KM TOP OF EMBANKMENT ELEVATION = 3569'
 245 KM DETENTION BASIN PARAMETERS REFERENCED FROM "DETENTION BASIN NO. 5
 HEC-1 INPUT

1 PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 246 KM EXPANSION AND DIVERSION BERM" PLANS BY G.C. WALLACE (5-23-2001)
 247 KM STAGE-STORAGE-DISCHARGE CURVE REFERENCED FROM "2006 SUMMERLIN WEST
 248 KM CONCEPTUAL DRAINAGE STUDY MASTER PLAN AMENDMENT: EXISTING OFFSITE/PROPOSED
 249 KM ONSITE DRAINAGE CONDITION" HYDROLOGIC MODEL DATED 8-7-2006 AND SUBMITTED
 250 KM WITH THE SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
 251 KM CONTROL MASTER PLAN UPDATE BY G.C. WALLACE (08-2006)
 252 KO 0
 253 RS 1 STOR -1
 254 SV 0 1.73 4.55 8.45 13.08 18.2 23.81 29.96 36.7 43.93
 255 SV 59.55 77.49 99.82 127.17 159.39 196.38 240.07 384.05 405.65 535.25
 256 SQ 0 192 276 391 505 616 725 813 900 982
 257 SQ 1176 1368 1534 1683 1804 1920 2033 2315 3725 23201
 258 SE 3532.5 3535 3536 3537 3538 3539 3540 3541 3542 3543
 259 SE 3543 3547 3549 3551 3553 3555 3557 3563 3564 3569
 260 SS 3563 435.6 3 1.5
 *
 261 KK 3-L
 262 KM COMPARE TO MPU BASIN SWAA-1
 263 BA 0.3227
 264 PB 3.44
 265 LS 0 88.4
 266 UD 0.160
 *
 267 KK CP3-L
 268 KM COMBINE 3-L AND DB3
 269 KM THIS IS CSWAA-1 IN GOWAN MPU HEC-1
 270 HC 2
 *
 * END OF SECTION MODELED BY VTN, NEVADA SVB
 * TIE VTN SECTION TO 2008 MPU HEC-1
 *
 271 KKRCSWAA-1
 272 KM ROUTE CSWAA-1 TO CSWAA-2
 273 KM FACILITY = ANGEL PARK - ALTA DRIVE
 274 KM FACILITY # = APAD 0115, 0146
 275 KM LINING = RCB
 276 RD 4640 0.044 0.015 0 TRAP 10 0
 *
 277 KK SWAA-2
 278 BA 0.700
 279 PB 3.39
 280 LS 0 90.9
 281 UD 0.346
 *
 282 KK CSWAA-2
 283 KM COMBINE RCSWAA-1 AND SWAA-2
 284 HC 2
 *

1 HEC-1 INPUT PAGE 8

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 285 KKRCSWAA-2
 286 KM ROUTE CSWAA-2 TO CSWAA-3
 287 KM FACILITY = ANGEL PARK - ALTA DRIVE
 288 KM FACILITY # = APAD 0000, 0018, 0044, 0073
 289 KM LINING = RCB
 290 RD 6120 0.035 0.015 0 TRAP 11 0
 *
 291 KK SWAA-3
 292 BA 0.581
 293 PB 3.31
 294 LS 0 87.8
 295 UD 0.361
 *
 296 KK CSWAA-3
 297 KM COMBINE RCSWAA-2 AND SWAA-3
 298 HC 2
 *
 * THE FOLLOWING SECTION OF HYDROLOGY IS NOT PART OF THE 2008 MPU
 * THIS SECTION IS MODELED BASED ON THE 2017 CONDITION OF THE SUMMERLIN MASTER PL
 * MODELED BY VTN, NEVADA SVB
 *
 *

299 KK 3-F
 300 KM COMPARE TO MPU BASIN SWFH-5
 301 BA 0.2815
 302 PB 3.50
 303 LS 0 88.9
 304 UD 0.152
 *
 305 KK R3-F
 306 KM ROUTE 3-F THROUGH 3-G2 TO CP3.8
 307 KM LINING RCB
 308 RD 2650 0.055 0.013 0 TRAP 6 0
 *
 309 KK 3-G2
 310 KM COMPARE TO MPU BASIN SWFH-6
 311 BA 0.1285
 312 PB 3.46
 313 LS 0 93.2
 314 UD 0.107
 *
 315 KK CP3.8
 316 KM COMBINES 3-F AND 3-G2
 317 HC 2
 *

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

318 KK RCP3.8
 319 KM ROUTE CP3.8 TO CP3.9
 320 KM FACILITIES APD6000 AND APDF0000
 321 RD 4500 0.075 0.013 0 TRAP 12 0
 *
 322 KK 3-A
 323 KM COMPARE TO MPU BASIN SWFH-1
 324 BA 0.3392
 325 PB 3.57
 326 LS 0 80.8
 327 UD 0.234
 *
 328 KK R3-A
 329 KM ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
 330 RD 3000 0.032 0.013 0 TRAP 5 0
 *
 331 KK 3-B
 332 KM COMPARE TO MPU BASIN SWFH-1
 333 BA 0.6973
 334 PB 3.57
 335 LS 0 83.1
 336 UD 0.274
 *
 337 KK R3-B
 338 KM ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
 339 RD 3000 0.024 0.013 0 TRAP 5 0
 *
 340 KK 3-C
 341 KM COMPARE TO MPU BASIN SWFH-2
 342 BA 0.2212
 343 PB 3.49
 344 LS 0 88.4
 345 UD 0.200
 *
 346 KK CPDBA-B
 347 KO 0
 348 KM COMBINE 3-A, 3-B, AND 3-C
 349 KM PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
 350 HC 3
 *
 351 KK GPDB
 352 KM VILLAGE 22 DETENTION BASIN
 353 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
 354 KM FACILITY # = 0001
 355 KM STORAGE VOLUME = 123 AC-FT
 356 KM OUTLET = 60" RCP
 357 KM 100-YEAR DISCHARGE =

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

358 KM SPILLWAY LENGTH = 1053'
 359 KM SPILLWAY HEIGHT =
 360 KM SPILLWAY CREST ELEVATION = 1007.9'
 361 KM SPILLWAY TYPE =
 362 KM PMF DISCHARGE =
 363 KM TOP OF EMBANKMENT ELEVATION =

364 KM INFORMATION REFERENCED FROM "SUMMERLIN VILLAGE 26 ULTIMATE/PROPOSED
 365 KM CONDITIONS" HYDRAOLOGIC MODEL BY G.C. WALLACE INC. (9-5-06)
 366 KM ELEVATIONS WITHIN THE STAGE-STORAGE-DISCHARGE CURVE WERE REDUCED BY 1000'
 367 KM IN ORDER FOR THE HYDROLOGIC MODEL TO RUN
 368 KO 3
 369 RS 1 STOR 0
 370 SV 6.54 12.78 19.92 28.03 37.17 46.61 59.93 75.75 94.29 115.85
 371 SV 129.61
 372 SE 10 12 14 16 18 20 22 24 26 28
 373 SE 30
 374 SQ 0 26.06 58.28 78.18 93.97 107.45 119.43 130.31 140.35 149.71
 375 SQ 158.53
 *

376 KK 3-G1
 377 KM COMPARE TO MPU BASIN SWFH-6
 378 BA 0.2406
 379 PB 3.46
 380 LS 0 90
 381 UD 0.131
 *

382 KK R3-G1
 383 KM ROUTE 3-G1 TO CP3-G1
 384 KM LINING RCB
 385 RD 1000 0.044 0.013 0 TRAP 6 0
 *

386 KK CP3-G1
 387 KM COMBINE 3-G1, AND GPDB
 388 HC 2
 *

389 KK RCP3-G1
 390 KM ROUTE 3P3-G1 TO CP3-H1
 391 KM LINING RCB
 392 RD 2603 0.044 0.013 0 TRAP 8 0
 *

393 KK 3-H1
 394 KM COMPARE TO MPU BASIN SWFH-9
 395 BA 0.0429
 396 PB 3.33
 397 LS 0 90.7
 398 UD 0.088
 *

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

399 KK CP3-H1
 400 KM COMBINE RCP3-G1, AND 3-H1
 401 HC 2
 *

402 KK RCP3-H1
 403 KM ROUTE CP3-H1 TO CP3.9
 404 KM LINING RCB
 405 RD 3510 0.044 0.013 0 TRAP 8 0
 *

406 KK 3-I1
 407 KM COMPARE TO MPU BASIN SWFH-7
 408 BA 0.2934
 409 PB 3.41
 410 LS 0 88.8
 411 UD 0.209
 *

412 KK CP3.9
 413 KM COMBINE CP3.8, CP3-H1 AND C-I1
 414 HC 3
 *

415 KK RCP9
 416 KM ROUTE CP3.9 TO CP3.10
 417 RD 2390 0.027 0.013 0 TRAP 6 0
 *

418 KK 3-O
 419 KM COMPARE TO MPU BASIN SV22-2
 420 BA 0.1124
 421 PB 3.46
 422 LS 0 92.6
 423 UD 0.123
 *

424 KK R3-O
 425 KM ROUTE 3-O TO CP3-P
 426 KM LINING RCB
 427 RD 3260 0.028 0.013 0 TRAP 4 0
 *

428 KK 3-P2

429 KM COMPARE TO MPU BASIN SV22-2
430 BA 0.1466
431 PB 3.46
432 LS 0 87.1
433 UD 0.148
*

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

434 KK R3-P2
435 KM ROUTE 3-P2 TO CP3-P
436 KM LINING RCB
437 RD 3260 0.028 0.013 0 TRAP 4 0
*

438 KK 3-P1
439 KM COMPARE TO MPU BASIN SV22-2
440 BA 0.2441
441 PB 3.46
442 LS 0 92.0
443 UD 0.117
*

444 KK CP3-P
445 HC 3
*

446 KK RCP3-P
447 KM ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q
448 RD 2750 0.033 0.013 0 TRAP 10 0
*

449 KK 3-Q
450 KM COMPARE TO MPU BASIN SV22-2
451 BA 0.1974
452 PB 3.46
453 LS 0 92.8
454 UD 0.162
*

455 KK CP3-Q
456 KM COMBINES CP3-P AND 3-Q
457 HC 2
*

458 KK RCP3-Q
459 KM ROUTE CP3-Q THROUGH STORM DRAIN TO CP3-H2
460 KM LINING RCB
461 RD 3000 0.015 0.013 0 TRAP 20 0
*

462 KK 3-H2
463 BA 0.1834
464 PB 3.33
465 LS 0 92.7
466 UD 0.134
*

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

467 KK CP3-H2
468 HC 2
*

469 KK RCPH-2
470 KM ROUTE CP3-H2 TO CP3.10
471 KM LINING RCB
472 RD 1725 0.019 0.013 0 TRAP 20 0
*

473 KK 3-I2
474 KM COMPARE TO MPU BASIN SWFH-7
475 BA 0.1185
476 PB 3.41
477 LS 0 90.5
478 UD 0.205
*

479 KK CP3.10
480 KM COMBINE CP3.9, CP3-H2, 3-I2
481 HC 3
*

482 KK RCP3.10
483 KM ROUTE CP3.10 TO CP3.11
484 KM FACILITIES APFH0000
485 KM LINING RCB
486 RD 1000 0.0350 0.013 0 TRAP 16 0
*

487 KK 3-H3

488 KM COMPARE TO MPU BASIN SWFH-9
489 BA 0.1403
490 PB 3.33
491 LS 0 94.3
492 UD 0.206
*

493 KK CP3.11
494 KM COMBINE 3-H3 AND RCP3.10
495 KM THIS IS CSWFH-9 IN 2008 MPU HEC-1
496 HC 2
*
* END OF SECTION MODELED BY VTN, NEVADA
* TIE VTN SECTION TO 2008 MPU HEC-1
*

497 KKRCSHFH-9
498 KM ROUTE CSWFH-9 TO CRCSWFH9
499 KM FACILITY = ANGEL PARK - BELTWAY BRANCH
500 KM FACILITY # = APBE 0000, 0013, 0022, 0051
501 KM LINING = CONCRETE
502 RD 4338 0.0181 0.015 0 TRAP 20 2
*

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

503 KKCRCSWFH9
504 KM COMBINE RCSWFH9 AND CSWAA-3
505 HC 2
*
* END OF G.C. WALLACE'S HYDROLOGIC MODEL
*

506 KKRCRCSWFH
507 KM ROUTE CRCSWFH9 TO C11A-1
508 KM FACILITY = ANGEL PARK MIDDLE BRANCH
509 KM FACILITY # = APMD 0230,0233,0237,0247,0248,0253,0258
510 KM LINING = CONCRETE
511 RD 1418 0.04 0.015 0 TRAP 76 2
*

512 KK 11A-1
513 BA 0.208
514 PB 3.25
515 LS 0 85.3
516 UD 0.292
*

517 KK C11A-1
518 KM COMBINE RCRCSWFH AND 11A-1
519 KM ANGEL PARK MIDDLE BRANCH @ PAVILLION CENTER DRIVE
520 HC 2
*

521 KK RC11A-1
522 KM ROUTE C11A-1 TO C11A-3
523 KM FACILITY = ANGEL PARK MIDDLE BRANCH
524 KM FACILITY # = APMD 0190,0195,0198,0208,0218,0227
525 KM LINING = CONCRETE
526 RD 2065 0.0281 0.015 0 TRAP 62 2
*

527 KK 11A-3
528 BA 0.195
529 PB 3.21
530 LS 0 89.3
531 UD 0.229
*

532 KK C11A-3
533 KM COMBINE RC11A-1 AND 11A-3
534 KM ANGEL PARK MIDDLE BRANCH @ TOWN CENTER DRIVE
535 HC 2
*

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

536 KK RC11A-3
537 KM ROUTE C11A-3 TO C3A
538 KM FACILITY = ANGEL PARK MIDDLE BRANCH
539 KM FACILITY # = APMD 0132, 0133
540 KM LENGTH = 3,164
541 KM SLOPE = 3.0%
542 KM N = 0.040
543 KM HYDRAULIC RADIUS = 1.5
544 KM VELOCITY = 13.5
545 KM NATURAL WASH
546 RM 1 0.065 0.15
*

547 KK 3A

548 BA 0.178
 549 PB 3.15
 550 LS 0 84.0
 551 UD 0.244
 *
 552 KK C3A
 553 KM COMBINE RCC11A-3 AND 3A
 554 KM ANGEL PARK MIDDLE BRANCH @ HUALAPAI WAY
 555 HC 2
 *
 556 KK RC3A
 557 KM ROUTE C3A TO C3B-1
 558 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 559 KM FACILITY # = APMD 0027, 0030
 560 KM LENGTH = 6,500
 561 KM SLOPE = 3.0%
 562 KM N = 0.040
 563 KM HYDRAULIC RADIUS = 1.5
 564 KM VELOCITY = 13.5
 565 KM NATURAL WASH
 566 RM 2 0.133 0.15
 *
 567 KK 3B-1
 568 BA 0.258
 569 PB 3.04
 570 LS 0 82.0
 571 UD 0.257
 *
 572 KK C3B-1
 573 KM COMBINE RC3A AND 3B-1
 574 HC 2
 *

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PAGE 16

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

575 KK RC3B-1
 576 KM ROUTE C3B-1 TO CC3B-2B
 577 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 578 KM FACILITY # = APMD 0000,0027,0030
 579 KM LINING = UNLINED
 580 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 581 RD 940 0.029 0.04 0 TRAP 100 3
 *
 582 KK 11B-2
 583 BA 0.441
 584 PB 3.25
 585 LS 0 85.7
 586 UD 0.423
 *
 587 KK R11B-2
 588 KM ROUTE 11B-2 TO C11B-1
 589 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 590 KM FACILITY # = APSP 0177,0183
 591 KM LINING = CONCRETE
 592 RD 1900 0.017 0.015 0 TRAP 10 2
 *
 593 KK 11B-1
 594 BA 0.394
 595 PB 3.26
 596 LS 0 87.2
 597 UD 0.267
 *
 598 KK C11B-1
 599 KM COMBINE R11B-2 AND 11B-1
 600 KM ANGEL PARK-SUMMERLIN PARKWAY @ ANASAZI DRIVE
 601 HC 2
 *
 602 KK RC11B-1
 603 KM ROUTE C11B-1 TO C8B-1
 604 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 605 KM FACILITY # = APSP 0135,0177
 606 KM LINING = CONCRETE
 607 RD 2150 0.024 0.015 0 TRAP 10 2
 *
 608 KK 8B-1
 609 BA 0.304
 610 PB 3.17
 611 LS 0 87.8
 612 UD 0.288
 *

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PAGE 17

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

613 KK C8B-1
 614 KM COMBINE RC11B-1 AND 8B-1
 615 KM ANGEL PARK-SUMMERLIN PARKWAY @ CRESTDALE DRIVE
 616 HC 2
 *
 617 KK RC8B-1
 618 KM ROUTE C8B-1 TO C8B-2
 619 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 620 KM FACILITY # = APSP 0066,0069,0133
 621 KM LINING = CONCRETE
 622 RD 3575 0.024 0.015 0 TRAP 10 2
 *
 623 KK 8B-2
 624 BA 0.420
 625 PB 3.10
 626 LS 0 93.7
 627 UD 0.336
 *
 628 KK C8B-2
 629 KM COMBINE 8B-2 AND RC8B-1
 630 KM ANGEL PARK-SUMMERLIN PARKWAY @ TOWN CENTER DRIVE
 631 HC 2
 *
 632 KK RC8B-2
 633 KM ROUTE C8B-2 TO CC3B-2A
 634 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 635 KM FACILITY # = APSP 0002
 636 KM LINING = UNLINED
 637 RD 1424 0.035 0.025 0 TRAP 50 3
 *
 638 KK 11A-2
 639 BA 0.290
 640 PB 3.20
 641 LS 0 88.3
 642 UD 0.194
 *
 643 KK R11A-2
 644 KM ROUTE 11A-2 TO C8A
 645 KM TOWN CENTER DRIVE AND HUALAPAI WAY
 646 RD 2900 0.017 0.016 0 TRAP 0 50
 *
 647 KK 8A
 648 BA 0.306
 649 PB 3.16
 650 LS 0 86.0
 651 UD 0.239
 *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 652 KK C8A
 653 KM COMBINE 8A AND R11A-2
 654 HC 2
 *
 655 KK RC8A
 656 KM ROUTE C8A TO C3B-2A
 657 KM NATURAL WASH
 658 KM TRAVEL LENGTH = 4,500
 659 KM SLOPE = 2.8%
 660 KM N = 0.040
 661 KM HYDRAULIC RADIUS = 1.5
 662 KM VELOCITY = 13.1
 663 RM 1 0.096 0.15
 *
 664 KK 3B-2A
 665 BA 0.243
 666 PB 3.06
 667 LS 0 88.5
 668 UD 0.213
 *
 669 KK C3B-2A
 670 KM COMBINE 3B-2A AND RC8A
 671 HC 2
 *
 672 KK CC3B-2A
 673 KM COMBINE C3B-2A AND RC8B-2
 674 HC 2
 *
 675 KKRC3B-2A

676 KM ROUTE CC3B-2A TO C3B-2B
 677 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 678 KM FACILITY # = APSP 0001
 679 KM LINING = UNLINED
 680 RD 3924 0.03 0.025 0 TRAP 20 2
 *
 681 KK 3B-2B
 682 BA 0.273
 683 PB 2.99
 684 LS 0 85.1
 685 UD 0.309
 *
 686 KK C3B-2B
 687 KM COMBINE RCC3B-2A AND 3B-2B
 688 HC 2
 *

1

HEC-1 INPUT

PAGE 19

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

689 KK CC3B-2B
 690 KM COMBINE RC3B-1 AND C3B-2B
 691 HC 2
 *
 692 KK RCC3B-2B
 693 KM ROUTE CC3B-2B TO CSF2-C
 694 KM FACILITY = ANGEL PARK NORTH
 695 KM FACILITY # = APNO 0012,0013,0015 APSP 0000
 696 KM LINING = UNLINED (NATURAL WASH)
 697 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 698 RD 1854 0.025 0.04 0 TRAP 100 3
 *
 699 KK SF2-C
 700 BA 0.388
 701 PB 2.91
 702 LS 0 84.2
 703 UD 0.443
 *
 704 KK CSF2-C
 705 KM COMBINE SF2-C AND RCC3B-2B
 706 HC 2
 *
 707 KK RCSF2-C
 708 KM ROUTE CSF2-C TO ANGLPKIN
 709 KM FACILITY = ANGEL PARK NORTH
 710 KM FACILITY # = APNO 0005
 711 KM LINING = UNLINED (NATURAL WASH)
 712 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 713 RD 1559 0.02 0.04 0 TRAP 100 3
 *
 714 KK SW11
 715 BA 0.589
 716 PB 3.34
 717 LS 0 87.8
 718 UD 0.311
 *
 719 KK RSW11
 720 KM ROUTE SW11 TO CSW17
 721 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 722 KM FACILITY # = APCB 0064, 0080
 723 KM LINING = RCB
 724 RD 2338 0.0167 0.015 0 TRAP 7 0
 *

1

HEC-1 INPUT

PAGE 20

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

725 KK SW17
 726 BA 0.356
 727 PB 3.30
 728 LS 0 87.8
 729 UD 0.271
 *
 730 KK CSW17
 731 KM COMBINE RSW11 AND SW17
 732 HC 2
 *
 733 KK RCSW17
 734 KM ROUTE CSW17 TO CSW18
 735 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 736 KM FACILITY # = APCB 0000,0001,0019,0050
 737 KM LINING = RCB
 738 RD 3600 0.014 0.015 0 TRAP 11 0

```

*
739      KK      SW18
740      BA      0.405
741      PB      3.27
742      LS      0      86.8
743      UD      0.271
*

744      KK      CSW18
745      KM      COMBINE RCSW17 AND SW18
746      HC      2
*

747      KK      RCSW18
748      KM      ROUTE CSW18 TO C12A
749      KM      FACILITY = ANGEL PARK SOUTH
750      KM      FACILITY # = APSO 0254,0255,0258,0345,0346; APCB 0000
751      KM      NATURAL WASH
752      KM      LENGTH = 5,200
753      KM      SLOPE = 1.4%
754      KM      N = 0.040
755      KM      HYDRAULIC RADIUS = 1.5
756      KM      VELOCITY = 9.2
757      RM      2      0.157      0.15
*

758      KK      12A
759      BA      0.392
760      PB      3.20
761      LS      0      91.2
762      UD      0.264
*

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HEC-1 INPUT

PAGE 21

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

```

763      KK      C12A
764      KM      COMBINE 12A AND RCSW18
765      HC      2
*

766      KK      RC12A
767      KM      ROUTE THRU 12B
768      KM      FACILITY = ANGEL PARK SOUTH
769      KM      FACILITY # = APSO 0204, 0205
770      KM      NATURAL WASH
771      KM      LENGTH = 2,600
772      KM      SLOPE = 3.5%
773      KM      N = 0.040
774      KM      HYDRAULIC RADIUS = 1.5
775      KM      VELOCITY = 14.5
776      RM      1      0.05      0.15
*

777      KK      12B
778      BA      0.260
779      PB      3.13
780      LS      0      91.0
781      UD      0.233
*

782      KK      C12B
783      KM      COMBINE 12B AND RC12A
784      HC      2
*

785      KK      RC12B
786      KM      ROUTE C12B TO C57B-3
787      KM      FACILITY = ANGEL PARK SOUTH
788      KM      FACILITY # = APSO 0067
789      KM      NATURAL WASH
790      KM      LENGTH = 6,000
791      KM      SLOPE = 2.3%
792      KM      N = 0.040
793      KM      HYDRAULIC RADIUS = 1.5
794      KM      VELOCITY = 11.8
795      RM      2      0.141      0.15
*

796      KK      57B-3
797      BA      0.310
798      PB      3.04
799      LS      0      82.1
800      UD      0.332
*

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HEC-1 INPUT

PAGE 22

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

```

801      KK      C57B-3
802      KM      COMBINE RC12B AND 57B-3
803      HC      2

```

*
 804 KK RC57B-3
 805 KM ROUTE C57B-3 TO C57B-2
 806 KM FACILITY = ANGEL PARK SOUTH
 807 KM FACILITY # = APSO 0067
 808 KM NATURAL WASH
 809 KM LENGTH = 1,300
 810 KM SLOPE = 1.7%
 811 KM N = 0.040
 812 KM HYDRAULIC RADIUS = 1.5
 813 KM VELOCITY = 10.2
 814 RM 0 0.035 0.15
 *

815 KK 57B-2
 816 BA 0.362
 817 PB 3.02
 818 LS 0 84.1
 819 UD 0.332
 *

820 KK C57B-2
 821 KM COMBINE 57B-2 AND RC57B-3
 822 HC 2
 *

823 KK RC57B-2
 824 KM ROUTE C57B-2 TO CC57B-1
 825 KM FACILITY = ANGEL PARK SOUTH
 826 KM FACILITY # = APSO 0067
 827 KM NATURAL WASH
 828 KM LENGTH = 1,000
 829 KM SLOPE = 1.8%
 830 KM N = 0.040
 831 KM HYDRAULIC RADIUS = 1.5
 832 KM VELOCITY = 10.5
 833 RM 0 0.027 0.15
 *

834 KK 13B-1
 835 BA 0.249
 836 PB 3.19
 837 LS 0 91.6
 838 UD 0.284
 *

1

HEC-1 INPUT

PAGE 23

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

839 KK RC13B-1
 840 KM ROUTE 13B-1 TO C13B-2
 841 KM GRIFFITH PARK DRIVE AND HUALAPAI WAY
 842 RD 3000 0.018 0.016 0 TRAP 0 50
 *

843 KK 13B-2
 844 BA 0.216
 845 PB 3.14
 846 LS 0 89.7
 847 UD 0.231
 *

848 KK C13B-2
 849 KM COMBINE 13B-2 AND RC13B-1
 850 KM HUALAPAI WAY AND LOCAL FACILITY
 851 HC 2
 *

852 KK RC13B-2
 853 KM ROUTE C13B-2 TO CCPIC-A
 854 KM LINING = GRASS
 855 RD 4900 0.021 0.03 0 TRAP 40 6
 *

856 KK 19A
 857 BA 0.253
 858 PB 3.25
 859 LS 0 89.9
 860 UD 0.351
 *

861 KK R19A
 862 KM ROUTE 19A TO C13A-1
 863 KM UNNAMED ROAD
 864 RD 4300 0.021 0.016 0 TRAP 0 50
 *

865 KK 13A-1
 866 BA 0.224
 867 PB 3.19
 868 LS 0 91.4
 869 UD 0.302
 *

870 KK C13A-1
871 KM COMBINE 13A-1 AND R19A
872 KM TOWN CENTER DRIVE AND SWALE
873 HC 2
*

1

HEC-1 INPUT

PAGE 24

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

874 KK RC13A-1
875 KM ROUTE C13A-1 TO C13A-2
876 KM NATURAL WASH
877 KM TRAVEL LENGTH = 2,800
878 KM SLOPE = 2.1%
879 KM N = 0.040
880 KM HYDRAULIC RADIUS = 1.5
881 KM VELOCITY = 11.4
882 RM 1 0.068 0.15
*

883 KK 13A-2
884 BA 0.188
885 PB 3.15
886 LS 0 90.0
887 UD 0.236
*

888 KK C13A-2
889 KM COMBINE 13A-2 AND RC13A-1
890 HC 2
*

891 KK RC13A-2
892 KM ROUTE C13A-2 TO CPIC-C
893 KM LINING = GRASS
894 RD 5200 0.015 0.03 0 TRAP 40 4
*

895 KK PIC-C
896 BA 0.243
897 PB 3.08
898 LS 0 90.4
899 UD 0.373
*

900 KK CPIC-C
901 KM COMBINE PIC-C AND RC13A-2
902 HC 2
*

903 KK RCPIC-C
904 KM ROUTE CPIC-C TO CPIC-A
905 KM LINING = GRASS
906 RD 2200 0.025 0.03 0 TRAP 40 4
*

907 KK PIC-A
908 BA 0.359
909 PB 3.03
910 LS 0 91.1
911 UD 0.499
*

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HEC-1 INPUT

PAGE 25

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

912 KK CPIC-A
913 KM COMBINE RCPIC-C AND PIC-A
914 HC 2
*

915 KK CCPIC-A
916 KM COMBINE CPIC-A AND RC13B-2
917 HC 2
*

918 KK RCPIC-A
919 KM ROUTE CCPIC-A TO C57B-1
920 KM FACILITY = ANGEL PARK - PECCOLE 2
921 KM FACILITY # = APP2 0000
922 KM LINING = GRASS
923 RD 4793 0.021 0.03 0 TRAP 10 2
*

924 KK 57B-1
925 BA 0.197
926 PB 2.92
927 LS 0 85.5
928 UD 0.277
*

929 KK C57B-1

930 KM COMBINE 57B-1 AND RCCPIC-A
 931 HC 2
 *

 932 KK CC57B-1
 933 KM COMBINE C57B-1 AND RC57B-2
 934 HC 2
 *

 935 KKRCC57B-1
 936 KM ROUTE CC57B-1 TO C57B-4
 937 KM FACILITY = ANGEL PARK - SOUTH BRANCH
 938 KM FACILITY # = APSO 0050
 939 KM LINING = NATURAL WASH
 940 RD 300 0.0184 0.04 0 TRAP 100 3
 *

 941 KK 57B-4
 942 BA 0.200
 943 PB 2.91
 944 LS 0 90.0
 945 UD 0.233
 *

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HEC-1 INPUT

PAGE 26

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

946 KK C57B-4
 947 KM COMBINE RCC57B-1 AND 57B-4
 948 HC 2
 *

 949 KK PIC-B
 950 BA 0.441
 951 PB 2.98
 952 LS 0 91.1
 953 UD 0.471
 *

 954 KK RPIC-B
 955 KM ROUTE PIC-B TO CC57B-4
 956 KM FACILITY = ANGEL PARK - PECCOLE 1
 957 KM FACILITY # = APP1 0000
 958 KM LINING = RCP
 959 RD 2982 0.024 0.013 0 CIRC 6
 *

 960 KK CC57B-4
 961 KM COMBINE RPIC-B AND C57B-4
 962 HC 2
 *

 963 KKRCC57B-4
 964 KM ROUTE CC57B-4 TO ANGLPKIN
 965 KM FACILITY = ANGEL PARK SOUTH
 966 KM FACILITY # = APSO 0000, 0020
 967 KM LINING = RCB
 968 RD 2857 0.0162 0.015 0 TRAP 24 0
 *

 969 KK 38A
 970 BA 0.353
 971 PB 2.86
 972 LS 0 91.6
 973 UD 0.399
 *

 974 KK R38A
 975 KM ROUTE 38A TO C38B
 976 KM FACILITY = ANGEL PARK - DURANGO
 977 KM FACILITY # = APDG 0000,0060
 978 KM LINING = RCP
 979 RD 4500 0.0096 0.015 0 CIRC 6
 *

 980 KK 38B
 981 BA 0.440
 982 PB 2.82
 983 LS 0 92.9
 984 UD 0.375
 *

1

HEC-1 INPUT

PAGE 27

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

985 KK C38B
 986 KM COMBINE 38B AND R38A
 987 KM DUCHARME AND DURANGO
 988 HC 2
 *

 989 KK 57BA
 990 BA 0.317

```

991      PB      2.96
992      LS           0      78.2
993      UD      0.436
          *

994      KK      R57BA
995      KM      ROUTE 57BA TO C3C
996      KM      RAMPART BOULEVARD
997      RD      500      0.02      0.016      0      TRAP      0      50
          *

998      KK      3C
999      BA      0.153
1000     PB      2.90
1001     LS           0      93.1
1002     UD      0.246
          *

1003     KK      C3C
1004     KM      COMBINE 3C AND R57BA
1005     KM      RAMPART AND REGENT LAS VEGAS
1006     HC      2
          *

1007     KK      RC3C
1008     KM      ROUTE C3C TO ANGLPKIN
1009     KM      LINING = UNLINED
1010     KM      CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
1011     RD      2300      0.0326      0.04      0      TRAP      50      4
          *

1012     KK      AP
1013     BA      0.668
1014     PB      2.81
1015     LS           0      81.6
1016     UD      0.392
          *

1017     KKANGLPKIN
1018     KM      COMBINE AP,RC3C,C38B,RCC57B-4, AND RCSF2-2
1019     KM      TOTAL INFLOW TO ANGEL PARK DETENTION BASIN
1020     KO      1
1021     HC      5
          *

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1

HEC-1 INPUT

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

1022     KKANGLPKDB
1023     KM      ANGEL PARK DETENTION BASIN
1024     KM      FACILITY = ANGEL PARK NORTH
1025     KM      FACILITY # = APNO 0000,0001
1026     KM      STORAGE VOLUME = 1512 AC-FT (2002 MPU VOLUME = 1400 AC-FT; 8% INCREASE)
1027     KM      OUTLET = 54" RCP
1028     KM      100-YEAR DISCHARGE =
1029     KM      SPILLWAY LENGTH =
1030     KM      SPILLWAY HEIGHT =
1031     KM      SPILLWAY CREST ELEVATION = 2619'
1032     KM      SPILLWAY TYPE =
1033     KM      PMF DISCHARGE =
1034     KM      TOP OF EMBANKMENT ELEVATION =
1035     KO      1
1036     RS      1      STOR      -1
1037     SV      0      10.8      43.2      113.4      222.48      411.48      640.44      910.44      1239.84      1470.9
1038     SV      1512      1554.12      1596.24      1640.52      1684.8      1730.16      1775.52      1823.04      1875.96      1919.1
1039     SE      2576      2580      2585      2590      2595      2600      2605      2610      2616      2618
1040     SE      2619.5      2620      2620.5      2621      2621.5      2622      2622.5      2623      2623.5
1041     SQ      0      89      194      232      285      316      343      370      392      405
1042     SQ      407      1852      4491      7909      11955      16545      21620      27137      33064      39373
          *
1043     ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

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

57      3-1
          V
71      R3-1
          .
          .
75      .      3-2
          .
          .
81      CP3.1.....
          V
          V
84      RCP3.1
          .
          .
88      .      3-D

```


	.	.	
94	CP3.3.....		
	V		
	V		
97	RCP3.3		
	.		
101		3-3	
	.	V	
	.	V	
107		R3-3	
	.	.	
	.	.	
111		3-4	
	.	V	
	.	V	
117		R3-4	
	.	.	
	.	.	
121			3-5
	.	.	V
	.	.	V
127		.	R3-5
	.	.	.
	.	.	.
131		CP3.2.....	
	.	V	
	.	V	
134		RCP3.2	
	.	.	
	.	.	
138		3-E	
	.	.	
	.	.	
144		CP3.4.....	
	.	V	
	.	V	
147		RCP3.4	
	.	.	
151		3-6	
	.	V	
	.	V	
157		R3-6	
	.	.	
	.	.	
161		3-7	
	.	V	
	.	V	
167		R3-7	
	.	.	
	.	.	
171		.	3-J
	.	.	V
	.	.	V
177		.	R3-J
	.	.	.
	.	.	.
181		CP3.5.....	
	.	V	
	.	V	
184		RCP3.5	
	.	.	
	.	.	
188		3-8	
	.	V	
	.	V	
194		R3-8	
	.	.	
	.	.	
198		.	3-K
	.	.	.
	.	.	.
204		CP3.6.....	
	.	V	
	.	V	
207		RCP3.6	
	.	.	
	.	.	
211		3-N	
	.	.	
	.	.	
217		.	3-M
	.	.	V
	.	.	V
223		.	R3-M
	.	.	.
	.	.	.
227		CPDB5.....	
	.	V	
	.	V	
232		DB5	
	.	.	

261	.	3-L	.	
	.	.	.	
267	CP3-L.....	.	.	
	V			
	V			
271	RCSWAA-1	.	.	
	.	.	.	
277	.	SWAA-2	.	
	.	.	.	
282	CSWAA-2.....	.	.	
	V			
	V			
285	RCSWAA-2	.	.	
	.	.	.	
291	.	SWAA-3	.	
	.	.	.	
	.	.	.	
296	CSWAA-3.....	.	.	
	.	.	.	
299	.	3-F	.	
	.	V	.	
	.	V	.	
305	.	R3-F	.	
	.	.	.	
309	.	.	3-G2	
	.	.	.	
	.	.	.	
315	CP3.8.....	.	.	
	V			
	V			
318	RCP3.8	.	.	
	.	.	.	
322	.	3-A	.	
	.	V	.	
	.	V	.	
328	.	R3-A	.	
	.	.	.	
	.	.	.	
331	.	.	3-B	
	.	.	V	
	.	.	V	
337	.	.	R3-B	
	.	.	.	
	.	.	.	
340	.	.	.	3-C
	.	.	.	.
	.	.	.	.
346	.	CPDBA-B.....	.	.
	.	V		
	.	V		
351	.	GPDB	.	.
	.	.	.	.
376	.	.	3-G1	.
	.	.	V	.
	.	.	V	.
382	.	.	R3-G1	.
	.	.	.	.
	.	.	.	.
386	.	CP3-G1.....	.	.
	.	V		
	.	V		
389	.	RCP3-G1	.	.
	.	.	.	.
393	.	.	3-H1	.
	.	.	.	.
	.	.	.	.
399	.	CP3-H1.....	.	.
	.	V		
	.	V		
402	.	RCP3-H1	.	.
	.	.	.	.
	.	.	.	.
406	.	.	3-I1	.
	.	.	.	.
	.	.	.	.
412	CP3.9.....	.	.	.
	V			
	V			
415	RCP9	.	.	.
	.	.	.	.
418	.	3-O	.	.
	.	V	.	.
	.	V	.	.
424	.	R3-O	.	.
	.	.	.	.

428	.	.	.	3-P2
	.	.	.	V
	.	.	.	V
434	.	.	.	R3-P2
	.	.	.	.
	.	.	.	.
438	.	.	.	3-P1
	.	.	.	.
	.	.	.	.
444	.	.	CP3-P.....	
	.	.	V	
	.	.	V	
446	.	.	RCP3-P	
	.	.	.	
	.	.	.	
449	.	.	.	3-Q
	.	.	.	.
	.	.	.	.
455	.	.	CP3-Q.....	
	.	.	V	
	.	.	V	
458	.	.	RCP3-Q	
	.	.	.	
	.	.	.	
462	.	.	.	3-H2
	.	.	.	.
	.	.	.	.
467	.	.	CP3-H2.....	
	.	.	V	
	.	.	V	
469	.	.	RCPH-2	
	.	.	.	
	.	.	.	
473	.	.	.	3-I2
	.	.	.	.
	.	.	.	.
479	.	.	CP3.10.....	
	.	.	V	
	.	.	V	
482	.	.	RCP3.10	
	.	.	.	
	.	.	.	
487	.	.	.	3-H3
	.	.	.	.
	.	.	.	.
493	.	.	CP3.11.....	
	.	.	V	
	.	.	V	
497	.	.	RCSHFH-9	
	.	.	.	
	.	.	.	
503	CRCSWFH9.....			
	V			
	V			
506	RCRCSWFH			
	.			
	.			
512	.	11A-1		
	.	.		
	.	.		
517	C11A-1.....			
	V			
	V			
521	RC11A-1			
	.			
	.			
527	.	11A-3		
	.	.		
	.	.		
532	C11A-3.....			
	V			
	V			
536	RC11A-3			
	.			
	.			
547	.	3A		
	.	.		
	.	.		
552	C3A.....			
	V			
	V			
556	RC3A			
	.			
	.			
567	.	3B-1		
	.	.		
	.	.		
572	C3B-1.....			
	V			
	V			
575	RC3B-1			
	.			
	.			
582	.	11B-2		

	.	V	
	.	V	
587	.	R11B-2	
	.	.	
593	.	.	11B-1
	.	.	.
	.	.	.
598	.	C11B-1.....	
	.	V	
	.	V	
602	.	RC11B-1	
	.	.	
	.	.	
608	.	.	8B-1
	.	.	.
	.	.	.
613	.	C8B-1.....	
	.	V	
	.	V	
617	.	RC8B-1	
	.	.	
	.	.	
623	.	.	8B-2
	.	.	.
	.	.	.
628	.	C8B-2.....	
	.	V	
	.	V	
632	.	RC8B-2	
	.	.	
	.	.	
638	.	.	11A-2
	.	.	V
	.	.	V
643	.	.	R11A-2
	.	.	.
	.	.	.
647	.	.	8A
	.	.	.
	.	.	.
652	.	.	C8A.....
	.	.	V
	.	.	V
655	.	.	RC8A
	.	.	.
	.	.	.
664	.	.	3B-2A
	.	.	.
	.	.	.
669	.	.	C3B-2A.....
	.	.	.
	.	.	.
672	.	CC3B-2A.....	
	.	V	
	.	V	
675	.	RCC3B-2A	
	.	.	
	.	.	
681	.	.	3B-2B
	.	.	.
	.	.	.
686	.	C3B-2B.....	
	.	.	.
	.	.	.
689	CC3B-2B.....		
	V		
	V		
692	RCC3B-2B		
	.		
	.		
699	.	SF2-C	
	.	.	
	.	.	
704	CSF2-C.....		
	V		
	V		
707	RCSF2-C		
	.		
	.		
714	.	SW11	
	.	V	
	.	V	
719	.	RSW11	
	.	.	
	.	.	
725	.	.	SW17
	.	.	.
	.	.	.
730	.	CSW17.....	
	.	V	
	.	V	
733	.	RCSW17	
	.	.	
	.	.	

739	.	.	SW18	.
	.	.	.	.
	.	.	.	.
744	.	CSW18.....	.	.
	.	V	.	.
	.	V	.	.
747	.	RCSW18	.	.
	.	.	.	.
	.	.	.	.
758	.	.	12A	.
	.	.	.	.
	.	.	.	.
763	.	C12A.....	.	.
	.	V	.	.
	.	V	.	.
766	.	RC12A	.	.
	.	.	.	.
	.	.	.	.
777	.	.	12B	.
	.	.	.	.
	.	.	.	.
782	.	C12B.....	.	.
	.	V	.	.
	.	V	.	.
785	.	RC12B	.	.
	.	.	.	.
	.	.	.	.
796	.	.	57B-3	.
	.	.	.	.
	.	.	.	.
801	.	C57B-3.....	.	.
	.	V	.	.
	.	V	.	.
804	.	RC57B-3	.	.
	.	.	.	.
	.	.	.	.
815	.	.	57B-2	.
	.	.	.	.
	.	.	.	.
820	.	C57B-2.....	.	.
	.	V	.	.
	.	V	.	.
823	.	RC57B-2	.	.
	.	.	.	.
	.	.	.	.
834	.	.	13B-1	.
	.	.	V	.
	.	.	V	.
839	.	.	RC13B-1	.
	.	.	.	.
	.	.	.	.
843	.	.	.	13B-2
	.	.	.	.
	.	.	.	.
848	.	.	C13B-2.....	.
	.	.	V	.
	.	.	V	.
852	.	.	RC13B-2	.
	.	.	.	.
	.	.	.	.
856	.	.	.	19A
	.	.	.	V
	.	.	.	V
861	.	.	.	R19A
	.	.	.	.
	.	.	.	.
865	.	.	.	.
	.	.	.	13A-1
	.	.	.	.
	.	.	.	.
870	.	.	.	C13A-1.....
	.	.	.	V
	.	.	.	V
874	.	.	.	RC13A-1
	.	.	.	.
	.	.	.	.
883	.	.	.	.
	.	.	.	13A-2
	.	.	.	.
	.	.	.	.
888	.	.	.	C13A-2.....
	.	.	.	V
	.	.	.	V
891	.	.	.	RC13A-2
	.	.	.	.
	.	.	.	.
895	.	.	.	.
	.	.	.	PIC-C
	.	.	.	.
	.	.	.	.
900	.	.	.	CPIC-C.....
	.	.	.	V
	.	.	.	V
903	.	.	.	RCPIC-C
	.	.	.	.
	.	.	.	.
907	.	.	.	.
	.	.	.	PIC-A
	.	.	.	.

THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
DOWNSTREAM HOLDING FACILITIES

MODELED BY VTN, NEVADA SVB/JYA
MAY 9, 2017

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
GOWAN WATERSHED (ALL)
RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
INPUT FILE = ALT1-SDN3.DAT
INPUT FILE DATE = MAY 5, 2008
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #5
MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
STORM CENTERING = FULL WATERSHED

REFERENCED HYDROLOGIC MODELS:
CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
MASTER PLAN UPDATE (G.C. WALLACE 2006)
GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
(G.C. WALLACE 2007)
LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
FROM G.C. WALLACE ON JANUARY 31, 2008)
US 95/RANCHO FIS RESTUDY (PBS&J 1998)
JR CARDS CONTAIN DARF'S BASED ON THE FOLLOWING VALUES:

AREA	DARF
SQ. MI.	
12-16	0.832
16-20	0.804
20-30	0.765
30-40	0.725
40-50	0.695
50-75	0.66
75-100	0.62

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN5

54 IO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
NMIN 5 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 0055 ENDING TIME
ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 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
.83 .80 .76

* *
227 KK * CPDB5 *
* *

230 KO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

* *
232 KK * DB5 *
* *

252 KO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

* *
346 KK * CPDBA-B *
* *

347 KO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

* *
351 KK * GPDB *
* *

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

HYDROGRAPH ROUTING DATA

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

370 SV	STORAGE	6.5	12.8	19.9	28.0	37.2	46.6	59.9	75.8	94.3
115.8										
		129.6								
372 SE	ELEVATION	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
28.00										
		30.00								
374 SQ	DISCHARGE	0.	26.	58.	78.	94.	107.	119.	130.	140.
150.										
		159.								

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .83

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
			6-HR	24.92-HR
+	(CFS)	(HR)		
+	128.	5.42	115.	44.

	(INCHES)	.851	1.348	1.348	1.348
	(AC-FT)	57.	90.	90.	90.
PEAK STORAGE	TIME		MAXIMUM AVERAGE	STORAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
73.	5.42	57.	23.	22.	22.
PEAK STAGE	TIME		MAXIMUM AVERAGE	STAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
23.63	5.42	21.35	14.11	13.96	13.96

CUMULATIVE AREA = 1.26 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .80

PEAK FLOW	TIME		MAXIMUM AVERAGE	FLOW	
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
+ 125.	5.42	(CFS)			
		111.	43.	41.	41.
		(INCHES)	.824	1.268	1.268
		(AC-FT)	55.	85.	85.

PEAK STORAGE	TIME		MAXIMUM AVERAGE	STORAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
68.	5.42	53.	22.	21.	21.

PEAK STAGE	TIME		MAXIMUM AVERAGE	STAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
23.08	5.42	20.75	13.81	13.67	13.67

CUMULATIVE AREA = 1.26 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .76

PEAK FLOW	TIME		MAXIMUM AVERAGE	FLOW	
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
+ 121.	5.42	(CFS)			
		106.	39.	38.	38.
		(INCHES)	.784	1.159	1.159
		(AC-FT)	53.	78.	78.

PEAK STORAGE	TIME		MAXIMUM AVERAGE	STORAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
62.	5.42	48.	20.	19.	19.

PEAK STAGE	TIME		MAXIMUM AVERAGE	STAGE	
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
22.32	5.42	19.90	13.41	13.29	13.29

CUMULATIVE AREA = 1.26 SQ MI

***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

*** **

* *
1017 KK * ANGLPKIN *
* *

1020 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLT 0 PLOT CONTROL

QSCAL 0. HYDROGRAPH PLOT SCALE
1021 HC HYDROGRAPH COMBINATION
ICOMP 5 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .83

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
8.	1		0000	1	0.	*	1		0615	76	2576.	*	1		1230	151	65.	*	1		1845	226
8.	1		0005	2	0.	*	1		0620	77	2464.	*	1		1235	152	64.	*	1		1850	227
8.	1		0010	3	0.	*	1		0625	78	2353.	*	1		1240	153	63.	*	1		1855	228
8.	1		0015	4	0.	*	1		0630	79	2240.	*	1		1245	154	62.	*	1		1900	229
7.	1		0020	5	1.	*	1		0635	80	2127.	*	1		1250	155	61.	*	1		1905	230
7.	1		0025	6	4.	*	1		0640	81	2015.	*	1		1255	156	60.	*	1		1910	231
7.	1		0030	7	13.	*	1		0645	82	1906.	*	1		1300	157	59.	*	1		1915	232
7.	1		0035	8	30.	*	1		0650	83	1800.	*	1		1305	158	58.	*	1		1920	233
7.	1		0040	9	59.	*	1		0655	84	1692.	*	1		1310	159	56.	*	1		1925	234
6.	1		0045	10	105.	*	1		0700	85	1577.	*	1		1315	160	55.	*	1		1930	235
6.	1		0050	11	171.	*	1		0705	86	1456.	*	1		1320	161	53.	*	1		1935	236
6.	1		0055	12	258.	*	1		0710	87	1338.	*	1		1325	162	51.	*	1		1940	237
6.	1		0100	13	355.	*	1		0715	88	1236.	*	1		1330	163	50.	*	1		1945	238
6.	1		0105	14	445.	*	1		0720	89	1158.	*	1		1335	164	48.	*	1		1950	239
6.	1		0110	15	516.	*	1		0725	90	1101.	*	1		1340	165	47.	*	1		1955	240
5.	1		0115	16	566.	*	1		0730	91	1055.	*	1		1345	166	46.	*	1		2000	241
5.	1		0120	17	598.	*	1		0735	92	1007.	*	1		1350	167	44.	*	1		2005	242
5.	1		0125	18	616.	*	1		0740	93	953.	*	1		1355	168	43.	*	1		2010	243
5.	1		0130	19	628.	*	1		0745	94	890.	*	1		1400	169	42.	*	1		2015	244
5.	1		0135	20	643.	*	1		0750	95	821.	*	1		1405	170	40.	*	1		2020	245
5.	1		0140	21	673.	*	1		0755	96	750.	*	1		1410	171	39.	*	1		2025	246
5.	1		0145	22	722.	*	1		0800	97	679.	*	1		1415	172	38.	*	1		2030	247
4.	1		0150	23	795.	*	1		0805	98	611.	*	1		1420	173	37.	*	1		2035	248
4.	1		0155	24	890.	*	1		0810	99	546.	*	1		1425	174	36.	*	1		2040	249
4.	1		0200	25	1000.	*	1		0815	100	487.	*	1		1430	175	35.	*	1		2045	250
4.	1		0205	26	1119.	*	1		0820	101	430.	*	1		1435	176	34.	*	1		2050	251
4.	1		0210	27	1235.	*	1		0825	102	375.	*	1		1440	177	33.	*	1		2055	252
4.	1		0215	28	1344.	*	1		0830	103	321.	*	1		1445	178	32.	*	1		2100	253
4.	1		0220	29	1438.	*	1		0835	104	269.	*	1		1450	179	31.	*	1		2105	254
4.	1		0225	30	1511.	*	1		0840	105	220.	*	1		1455	180	30.	*	1		2110	255
4.	1		0230	31	1553.	*	1		0845	106	181.	*	1		1500	181	29.	*	1		2115	256
3.	1		0235	32	1561.	*	1		0850	107	152.	*	1		1505	182	28.	*	1		2120	257
3.	1		0240	33	1537.	*	1		0855	108	134.	*	1		1510	183	27.	*	1		2125	258
3.	1		0245	34	1494.	*	1		0900	109	122.	*	1		1515	184	26.	*	1		2130	259
3.	1		0250	35	1453.	*	1		0905	110	116.	*	1		1520	185	26.	*	1		2135	260
3.	1		0255	36	1439.	*	1		0910	111	112.	*	1		1525	186	25.	*	1		2140	261

3.	1	0300	37	1479.	*	1	0915	112	109.	*	1	1530	187	24.	*	1	2145	262
3.	1	0305	38	1602.	*	1	0920	113	107.	*	1	1535	188	24.	*	1	2150	263
3.	1	0310	39	1846.	*	1	0925	114	106.	*	1	1540	189	23.	*	1	2155	264
3.	1	0315	40	2252.	*	1	0930	115	104.	*	1	1545	190	22.	*	1	2200	265
3.	1	0320	41	2858.	*	1	0935	116	103.	*	1	1550	191	22.	*	1	2205	266
3.	1	0325	42	3695.	*	1	0940	117	102.	*	1	1555	192	21.	*	1	2210	267
3.	1	0330	43	4797.	*	1	0945	118	101.	*	1	1600	193	20.	*	1	2215	268
2.	1	0335	44	6144.	*	1	0950	119	100.	*	1	1605	194	20.	*	1	2220	269
2.	1	0340	45	7601.	*	1	0955	120	99.	*	1	1610	195	19.	*	1	2225	270
2.	1	0345	46	8899.	*	1	1000	121	98.	*	1	1615	196	19.	*	1	2230	271
2.	1	0350	47	9774.	*	1	1005	122	97.	*	1	1620	197	18.	*	1	2235	272
2.	1	0355	48	10098.	*	1	1010	123	96.	*	1	1625	198	18.	*	1	2240	273
2.	1	0400	49	9904.	*	1	1015	124	95.	*	1	1630	199	17.	*	1	2245	274
2.	1	0405	50	9361.	*	1	1020	125	94.	*	1	1635	200	17.	*	1	2250	275
2.	1	0410	51	8657.	*	1	1025	126	93.	*	1	1640	201	16.	*	1	2255	276
2.	1	0415	52	7904.	*	1	1030	127	91.	*	1	1645	202	16.	*	1	2300	277
2.	1	0420	53	7160.	*	1	1035	128	90.	*	1	1650	203	15.	*	1	2305	278
2.	1	0425	54	6473.	*	1	1040	129	89.	*	1	1655	204	15.	*	1	2310	279
2.	1	0430	55	5890.	*	1	1045	130	88.	*	1	1700	205	15.	*	1	2315	280
2.	1	0435	56	5464.	*	1	1050	131	87.	*	1	1705	206	14.	*	1	2320	281
2.	1	0440	57	5236.	*	1	1055	132	86.	*	1	1710	207	14.	*	1	2325	282
2.	1	0445	58	5232.	*	1	1100	133	85.	*	1	1715	208	13.	*	1	2330	283
2.	1	0450	59	5448.	*	1	1105	134	84.	*	1	1720	209	13.	*	1	2335	284
2.	1	0455	60	5837.	*	1	1110	135	83.	*	1	1725	210	13.	*	1	2340	285
1.	1	0500	61	6278.	*	1	1115	136	82.	*	1	1730	211	12.	*	1	2345	286
1.	1	0505	62	6610.	*	1	1120	137	81.	*	1	1735	212	12.	*	1	2350	287
1.	1	0510	63	6716.	*	1	1125	138	80.	*	1	1740	213	12.	*	1	2355	288
1.	1	0515	64	6560.	*	1	1130	139	79.	*	1	1745	214	11.	*	2	0000	289
1.	1	0520	65	6175.	*	1	1135	140	78.	*	1	1750	215	11.	*	2	0005	290
1.	1	0525	66	5654.	*	1	1140	141	77.	*	1	1755	216	11.	*	2	0010	291
1.	1	0530	67	5095.	*	1	1145	142	76.	*	1	1800	217	10.	*	2	0015	292
1.	1	0535	68	4569.	*	1	1150	143	75.	*	1	1805	218	10.	*	2	0020	293
1.	1	0540	69	4111.	*	1	1155	144	73.	*	1	1810	219	10.	*	2	0025	294
1.	1	0545	70	3730.	*	1	1200	145	72.	*	1	1815	220	10.	*	2	0030	295
1.	1	0550	71	3422.	*	1	1205	146	71.	*	1	1820	221	9.	*	2	0035	296
1.	1	0555	72	3179.	*	1	1210	147	70.	*	1	1825	222	9.	*	2	0040	297
1.	1	0600	73	2985.	*	1	1215	148	69.	*	1	1830	223	9.	*	2	0045	298
1.	1	0605	74	2827.	*	1	1220	149	68.	*	1	1835	224	9.	*	2	0050	299
1.	1	0610	75	2694.	*	1	1225	150	66.	*	1	1840	225	8.	*	2	0055	300

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+		(CFS)				
+	10098.	3.92	3660.	979.	943.	943.
		(INCHES)	1.493	1.598	1.598	1.598
		(AC-FT)	1815.	1943.	1943.	1943.

CUMULATIVE AREA = 22.79 SQ MI

2.	1	0320	41	2660.	*	1	0935	116	98.	*	1	1550	191	19.	*	1	2205	266
2.	1	0325	42	3450.	*	1	0940	117	97.	*	1	1555	192	18.	*	1	2210	267
2.	1	0330	43	4496.	*	1	0945	118	96.	*	1	1600	193	18.	*	1	2215	268
2.	1	0335	44	5781.	*	1	0950	119	95.	*	1	1605	194	17.	*	1	2220	269
2.	1	0340	45	7186.	*	1	0955	120	94.	*	1	1610	195	17.	*	1	2225	270
2.	1	0345	46	8436.	*	1	1000	121	93.	*	1	1615	196	16.	*	1	2230	271
2.	1	0350	47	9297.	*	1	1005	122	92.	*	1	1620	197	16.	*	1	2235	272
2.	1	0355	48	9633.	*	1	1010	123	90.	*	1	1625	198	15.	*	1	2240	273
2.	1	0400	49	9470.	*	1	1015	124	89.	*	1	1630	199	15.	*	1	2245	274
2.	1	0405	50	8971.	*	1	1020	125	88.	*	1	1635	200	15.	*	1	2250	275
2.	1	0410	51	8312.	*	1	1025	126	87.	*	1	1640	201	14.	*	1	2255	276
2.	1	0415	52	7603.	*	1	1030	127	86.	*	1	1645	202	14.	*	1	2300	277
2.	1	0420	53	6897.	*	1	1035	128	85.	*	1	1650	203	13.	*	1	2305	278
2.	1	0425	54	6241.	*	1	1040	129	84.	*	1	1655	204	13.	*	1	2310	279
2.	1	0430	55	5684.	*	1	1045	130	83.	*	1	1700	205	13.	*	1	2315	280
2.	1	0435	56	5275.	*	1	1050	131	82.	*	1	1705	206	12.	*	1	2320	281
1.	1	0440	57	5051.	*	1	1055	132	81.	*	1	1710	207	12.	*	1	2325	282
1.	1	0445	58	5042.	*	1	1100	133	80.	*	1	1715	208	12.	*	1	2330	283
1.	1	0450	59	5245.	*	1	1105	134	79.	*	1	1720	209	11.	*	1	2335	284
1.	1	0455	60	5613.	*	1	1110	135	78.	*	1	1725	210	11.	*	1	2340	285
1.	1	0500	61	6037.	*	1	1115	136	77.	*	1	1730	211	11.	*	1	2345	286
1.	1	0505	62	6362.	*	1	1120	137	76.	*	1	1735	212	10.	*	1	2350	287
1.	1	0510	63	6475.	*	1	1125	138	75.	*	1	1740	213	10.	*	1	2355	288
1.	1	0515	64	6332.	*	1	1130	139	73.	*	1	1745	214	10.	*	2	0000	289
1.	1	0520	65	5969.	*	1	1135	140	72.	*	1	1750	215	10.	*	2	0005	290
1.	1	0525	66	5469.	*	1	1140	141	71.	*	1	1755	216	9.	*	2	0010	291
1.	1	0530	67	4932.	*	1	1145	142	70.	*	1	1800	217	9.	*	2	0015	292
1.	1	0535	68	4425.	*	1	1150	143	69.	*	1	1805	218	9.	*	2	0020	293
1.	1	0540	69	3983.	*	1	1155	144	68.	*	1	1810	219	9.	*	2	0025	294
1.	1	0545	70	3615.	*	1	1200	145	66.	*	1	1815	220	8.	*	2	0030	295
1.	1	0550	71	3319.	*	1	1205	146	65.	*	1	1820	221	8.	*	2	0035	296
1.	1	0555	72	3082.	*	1	1210	147	64.	*	1	1825	222	8.	*	2	0040	297
1.	1	0600	73	2893.	*	1	1215	148	63.	*	1	1830	223	8.	*	2	0045	298
1.	1	0605	74	2739.	*	1	1220	149	62.	*	1	1835	224	7.	*	2	0050	299
1.	1	0610	75	2609.	*	1	1225	150	61.	*	1	1840	225	7.	*	2	0055	300
1.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		24.92-HR
+	(CFS)	(HR)		24-HR	72-HR	
			(CFS)			
+	9633.	3.92		3493.	930.	896.
			(INCHES)	1.425	1.518	1.518
			(AC-FT)	1732.	1845.	1845.
			CUMULATIVE AREA =	22.79	SQ MI	

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .76

FLOW	DA MON HRMN				FLOW	*	DA MON HRMN				FLOW	*	DA MON HRMN				FLOW	*	DA MON HRMN			
	DA	MON	HRMN	ORD			DA	MON	HRMN	ORD			DA	MON	HRMN	ORD			DA	MON	HRMN	ORD
6.	1		0000	1	0.	*	1	0615	76	2365.	*	1	1230	151	50.	*	1	1845	226			
	1		0005	2	0.	*	1	0620	77	2252.	*	1	1235	152	48.	*	1	1850	227			
6.	1		0010	3	0.	*	1	0625	78	2138.	*	1	1240	153	47.	*	1	1855	228			
5.	1		0015	4	0.	*	1	0630	79	2021.	*	1	1245	154	45.	*	1	1900	229			
5.	1		0020	5	1.	*	1	0635	80	1898.	*	1	1250	155	44.	*	1	1905	230			
5.	1		0025	6	3.	*	1	0640	81	1766.	*	1	1255	156	43.	*	1	1910	231			
5.	1		0030	7	8.	*	1	0645	82	1627.	*	1	1300	157	41.	*	1	1915	233			
5.	1		0035	8	19.	*	1	0650	83	1486.	*	1	1305	158	40.	*	1	1920	233			
5.	1		0040	9	36.	*	1	0655	84	1356.	*	1	1310	159	39.	*	1	1925	234			
5.	1		0045	10	67.	*	1	0700	85	1250.	*	1	1315	160	38.	*	1	1930	235			
4.	1		0050	11	113.	*	1	0705	86	1171.	*	1	1320	161	37.	*	1	1935	236			
4.	1		0055	12	172.	*	1	0710	87	1113.	*	1	1325	162	36.	*	1	1940	237			
4.	1		0100	13	241.	*	1	0715	88	1064.	*	1	1330	163	35.	*	1	1945	238			
4.	1		0105	14	308.	*	1	0720	89	1013.	*	1	1335	164	34.	*	1	1950	239			
4.	1		0110	15	365.	*	1	0725	90	956.	*	1	1340	165	33.	*	1	1955	240			
4.	1		0115	16	408.	*	1	0730	91	892.	*	1	1345	166	32.	*	1	2000	241			
4.	1		0120	17	438.	*	1	0735	92	822.	*	1	1350	167	31.	*	1	2005	242			
4.	1		0125	18	459.	*	1	0740	93	751.	*	1	1355	168	30.	*	1	2010	243			
3.	1		0130	19	475.	*	1	0745	94	680.	*	1	1400	169	29.	*	1	2015	244			
3.	1		0135	20	492.	*	1	0750	95	612.	*	1	1405	170	28.	*	1	2020	245			
3.	1		0140	21	518.	*	1	0755	96	548.	*	1	1410	171	27.	*	1	2025	246			
3.	1		0145	22	559.	*	1	0800	97	489.	*	1	1415	172	26.	*	1	2030	247			
3.	1		0150	23	619.	*	1	0805	98	434.	*	1	1420	173	26.	*	1	2035	248			
3.	1		0155	24	699.	*	1	0810	99	382.	*	1	1425	174	25.	*	1	2040	249			
3.	1		0200	25	798.	*	1	0815	100	329.	*	1	1430	175	24.	*	1	2045	250			
3.	1		0205	26	906.	*	1	0820	101	278.	*	1	1435	176	23.	*	1	2050	251			
3.	1		0210	27	1011.	*	1	0825	102	228.	*	1	1440	177	23.	*	1	2055	252			
3.	1		0215	28	1108.	*	1	0830	103	186.	*	1	1445	178	22.	*	1	2100	253			

2.	1	0340	45	6598.	*	1	0955	120	86.	*	1	1610	195	14.	*	1	2225	270
2.	1	0345	46	7786.	*	1	1000	121	85.	*	1	1615	196	13.	*	1	2230	271
2.	1	0350	47	8621.	*	1	1005	122	84.	*	1	1620	197	13.	*	1	2235	272
2.	1	0355	48	8972.	*	1	1010	123	83.	*	1	1625	198	13.	*	1	2240	273
2.	1	0400	49	8858.	*	1	1015	124	82.	*	1	1630	199	12.	*	1	2245	274
1.	1	0405	50	8422.	*	1	1020	125	81.	*	1	1635	200	12.	*	1	2250	275
1.	1	0410	51	7825.	*	1	1025	126	80.	*	1	1640	201	12.	*	1	2255	276
1.	1	0415	52	7174.	*	1	1030	127	79.	*	1	1645	202	11.	*	1	2300	277
1.	1	0420	53	6524.	*	1	1035	128	78.	*	1	1650	203	11.	*	1	2305	278
1.	1	0425	54	5915.	*	1	1040	129	77.	*	1	1655	204	11.	*	1	2310	279
1.	1	0430	55	5393.	*	1	1045	130	76.	*	1	1700	205	10.	*	1	2315	280
1.	1	0435	56	5009.	*	1	1050	131	74.	*	1	1705	206	10.	*	1	2320	281
1.	1	0440	57	4795.	*	1	1055	132	73.	*	1	1710	207	10.	*	1	2325	282
1.	1	0445	58	4779.	*	1	1100	133	72.	*	1	1715	208	10.	*	1	2330	283
1.	1	0450	59	4964.	*	1	1105	134	71.	*	1	1720	209	9.	*	1	2335	284
1.	1	0455	60	5304.	*	1	1110	135	70.	*	1	1725	210	9.	*	1	2340	285
1.	1	0500	61	5701.	*	1	1115	136	69.	*	1	1730	211	9.	*	1	2345	286
1.	1	0505	62	6009.	*	1	1120	137	67.	*	1	1735	212	8.	*	1	2350	287
1.	1	0510	63	6123.	*	1	1125	138	66.	*	1	1740	213	8.	*	1	2355	288
1.	1	0515	64	5999.	*	1	1130	139	65.	*	1	1745	214	8.	*	2	0000	289
1.	1	0520	65	5667.	*	1	1135	140	64.	*	1	1750	215	8.	*	2	0005	290
1.	1	0525	66	5202.	*	1	1140	141	63.	*	1	1755	216	8.	*	2	0010	291
1.	1	0530	67	4700.	*	1	1145	142	62.	*	1	1800	217	7.	*	2	0015	292
1.	1	0535	68	4223.	*	1	1150	143	61.	*	1	1805	218	7.	*	2	0020	293
1.	1	0540	69	3804.	*	1	1155	144	60.	*	1	1810	219	7.	*	2	0025	294
1.	1	0545	70	3454.	*	1	1200	145	59.	*	1	1815	220	7.	*	2	0030	295
1.	1	0550	71	3170.	*	1	1205	146	57.	*	1	1820	221	7.	*	2	0035	296
1.	1	0555	72	2943.	*	1	1210	147	56.	*	1	1825	222	6.	*	2	0040	297
1.	1	0600	73	2761.	*	1	1215	148	54.	*	1	1830	223	6.	*	2	0045	298
1.	1	0605	74	2612.	*	1	1220	149	53.	*	1	1835	224	6.	*	2	0050	299
1.	1	0610	75	2483.	*	1	1225	150	51.	*	1	1840	225	6.	*	2	0055	300

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
8972.	3.92	3258.	862.	830.	830.
(INCHES)		1.329	1.407	1.407	1.407
(AC-FT)		1616.	1710.	1710.	1710.

CUMULATIVE AREA = 22.79 SQ MI

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* *
1022 KK * ANGLPKDB *
* *

1035 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

1036 RS	STORAGE ROUTING		
	NSTPS	1	NUMBER OF SUBREACHES
	ITYP	STOR	TYPE OF INITIAL CONDITION
	RSVRC	-1.00	INITIAL CONDITION
	X	.00	WORKING R AND D COEFFICIENT

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .83

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	2576.0	*	1		0820	101	698.	1520.5	2619.1	*	1		1640	201	395.	1290.6
2616.4	1	0005	2	0.	.0	2576.0	*	1		0825	102	636.	1518.7	2619.1	*	1		1645	202	395.	1288.0
2616.4	1	0010	3	0.	.0	2576.0	*	1		0830	103	575.	1516.9	2619.1	*	1		1650	203	395.	1285.4
2616.4	1	0015	4	0.	.0	2576.0	*	1		0835	104	516.	1515.2	2619.0	*	1		1655	204	394.	1282.8
2616.4	1	0020	5	0.	.0	2576.0	*	1		0840	105	458.	1513.5	2619.0	*	1		1700	205	394.	1280.2
2616.3	1	0025	6	0.	.0	2576.0	*	1		0845	106	407.	1511.9	2619.0	*	1		1705	206	394.	1277.5
2616.3	1	0030	7	1.	.1	2576.0	*	1		0850	107	407.	1510.2	2619.0	*	1		1710	207	394.	1274.9
2616.3	1	0035	8	2.	.2	2576.1	*	1		0855	108	407.	1508.4	2618.9	*	1		1715	208	394.	1272.3
2616.3	1	0040	9	4.	.5	2576.2	*	1		0900	109	407.	1506.5	2618.9	*	1		1720	209	394.	1269.7
2616.3	1	0045	10	8.	1.0	2576.4	*	1		0905	110	407.	1504.5	2618.8	*	1		1725	210	394.	1267.1
2616.2	1	0050	11	16.	1.9	2576.7	*	1		0910	111	407.	1502.5	2618.8	*	1		1730	211	393.	1264.4
2616.2	1	0055	12	27.	3.2	2577.2	*	1		0915	112	406.	1500.5	2618.7	*	1		1735	212	393.	1261.8
2616.2	1	0100	13	42.	5.1	2577.9	*	1		0920	113	406.	1498.4	2618.7	*	1		1740	213	393.	1259.2
2616.1	1	0105	14	62.	7.5	2578.8	*	1		0925	114	406.	1496.3	2618.6	*	1		1745	214	393.	1256.6
2616.1	1	0110	15	85.	10.3	2579.8	*	1		0930	115	406.	1494.3	2618.6	*	1		1750	215	393.	1253.9
2616.1	1	0115	16	97.	13.4	2580.4	*	1		0935	116	406.	1492.2	2618.5	*	1		1755	216	393.	1251.3
2616.1	1	0120	17	108.	16.7	2580.9	*	1		0940	117	406.	1490.1	2618.5	*	1		1800	217	392.	1248.7
2616.1	1	0125	18	119.	20.1	2581.4	*	1		0945	118	406.	1488.0	2618.4	*	1		1805	218	392.	1246.0
2616.0	1	0130	19	130.	23.5	2582.0	*	1		0950	119	406.	1485.9	2618.4	*	1		1810	219	392.	1243.4
2616.0	1	0135	20	141.	27.0	2582.5	*	1		0955	120	406.	1483.8	2618.3	*	1		1815	220	392.	1240.8
2616.0	1	0140	21	153.	30.5	2583.0	*	1		1000	121	406.	1481.7	2618.3	*	1		1820	221	392.	1238.1
2615.9	1	0145	22	165.	34.2	2583.6	*	1		1005	122	405.	1479.5	2618.2	*	1		1825	222	392.	1235.5
2615.9	1	0150	23	178.	38.2	2584															

1	0220	29	212.	76.2	2587.3	*	1	1040	129	405.	1464.5	2617.9	*	1	1900	229	390.	1217.0	
2615.6	1	0225	30	217.	84.9	2588.0	*	1	1045	130	405.	1462.3	2617.9	*	1	1905	230	390.	1214.4
2615.5	1	0230	31	221.	93.9	2588.6	*	1	1050	131	404.	1460.1	2617.9	*	1	1910	231	390.	1211.8
2615.5	1	0235	32	226.	103.1	2589.3	*	1	1055	132	404.	1458.0	2617.9	*	1	1915	232	390.	1209.1
2615.4	1	0240	33	231.	112.2	2589.9	*	1	1100	133	404.	1455.8	2617.9	*	1	1920	233	390.	1206.5
2615.4	1	0245	34	236.	121.0	2590.3	*	1	1105	134	404.	1453.6	2617.8	*	1	1925	234	390.	1203.8
2615.3	1	0250	35	240.	129.5	2590.7	*	1	1110	135	404.	1451.4	2617.8	*	1	1930	235	389.	1201.2
2615.3	1	0255	36	244.	137.8	2591.1	*	1	1115	136	404.	1449.1	2617.8	*	1	1935	236	389.	1198.6
2615.2	1	0300	37	248.	146.2	2591.5	*	1	1120	137	404.	1446.9	2617.8	*	1	1940	237	389.	1195.
2615.2	1	0305	38	252.	155.0	2591.9	*	1	1125	138	404.	1444.7	2617.8	*	1	1945	238	389.	1193.3
2615.2	1	0310	39	257.	165.2	2592.4	*	1	1130	139	403.	1442.5	2617.8	*	1	1950	239	389.	1190.6
2615.1	1	0315	40	263.	177.5	2592.9	*	1	1135	140	403.	1440.2	2617.7	*	1	1955	240	389.	1188.0
2615.1	1	0320	41	271.	193.2	2593.7	*	1	1140	141	403.	1438.0	2617.7	*	1	2000	241	388.	1185.4
2615.0	1	0325	42	281.	213.9	2594.6	*	1	1145	142	403.	1435.8	2617.7	*	1	2005	242	388.	1182.7
2615.0	1	0330	43	288.	241.2	2595.5	*	1	1150	143	403.	1433.5	2617.7	*	1	2010	243	388.	1180.1
2614.9	1	0335	44	294.	276.9	2596.4	*	1	1155	144	403.	1431.2	2617.7	*	1	2015	244	388.	1177.5
2614.9	1	0340	45	301.	322.1	2597.6	*	1	1200	145	403.	1429.0	2617.6	*	1	2020	245	388.	1174.8
2614.8	1	0345	46	310.	376.9	2599.1	*	1	1205	146	403.	1426.7	2617.6	*	1	2025	246	387.	1172.2
2614.8	1	0350	47	319.	439.0	2600.6	*	1	1210	147	402.	1424.4	2617.6	*	1	2030	247	387.	1169.5
2614.7	1	0355	48	327.	505.2	2602.0	*	1	1215	148	402.	1422.1	2617.6	*	1	2035	248	387.	1166.9
2614.7	1	0400	49	335.	571.8	2603.5	*	1	1220	149	402.	1419.8	2617.6	*	1	2040	249	387.	1164.3
2614.6	1	0405	50	342.	635.8	2604.9	*	1	1225	150	402.	1417.5	2617.5	*	1	2045	250	387.	1161.6
2614.6	1	0410	51	349.	695.5	2606.0	*	1	1230	151	402.	1415.2	2617.5	*	1	2050	251	387.	1159.0
2614.5	1	0415	52	354.	750.1	2607.0	*	1	1235	152	402.	1412.9	2617.5	*	1	2055	252	386.	1156.4
2614.5	1	0420	53	359.	799.5														

1	0615	76	947.	1527.7	2619.2	*	1	1435	176	398.	1354.8	2617.0	*	1	2255	276	382.	1093.3	
2613.3	1	0620	77	1279.	1537.4	2619.3	*	1	1440	177	398.	1352.3	2617.0	*	1	2300	277	382.	1090.7
2613.3	1	0625	78	1518.	1544.4	2619.4	*	1	1445	178	398.	1349.8	2617.0	*	1	2305	278	382.	1088.1
2613.2	1	0630	79	1682.	1549.2	2619.4	*	1	1450	179	398.	1347.2	2616.9	*	1	2310	279	382.	1085.4
2613.2	1	0635	80	1788.	1552.3	2619.5	*	1	1455	180	398.	1344.7	2616.9	*	1	2315	280	382.	1082.8
2613.1	1	0640	81	1848.	1554.0	2619.5	*	1	1500	181	398.	1342.2	2616.9	*	1	2320	281	381.	1080.2
2613.1	1	0645	82	1885.	1554.7	2619.5	*	1	1505	182	398.	1339.6	2616.9	*	1	2325	282	381.	1077.6
2613.0	1	0650	83	1874.	1554.5	2619.5	*	1	1510	183	397.	1337.1	2616.8	*	1	2330	283	381.	1075.0
2613.0	1	0655	84	1838.	1553.7	2619.5	*	1	1515	184	397.	1334.5	2616.8	*	1	2335	284	381.	1072.4
2612.9	1	0700	85	1795.	1552.5	2619.5	*	1	1520	185	397.	1332.0	2616.8	*	1	2340	285	381.	1069.8
2612.9	1	0705	86	1736.	1550.7	2619.5	*	1	1525	186	397.	1329.4	2616.8	*	1	2345	286	380.	1067.2
2612.9	1	0710	87	1665.	1548.7	2619.4	*	1	1530	187	397.	1326.8	2616.8	*	1	2350	287	380.	1064.5
2612.8	1	0715	88	1585.	1546.3	2619.4	*	1	1535	188	397.	1324.3	2616.7	*	1	2355	288	380.	1061.9
2612.8	1	0720	89	1503.	1543.9	2619.4	*	1	1540	189	397.	1321.7	2616.7	*	2	0000	289	380.	1059.3
2612.7	1	0725	90	1424.	1541.6	2619.4	*	1	1545	190	396.	1319.1	2616.7	*	2	0005	290	380.	1056.7
2612.7	1	0730	91	1351.	1539.5	2619.3	*	1	1550	191	396.	1316.5	2616.7	*	2	0010	291	380.	1054.1
2612.6	1	0735	92	1283.	1537.5	2619.3	*	1	1555	192	396.	1314.0	2616.6	*	2	0015	292	379.	1051.5
2612.6	1	0740	93	1219.	1535.7	2619.3	*	1	1600	193	396.	1311.4	2616.6	*	2	0020	293	379.	1048.9
2612.5	1	0745	94	1156.	1533.8	2619.3	*	1	1605	194	396.	1308.8	2616.6	*	2	0025	294	379.	1046.3
2612.5	1	0750	95	1093.	1532.0	2619.2	*	1	1610	195	396.	1306.2	2616.6	*	2	0030	295	379.	1043.7
2612.4	1	0755	96	1028.	1530.1	2619.2	*	1	1615	196	396.	1303.6	2616.6	*	2	0035	296	379.	1041.1
2612.4	1	0800	97	962.	1528.2	2619.2	*	1	1620	197	395.	1301.0	2616.5	*	2	0040	297	379.	1038.5
2612.3	1	0805	98	895.	1526.2	2619.2	*	1	1625	198	395.	1298.4	2616.5	*	2	0045	298	378.	1035.9
2612.3	1	0810	99	828.	1524.3	2619.1	*	1	1630	199	395.	1295.8	2616.5	*	2	0050	299	378.	1033.3
2612.2	1	0815	100	762.	1522.4	2619.1	*	1	1635	200	395.	1293.2	2616.5	*	2	0055	300	378.	1030.7

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*

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	1885.	6.75					
		(CFS)	763.	460.	443.	443.	
		(INCHES)	.311	.750	.750	.750	
		(AC-FT)	378.	912.	912.	912.	
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	1555.	6.75	1501.	1147.	1104.	1104.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	2619.51	6.75	2618.68	2612.57	2611.23	2611.23	

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKDB
PLAN 1, RATIO = .80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
1	0000	1	0.	.0	2576.0	*	1	0820	101	610.	1517.9	2619.1	*	1	1640	201	395.	1284.9			
2616.4	1	0005	2	0.	.0	2576.0	*	1	0825	102	552.	1516.2	2619.1	*	1	1645	202	394.	1282.3		

1	0010	3	0.	.0	2576.0	*	1	0830	103	496.	1514.6	2619.0	*	1	1650	203	394.	1279.7	
2616.3	1	0015	4	0.	.0	2576.0	*	1	0835	104	441.	1513.0	2619.0	*	1	1655	204	394.	1277.0
2616.3	1	0020	5	0.	.0	2576.0	*	1	0840	105	407.	1511.4	2619.0	*	1	1700	205	394.	1274.4
2616.3	1	0025	6	0.	.0	2576.0	*	1	0845	106	407.	1509.7	2618.9	*	1	1705	206	394.	1271.8
2616.3	1	0030	7	1.	.1	2576.0	*	1	0850	107	407.	1507.8	2618.9	*	1	1710	207	394.	1269.2
2616.2	1	0035	8	1.	.2	2576.1	*	1	0855	108	407.	1505.9	2618.9	*	1	1715	208	394.	1266.5
2616.2	1	0040	9	3.	.4	2576.1	*	1	0900	109	407.	1503.9	2618.8	*	1	1720	209	393.	1263.9
2616.2	1	0045	10	7.	.8	2576.3	*	1	0905	110	407.	1501.9	2618.8	*	1	1725	210	393.	1261.3
2616.2	1	0050	11	13.	1.5	2576.6	*	1	0910	111	406.	1499.8	2618.7	*	1	1730	211	393.	1258.6
2616.2	1	0055	12	22.	2.7	2577.0	*	1	0915	112	406.	1497.7	2618.7	*	1	1735	212	393.	1256.0
2616.1	1	0100	13	35.	4.3	2577.6	*	1	0920	113	406.	1495.6	2618.6	*	1	1740	213	393.	1253.4
2616.1	1	0105	14	52.	6.3	2578.3	*	1	0925	114	406.	1493.5	2618.6	*	1	1745	214	393.	1250.7
2616.1	1	0110	15	72.	8.8	2579.2	*	1	0930	115	406.	1491.4	2618.5	*	1	1750	215	392.	1248.1
2616.0	1	0115	16	91.	11.5	2580.1	*	1	0935	116	406.	1489.3	2618.4	*	1	1755	216	392.	1245.5
2616.0	1	0120	17	100.	14.3	2580.5	*	1	0940	117	406.	1487.2	2618.4	*	1	1800	217	392.	1242.8
2616.0	1	0125	18	110.	17.3	2581.0	*	1	0945	118	406.	1485.0	2618.3	*	1	1805	218	392.	1240.2
2616.0	1	0130	19	120.	20.4	2581.5	*	1	0950	119	406.	1482.9	2618.3	*	1	1810	219	392.	1237.5
2616.0	1	0135	20	130.	23.4	2581.9	*	1	0955	120	405.	1480.8	2618.2	*	1	1815	220	392.	1234.9
2615.9	1	0140	21	140.	26.6	2582.4	*	1	1000	121	405.	1478.6	2618.2	*	1	1820	221	391.	1232.3
2615.9	1	0145	22	151.	29.9	2582.9	*	1	1005	122	405.	1476.5	2618.1	*	1	1825	222	391.	1229.6
2615.8	1	0150	23	163.	33.5	2583.5	*	1	1010	123	405.	1474.3	2618.1	*	1	1830	223	391.	1227.0
2615.8	1	0155	24	176.	37.6	2584.1	*	1	1015	124	405.	1472.1	2618.0	*	1	1835	224	391.	1224.3
2615.7	1	0200	25	191.	42.3	2584.9	*	1	1020	125	405.	1469.9	2618.0	*	1	1840	225	391.	1221.7
2615.7	1	0205	26	196.	47.7	2585.3	*	1	1025	126	405.	1467.8	2618.0	*	1	1845	226	391.	1219.1
2615.6	1	0210	27	200.	53.8	2585.8	*	1	1030	127	405.	1465.6	2618.0	*	1				

2614.5	1	0405	50	338.	595.5	2604.0	*	1	1225	150	402.	1413.4	2617.5	*	1	2045	250	386.	1155.7
2614.4	1	0410	51	344.	652.7	2605.2	*	1	1230	151	402.	1411.0	2617.5	*	1	2050	251	386.	1153.0
2614.4	1	0415	52	349.	705.1	2606.2	*	1	1235	152	401.	1408.7	2617.5	*	1	2055	252	386.	1150.4
2614.4	1	0420	53	354.	752.6	2607.1	*	1	1240	153	401.	1406.3	2617.4	*	1	2100	253	386.	1147.8
2614.3	1	0425	54	358.	795.4	2607.9	*	1	1245	154	401.	1403.9	2617.4	*	1	2105	254	386.	1145.1
2614.2	1	0430	55	362.	834.0	2608.6	*	1	1250	155	401.	1401.6	2617.4	*	1	2110	255	385.	1142.5
2614.2	1	0435	56	366.	869.2	2609.2	*	1	1255	156	401.	1399.2	2617.4	*	1	2115	256	385.	1139.9
2614.1	1	0440	57	369.	902.2	2609.8	*	1	1300	157	401.	1396.8	2617.4	*	1	2120	257	385.	1137.2
2614.1	1	0445	58	372.	934.4	2610.4	*	1	1305	158	401.	1394.4	2617.3	*	1	2125	258	385.	1134.6
2614.1	1	0450	59	374.	967.3	2611.0	*	1	1310	159	401.	1391.9	2617.3	*	1	2130	259	385.	1132.0
2614.0	1	0455	60	376.	1002.1	2611.7	*	1	1315	160	400.	1389.5	2617.3	*	1	2135	260	385.	1129.3
2614.0	1	0500	61	379.	1039.6	2612.4	*	1	1320	161	400.	1387.1	2617.3	*	1	2140	261	384.	1126.7
2613.9	1	0505	62	381.	1079.7	2613.1	*	1	1325	162	400.	1384.6	2617.3	*	1	2145	262	384.	1124.1
2613.9	1	0510	63	384.	1121.3	2613.8	*	1	1330	163	400.	1382.2	2617.2	*	1	2150	263	384.	1121.4
2613.8	1	0515	64	387.	1162.7	2614.6	*	1	1335	164	400.	1379.7	2617.2	*	1	2155	264	384.	1118.8
2613.8	1	0520	65	389.	1202.4	2615.3	*	1	1340	165	400.	1377.2	2617.2	*	1	2200	265	384.	1116.2
2613.7	1	0525	66	392.	1239.1	2616.0	*	1	1345	166	400.	1374.8	2617.2	*	1	2205	266	384.	1113.6
2613.7	1	0530	67	394.	1272.2	2616.3	*	1	1350	167	399.	1372.3	2617.1	*	1	2210	267	383.	1110.9
2613.7	1	0535	68	395.	1301.7	2616.5	*	1	1355	168	399.	1369.8	2617.1	*	1	2215	268	383.	1108.3
2613.6	1	0540	69	397.	1327.9	2616.8	*	1	1400	169	399.	1367.3	2617.1	*	1	2220	269	383.	1105.7
2613.6	1	0545	70	398.	1351.4	2617.0	*	1	1405	170	399.	1364.8	2617.1	*	1	2225	270	383.	1103.1
2613.5	1	0550	71	399.	1372.5	2617.1	*	1	1410	171	399.	1362.3	2617.1	*	1	2230	271	383.	1100.4
2613.5	1	0555	72	401.	1391.8	2617.3	*	1	1415	172	399.	1359.7	2617.0	*	1	2235	272	383.	1097.8
2613.4	1	0600	73	402.	1409.6	2617.5	*	1	1420	173	399.	1357.2	2617.0	*	1	2240	273	382.	1095.2
2613.4	1	060																	

1	0155	24	155.	31.1	2583.1	*	1	1015	124	403.	1434.1	2617.7	*	1	1835	224	388.	1184.0	
2615.0	1	0200	25	168.	35.2	2583.8	*	1	1020	125	403.	1431.9	2617.7	*	1	1840	225	388.	1181.4
2614.9	1	0205	26	183.	39.8	2584.5	*	1	1025	126	403.	1429.7	2617.6	*	1	1845	226	388.	1178.8
2614.9	1	0210	27	195.	45.1	2585.1	*	1	1030	127	403.	1427.5	2617.6	*	1	1850	227	388.	1176.2
2614.8	1	0215	28	198.	51.0	2585.6	*	1	1035	128	402.	1425.2	2617.6	*	1	1855	228	388.	1173.5
2614.8	1	0220	29	202.	57.6	2586.0	*	1	1040	129	402.	1423.0	2617.6	*	1	1900	229	387.	1170.9
2614.7	1	0225	30	206.	64.6	2586.5	*	1	1045	130	402.	1420.8	2617.6	*	1	1905	230	387.	1168.3
2614.7	1	0230	31	210.	72.0	2587.1	*	1	1050	131	402.	1418.5	2617.5	*	1	1910	231	387.	1165.6
2614.6	1	0235	32	214.	79.5	2587.6	*	1	1055	132	402.	1416.2	2617.5	*	1	1915	232	387.	1163.
2614.6	1	0240	33	218.	87.1	2588.1	*	1	1100	133	402.	1414.0	2617.5	*	1	1920	233	387.	1160.4
2614.6	1	0245	34	222.	94.4	2588.6	*	1	1105	134	402.	1411.7	2617.5	*	1	1925	234	387.	1157.7
2614.5	1	0250	35	226.	101.5	2589.2	*	1	1110	135	402.	1409.4	2617.5	*	1	1930	235	386.	1155.1
2614.5	1	0255	36	229.	108.5	2589.6	*	1	1115	136	401.	1407.1	2617.4	*	1	1935	236	386.	1152.5
2614.4	1	0300	37	233.	115.4	2590.1	*	1	1120	137	401.	1404.8	2617.4	*	1	1940	237	386.	1149.8
2614.4	1	0305	38	237.	122.8	2590.4	*	1	1125	138	401.	1402.5	2617.4	*	1	1945	238	386.	1147.2
2614.3	1	0310	39	241.	131.2	2590.8	*	1	1130	139	401.	1400.2	2617.4	*	1	1950	239	386.	1144.6
2614.3	1	0315	40	246.	141.3	2591.3	*	1	1135	140	401.	1397.9	2617.4	*	1	1955	240	385.	1142.0
2614.2	1	0320	41	252.	154.4	2591.9	*	1	1140	141	401.	1395.6	2617.3	*	1	2000	241	385.	1139.3
2614.2	1	0325	42	260.	171.6	2592.7	*	1	1145	142	401.	1393.3	2617.3	*	1	2005	242	385.	1136.7
2614.1	1	0330	43	271.	194.5	2593.7	*	1	1150	143	400.	1390.9	2617.3	*	1	2010	243	385.	1134.1
2614.1	1	0335	44	285.	224.8	2595.1	*	1	1155	144	400.	1388.6	2617.3	*	1	2015	244	385.	1131.4
2614.0	1	0340	45	292.	263.8	2596.1	*	1	1200	145	400.	1386.2	2617.3	*	1	2020	245	385.	1128.8
2614.0	1	0345	46	300.	311.3	2597.3	*	1	1205	146	400.	1383.9	2617.2	*	1	2025	246	384.	1126.2
2613.9	1	0350	47	308.	365.7	2598.8	*	1	1210	147	400.	1381.5	2617.2	*	1	2030	247	384.	1123.6
2613.9	1	0355	48	317.	424.1	2600.3</													

1	0550	71	394.	1274.7	2616.3	*	1	1410	171	397.	1322.3	2616.7	*	1	2230	271	380.	1060.8	
2612.7	1	0555	72	395.	1293.0	2616.5	*	1	1415	172	396.	1319.7	2616.7	*	1	2235	272	380.	1058.2
2612.7	1	0600	73	396.	1309.9	2616.6	*	1	1420	173	396.	1317.2	2616.7	*	1	2240	273	380.	1055.6
2612.6	1	0605	74	397.	1325.7	2616.7	*	1	1425	174	396.	1314.6	2616.6	*	1	2245	274	380.	1053.0
2612.6	1	0610	75	398.	1340.5	2616.9	*	1	1430	175	396.	1312.0	2616.6	*	1	2250	275	379.	1050.4
2612.5	1	0615	76	398.	1354.5	2617.0	*	1	1435	176	396.	1309.5	2616.6	*	1	2255	276	379.	1047.8
2612.5	1	0620	77	399.	1367.6	2617.1	*	1	1440	177	396.	1306.9	2616.6	*	1	2300	277	379.	1045.2
2612.5	1	0625	78	400.	1380.0	2617.2	*	1	1445	178	396.	1304.3	2616.6	*	1	2305	278	379.	1042.6
2612.4	1	0630	79	401.	1391.5	2617.3	*	1	1450	179	395.	1301.8	2616.5	*	1	2310	279	379.	1040.0
2612.4	1	0635	80	401.	1402.3	2617.4	*	1	1455	180	395.	1299.2	2616.5	*	1	2315	280	378.	1037.4
2612.3	1	0640	81	402.	1412.1	2617.5	*	1	1500	181	395.	1296.6	2616.5	*	1	2320	281	378.	1034.8
2612.3	1	0645	82	402.	1421.0	2617.6	*	1	1505	182	395.	1294.0	2616.5	*	1	2325	282	378.	1032.2
2612.2	1	0650	83	403.	1429.0	2617.6	*	1	1510	183	395.	1291.4	2616.4	*	1	2330	283	378.	1029.6
2612.2	1	0655	84	403.	1436.0	2617.7	*	1	1515	184	395.	1288.9	2616.4	*	1	2335	284	378.	1027.0
2612.1	1	0700	85	403.	1442.2	2617.8	*	1	1520	185	395.	1286.3	2616.4	*	1	2340	285	378.	1024.4
2612.1	1	0705	86	404.	1447.8	2617.8	*	1	1525	186	394.	1283.7	2616.4	*	1	2345	286	377.	1021.8
2612.0	1	0710	87	404.	1452.8	2617.8	*	1	1530	187	394.	1281.1	2616.4	*	1	2350	287	377.	1019.2
2612.0	1	0715	88	404.	1457.5	2617.9	*	1	1535	188	394.	1278.5	2616.3	*	1	2355	288	377.	1016.6
2611.9	1	0720	89	404.	1461.9	2617.9	*	1	1540	189	394.	1275.9	2616.3	*	2	0000	289	377.	1014.0
2611.9	1	0725	90	405.	1465.9	2618.0	*	1	1545	190	394.	1273.3	2616.3	*	2	0005	290	377.	1011.4
2611.8	1	0730	91	405.	1469.5	2618.0	*	1	1550	191	394.	1270.7	2616.3	*	2	0010	291	377.	1008.8
2611.8	1	0735	92	405.	1472.6	2618.0	*	1	1555	192	394.	1268.1	2616.2	*	2	0015	292	376.	1006.3
2611.7	1	0740	93	405.	1475.2	2618.1	*	1	1600	193	393.	1265.5	2616.2	*	2	0020	293	376.	1003.7
2611.7	1	0745	94	405.	1477.4	2618.2	*	1	1605	194	393.	1262.8	2616.2	*	2	0025	294	376.	1001.1
2611.7	1	0750	95	405.	1479.0	2618.2	*	1	1610	195	393.	1260.2	2616.2	*	2	0030	295	376.	998.5
2611.6	1	0755	96	405.	1480.2	2618.2	*	1	1615	196	393.	1257.6	2616.2	*	2	0035	296	376.	995.9
2611.6	1	0800	97	405.	1481.0	2618.2	*	1	1620	197	393.	1255.0	2616.1	*	2	0040	297	376.	993.3
2611.5	1	0805	98	406.	1481.4	2618.3	*	1	1625	198	393.	1252.4	2616.1	*	2	0045	298	375.	990.8
2611.5	1	0810	99	406.	1481.4	2618.3	*	1	1630	199	393.	1249.8	2616.1	*	2	0050	299	375.	988.2
2611.4	1	0815	100	405.	1481.1	2618.2	*	1	1635	200	392.	1247.1	2616.1	*	2	0055	300	375.	985.6

* * *

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	406.	8.08	(CFS)	403.	365.	352.	352.
			(INCHES)	.164	.596	.596	.596
			(AC-FT)	200.	724.	724.	724.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	1481.	8.17		1437.	1091.	1051.	1051.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	2618.26	8.17		2617.73	2611.63	2610.32	2610.32

CUMULATIVE AREA = 22.79 SQ MI

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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

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION		
				RATIO 1	RATIO 2	RATIO 3
				.83	.80	.76

HYDROGRAPH AT							
+	3-1	2.22	1	FLOW TIME	1324. 4.00	1261. 4.00	1173. 4.00
ROUTED TO							
+	R3-1	2.22	1	FLOW TIME	1323. 4.00	1261. 4.00	1173. 4.00
HYDROGRAPH AT							
+	3-2	.23	1	FLOW TIME	223. 3.50	212. 3.50	196. 3.50
2 COMBINED AT							
+	CP3.1	2.45	1	FLOW TIME	1381. 4.00	1316. 4.00	1225. 4.00
ROUTED TO							
+	RCP3.1	2.45	1	FLOW TIME	1386. 4.00	1317. 4.00	1224. 4.08
HYDROGRAPH AT							
+	3-D	.33	1	FLOW TIME	259. 3.58	246. 3.58	227. 3.58
2 COMBINED AT							
+	CP3.3	2.78	1	FLOW TIME	1513. 4.00	1438. 4.00	1335. 4.00
ROUTED TO							
+	RCP3.3	2.78	1	FLOW TIME	1507. 4.00	1432. 4.00	1330. 4.00
HYDROGRAPH AT							
+	3-3	.17	1	FLOW TIME	222. 3.50	212. 3.50	198. 3.50
ROUTED TO							
+	R3-3	.17	1	FLOW TIME	198. 3.58	189. 3.58	178. 3.58
HYDROGRAPH AT							
+	3-4	.35	1	FLOW TIME	424. 3.50	405. 3.50	379. 3.50
ROUTED TO							
+	R3-4	.35	1	FLOW TIME	387. 3.58	369. 3.58	345. 3.58
HYDROGRAPH AT							
+	3-5	.29	1	FLOW TIME	353. 3.50	337. 3.50	314. 3.50
ROUTED TO							
+	R3-5	.29	1	FLOW TIME	325. 3.58	310. 3.58	295. 3.58
3 COMBINED AT							
+	CP3.2	.81	1	FLOW TIME	909. 3.58	868. 3.58	818. 3.58
ROUTED TO							
+	RCP3.2	.81	1	FLOW TIME	854. 3.58	811. 3.58	770. 3.58
HYDROGRAPH AT							
+	3-E	.54	1	FLOW TIME	438. 3.67	416. 3.67	387. 3.67
3 COMBINED AT							
+	CP3.4	4.14	1	FLOW TIME	2441. 3.67	2323. 3.67	2158. 3.67
ROUTED TO							
+	RCP3.4	4.14	1	FLOW TIME	2399. 3.67	2276. 3.67	2114. 3.67
HYDROGRAPH AT							
+	3-6	.09	1	FLOW TIME	113. 3.50	108. 3.50	101. 3.50
ROUTED TO							
+	R3-6	.09	1	FLOW TIME	102. 3.67	97. 3.67	86. 3.67
HYDROGRAPH AT							
+	3-7	.17	1	FLOW TIME	232. 3.50	221. 3.50	207. 3.50
ROUTED TO							
+	R3-7	.17	1	FLOW TIME	199. 3.50	189. 3.50	169. 3.50
HYDROGRAPH AT							
+	3-J	.15	1	FLOW	106.	99.	90.

				TIME	3.58	3.58	3.58
ROUTED TO							
+	R3-J	.15	1	FLOW TIME	104. 3.67	97. 3.67	88. 3.67
3 COMBINED AT							
+	CP3.5	.41	1	FLOW TIME	360. 3.58	341. 3.58	304. 3.58
ROUTED TO							
+	RCP3.5	.41	1	FLOW TIME	349. 3.58	331. 3.58	295. 3.58
HYDROGRAPH AT							
+	3-8	.64	1	FLOW TIME	630. 3.58	601. 3.58	561. 3.58
ROUTED TO							
+	R3-8	.64	1	FLOW TIME	600. 3.67	572. 3.67	543. 3.67
HYDROGRAPH AT							
+	3-K	.89	1	FLOW TIME	697. 3.67	664. 3.67	618. 3.67
3 COMBINED AT							
+	CP3.6	1.94	1	FLOW TIME	1613. 3.67	1538. 3.67	1436. 3.67
ROUTED TO							
+	RCP3.6	1.94	1	FLOW TIME	1595. 3.67	1525. 3.67	1414. 3.67
HYDROGRAPH AT							
+	3-N	.46	1	FLOW TIME	378. 3.67	360. 3.67	337. 3.67
HYDROGRAPH AT							
+	3-M	.19	1	FLOW TIME	196. 3.58	187. 3.58	175. 3.58
ROUTED TO							
+	R3-M	.19	1	FLOW TIME	191. 3.58	184. 3.58	170. 3.58
4 COMBINED AT							
+	CPDB5	6.72	1	FLOW TIME	4536. 3.67	4320. 3.67	4012. 3.67
ROUTED TO							
+	DB5	6.72	1	FLOW TIME	1930. 5.17	1882. 5.17	1814. 5.17
** PEAK STAGES IN FEET **							
			1	STAGE TIME	3555.17 5.17	3554.34 5.17	3553.18 5.17
HYDROGRAPH AT							
+	3-L	.32	1	FLOW TIME	317. 3.58	303. 3.58	283. 3.58
2 COMBINED AT							
+	CP3-L	7.05	1	FLOW TIME	2043. 4.92	1990. 4.92	1916. 4.92
ROUTED TO							
+	RCSWAA-1	7.05	1	FLOW TIME	2041. 4.92	1988. 4.92	1914. 4.92
HYDROGRAPH AT							
+	SWAA-2	.70	1	FLOW TIME	539. 3.75	516. 3.75	484. 3.75
2 COMBINED AT							
+	CSWAA-2	7.75	1	FLOW TIME	2324. 3.83	2254. 3.83	2161. 4.92
ROUTED TO							
+	RCSWAA-2	7.75	1	FLOW TIME	2320. 3.83	2252. 3.92	2157. 5.00
HYDROGRAPH AT							
+	SWAA-3	.58	1	FLOW TIME	380. 3.75	362. 3.75	337. 3.75
2 COMBINED AT							
+	CSWAA-3	8.33	1	FLOW TIME	2681. 3.83	2592. 3.83	2465. 3.83
HYDROGRAPH AT							
+	3-F	.28	1	FLOW TIME	291. 3.58	278. 3.58	260. 3.58
ROUTED TO							

+	R3-F	.28	1	FLOW TIME	287. 3.58	274. 3.58	256. 3.58
HYDROGRAPH AT							
+	3-G2	.13	1	FLOW TIME	162. 3.50	156. 3.50	147. 3.50
2 COMBINED AT							
+	CP3.8	.41	1	FLOW TIME	431. 3.58	412. 3.58	387. 3.58
ROUTED TO							
+	RCP3.8	.41	1	FLOW TIME	425. 3.58	406. 3.58	382. 3.58
HYDROGRAPH AT							
+	3-A	.34	1	FLOW TIME	220. 3.67	207. 3.67	190. 3.67
ROUTED TO							
+	R3-A	.34	1	FLOW TIME	219. 3.67	206. 3.67	189. 3.67
HYDROGRAPH AT							
+	3-B	.70	1	FLOW TIME	478. 3.67	452. 3.67	417. 3.67
ROUTED TO							
+	R3-B	.70	1	FLOW TIME	472. 3.67	446. 3.67	411. 3.67
HYDROGRAPH AT							
+	3-C	.22	1	FLOW TIME	206. 3.58	196. 3.58	183. 3.58
3 COMBINED AT							
+	CPDBA-B	1.26	1	FLOW TIME	877. 3.67	831. 3.67	767. 3.67
ROUTED TO							
+	GPDB	1.26	1	FLOW TIME	128. 5.42	125. 5.42	121. 5.42
*** PEAK STAGES IN FEET ***							
1	STAGE	23.63			23.08	22.32	
	TIME	5.42			5.42	5.42	
HYDROGRAPH AT							
+	3-G1	.24	1	FLOW TIME	256. 3.58	245. 3.58	230. 3.58
ROUTED TO							
+	R3-G1	.24	1	FLOW TIME	256. 3.58	245. 3.58	230. 3.58
2 COMBINED AT							
+	CP3-G1	1.50	1	FLOW TIME	333. 3.58	317. 3.58	296. 3.58
ROUTED TO							
+	RCP3-G1	1.50	1	FLOW TIME	329. 3.58	314. 3.58	293. 3.58
HYDROGRAPH AT							
+	3-H1	.04	1	FLOW TIME	51. 3.50	49. 3.50	46. 3.50
2 COMBINED AT							
+	CP3-H1	1.54	1	FLOW TIME	368. 3.58	352. 3.58	328. 3.58
ROUTED TO							
+	RCP3-H1	1.54	1	FLOW TIME	363. 3.58	346. 3.58	321. 3.58
HYDROGRAPH AT							
+	3-I1	.29	1	FLOW TIME	262. 3.58	250. 3.58	234. 3.58
3 COMBINED AT							
+	CP3.9	2.24	1	FLOW TIME	1051. 3.58	1003. 3.58	937. 3.58
ROUTED TO							
+	RCP9	2.24	1	FLOW TIME	1039. 3.58	990. 3.58	925. 3.58
HYDROGRAPH AT							
+	3-O	.11	1	FLOW TIME	131. 3.50	126. 3.50	119. 3.50
ROUTED TO							
+	R3-O	.11	1	FLOW TIME	128. 3.58	123. 3.58	117. 3.58

HYDROGRAPH AT							
+	3-P2	.15	1	FLOW TIME	141. 3.58	134. 3.58	125. 3.58
ROUTED TO							
+	R3-P2	.15	1	FLOW TIME	137. 3.58	130. 3.58	121. 3.58
HYDROGRAPH AT							
+	3-P1	.24	1	FLOW TIME	287. 3.50	275. 3.50	258. 3.50
3 COMBINED AT							
+	CP3-P	.50	1	FLOW TIME	537. 3.58	515. 3.58	484. 3.58
ROUTED TO							
+	RCP3-P	.50	1	FLOW TIME	536. 3.58	513. 3.58	481. 3.58
HYDROGRAPH AT							
+	3-Q	.20	1	FLOW TIME	224. 3.58	215. 3.58	203. 3.58
2 COMBINED AT							
+	CP3-Q	.70	1	FLOW TIME	759. 3.58	728. 3.58	684. 3.58
ROUTED TO							
+	RCP3-Q	.70	1	FLOW TIME	741. 3.58	709. 3.58	667. 3.58
HYDROGRAPH AT							
+	3-H2	.18	1	FLOW TIME	202. 3.58	194. 3.58	183. 3.58
2 COMBINED AT							
+	CP3-H2	.88	1	FLOW TIME	943. 3.58	903. 3.58	850. 3.58
ROUTED TO							
+	RCPH-2	.88	1	FLOW TIME	930. 3.58	890. 3.58	836. 3.58
HYDROGRAPH AT							
+	3-I2	.12	1	FLOW TIME	114. 3.58	109. 3.58	102. 3.58
3 COMBINED AT							
+	CP3.10	3.25	1	FLOW TIME	2082. 3.58	1989. 3.58	1863. 3.58
ROUTED TO							
+	RCP3.10	3.25	1	FLOW TIME	2070. 3.58	1977. 3.58	1851. 3.58
HYDROGRAPH AT							
+	3-H3	.14	1	FLOW TIME	146. 3.58	141. 3.58	133. 3.58
2 COMBINED AT							
+	CP3.11	3.39	1	FLOW TIME	2217. 3.58	2118. 3.58	1984. 3.58
ROUTED TO							
+	RCSHFH-9	3.39	1	FLOW TIME	2112. 3.58	2009. 3.58	1876. 3.58
2 COMBINED AT							
+	CRCSWFH9	11.72	1	FLOW TIME	4642. 3.67	4420. 3.67	4137. 3.67
ROUTED TO							
+	RCRCSWFH	11.72	1	FLOW TIME	4608. 3.67	4385. 3.67	4101. 3.67
HYDROGRAPH AT							
+	11A-1	.21	1	FLOW TIME	132. 3.67	125. 3.67	115. 3.67
2 COMBINED AT							
+	C11A-1	11.92	1	FLOW TIME	4740. 3.67	4510. 3.67	4216. 3.67
ROUTED TO							
+	RC11A-1	11.92	1	FLOW TIME	4679. 3.67	4449. 3.67	4153. 3.67
HYDROGRAPH AT							
+	11A-3	.19	1	FLOW TIME	156. 3.58	149. 3.58	138. 3.58
2 COMBINED AT							
+	C11A-3	12.12	1	FLOW TIME	4832. 3.67	4595. 3.67	4289. 3.67

ROUTED TO							
+	RC11A-3	12.12	1	FLOW TIME	4741. 3.75	4519. 3.75	4227. 3.75
HYDROGRAPH AT							
+	3A	.18	1	FLOW TIME	107. 3.67	102. 3.67	93. 3.67
2 COMBINED AT							
+	C3A	12.30	1	FLOW TIME	4834. 3.75	4607. 3.75	4309. 3.75
ROUTED TO							
+	RC3A	12.30	1	FLOW TIME	4664. 3.92	4458. 3.92	4182. 3.92
HYDROGRAPH AT							
+	3B-1	.26	1	FLOW TIME	131. 3.67	123. 3.67	112. 3.67
2 COMBINED AT							
+	C3B-1	12.55	1	FLOW TIME	4748. 3.92	4538. 3.92	4255. 3.92
ROUTED TO							
+	RC3B-1	12.55	1	FLOW TIME	4733. 3.92	4521. 3.92	4235. 3.92
HYDROGRAPH AT							
+	11B-2	.44	1	FLOW TIME	238. 3.83	226. 3.83	208. 3.83
ROUTED TO							
+	R11B-2	.44	1	FLOW TIME	237. 3.83	225. 3.83	208. 3.83
HYDROGRAPH AT							
+	11B-1	.39	1	FLOW TIME	282. 3.67	268. 3.67	249. 3.67
2 COMBINED AT							
+	C11B-1	.84	1	FLOW TIME	487. 3.67	462. 3.67	427. 3.67
ROUTED TO							
+	RC11B-1	.84	1	FLOW TIME	484. 3.75	459. 3.75	425. 3.75
HYDROGRAPH AT							
+	8B-1	.30	1	FLOW TIME	208. 3.67	198. 3.67	184. 3.67
2 COMBINED AT							
+	C8B-1	1.14	1	FLOW TIME	680. 3.67	645. 3.67	598. 3.75
ROUTED TO							
+	RC8B-1	1.14	1	FLOW TIME	683. 3.75	646. 3.75	598. 3.75
HYDROGRAPH AT							
+	8B-2	.42	1	FLOW TIME	324. 3.67	310. 3.67	292. 3.67
2 COMBINED AT							
+	C8B-2	1.56	1	FLOW TIME	1003. 3.75	953. 3.75	887. 3.75
ROUTED TO							
+	RC8B-2	1.56	1	FLOW TIME	995. 3.75	943. 3.75	879. 3.75
HYDROGRAPH AT							
+	11A-2	.29	1	FLOW TIME	241. 3.58	230. 3.58	214. 3.58
ROUTED TO							
+	R11A-2	.29	1	FLOW TIME	237. 3.67	225. 3.67	209. 3.67
HYDROGRAPH AT							
+	8A	.31	1	FLOW TIME	204. 3.67	194. 3.67	179. 3.67
2 COMBINED AT							
+	C8A	.60	1	FLOW TIME	441. 3.67	419. 3.67	388. 3.67
ROUTED TO							
+	RC8A	.60	1	FLOW TIME	413. 3.75	392. 3.75	364. 3.75
HYDROGRAPH AT							
+	3B-2A	.24	1	FLOW	183.	174.	162.

				TIME	3.58	3.58	3.58
2 COMBINED AT							
+	C3B-2A	.84	1	FLOW TIME	555. 3.67	527. 3.67	488. 3.67
2 COMBINED AT							
+	CC3B-2A	2.40	1	FLOW TIME	1546. 3.75	1467. 3.75	1365. 3.75
ROUTED TO							
+	RCC3B-2A	2.40	1	FLOW TIME	1524. 3.75	1447. 3.75	1342. 3.75
HYDROGRAPH AT							
+	3B-2B	.27	1	FLOW TIME	145. 3.67	137. 3.67	126. 3.67
2 COMBINED AT							
+	C3B-2B	2.67	1	FLOW TIME	1665. 3.75	1581. 3.75	1465. 3.75
2 COMBINED AT							
+	CC3B-2B	15.23	1	FLOW TIME	6232. 3.83	5934. 3.92	5557. 3.92
ROUTED TO							
+	RCC3B-2B	15.23	1	FLOW TIME	6218. 3.92	5927. 3.92	5543. 3.92
HYDROGRAPH AT							
+	SF2-C	.39	1	FLOW TIME	159. 3.83	150. 3.83	138. 3.83
2 COMBINED AT							
+	CSF2-C	15.61	1	FLOW TIME	6373. 3.92	6074. 3.92	5677. 3.92
ROUTED TO							
+	RCSF2-C	15.61	1	FLOW TIME	6340. 3.92	6036. 3.92	5637. 3.92
HYDROGRAPH AT							
+	SW11	.59	1	FLOW TIME	418. 3.67	398. 3.67	370. 3.67
ROUTED TO							
+	RSW11	.59	1	FLOW TIME	410. 3.67	391. 3.67	362. 3.67
HYDROGRAPH AT							
+	SW17	.36	1	FLOW TIME	264. 3.67	252. 3.67	234. 3.67
2 COMBINED AT							
+	CSW17	.94	1	FLOW TIME	674. 3.67	642. 3.67	596. 3.67
ROUTED TO							
+	RCSW17	.94	1	FLOW TIME	655. 3.75	625. 3.75	582. 3.75
HYDROGRAPH AT							
+	SW18	.41	1	FLOW TIME	285. 3.67	271. 3.67	251. 3.67
2 COMBINED AT							
+	CSW18	1.35	1	FLOW TIME	939. 3.67	894. 3.67	829. 3.67
ROUTED TO							
+	RCSW18	1.35	1	FLOW TIME	885. 3.83	841. 3.83	781. 3.83
HYDROGRAPH AT							
+	12A	.39	1	FLOW TIME	320. 3.67	306. 3.67	287. 3.67
2 COMBINED AT							
+	C12A	1.74	1	FLOW TIME	1123. 3.83	1069. 3.83	995. 3.83
ROUTED TO							
+	RC12A	1.74	1	FLOW TIME	1117. 3.83	1063. 3.83	988. 3.83
HYDROGRAPH AT							
+	12B	.26	1	FLOW TIME	212. 3.58	203. 3.58	190. 3.58
2 COMBINED AT							
+	C12B	2.00	1	FLOW TIME	1258. 3.83	1198. 3.83	1114. 3.83
ROUTED TO							

+	RC12B	2.00	1	FLOW TIME	1222. 4.00	1164. 4.00	1084. 4.00
	HYDROGRAPH AT						
+	57B-3	.31	1	FLOW TIME	140. 3.75	131. 3.75	120. 3.75
	2 COMBINED AT						
+	C57B-3	2.31	1	FLOW TIME	1334. 3.92	1269. 3.92	1178. 3.92
	ROUTED TO						
+	RC57B-3	2.31	1	FLOW TIME	1332. 4.00	1268. 4.00	1178. 4.00
	HYDROGRAPH AT						
+	57B-2	.36	1	FLOW TIME	179. 3.75	169. 3.75	155. 3.75
	2 COMBINED AT						
+	C57B-2	2.67	1	FLOW TIME	1464. 3.92	1391. 3.92	1291. 4.00
	ROUTED TO						
+	RC57B-2	2.67	1	FLOW TIME	1467. 4.00	1395. 4.00	1295. 4.00
	HYDROGRAPH AT						
+	13B-1	.25	1	FLOW TIME	200. 3.67	192. 3.67	180. 3.67
	ROUTED TO						
+	RC13B-1	.25	1	FLOW TIME	200. 3.75	192. 3.75	180. 3.75
	HYDROGRAPH AT						
+	13B-2	.22	1	FLOW TIME	169. 3.58	161. 3.58	151. 3.58
	2 COMBINED AT						
+	C13B-2	.47	1	FLOW TIME	349. 3.67	333. 3.67	311. 3.67
	ROUTED TO						
+	RC13B-2	.47	1	FLOW TIME	351. 3.83	336. 3.83	314. 3.83
	HYDROGRAPH AT						
+	19A	.25	1	FLOW TIME	177. 3.75	169. 3.75	158. 3.75
	ROUTED TO						
+	R19A	.25	1	FLOW TIME	178. 3.83	170. 3.83	159. 3.83
	HYDROGRAPH AT						
+	13A-1	.22	1	FLOW TIME	174. 3.67	167. 3.67	156. 3.67
	2 COMBINED AT						
+	C13A-1	.48	1	FLOW TIME	329. 3.75	314. 3.75	293. 3.75
	ROUTED TO						
+	RC13A-1	.48	1	FLOW TIME	324. 3.83	310. 3.83	289. 3.83
	HYDROGRAPH AT						
+	13A-2	.19	1	FLOW TIME	148. 3.58	141. 3.58	132. 3.58
	2 COMBINED AT						
+	C13A-2	.66	1	FLOW TIME	434. 3.75	414. 3.75	386. 3.75
	ROUTED TO						
+	RC13A-2	.66	1	FLOW TIME	435. 3.92	415. 3.92	388. 3.92
	HYDROGRAPH AT						
+	PIC-C	.24	1	FLOW TIME	158. 3.75	151. 3.75	141. 3.75
	2 COMBINED AT						
+	CPIC-C	.91	1	FLOW TIME	581. 3.83	554. 3.83	515. 3.83
	ROUTED TO						
+	RCPIC-C	.91	1	FLOW TIME	577. 3.92	551. 3.92	513. 3.92
	HYDROGRAPH AT						
+	PIC-A	.36	1	FLOW TIME	204. 3.83	195. 3.83	182. 3.83

2 COMBINED AT							
+	CPIC-A	1.27	1	FLOW TIME	781. 3.92	746. 3.92	695. 3.92
2 COMBINED AT							
+	CCPIC-A	1.73	1	FLOW TIME	1115. 3.83	1064. 3.92	994. 3.92
ROUTED TO							
+	RCCPIC-A	1.73	1	FLOW TIME	1098. 3.92	1071. 3.92	995. 3.92
HYDROGRAPH AT							
+	57B-1	.20	1	FLOW TIME	109. 3.67	103. 3.67	95. 3.67
2 COMBINED AT							
+	C57B-1	1.93	1	FLOW TIME	1172. 3.92	1141. 3.92	1060. 3.92
2 COMBINED AT							
+	CC57B-1	4.60	1	FLOW TIME	2624. 4.00	2517. 3.92	2342. 4.00
ROUTED TO							
+	RCC57B-1	4.60	1	FLOW TIME	2623. 4.00	2515. 4.00	2341. 4.00
HYDROGRAPH AT							
+	57B-4	.20	1	FLOW TIME	142. 3.58	136. 3.58	126. 3.58
2 COMBINED AT							
+	C57B-4	4.80	1	FLOW TIME	2694. 4.00	2582. 3.92	2405. 4.00
HYDROGRAPH AT							
+	PIC-B	.44	1	FLOW TIME	253. 3.83	242. 3.83	226. 3.83
ROUTED TO							
+	RPIC-B	.44	1	FLOW TIME	250. 3.83	239. 3.83	224. 3.83
2 COMBINED AT							
+	CC57B-4	5.24	1	FLOW TIME	2940. 3.92	2821. 3.92	2619. 4.00
ROUTED TO							
+	RCC57B-4	5.24	1	FLOW TIME	2933. 4.00	2811. 4.00	2617. 4.00
HYDROGRAPH AT							
+	38A	.35	1	FLOW TIME	212. 3.75	202. 3.75	189. 3.75
ROUTED TO							
+	R38A	.35	1	FLOW TIME	208. 3.83	200. 3.83	190. 3.83
HYDROGRAPH AT							
+	38B	.44	1	FLOW TIME	281. 3.75	269. 3.75	253. 3.75
2 COMBINED AT							
+	C38B	.79	1	FLOW TIME	480. 3.75	460. 3.75	432. 3.75
HYDROGRAPH AT							
+	57BA	.32	1	FLOW TIME	95. 3.83	88. 3.83	79. 3.83
ROUTED TO							
+	R57BA	.32	1	FLOW TIME	94. 3.83	87. 3.83	78. 3.83
HYDROGRAPH AT							
+	3C	.15	1	FLOW TIME	120. 3.67	115. 3.67	108. 3.67
2 COMBINED AT							
+	C3C	.47	1	FLOW TIME	197. 3.67	186. 3.67	171. 3.67
ROUTED TO							
+	RC3C	.47	1	FLOW TIME	197. 3.75	187. 3.75	171. 3.75
HYDROGRAPH AT							
+	AP	.67	1	FLOW TIME	234. 3.75	219. 3.75	198. 3.75
5 COMBINED AT							
+	ANGLPKIN	22.79	1	FLOW TIME	10098. 3.92	9633. 3.92	8972. 3.92

```

ROUTED TO
+      ANGLPKDB      22.79      1  FLOW      1885.      1274.      406.
      TIME      6.75      7.08      8.08

      ** PEAK STAGES IN FEET **
      1  STAGE      2619.51      2619.30      2618.26
      TIME      6.75      7.08      8.17

1
      SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
      (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

      INTERPOLATED TO
      COMPUTATION INTERVAL
      PEAK TIME TO
      PEAK PEAK

      ISTAQ      ELEMENT      DT      PEAK      TIME TO      VOLUME      DT      PEAK      TIME TO      VOLUME
      (MIN)      (CFS)      (MIN)      (IN)      (MIN)      (CFS)      (MIN)      (IN)

      FOR PLAN = 1  RATIO= .00
      R3-1  MANE      3.35      1323.00      241.19      1.82      5.00      1322.76      240.00      1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2158E+03 EXCESS= .0000E+00 OUTFLOW= .2158E+03 BASIN STORAGE= .7133E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      R3-1  MANE      3.42      1261.42      239.12      1.73      5.00      1260.86      240.00      1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2050E+03 EXCESS= .0000E+00 OUTFLOW= .2050E+03 BASIN STORAGE= .9191E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      R3-1  MANE      3.52      1174.04      239.08      1.61      5.00      1173.30      240.00      1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1901E+03 EXCESS= .0000E+00 OUTFLOW= .1901E+03 BASIN STORAGE= .7847E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.1  MANE      5.00      1385.62      240.00      1.80      5.00      1385.62      240.00      1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2345E+03 EXCESS= .0000E+00 OUTFLOW= .2346E+03 BASIN STORAGE= .1145E-01 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.1  MANE      5.00      1316.71      240.00      1.71      5.00      1316.71      240.00      1.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2227E+03 EXCESS= .0000E+00 OUTFLOW= .2227E+03 BASIN STORAGE= .1099E-01 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.1  MANE      5.00      1223.85      245.00      1.58      5.00      1223.85      245.00      1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2064E+03 EXCESS= .0000E+00 OUTFLOW= .2064E+03 BASIN STORAGE= .1120E-01 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.3  MANE      .64      1510.85      240.99      1.77      5.00      1506.98      240.00      1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2617E+03 EXCESS= .0000E+00 OUTFLOW= .2617E+03 BASIN STORAGE= .1126E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.3  MANE      .66      1436.26      240.49      1.68      5.00      1432.14      240.00      1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2484E+03 EXCESS= .0000E+00 OUTFLOW= .2484E+03 BASIN STORAGE= .1171E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      RCP3.3  MANE      .68      1335.13      240.67      1.55      5.00      1329.74      240.00      1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2301E+03 EXCESS= .0000E+00 OUTFLOW= .2301E+03 BASIN STORAGE= .1124E-02 PERCENT ERROR=
.0

      FOR PLAN = 1  RATIO= .00
      R3-3  MANE      4.50      199.96      216.00      1.86      5.00      197.50      215.00      1.86

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1725E+02 EXCESS= .0000E+00 OUTFLOW= .1727E+02 BASIN STORAGE= .4807E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-3 MANE 4.50 191.39 216.00 1.77 5.00 188.77 215.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1640E+02 EXCESS= .0000E+00 OUTFLOW= .1642E+02 BASIN STORAGE= .4735E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-3 MANE 4.75 184.25 213.75 1.65 5.00 177.95 215.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1529E+02 EXCESS= .0000E+00 OUTFLOW= .1530E+02 BASIN STORAGE= .5470E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-4 MANE 4.50 392.81 216.00 1.86 5.00 386.66 215.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3433E+02 EXCESS= .0000E+00 OUTFLOW= .3436E+02 BASIN STORAGE= .6869E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-4 MANE 4.50 375.69 216.00 1.77 5.00 369.35 215.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3265E+02 EXCESS= .0000E+00 OUTFLOW= .3268E+02 BASIN STORAGE= .6765E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-4 MANE 4.50 351.78 216.00 1.65 5.00 345.19 215.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3032E+02 EXCESS= .0000E+00 OUTFLOW= .3035E+02 BASIN STORAGE= .6616E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.60 328.36 212.21 1.83 5.00 324.77 215.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2871E+02 EXCESS= .0000E+00 OUTFLOW= .2873E+02 BASIN STORAGE= .3074E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.66 313.00 212.22 1.74 5.00 309.52 215.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2727E+02 EXCESS= .0000E+00 OUTFLOW= .2728E+02 BASIN STORAGE= .3220E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.75 305.58 213.89 1.62 5.00 294.97 215.00 1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2537E+02 EXCESS= .0000E+00 OUTFLOW= .2538E+02 BASIN STORAGE= .3826E-02 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 3.18 876.77 216.17 1.85 5.00 853.67 215.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8023E+02 EXCESS= .0000E+00 OUTFLOW= .8026E+02 BASIN STORAGE= .4115E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 3.23 837.94 216.65 1.76 5.00 811.37 215.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7623E+02 EXCESS= .0000E+00 OUTFLOW= .7625E+02 BASIN STORAGE= .3552E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 3.30 792.23 218.06 1.64 5.00 770.47 215.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7096E+02 EXCESS= .0000E+00 OUTFLOW= .7099E+02 BASIN STORAGE= .4132E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.70 2412.83 220.87 1.77 5.00 2398.72 220.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3896E+03 EXCESS= .0000E+00 OUTFLOW= .3896E+03 BASIN STORAGE= .3882E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
RCP3.4	MANE	1.73	2311.18	221.58	1.68	5.00	2276.31	220.00	1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3699E+03 EXCESS= .0000E+00 OUTFLOW= .3699E+03 BASIN STORAGE= .3381E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
RCP3.4	MANE	1.78	2124.59	222.47	1.55	5.00	2114.02	220.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3429E+03 EXCESS= .0000E+00 OUTFLOW= .3429E+03 BASIN STORAGE= .3405E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
R3-6	MANE	4.50	104.03	220.50	1.82	5.00	101.96	220.00	1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8599E+01 EXCESS= .0000E+00 OUTFLOW= .8621E+01 BASIN STORAGE= .1241E-01 PERCENT ERROR= -.4

FOR PLAN = 1	RATIO= .00								
R3-6	MANE	4.50	99.25	220.50	1.73	5.00	97.16	220.00	1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8176E+01 EXCESS= .0000E+00 OUTFLOW= .8196E+01 BASIN STORAGE= .1226E-01 PERCENT ERROR= -.4

FOR PLAN = 1	RATIO= .00								
R3-6	MANE	4.75	90.94	223.25	1.61	5.00	86.12	220.00	1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7617E+01 EXCESS= .0000E+00 OUTFLOW= .7636E+01 BASIN STORAGE= .9940E-02 PERCENT ERROR= -.4

FOR PLAN = 1	RATIO= .00								
R3-7	MANE	3.75	217.04	213.75	1.77	5.00	199.05	210.00	1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1612E+02 EXCESS= .0000E+00 OUTFLOW= .1613E+02 BASIN STORAGE= .4324E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
R3-7	MANE	3.75	207.37	213.75	1.68	5.00	189.14	210.00	1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1531E+02 EXCESS= .0000E+00 OUTFLOW= .1532E+02 BASIN STORAGE= .4255E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
R3-7	MANE	4.00	187.19	212.00	1.54	5.00	169.25	210.00	1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1404E+02 EXCESS= .0000E+00 OUTFLOW= .1405E+02 BASIN STORAGE= .3680E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
R3-J	MANE	5.00	103.78	220.00	1.15	5.00	103.78	220.00	1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9369E+01 EXCESS= .0000E+00 OUTFLOW= .9377E+01 BASIN STORAGE= .7542E-02 PERCENT ERROR= -.2

FOR PLAN = 1	RATIO= .00								
R3-J	MANE	5.00	97.13	220.00	1.08	5.00	97.13	220.00	1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8784E+01 EXCESS= .0000E+00 OUTFLOW= .8793E+01 BASIN STORAGE= .7386E-02 PERCENT ERROR= -.2

FOR PLAN = 1	RATIO= .00								
R3-J	MANE	5.00	87.93	220.00	.98	5.00	87.93	220.00	.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7985E+01 EXCESS= .0000E+00 OUTFLOW= .7994E+01 BASIN STORAGE= .7162E-02 PERCENT ERROR= -.2

FOR PLAN = 1	RATIO= .00								
RCP3.5	MANE	1.67	358.01	216.62	1.55	5.00	348.97	215.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3414E+02 EXCESS= .0000E+00 OUTFLOW= .3414E+02 BASIN STORAGE= .1596E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.70 334.53 215.85 1.47 5.00 330.87 215.00 1.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3232E+02 EXCESS= .0000E+00 OUTFLOW= .3232E+02 BASIN STORAGE= .1461E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.77 299.88 216.27 1.35 5.00 295.46 215.00 1.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2965E+02 EXCESS= .0000E+00 OUTFLOW= .2965E+02 BASIN STORAGE= .1500E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.69 615.41 217.72 1.86 5.00 600.25 220.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6325E+02 EXCESS= .0000E+00 OUTFLOW= .6326E+02 BASIN STORAGE= .4574E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.75 585.64 217.60 1.77 5.00 572.08 220.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6013E+02 EXCESS= .0000E+00 OUTFLOW= .6015E+02 BASIN STORAGE= .3000E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.84 553.22 219.11 1.64 5.00 543.47 220.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5586E+02 EXCESS= .0000E+00 OUTFLOW= .5588E+02 BASIN STORAGE= .3523E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.6 MANE 2.06 1596.01 220.34 1.74 5.00 1595.04 220.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1798E+03 EXCESS= .0000E+00 OUTFLOW= .1798E+03 BASIN STORAGE= .3693E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.6 MANE 2.10 1525.05 220.00 1.65 5.00 1525.04 220.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1708E+03 EXCESS= .0000E+00 OUTFLOW= .1708E+03 BASIN STORAGE= .2941E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.6 MANE 2.15 1414.85 219.15 1.53 5.00 1413.95 220.00 1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1582E+03 EXCESS= .0000E+00 OUTFLOW= .1582E+03 BASIN STORAGE= .3791E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-M MANE 2.20 191.95 215.52 1.77 5.00 191.05 215.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1821E+02 EXCESS= .0000E+00 OUTFLOW= .1821E+02 BASIN STORAGE= .2007E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-M MANE 2.24 183.71 215.04 1.69 5.00 183.62 215.00 1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1733E+02 EXCESS= .0000E+00 OUTFLOW= .1734E+02 BASIN STORAGE= .2335E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-M MANE 2.30 170.56 216.33 1.57 5.00 169.81 215.00 1.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1609E+02 EXCESS= .0000E+00 OUTFLOW= .1610E+02 BASIN STORAGE= .2380E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCSWAA-1	MANE	1.18	2041.69	295.94	1.76	5.00	2040.77	295.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6607E+03 EXCESS= .0000E+00 OUTFLOW= .6607E+03 BASIN STORAGE= .2764E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSWAA-1	MANE	1.19	1988.75	295.48	1.67	5.00	1987.99	295.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6274E+03 EXCESS= .0000E+00 OUTFLOW= .6274E+03 BASIN STORAGE= .2998E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSWAA-1	MANE	1.21	1914.80	296.37	1.55	5.00	1914.06	295.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5817E+03 EXCESS= .0000E+00 OUTFLOW= .5817E+03 BASIN STORAGE= .2855E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSWAA-2	MANE	1.64	2323.58	231.73	1.77	5.00	2319.93	230.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7316E+03 EXCESS= .0000E+00 OUTFLOW= .7316E+03 BASIN STORAGE= .4688E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSWAA-2	MANE	1.66	2253.38	232.92	1.68	5.00	2251.58	235.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6950E+03 EXCESS= .0000E+00 OUTFLOW= .6950E+03 BASIN STORAGE= .4155E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSWAA-2	MANE	1.69	2160.82	297.80	1.56	5.00	2157.16	300.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6447E+03 EXCESS= .0000E+00 OUTFLOW= .6448E+03 BASIN STORAGE= .4277E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-F	MANE	1.03	287.98	215.72	1.81	5.00	286.75	215.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2721E+02 EXCESS= .0000E+00 OUTFLOW= .2721E+02 BASIN STORAGE= .1299E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-F	MANE	1.05	274.73	215.51	1.72	5.00	273.71	215.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2589E+02 EXCESS= .0000E+00 OUTFLOW= .2589E+02 BASIN STORAGE= .1176E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
R3-F	MANE	1.07	257.30	216.01	1.60	5.00	256.43	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2407E+02 EXCESS= .0000E+00 OUTFLOW= .2407E+02 BASIN STORAGE= .1328E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.8	MANE	1.79	427.55	213.32	1.92	5.00	425.12	215.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4203E+02 EXCESS= .0000E+00 OUTFLOW= .4203E+02 BASIN STORAGE= .2622E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.8	MANE	1.82	409.54	213.48	1.83	5.00	406.19	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4007E+02 EXCESS= .0000E+00 OUTFLOW= .4008E+02 BASIN STORAGE= .2576E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3.8	MANE	1.87	382.72	213.30	1.71	5.00	381.96	215.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3737E+02 EXCESS= .0000E+00 OUTFLOW= .3738E+02 BASIN STORAGE= .2792E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.42	219.54	217.80	1.28	5.00	218.60	220.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2312E+02 EXCESS= .0000E+00 OUTFLOW= .2312E+02 BASIN STORAGE= .1465E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.46	206.34	220.05	1.20	5.00	206.34	220.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2175E+02 EXCESS= .0000E+00 OUTFLOW= .2175E+02 BASIN STORAGE= .1427E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.51	188.96	220.28	1.10	5.00	188.93	220.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1987E+02 EXCESS= .0000E+00 OUTFLOW= .1987E+02 BASIN STORAGE= .1352E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.14	474.02	220.60	1.43	5.00	471.57	220.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5316E+02 EXCESS= .0000E+00 OUTFLOW= .5316E+02 BASIN STORAGE= .1656E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.16	449.29	220.88	1.35	5.00	446.42	220.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5019E+02 EXCESS= .0000E+00 OUTFLOW= .5019E+02 BASIN STORAGE= .1820E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.20	414.24	221.03	1.24	5.00	411.32	220.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4610E+02 EXCESS= .0000E+00 OUTFLOW= .4610E+02 BASIN STORAGE= .1603E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.44	256.06	214.98	1.87	5.00	256.01	215.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2404E+02 EXCESS= .0000E+00 OUTFLOW= .2404E+02 BASIN STORAGE= .4502E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.44	244.86	214.81	1.78	5.00	244.65	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2290E+02 EXCESS= .0000E+00 OUTFLOW= .2290E+02 BASIN STORAGE= .4781E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.46	229.62	214.97	1.66	5.00	229.56	215.00	1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2134E+02 EXCESS= .0000E+00 OUTFLOW= .2134E+02 BASIN STORAGE= .4491E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.15	329.52	215.61	1.43	5.00	328.76	215.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1145E+03 EXCESS= .0000E+00 OUTFLOW= .1145E+03 BASIN STORAGE= .1712E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.17	314.39	215.15	1.35	5.00	313.79	215.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1080E+03 EXCESS= .0000E+00 OUTFLOW= .1080E+03 BASIN STORAGE= .1569E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.20	293.22	215.15	1.24	5.00	292.53	215.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9910E+02 EXCESS= .0000E+00 OUTFLOW= .9910E+02 BASIN STORAGE= .1387E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.49	364.66	215.40	1.44	5.00	363.43	215.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1187E+03 EXCESS= .0000E+00 OUTFLOW= .1187E+03 BASIN STORAGE= .2343E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.51	348.83	216.39	1.36	5.00	346.09	215.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1120E+03 EXCESS= .0000E+00 OUTFLOW= .1120E+03 BASIN STORAGE= .2152E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	1.56	325.81	216.26	1.25	5.00	321.43	215.00	1.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1028E+03 EXCESS= .0000E+00 OUTFLOW= .1028E+03 BASIN STORAGE= .1902E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.69	1045.14	215.49	1.57	5.00	1038.60	215.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1879E+03 EXCESS= .0000E+00 OUTFLOW= .1879E+03 BASIN STORAGE= .1663E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.70	995.91	215.39	1.49	5.00	990.28	215.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1780E+03 EXCESS= .0000E+00 OUTFLOW= .1780E+03 BASIN STORAGE= .1528E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.72	931.97	215.55	1.37	5.00	924.99	215.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1642E+03 EXCESS= .0000E+00 OUTFLOW= .1642E+03 BASIN STORAGE= .1351E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.81	131.53	213.41	2.10	5.00	128.14	215.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1260E+02 EXCESS= .0000E+00 OUTFLOW= .1260E+02 BASIN STORAGE= .1457E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.84	126.21	213.27	2.01	5.00	123.33	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1205E+02 EXCESS= .0000E+00 OUTFLOW= .1205E+02 BASIN STORAGE= .1577E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.88	118.70	212.82	1.88	5.00	116.63	215.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1128E+02 EXCESS= .0000E+00 OUTFLOW= .1129E+02 BASIN STORAGE= .1484E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.76	138.26	216.42	1.64	5.00	137.27	215.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1283E+02 EXCESS= .0000E+00 OUTFLOW= .1283E+02 BASIN STORAGE= .1493E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.79	130.62	215.27	1.56	5.00	130.40	215.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1218E+02 EXCESS= .0000E+00 OUTFLOW= .1218E+02 BASIN STORAGE= .1720E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-P2	MANE	1.85	121.79	215.97	1.44	5.00	121.42	215.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1127E+02 EXCESS= .0000E+00 OUTFLOW= .1127E+02 BASIN STORAGE= .1494E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.19	537.29	214.72	1.94	5.00	535.55	215.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5207E+02 EXCESS= .0000E+00 OUTFLOW= .5208E+02 BASIN STORAGE= .1709E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.21	514.71	214.81	1.85	5.00	513.50	215.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4969E+02 EXCESS= .0000E+00 OUTFLOW= .4969E+02 BASIN STORAGE= .1701E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.24	482.08	215.24	1.73	5.00	481.38	215.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4637E+02 EXCESS= .0000E+00 OUTFLOW= .4638E+02 BASIN STORAGE= .2019E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.89	742.07	215.91	1.99	5.00	741.02	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7445E+02 EXCESS= .0000E+00 OUTFLOW= .7446E+02 BASIN STORAGE= .3713E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.93	710.99	215.69	1.90	5.00	709.47	215.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7111E+02 EXCESS= .0000E+00 OUTFLOW= .7112E+02 BASIN STORAGE= .3111E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.97	669.32	215.27	1.78	5.00	667.48	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6643E+02 EXCESS= .0000E+00 OUTFLOW= .6644E+02 BASIN STORAGE= .3682E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPH-2	MANE	.93	936.54	215.84	2.00	5.00	929.91	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9408E+02 EXCESS= .0000E+00 OUTFLOW= .9408E+02 BASIN STORAGE= .1749E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPH-2	MANE	.95	896.92	215.79	1.91	5.00	889.86	215.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8986E+02 EXCESS= .0000E+00 OUTFLOW= .8986E+02 BASIN STORAGE= .1675E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPH-2	MANE	.97	839.59	215.28	1.78	5.00	835.80	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8399E+02 EXCESS= .0000E+00 OUTFLOW= .8399E+02 BASIN STORAGE= .1673E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.10	MANE	.30	2075.17	215.39	1.70	5.00	2070.39	215.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2940E+03 EXCESS= .0000E+00 OUTFLOW= .2940E+03 BASIN STORAGE= .9575E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.10	MANE	.30	1981.71	215.41	1.61	5.00	1977.10	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2793E+03 EXCESS= .0000E+00 OUTFLOW= .2793E+03 BASIN STORAGE= .8794E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.10	MANE	.31	1857.18	215.20	1.49	5.00	1850.82	215.00	1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2589E+03 EXCESS= .0000E+00 OUTFLOW= .2589E+03 BASIN STORAGE= .7775E-02 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSHFH-9	MANE		2.50	2174.59	217.92	1.72	5.00	2112.34	215.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3102E+03 EXCESS= .0000E+00 OUTFLOW= .3102E+03 BASIN STORAGE= .4771E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSHFH-9	MANE		2.54	2055.97	218.74	1.63	5.00	2008.94	215.00	1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2948E+03 EXCESS= .0000E+00 OUTFLOW= .2948E+03 BASIN STORAGE= .4335E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCSHFH-9	MANE		2.60	1938.53	218.39	1.51	5.00	1876.14	215.00	1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2734E+03 EXCESS= .0000E+00 OUTFLOW= .2734E+03 BASIN STORAGE= .3764E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCRCSWFH	MANE		.66	4628.89	220.43	1.75	5.00	4608.49	220.00	1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1091E+04 EXCESS= .0000E+00 OUTFLOW= .1091E+04 BASIN STORAGE= .2394E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCRCSWFH	MANE		.67	4410.63	220.54	1.66	5.00	4385.41	220.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1037E+04 EXCESS= .0000E+00 OUTFLOW= .1037E+04 BASIN STORAGE= .2188E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCRCSWFH	MANE		.69	4131.27	220.61	1.54	5.00	4100.58	220.00	1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9612E+03 EXCESS= .0000E+00 OUTFLOW= .9612E+03 BASIN STORAGE= .1917E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC11A-1	MANE		1.00	4718.09	220.67	1.74	5.00	4679.45	220.00	1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1106E+04 EXCESS= .0000E+00 OUTFLOW= .1106E+04 BASIN STORAGE= .3546E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC11A-1	MANE		1.02	4492.52	221.74	1.65	5.00	4449.28	220.00	1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1051E+04 EXCESS= .0000E+00 OUTFLOW= .1051E+04 BASIN STORAGE= .3245E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC11A-1	MANE		1.04	4213.24	221.12	1.53	5.00	4153.39	220.00	1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9745E+03 EXCESS= .0000E+00 OUTFLOW= .9745E+03 BASIN STORAGE= .2848E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC3B-1	MANE		.98	4737.66	235.45	1.72	5.00	4733.10	235.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1149E+04 EXCESS= .0000E+00 OUTFLOW= .1149E+04 BASIN STORAGE= .3786E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC3B-1	MANE		1.00	4526.90	235.49	1.63	5.00	4520.84	235.00	1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1091E+04 EXCESS= .0000E+00 OUTFLOW= .1091E+04 BASIN STORAGE= .3455E-01 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RC3B-1	MANE		1.02	4248.62	236.13	1.51	5.00	4235.46	235.00	1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+04 EXCESS= .0000E+00 OUTFLOW= .1012E+04 BASIN STORAGE= .3049E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11B-2 MANE 2.09 237.78 228.28 1.39 5.00 237.26 230.00 1.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3272E+02 EXCESS= .0000E+00 OUTFLOW= .3272E+02 BASIN STORAGE= .7907E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11B-2 MANE 2.13 225.38 229.91 1.32 5.00 225.34 230.00 1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3095E+02 EXCESS= .0000E+00 OUTFLOW= .3095E+02 BASIN STORAGE= .8096E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11B-2 MANE 2.18 208.52 229.00 1.21 5.00 207.90 230.00 1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2852E+02 EXCESS= .0000E+00 OUTFLOW= .2852E+02 BASIN STORAGE= .8984E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.69 487.81 222.78 1.44 5.00 484.50 225.00 1.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6434E+02 EXCESS= .0000E+00 OUTFLOW= .6434E+02 BASIN STORAGE= .8682E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.72 462.67 223.04 1.37 5.00 459.39 225.00 1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6094E+02 EXCESS= .0000E+00 OUTFLOW= .6094E+02 BASIN STORAGE= .8948E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.76 428.32 223.18 1.26 5.00 425.34 225.00 1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5625E+02 EXCESS= .0000E+00 OUTFLOW= .5625E+02 BASIN STORAGE= .9091E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.53 683.97 225.39 1.46 5.00 683.27 225.00 1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8842E+02 EXCESS= .0000E+00 OUTFLOW= .8843E+02 BASIN STORAGE= .1334E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.57 647.45 223.93 1.38 5.00 645.56 225.00 1.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8375E+02 EXCESS= .0000E+00 OUTFLOW= .8375E+02 BASIN STORAGE= .1258E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.64 599.36 223.98 1.27 5.00 598.02 225.00 1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7738E+02 EXCESS= .0000E+00 OUTFLOW= .7738E+02 BASIN STORAGE= .1423E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.53 998.50 226.77 1.58 5.00 994.93 225.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1314E+03 EXCESS= .0000E+00 OUTFLOW= .1314E+03 BASIN STORAGE= .1626E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.56 950.99 226.30 1.50 5.00 943.37 225.00 1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1248E+03 EXCESS= .0000E+00 OUTFLOW= .1248E+03 BASIN STORAGE= .1636E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.60 882.13 225.71 1.39 5.00 879.17 225.00 1.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1159E+03 EXCESS= .0000E+00 OUTFLOW= .1159E+03 BASIN STORAGE= .1574E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 5.00 236.53 220.00 1.54 5.00 236.53 220.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2388E+02 EXCESS= .0000E+00 OUTFLOW= .2389E+02 BASIN STORAGE= .1771E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 5.00 224.98 220.00 1.47 5.00 224.98 220.00 1.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2267E+02 EXCESS= .0000E+00 OUTFLOW= .2268E+02 BASIN STORAGE= .1729E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R11A-2 MANE 5.00 208.94 220.00 1.36 5.00 208.94 220.00 1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2101E+02 EXCESS= .0000E+00 OUTFLOW= .2101E+02 BASIN STORAGE= .1640E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 3.04 1536.26 227.67 1.53 5.00 1523.71 225.00 1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1962E+03 EXCESS= .0000E+00 OUTFLOW= .1962E+03 BASIN STORAGE= .3418E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 3.09 1454.87 225.51 1.46 5.00 1446.96 225.00 1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1862E+03 EXCESS= .0000E+00 OUTFLOW= .1863E+03 BASIN STORAGE= .3735E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2A MANE 3.16 1358.78 227.85 1.35 5.00 1341.64 225.00 1.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1727E+03 EXCESS= .0000E+00 OUTFLOW= .1728E+03 BASIN STORAGE= .3806E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.83 6243.22 232.45 1.68 5.00 6217.86 235.00 1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1362E+04 EXCESS= .0000E+00 OUTFLOW= .1362E+04 BASIN STORAGE= .7985E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.86 5944.62 233.03 1.59 5.00 5927.35 235.00 1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1294E+04 EXCESS= .0000E+00 OUTFLOW= .1294E+04 BASIN STORAGE= .7307E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.91 5550.33 233.11 1.48 5.00 5543.12 235.00 1.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1199E+04 EXCESS= .0000E+00 OUTFLOW= .1199E+04 BASIN STORAGE= .6431E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.64 6347.98 235.65 1.66 5.00 6340.06 235.00 1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1384E+04 EXCESS= .0000E+00 OUTFLOW= .1384E+04 BASIN STORAGE= .7346E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.67 6064.52 236.60 1.58 5.00 6036.17 235.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1314E+04 EXCESS= .0000E+00 OUTFLOW= .1314E+04 BASIN STORAGE= .6717E-01 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCSF2-C	MANE	1.71	5651.22	235.83	1.46	5.00	5636.92	235.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1218E+04 EXCESS= .0000E+00 OUTFLOW= .1218E+04 BASIN STORAGE= .5939E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.30	416.37	222.12	1.61	5.00	410.01	220.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5050E+02 EXCESS= .0000E+00 OUTFLOW= .5051E+02 BASIN STORAGE= .1749E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.32	397.37	221.25	1.53	5.00	390.68	220.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4795E+02 EXCESS= .0000E+00 OUTFLOW= .4795E+02 BASIN STORAGE= .1754E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.36	368.29	222.34	1.41	5.00	362.23	220.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4443E+02 EXCESS= .0000E+00 OUTFLOW= .4443E+02 BASIN STORAGE= .1741E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	2.09	669.29	223.35	1.60	5.00	655.44	225.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8051E+02 EXCESS= .0000E+00 OUTFLOW= .8051E+02 BASIN STORAGE= .3168E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	2.13	637.32	223.48	1.52	5.00	624.88	225.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7643E+02 EXCESS= .0000E+00 OUTFLOW= .7644E+02 BASIN STORAGE= .3781E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	2.19	591.71	223.65	1.40	5.00	581.57	225.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7080E+02 EXCESS= .0000E+00 OUTFLOW= .7081E+02 BASIN STORAGE= .3456E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC13B-1	MANE	5.00	200.29	225.00	1.80	5.00	200.29	225.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2393E+02 EXCESS= .0000E+00 OUTFLOW= .2393E+02 BASIN STORAGE= .1245E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC13B-1	MANE	5.00	191.65	225.00	1.72	5.00	191.65	225.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2283E+02 EXCESS= .0000E+00 OUTFLOW= .2284E+02 BASIN STORAGE= .1947E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC13B-1	MANE	5.00	179.61	225.00	1.61	5.00	179.61	225.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2131E+02 EXCESS= .0000E+00 OUTFLOW= .2132E+02 BASIN STORAGE= .1878E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC13B-2	MANE	5.00	351.46	230.00	1.71	5.00	351.46	230.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4246E+02 EXCESS= .0000E+00 OUTFLOW= .4249E+02 BASIN STORAGE= .5720E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1 RATIO= .00									
RC13B-2	MANE	5.00	335.67	230.00	1.63	5.00	335.67	230.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4046E+02 EXCESS= .0000E+00 OUTFLOW= .4048E+02 BASIN STORAGE= .5576E-02 PERCENT ERROR=									
.1									

FOR PLAN = 1	RATIO=	.00							
RC13B-2	MANE	5.00	313.60	230.00	1.52	5.00	313.60	230.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3769E+02 EXCESS= .0000E+00 OUTFLOW= .3772E+02 BASIN STORAGE= .5431E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	178.39	230.00	1.71	5.00	178.39	230.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2302E+02 EXCESS= .0000E+00 OUTFLOW= .2303E+02 BASIN STORAGE= .2506E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	170.16	230.00	1.62	5.00	170.16	230.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2192E+02 EXCESS= .0000E+00 OUTFLOW= .2192E+02 BASIN STORAGE= .2444E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	158.71	230.00	1.51	5.00	158.71	230.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2039E+02 EXCESS= .0000E+00 OUTFLOW= .2039E+02 BASIN STORAGE= .2356E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	434.94	235.00	1.71	5.00	434.94	235.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6079E+02 EXCESS= .0000E+00 OUTFLOW= .6082E+02 BASIN STORAGE= .7218E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	415.26	235.00	1.63	5.00	415.26	235.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5790E+02 EXCESS= .0000E+00 OUTFLOW= .5794E+02 BASIN STORAGE= .7083E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	387.82	235.00	1.52	5.00	387.82	235.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5392E+02 EXCESS= .0000E+00 OUTFLOW= .5395E+02 BASIN STORAGE= .6890E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.53	579.21	232.99	1.69	5.00	577.03	235.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8180E+02 EXCESS= .0000E+00 OUTFLOW= .8181E+02 BASIN STORAGE= .2450E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.59	552.92	233.25	1.61	5.00	551.00	235.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7791E+02 EXCESS= .0000E+00 OUTFLOW= .7792E+02 BASIN STORAGE= .2771E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.68	513.91	235.30	1.50	5.00	513.15	235.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7253E+02 EXCESS= .0000E+00 OUTFLOW= .7253E+02 BASIN STORAGE= .3179E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.94	1115.80	237.12	1.69	5.00	1098.38	235.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1556E+03 EXCESS= .0000E+00 OUTFLOW= .1557E+03 BASIN STORAGE= .3676E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	5.00	1070.86	235.00	1.61	5.00	1070.86	235.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1483E+03 EXCESS= .0000E+00 OUTFLOW= .1483E+03 BASIN STORAGE= .3181E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	5.00	994.91	235.00	1.50	5.00	994.91	235.00	1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .3166E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.45	2623.64	239.82	1.55	5.00	2623.06	240.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3799E+03 EXCESS= .0000E+00 OUTFLOW= .3799E+03 BASIN STORAGE= .8393E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.46	2517.50	235.81	1.47	5.00	2514.53	240.00	1.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3610E+03 EXCESS= .0000E+00 OUTFLOW= .3610E+03 BASIN STORAGE= .8337E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.47	2341.51	239.91	1.36	5.00	2341.22	240.00	1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3348E+03 EXCESS= .0000E+00 OUTFLOW= .3348E+03 BASIN STORAGE= .8409E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.95	252.93	232.03	1.60	5.00	250.47	230.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3763E+02 EXCESS= .0000E+00 OUTFLOW= .3763E+02 BASIN STORAGE= .2632E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.97	241.55	232.20	1.52	5.00	239.09	230.00	1.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3584E+02 EXCESS= .0000E+00 OUTFLOW= .3584E+02 BASIN STORAGE= .2395E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.99	225.41	233.36	1.42	5.00	223.60	230.00	1.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3338E+02 EXCESS= .0000E+00 OUTFLOW= .3338E+02 BASIN STORAGE= .2597E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.20	2941.17	236.83	1.55	5.00	2932.66	240.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4331E+03 EXCESS= .0000E+00 OUTFLOW= .4331E+03 BASIN STORAGE= .3355E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.22	2822.18	237.10	1.47	5.00	2811.37	240.00	1.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4117E+03 EXCESS= .0000E+00 OUTFLOW= .4117E+03 BASIN STORAGE= .3587E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.26	2619.88	237.98	1.37	5.00	2616.96	240.00	1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3820E+03 EXCESS= .0000E+00 OUTFLOW= .3820E+03 BASIN STORAGE= .3291E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.93	209.60	231.90	1.55	5.00	208.15	230.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2916E+02 EXCESS= .0000E+00 OUTFLOW= .2916E+02 BASIN STORAGE= .8342E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.98	200.75	229.04	1.48	5.00	200.21	230.00	1.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2779E+02 EXCESS= .0000E+00 OUTFLOW= .2779E+02 BASIN STORAGE= .8579E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	5.00	189.51	230.00	1.38	5.00	189.51	230.00	1.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2589E+02 EXCESS= .0000E+00 OUTFLOW= .2589E+02 BASIN STORAGE= .6822E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.29	94.82	231.58	.77	5.00	94.22	230.00	.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1308E+02 EXCESS= .0000E+00 OUTFLOW= .1308E+02 BASIN STORAGE= .2093E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.32	88.12	231.90	.72	5.00	87.44	230.00	.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1218E+02 EXCESS= .0000E+00 OUTFLOW= .1218E+02 BASIN STORAGE= .2069E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.35	79.04	231.57	.65	5.00	78.37	230.00	.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1096E+02 EXCESS= .0000E+00 OUTFLOW= .1096E+02 BASIN STORAGE= .2207E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	197.17	225.00	1.08	5.00	197.17	225.00	1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2700E+02 EXCESS= .0000E+00 OUTFLOW= .2702E+02 BASIN STORAGE= .3462E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	186.60	225.00	1.02	5.00	186.60	225.00	1.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2548E+02 EXCESS= .0000E+00 OUTFLOW= .2550E+02 BASIN STORAGE= .3908E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	171.49	225.00	.93	5.00	171.49	225.00	.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2340E+02 EXCESS= .0000E+00 OUTFLOW= .2341E+02 BASIN STORAGE= .3739E-02 PERCENT ERROR= -.1

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

B.5.3 10-YEAR DB5/ALTA TRIBUTARY

B.5.3 Alta-sdn3.10

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1*****
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*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
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* RUN DATE 21SEP17 TIME 09:25:37 *
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X X XXXXXXX XXXXX X
X X X X X XX
X X X X X X
XXXXXXX XXXX X XXXXX X
X X X X X X
X X X X X X
X X XXXXXXX XXXXX XXX
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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

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1
HEC-1 INPUT
PAGE 1

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

*** DIAGRAM ***
*** FREE ***
1 ID THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
2 ID TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
3 ID DOWNSTREAM HOLDING FACILITIES
4 ID
5 ID MODELED BY VTN, NEVADA SVB/JYA
6 ID MAY 9, 2017
7 ID
8 ID
9 ID CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
10 ID GOWAN WATERSHED (ALL)
11 ID RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
12 ID INPUT FILE = ALT1-SDN3.DAT
13 ID INPUT FILE DATE = MAY 5, 2008
14 ID DESIGN STORM = 100-YEAR 6-HR STORM
15 ID STORM DISTRIBUTION = SDN #5
16 ID MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
17 ID CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
18 ID STORM CENTERING = FULL WATERSHED
19 ID
20 ID REFERENCED HYDROLOGIC MODELS:
21 ID CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
22 ID NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
23 ID RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
24 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
25 ID 3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
26 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
27 ID SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
28 ID MASTER PLAN UPDATE (G.C. WALLACE 2006)
29 ID GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
30 ID (G.C. WALLACE 2007)
31 ID LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
32 ID FROM G.C. WALLACE ON JANUARY 31, 2008)
33 ID US 95/RANCHO FIS RESTUDY (PBS&J 1998)
34 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
35 ID
36 ID AREA DARF
37 ID SQ. MI.
38 ID 0-0.5 0.99
39 ID 0.5-1 0.975
40 ID 1-2 0.95
41 ID 2-3 0.925
42 ID 3-4 0.915
43 ID 4-5 0.908
44 ID 5-6 0.903
45 ID 6-7 0.895
46 ID 7-8 0.885
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47 ID
48 ID
49 ID
50 ID
51 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
52 ID
53 ID 100-YEAR, 6-HOUR STORM, SDN5
HEC-1 INPUT
1
PAGE 2

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

54 ID
55 IT 5 0 0 300
56 IO 5 0 0
57 IN 5 0 0
58 JR PREC 0.57 0.56 0.54
*
59 KK 3-1
60 KM COMPARE TO MPU BASIN DB54-1 (CURVE NUMBER CHANGED FROM 87.2)
61 BA 2.22
62 PB 3.72
63 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.130
64 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
65 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
66 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
67 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
68 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
69 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
70 PC 0.998 0.999 1
71 LS 0 87.0
72 UD 0.582
*

73 KK R3-1
74 KM ROUTE R3-1 THROUGH 3-2
75 KM EXISTING NATURAL WASH
76 RD 3322 0.092 0.030 0 TRAP 125 0
*

77 KK 3-2
78 KM COMPARE TO MPU BASIN DB54-5 (CURVE NUMBER CHANGED FROM 85.2)
79 BA 0.226
80 PB 3.67
81 LS 0 83.9
82 UD 0.110
*

83 KK CP3.1
84 KM COMBINE R3-1 AND 3-2
85 HC 2
*

86 KK RCP3.1
87 KM ROUTE CP3.1 TO CP3.3 THROUGH 3-E VIA
88 KM (PORTION OF FACILITY APM50059)
89 RD 7900 0.070 0.013 0 TRAP 125 2
*

90 KK 3-D
91 KM PORTION OF BASINS DB54-6R (PB=3.56)
92 BA 0.3329
93 PB 3.56
94 LS 0 84.6
95 UD 0.223
*

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PAGE 3

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

96 KK CP3.3
97 KM COMBINE 3-D, RCP3.1,
98 HC 2
*

99 KK RCP3.3
100 KM ROUTE CP3.3 TO CP3.4 THROUGH 3-E VIA A
101 KM (PORTION OF FACILITY APM50059)
102 RD 1000 0.070 0.013 0 TRAP 125 2
*

103 KK 3-3
104 KM PORTION OF MPU BASIN DB54-3
105 BA 0.1737
106 PB 3.67
107 LS 0 88.0
108 UD 0.081
*

109 KK R3-3
110 KM ROUTE R3-3 THROUGH A PORTION OF 3-E TO CP3.2
111 KM NATURAL WASH
112 RD 2233 0.054 0.030 0 TRAP 100 0
*

113	KK	3-4							
114	KM	PORTION OF MPU BASIN DB54-3							
115	BA	0.3457							
116	PB	3.67							
117	LS	0	88.0						
118	UD	0.092							
	*								
119	KK	R3-4							
120	KM	ROUTE R3-4 THROUGH A PORTION OF 3-E TO CP3.2							
121	KM	NATURAL WASH							
122	RD	3300	0.097	0.030	0	TRAP	100	0	
	*								
123	KK	3-5							
124	KM	COMPARE TO MPU BASIN DB54-2 (SLIGHTLY LARGER PORTION OF DB54-4)							
125	BA	0.2936							
126	PB	3.66							
127	LS	0	87.7						
128	UD	0.094							
	*								
129	KK	R3-5							
130	KM	ROUTE R3-5 THROUGH A PORTION OF 3-E TO CP3.2							
131	KM	(PORTION OF FACILITY APM50057)							
132	RD	4400	0.068	0.013	0	TRAP	50	2	
	*								

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

133	KK	CP3.2							
134	KM	COMBINE R3-5 , R3-4 AND R3-3							
135	HC	3							
	*								
136	KK	RCP3.2							
137	KM	ROUTE RCP3.2 THROUGH A PORTION OF 3-E TO CP3.4							
138	KM	(PORTION OF FACILITY APM50057)							
139	RD	5500	0.068	0.013	0	TRAP	50	2	
	*								
140	KK	3-E							
141	KM	PORTION OF BASINS DB54-4 (PB=3.60) AND DB54-6R (PB=3.56)							
142	BA	0.5442							
143	PB	3.60							
144	LS	0	85.8						
145	UD	0.238							
	*								
146	KK	CP3.4							
147	KM	COMBINE 3-E, RCP3.2 AND RCP3.3							
148	HC	3							
	*								
149	KK	RCP3.4							
150	KM	ROUTE RCP3.4 THROUGH A PORTION OF 3-N TO CPDB3							
151	KM	(FACILITIES APM50056, APM50047 AND APM50008)							
152	RD	3365	0.052	0.013	0	TRAP	80	2	
	*								
153	KK	3-6							
154	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4							
155	BA	0.0887							
156	PB	3.61							
157	LS	0	88.0						
158	UD	0.074							
	*								
159	KK	R3-6							
160	KM	ROUTE 3-6 THROUGH A PORTION OF 3-J AND A PORTION OF 3-K TO CP3.5							
161	KM	EXISTING NATURAL WASHES							
162	RD	4500	0.080	0.030	0	TRAP	100	0	
	*								
163	KK	3-7							
164	KM	PORTION OF MPU BASIN DB55-3 AND DB55-4							
165	BA	0.1714							
166	PB	3.61							
167	LS	0	87.2						
168	UD	0.048							
	*								

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PAGE 5

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

169	KK	R3-7							
170	KM	ROUTE 3-7 THROUGH A PORTION OF 3-K TO CP3.5							
171	KM	PORTION OF FACILITY ID APM50213							
172	RD	4340	0.073	0.013	0	TRAP	50	2	
	*								

173	KK	3-J							
174	KM	PORTION OF MPU BASIN DB55-4							
175	BA	0.1529							
176	PB	3.58							
177	LS	0	78.6						
178	UD	0.168							
	*								
179	KK	R3-J							
180	KM	ROUTE 3-J THROUGH A PORTION OF 3-K TO CP3.5							
181	KM	NATURAL WASHES							
182	RD	2700	0.074	0.030	0	TRAP	100	0	
	*								
183	KK	CP3.5							
184	KM	COMBINE R3-J, R3-7 AND R3-6							
185	HC	3							
	*								
186	KK	RCP3.5							
187	KM	ROUTE CP3.5 THROUGH A PORTION OF 3-K TO CP3.6							
188	KM	PORTION OF FACILITY ID APM50213							
189	RD	2100	0.073	0.013	0	TRAP	50	2	
	*								
190	KK	3-8							
191	KM	COMPARE TO MPU BASIN DB55-1							
192	BA	0.6386							
193	PB	3.68							
194	LS	0	87.8						
195	UD	0.196							
	*								
196	KK	R3-8							
197	KM	ROUTE 3-8 THROUGH A PORTION OF 3-K TO CP3.6							
198	KM	FACILITY ID APM50212							
199	RD	6695	0.075	0.013	0	TRAP	30	2	
	*								
200	KK	3-K							
201	KM	COMPARE TO MPU BASIN DB55-7							
202	BA	0.8890							
203	PB	3.54							
204	LS	0	87.6						
205	UD	0.296							
	*								

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

206	KK	CP3.6							
207	KM	COMBINE 3-K, R3-8 AND RCP3.5							
208	HC	3							
	*								
209	KK	RCP3.6							
210	KM	ROUTE CP3.6 THROUGH A PORTION OF 3-N TO CPDB3							
211	KM	FACILITY ID APM500009							
212	RD	4180	0.058	0.013	0	TRAP	50	2	
	*								
213	KK	3-N							
214	KM	COMPARE TO MPU BASIN DB55-8							
215	BA	0.4557							
216	PB	3.46							
217	LS	0	88.9						
218	UD	0.269							
	*								
219	KK	3-M							
220	KM	COMPARE TO MPU BASIN DB55-8							
221	BA	0.1924							
222	PB	3.46							
223	LS	0	88.8						
224	UD	0.147							
	*								
225	KK	R3-M							
226	KM	ROUTE 3-M THROUGH A PORTION OF 3-N TO CP3.7							
227	KM	FACILITY ID PORTION OF APM500009							
228	RD	4500	0.0528	0.013	0	TRAP	7	0	
	*								
229	KK	CPDB5							
230	KM	COMBINE 3-M, 3-N, RCP3.6 AND RCP3.4							
231	KM	TOTAL INFLOW TO SUMMERLIN #5 DETENTION BASIN							
232	KO	0							
233	HC	4							
	*								
234	KK	DB5							
235	KM	SUMMERLIN DETENTION BASIN 5							
236	KM	FACILITY = ANGEL PARK - MIDDLE 5 BRANCH							
237	KM	FACILITY # = APM5 0000							

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238	KM	STORAGE VOLUME = 384.1 ACRE-FEET
239	KM	OUTLET = 2: 7' x 5.5' RCBS
240	KM	100-YEAR DISCHARGE = 2,150 CFS
241	KM	SPILLWAY LENGTH = 453.6'
242	KM	SPILLWAY HEIGHT =
243	KM	SPILLWAY CREST ELEVATION = 3563'
244	KM	SPILLWAY TYPE = CONCRETE BROAD CRESTED WEIR
245	KM	PMF DISCHARGE = 12,153 CFS
246	KM	TOP OF EMBANKMENT ELEVATION = 3569'
247	KM	DETENTION BASIN PARAMETERS REFERENCED FROM "DETENTION BASIN NO. 5

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

248	KM	EXPANSION AND DIVERSION BERM" PLANS BY G.C. WALLACE (5-23-2001)
249	KM	STAGE-STORAGE-DISCHARGE CURVE REFERENCED FROM "2006 SUMMERLIN WEST
250	KM	CONCEPTUAL DRAINAGE STUDY MASTER PLAN AMENDMENT: EXISTING OFFSITE/PROPOSED
251	KM	ONSITE DRAINAGE CONDITION" HYDROLOGIC MODEL DATED 8-7-2006 AND SUBMITTED
252	KM	WITH THE SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
253	KM	CONTROL MASTER PLAN UPDATE BY G.C. WALLACE (08-2006)
254	KO	0
255	RS	1 STOR -1
256	SV	0 1.73 4.55 8.45 13.08 18.2 23.81 29.96 36.7 43.93
257	SV	59.55 77.49 99.82 127.17 159.39 196.38 240.07 384.05 405.65 535.25
258	SQ	0 192 276 391 505 616 725 813 900 982
259	SQ	1176 1368 1534 1683 1804 1920 2033 2315 3725 23201
260	SE	3532.5 3535 3536 3537 3538 3539 3540 3541 3542 3543
261	SE	3543 3547 3549 3551 3553 3555 3557 3563 3564 3569
262	SS	3563 435.6 3 1.5
	*	
263	KK	3-L
264	KM	COMPARE TO MPU BASIN SWAA-1
265	BA	0.3227
266	PB	3.44
267	LS	0 88.4
268	UD	0.160
	*	
269	KK	CP3-L
270	KM	COMBINE 3-L AND DB3
271	KM	THIS IS CSWAA-1 IN GOWAN MPU HEC-1
272	HC	2
	*	
	*	END OF SECTION MODELED BY VTN, NEVADA SVB
	*	TIE VTN SECTION TO 2008 MPU HEC-1
	*	
273	KKRCSWAA-1	
274	KM	ROUTE CSWAA-1 TO CSWAA-2
275	KM	FACILITY = ANGEL PARK - ALTA DRIVE
276	KM	FACILITY # = APAD 0115, 0146
277	KM	LINING = RCB
278	RD	4640 0.044 0.015 0 TRAP 10 0
	*	
279	KK	SWAA-2
280	BA	0.700
281	PB	3.39
282	LS	0 90.9
283	UD	0.346
	*	
284	KK	CSWAA-2
285	KM	COMBINE RCSWAA-1 AND SWAA-2
286	HC	2
	*	

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PAGE 8

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

287	KKRCSWAA-2	
288	KM	ROUTE CSWAA-2 TO CSWAA-3
289	KM	FACILITY = ANGEL PARK - ALTA DRIVE
290	KM	FACILITY # = APAD 0000, 0018, 0044, 0073
291	KM	LINING = RCB
292	RD	6120 0.035 0.015 0 TRAP 11 0
	*	
293	KK	SWAA-3
294	BA	0.581
295	PB	3.31
296	LS	0 87.8
297	UD	0.361
	*	
298	KK	CSWAA-3
299	KM	COMBINE RCSWAA-2 AND SWAA-3
300	HC	2
	*	
	*	THE FOLLOWING SECTION OF HYDROLOGY IS NOT PART OF THE 2008 MPU
	*	THIS SECTION IS MODELED BASED ON THE 2017 CONDITION OF THE SUMMERLIN MASTER PL
	*	MODELED BY VTN, NEVADA SVB
	*	

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*
301      KK      3-F
302      KM      COMPARE TO MPU BASIN SWFH-5
303      BA      0.2815
304      PB      3.50
305      LS      0      88.9
306      UD      0.152
*
307      KK      R3-F
308      KM      ROUTE 3-F THROUGH 3-G2 TO CP3.8
309      KM      LINING RCB
310      RD      2650      0.055      0.013      0      TRAP      6      0
*
311      KK      3-G2
312      KM      COMPARE TO MPU BASIN SWFH-6
313      BA      0.1285
314      PB      3.46
315      LS      0      93.2
316      UD      0.107
*
317      KK      CP3.8
318      KM      COMBINES 3-F AND 3-G2
319      HC      2
*

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

```

320      KK      RCP3.8
321      KM      ROUTE CP3.8 TO CP3.9
322      KM      FACILITIES APD6000 AND APDF0000
323      RD      4500      0.075      0.013      0      TRAP      12      0
*
324      KK      3-A
325      KM      COMPARE TO MPU BASIN SWFH-1
326      BA      0.3392
327      PB      3.57
328      LS      0      80.8
329      UD      0.234
*
330      KK      R3-A
331      KM      ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
332      RD      3000      0.032      0.013      0      TRAP      5      0
*
333      KK      3-B
334      KM      COMPARE TO MPU BASIN SWFH-1
335      BA      0.6973
336      PB      3.57
337      LS      0      83.1
338      UD      0.274
*
339      KK      R3-B
340      KM      ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
341      RD      3000      0.024      0.013      0      TRAP      5      0
*
342      KK      3-C
343      KM      COMPARE TO MPU BASIN SWFH-2
344      BA      0.2212
345      PB      3.49
346      LS      0      88.4
347      UD      0.200
*
348      KK      CPDBA-B
349      KO      0
350      KM      COMBINE 3-A, 3-B, AND 3-C
351      KM      PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
352      HC      3
*
353      KK      GPDB
354      KM      VILLAGE 22 DETENTION BASIN
355      KM      FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
356      KM      FACILITY # = 0001
357      KM      STORAGE VOLUME = 123 AC-FT
358      KM      OUTLET = 60" RCP
359      KM      100-YEAR DISCHARGE =

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

```

360      KM      SPILLWAY LENGTH = 1053'
361      KM      SPILLWAY HEIGHT =
362      KM      SPILLWAY CREST ELEVATION = 1007.9'
363      KM      SPILLWAY TYPE =

```

364 KM PMF DISCHARGE =
 365 KM TOP OF EMBANKMENT ELEVATION =
 366 KM INFORMATION REFERENCED FROM "SUMMERLIN VILLAGE 26 ULTIMATE/PROPOSED
 367 KM CONDITIONS" HYDRAOLOGIC MODEL BY G.C. WALLACE INC. (9-5-06)
 368 KM ELEVATIONS WITHIN THE STAGE-STORAGE-DISCHARGE CURVE WERE REDUCED BY 1000'
 369 KM IN ORDER FOR THE HYDROLOGIC MODEL TO RUN
 370 KO 3
 371 RS 1 STOR 0
 372 SV 6.54 12.78 19.92 28.03 37.17 46.61 59.93 75.75 94.29 115.85
 373 SV 129.61
 374 SE 10 12 14 16 18 20 22 24 26 28
 375 SE 30
 376 SQ 0 26.06 58.28 78.18 93.97 107.45 119.43 130.31 140.35 149.71
 377 SQ 158.53
 *

378 KK 3-G1
 379 KM COMPARE TO MPU BASIN SWFH-6
 380 BA 0.2406
 381 PB 3.46
 382 LS 0 90
 383 UD 0.131
 *

384 KK R3-G1
 385 KM ROUTE 3-G1 TO CP3-G1
 386 KM LINING RCB
 387 RD 1000 0.044 0.013 0 TRAP 6 0
 *

388 KK CP3-G1
 389 KM COMBINE 3-G1, AND GPDB
 390 HC 2
 *

391 KK RCP3-G1
 392 KM ROUTE 3P3-G1 TO CP3-H1
 393 KM LINING RCB
 394 RD 2603 0.044 0.013 0 TRAP 8 0
 *

395 KK 3-H1
 396 KM COMPARE TO MPU BASIN SWFH-9
 397 BA 0.0429
 398 PB 3.33
 399 LS 0 90.7
 400 UD 0.088
 *

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PAGE 11

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

401 KK CP3-H1
 402 KM COMBINE RCP3-G1, AND 3-H1
 403 HC 2
 *

404 KK RCP3-H1
 405 KM ROUTE CP3-H1 TO CP3.9
 406 KM LINING RCB
 407 RD 3510 0.044 0.013 0 TRAP 8 0
 *

408 KK 3-I1
 409 KM COMPARE TO MPU BASIN SWFH-7
 410 BA 0.2934
 411 PB 3.41
 412 LS 0 88.8
 413 UD 0.209
 *

414 KK CP3.9
 415 KM COMBINE CP3.8, CP3-H1 AND C-I1
 416 HC 3
 *

417 KK RCP9
 418 KM ROUTE CP3.9 TO CP3.10
 419 RD 2390 0.027 0.013 0 TRAP 6 0
 *

420 KK 3-O
 421 KM COMPARE TO MPU BASIN SV22-2
 422 BA 0.1124
 423 PB 3.46
 424 LS 0 92.6
 425 UD 0.123
 *

426 KK R3-O
 427 KM ROUTE 3-O TO CP3-P
 428 KM LINING RCB
 429 RD 3260 0.028 0.013 0 TRAP 4 0
 *

430 KK 3-P2
 431 KM COMPARE TO MPU BASIN SV22-2
 432 BA 0.1466
 433 PB 3.46
 434 LS 0 87.1
 435 UD 0.148
 *

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

436 KK R3-P2
 437 KM ROUTE 3-P2 TO CP3-P
 438 KM LINING RCB
 439 RD 3260 0.028 0.013 0 TRAP 4 0
 *

440 KK 3-P1
 441 KM COMPARE TO MPU BASIN SV22-2
 442 BA 0.2441
 443 PB 3.46
 444 LS 0 92.0
 445 UD 0.117
 *

446 KK CP3-P
 447 HC 3
 *

448 KK RCP3-P
 449 KM ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q
 450 RD 2750 0.033 0.013 0 TRAP 10 0
 *

451 KK 3-Q
 452 KM COMPARE TO MPU BASIN SV22-2
 453 BA 0.1974
 454 PB 3.46
 455 LS 0 92.8
 456 UD 0.162
 *

457 KK CP3-Q
 458 KM COMBINES CP3-P AND 3-Q
 459 HC 2
 *

460 KK RCP3-Q
 461 KM ROUTE CP3-Q THROUGH STORM DRAIN TO CP3-H2
 462 KM LINING RCB
 463 RD 3000 0.015 0.013 0 TRAP 20 0
 *

464 KK 3-H2
 465 BA 0.1834
 466 PB 3.33
 467 LS 0 92.7
 468 UD 0.134
 *

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

469 KK CP3-H2
 470 HC 2
 *

471 KK RCPH-2
 472 KM ROUTE CP3-H2 TO CP3.10
 473 KM LINING RCB
 474 RD 1725 0.019 0.013 0 TRAP 20 0
 *

475 KK 3-I2
 476 KM COMPARE TO MPU BASIN SWFH-7
 477 BA 0.1185
 478 PB 3.41
 479 LS 0 90.5
 480 UD 0.205
 *

481 KK CP3.10
 482 KM COMBINE CP3.9, CP3-H2, 3-I2
 483 HC 3
 *

484 KK RCP3.10
 485 KM ROUTE CP3.10 TO CP3.11
 486 KM FACILITIES APFH0000
 487 KM LINING RCB
 488 RD 1000 0.0350 0.013 0 TRAP 16 0
 *

489 KK 3-H3
 490 KM COMPARE TO MPU BASIN SWFH-9
 491 BA 0.1403
 492 PB 3.33
 493 LS 0 94.3
 494 UD 0.206
 *
 495 KK CP3.11
 496 KM COMBINE 3-H3 AND RCP3.10
 497 KM THIS IS CSWFH-9 IN 2008 MPU HEC-1
 498 HC 2
 *
 * END OF SECTION MODELED BY VTN, NEVADA
 * TIE VTN SECTION TO 2008 MPU HEC-1
 *
 499 KKRCSHFH-9
 500 KM ROUTE CSWFH-9 TO CRCSWFH9
 501 KM FACILITY = ANGEL PARK - BELTWAY BRANCH
 502 KM FACILITY # = APBE 0000, 0013, 0022, 0051
 503 KM LINING = CONCRETE
 504 RD 4338 0.0181 0.015 0 TRAP 20 2
 *

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

505 KKRCRCSWFH9
 506 KM COMBINE RCSWFH9 AND CSWAA-3
 507 HC 2
 *
 * END OF G.C. WALLACE'S HYDROLOGIC MODEL
 *
 508 KKRCRCSWFH
 509 KM ROUTE CRCSWFH9 TO C11A-1
 510 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 511 KM FACILITY # = APMD 0230,0233,0237,0247,0248,0253,0258
 512 KM LINING = CONCRETE
 513 RD 1418 0.04 0.015 0 TRAP 76 2
 *
 514 KK 11A-1
 515 BA 0.208
 516 PB 3.25
 517 LS 0 85.3
 518 UD 0.292
 *
 519 KK C11A-1
 520 KM COMBINE RCRCSWFH AND 11A-1
 521 KM ANGEL PARK MIDDLE BRANCH @ PAVILLION CENTER DRIVE
 522 HC 2
 *
 523 KK RC11A-1
 524 KM ROUTE C11A-1 TO C11A-3
 525 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 526 KM FACILITY # = APMD 0190,0195,0198,0208,0218,0227
 527 KM LINING = CONCRETE
 528 RD 2065 0.0281 0.015 0 TRAP 62 2
 *
 529 KK 11A-3
 530 BA 0.195
 531 PB 3.21
 532 LS 0 89.3
 533 UD 0.229
 *
 534 KK C11A-3
 535 KM COMBINE RC11A-1 AND 11A-3
 536 KM ANGEL PARK MIDDLE BRANCH @ TOWN CENTER DRIVE
 537 HC 2
 *

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

538 KK RC11A-3
 539 KM ROUTE C11A-3 TO C3A
 540 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 541 KM FACILITY # = APMD 0132, 0133
 542 KM LENGTH = 3,164
 543 KM SLOPE = 3.0%
 544 KM N = 0.040
 545 KM HYDRAULIC RADIUS = 1.5
 546 KM VELOCITY = 13.5
 547 KM NATURAL WASH
 548 RM 1 0.065 0.15
 *

549 KK 3A
 550 BA 0.178
 551 PB 3.15
 552 LS 0 84.0
 553 UD 0.244
 *
 554 KK C3A
 555 KM COMBINE RCC11A-3 AND 3A
 556 KM ANGEL PARK MIDDLE BRANCH @ HUALAPAI WAY
 557 HC 2
 *
 558 KK RC3A
 559 KM ROUTE C3A TO C3B-1
 560 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 561 KM FACILITY # = APMD 0027, 0030
 562 KM LENGTH = 6,500
 563 KM SLOPE = 3.0%
 564 KM N = 0.040
 565 KM HYDRAULIC RADIUS = 1.5
 566 KM VELOCITY = 13.5
 567 KM NATURAL WASH
 568 RM 2 0.133 0.15
 *
 569 KK 3B-1
 570 BA 0.258
 571 PB 3.04
 572 LS 0 82.0
 573 UD 0.257
 *
 574 KK C3B-1
 575 KM COMBINE RC3A AND 3B-1
 576 HC 2
 *

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HEC-1 INPUT

PAGE 16

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

577 KK RC3B-1
 578 KM ROUTE C3B-1 TO CC3B-2B
 579 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 580 KM FACILITY # = APMD 0000,0027,0030
 581 KM LINING = UNLINED
 582 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 583 RD 940 0.029 0.04 0 TRAP 100 3
 *
 584 KK 11B-2
 585 BA 0.441
 586 PB 3.25
 587 LS 0 85.7
 588 UD 0.423
 *
 589 KK R11B-2
 590 KM ROUTE 11B-2 TO C11B-1
 591 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 592 KM FACILITY # = APSP 0177,0183
 593 KM LINING = CONCRETE
 594 RD 1900 0.017 0.015 0 TRAP 10 2
 *
 595 KK 11B-1
 596 BA 0.394
 597 PB 3.26
 598 LS 0 87.2
 599 UD 0.267
 *
 600 KK C11B-1
 601 KM COMBINE R11B-2 AND 11B-1
 602 KM ANGEL PARK-SUMMERLIN PARKWAY @ ANASAZI DRIVE
 603 HC 2
 *
 604 KK RC11B-1
 605 KM ROUTE C11B-1 TO C8B-1
 606 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 607 KM FACILITY # = APSP 0135,0177
 608 KM LINING = CONCRETE
 609 RD 2150 0.024 0.015 0 TRAP 10 2
 *
 610 KK 8B-1
 611 BA 0.304
 612 PB 3.17
 613 LS 0 87.8
 614 UD 0.288
 *

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HEC-1 INPUT

PAGE 17

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

```

615      KK      C8B-1
616      KM      COMBINE RC11B-1 AND 8B-1
617      KM      ANGEL PARK-SUMMERLIN PARKWAY @ CRESTDALE DRIVE
618      HC      2
        *

619      KK      RC8B-1
620      KM      ROUTE C8B-1 TO C8B-2
621      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
622      KM      FACILITY # = APSP 0066,0069,0133
623      KM      LINING = CONCRETE
624      RD      3575  0.024  0.015      0      TRAP      10      2
        *

625      KK      8B-2
626      BA      0.420
627      PB      3.10
628      LS      0      93.7
629      UD      0.336
        *

630      KK      C8B-2
631      KM      COMBINE 8B-2 AND RC8B-1
632      KM      ANGEL PARK-SUMMERLIN PARKWAY @ TOWN CENTER DRIVE
633      HC      2
        *

634      KK      RC8B-2
635      KM      ROUTE C8B-2 TO CC3B-2A
636      KM      FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
637      KM      FACILITY # = APSP 0002
638      KM      LINING = UNLINED
639      RD      1424  0.035  0.025      0      TRAP      50      3
        *

640      KK      11A-2
641      BA      0.290
642      PB      3.20
643      LS      0      88.3
644      UD      0.194
        *

645      KK      R11A-2
646      KM      ROUTE 11A-2 TO C8A
647      KM      TOWN CENTER DRIVE AND HUALAPAI WAY
648      RD      2900  0.017  0.016      0      TRAP      0      50
        *

649      KK      8A
650      BA      0.306
651      PB      3.16
652      LS      0      86.0
653      UD      0.239
        *

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HEC-1 INPUT

PAGE 18

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

```

654      KK      C8A
655      KM      COMBINE 8A AND R11A-2
656      HC      2
        *

657      KK      RC8A
658      KM      ROUTE C8A TO C3B-2A
659      KM      NATURAL WASH
660      KM      TRAVEL LENGTH = 4,500
661      KM      SLOPE = 2.8%
662      KM      N = 0.040
663      KM      HYDRAULIC RADIUS = 1.5
664      KM      VELOCITY = 13.1
665      RM      1  0.096  0.15
        *

666      KK      3B-2A
667      BA      0.243
668      PB      3.06
669      LS      0      88.5
670      UD      0.213
        *

671      KK      C3B-2A
672      KM      COMBINE 3B-2A AND RC8A
673      HC      2
        *

674      KK      CC3B-2A
675      KM      COMBINE C3B-2A AND RC8B-2
676      HC      2
        *

```

677 KKRCC3B-2A
 678 KM ROUTE CC3B-2A TO C3B-2B
 679 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 680 KM FACILITY # = APSP 0001
 681 KM LINING = UNLINED
 682 RD 3924 0.03 0.025 0 TRAP 20 2
 *
 683 KK 3B-2B
 684 BA 0.273
 685 PB 2.99
 686 LS 0 85.1
 687 UD 0.309
 *
 688 KK C3B-2B
 689 KM COMBINE RCC3B-2A AND 3B-2B
 690 HC 2
 *

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HEC-1 INPUT

PAGE 19

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

691 KK CC3B-2B
 692 KM COMBINE RC3B-1 AND C3B-2B
 693 HC 2
 *
 694 KKRCC3B-2B
 695 KM ROUTE CC3B-2B TO CSF2-C
 696 KM FACILITY = ANGEL PARK NORTH
 697 KM FACILITY # = APNO 0012,0013,0015 APSP 0000
 698 KM LINING = UNLINED (NATURAL WASH)
 699 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 700 RD 1854 0.025 0.04 0 TRAP 100 3
 *
 701 KK SF2-C
 702 BA 0.388
 703 PB 2.91
 704 LS 0 84.2
 705 UD 0.443
 *
 706 KK CSF2-C
 707 KM COMBINE SF2-C AND RCC3B-2B
 708 HC 2
 *
 709 KK RCSF2-C
 710 KM ROUTE CSF2-C TO ANGLPKIN
 711 KM FACILITY = ANGEL PARK NORTH
 712 KM FACILITY # = APNO 0005
 713 KM LINING = UNLINED (NATURAL WASH)
 714 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 715 RD 1559 0.02 0.04 0 TRAP 100 3
 *
 716 KK SW11
 717 BA 0.589
 718 PB 3.34
 719 LS 0 87.8
 720 UD 0.311
 *
 721 KK RSW11
 722 KM ROUTE SW11 TO CSW17
 723 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 724 KM FACILITY # = APCB 0064, 0080
 725 KM LINING = RCB
 726 RD 2338 0.0167 0.015 0 TRAP 7 0
 *

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HEC-1 INPUT

PAGE 20

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

727 KK SW17
 728 BA 0.356
 729 PB 3.30
 730 LS 0 87.8
 731 UD 0.271
 *
 732 KK CSW17
 733 KM COMBINE RSW11 AND SW17
 734 HC 2
 *
 735 KK RSW17
 736 KM ROUTE CSW17 TO CSW18
 737 KM FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
 738 KM FACILITY # = APCB 0000,0001,0019,0050

739 KM LINING = RCB
 740 RD 3600 0.014 0.015 0 TRAP 11 0
 *
 741 KK SW18
 742 BA 0.405
 743 PB 3.27
 744 LS 0 86.8
 745 UD 0.271
 *
 746 KK CSW18
 747 KM COMBINE RCSW17 AND SW18
 748 HC 2
 *
 749 KK RCSW18
 750 KM ROUTE CSW18 TO C12A
 751 KM FACILITY = ANGEL PARK SOUTH
 752 KM FACILITY # = APSO 0254,0255,0258,0345,0346; APCB 0000
 753 KM NATURAL WASH
 754 KM LENGTH = 5,200
 755 KM SLOPE = 1.4%
 756 KM N = 0.040
 757 KM HYDRAULIC RADIUS = 1.5
 758 KM VELOCITY = 9.2
 759 RM 2 0.157 0.15
 *
 760 KK 12A
 761 BA 0.392
 762 PB 3.20
 763 LS 0 91.2
 764 UD 0.264
 *

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HEC-1 INPUT

PAGE 21

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

765 KK C12A
 766 KM COMBINE 12A AND RCSW18
 767 HC 2
 *
 768 KK RC12A
 769 KM ROUTE THRU 12B
 770 KM FACILITY = ANGEL PARK SOUTH
 771 KM FACILITY # = APSO 0204, 0205
 772 KM NATURAL WASH
 773 KM LENGTH = 2,600
 774 KM SLOPE = 3.5%
 775 KM N = 0.040
 776 KM HYDRAULIC RADIUS = 1.5
 777 KM VELOCITY = 14.5
 778 RM 1 0.05 0.15
 *
 779 KK 12B
 780 BA 0.260
 781 PB 3.13
 782 LS 0 91.0
 783 UD 0.233
 *
 784 KK C12B
 785 KM COMBINE 12B AND RC12A
 786 HC 2
 *
 787 KK RC12B
 788 KM ROUTE C12B TO C57B-3
 789 KM FACILITY = ANGEL PARK SOUTH
 790 KM FACILITY # = APSO 0067
 791 KM NATURAL WASH
 792 KM LENGTH = 6,000
 793 KM SLOPE = 2.3%
 794 KM N = 0.040
 795 KM HYDRAULIC RADIUS = 1.5
 796 KM VELOCITY = 11.8
 797 RM 2 0.141 0.15
 *
 798 KK 57B-3
 799 BA 0.310
 800 PB 3.04
 801 LS 0 82.1
 802 UD 0.332
 *

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HEC-1 INPUT

PAGE 22

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

803 KK C57B-3

804 KM COMBINE RC12B AND 57B-3
 805 HC 2
 *
 806 KK RC57B-3
 807 KM ROUTE C57B-3 TO C57B-2
 808 KM FACILITY = ANGEL PARK SOUTH
 809 KM FACILITY # = APSO 0067
 810 KM NATURAL WASH
 811 KM LENGTH = 1,300
 812 KM SLOPE = 1.7%
 813 KM N = 0.040
 814 KM HYDRAULIC RADIUS = 1.5
 815 KM VELOCITY = 10.2
 816 RM 0 0.035 0.15
 *

817 KK 57B-2
 818 BA 0.362
 819 PB 3.02
 820 LS 0 84.1
 821 UD 0.332
 *

822 KK C57B-2
 823 KM COMBINE 57B-2 AND RC57B-3
 824 HC 2
 *

825 KK RC57B-2
 826 KM ROUTE C57B-2 TO CC57B-1
 827 KM FACILITY = ANGEL PARK SOUTH
 828 KM FACILITY # = APSO 0067
 829 KM NATURAL WASH
 830 KM LENGTH = 1,000
 831 KM SLOPE = 1.8%
 832 KM N = 0.040
 833 KM HYDRAULIC RADIUS = 1.5
 834 KM VELOCITY = 10.5
 835 RM 0 0.027 0.15
 *

836 KK 13B-1
 837 BA 0.249
 838 PB 3.19
 839 LS 0 91.6
 840 UD 0.284
 *

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HEC-1 INPUT

PAGE 23

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

841 KK RC13B-1
 842 KM ROUTE 13B-1 TO C13B-2
 843 KM GRIFFITH PARK DRIVE AND HUALAPAI WAY
 844 RD 3000 0.018 0.016 0 TRAP 0 50
 *

845 KK 13B-2
 846 BA 0.216
 847 PB 3.14
 848 LS 0 89.7
 849 UD 0.231
 *

850 KK C13B-2
 851 KM COMBINE 13B-2 AND RC13B-1
 852 KM HUALAPAI WAY AND LOCAL FACILITY
 853 HC 2
 *

854 KK RC13B-2
 855 KM ROUTE C13B-2 TO CCPIC-A
 856 KM LINING = GRASS
 857 RD 4900 0.021 0.03 0 TRAP 40 6
 *

858 KK 19A
 859 BA 0.253
 860 PB 3.25
 861 LS 0 89.9
 862 UD 0.351
 *

863 KK R19A
 864 KM ROUTE 19A TO C13A-1
 865 KM UNNAMED ROAD
 866 RD 4300 0.021 0.016 0 TRAP 0 50
 *

867 KK 13A-1
 868 BA 0.224
 869 PB 3.19
 870 LS 0 91.4

871 UD 0.302
 *
 872 KK C13A-1
 873 KM COMBINE 13A-1 AND R19A
 874 KM TOWN CENTER DRIVE AND SWALE
 875 HC 2
 *

1 HEC-1 INPUT PAGE 24

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

876 KK RC13A-1
 877 KM ROUTE C13A-1 TO C13A-2
 878 KM NATURAL WASH
 879 KM TRAVEL LENGTH = 2,800
 880 KM SLOPE = 2.1%
 881 KM N = 0.040
 882 KM HYDRAULIC RADIUS = 1.5
 883 KM VELOCITY = 11.4
 884 RM 1 0.068 0.15
 *
 885 KK 13A-2
 886 BA 0.188
 887 PB 3.15
 888 LS 0 90.0
 889 UD 0.236
 *
 890 KK C13A-2
 891 KM COMBINE 13A-2 AND RC13A-1
 892 HC 2
 *
 893 KK RC13A-2
 894 KM ROUTE C13A-2 TO CPIC-C
 895 KM LINING = GRASS
 896 RD 5200 0.015 0.03 0 TRAP 40 4
 *
 897 KK PIC-C
 898 BA 0.243
 899 PB 3.08
 900 LS 0 90.4
 901 UD 0.373
 *
 902 KK CPIC-C
 903 KM COMBINE PIC-C AND RC13A-2
 904 HC 2
 *
 905 KK RCPIC-C
 906 KM ROUTE CPIC-C TO CPIC-A
 907 KM LINING = GRASS
 908 RD 2200 0.025 0.03 0 TRAP 40 4
 *
 909 KK PIC-A
 910 BA 0.359
 911 PB 3.03
 912 LS 0 91.1
 913 UD 0.499
 *

1 HEC-1 INPUT PAGE 25

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

914 KK CPIC-A
 915 KM COMBINE RCPIC-C AND PIC-A
 916 HC 2
 *
 917 KK CCPIC-A
 918 KM COMBINE CPIC-A AND RC13B-2
 919 HC 2
 *
 920 KK RCPIC-A
 921 KM ROUTE CCPIC-A TO C57B-1
 922 KM FACILITY = ANGEL PARK - PECCOLE 2
 923 KM FACILITY # = APP2 0000
 924 KM LINING = GRASS
 925 RD 4793 0.021 0.03 0 TRAP 10 2
 *
 926 KK 57B-1
 927 BA 0.197
 928 PB 2.92
 929 LS 0 85.5
 930 UD 0.277
 *

931 KK C57B-1
932 KM COMBINE 57B-1 AND RCCPIC-A
933 HC 2
*

934 KK CC57B-1
935 KM COMBINE C57B-1 AND RC57B-2
936 HC 2
*

937 KKRCC57B-1
938 KM ROUTE CC57B-1 TO C57B-4
939 KM FACILITY = ANGEL PARK - SOUTH BRANCH
940 KM FACILITY # = APSO 0050
941 KM LINING = NATURAL WASH
942 RD 300 0.0184 0.04 0 TRAP 100 3
*

943 KK 57B-4
944 BA 0.200
945 PB 2.91
946 LS 0 90.0
947 UD 0.233
*

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HEC-1 INPUT

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

948 KK C57B-4
949 KM COMBINE RCC57B-1 AND 57B-4
950 HC 2
*

951 KK PIC-B
952 BA 0.441
953 PB 2.98
954 LS 0 91.1
955 UD 0.471
*

956 KK RPIC-B
957 KM ROUTE PIC-B TO CC57B-4
958 KM FACILITY = ANGEL PARK - PECCOLE 1
959 KM FACILITY # = APP1 0000
960 KM LINING = RCP
961 RD 2982 0.024 0.013 0 CIRC 6
*

962 KK CC57B-4
963 KM COMBINE RPIC-B AND C57B-4
964 HC 2
*

965 KKRCC57B-4
966 KM ROUTE CC57B-4 TO ANGLPKIN
967 KM FACILITY = ANGEL PARK SOUTH
968 KM FACILITY # = APSO 0000, 0020
969 KM LINING = RCB
970 RD 2857 0.0162 0.015 0 TRAP 24 0
*

971 KK 38A
972 BA 0.353
973 PB 2.86
974 LS 0 91.6
975 UD 0.399
*

976 KK R38A
977 KM ROUTE 38A TO C38B
978 KM FACILITY = ANGEL PARK - DURANGO
979 KM FACILITY # = APDG 0000,0060
980 KM LINING = RCP
981 RD 4500 0.0096 0.015 0 CIRC 6
*

982 KK 38B
983 BA 0.440
984 PB 2.82
985 LS 0 92.9
986 UD 0.375
*

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HEC-1 INPUT

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

987 KK C38B
988 KM COMBINE 38B AND R38A
989 KM DUCHARME AND DURANGO
990 HC 2
*

```

991      KK      57BA
992      BA      0.317
993      PB      2.96
994      LS      0      78.2
995      UD      0.436
          *

996      KK      R57BA
997      KM      ROUTE 57BA TO C3C
998      KM      RAMPART BOULEVARD
999      RD      500      0.02      0.016      0      TRAP      0      50
          *

1000     KK      3C
1001     BA      0.153
1002     PB      2.90
1003     LS      0      93.1
1004     UD      0.246
          *

1005     KK      C3C
1006     KM      COMBINE 3C AND R57BA
1007     KM      RAMPART AND REGENT LAS VEGAS
1008     HC      2
          *

1009     KK      RC3C
1010     KM      ROUTE C3C TO ANGLPKIN
1011     KM      LINING = UNLINED
1012     KM      CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
1013     RD      2300      0.0326      0.04      0      TRAP      50      4
          *

1014     KK      AP
1015     BA      0.668
1016     PB      2.81
1017     LS      0      81.6
1018     UD      0.392
          *

1019     KKANGLPKIN
1020     KM      COMBINE AP,RC3C,C38B,RCC57B-4, AND RCSF2-2
1021     KM      TOTAL INFLOW TO ANGEL PARK DETENTION BASIN
1022     KO      1
1023     HC      5
          *

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HEC-1 INPUT

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

1024      KKANGLPKDB
1025      KM      ANGEL PARK DETENTION BASIN
1026      KM      FACILITY = ANGEL PARK NORTH
1027      KM      FACILITY # = APNO 0000,0001
1028      KM      STORAGE VOLUME = 1512 AC-FT (2002 MPU VOLUME = 1400 AC-FT; 8% INCREASE)
1029      KM      OUTLET = 54" RCP
1030      KM      100-YEAR DISCHARGE =
1031      KM      SPILLWAY LENGTH =
1032      KM      SPILLWAY HEIGHT =
1033      KM      SPILLWAY CREST ELEVATION = 2619'
1034      KM      SPILLWAY TYPE =
1035      KM      PMF DISCHARGE =
1036      KM      TOP OF EMBANKMENT ELEVATION =
1037      KO      1
1038      RS      1      STOR      -1
1039      SV      0      10.8      43.2      113.4      222.48      411.48      640.44      910.44      1239.84      1470.9
1040      SV      1512      1554.12      1596.24      1640.52      1684.8      1730.16      1775.52      1823.04      1875.96      1919.1
1041      SE      2576      2580      2585      2590      2595      2600      2605      2610      2616      2618
1042      SE      2619      2619.5      2620      2620.5      2621      2621.5      2622      2622.5      2623      2623.5
1043      SQ      0      89      194      232      285      316      343      370      392      405
1044      SQ      407      1852      4491      7909      11955      16545      21620      27137      33064      39373
          *
1045      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

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

59      3-1
        V
        V
73      R3-1
        .
        .
77      .      3-2
        .
        .
83      CP3.1.....
        V
        V
86      RCP3.1
        .

```


90	.	3-D	.
	.	.	.
96	CP3.3	.	.
	V		
	V		
99	RCP3.3		
	.		
103	.	3-3	.
	.	V	.
	.	V	.
109	.	R3-3	.
	.	.	.
	.	.	.
113	.	.	3-4
	.	.	V
	.	.	V
119	.	.	R3-4
	.	.	.
	.	.	.
123	.	.	3-5
	.	.	V
	.	.	V
129	.	.	R3-5
	.	.	.
	.	.	.
133	.	CP3.2	.
	.	V	.
	.	V	.
136	.	RCP3.2	.
	.	.	.
	.	.	.
140	.	.	3-E
	.	.	.
	.	.	.
146	.	CP3.4	.
	.	V	.
	.	V	.
149	.	RCP3.4	.
	.	.	.
153	.	3-6	.
	.	V	.
	.	V	.
159	.	R3-6	.
	.	.	.
	.	.	.
163	.	.	3-7
	.	.	V
	.	.	V
169	.	.	R3-7
	.	.	.
	.	.	.
173	.	.	3-J
	.	.	V
	.	.	V
179	.	.	R3-J
	.	.	.
	.	.	.
183	.	CP3.5	.
	.	V	.
	.	V	.
186	.	RCP3.5	.
	.	.	.
	.	.	.
190	.	.	3-8
	.	.	V
	.	.	V
196	.	.	R3-8
	.	.	.
	.	.	.
200	.	.	3-K
	.	.	.
	.	.	.
206	.	CP3.6	.
	.	V	.
	.	V	.
209	.	RCP3.6	.
	.	.	.
	.	.	.
213	.	.	3-N
	.	.	.
	.	.	.
219	.	.	3-M
	.	.	V
	.	.	V
225	.	.	R3-M
	.	.	.
	.	.	.
229	.	CPDB5	.
	.	V	.
	.	V	.
234	.	DB5	.

263	.	3-L	.
	.	.	.
269	CP3-L.....		
	V		
	V		
273	RCSWAA-1		
	.		
279	SWAA-2		
	.		
	.		
284	CSWAA-2.....		
	V		
	V		
287	RCSWAA-2		
	.		
293	SWAA-3		
	.		
	.		
298	CSWAA-3.....		
	.		
301	3-F		
	V		
	V		
307	R3-F		
	.		
	.		
311	3-G2		
	.		
	.		
317	CP3.8.....		
	V		
	V		
320	RCP3.8		
	.		
	.		
324	3-A		
	V		
	V		
330	R3-A		
	.		
	.		
333	3-B		
	V		
	V		
339	R3-B		
	.		
	.		
342	3-C		
	.		
	.		
348	CPDBA-B.....		
	V		
	V		
353	GPDB		
	.		
	.		
378	3-G1		
	V		
	V		
384	R3-G1		
	.		
	.		
388	CP3-G1.....		
	V		
	V		
391	RCP3-G1		
	.		
	.		
395	3-H1		
	.		
	.		
401	CP3-H1.....		
	V		
	V		
404	RCP3-H1		
	.		
	.		
408	3-I1		
	.		
	.		
414	CP3.9.....		
	V		
	V		
417	RCP9		
	.		
	.		
420	3-O		
	V		
	V		

426	.	.	R3-O	
	.	.	.	
430	.	.	.	3-P2
	.	.	V	
	.	.	V	
436	.	.	R3-P2	
	.	.	.	
	.	.	.	
440	.	.	.	3-P1
	.	.	.	
	.	.	.	
446	.	.	CP3-P.....	
	.	.	V	
	.	.	V	
448	.	.	RCP3-P	
	.	.	.	
	.	.	.	
451	.	.	.	3-Q
	.	.	.	
	.	.	.	
457	.	.	CP3-Q.....	
	.	.	V	
	.	.	V	
460	.	.	RCP3-Q	
	.	.	.	
	.	.	.	
464	.	.	.	3-H2
	.	.	.	
	.	.	.	
469	.	.	CP3-H2.....	
	.	.	V	
	.	.	V	
471	.	.	RCPH-2	
	.	.	.	
	.	.	.	
475	.	.	.	3-I2
	.	.	.	
	.	.	.	
481	.	.	CP3.10.....	
	.	.	V	
	.	.	V	
484	.	.	RCP3.10	
	.	.	.	
	.	.	.	
489	.	.	.	3-H3
	.	.	.	
	.	.	.	
495	.	.	CP3.11.....	
	.	.	V	
	.	.	V	
499	.	.	RCSHFH-9	
	.	.	.	
	.	.	.	
505	CRCSWFH9.....			
	.	.	V	
	.	.	V	
508	RCRCSWFH			
	.	.	.	
514	.	.	11A-1	
	.	.	.	
	.	.	.	
519	C11A-1.....			
	.	.	V	
	.	.	V	
523	RC11A-1			
	.	.	.	
	.	.	.	
529	.	.	11A-3	
	.	.	.	
	.	.	.	
534	C11A-3.....			
	.	.	V	
	.	.	V	
538	RC11A-3			
	.	.	.	
	.	.	.	
549	.	.	3A	
	.	.	.	
	.	.	.	
554	C3A.....			
	.	.	V	
	.	.	V	
558	RC3A			
	.	.	.	
	.	.	.	
569	.	.	3B-1	
	.	.	.	
	.	.	.	
574	C3B-1.....			
	.	.	V	
	.	.	V	
577	RC3B-1			
	.	.	.	

584	.	11B-2	
	.	V	
	.	V	
589	.	R11B-2	
	.	.	
	.	.	
595	.	.	11B-1
	.	.	.
	.	.	.
600	.	C11B-1.....	
	.	V	
	.	V	
604	.	RC11B-1	
	.	.	
	.	.	
610	.	.	8B-1
	.	.	.
	.	.	.
615	.	C8B-1.....	
	.	V	
	.	V	
619	.	RC8B-1	
	.	.	
	.	.	
625	.	.	8B-2
	.	.	.
	.	.	.
630	.	C8B-2.....	
	.	V	
	.	V	
634	.	RC8B-2	
	.	.	
	.	.	
640	.	.	11A-2
	.	V	
	.	V	
645	.	R11A-2	
	.	.	
	.	.	
649	.	.	8A
	.	.	.
	.	.	.
654	.	C8A.....	
	.	V	
	.	V	
657	.	RC8A	
	.	.	
	.	.	
666	.	.	3B-2A
	.	.	.
	.	.	.
671	.	C3B-2A.....	
	.	.	
	.	.	
674	.	CC3B-2A.....	
	.	V	
	.	V	
677	.	RCC3B-2A	
	.	.	
	.	.	
683	.	.	3B-2B
	.	.	.
	.	.	.
688	.	C3B-2B.....	
	.	.	
	.	.	
691	.	CC3B-2B.....	
	.	V	
	.	V	
694	.	RCC3B-2B	
	.	.	
	.	.	
701	.	SF2-C	
	.	.	
	.	.	
706	.	CSF2-C.....	
	.	V	
	.	V	
709	.	RCSF2-C	
	.	.	
	.	.	
716	.	SW11	
	.	V	
	.	V	
721	.	RSW11	
	.	.	
	.	.	
727	.	.	SW17
	.	.	.
	.	.	.
732	.	CSW17.....	
	.	V	
	.	V	
735	.	RCSW17	

741	.	.	SW18	.
	.	.	.	.
746	.	CSW18.....	.	.
	.	V	.	.
	.	V	.	.
749	.	RCSW18	.	.
	.	.	.	.
760	.	.	12A	.
	.	.	.	.
765	.	C12A.....	.	.
	.	V	.	.
	.	V	.	.
768	.	RC12A	.	.
	.	.	.	.
779	.	.	12B	.
	.	.	.	.
784	.	C12B.....	.	.
	.	V	.	.
	.	V	.	.
787	.	RC12B	.	.
	.	.	.	.
798	.	.	57B-3	.
	.	.	.	.
803	.	C57B-3.....	.	.
	.	V	.	.
	.	V	.	.
806	.	RC57B-3	.	.
	.	.	.	.
817	.	.	57B-2	.
	.	.	.	.
822	.	C57B-2.....	.	.
	.	V	.	.
	.	V	.	.
825	.	RC57B-2	.	.
	.	.	.	.
836	.	.	13B-1	.
	.	.	V	.
	.	.	V	.
841	.	RC13B-1	.	.
	.	.	.	.
845	.	.	13B-2	.
	.	.	.	.
850	.	C13B-2.....	.	.
	.	V	.	.
	.	V	.	.
854	.	RC13B-2	.	.
	.	.	.	.
858	.	.	19A	.
	.	.	V	.
	.	.	V	.
863	.	.	R19A	.
	.	.	.	.
867	.	.	.	13A-1
	.	.	.	.
872	.	.	C13A-1.....	.
	.	.	V	.
	.	.	V	.
876	.	.	RC13A-1	.
	.	.	.	.
885	.	.	.	13A-2
	.	.	.	.
890	.	.	C13A-2.....	.
	.	.	V	.
	.	.	V	.
893	.	.	RC13A-2	.
	.	.	.	.
897	.	.	.	PIC-C
	.	.	.	.
902	.	.	CPIC-C.....	.
	.	.	V	.
	.	.	V	.
905	.	.	RCPIC-C	.
	.	.	.	.
	.	.	.	.

THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
DOWNSTREAM HOLDING FACILITIES

MODELED BY VTN, NEVADA SVB/JYA
MAY 9, 2017

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
GOWAN WATERSHED (ALL)
RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
INPUT FILE = ALT1-SDN3.DAT
INPUT FILE DATE = MAY 5, 2008
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #5
MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
STORM CENTERING = FULL WATERSHED

REFERENCED HYDROLOGIC MODELS:
CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
MASTER PLAN UPDATE (G.C. WALLACE 2006)
GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
(G.C. WALLACE 2007)
LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
FROM G.C. WALLACE ON JANUARY 31, 2008)
US 95/RANCHO FIS RESTUDY (PBS&J 1998)
JR CARDS CONTAIN DARF'S BASED ON THE FOLLOWING VALUES:

AREA	DARF
SQ. MI.	
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN5

56 IO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
 NMIN 5 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 0055 ENDING TIME
 ICENT 19 CENTURY MARK

 COMPUTATION INTERVAL .08 HOURS
 TOTAL TIME BASE 24.92 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
 .57 .56 .54

*
229 KK * CPDB5 *
*

232 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*
234 KK * DB5 *
*

254 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*
348 KK * CPDBA-B *
*

349 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*
353 KK * GPDB *
*

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

HYDROGRAPH ROUTING DATA

371 RS	STORAGE ROUTING									
	NSTPS	1	NUMBER OF SUBREACHES							
	ITYP	STOR	TYPE OF INITIAL CONDITION							
	RSVRIC	.00	INITIAL CONDITION							
	X	.00	WORKING R AND D COEFFICIENT							
372 SV	STORAGE	6.5	12.8	19.9	28.0	37.2	46.6	59.9	75.8	94.3
115.8		129.6								
374 SE	ELEVATION	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
28.00		30.00								
376 SQ	DISCHARGE	0.	26.	58.	78.	94.	107.	119.	130.	140.
150.		159.								

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .57

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)				
+ 92.	5.33		70.	22.	21.	21.
		(INCHES)	.520	.643	.643	.643
		(AC-FT)	35.	43.	43.	43.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 36.	5.33		26.	12.	11.	11.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 17.76	5.33		15.44	11.68	11.62	11.62

CUMULATIVE AREA = 1.26 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .56

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)				
+ 90.	5.33		68.	21.	20.	20.
		(INCHES)	.503	.618	.618	.618
		(AC-FT)	34.	41.	41.	41.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 35.	5.33		25.	11.	11.	11.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 17.48	5.33		15.21	11.60	11.54	11.54

CUMULATIVE AREA = 1.26 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .54

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)				
+ 86.	5.33		63.	19.	19.	19.
		(INCHES)	.468	.570	.570	.570
		(AC-FT)	31.	38.	38.	38.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 32.	5.33		23.	11.	10.	10.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 16.93	5.33		14.76	11.46	11.40	11.40

CUMULATIVE AREA = 1.26 SQ MI

***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

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* *
1019 KK * ANGLPKIN *
* *

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*****
1022 KO      OUTPUT CONTROL VARIABLES
              IPRNT      1  PRINT CONTROL
              IPLOT      0  PLOT CONTROL
              QSCAL      0.  HYDROGRAPH PLOT SCALE

1023 HC      HYDROGRAPH COMBINATION
              ICOMP      5  NUMBER OF HYDROGRAPHS TO COMBINE

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                                HYDROGRAPH AT STATION ANGLPKIN
                                SUM OF 5 HYDROGRAPHS
                                PLAN 1,  RATIO = .57

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	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
1.	1	0000	1	0.	*	1	0615	76	1383.	*	1	1230	151	17.	*	1	1845	226				
2.	1	0005	2	0.	*	1	0620	77	1315.	*	1	1235	152	16.	*	1	1850	227				
2.	1	0010	3	0.	*	1	0625	78	1254.	*	1	1240	153	16.	*	1	1855	228				
2.	1	0015	4	0.	*	1	0630	79	1193.	*	1	1245	154	15.	*	1	1900	229				
2.	1	0020	5	0.	*	1	0635	80	1125.	*	1	1250	155	15.	*	1	1905	230				
2.	1	0025	6	0.	*	1	0640	81	1050.	*	1	1255	156	14.	*	1	1910	231				
2.	1	0030	7	0.	*	1	0645	82	971.	*	1	1300	157	14.	*	1	1915	232				
2.	1	0035	8	1.	*	1	0650	83	890.	*	1	1305	158	14.	*	1	1920	233				
2.	1	0040	9	1.	*	1	0655	84	809.	*	1	1310	159	13.	*	1	1925	234				
2.	1	0045	10	2.	*	1	0700	85	731.	*	1	1315	160	13.	*	1	1930	235				
2.	1	0050	11	4.	*	1	0705	86	658.	*	1	1320	161	13.	*	1	1935	236				
2.	1	0055	12	6.	*	1	0710	87	589.	*	1	1325	162	12.	*	1	1940	237				
1.	1	0100	13	10.	*	1	0715	88	526.	*	1	1330	163	12.	*	1	1945	238				
1.	1	0105	14	15.	*	1	0720	89	468.	*	1	1335	164	12.	*	1	1950	239				
1.	1	0110	15	19.	*	1	0725	90	416.	*	1	1340	165	11.	*	1	1955	240				
1.	1	0115	16	23.	*	1	0730	91	367.	*	1	1345	166	11.	*	1	2000	241				
1.	1	0120	17	24.	*	1	0735	92	319.	*	1	1350	167	11.	*	1	2005	242				
1.	1	0125	18	23.	*	1	0740	93	271.	*	1	1355	168	10.	*	1	2010	243				
1.	1	0130	19	23.	*	1	0745	94	223.	*	1	1400	169	10.	*	1	2015	244				
1.	1	0135	20	24.	*	1	0750	95	179.	*	1	1405	170	10.	*	1	2020	245				
1.	1	0140	21	28.	*	1	0755	96	144.	*	1	1410	171	9.	*	1	2025	246				
1.	1	0145	22	36.	*	1	0800	97	119.	*	1	1415	172	9.	*	1	2030	247				
1.	1	0150	23	48.	*	1	0805	98	102.	*	1	1420	173	9.	*	1	2035	248				
1.	1	0155	24	65.	*	1	0810	99	90.	*	1	1425	174	9.	*	1	2040	249				
1.	1	0200	25	86.	*	1	0815	100	83.	*	1	1430	175	8.	*	1	2045	250				
1.	1	0205	26	110.	*	1	0820	101	78.	*	1	1435	176	8.	*	1	2050	251				
1.	1	0210	27	134.	*	1	0825	102	74.	*	1	1440	177	8.	*	1	2055	252				
1.	1	0215	28	156.	*	1	0830	103	71.	*	1	1445	178	8.	*	1	2100	253				
1.	1	0220	29	174.	*	1	0835	104	69.	*	1	1450	179	8.	*	1	2105	254				
1.	1	0225	30	189.	*	1	0840	105	67.	*	1	1455	180	7.	*	1	2110	255				
1.	1	0230	31	202.	*	1	0845	106	65.	*	1	1500	181	7.	*	1	2115	256				
1.	1	0235	32	218.	*	1	0850	107	63.	*	1	1505	182	7.	*	1	2120	257				
1.	1	0240	33	240.	*	1	0855	108	61.	*	1	1510	183	7.	*	1	2125	258				
1.	1	0245	34	271.	*	1	0900	109	59.	*	1	1515	184	7.	*	1	2130	259				

1.	1	0250	35	312.	*	1	0905	110	57.	*	1	1520	185	6.	*	1	2135	260
1.	1	0255	36	359.	*	1	0910	111	55.	*	1	1525	186	6.	*	1	2140	261
1.	1	0300	37	405.	*	1	0915	112	53.	*	1	1530	187	6.	*	1	2145	262
1.	1	0305	38	448.	*	1	0920	113	52.	*	1	1535	188	6.	*	1	2150	263
1.	1	0310	39	490.	*	1	0925	114	50.	*	1	1540	189	6.	*	1	2155	264
1.	1	0315	40	545.	*	1	0930	115	48.	*	1	1545	190	6.	*	1	2200	265
1.	1	0320	41	637.	*	1	0935	116	47.	*	1	1550	191	5.	*	1	2205	266
1.	1	0325	42	830.	*	1	0940	117	45.	*	1	1555	192	5.	*	1	2210	267
1.	1	0330	43	1252.	*	1	0945	118	44.	*	1	1600	193	5.	*	1	2215	268
1.	1	0335	44	2101.	*	1	0950	119	42.	*	1	1605	194	5.	*	1	2220	269
1.	1	0340	45	3427.	*	1	0955	120	41.	*	1	1610	195	5.	*	1	2225	270
1.	1	0345	46	4996.	*	1	1000	121	40.	*	1	1615	196	5.	*	1	2230	271
1.	1	0350	47	6453.	*	1	1005	122	39.	*	1	1620	197	5.	*	1	2235	272
1.	1	0355	48	7411.	*	1	1010	123	38.	*	1	1625	198	4.	*	1	2240	273
1.	1	0400	49	7737.	*	1	1015	124	36.	*	1	1630	199	4.	*	1	2245	274
0.	1	0405	50	7575.	*	1	1020	125	35.	*	1	1635	200	4.	*	1	2250	275
0.	1	0410	51	7112.	*	1	1025	126	34.	*	1	1640	201	4.	*	1	2255	276
0.	1	0415	52	6503.	*	1	1030	127	33.	*	1	1645	202	4.	*	1	2300	277
0.	1	0420	53	5852.	*	1	1035	128	32.	*	1	1650	203	4.	*	1	2305	278
0.	1	0425	54	5233.	*	1	1040	129	31.	*	1	1655	204	4.	*	1	2310	279
0.	1	0430	55	4691.	*	1	1045	130	30.	*	1	1700	205	4.	*	1	2315	280
0.	1	0435	56	4258.	*	1	1050	131	29.	*	1	1705	206	4.	*	1	2320	281
0.	1	0440	57	3953.	*	1	1055	132	29.	*	1	1710	207	3.	*	1	2325	282
0.	1	0445	58	3769.	*	1	1100	133	28.	*	1	1715	208	3.	*	1	2330	283
0.	1	0450	59	3691.	*	1	1105	134	27.	*	1	1720	209	3.	*	1	2335	284
0.	1	0455	60	3689.	*	1	1110	135	26.	*	1	1725	210	3.	*	1	2340	285
0.	1	0500	61	3718.	*	1	1115	136	25.	*	1	1730	211	3.	*	1	2345	286
0.	1	0505	62	3733.	*	1	1120	137	25.	*	1	1735	212	3.	*	1	2350	287
0.	1	0510	63	3701.	*	1	1125	138	24.	*	1	1740	213	3.	*	1	2355	288
0.	1	0515	64	3610.	*	1	1130	139	23.	*	1	1745	214	3.	*	2	0000	289
0.	1	0520	65	3456.	*	1	1135	140	23.	*	1	1750	215	3.	*	2	0005	290
0.	1	0525	66	3252.	*	1	1140	141	22.	*	1	1755	216	3.	*	2	0010	291
0.	1	0530	67	3018.	*	1	1145	142	21.	*	1	1800	217	3.	*	2	0015	292
0.	1	0535	68	2774.	*	1	1150	143	21.	*	1	1805	218	3.	*	2	0020	293
0.	1	0540	69	2533.	*	1	1155	144	20.	*	1	1810	219	2.	*	2	0025	294
0.	1	0545	70	2304.	*	1	1200	145	20.	*	1	1815	220	2.	*	2	0030	295
0.	1	0550	71	2089.	*	1	1205	146	19.	*	1	1820	221	2.	*	2	0035	296
0.	1	0555	72	1894.	*	1	1210	147	19.	*	1	1825	222	2.	*	2	0040	297
0.	1	0600	73	1722.	*	1	1215	148	18.	*	1	1830	223	2.	*	2	0045	298
0.	1	0605	74	1580.	*	1	1220	149	18.	*	1	1835	224	2.	*	2	0050	299
0.	1	0610	75	1468.	*	1	1225	150	17.	*	1	1840	225	2.	*	2	0055	300
0.					*					*					*			

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	7737.	4.00	(CFS)	2101.	537.	517.	517.
			(INCHES)	.857	.876	.876	.876
			(AC-FT)	1042.	1064.	1064.	1064.

CUMULATIVE AREA = 22.79 SQ MI

HYDROGRAPH AT STATION ANGLPKIN
SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .56

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
2.	1	0000	1	0.	*	1	0615	76	1359.	*	1	1230	151	16.	*	1	1845	226				
2.	1	0005	2	0.	*	1	0620	77	1295.	*	1	1235	152	15.	*	1	1850	227				
2.	1	0010	3	0.	*	1	0625	78	1234.	*	1	1240	153	15.	*	1	1855	228				
2.	1	0015	4	0.	*	1	0630	79	1170.	*	1	1245	154	14.	*	1	1900	229				
2.	1	0020	5	0.	*	1	0635	80	1099.	*	1	1250	155	14.	*	1	1905	230				
2.	1	0025	6	0.	*	1	0640	81	1021.	*	1	1255	156	14.	*	1	1910	231				
2.	1	0030	7	0.	*	1	0645	82	940.	*	1	1300	157	13.	*	1	1915	232				
2.	1	0035	8	1.	*	1	0650	83	858.	*	1	1305	158	13.	*	1	1920	233				
2.	1	0040	9	1.	*	1	0655	84	778.	*	1	1310	159	13.	*	1	1925	234				
2.	1	0045	10	2.	*	1	0700	85	701.	*	1	1315	160	12.	*	1	1930	235				
1.	1	0050	11	3.	*	1	0705	86	630.	*	1	1320	161	12.	*	1	1935	236				
1.	1	0055	12	5.	*	1	0710	87	563.	*	1	1325	162	12.	*	1	1940	237				
1.	1	0100	13	9.	*	1	0715	88	502.	*	1	1330	163	11.	*	1	1945	238				
1.	1	0105	14	13.	*	1	0720	89	446.	*	1	1335	164	11.	*	1	1950	239				
1.	1	0110	15	17.	*	1	0725	90	395.	*	1	1340	165	11.	*	1	1955	240				
1.	1	0115	16	20.	*	1	0730	91	347.	*	1	1345	166	10.	*	1	2000	241				
1.	1	0120	17	21.	*	1	0735	92	299.	*	1	1350	167	10.	*	1	2005	242				
1.	1	0125	18	21.	*	1	0740	93	252.	*	1	1355	168	10.	*	1	2010	243				
1.	1	0130	19	21.	*	1	0745	94	206.	*	1	1400	169	9.	*	1	2015	244				
1.	1	0135	20	22.	*	1	0750	95	166.	*	1	1405	170	9.	*	1	2020	245				
1.	1	0140	21	25.	*	1	0755	96	134.	*	1	1410	171	9.	*	1	2025	246				
1.	1	0145	22	32.	*	1	0800	97	112.	*	1	1415	172	9.	*	1	2030	247				
1.	1	0150	23	44.	*	1	0805	98	97.	*	1	1420	173	8.	*	1	2035	248				
1.	1	0155	24	59.	*	1	0810	99	87.	*	1	1425	174	8.	*	1	2040	249				
1.	1	0200	25	79.	*	1	0815	100	80.	*	1	1430	175	8.	*	1	2045	250				
1.	1	0205	26	100.	*	1	0820	101	76.	*	1	1435	176	8.	*	1	2050	251				
1.	1	0210	27	123.	*	1	0825	102	72.	*	1	1440	177	8.	*	1	2055	252				
1.	1	0215	28	143.	*	1	0830	103	69.	*	1	1445	178	7.	*	1	2100	253				
1.	1	0220	29	160.	*	1	0835	104	67.	*	1	1450	179	7.	*	1	2105	254				
1.	1	0225	30	174.	*	1	0840	105	64.	*	1	1455	180	7.	*	1	2110	255				
1.	1	0230	31	188.	*	1	0845	106	62.	*	1	1500	181	7.	*	1	2115	256				
1.	1	0235	32	203.	*	1	0850	107	60.	*	1	1505	182	7.	*	1	2120	257				
1.	1	0240	33	223.	*	1	0855	108	58.	*	1	1510	183	6.	*	1	2125	258				
1.	1	0245	34	252.	*	1	0900	109	56.	*	1	1515	184	6.	*	1	2130	259				
1.	1	0250	35	291.	*	1	0905	110	54.	*	1	1520	185	6.	*	1	2135	260				
1.	1	0255	36	336.	*	1	0910	111	52.	*	1	1525	186	6.	*	1	2140	261				
1.	1	0300	37	380.	*	1	0915	112	50.	*	1	1530	187	6.	*	1	2145	262				
1.	1	0305	38	421.	*	1	0920	113	49.	*	1	1535	188	6.	*	1	2150	263				

1.	1	0310	39	462.	*	1	0925	114	47.	*	1	1540	189	5.	*	1	2155	264
1.	1	0315	40	515.	*	1	0930	115	45.	*	1	1545	190	5.	*	1	2200	265
1.	1	0320	41	604.	*	1	0935	116	44.	*	1	1550	191	5.	*	1	2205	266
1.	1	0325	42	787.	*	1	0940	117	43.	*	1	1555	192	5.	*	1	2210	267
1.	1	0330	43	1189.	*	1	0945	118	41.	*	1	1600	193	5.	*	1	2215	268
1.	1	0335	44	1998.	*	1	0950	119	40.	*	1	1605	194	5.	*	1	2220	269
1.	1	0340	45	3279.	*	1	0955	120	39.	*	1	1610	195	5.	*	1	2225	270
1.	1	0345	46	4810.	*	1	1000	121	38.	*	1	1615	196	4.	*	1	2230	271
1.	1	0350	47	6228.	*	1	1005	122	36.	*	1	1620	197	4.	*	1	2235	272
1.	1	0355	48	7183.	*	1	1010	123	35.	*	1	1625	198	4.	*	1	2240	273
0.	1	0400	49	7521.	*	1	1015	124	34.	*	1	1630	199	4.	*	1	2245	274
0.	1	0405	50	7368.	*	1	1020	125	33.	*	1	1635	200	4.	*	1	2250	275
0.	1	0410	51	6923.	*	1	1025	126	32.	*	1	1640	201	4.	*	1	2255	276
0.	1	0415	52	6337.	*	1	1030	127	31.	*	1	1645	202	4.	*	1	2300	277
0.	1	0420	53	5710.	*	1	1035	128	30.	*	1	1650	203	4.	*	1	2305	278
0.	1	0425	54	5111.	*	1	1040	129	29.	*	1	1655	204	4.	*	1	2310	279
0.	1	0430	55	4587.	*	1	1045	130	29.	*	1	1700	205	3.	*	1	2315	280
0.	1	0435	56	4167.	*	1	1050	131	28.	*	1	1705	206	3.	*	1	2320	281
0.	1	0440	57	3868.	*	1	1055	132	27.	*	1	1710	207	3.	*	1	2325	282
0.	1	0445	58	3689.	*	1	1100	133	26.	*	1	1715	208	3.	*	1	2330	283
0.	1	0450	59	3611.	*	1	1105	134	25.	*	1	1720	209	3.	*	1	2335	284
0.	1	0455	60	3605.	*	1	1110	135	25.	*	1	1725	210	3.	*	1	2340	285
0.	1	0500	61	3632.	*	1	1115	136	24.	*	1	1730	211	3.	*	1	2345	286
0.	1	0505	62	3646.	*	1	1120	137	23.	*	1	1735	212	3.	*	1	2350	287
0.	1	0510	63	3616.	*	1	1125	138	23.	*	1	1740	213	3.	*	1	2355	288
0.	1	0515	64	3528.	*	1	1130	139	22.	*	1	1745	214	3.	*	2	0000	289
0.	1	0520	65	3379.	*	1	1135	140	21.	*	1	1750	215	3.	*	2	0005	290
0.	1	0525	66	3181.	*	1	1140	141	21.	*	1	1755	216	3.	*	2	0010	291
0.	1	0530	67	2951.	*	1	1145	142	20.	*	1	1800	217	2.	*	2	0015	292
0.	1	0535	68	2708.	*	1	1150	143	20.	*	1	1805	218	2.	*	2	0020	293
0.	1	0540	69	2464.	*	1	1155	144	19.	*	1	1810	219	2.	*	2	0025	294
0.	1	0545	70	2230.	*	1	1200	145	19.	*	1	1815	220	2.	*	2	0030	295
0.	1	0550	71	2014.	*	1	1205	146	18.	*	1	1820	221	2.	*	2	0035	296
0.	1	0555	72	1823.	*	1	1210	147	18.	*	1	1825	222	2.	*	2	0040	297
0.	1	0600	73	1663.	*	1	1215	148	17.	*	1	1830	223	2.	*	2	0045	298
0.	1	0605	74	1535.	*	1	1220	149	17.	*	1	1835	224	2.	*	2	0050	299
0.	1	0610	75	1435.	*	1	1225	150	16.	*	1	1840	225	2.	*	2	0055	300

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	7521.	4.00	(CFS)	2040.	521.	501.
			(INCHES)	.832	.849	.849
			(AC-FT)	1011.	1032.	1032.
CUMULATIVE AREA = 22.79 SQ MI						

HYDROGRAPH AT STATION ANGLPKIN

SUM OF 5 HYDROGRAPHS
PLAN 1, RATIO = .54

	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
FLOW																						
2.	1		0000	1	0.	*	1		0615	76	1319.	*	1		1230	151	14.	*	1		1845	226
2.	1		0005	2	0.	*	1		0620	77	1258.	*	1		1235	152	14.	*	1		1850	227
2.	1		0010	3	0.	*	1		0625	78	1195.	*	1		1240	153	13.	*	1		1855	228
2.	1		0015	4	0.	*	1		0630	79	1125.	*	1		1245	154	13.	*	1		1900	229
2.	1		0020	5	0.	*	1		0635	80	1048.	*	1		1250	155	13.	*	1		1905	230
2.	1		0025	6	0.	*	1		0640	81	967.	*	1		1255	156	12.	*	1		1910	231
1.	1		0030	7	0.	*	1		0645	82	884.	*	1		1300	157	12.	*	1		1915	232
1.	1		0035	8	0.	*	1		0650	83	802.	*	1		1305	158	11.	*	1		1920	233
1.	1		0040	9	1.	*	1		0655	84	723.	*	1		1310	159	11.	*	1		1925	234
1.	1		0045	10	1.	*	1		0700	85	649.	*	1		1315	160	11.	*	1		1930	235
1.	1		0050	11	2.	*	1		0705	86	581.	*	1		1320	161	11.	*	1		1935	236
1.	1		0055	12	4.	*	1		0710	87	517.	*	1		1325	162	10.	*	1		1940	237
1.	1		0100	13	6.	*	1		0715	88	460.	*	1		1330	163	10.	*	1		1945	238
1.	1		0105	14	9.	*	1		0720	89	408.	*	1		1335	164	10.	*	1		1950	239
1.	1		0110	15	13.	*	1		0725	90	360.	*	1		1340	165	9.	*	1		1955	240
1.	1		0115	16	15.	*	1		0730	91	314.	*	1		1345	166	9.	*	1		2000	241
1.	1		0120	17	17.	*	1		0735	92	267.	*	1		1350	167	9.	*	1		2005	242
1.	1		0125	18	17.	*	1		0740	93	221.	*	1		1355	168	9.	*	1		2010	243
1.	1		0130	19	17.	*	1		0745	94	178.	*	1		1400	169	8.	*	1		2015	244
1.	1		0135	20	18.	*	1		0750	95	143.	*	1		1405	170	8.	*	1		2020	245
1.	1		0140	21	21.	*	1		0755	96	117.	*	1		1410	171	8.	*	1		2025	246
1.	1		0145	22	27.	*	1		0800	97	99.	*	1		1415	172	8.	*	1		2030	247
1.	1		0150	23	36.	*	1		0805	98	88.	*	1		1420	173	8.	*	1		2035	248
1.	1		0155	24	49.	*	1		0810	99	80.	*	1		1425	174	7.	*	1		2040	249
1.	1		0200	25	65.	*	1		0815	100	75.	*	1		1430	175	7.	*	1		2045	250
1.	1		0205	26	83.	*	1		0820	101	70.	*	1		1435	176	7.	*	1		2050	251
1.	1		0210	27	102.	*	1		0825	102	67.	*	1		1440	177	7.	*	1		2055	252
1.	1		0215	28	120.	*	1		0830	103	64.	*	1		1445	178	7.	*	1		2100	253
1.	1		0220	29	135.	*	1		0835	104	61.	*	1		1450	179	6.	*	1		2105	254
1.	1		0225	30	148.	*	1		0840	105	58.	*	1		1455	180	6.	*	1		2110	255
1.	1		0230	31	159.	*	1		0845	106	56.	*	1		1500	181	6.	*	1		2115	256
1.	1		0235	32	173.	*	1		0850	107	54.	*	1		1505	182	6.	*	1		2120	257
1.	1		0240	33	191.	*	1		0855	108	52.	*	1		1510	183	6.	*	1		2125	258
1.	1		0245	34	217.	*	1		0900	109	50.	*	1		1515	184	6.	*	1		2130	259
1.	1		0250	35	252.	*	1		0905	110	48.	*	1		1520	185	5.	*	1		2135	260
1.	1		0255	36	292.	*	1		0910	111	46.	*	1		1525	186	5.	*	1		2140	261
1.	1		0300	37	333.	*	1		0915	112	45.	*	1		1530	187	5.	*	1		2145	262
1.	1		0305	38	370.	*	1		0920	113	43.	*	1		1535	188	5.	*	1		2150	263
1.	1		0310	39	408.	*	1		0925	114	42.	*	1		1540	189	5.	*	1		2155	264
1.	1		0315	40	457.	*	1		0930	115	40.	*	1		1545	190	5.	*	1		2200	265
1.	1		0320	41	538.	*	1		0935	116	39.	*	1		1550	191	5.	*	1		2205	266
1.	1		0325	42	700.	*	1		0940	117	38.	*	1		1555	192	4.	*	1		2210	267

1.	1	0330	43	1058.	*	1	0945	118	37.	*	1	1600	193	4.	*	1	2215	268
0.	1	0335	44	1788.	*	1	0950	119	35.	*	1	1605	194	4.	*	1	2220	269
0.	1	0340	45	2984.	*	1	0955	120	34.	*	1	1610	195	4.	*	1	2225	270
0.	1	0345	46	4429.	*	1	1000	121	33.	*	1	1615	196	4.	*	1	2230	271
0.	1	0350	47	5786.	*	1	1005	122	32.	*	1	1620	197	4.	*	1	2235	272
0.	1	0355	48	6720.	*	1	1010	123	31.	*	1	1625	198	4.	*	1	2240	273
0.	1	0400	49	7077.	*	1	1015	124	30.	*	1	1630	199	4.	*	1	2245	274
0.	1	0405	50	6956.	*	1	1020	125	29.	*	1	1635	200	4.	*	1	2250	275
0.	1	0410	51	6542.	*	1	1025	126	28.	*	1	1640	201	3.	*	1	2255	276
0.	1	0415	52	6002.	*	1	1030	127	28.	*	1	1645	202	3.	*	1	2300	277
0.	1	0420	53	5424.	*	1	1035	128	27.	*	1	1650	203	3.	*	1	2305	278
0.	1	0425	54	4870.	*	1	1040	129	26.	*	1	1655	204	3.	*	1	2310	279
0.	1	0430	55	4380.	*	1	1045	130	25.	*	1	1700	205	3.	*	1	2315	280
0.	1	0435	56	3983.	*	1	1050	131	25.	*	1	1705	206	3.	*	1	2320	281
0.	1	0440	57	3697.	*	1	1055	132	24.	*	1	1710	207	3.	*	1	2325	282
0.	1	0445	58	3525.	*	1	1100	133	23.	*	1	1715	208	3.	*	1	2330	283
0.	1	0450	59	3448.	*	1	1105	134	23.	*	1	1720	209	3.	*	1	2335	284
0.	1	0455	60	3441.	*	1	1110	135	22.	*	1	1725	210	3.	*	1	2340	285
0.	1	0500	61	3466.	*	1	1115	136	21.	*	1	1730	211	3.	*	1	2345	286
0.	1	0505	62	3479.	*	1	1120	137	21.	*	1	1735	212	3.	*	1	2350	287
0.	1	0510	63	3451.	*	1	1125	138	20.	*	1	1740	213	2.	*	1	2355	288
0.	1	0515	64	3368.	*	1	1130	139	20.	*	1	1745	214	2.	*	2	0000	289
0.	1	0520	65	3225.	*	1	1135	140	19.	*	1	1750	215	2.	*	2	0005	290
0.	1	0525	66	3030.	*	1	1140	141	19.	*	1	1755	216	2.	*	2	0010	291
0.	1	0530	67	2799.	*	1	1145	142	18.	*	1	1800	217	2.	*	2	0015	292
0.	1	0535	68	2551.	*	1	1150	143	18.	*	1	1805	218	2.	*	2	0020	293
0.	1	0540	69	2305.	*	1	1155	144	17.	*	1	1810	219	2.	*	2	0025	294
0.	1	0545	70	2077.	*	1	1200	145	17.	*	1	1815	220	2.	*	2	0030	295
0.	1	0550	71	1875.	*	1	1205	146	16.	*	1	1820	221	2.	*	2	0035	296
0.	1	0555	72	1705.	*	1	1210	147	16.	*	1	1825	222	2.	*	2	0040	297
0.	1	0600	73	1571.	*	1	1215	148	15.	*	1	1830	223	2.	*	2	0045	298
0.	1	0605	74	1467.	*	1	1220	149	15.	*	1	1835	224	2.	*	2	0050	299
0.	1	0610	75	1386.	*	1	1225	150	14.	*	1	1840	225	2.	*	2	0055	300

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	7077.	4.00					
			(CFS)				
			1919.	489.	471.	471.	
		(INCHES)	.783	.798	.798	.798	
		(AC-FT)	952.	970.	970.	970.	

CUMULATIVE AREA = 22.79 SQ MI

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1024 KK

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* ANGLPKDB *
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1037 KO OUTPUT CONTROL VARIABLES

HYDROGRAPH ROUTING DATA

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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	2576.0	*	1		0820	101	369.	900.1	2609.8	*	1		1640	201	346.	670.0
2605.5	1	0005	2	0.	.0	2576.0	*	1		0825	102	369.	898.1	2609.8	*	1		1645	202	346.	667.7
2605.5	1	0010	3	0.	.0	2576.0	*	1		0830	103	369.	896.1	2609.7	*	1		1650	203	345.	665.3
2605.5	1	0015	4	0.	.0	2576.0	*	1		0835	104	368.	894.0	2609.7	*	1		1655	204	345.	663.0
2605.4	1	0020	5	0.	.0	2576.0	*	1		0840	105	368.	891.9	2609.7	*	1		1700	205	345.	660.6
2605.4	1	0025	6	0.	.0	2576.0	*	1		0845	106	368.	889.9	2609.6	*	1		1705	206	345.	658.3
2605.3	1	0030	7	0.	.0	2576.0	*	1		0850	107	368.	887.8	2609.6	*	1		1710	207	345.	655.9
2605.3	1	0035	8	0.	.0	2576.0	*	1		0855	108	368.	885.7	2609.5	*	1		1715	208	344.	653.6
2605.2	1	0040	9	0.	.0	2576.0	*	1		0900	109	367.	883.5	2609.5	*	1		1720	209	344.	651.2
2605.2	1	0045	10	0.	.0	2576.0	*	1		0905	110	367.	881.4	2609.5	*	1		1725	210	344.	648.9
2605.2	1	0050	11	0.	.0	2576.0	*	1		0910	111	367.	879.3	2609.4	*	1		1730	211	344.	646.5
2605.1	1	0055	12	1.	.1	2576.0	*	1		0915	112	367.	877.1	2609.4	*	1		1735	212	343.	644.2
2605.1	1	0100	13	1.	.1	2576.0	*	1		0920	113	366.	875.0	2609.3	*	1		1740	213	343.	641.8
2605.0	1	0105	14	2.	.2	2576.1	*	1		0925	114	366.	872.8	2609.3	*	1		1745	214	343.	639.5
2605.0	1	0110	15	3.	.3	2576.1	*	1		0930	115	366.	870.6	2609.3	*	1		1750	215	343.	637.1
2604.9	1	0115	16	4.	.4	2576.2	*	1		0935	116	366.	868.4	2609.2	*	1		1755	216	342.	634.8
2604.9	1	0120	17	5.	.6	2576.2	*	1		0940	117	366.	866.2	2609.2	*	1		1800	217	342.	632.5
2604.8	1	0125	18	6.	.7	2576.3	*	1		0945	118	365.	864.0	2609.1	*	1		1805	218	342.	630.1
2604.8	1	0130	19	7.	.8	2576.3	*	1		0950	119	365.	861.8	2609.1	*	1		1810	219	342.	627.8
2604.7	1	0135	20	8.	.9	2576.3	*	1		0955	120	365.	859.5	2609.1	*	1		1815	220	341.	625.5
2604.7	1	0140	21	9.	1.0	2576.4	*	1		1000	121	365.	857.3	2609.0	*	1		1820	221	341.	623.1
2604.6	1	0145	22	10.	1.2	2576.4	*	1		1005	122	364.	855.1	2609.0	*	1		1825	222	341.	620.8
2604.6	1	0150	23	12.	1.4	2576.5	*	1		1010	123	364.	852.8	2608.9	*	1		1830	223		

1	0210	27	27.	3.3	2577.2	*	1	1030	127	363.	843.8	2608.8	*	1	1850	227	339.	609.2	
2604.3	1	0215	28	34.	4.1	2577.5	*	1	1035	128	363.	841.5	2608.7	*	1	1855	228	339.	606.8
2604.3	1	0220	29	41.	5.0	2577.8	*	1	1040	129	363.	839.2	2608.7	*	1	1900	229	339.	604.5
2604.2	1	0225	30	49.	5.9	2578.2	*	1	1045	130	363.	836.9	2608.6	*	1	1905	230	338.	602.2
2604.2	1	0230	31	57.	6.9	2578.6	*	1	1050	131	362.	834.6	2608.6	*	1	1910	231	338.	599.9
2604.1	1	0235	32	65.	7.9	2578.9	*	1	1055	132	362.	832.3	2608.6	*	1	1915	232	338.	597.6
2604.1	1	0240	33	74.	9.0	2579.3	*	1	1100	133	362.	830.0	2608.5	*	1	1920	233	338.	595.2
2604.0	1	0245	34	84.	10.2	2579.8	*	1	1105	134	362.	827.7	2608.5	*	1	1925	234	337.	592.9
2604.0	1	0250	35	92.	11.6	2580.1	*	1	1110	135	361.	825.4	2608.4	*	1	1930	235	337.	590.6
2603.9	1	0255	36	97.	13.3	2580.4	*	1	1115	136	361.	823.1	2608.4	*	1	1935	236	337.	588.3
2603.9	1	0300	37	103.	15.2	2580.7	*	1	1120	137	361.	820.8	2608.3	*	1	1940	237	337.	586.0
2603.8	1	0305	38	111.	17.4	2581.0	*	1	1125	138	361.	818.5	2608.3	*	1	1945	238	336.	583.7
2603.8	1	0310	39	118.	19.9	2581.4	*	1	1130	139	361.	816.2	2608.3	*	1	1950	239	336.	581.4
2603.7	1	0315	40	127.	22.6	2581.8	*	1	1135	140	360.	813.8	2608.2	*	1	1955	240	336.	579.1
2603.7	1	0320	41	138.	25.8	2582.3	*	1	1140	141	360.	811.5	2608.2	*	1	2000	241	335.	576.8
2603.6	1	0325	42	151.	29.8	2582.9	*	1	1145	142	360.	809.2	2608.1	*	1	2005	242	335.	574.5
2603.6	1	0330	43	170.	35.9	2583.9	*	1	1150	143	360.	806.9	2608.1	*	1	2010	243	335.	572.2
2603.5	1	0335	44	196.	46.2	2585.2	*	1	1155	144	359.	804.5	2608.0	*	1	2015	244	335.	569.9
2603.5	1	0340	45	205.	63.8	2586.5	*	1	1200	145	359.	802.2	2608.0	*	1	2020	245	334.	567.6
2603.4	1	0345	46	220.	91.4	2588.4	*	1	1205	146	359.	799.8	2608.0	*	1	2025	246	334.	565.3
2603.4	1	0350	47	240.	129.2	2590.7	*	1	1210	147	359.	797.5	2607.9	*	1	2030	247	334.	563.0
2603.3	1	0355	48	262.	175.2	2592.8	*	1	1215	148	358.	795.2	2607.9	*	1	2035	248	334.	560.7
2603.3	1	0400	49	285.	225.5	2595.1	*	1	1220	149	358.	792.8	2607.8	*	1	2040	249	333.	558.4
2603.2	1	0405	50	294.	276.2	2596.4	*	1	1225	150	358.	790.5	2607.8	*	1	2045	250	333.	556.1
2603.2	1	0410	51	302.	324.8	2597.7	*	1	1230	151	358.	788.1	2607.7	*	1	2050	251	333.	553.8
2603.1	1	0415	52	309.	369.6	2598.9	*	1	1235	152	358.	785.8	2607.7	*	1	2055	252	333.	551.6
2603.1	1	0420	53	316.	409.9	2600.0	*	1	1240	153	357.	783.4	2607.6	*	1	2100	253	332.	549.3
2603.0	1	0425	54	320.	445.9	2600.8	*	1	1245	154	357.	781.1	2607.6	*	1	2105	254	332.	547.0
2603.0	1	0430	55	324.	477.9	2601.5	*	1	1250	155	357.	778.7	2607.6	*	1	2110	255	332.	544.7
2602.9	1	0435	56	327.	506.5	2602.1	*	1	1255	156	357.	776.4	2607.5	*	1	2115	256	331.	542.4
2602.9	1	0440	57	330.	532.5	2602.6	*	1	1300	157	356.	774.0	2607.5	*	1	2120	257	331.	540.2
2602.8	1	0445	58	333.	556.8	2603.2	*	1	1305	158	356.	771.6	2607.4	*	1	2125	258	331.	537.9
2602.8	1	0450	59	336.	580.2	2603.7	*	1	1310	159	356.	769.3	2607.4	*	1	2130	259	331.	535.6
2602.7	1	0455	60	339.	603.3	2604.2	*	1	1315	160	356.	766.9	2607.3	*	1	2135	260	330.	533.3
2602.7	1	0500	61	341.	626.4	2604.7	*	1	1320	161	355.	764.6	2607.3	*	1	2140	261	330.	531.1
2602.6	1	0505	62	344.	649.7	2605.2	*	1	1325	162	355.	762.2	2607.3	*	1	2145	262	330.	528.8
2602.6	1	0510	63	346.	672.9	2605.6	*	1	1330	163	355.	759.8	2607.2	*	1	2150	263	330.	526.5
2602.5	1	0515	64	349.	695.7	2606.0	*	1	1335	164	355.	757.5	2607.2	*	1	2155	264	329.	524.3
2602.5	1	0520	65	351.	717.7	2606.4	*	1	1340	165	354.	755.1	2607.1	*	1	2200	265	329.	522.0
2602.4	1	0525	66	353.	738.3	2606.8	*	1	1345	166	354.	752.7	2607.1	*	1	2205	266	329.	519.8
2602.4	1	0530	67	355.	757.5	2607.2	*	1	1350	167	354.	750.4	2607.0	*	1	2210	267	329.	517.5
2602.3	1	0535	68	356.	775.0	2607.5	*	1	1355	168	354.	748.0	2607.0	*	1	2215	268	328.	515.2
2602.3	1	0540	69	358.	790.8	2607.8	*	1	1400	169	354.	745.6	2606.9	*	1	2220	269	328.	513.0
2602.2	1	0545	70	359.	805.0	2608.0	*	1	1405	170	353.	743.3	2606.9	*	1	2225	270	328.	510.7
2602.2	1	0550	71	361.	817.6	2608.3	*	1	1410	171	353.	740.9	2606.9	*	1	2230	271	327.	508.5
2602.1	1	0555	72	362.	828.9	2608.5	*	1	1415	172	353.	738.5	2606.8	*	1	2235	272	327.	506.2
2602.1	1	0600	73	363.	838.8	2608.7	*	1	1420	173	353.	736.2	2606.8	*	1	2240	273	327.	504.0

2605.0	1	0000	1	0.	.0	2576.0	*	1	0820	101	366.	871.0	2609.3	*	1	1640	201	343.	642.0
2605.0	1	0005	2	0.	.0	2576.0	*	1	0825	102	366.	868.9	2609.2	*	1	1645	202	343.	639.6
2605.0	1	0010	3	0.	.0	2576.0	*	1	0830	103	366.	866.9	2609.2	*	1	1650	203	343.	637.3
2604.9	1	0015	4	0.	.0	2576.0	*	1	0835	104	365.	864.9	2609.2	*	1	1655	204	342.	635.0
2604.9	1	0020	5	0.	.0	2576.0	*	1	0840	105	365.	862.8	2609.1	*	1	1700	205	342.	632.6
2604.8	1	0025	6	0.	.0	2576.0	*	1	0845	106	365.	860.7	2609.1	*	1	1705	206	342.	630.3
2604.8	1	0030	7	0.	.0	2576.0	*	1	0850	107	365.	858.6	2609.0	*	1	1710	207	342.	628.0
2604.7	1	0035	8	0.	.0	2576.0	*	1	0855	108	365.	856.5	2609.0	*	1	1715	208	341.	625.6
2604.7	1	0040	9	0.	.0	2576.0	*	1	0900	109	364.	854.4	2609.0	*	1	1720	209	341.	623.
2604.6	1	0045	10	0.	.0	2576.0	*	1	0905	110	364.	852.3	2608.9	*	1	1725	210	341.	621.0
2604.6	1	0050	11	0.	.0	2576.0	*	1	0910	111	364.	850.1	2608.9	*	1	1730	211	340.	618.7
2604.5	1	0055	12	1.	.1	2576.0	*	1	0915	112	364.	848.0	2608.8	*	1	1735	212	340.	616.3
2604.5	1	0100	13	1.	.1	2576.0	*	1	0920	113	364.	845.8	2608.8	*	1	1740	213	340.	614.0
2604.4	1	0105	14	1.	.2	2576.1	*	1	0925	114	363.	843.6	2608.8	*	1	1745	214	340.	611.7
2604.4	1	0110	15	2.	.3	2576.1	*	1	0930	115	363.	841.4	2608.7	*	1	1750	215	339.	609.4
2604.3	1	0115	16	3.	.4	2576.1	*	1	0935	116	363.	839.3	2608.7	*	1	1755	216	339.	607.1
2604.3	1	0120	17	4.	.5	2576.2	*	1	0940	117	363.	837.1	2608.6	*	1	1800	217	339.	604.7
2604.2	1	0125	18	5.	.6	2576.2	*	1	0945	118	362.	834.8	2608.6	*	1	1805	218	339.	602.4
2604.2	1	0130	19	6.	.7	2576.3	*	1	0950	119	362.	832.6	2608.6	*	1	1810	219	338.	600.1
2604.1	1	0135	20	7.	.8	2576.3	*	1	0955	120	362.	830.4	2608.5	*	1	1815	220	338.	597.8
2604.1	1	0140	21	8.	.9	2576.3	*	1	1000	121	362.	828.2	2608.5	*	1	1820	221	338.	595.5
2604.0	1	0145	22	9.	1.1	2576.4	*	1	1005	122	362.	825.9	2608.4	*	1	1825	222	337.	593.2
2604.0	1	0150	23	10.	1.3	2576.5	*	1	1010	123	361.	823.7	2608.4	*	1	1830	223	337.	590.9
2603.9	1	0155	24	13.	1.5	2576.6	*	1	1015	124	361.	821.4	2608.4	*	1	1835	224	337.	588.6
2603.9	1	0200	25	16.	1.9	2576.7	*	1	1020	125	361.	819.2	2608.3	*	1	1840	225	337.	586.3
2603.8	1	0205	26	20.	2.4	2576.9	*	1</											

1	0355	48	258.	167.4	2592.5	*	1	1215	148	356.	766.3	2607.3	*	1	2035	248	330.	533.7	
2602.7	1	0400	49	282.	216.2	2594.7	*	1	1220	149	355.	763.9	2607.3	*	1	2040	249	330.	531.4
2602.6	1	0405	50	292.	265.5	2596.1	*	1	1225	150	355.	761.6	2607.2	*	1	2045	250	330.	529.1
2602.6	1	0410	51	300.	312.7	2597.4	*	1	1230	151	355.	759.3	2607.2	*	1	2050	251	330.	526.9
2602.5	1	0415	52	307.	356.2	2598.5	*	1	1235	152	355.	756.9	2607.2	*	1	2055	252	329.	524.6
2602.5	1	0420	53	313.	395.6	2599.6	*	1	1240	153	354.	754.6	2607.1	*	1	2100	253	329.	522.3
2602.4	1	0425	54	318.	430.7	2600.4	*	1	1245	154	354.	752.3	2607.1	*	1	2105	254	329.	520.1
2602.4	1	0430	55	322.	461.8	2601.1	*	1	1250	155	354.	749.9	2607.0	*	1	2110	255	329.	517.8
2602.3	1	0435	56	325.	489.8	2601.7	*	1	1255	156	354.	747.6	2607.0	*	1	2115	256	328.	515.6
2602.3	1	0440	57	328.	515.2	2602.3	*	1	1300	157	353.	745.2	2606.9	*	1	2120	257	328.	513.3
2602.2	1	0445	58	331.	538.9	2602.8	*	1	1305	158	353.	742.9	2606.9	*	1	2125	258	328.	511.1
2602.2	1	0450	59	334.	561.8	2603.3	*	1	1310	159	353.	740.5	2606.9	*	1	2130	259	327.	508.8
2602.1	1	0455	60	336.	584.3	2603.8	*	1	1315	160	353.	738.2	2606.8	*	1	2135	260	327.	506.6
2602.1	1	0500	61	339.	606.9	2604.3	*	1	1320	161	353.	735.9	2606.8	*	1	2140	261	327.	504.3
2602.0	1	0505	62	342.	629.6	2604.8	*	1	1325	162	352.	733.5	2606.7	*	1	2145	262	327.	502.1
2602.0	1	0510	63	344.	652.3	2605.2	*	1	1330	163	352.	731.2	2606.7	*	1	2150	263	326.	499.8
2601.9	1	0515	64	346.	674.5	2605.6	*	1	1335	164	352.	728.8	2606.6	*	1	2155	264	326.	497.6
2601.9	1	0520	65	349.	695.9	2606.0	*	1	1340	165	352.	726.5	2606.6	*	1	2200	265	326.	495.3
2601.8	1	0525	66	351.	716.1	2606.4	*	1	1345	166	351.	724.1	2606.5	*	1	2205	266	326.	493.1
2601.8	1	0530	67	352.	734.8	2606.7	*	1	1350	167	351.	721.8	2606.5	*	1	2210	267	325.	490.9
2601.7	1	0535	68	354.	751.8	2607.1	*	1	1355	168	351.	719.4	2606.5	*	1	2215	268	325.	488.6
2601.7	1	0540	69	356.	767.2	2607.3	*	1	1400	169	351.	717.1	2606.4	*	1	2220	269	325.	486.4
2601.6	1	0545	70	357.	780.9	2607.6	*	1	1405	170	350.	714.7	2606.4	*	1	2225	270	325.	484.2
2601.6	1	0550	71	358.	793.0	2607.8	*	1	1410	171	350.	712.4	2606.3	*	1	2230	271	324.	481.9
2601.5	1	0555	72	359.	803.8	2608.0	*	1	1415	172	350.</								

1	0145	22	7.	9	2576.3	*	1	1005	122	356.	768.9	2607.4	*	1	1825	222	331.	539.3	
2602.8	1	0150	23	8.	1.0	2576.4	*	1	1010	123	356.	766.7	2607.3	*	1	1830	223	331.	537.0
2602.7	1	0155	24	10.	1.2	2576.5	*	1	1015	124	355.	764.4	2607.3	*	1	1835	224	331.	534.8
2602.7	1	0200	25	13.	1.6	2576.6	*	1	1020	125	355.	762.2	2607.3	*	1	1840	225	330.	532.5
2602.6	1	0205	26	16.	2.0	2576.7	*	1	1025	126	355.	759.9	2607.2	*	1	1845	226	330.	530.2
2602.6	1	0210	27	20.	2.5	2576.9	*	1	1030	127	355.	757.7	2607.2	*	1	1850	227	330.	528.0
2602.5	1	0215	28	25.	3.1	2577.1	*	1	1035	128	354.	755.4	2607.1	*	1	1855	228	329.	525.7
2602.5	1	0220	29	31.	3.8	2577.4	*	1	1040	129	354.	753.2	2607.1	*	1	1900	229	329.	523.5
2602.4	1	0225	30	37.	4.5	2577.7	*	1	1045	130	354.	750.9	2607.0	*	1	1905	230	329.	521.2
2602.4	1	0230	31	44.	5.3	2578.0	*	1	1050	131	354.	748.6	2607.0	*	1	1910	231	329.	518.9
2602.3	1	0235	32	50.	6.1	2578.3	*	1	1055	132	354.	746.4	2607.0	*	1	1915	232	328.	516.7
2602.3	1	0240	33	58.	7.0	2578.6	*	1	1100	133	353.	744.1	2606.9	*	1	1920	233	328.	514.4
2602.2	1	0245	34	66.	8.0	2579.0	*	1	1105	134	353.	741.8	2606.9	*	1	1925	234	328.	512.2
2602.2	1	0250	35	75.	9.1	2579.4	*	1	1110	135	353.	739.6	2606.8	*	1	1930	235	328.	509.9
2602.2	1	0255	36	86.	10.4	2579.9	*	1	1115	136	353.	737.3	2606.8	*	1	1935	236	327.	507.7
2602.1	1	0300	37	93.	12.0	2580.2	*	1	1120	137	352.	735.0	2606.8	*	1	1940	237	327.	505.5
2602.1	1	0305	38	98.	13.7	2580.5	*	1	1125	138	352.	732.7	2606.7	*	1	1945	238	327.	503.2
2602.0	1	0310	39	105.	15.7	2580.8	*	1	1130	139	352.	730.4	2606.7	*	1	1950	239	327.	501.0
2602.0	1	0315	40	112.	17.9	2581.1	*	1	1135	140	352.	728.1	2606.6	*	1	1955	240	326.	498.7
2601.9	1	0320	41	121.	20.6	2581.5	*	1	1140	141	352.	725.8	2606.6	*	1	2000	241	326.	496.5
2601.9	1	0325	42	132.	24.0	2582.0	*	1	1145	142	351.	723.5	2606.5	*	1	2005	242	326.	494.3
2601.8	1	0330	43	148.	29.0	2582.8	*	1	1150	143	351.	721.2	2606.5	*	1	2010	243	325.	492.0
2601.8	1	0335	44	176.	37.7	2584.2	*	1	1155	144	351.	718.9	2606.5	*	1	2015	244	325.	489.8
2601.7	1	0340	45	199.	52.9	2585.7	*	1	1200	145	351.	716.6	2606.4	*	1	2020	245	325.	487.6
2601.7	1	0345	46	212.	77.0	2587.4	*	1	1205	146	350.	714.3	2606.4	*	1	2025	246	325.	

1	0540	69	351.	719.9	2606.5	*	1	1400	169	345.	661.1	2605.4	*	1	2220	269	319.	434.5	
2600.5	1	0545	70	352.	732.6	2606.7	*	1	1405	170	345.	658.8	2605.3	*	1	2225	270	318.	432.3
2600.5	1	0550	71	353.	743.7	2606.9	*	1	1410	171	345.	656.5	2605.3	*	1	2230	271	318.	430.1
2600.4	1	0555	72	354.	753.6	2607.1	*	1	1415	172	344.	654.2	2605.3	*	1	2235	272	318.	427.9
2600.4	1	0600	73	355.	762.5	2607.3	*	1	1420	173	344.	651.9	2605.2	*	1	2240	273	318.	425.7
2600.3	1	0605	74	356.	770.5	2607.4	*	1	1425	174	344.	649.6	2605.2	*	1	2245	274	317.	423.5
2600.3	1	0610	75	357.	777.8	2607.5	*	1	1430	175	344.	647.2	2605.1	*	1	2250	275	317.	421.4
2600.2	1	0615	76	357.	784.7	2607.7	*	1	1435	176	343.	644.9	2605.1	*	1	2255	276	317.	419.2
2600.2	1	0620	77	358.	791.1	2607.8	*	1	1440	177	343.	642.6	2605.0	*	1	2300	277	317.	417.0
2600.1	1	0625	78	359.	797.1	2607.9	*	1	1445	178	343.	640.3	2605.0	*	1	2305	278	316.	414.8
2600.1	1	0630	79	359.	802.6	2608.0	*	1	1450	179	343.	638.0	2604.9	*	1	2310	279	316.	412.6
2600.0	1	0635	80	360.	807.6	2608.1	*	1	1455	180	342.	635.6	2604.9	*	1	2315	280	316.	410.5
2600.0	1	0640	81	360.	812.1	2608.2	*	1	1500	181	342.	633.3	2604.8	*	1	2320	281	315.	408.3
2599.9	1	0645	82	361.	816.0	2608.3	*	1	1505	182	342.	631.0	2604.8	*	1	2325	282	315.	406.1
2599.9	1	0650	83	361.	819.3	2608.3	*	1	1510	183	342.	628.7	2604.7	*	1	2330	283	315.	404.0
2599.8	1	0655	84	361.	822.0	2608.4	*	1	1515	184	341.	626.4	2604.7	*	1	2335	284	314.	401.8
2599.7	1	0700	85	361.	824.3	2608.4	*	1	1520	185	341.	624.1	2604.6	*	1	2340	285	314.	399.6
2599.7	1	0705	86	362.	826.0	2608.4	*	1	1525	186	341.	621.8	2604.6	*	1	2345	286	314.	397.5
2599.6	1	0710	87	362.	827.3	2608.5	*	1	1530	187	341.	619.5	2604.5	*	1	2350	287	313.	395.3
2599.6	1	0715	88	362.	828.2	2608.5	*	1	1535	188	340.	617.1	2604.5	*	1	2355	288	313.	393.2
2599.5	1	0720	89	362.	828.7	2608.5	*	1	1540	189	340.	614.8	2604.4	*	2	0000	289	313.	391.0
2599.5	1	0725	90	362.	828.8	2608.5	*	1	1545	190	340.	612.5	2604.4	*	2	0005	290	312.	388.9
2599.4	1	0730	91	362.	828.7	2608.5	*	1	1550	191	339.	610.2	2604.3	*	2	0010	291	312.	386.7
2599.3	1	0735	92	362.	828.2	2608.5	*	1	1555	192	339.	607.9	2604.3	*	2	0015	292	312.	384.6
2599.3	1	0740	93	362.	827.4	2608.5	*	1	1600	193	339.	605.6	2604.2	*	2	0020	293	311.	382.4
2599.2	1	0745	94	362.	826.3	2608.4	*	1	1605	194	339.	603.3	2604.2	*	2	0025	294	311.	380.3
2599.2	1	0750	95	361.	824.9	2608.4	*	1	1610	195	338.	601.0	2604.1	*	2	0030	295	311.	378.1
2599.1	1	0755	96	361.	823.3	2608.4	*	1	1615	196	338.	598.7	2604.1	*	2	0035	296	310.	376.0
2599.1	1	0800	97	361.	821.5	2608.4	*	1	1620	197	338.	596.4	2604.0	*	2	0040	297	310.	373.9
2599.0	1	0805	98	361.	819.7	2608.3	*	1	1625	198	338.	594.1	2604.0	*	2	0045	298	309.	371.7
2598.9	1	0810	99	361.	817.8	2608.3	*	1	1630	199	337.	591.8	2603.9	*	2	0050	299	309.	369.6
2598.9	1	0815	100	361.	815.8	2608.2	*	1	1635	200	337.	589.5	2603.9	*	2	0055	300	309.	367.5

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PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	362.	7.42	(CFS)	358.	304.	293.
			(INCHES)	.146	.496	.496
			(AC-FT)	177.	603.	603.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	829.	7.42	786.	535.	515.	515.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	2608.49	7.42	2607.70	2601.00	2600.08	2600.08

CUMULATIVE AREA = 22.79 SQ MI

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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

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION		
				RATIO 1 .57	RATIO 2 .56	RATIO 3 .54
HYDROGRAPH AT						
+	3-1	2.22	1 FLOW	1001.	972.	915.
			TIME	4.08	4.08	4.08
ROUTED TO						
+	R3-1	2.22	1 FLOW	1000.	968.	915.
			TIME	4.08	4.08	4.08
HYDROGRAPH AT						
+	3-2	.23	1 FLOW	167.	162.	151.
			TIME	3.58	3.58	3.58
2 COMBINED AT						
+	CP3.1	2.45	1 FLOW	1033.	1000.	945.
			TIME	4.08	4.08	4.08
ROUTED TO						
+	RCP3.1	2.45	1 FLOW	1037.	1003.	946.
			TIME	4.17	4.17	4.17
HYDROGRAPH AT						
+	3-D	.33	1 FLOW	196.	190.	177.
			TIME	3.67	3.67	3.67
2 COMBINED AT						
+	CP3.3	2.78	1 FLOW	1096.	1061.	1001.
			TIME	4.17	4.17	4.17
ROUTED TO						
+	RCP3.3	2.78	1 FLOW	1095.	1060.	999.
			TIME	4.17	4.17	4.17
HYDROGRAPH AT						
+	3-3	.17	1 FLOW	180.	175.	165.
			TIME	3.50	3.50	3.50
ROUTED TO						
+	R3-3	.17	1 FLOW	165.	161.	150.
			TIME	3.58	3.58	3.58
HYDROGRAPH AT						
+	3-4	.35	1 FLOW	341.	332.	313.
			TIME	3.50	3.50	3.50
ROUTED TO						
+	R3-4	.35	1 FLOW	321.	312.	291.
			TIME	3.58	3.58	3.58
HYDROGRAPH AT						
+	3-5	.29	1 FLOW	281.	273.	257.
			TIME	3.50	3.50	3.50
ROUTED TO						
+	R3-5	.29	1 FLOW	278.	263.	247.
			TIME	3.58	3.58	3.58
3 COMBINED AT						
+	CP3.2	.81	1 FLOW	764.	736.	688.
			TIME	3.58	3.58	3.58
ROUTED TO						
+	RCP3.2	.81	1 FLOW	726.	703.	662.
			TIME	3.67	3.67	3.67
HYDROGRAPH AT						
+	3-E	.54	1 FLOW	344.	334.	313.
			TIME	3.67	3.67	3.67
3 COMBINED AT						
+	CP3.4	4.14	1 FLOW	1648.	1590.	1478.
			TIME	3.67	3.67	3.67
ROUTED TO						
+	RCP3.4	4.14	1 FLOW	1636.	1577.	1467.
			TIME	3.75	3.75	3.75
HYDROGRAPH AT						
+	3-6	.09	1 FLOW	92.	90.	85.
			TIME	3.50	3.50	3.50
ROUTED TO						
+	R3-6	.09	1 FLOW	83.	80.	76.
			TIME	3.67	3.67	3.67
HYDROGRAPH AT						
+	3-7	.17	1 FLOW	192.	186.	176.
			TIME	3.50	3.50	3.50
ROUTED TO						
+	R3-7	.17	1 FLOW	170.	158.	156.

				TIME	3.58	3.58	3.58
HYDROGRAPH AT							
+	3-J	.15	1	FLOW TIME	65. 3.58	62. 3.58	57. 3.58
ROUTED TO							
+	R3-J	.15	1	FLOW TIME	65. 3.75	62. 3.75	57. 3.75
3 COMBINED AT							
+	CP3.5	.41	1	FLOW TIME	265. 3.58	245. 3.58	230. 3.58
ROUTED TO							
+	RCP3.5	.41	1	FLOW TIME	250. 3.67	239. 3.67	226. 3.67
HYDROGRAPH AT							
+	3-8	.64	1	FLOW TIME	500. 3.58	486. 3.58	457. 3.58
ROUTED TO							
+	R3-8	.64	1	FLOW TIME	502. 3.67	481. 3.67	458. 3.67
HYDROGRAPH AT							
+	3-K	.89	1	FLOW TIME	553. 3.75	537. 3.75	506. 3.75
3 COMBINED AT							
+	CP3.6	1.94	1	FLOW TIME	1285. 3.67	1237. 3.67	1170. 3.67
ROUTED TO							
+	RCP3.6	1.94	1	FLOW TIME	1269. 3.75	1228. 3.75	1166. 3.75
HYDROGRAPH AT							
+	3-N	.46	1	FLOW TIME	306. 3.67	298. 3.67	281. 3.67
HYDROGRAPH AT							
+	3-M	.19	1	FLOW TIME	164. 3.58	160. 3.58	151. 3.58
ROUTED TO							
+	R3-M	.19	1	FLOW TIME	157. 3.58	152. 3.58	144. 3.58
4 COMBINED AT							
+	CPDB5	6.72	1	FLOW TIME	3329. 3.75	3219. 3.75	3023. 3.75
ROUTED TO							
+	DB5	6.72	1	FLOW TIME	1556. 4.33	1532. 4.33	1474. 4.33
				** PEAK STAGES IN FEET **			
			1	STAGE	3549.29	3548.97	3548.28
				TIME	4.33	4.33	4.33
HYDROGRAPH AT							
+	3-L	.32	1	FLOW TIME	260. 3.58	252. 3.58	238. 3.58
2 COMBINED AT							
+	CP3-L	7.05	1	FLOW TIME	1593. 4.58	1561. 4.42	1502. 4.33
ROUTED TO							
+	RCSWAA-1	7.05	1	FLOW TIME	1592. 4.58	1561. 4.42	1501. 4.33
HYDROGRAPH AT							
+	SWAA-2	.70	1	FLOW TIME	458. 3.75	446. 3.75	422. 3.75
2 COMBINED AT							
+	CSWAA-2	7.75	1	FLOW TIME	1874. 4.00	1838. 4.00	1755. 4.00
ROUTED TO							
+	RCSWAA-2	7.75	1	FLOW TIME	1870. 4.00	1830. 4.00	1747. 4.08
HYDROGRAPH AT							
+	SWAA-3	.58	1	FLOW TIME	296. 3.83	288. 3.83	270. 3.83
2 COMBINED AT							
+	CSWAA-3	8.33	1	FLOW TIME	2114. 4.00	2068. 4.00	1954. 4.00
HYDROGRAPH AT							

+	3-F	.28	1	FLOW TIME	244. 3.58	237. 3.58	224. 3.58
ROUTED TO							
+	R3-F	.28	1	FLOW TIME	238. 3.58	231. 3.58	218. 3.58
HYDROGRAPH AT							
+	3-G2	.13	1	FLOW TIME	144. 3.50	141. 3.50	134. 3.50
2 COMBINED AT							
+	CP3.8	.41	1	FLOW TIME	378. 3.58	368. 3.58	348. 3.58
ROUTED TO							
+	RCP3.8	.41	1	FLOW TIME	366. 3.58	355. 3.58	338. 3.58
HYDROGRAPH AT							
+	3-A	.34	1	FLOW TIME	151. 3.67	145. 3.67	134. 3.67
ROUTED TO							
+	R3-A	.34	1	FLOW TIME	146. 3.75	141. 3.75	130. 3.75
HYDROGRAPH AT							
+	3-B	.70	1	FLOW TIME	340. 3.75	329. 3.75	306. 3.75
ROUTED TO							
+	R3-B	.70	1	FLOW TIME	339. 3.75	326. 3.75	303. 3.75
HYDROGRAPH AT							
+	3-C	.22	1	FLOW TIME	163. 3.67	158. 3.67	149. 3.67
3 COMBINED AT							
+	CPDBA-B	1.26	1	FLOW TIME	628. 3.67	606. 3.67	564. 3.75
ROUTED TO							
+	GPDB	1.26	1	FLOW TIME	92. 5.33	90. 5.33	86. 5.33
** PEAK STAGES IN FEET **							
	1	STAGE		17.76	17.48	16.93	
		TIME		5.33	5.33	5.33	
HYDROGRAPH AT							
+	3-G1	.24	1	FLOW TIME	225. 3.58	219. 3.58	207. 3.58
ROUTED TO							
+	R3-G1	.24	1	FLOW TIME	223. 3.58	218. 3.58	206. 3.58
2 COMBINED AT							
+	CP3-G1	1.50	1	FLOW TIME	231. 3.58	224. 3.58	209. 3.58
ROUTED TO							
+	RCP3-G1	1.50	1	FLOW TIME	225. 3.58	218. 3.58	203. 3.58
HYDROGRAPH AT							
+	3-H1	.04	1	FLOW TIME	43. 3.50	42. 3.50	40. 3.50
2 COMBINED AT							
+	CP3-H1	1.54	1	FLOW TIME	263. 3.58	255. 3.58	238. 3.58
ROUTED TO							
+	RCP3-H1	1.54	1	FLOW TIME	254. 3.58	246. 3.58	230. 3.58
HYDROGRAPH AT							
+	3-I1	.29	1	FLOW TIME	212. 3.67	206. 3.67	194. 3.67
3 COMBINED AT							
+	CP3.9	2.24	1	FLOW TIME	826. 3.58	802. 3.58	757. 3.58
ROUTED TO							
+	RCP9	2.24	1	FLOW TIME	808. 3.58	785. 3.58	740. 3.58
HYDROGRAPH AT							
+	3-O	.11	1	FLOW TIME	120. 3.58	117. 3.58	112. 3.58

ROUTED TO							
+	R3-O	.11	1	FLOW TIME	118. 3.58	115. 3.58	110. 3.58
HYDROGRAPH AT							
+	3-P2	.15	1	FLOW TIME	113. 3.58	110. 3.58	103. 3.58
ROUTED TO							
+	R3-P2	.15	1	FLOW TIME	108. 3.58	104. 3.58	98. 3.58
HYDROGRAPH AT							
+	3-P1	.24	1	FLOW TIME	254. 3.58	248. 3.58	236. 3.58
3 COMBINED AT							
+	CP3-P	.50	1	FLOW TIME	480. 3.58	467. 3.58	444. 3.58
ROUTED TO							
+	RCP3-P	.50	1	FLOW TIME	471. 3.58	458. 3.58	437. 3.58
HYDROGRAPH AT							
+	3-Q	.20	1	FLOW TIME	203. 3.58	198. 3.58	189. 3.58
2 COMBINED AT							
+	CP3-Q	.70	1	FLOW TIME	674. 3.58	656. 3.58	626. 3.58
ROUTED TO							
+	RCP3-Q	.70	1	FLOW TIME	647. 3.58	631. 3.58	600. 3.58
HYDROGRAPH AT							
+	3-H2	.18	1	FLOW TIME	186. 3.58	182. 3.58	173. 3.58
2 COMBINED AT							
+	CP3-H2	.88	1	FLOW TIME	833. 3.58	813. 3.58	773. 3.58
ROUTED TO							
+	RCPH-2	.88	1	FLOW TIME	813. 3.58	792. 3.58	752. 3.58
HYDROGRAPH AT							
+	3-I2	.12	1	FLOW TIME	94. 3.67	92. 3.67	87. 3.67
3 COMBINED AT							
+	CP3.10	3.25	1	FLOW TIME	1715. 3.58	1668. 3.58	1578. 3.58
ROUTED TO							
+	RCP3.10	3.25	1	FLOW TIME	1699. 3.58	1652. 3.58	1562. 3.58
HYDROGRAPH AT							
+	3-H3	.14	1	FLOW TIME	133. 3.58	130. 3.58	124. 3.58
2 COMBINED AT							
+	CP3.11	3.39	1	FLOW TIME	1832. 3.58	1781. 3.58	1685. 3.58
ROUTED TO							
+	RCSHFH-9	3.39	1	FLOW TIME	1812. 3.67	1767. 3.67	1683. 3.67
2 COMBINED AT							
+	CRCSWFH9	11.72	1	FLOW TIME	3517. 3.75	3435. 3.75	3289. 3.75
ROUTED TO							
+	RCRCSWFH	11.72	1	FLOW TIME	3514. 3.75	3432. 3.75	3281. 3.75
HYDROGRAPH AT							
+	11A-1	.21	1	FLOW TIME	97. 3.75	93. 3.75	87. 3.75
2 COMBINED AT							
+	C11A-1	11.92	1	FLOW TIME	3611. 3.75	3525. 3.75	3368. 3.75
ROUTED TO							
+	RC11A-1	11.92	1	FLOW TIME	3596. 3.75	3509. 3.75	3347. 3.75
HYDROGRAPH AT							
+	11A-3	.19	1	FLOW TIME	128. 3.67	125. 3.67	118. 3.67

2 COMBINED AT							
+	C11A-3	12.12	1	FLOW TIME	3714. 3.75	3624. 3.75	3455. 3.75
ROUTED TO							
+	RC11A-3	12.12	1	FLOW TIME	3652. 3.83	3558. 3.83	3382. 3.83
HYDROGRAPH AT							
+	3A	.18	1	FLOW TIME	76. 3.67	73. 3.67	68. 3.67
2 COMBINED AT							
+	C3A	12.30	1	FLOW TIME	3717. 3.83	3621. 3.83	3441. 3.83
ROUTED TO							
+	RC3A	12.30	1	FLOW TIME	3603. 4.00	3506. 4.00	3319. 4.00
HYDROGRAPH AT							
+	3B-1	.26	1	FLOW TIME	85. 3.75	81. 3.75	75. 3.75
2 COMBINED AT							
+	C3B-1	12.55	1	FLOW TIME	3655. 4.00	3557. 4.00	3366. 4.00
ROUTED TO							
+	RC3B-1	12.55	1	FLOW TIME	3646. 4.00	3548. 4.00	3359. 4.00
HYDROGRAPH AT							
+	11B-2	.44	1	FLOW TIME	174. 3.92	168. 3.92	157. 3.92
ROUTED TO							
+	R11B-2	.44	1	FLOW TIME	174. 3.92	168. 3.92	157. 3.92
HYDROGRAPH AT							
+	11B-1	.39	1	FLOW TIME	216. 3.67	209. 3.67	196. 3.67
2 COMBINED AT							
+	C11B-1	.84	1	FLOW TIME	360. 3.75	349. 3.75	326. 3.75
ROUTED TO							
+	RC11B-1	.84	1	FLOW TIME	359. 3.83	348. 3.83	325. 3.83
HYDROGRAPH AT							
+	8B-1	.30	1	FLOW TIME	161. 3.75	156. 3.75	146. 3.75
2 COMBINED AT							
+	C8B-1	1.14	1	FLOW TIME	511. 3.75	495. 3.75	462. 3.75
ROUTED TO							
+	RC8B-1	1.14	1	FLOW TIME	510. 3.83	493. 3.83	463. 3.83
HYDROGRAPH AT							
+	8B-2	.42	1	FLOW TIME	289. 3.75	283. 3.75	269. 3.75
2 COMBINED AT							
+	C8B-2	1.56	1	FLOW TIME	789. 3.83	766. 3.83	723. 3.83
ROUTED TO							
+	RC8B-2	1.56	1	FLOW TIME	785. 3.83	762. 3.83	719. 3.83
HYDROGRAPH AT							
+	11A-2	.29	1	FLOW TIME	187. 3.58	181. 3.58	170. 3.58
ROUTED TO							
+	R11A-2	.29	1	FLOW TIME	184. 3.75	186. 3.75	168. 3.75
HYDROGRAPH AT							
+	8A	.31	1	FLOW TIME	155. 3.67	149. 3.67	139. 3.67
2 COMBINED AT							
+	C8A	.60	1	FLOW TIME	331. 3.75	329. 3.75	301. 3.75
ROUTED TO							
+	RC8A	.60	1	FLOW	314.	310.	285.

				TIME	3.83	3.83	3.83
HYDROGRAPH AT							
+	3B-2A	.24	1	FLOW TIME	144. 3.67	139. 3.67	131. 3.67
2 COMBINED AT							
+	C3B-2A	.84	1	FLOW TIME	433. 3.75	424. 3.75	392. 3.75
2 COMBINED AT							
+	CC3B-2A	2.40	1	FLOW TIME	1204. 3.83	1174. 3.83	1101. 3.83
ROUTED TO							
+	RCC3B-2A	2.40	1	FLOW TIME	1193. 3.83	1163. 3.83	1088. 3.83
HYDROGRAPH AT							
+	3B-2B	.27	1	FLOW TIME	103. 3.75	100. 3.75	92. 3.75
2 COMBINED AT							
+	C3B-2B	2.67	1	FLOW TIME	1293. 3.83	1259. 3.83	1178. 3.83
2 COMBINED AT							
+	CC3B-2B	15.23	1	FLOW TIME	4808. 3.92	4679. 3.92	4411. 3.92
ROUTED TO							
+	RCC3B-2B	15.23	1	FLOW TIME	4781. 4.00	4651. 4.00	4404. 4.00
HYDROGRAPH AT							
+	SF2-C	.39	1	FLOW TIME	107. 3.92	103. 3.92	95. 3.92
2 COMBINED AT							
+	CSF2-C	15.61	1	FLOW TIME	4886. 4.00	4752. 4.00	4497. 4.00
ROUTED TO							
+	RCSF2-C	15.61	1	FLOW TIME	4853. 4.00	4725. 4.00	4458. 4.00
HYDROGRAPH AT							
+	SW11	.59	1	FLOW TIME	330. 3.75	320. 3.75	301. 3.75
ROUTED TO							
+	RSW11	.59	1	FLOW TIME	325. 3.75	315. 3.75	296. 3.75
HYDROGRAPH AT							
+	SW17	.36	1	FLOW TIME	205. 3.67	199. 3.67	187. 3.75
2 COMBINED AT							
+	CSW17	.94	1	FLOW TIME	530. 3.75	514. 3.75	483. 3.75
ROUTED TO							
+	RCSW17	.94	1	FLOW TIME	521. 3.75	504. 3.75	474. 3.75
HYDROGRAPH AT							
+	SW18	.41	1	FLOW TIME	215. 3.75	209. 3.75	196. 3.75
2 COMBINED AT							
+	CSW18	1.35	1	FLOW TIME	736. 3.75	713. 3.75	669. 3.75
ROUTED TO							
+	RCSW18	1.35	1	FLOW TIME	690. 3.92	669. 3.92	627. 3.92
HYDROGRAPH AT							
+	12A	.39	1	FLOW TIME	272. 3.67	265. 3.67	251. 3.67
2 COMBINED AT							
+	C12A	1.74	1	FLOW TIME	881. 3.83	853. 3.83	802. 3.92
ROUTED TO							
+	RC12A	1.74	1	FLOW TIME	880. 3.92	853. 3.92	801. 3.92
HYDROGRAPH AT							
+	12B	.26	1	FLOW TIME	182. 3.67	177. 3.67	168. 3.67
2 COMBINED AT							

+	C12B	2.00	1	FLOW TIME	990. 3.92	960. 3.92	903. 3.92
ROUTED TO							
+	RC12B	2.00	1	FLOW TIME	953. 4.00	924. 4.00	869. 4.00
HYDROGRAPH AT							
+	57B-3	.31	1	FLOW TIME	91. 3.83	88. 3.83	81. 3.83
2 COMBINED AT							
+	C57B-3	2.31	1	FLOW TIME	1027. 4.00	996. 4.00	934. 4.00
ROUTED TO							
+	RC57B-3	2.31	1	FLOW TIME	1023. 4.08	992. 4.08	932. 4.08
HYDROGRAPH AT							
+	57B-2	.36	1	FLOW TIME	124. 3.83	119. 3.83	111. 3.83
2 COMBINED AT							
+	C57B-2	2.67	1	FLOW TIME	1108. 4.00	1074. 4.00	1006. 4.00
ROUTED TO							
+	RC57B-2	2.67	1	FLOW TIME	1111. 4.08	1077. 4.08	1010. 4.08
HYDROGRAPH AT							
+	13B-1	.25	1	FLOW TIME	169. 3.75	164. 3.75	156. 3.75
ROUTED TO							
+	RC13B-1	.25	1	FLOW TIME	171. 3.83	167. 3.83	158. 3.83
HYDROGRAPH AT							
+	13B-2	.22	1	FLOW TIME	140. 3.67	137. 3.67	129. 3.67
2 COMBINED AT							
+	C13B-2	.47	1	FLOW TIME	294. 3.75	286. 3.75	271. 3.75
ROUTED TO							
+	RC13B-2	.47	1	FLOW TIME	295. 3.92	288. 3.92	272. 3.92
HYDROGRAPH AT							
+	19A	.25	1	FLOW TIME	144. 3.75	140. 3.75	133. 3.75
ROUTED TO							
+	R19A	.25	1	FLOW TIME	146. 3.92	142. 3.92	134. 3.92
HYDROGRAPH AT							
+	13A-1	.22	1	FLOW TIME	147. 3.75	144. 3.75	136. 3.75
2 COMBINED AT							
+	C13A-1	.48	1	FLOW TIME	273. 3.83	266. 3.83	251. 3.83
ROUTED TO							
+	RC13A-1	.48	1	FLOW TIME	268. 3.92	260. 3.92	246. 3.92
HYDROGRAPH AT							
+	13A-2	.19	1	FLOW TIME	124. 3.67	121. 3.67	114. 3.67
2 COMBINED AT							
+	C13A-2	.66	1	FLOW TIME	354. 3.83	344. 3.83	324. 3.83
ROUTED TO							
+	RC13A-2	.66	1	FLOW TIME	354. 4.00	344. 4.00	324. 4.00
HYDROGRAPH AT							
+	PIC-C	.24	1	FLOW TIME	129. 3.83	125. 3.83	118. 3.83
2 COMBINED AT							
+	CPIC-C	.91	1	FLOW TIME	462. 3.92	448. 4.00	423. 4.00
ROUTED TO							
+	RCPIC-C	.91	1	FLOW TIME	461. 4.00	450. 4.00	424. 4.00

HYDROGRAPH AT							
+	PIC-A	.36	1	FLOW TIME	165. 3.92	160. 3.92	152. 3.92
2 COMBINED AT							
+	CPIC-A	1.27	1	FLOW TIME	625. 4.00	609. 4.00	575. 4.00
2 COMBINED AT							
+	CCPIC-A	1.73	1	FLOW TIME	900. 4.00	878. 4.00	830. 4.00
ROUTED TO							
+	RCCPIC-A	1.73	1	FLOW TIME	904. 4.00	880. 4.00	827. 4.08
HYDROGRAPH AT							
+	57B-1	.20	1	FLOW TIME	77. 3.75	74. 3.75	69. 3.75
2 COMBINED AT							
+	C57B-1	1.93	1	FLOW TIME	954. 4.00	928. 4.00	871. 4.00
2 COMBINED AT							
+	CC57B-1	4.60	1	FLOW TIME	2047. 4.00	1990. 4.08	1874. 4.08
ROUTED TO							
+	RCC57B-1	4.60	1	FLOW TIME	2046. 4.08	1990. 4.08	1873. 4.08
HYDROGRAPH AT							
+	57B-4	.20	1	FLOW TIME	117. 3.67	114. 3.67	107. 3.67
2 COMBINED AT							
+	C57B-4	4.80	1	FLOW TIME	2092. 4.00	2034. 4.08	1914. 4.08
HYDROGRAPH AT							
+	PIC-B	.44	1	FLOW TIME	205. 3.92	199. 3.92	188. 3.92
ROUTED TO							
+	RPIC-B	.44	1	FLOW TIME	202. 3.92	197. 3.92	186. 3.92
2 COMBINED AT							
+	CC57B-4	5.24	1	FLOW TIME	2293. 4.00	2226. 4.00	2089. 4.08
ROUTED TO							
+	RCC57B-4	5.24	1	FLOW TIME	2281. 4.08	2217. 4.08	2088. 4.08
HYDROGRAPH AT							
+	38A	.35	1	FLOW TIME	174. 3.83	170. 3.83	161. 3.83
ROUTED TO							
+	R38A	.35	1	FLOW TIME	175. 3.92	170. 3.92	161. 3.92
HYDROGRAPH AT							
+	38B	.44	1	FLOW TIME	239. 3.83	233. 3.83	221. 3.83
2 COMBINED AT							
+	C38B	.79	1	FLOW TIME	407. 3.83	396. 3.83	375. 3.83
HYDROGRAPH AT							
+	57BA	.32	1	FLOW TIME	52. 4.00	49. 4.00	44. 4.00
ROUTED TO							
+	R57BA	.32	1	FLOW TIME	51. 4.00	49. 4.00	44. 4.00
HYDROGRAPH AT							
+	3C	.15	1	FLOW TIME	107. 3.67	104. 3.67	99. 3.67
2 COMBINED AT							
+	C3C	.47	1	FLOW TIME	137. 3.75	132. 3.75	123. 3.75
ROUTED TO							
+	RC3C	.47	1	FLOW TIME	138. 3.83	133. 3.83	124. 3.83
HYDROGRAPH AT							
+	AP	.67	1	FLOW TIME	143. 3.92	137. 3.92	125. 3.92

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5 COMBINED AT
+ ANGLPKIN 22.79 1 FLOW 7737. 7521. 7077.
TIME 4.00 4.00 4.00

ROUTED TO
+ ANGLPKDB 22.79 1 FLOW 370. 367. 362.
TIME 7.50 7.50 7.42

** PEAK STAGES IN FEET **
1 STAGE 2610.06 2609.53 2608.49
TIME 7.50 7.50 7.42

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
R3-1 MANE 3.75 1000.44 243.49 1.00 5.00 999.92 245.00 1.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1185E+03 EXCESS= .0000E+00 OUTFLOW= .1185E+03 BASIN STORAGE= .8451E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-1 MANE 3.79 969.41 246.37 .97 5.00 967.74 245.00 .97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1150E+03 EXCESS= .0000E+00 OUTFLOW= .1150E+03 BASIN STORAGE= .7022E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-1 MANE 3.88 914.92 244.70 .91 5.00 914.59 245.00 .91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1080E+03 EXCESS= .0000E+00 OUTFLOW= .1081E+03 BASIN STORAGE= .8081E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 5.00 1036.51 250.00 .98 5.00 1036.51 250.00 .98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1282E+03 EXCESS= .0000E+00 OUTFLOW= .1283E+03 BASIN STORAGE= .1026E-01 PERCENT ERROR=
.1

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 5.00 1002.58 250.00 .95 5.00 1002.58 250.00 .95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1244E+03 EXCESS= .0000E+00 OUTFLOW= .1245E+03 BASIN STORAGE= .1053E-01 PERCENT ERROR=
.1

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 5.00 946.08 250.00 .90 5.00 946.08 250.00 .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1168E+03 EXCESS= .0000E+00 OUTFLOW= .1169E+03 BASIN STORAGE= .1025E-01 PERCENT ERROR=
.1

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .73 1095.19 250.18 .96 5.00 1095.11 250.00 .96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1424E+03 EXCESS= .0000E+00 OUTFLOW= .1424E+03 BASIN STORAGE= .1134E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .74 1060.26 249.68 .93 5.00 1060.03 250.00 .93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .1209E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .76 999.35 250.79 .87 5.00 999.20 250.00 .87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1296E+03 EXCESS= .0000E+00 OUTFLOW= .1296E+03 BASIN STORAGE= .1178E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00

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R3-3	MANE	4.50	169.71	216.00	1.04	5.00	165.31	215.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9621E+01 EXCESS= .0000E+00 OUTFLOW= .9650E+01 BASIN STORAGE= .5288E-02 PERCENT ERROR= -									
.4									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	4.50	165.09	216.00	1.01	5.00	160.66	215.00	1.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9344E+01 EXCESS= .0000E+00 OUTFLOW= .9373E+01 BASIN STORAGE= .5238E-02 PERCENT ERROR= -									
.4									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	4.25	153.78	216.75	.95	5.00	149.71	215.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8784E+01 EXCESS= .0000E+00 OUTFLOW= .8805E+01 BASIN STORAGE= .6786E-02 PERCENT ERROR= -									
.3									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.50	330.70	216.00	1.04	5.00	321.27	215.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1915E+02 EXCESS= .0000E+00 OUTFLOW= .1920E+02 BASIN STORAGE= .7522E-02 PERCENT ERROR= -									
.3									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.50	321.56	216.00	1.01	5.00	312.14	215.00	1.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1860E+02 EXCESS= .0000E+00 OUTFLOW= .1865E+02 BASIN STORAGE= .7451E-02 PERCENT ERROR= -									
.3									
FOR PLAN = 1 RATIO= .00									
R3-4	MANE	4.25	300.63	216.75	.95	5.00	291.04	215.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1748E+02 EXCESS= .0000E+00 OUTFLOW= .1752E+02 BASIN STORAGE= .6977E-02 PERCENT ERROR= -									
.2									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.91	278.35	215.06	1.02	5.00	277.86	215.00	1.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1591E+02 EXCESS= .0000E+00 OUTFLOW= .1593E+02 BASIN STORAGE= .4041E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	3.95	264.75	213.38	.99	5.00	263.08	215.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1545E+02 EXCESS= .0000E+00 OUTFLOW= .1547E+02 BASIN STORAGE= .3943E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
R3-5	MANE	4.00	251.75	216.00	.93	5.00	246.83	215.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1450E+02 EXCESS= .0000E+00 OUTFLOW= .1452E+02 BASIN STORAGE= .3575E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
RCP3.2	MANE	3.39	735.68	216.78	1.03	5.00	726.18	220.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4480E+02 EXCESS= .0000E+00 OUTFLOW= .4484E+02 BASIN STORAGE= .3949E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
RCP3.2	MANE	3.43	706.06	219.82	1.00	5.00	702.97	220.00	1.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4347E+02 EXCESS= .0000E+00 OUTFLOW= .4351E+02 BASIN STORAGE= .4379E-02 PERCENT ERROR= -									
.1									
FOR PLAN = 1 RATIO= .00									
RCP3.2	MANE	3.52	681.51	218.32	.94	5.00	661.94	220.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4077E+02 EXCESS= .0000E+00 OUTFLOW= .4080E+02 BASIN STORAGE= .4916E-02 PERCENT ERROR= -									
.1									

FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	1.97	1654.90	222.66	.96	5.00	1635.85	225.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2127E+03 EXCESS= .0000E+00 OUTFLOW= .2128E+03 BASIN STORAGE= .3248E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	2.00	1597.90	223.67	.94	5.00	1577.47	225.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2064E+03 EXCESS= .0000E+00 OUTFLOW= .2064E+03 BASIN STORAGE= .3436E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.4	MANE	2.05	1485.01	223.81	.88	5.00	1466.60	225.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1936E+03 EXCESS= .0000E+00 OUTFLOW= .1936E+03 BASIN STORAGE= .3480E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	4.50	84.63	220.50	1.02	5.00	83.16	220.00	1.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4781E+01 EXCESS= .0000E+00 OUTFLOW= .4815E+01 BASIN STORAGE= .1095E-01 PERCENT ERROR=									
.9									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	4.25	82.74	221.00	.99	5.00	80.42	220.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4637E+01 EXCESS= .0000E+00 OUTFLOW= .4668E+01 BASIN STORAGE= .1087E-01 PERCENT ERROR=									
.9									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	4.25	77.97	221.00	.93	5.00	75.51	220.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4363E+01 EXCESS= .0000E+00 OUTFLOW= .4394E+01 BASIN STORAGE= .1071E-01 PERCENT ERROR=									
.9									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.75	179.78	213.75	.97	5.00	169.79	215.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8876E+01 EXCESS= .0000E+00 OUTFLOW= .8898E+01 BASIN STORAGE= .3143E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.00	158.31	216.00	.94	5.00	157.68	215.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8528E+01 EXCESS= .0000E+00 OUTFLOW= .8547E+01 BASIN STORAGE= .2790E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.75	164.36	213.75	.89	5.00	156.15	215.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8091E+01 EXCESS= .0000E+00 OUTFLOW= .8111E+01 BASIN STORAGE= .3049E-02 PERCENT ERROR=									
.3									
FOR PLAN = 1	RATIO=	.00							
R3-J	MANE	3.00	64.69	225.00	.53	5.00	64.69	225.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4324E+01 EXCESS= .0000E+00 OUTFLOW= .4337E+01 BASIN STORAGE= .7071E-02 PERCENT ERROR=									
.5									
FOR PLAN = 1	RATIO=	.00							
R3-J	MANE	2.75	63.33	222.75	.51	5.00	62.12	225.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4160E+01 EXCESS= .0000E+00 OUTFLOW= .4172E+01 BASIN STORAGE= .6078E-02 PERCENT ERROR=									
.4									
FOR PLAN = 1	RATIO=	.00							
R3-J	MANE	2.25	57.46	225.00	.47	5.00	57.46	225.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3824E+01 EXCESS= .0000E+00 OUTFLOW= .3834E+01 BASIN STORAGE= .5795E-02 PERCENT ERROR=									
.4									

FOR PLAN = 1	RATIO=	.00							
RCP3.5	MANE	1.87	261.80	218.25	.82	5.00	249.80	220.00	.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1803E+02 EXCESS= .0000E+00 OUTFLOW= .1803E+02 BASIN STORAGE= .1379E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.5	MANE	1.92	245.62	218.80	.79	5.00	238.90	220.00	.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1735E+02 EXCESS= .0000E+00 OUTFLOW= .1735E+02 BASIN STORAGE= .1576E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.5	MANE	1.96	230.21	217.89	.74	5.00	226.02	220.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1631E+02 EXCESS= .0000E+00 OUTFLOW= .1632E+02 BASIN STORAGE= .1701E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	4.00	503.28	220.13	1.03	5.00	501.59	220.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3514E+02 EXCESS= .0000E+00 OUTFLOW= .3516E+02 BASIN STORAGE= .3186E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	4.04	483.78	222.39	1.00	5.00	481.04	220.00	1.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3414E+02 EXCESS= .0000E+00 OUTFLOW= .3416E+02 BASIN STORAGE= .4458E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-8	MANE	4.13	458.08	218.90	.94	5.00	457.54	220.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3213E+02 EXCESS= .0000E+00 OUTFLOW= .3215E+02 BASIN STORAGE= .4102E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	2.24	1288.13	223.82	.95	5.00	1269.00	225.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9851E+02 EXCESS= .0000E+00 OUTFLOW= .9852E+02 BASIN STORAGE= .3374E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	2.27	1235.39	224.65	.92	5.00	1228.47	225.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9544E+02 EXCESS= .0000E+00 OUTFLOW= .9545E+02 BASIN STORAGE= .3297E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3.6	MANE	2.32	1171.01	224.71	.87	5.00	1165.53	225.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8982E+02 EXCESS= .0000E+00 OUTFLOW= .8984E+02 BASIN STORAGE= .3016E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	2.36	160.96	217.18	.99	5.00	156.90	215.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1019E+02 EXCESS= .0000E+00 OUTFLOW= .1019E+02 BASIN STORAGE= .2570E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	2.39	156.54	217.23	.97	5.00	152.49	215.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9898E+01 EXCESS= .0000E+00 OUTFLOW= .9902E+01 BASIN STORAGE= .2612E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R3-M	MANE	2.44	148.09	217.43	.91	5.00	143.88	215.00	.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9322E+01 EXCESS= .0000E+00 OUTFLOW= .9326E+01 BASIN STORAGE= .2002E-02 PERCENT ERROR=									
.1									

FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.30	1592.67	276.11	.96	5.00	1592.18	275.00	.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3621E+03 EXCESS= .0000E+00 OUTFLOW= .3621E+03 BASIN STORAGE= .2793E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.31	1560.85	262.63	.93	5.00	1560.75	265.00	.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3512E+03 EXCESS= .0000E+00 OUTFLOW= .3513E+03 BASIN STORAGE= .3032E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCSWAA-1	MANE	1.33	1501.75	261.37	.88	5.00	1501.17	260.00	.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3300E+03 EXCESS= .0000E+00 OUTFLOW= .3300E+03 BASIN STORAGE= .3073E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.79	1874.52	238.20	.98	5.00	1869.79	240.00	.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4032E+03 EXCESS= .0000E+00 OUTFLOW= .4032E+03 BASIN STORAGE= .4819E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.81	1837.86	241.87	.95	5.00	1830.23	240.00	.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3912E+03 EXCESS= .0000E+00 OUTFLOW= .3912E+03 BASIN STORAGE= .4331E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCSWAA-2	MANE	1.84	1755.74	242.73	.89	5.00	1746.87	245.00	.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3678E+03 EXCESS= .0000E+00 OUTFLOW= .3678E+03 BASIN STORAGE= .4312E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	1.10	242.33	216.14	1.02	5.00	237.88	215.00	1.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1528E+02 EXCESS= .0000E+00 OUTFLOW= .1528E+02 BASIN STORAGE= .1101E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	1.12	234.88	216.32	.99	5.00	230.88	215.00	.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1484E+02 EXCESS= .0000E+00 OUTFLOW= .1484E+02 BASIN STORAGE= .1252E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	1.14	220.55	215.65	.93	5.00	217.57	215.00	.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1398E+02 EXCESS= .0000E+00 OUTFLOW= .1398E+02 BASIN STORAGE= .1151E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.89	371.51	217.19	1.11	5.00	365.68	215.00	1.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2424E+02 EXCESS= .0000E+00 OUTFLOW= .2425E+02 BASIN STORAGE= .2357E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.91	357.75	217.66	1.08	5.00	355.45	215.00	1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2359E+02 EXCESS= .0000E+00 OUTFLOW= .2360E+02 BASIN STORAGE= .2680E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.95	342.47	216.62	1.02	5.00	337.75	215.00	1.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2229E+02 EXCESS= .0000E+00 OUTFLOW= .2230E+02 BASIN STORAGE= .2283E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.65	151.00	221.76	.62	5.00	146.21	225.00	.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1118E+02 EXCESS= .0000E+00 OUTFLOW= .1118E+02 BASIN STORAGE= .1355E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.68	145.22	221.88	.60	5.00	140.93	225.00	.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1077E+02 EXCESS= .0000E+00 OUTFLOW= .1077E+02 BASIN STORAGE= .1572E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.74	133.71	222.28	.55	5.00	130.49	225.00	.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9968E+01 EXCESS= .0000E+00 OUTFLOW= .9969E+01 BASIN STORAGE= .1467E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.30	339.49	225.36	.72	5.00	338.52	225.00	.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+02 EXCESS= .0000E+00 OUTFLOW= .2693E+02 BASIN STORAGE= .1533E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.32	327.52	225.85	.70	5.00	326.43	225.00	.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2601E+02 EXCESS= .0000E+00 OUTFLOW= .2601E+02 BASIN STORAGE= .1621E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.36	304.97	225.66	.65	5.00	303.46	225.00	.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2421E+02 EXCESS= .0000E+00 OUTFLOW= .2421E+02 BASIN STORAGE= .1669E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.46	223.54	215.10	1.07	5.00	223.22	215.00	1.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1374E+02 EXCESS= .0000E+00 OUTFLOW= .1374E+02 BASIN STORAGE= .4455E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.46	217.79	215.51	1.04	5.00	217.50	215.00	1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1336E+02 EXCESS= .0000E+00 OUTFLOW= .1336E+02 BASIN STORAGE= .4688E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.47	206.28	215.51	.98	5.00	205.92	215.00	.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1261E+02 EXCESS= .0000E+00 OUTFLOW= .1261E+02 BASIN STORAGE= .4685E-03 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.33	229.78	216.37	.71	5.00	225.23	215.00	.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5689E+02 EXCESS= .0000E+00 OUTFLOW= .5689E+02 BASIN STORAGE= .7253E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.34	221.73	216.53	.69	5.00	217.85	215.00	.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5485E+02 EXCESS= .0000E+00 OUTFLOW= .5485E+02 BASIN STORAGE= .7013E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3-G1	MANE	1.38	206.19	215.67	.64	5.00	202.93	215.00	.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5083E+02 EXCESS= .0000E+00 OUTFLOW= .5083E+02 BASIN STORAGE= .6527E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-H1 MANE 1.70 258.69 217.51 .72 5.00 253.94 215.00 .72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5932E+02 EXCESS= .0000E+00 OUTFLOW= .5932E+02 BASIN STORAGE= .9982E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-H1 MANE 1.72 253.82 216.88 .70 5.00 245.51 215.00 .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5722E+02 EXCESS= .0000E+00 OUTFLOW= .5722E+02 BASIN STORAGE= .9635E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-H1 MANE 1.77 234.10 217.57 .65 5.00 230.13 215.00 .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5306E+02 EXCESS= .0000E+00 OUTFLOW= .5306E+02 BASIN STORAGE= .8961E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .76 824.12 216.10 .82 5.00 808.39 215.00 .83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9873E+02 EXCESS= .0000E+00 OUTFLOW= .9873E+02 BASIN STORAGE= .7101E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .76 799.11 215.67 .80 5.00 785.15 215.00 .80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9553E+02 EXCESS= .0000E+00 OUTFLOW= .9553E+02 BASIN STORAGE= .6857E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP9 MANE .78 755.35 216.00 .75 5.00 739.81 215.00 .75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8922E+02 EXCESS= .0000E+00 OUTFLOW= .8922E+02 BASIN STORAGE= .6379E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.87 118.29 213.61 1.26 5.00 117.88 215.00 1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7540E+01 EXCESS= .0000E+00 OUTFLOW= .7543E+01 BASIN STORAGE= .1710E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.89 115.65 213.73 1.23 5.00 115.11 215.00 1.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7353E+01 EXCESS= .0000E+00 OUTFLOW= .7356E+01 BASIN STORAGE= .1707E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.93 110.20 214.06 1.16 5.00 109.79 215.00 1.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6978E+01 EXCESS= .0000E+00 OUTFLOW= .6981E+01 BASIN STORAGE= .1619E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.92 111.85 217.02 .89 5.00 107.87 215.00 .89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6958E+01 EXCESS= .0000E+00 OUTFLOW= .6959E+01 BASIN STORAGE= .1706E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.94 107.26 217.69 .86 5.00 104.14 215.00 .86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6746E+01 EXCESS= .0000E+00 OUTFLOW= .6748E+01 BASIN STORAGE= .1496E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-P2 MANE 1.99 101.74 217.19 .81 5.00 98.04 215.00 .81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6330E+01 EXCESS= .0000E+00 OUTFLOW= .6332E+01 BASIN STORAGE= .1442E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.25 474.23 215.95 1.13 5.00 471.24 215.00 1.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3027E+02 EXCESS= .0000E+00 OUTFLOW= .3028E+02 BASIN STORAGE= .1721E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.26 461.80 215.72 1.10 5.00 458.08 215.00 1.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2947E+02 EXCESS= .0000E+00 OUTFLOW= .2948E+02 BASIN STORAGE= .1953E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-P MANE 1.29 438.28 216.34 1.04 5.00 436.91 215.00 1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2789E+02 EXCESS= .0000E+00 OUTFLOW= .2789E+02 BASIN STORAGE= .1695E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 1.99 661.42 216.53 1.17 5.00 647.20 215.00 1.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4373E+02 EXCESS= .0000E+00 OUTFLOW= .4374E+02 BASIN STORAGE= .3027E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 2.01 647.63 216.86 1.14 5.00 631.04 215.00 1.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4259E+02 EXCESS= .0000E+00 OUTFLOW= .4260E+02 BASIN STORAGE= .3726E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3-Q MANE 2.05 617.72 216.95 1.08 5.00 600.35 215.00 1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4037E+02 EXCESS= .0000E+00 OUTFLOW= .4038E+02 BASIN STORAGE= .3853E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .98 830.43 216.04 1.18 5.00 812.94 215.00 1.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5544E+02 EXCESS= .0000E+00 OUTFLOW= .5544E+02 BASIN STORAGE= .1687E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE .99 808.03 216.23 1.15 5.00 791.62 215.00 1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5399E+02 EXCESS= .0000E+00 OUTFLOW= .5399E+02 BASIN STORAGE= .1902E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCPH-2 MANE 1.01 766.24 216.55 1.09 5.00 751.77 215.00 1.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5118E+02 EXCESS= .0000E+00 OUTFLOW= .5118E+02 BASIN STORAGE= .1734E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .32 1713.79 215.30 .93 5.00 1699.32 215.00 .93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1611E+03 EXCESS= .0000E+00 OUTFLOW= .1611E+03 BASIN STORAGE= .4090E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .33 1667.54 215.42 .90 5.00 1651.78 215.00 .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1563E+03 EXCESS= .0000E+00 OUTFLOW= .1563E+03 BASIN STORAGE= .3951E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCP3.10	MANE	.33	1577.09	215.58	.85	5.00	1561.66	215.00	.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1468E+03 EXCESS= .0000E+00 OUTFLOW= .1468E+03 BASIN STORAGE= .3679E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.67	1828.86	218.97	.95	5.00	1811.87	220.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1710E+03 EXCESS= .0000E+00 OUTFLOW= .1711E+03 BASIN STORAGE= .1864E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.70	1774.86	218.33	.92	5.00	1767.36	220.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1661E+03 EXCESS= .0000E+00 OUTFLOW= .1661E+03 BASIN STORAGE= .1791E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCSHFH-9	MANE	2.75	1689.72	219.69	.86	5.00	1682.70	220.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1561E+03 EXCESS= .0000E+00 OUTFLOW= .1561E+03 BASIN STORAGE= .1655E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RRCRCSWFH	MANE	.73	3514.40	225.05	.96	5.00	3514.40	225.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6008E+03 EXCESS= .0000E+00 OUTFLOW= .6008E+03 BASIN STORAGE= .9927E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RRCRCSWFH	MANE	.73	3432.30	224.85	.93	5.00	3431.99	225.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5830E+03 EXCESS= .0000E+00 OUTFLOW= .5830E+03 BASIN STORAGE= .9570E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RRCRCSWFH	MANE	.75	3282.42	225.58	.88	5.00	3281.10	225.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5483E+03 EXCESS= .0000E+00 OUTFLOW= .5483E+03 BASIN STORAGE= .8889E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	1.10	3597.95	226.49	.96	5.00	3595.78	225.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6088E+03 EXCESS= .0000E+00 OUTFLOW= .6088E+03 BASIN STORAGE= .1464E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	1.11	3514.56	226.29	.93	5.00	3509.41	225.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5907E+03 EXCESS= .0000E+00 OUTFLOW= .5907E+03 BASIN STORAGE= .1412E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	1.13	3351.39	225.63	.87	5.00	3346.55	225.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5556E+03 EXCESS= .0000E+00 OUTFLOW= .5556E+03 BASIN STORAGE= .1314E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	1.08	3647.29	240.23	.94	5.00	3646.25	240.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6307E+03 EXCESS= .0000E+00 OUTFLOW= .6307E+03 BASIN STORAGE= .1572E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	1.09	3548.50	240.51	.91	5.00	3547.94	240.00	.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6120E+03 EXCESS= .0000E+00 OUTFLOW= .6120E+03 BASIN STORAGE= .1517E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RC3B-1	MANE	1.12	3359.61	241.07	.86	5.00	3359.34	240.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5754E+03 EXCESS= .0000E+00 OUTFLOW= .5754E+03 BASIN STORAGE= .1412E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	2.31	173.72	235.25	.72	5.00	173.60	235.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1702E+02 EXCESS= .0000E+00 OUTFLOW= .1702E+02 BASIN STORAGE= .8934E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	2.33	168.07	235.30	.70	5.00	167.92	235.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1647E+02 EXCESS= .0000E+00 OUTFLOW= .1647E+02 BASIN STORAGE= .8699E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11B-2	MANE	2.38	156.77	235.54	.65	5.00	156.53	235.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1537E+02 EXCESS= .0000E+00 OUTFLOW= .1538E+02 BASIN STORAGE= .7870E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.85	361.61	227.67	.76	5.00	359.11	230.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3398E+02 EXCESS= .0000E+00 OUTFLOW= .3398E+02 BASIN STORAGE= .7959E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.87	349.98	228.11	.74	5.00	347.62	230.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3290E+02 EXCESS= .0000E+00 OUTFLOW= .3291E+02 BASIN STORAGE= .8679E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC11B-1	MANE	1.91	326.48	229.13	.69	5.00	325.28	230.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3078E+02 EXCESS= .0000E+00 OUTFLOW= .3078E+02 BASIN STORAGE= .7656E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.76	510.93	229.47	.77	5.00	509.83	230.00	.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4696E+02 EXCESS= .0000E+00 OUTFLOW= .4696E+02 BASIN STORAGE= .1379E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.79	493.20	228.95	.75	5.00	492.98	230.00	.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4549E+02 EXCESS= .0000E+00 OUTFLOW= .4550E+02 BASIN STORAGE= .1522E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-1	MANE	2.85	464.34	230.96	.70	5.00	463.03	230.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4258E+02 EXCESS= .0000E+00 OUTFLOW= .4258E+02 BASIN STORAGE= .1608E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.67	785.34	228.68	.88	5.00	784.81	230.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7285E+02 EXCESS= .0000E+00 OUTFLOW= .7285E+02 BASIN STORAGE= .1769E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.69	762.98	231.14	.85	5.00	762.07	230.00	.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7074E+02 EXCESS= .0000E+00 OUTFLOW= .7075E+02 BASIN STORAGE= .1680E-02 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
R08B-2	MANE	1.72	719.15	229.03	.80	5.00	719.13	230.00	.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6657E+02 EXCESS= .0000E+00 OUTFLOW= .6658E+02 BASIN STORAGE= .1638E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	188.33	223.25	.84	5.00	183.57	225.00	.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1302E+02 EXCESS= .0000E+00 OUTFLOW= .1303E+02 BASIN STORAGE= .1280E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	5.00	186.01	225.00	.82	5.00	186.01	225.00	.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1264E+02 EXCESS= .0000E+00 OUTFLOW= .1265E+02 BASIN STORAGE= .1697E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	171.77	223.25	.77	5.00	167.85	225.00	.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1186E+02 EXCESS= .0000E+00 OUTFLOW= .1187E+02 BASIN STORAGE= .1224E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	3.30	1199.66	231.10	.84	5.00	1193.40	230.00	.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1076E+03 EXCESS= .0000E+00 OUTFLOW= .1076E+03 BASIN STORAGE= .3042E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	3.33	1169.96	233.04	.82	5.00	1162.65	230.00	.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1044E+03 EXCESS= .0000E+00 OUTFLOW= .1045E+03 BASIN STORAGE= .2847E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	3.40	1095.66	231.33	.77	5.00	1088.28	230.00	.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9814E+02 EXCESS= .0000E+00 OUTFLOW= .9816E+02 BASIN STORAGE= .3635E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	2.02	4818.82	238.03	.92	5.00	4781.48	240.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7471E+03 EXCESS= .0000E+00 OUTFLOW= .7471E+03 BASIN STORAGE= .3315E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	2.04	4687.88	238.43	.89	5.00	4651.26	240.00	.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7249E+03 EXCESS= .0000E+00 OUTFLOW= .7249E+03 BASIN STORAGE= .3210E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	2.08	4415.50	237.52	.84	5.00	4404.46	240.00	.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6815E+03 EXCESS= .0000E+00 OUTFLOW= .6815E+03 BASIN STORAGE= .2988E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.81	4864.02	242.26	.91	5.00	4853.31	240.00	.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7578E+03 EXCESS= .0000E+00 OUTFLOW= .7578E+03 BASIN STORAGE= .3074E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.83	4731.00	241.14	.88	5.00	4724.80	240.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7352E+03 EXCESS= .0000E+00 OUTFLOW= .7352E+03 BASIN STORAGE= .2963E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCSF2-C	MANE	1.86	4474.15	242.44	.83	5.00	4457.99	240.00	.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6910E+03 EXCESS= .0000E+00 OUTFLOW= .6910E+03 BASIN STORAGE= .2764E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.43	328.10	225.73	.88	5.00	324.89	225.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2754E+02 EXCESS= .0000E+00 OUTFLOW= .2754E+02 BASIN STORAGE= .1787E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.45	317.82	227.00	.85	5.00	315.41	225.00	.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2672E+02 EXCESS= .0000E+00 OUTFLOW= .2672E+02 BASIN STORAGE= .1815E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RSW11	MANE	1.48	299.51	226.80	.80	5.00	296.20	225.00	.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2508E+02 EXCESS= .0000E+00 OUTFLOW= .2508E+02 BASIN STORAGE= .1599E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	2.30	524.06	227.64	.87	5.00	520.91	225.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4386E+02 EXCESS= .0000E+00 OUTFLOW= .4387E+02 BASIN STORAGE= .3897E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	2.33	507.95	228.03	.84	5.00	504.19	225.00	.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4254E+02 EXCESS= .0000E+00 OUTFLOW= .4254E+02 BASIN STORAGE= .3468E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	2.39	476.59	226.63	.79	5.00	473.58	225.00	.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3993E+02 EXCESS= .0000E+00 OUTFLOW= .3994E+02 BASIN STORAGE= .3576E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	171.06	230.00	1.05	5.00	171.06	230.00	1.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1391E+02 EXCESS= .0000E+00 OUTFLOW= .1392E+02 BASIN STORAGE= .1716E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	166.77	230.00	1.02	5.00	166.77	230.00	1.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1354E+02 EXCESS= .0000E+00 OUTFLOW= .1355E+02 BASIN STORAGE= .1692E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	158.21	230.00	.96	5.00	158.21	230.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1281E+02 EXCESS= .0000E+00 OUTFLOW= .1281E+02 BASIN STORAGE= .1644E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-2	MANE	5.00	295.27	235.00	.98	5.00	295.27	235.00	.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2427E+02 EXCESS= .0000E+00 OUTFLOW= .2430E+02 BASIN STORAGE= .7210E-02 PERCENT ERROR=									
.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-2	MANE	5.00	287.51	235.00	.95	5.00	287.51	235.00	.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2360E+02 EXCESS= .0000E+00 OUTFLOW= .2363E+02 BASIN STORAGE= .7135E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC13B-2	MANE	5.00	271.98	235.00	.90	5.00	271.98	235.00	.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2228E+02 EXCESS= .0000E+00 OUTFLOW= .2231E+02 BASIN STORAGE= .6984E-02 PERCENT ERROR= -
.2

FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	146.43	235.00	.96	5.00	146.43	235.00	.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1300E+02 EXCESS= .0000E+00 OUTFLOW= .1300E+02 BASIN STORAGE= .2023E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	142.40	235.00	.94	5.00	142.40	235.00	.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1263E+02 EXCESS= .0000E+00 OUTFLOW= .1264E+02 BASIN STORAGE= .1896E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
R19A	MANE	5.00	134.35	235.00	.88	5.00	134.35	235.00	.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1191E+02 EXCESS= .0000E+00 OUTFLOW= .1191E+02 BASIN STORAGE= .1839E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	353.55	240.00	.98	5.00	353.55	240.00	.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3459E+02 EXCESS= .0000E+00 OUTFLOW= .3462E+02 BASIN STORAGE= .6811E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	343.70	240.00	.95	5.00	343.70	240.00	.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3364E+02 EXCESS= .0000E+00 OUTFLOW= .3367E+02 BASIN STORAGE= .9250E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	324.02	240.00	.90	5.00	324.02	240.00	.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3174E+02 EXCESS= .0000E+00 OUTFLOW= .3177E+02 BASIN STORAGE= .9051E-02 PERCENT ERROR= -
.1

FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.82	462.80	240.43	.96	5.00	461.30	240.00	.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4647E+02 EXCESS= .0000E+00 OUTFLOW= .4648E+02 BASIN STORAGE= .2735E-02 PERCENT ERROR= -
.0

FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.85	450.70	238.98	.93	5.00	449.78	240.00	.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4518E+02 EXCESS= .0000E+00 OUTFLOW= .4519E+02 BASIN STORAGE= .3117E-02 PERCENT ERROR= -
.0

FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.93	424.24	239.80	.88	5.00	424.07	240.00	.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4262E+02 EXCESS= .0000E+00 OUTFLOW= .4263E+02 BASIN STORAGE= .2442E-02 PERCENT ERROR= -
.0

FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	5.00	904.21	240.00	.96	5.00	904.21	240.00	.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8869E+02 EXCESS= .0000E+00 OUTFLOW= .8871E+02 BASIN STORAGE= .3082E-02 PERCENT ERROR= -
.0

FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	5.00	879.86	240.00	.93	5.00	879.86	240.00	.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8623E+02 EXCESS= .0000E+00 OUTFLOW= .8626E+02 BASIN STORAGE= .2945E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCCPIC-A MANE 5.00 826.54 245.00 .88 5.00 826.54 245.00 .88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8137E+02 EXCESS= .0000E+00 OUTFLOW= .8139E+02 BASIN STORAGE= .2969E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .49 2047.69 240.97 .85 5.00 2046.25 245.00 .85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2095E+03 EXCESS= .0000E+00 OUTFLOW= .2095E+03 BASIN STORAGE= .8239E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .50 1989.99 245.01 .83 5.00 1989.98 245.00 .83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2033E+03 EXCESS= .0000E+00 OUTFLOW= .2033E+03 BASIN STORAGE= .8365E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .51 1872.68 245.00 .78 5.00 1872.67 245.00 .78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1911E+03 EXCESS= .0000E+00 OUTFLOW= .1911E+03 BASIN STORAGE= .8350E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 2.03 203.87 238.08 .91 5.00 202.47 235.00 .91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2143E+02 EXCESS= .0000E+00 OUTFLOW= .2143E+02 BASIN STORAGE= .2507E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 2.05 198.61 237.34 .89 5.00 196.88 235.00 .89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2084E+02 EXCESS= .0000E+00 OUTFLOW= .2084E+02 BASIN STORAGE= .2345E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 2.07 187.58 237.96 .84 5.00 186.01 235.00 .84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1966E+02 EXCESS= .0000E+00 OUTFLOW= .1966E+02 BASIN STORAGE= .2383E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-4 MANE 1.33 2291.78 241.66 .86 5.00 2280.89 245.00 .86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2396E+03 EXCESS= .0000E+00 OUTFLOW= .2396E+03 BASIN STORAGE= .3664E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-4 MANE 1.34 2225.73 241.85 .83 5.00 2217.21 245.00 .83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2326E+03 EXCESS= .0000E+00 OUTFLOW= .2326E+03 BASIN STORAGE= .3422E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCC57B-4 MANE 1.38 2091.48 242.58 .78 5.00 2087.77 245.00 .78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2188E+03 EXCESS= .0000E+00 OUTFLOW= .2188E+03 BASIN STORAGE= .3247E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R38A MANE 5.00 174.53 235.00 .89 5.00 174.53 235.00 .89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1667E+02 EXCESS= .0000E+00 OUTFLOW= .1667E+02 BASIN STORAGE= .5753E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R38A MANE 5.00 169.91 235.00 .86 5.00 169.91 235.00 .86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1621E+02 EXCESS= .0000E+00 OUTFLOW= .1621E+02 BASIN STORAGE= .5657E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	5.00	160.68	235.00	.81	5.00	160.68	235.00	.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1531E+02 EXCESS= .0000E+00 OUTFLOW= .1531E+02 BASIN STORAGE= .5462E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.51	51.68	238.09	.33	5.00	51.50	240.00	.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5507E+01 EXCESS= .0000E+00 OUTFLOW= .5508E+01 BASIN STORAGE= .2045E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.53	49.12	237.99	.31	5.00	48.99	240.00	.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5262E+01 EXCESS= .0000E+00 OUTFLOW= .5263E+01 BASIN STORAGE= .2008E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.57	44.21	241.12	.28	5.00	44.10	240.00	.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4784E+01 EXCESS= .0000E+00 OUTFLOW= .4784E+01 BASIN STORAGE= .2102E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	137.82	230.00	.55	5.00	137.82	230.00	.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1374E+02 EXCESS= .0000E+00 OUTFLOW= .1375E+02 BASIN STORAGE= .3598E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	133.27	230.00	.53	5.00	133.27	230.00	.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1328E+02 EXCESS= .0000E+00 OUTFLOW= .1329E+02 BASIN STORAGE= .3530E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RC3C	MANE	5.00	124.30	230.00	.49	5.00	124.30	230.00	.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1238E+02 EXCESS= .0000E+00 OUTFLOW= .1239E+02 BASIN STORAGE= .3305E-02 PERCENT ERROR= -.1

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

B.5.4 100-YEAR RED ROCK DETENTION BASIN TRIBUTARY

B.5.4 Red Rock-sdn3

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1*****
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*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
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* RUN DATE 08SEP17 TIME 15:24:04 *
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*
*
* U.S. ARMY CORPS OF ENGINEERS
*
* HYDROLOGIC ENGINEERING CENTER
*
* 609 SECOND STREET
*
* DAVIS, CALIFORNIA 95616
*
* (916) 756-1104
*
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X X XXXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXXX XXXX X XXXX X
X X X X X X
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X X XXXXXXX XXXXX XXX
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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

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
	*DIAGRAM
*** FREE ***	
1	ID INPUT FILE DATE = NOVEMBER 30, 2016
2	ID DESIGN STORM = 100-YEAR 6-HR STORM
3	ID STORM DISTRIBUTION = SDN #3
4	ID MODELED BY VTN (SVB)
5	ID
6	ID *****
7	ID * REFERENCED HYDROLOGIC MODELS: *
8	ID * FLAMINGO / TROPICANA WASHES WATERSHED 2008 MPU FLAM3A *
9	ID * ALL PB CARDS WERE REFERENCED FROM THIS STUDY *
10	ID *****
11	ID
12	ID
13	ID
14	ID
15	ID
16	ID AREA DARF
17	ID SQ. MI.
18	ID 0-0.5 0.99
19	ID 0.5-1 0.975
20	ID 1-2 0.95
21	ID 2-3 0.925
22	ID 3-4 0.915
23	ID 4-5 0.908
24	ID 5-6 0.903
25	ID 6-7 0.895
26	ID 7-8 0.885
27	ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
28	ID
29	ID 10-YEAR, 6-HOUR STORM, SDN3
30	* JR PREC 0.570 0.559 0.553 0.530 0.519 0.513 0.507
31	ID 100-YEAR, 6-HOUR STORM, SDN3
32	ID
33	IT 5 0 0 300
34	IO 5 0 0
35	IN 5 0 0
36	JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
37	*
38	KK 4-1
39	KM COMPARE TO MPU BASIN RR14A
40	BA 4.601
41	PB 3.75
42	PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
43	PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
44	PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
45	PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409

44	PC	0.499	0.59	0.71	0.744	0.781	0.812	0.819	0.835	0.851	0.856
45	PC	0.86	0.868	0.876	0.888	0.91	0.926	0.937	0.95	0.97	0.976
46	PC	0.982	0.985	0.987	0.989	0.99	0.993	0.993	0.994	0.995	0.998
47	PC	0.998	0.999	1							
48	LS	0	87.6								
49	UD	0.725									
	*										

1

HEC-1 INPUT

PAGE 2

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

50	KK	R4-1									
51	KM	REFERENCED FROM 2008 MPU SEE R-RR14A									
52	KM	ROUTE R4-1 THROUGH 4-2									
53	KM	FUTURE CONCRETE CHANNEL									
54	RD	5500	0.071	0.015	0	TRAP	12	2			
	*										

55	KK	4-2									
56	KM	PORTION OF 2008 MPU BASIN RD4									
57	BA	0.3656									
58	PB	3.49									
59	LS	0	85.4								
60	UD	0.163									
	*										

61	KK	CP4.1									
62	KM	COMBINE 4-2 AND R4-1									
63	KM	CHECK TO SEE IF 4-A CAN DRAIN INTO CHANNEL									
64	HC	2									
	*										

65	KK	RCP4.1									
66	KM	ROUTE CP4-2 THROUGH 4-3									
67	KM	EXISTING NATURAL BRAIDED CHANNELS									
68	RD	3140	0.067	0.030	0	TRAP	100	0			
	*										

69	KK	4-3									
70	KM	PORTION OF 2008 MPU BASIN RD5									
71	BA	0.2102									
72	PB	3.42									
73	LS	0	85.1								
74	UD	0.143									
	*										

75	KK	CP4.2									
76	KM	COMBINE 4-3 AND RCP4.1									
77	HC	2									
	*										

78	KK	4-A									
79	KM	PORTION OF 2008 MPU BASIN RD1									
80	BA	0.3599									
81	PB	3.51									
82	LS	0	84.6								
83	UD	0.202									
	*										

84	KK	RCP4-A									
85	KM	ROUTE 4-A THROUGH 4-B									
86	KM	EXISTING NATURAL BRAIDED CHANNELS									
87	RD	3940	0.041	0.030	0	TRAP	100	0			
	*										

1

HEC-1 INPUT

PAGE 3

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

88	KK	4-B									
89	KM	PORTION OF 2008 MPU BASIN RD5=3.42 AND RD2=3.42									
90	BA	0.5403									
91	PB	3.42									
92	LS	0	86.3								
93	UD	0.331									
	*										

94	KK	CP4.3									
95	KM	COMBINE 4-A AND 4-B									
96	HC	2									
	*										
97	ZZ										

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT											
LINE	(V) ROUTING	(--->)	DIVERSION OR PUMP FLOW								
NO.	(.) CONNECTOR	(<---)	RETURN OF DIVERTED OR PUMPED FLOW								

36	4-1	
	V	
	V	
50	R4-1	
	.	

55 . 4-2
. .
. .
61 CP4.1.....
V
V
65 RCP4.1
. .
. .
69 . 4-3
. .
. .
75 CP4.2.....
. .
78 . 4-A
. V
. V
84 . RCP4-A
. .
. .
88 . 4-B
. .
. .
94 . CP4.3.....

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1*****

* *
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* *
* RUN DATE 08SEP17 TIME 15:24:04 *
* *

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

INPUT FILE DATE = NOVEMBER 30, 2016
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #3
MODELED BY VTN (SVB)

* REFERENCED HYDROLOGIC MODELS: *
* FLAMINGO / TROPICANA WASHES WATERSHED 2008 MPU FLAM3A *
* ALL PB CARDS WERE REFERENCED FROM THIS STUDY *

AREA	DARF
SQ. MI.	
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

10-YEAR, 6-HOUR STORM, SDN3
100-YEAR, 6-HOUR STORM, SDN3

33 IO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
NMIN 5 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 0055 ENDING TIME

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

JR	MULTI-RATIO OPTION		
	RATIOS OF PRECIPITATION		
	.99	.98	.95

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS

STATION	PEAK FLOW IN CUBIC FEET PER SECOND	AREA IN SQUARE MILES	TIME TO PEAK IN HOURS
---------	------------------------------------	----------------------	-----------------------

2 COMBINED AT

```

+          CP4.3      .90    1  FLOW      1196.  1170.  1127.  1085.  1068.  1056.  1048.  1034.
1017.
                                     TIME      3.75   3.75   3.75   3.75   3.75   3.75   3.75
3.75
1

```

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL		VOLUME (IN)
						PEAK (CFS)	TIME TO PEAK (MIN)	
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.54	4261.68	252.20	2.43	5.00	4250.85	250.00 2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5957E+03 EXCESS= .0000E+00 OUTFLOW= .5957E+03 BASIN STORAGE= .1728E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.55	4174.52	252.28	2.38	5.00	4164.08	250.00 2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5831E+03 EXCESS= .0000E+00 OUTFLOW= .5831E+03 BASIN STORAGE= .1527E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.56	4034.58	251.95	2.29	5.00	4019.77	250.00 2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5621E+03 EXCESS= .0000E+00 OUTFLOW= .5621E+03 BASIN STORAGE= .1967E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.58	3893.79	251.69	2.21	5.00	3874.79	250.00 2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5412E+03 EXCESS= .0000E+00 OUTFLOW= .5412E+03 BASIN STORAGE= .1840E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.59	3834.56	251.28	2.17	5.00	3816.47	250.00 2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5329E+03 EXCESS= .0000E+00 OUTFLOW= .5329E+03 BASIN STORAGE= .1948E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.60	3792.04	252.11	2.15	5.00	3777.80	250.00 2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5271E+03 EXCESS= .0000E+00 OUTFLOW= .5271E+03 BASIN STORAGE= .1848E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.60	3762.95	251.12	2.13	5.00	3748.36	250.00 2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5229E+03 EXCESS= .0000E+00 OUTFLOW= .5229E+03 BASIN STORAGE= .1898E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.61	3717.82	252.09	2.10	5.00	3702.97	250.00 2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5163E+03 EXCESS= .0000E+00 OUTFLOW= .5163E+03 BASIN STORAGE= .1625E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
R4-1	MANE	1.61	3664.05	251.72	2.07	5.00	3644.43	250.00 2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5080E+03 EXCESS= .0000E+00 OUTFLOW= .5080E+03 BASIN STORAGE= .1712E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP4.1	MANE	1.98	4346.94	253.16	2.40	5.00	4333.42	250.00 2.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6349E+03 EXCESS= .0000E+00 OUTFLOW= .6349E+03 BASIN STORAGE= .7665E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								

RCP4.1	MANE	1.99	4257.85	253.26	2.35	5.00	4244.94	250.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6214E+03 EXCESS= .0000E+00 OUTFLOW= .6214E+03 BASIN STORAGE= .7007E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.02	4114.92	252.81	2.26	5.00	4095.81	250.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5990E+03 EXCESS= .0000E+00 OUTFLOW= .5990E+03 BASIN STORAGE= .6541E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.05	3968.09	252.44	2.18	5.00	3947.65	250.00	2.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5766E+03 EXCESS= .0000E+00 OUTFLOW= .5767E+03 BASIN STORAGE= .6284E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.06	3906.47	251.91	2.14	5.00	3890.75	250.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5677E+03 EXCESS= .0000E+00 OUTFLOW= .5677E+03 BASIN STORAGE= .6565E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.07	3867.63	252.94	2.12	5.00	3848.52	250.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5615E+03 EXCESS= .0000E+00 OUTFLOW= .5615E+03 BASIN STORAGE= .6430E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.08	3832.18	253.73	2.10	5.00	3820.99	250.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5570E+03 EXCESS= .0000E+00 OUTFLOW= .5570E+03 BASIN STORAGE= .6549E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.09	3791.41	252.88	2.08	5.00	3771.83	250.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5500E+03 EXCESS= .0000E+00 OUTFLOW= .5500E+03 BASIN STORAGE= .7695E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4.1	MANE	2.10	3732.31	252.39	2.04	5.00	3712.81	250.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5411E+03 EXCESS= .0000E+00 OUTFLOW= .5411E+03 BASIN STORAGE= .6262E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP4-A	MANE	5.00	531.02	225.00	1.97	5.00	531.02	225.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3767E+02 EXCESS= .0000E+00 OUTFLOW= .3774E+02 BASIN STORAGE= .9678E-02 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
RCP4-A	MANE	5.00	519.79	225.00	1.92	5.00	519.79	225.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3680E+02 EXCESS= .0000E+00 OUTFLOW= .3686E+02 BASIN STORAGE= .9599E-02 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
RCP4-A	MANE	5.00	501.06	225.00	1.84	5.00	501.06	225.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3535E+02 EXCESS= .0000E+00 OUTFLOW= .3541E+02 BASIN STORAGE= .9465E-02 PERCENT ERROR=									
.2									
FOR PLAN = 1 RATIO= .00									
RCP4-A	MANE	5.00	482.33	225.00	1.77	5.00	482.33	225.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3392E+02 EXCESS= .0000E+00 OUTFLOW= .3398E+02 BASIN STORAGE= .9329E-02 PERCENT ERROR=									
.2									

FOR PLAN = 1 RATIO= .00
RCP4-A MANE 5.00 474.84 225.00 1.74 5.00 474.84 225.00 1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3334E+02 EXCESS= .0000E+00 OUTFLOW= .3340E+02 BASIN STORAGE= .9273E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
RCP4-A MANE 5.00 469.59 225.00 1.72 5.00 469.59 225.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3294E+02 EXCESS= .0000E+00 OUTFLOW= .3300E+02 BASIN STORAGE= .9234E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
RCP4-A MANE 5.00 465.85 225.00 1.70 5.00 465.85 225.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3266E+02 EXCESS= .0000E+00 OUTFLOW= .3272E+02 BASIN STORAGE= .9206E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
RCP4-A MANE 5.00 459.85 225.00 1.68 5.00 459.85 225.00 1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3220E+02 EXCESS= .0000E+00 OUTFLOW= .3227E+02 BASIN STORAGE= .9161E-02 PERCENT ERROR= -
.2

FOR PLAN = 1 RATIO= .00
RCP4-A MANE 5.00 452.36 225.00 1.65 5.00 452.36 225.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3164E+02 EXCESS= .0000E+00 OUTFLOW= .3170E+02 BASIN STORAGE= .9104E-02 PERCENT ERROR= -
.2

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

B.5.5 100-YEAR AREA 1 TRIBUTARY

B.5.5.Area 1

```
1*****
*****
*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* JUN 1998 *
*
* VERSION 4.1 *
*
*
* RUN DATE 13SEP17 TIME 13:11:21 *
*
*
*****
*****
```

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

```

X X XXXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXXX XXXX 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 -AMSK- 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 INPUT FILE DATE = SEPTEMBER 12,2017
2 ID DESIGN STORM = 100-YEAR 6-HR STORM
3 ID STORM DISTRIBUTION = SDN #3
4 ID MODELED BY VTN (JYA)
5 ID
6 ID *****
7 ID * AREA 1 HEC-1 MODEL *
8 ID * REFER TO LAND USE EXHIBIT BY VTN FOR LOCATION OF AREAS 1 *
9 ID * *
10 ID *****
11 ID
12 ID
13 ID
14 ID AREA DARF
15 ID SQ. MI.
16 ID 0-0.5 0.99
17 ID 0.5-1 0.975
18 ID 1-2 0.95
19 ID 2-3 0.925
20 ID 3-4 0.915
21 ID 4-5 0.908
22 ID 5-6 0.903
23 ID 6-7 0.895
24 ID 7-8 0.885
25 ID
26 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
27 ID
28 ID 100-YEAR, 6-HOUR STORM, SDN3
29 ID
30 ID 5 0 0 200
31 ID 5 0 0
32 ID 5 0 0
33 ID JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
34 ID *
35 ID *****
36 ID * THE FOLLOWING SECTION REFERENCES THE DB5/ALTA TRIBUTARY MODEL*
37 ID * "ALTA-SDN3.DAT" INCLUDED IN THIS DRAINAGE STUDY *
38 ID * SEE FIGURE A.6.4 FOR DB5/ALTA TRIBUTARY BASINS *
39 ID *****
39 KK 3-F
40 KM COMPARE TO MPU BASIN SWFH-5
41 BA 0.2815
42 PB 3.50
43 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
```


44	PC	0.13	0.13	0.13	0.133	0.14	0.142	0.148	0.158	0.172	0.181
45	PC	0.19	0.197	0.199	0.2	0.201	0.204	0.214	0.229	0.241	0.249
46	PC	0.251	0.256	0.27	0.278	0.281	0.283	0.295	0.322	0.352	0.409
47	PC	0.499	0.59	0.71	0.744	0.781	0.812	0.819	0.835	0.851	0.856
48	PC	0.86	0.868	0.876	0.888	0.91	0.926	0.937	0.95	0.97	0.976
49	PC	0.982	0.985	0.987	0.989	0.99	0.993	0.993	0.994	0.995	0.998
50	PC	0.998	0.999	1							

1 HEC-1 INPUT PAGE 2

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

51 LS 0 88.9
52 UD 0.152
*

53 KK R3-F
54 KM ROUTE 3-F THROUGH 3-G2 TO CP3.8
55 KM LINING RCB
56 RD 2650 0.055 0.013 0 TRAP 6 0
*

57 KK 3-G2
58 KM COMPARE TO MPU BASIN SWFH-6
59 BA 0.1285
60 PB 3.46
61 LS 0 93.2
62 UD 0.107
*

63 KK CP3.8
64 KM COMBINES 3-F AND 3-G2
65 HC 2
*

66 KK RCP3.8
67 KM ROUTE CP3.8 TO CP3.9
68 KM FACILITIES APD6000 AND APDF0000
69 RD 4500 0.075 0.013 0 TRAP 12 0
*

70 KK 3-A
71 KM DB5/ALTA TRIBUTARY BASIN
72 BA 0.3392
73 PB 3.57
74 LS 0 80.8
75 UD 0.234
*

76 KK R3-A
77 KM ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
78 RD 3000 0.032 0.013 0 TRAP 5 0
*

79 KK 3-B
80 KM COMPARE TO MPU BASIN SWFH-1
81 BA 0.6973
82 PB 3.57
83 LS 0 83.1
84 UD 0.274
*

1 HEC-1 INPUT PAGE 3

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

85 KK R3-B
86 KM ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
87 RD 3000 0.024 0.013 0 TRAP 5 0
*

88 KK 3-C
89 KM COMPARE TO MPU BASIN SWFH-2
90 BA 0.2888
91 PB 3.49
92 LS 0 88.4
93 UD 0.200
*

94 KK CPDBA-B
95 KO 0
96 KM COMBINE 3-A, 3-B, AND 3-C
97 KM PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
98 HC 3
*

99 KK GPDB
100 KM VILLAGE 22 DETENTION BASIN
101 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
102 KM FACILITY # = 0001
103 KM STORAGE VOLUME = 123 AC-FT
104 KM OUTLET = 60" RCP
105 KM 100-YEAR DISCHARGE =
106 KM SPILLWAY LENGTH = 1053'
107 KM SPILLWAY HEIGHT =
108 KM SPILLWAY CREST ELEVATION = 1007.9'

109 KM SPILLWAY TYPE =
 110 KM PMF DISCHARGE =
 111 KM TOP OF EMBANKMENT ELEVATION =
 112 KM INFORMATION REFERENCED FROM "SUMMERLIN VILLAGE 26 ULTIMATE/PROPOSED
 113 KM CONDITIONS" HYDRAOLOGIC MODEL BY G.C. WALLACE INC. (9-5-06)
 114 KM ELEVATIONS WITHIN THE STAGE-STORAGE-DISCHARGE CURVE WERE REDUCED BY 1000'
 115 KM IN ORDER FOR THE HYDROLOGIC MODEL TO RUN
 116 KO 3
 117 RS 1 STOR 0
 118 SV 6.54 12.78 19.92 28.03 37.17 46.61 59.93 75.75 94.29 115.85
 119 SV 129.61
 120 SE 10 12 14 16 18 20 22 24 26 28
 121 SE 30
 122 SQ 0 26.06 58.28 78.18 93.97 107.45 119.43 130.31 140.35 149.71
 123 SQ 158.53
 *
 124 KK 3-G1
 125 KM COMPARE TO MPU BASIN SWFH-6
 126 BA 0.1725
 127 PB 3.46
 128 LS 0 90
 129 UD 0.131
 *

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HEC-1 INPUT

PAGE 4

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

130 KK R3-G1
 131 KM ROUTE 3-G1 TO CP3-G1
 132 KM LINING RCB
 133 RD 1000 0.044 0.013 0 TRAP 6 0
 *

134 KK CP3-G1
 135 KM COMBINE 3-G1, AND GPDB
 136 HC 2
 *

137 KK RCP3-G1
 138 KM ROUTE 3P3-G1 TO CP3-H1
 139 KM LINING RCB
 140 RD 2603 0.044 0.013 0 TRAP 8 0
 *

141 KK 3-H1
 142 KM COMPARE TO MPU BASIN SWFH-9
 143 BA 0.0429
 144 PB 3.33
 145 LS 0 90.7
 146 UD 0.088
 *

147 KK CP3-H1
 148 KM COMBINE RCP3-G1, AND 3-H1
 149 HC 2
 *
 150 KM *****
 151 KM *END OF REFERENCED DB5/ALTA TRIBUTARY MODEL*
 152 KM *BEGIN AREA 1 MODEL *
 153 KM *****
 *

154 KK W63
 155 BA 0.0272
 156 PB 3.43
 157 LS 0 92.0
 158 UD 0.085
 *

159 KK CP1
 160 KM COMBINES BASINS CP3-H1 AND W63
 161 HC 2
 *

162 KK RCP1
 163 KM ROUTE CP1 TO CP2
 164 KM LINING RCB
 165 RD 340 0.044 0.013 0 TRAP 8 0
 *

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HEC-1 INPUT

PAGE 5

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

166 KK WP8
 167 BA 0.0019
 168 LS 0 88.0
 169 UD 0.075
 *

170 KK CP2
 171 KM COMBINES BASINS W63 AND WP8
 172 HC 2

```

*
173      KK      RCP2
174      KM      ROUTE CP2 TO CP3
175      KM      LINING RCB
176      RD      465    0.044    0.013        0    TRAP        8        0
*

177      KK      ST2
178      BA      0.0046
179      LS      0        98
180      UD      0.055
*

181      KK      CP3
182      KM      COMBINES BASINS CP2 AND ST2
183      HC      2
*

184      KK      RCP3
185      KM      ROUTE CP3 TO CP4
186      KM      LINING RCB
187      RD      620    0.044    0.013        0    TRAP        8        0
*

188      KK      W64
189      BA      0.0236
190      LS      0        92.0
191      UD      0.086
*

192      KK      CP4
193      KM      COMBINE CP3 AND W64
194      HC      2
*

195      KK      RCP4
196      KM      ROUTE CP4 TO CP5
197      KM      LINING RCB
198      RD      620    0.044    0.013        0    TRAP        8        0
*

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HEC-1 INPUT
PAGE 6

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

199      KK      W72
200      BA      0.0332
201      LS      0        95.0
202      UD      0.081
*

203      KK      CP5
204      KM      COMBINE BASINS CP4 AND W72
205      HC      2
*

206      KK      RCP5
207      KM      ROUTE CP5 TO CP6
208      KM      LINING RCB
209      RD      460    0.044    0.013        0    TRAP        8        0
*

210      KK      DES5
211      BA      0.0132
212      LS      0        94.0
213      UD      0.108
*

214      KK      CP6
215      KM      COMBINE CP5 AND DES5
216      HC      2
*

217      KK      W74
218      BA      0.0038
219      LS      0        94.0
220      UD      0.066
*

221      KK      RW74
222      KM      ROUTE W74 THROUGH EXISTING RCB TO CP7
223      KM      LINING RCB
224      RD      1596    0.051    0.013        0    TRAP        8        0
*

225      KK      W73
226      BA      0.0217
227      LS      0        94.0
228      UD      0.089
*

229      KK      RW73
230      KM      ROUTE W73 THROUGH EXISTING RCB TO CP7
231      KM      LINING RCB

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232 RD 1400 0.051 0.013 0 TRAP 8 0

*

HEC-1 INPUT

PAGE 7

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

233 KK CP7
 234 KM COMBINE CP3.8, CP6, W74, AND W73
 235 KM COMPARE TO CP3.9 IN DB5-ALTA TRIBUTARY MODEL
 236 HC 4
 *

237 KM *****
 238 KM * THE FOLLOWING SECTION REFERENCES THE DB5/ALTA TRIBUTARY MODEL*
 239 KM * "ALTA-SDN3.DAT" INCLUDED IN THIS DRAINAGE STUDY *
 240 KM * SEE FIGURE A.6.4 FOR DB5/ALTA TRIBUTARY BASINS *
 241 KM *****
 *

242 KK 3-0
 243 KM COMPARE TO MPU BASIN SV22-2
 244 BA 0.1124
 245 PB 3.46
 246 LS 0 92.6
 247 UD 0.123
 *

248 KK R3-0
 249 KM ROUTE 3-0 TO CP3-P
 250 KM LINING RCB
 251 RD 3260 0.028 0.013 0 TRAP 4 0
 *

252 KK 3-P
 253 KM COMPARE TO MPU BASIN SV22-2
 254 BA 0.3887
 255 PB 3.46
 256 LS 0 90.2
 257 UD 0.212
 *

258 KK CP3-P
 259 HC 2
 *

260 KK RCP3-P
 261 KM ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q
 262 RD 2750 0.033 0.013 0 TRAP 10 0
 *

263 KM *****
 264 KM *END OF REFERENCED DB5/ALTA TRIBUTARY MODEL*
 265 KM *CONTINUE AREA 1 MODEL *
 266 KM *****
 *

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HEC-1 INPUT

PAGE 8

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

267 KK 3-Q
 268 KM REDUCED AREA FROM DB5/ALTA FOR AREA 1 BASINS
 269 BA 0.1308
 270 PB 3.46
 271 LS 0 92.8
 272 UD 0.162
 *

273 KK CP3-Q
 274 KM COMBINES CP3-P AND 3-Q
 275 HC 2
 *

276 KK W44
 277 BA 0.0075
 278 LS 0 95.0
 279 UD 0.067
 *

280 KK W45
 281 BA 0.0113
 282 PB 3.43
 283 LS 0 95.0
 284 UD 0.080
 *

285 KK WP6
 286 BA 0.0035
 287 LS 0 88.0
 288 UD 0.083
 *

289 KK CP8
 290 KM COMBINE CP3-Q, W44, W45, AND WP6

291	HC	4						
	*							
292	KK	RCP8						
293	KM	ROUTE CP8 THROUGH STORM DRAIN TO CP9						
294	RD	715 0.015 0.013 0 TRAP	10	0				
	*							
295	KK	W42						
296	BA	0.0088						
297	LS	0	95.0					
298	UD	0.063						
	*							
299	KK	W43						
300	BA	0.0042						
301	LS	0	95.0					
302	UD	0.058						
	*							

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HEC-1 INPUT

PAGE 9

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
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303	KK	WP5						
304	BA	0.0019						
305	LS	0	88.0					
306	UD	0.084						
	*							
307	KK	CWP5						
308	KM	COMBINE BASINS W42,W43, AND WP5						
309	HC	3						
	*							
310	KK	RCWP5						
311	KM	ROUTE CP8 CWP5 TO CDES1						
312	RD	340 0.005 0.013 0 CIRC	4					
	*							
313	KK	DES1						
314	BA	0.0026						
315	LS	0	98					
316	UD	0.066						
	*							
317	KK	CDES1						
318	KM	COMBINE CWP5 AND DES1						
319	HC	2						
	*							
320	KK	W47						
321	BA	0.0085						
322	LS	0	95.0					
323	UD	0.064						
	*							
324	KK	W46						
325	BA	0.0046						
326	LS	0	95.0					
327	UD	0.067						
	*							
328	KK	SUMM1						
329	BA	0.0067						
330	PB	3.43						
331	LS	0	98					
332	UD	0.093						
	*							
333	KK	CW46						
334	KM	COMBINE BASINS W46, W47, AND SUMM1						
335	HC	3						
	*							

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HEC-1 INPUT

PAGE 10

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

336	KK	CSUMM1						
337	KM	COMBINE BASINS CDES1 AND CW46						
338	HC	2						
	*							
339	KK	RCSUMM1						
340	KM	ROUTE CP8 CWP5 TO CDES1						
341	RD	440 0.005 0.013 0 CIRC	5					
	*							
342	KK	W48						
343	BA	0.0119						
344	PB	3.43						
345	LS	0	93.0					
346	UD	0.100						
	*							

```

347      KK      RW48
348      KM      ROUTE CW48 TO CW57
349      RD      440    0.065    0.013        0    CIRC        3
      *

350      KK      W57
351      BA      0.0048
352      LS      0      93.1
353      UD      0.069
      *

354      KK      CW57
355      KM      COMBINE W48 AND W57
356      HC      2
      *

357      KK      RCW57
358      KM      ROUTE CW57 TO CW56
359      RD      330    0.060    0.013        0    CIRC        3
      *

360      KK      W56
361      BA      0.0055
362      LS      0      93.1
363      UD      0.073
      *

364      KK      CW56
365      KM      COMBINE W56 AND W57
366      HC      2
      *

```

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HEC-1 INPUT

PAGE 11

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

```

367      KK      RCW56
368      KM      ROUTE CW56 TO CST1
369      RD      330    0.055    0.013        0    CIRC        3
      *

370      KK      W55
371      BA      0.0048
372      LS      0      93.1
373      UD      0.076
      *

374      KK      W49
375      BA      0.0106
376      LS      0      95
377      UD      0.080
      *

378      KK      ST1
379      BA      0.0025
380      LS      0      98
381      UD      0.038
      *

382      KK      CST1
383      KM      COMBINES CSUMM1, CW56, W55, W49, AND ST1
384      HC      5
      *

385      KK      RCST1
386      KM      ROUTE CST1 TO CWP7
387      RD      330    0.055    0.013        0    CIRC        6
      *

388      KK      WP7
389      BA      0.0014
390      LS      0      89.0
391      UD      0.073
      *

392      KK      CWP7
393      KM      COMBINE CST1 AND WP7
394      HC      2
      *

395      KK      RCWP7
396      KM      ROUTE CWP7 TO CW53
397      RD      470    0.050    0.013        0    CIRC        6
      *

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HEC-1 INPUT

PAGE 12

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

```

398      KK      W53
399      BA      0.0040
400      LS      0      93.1
401      UD      0.069
      *

```

402	KK	CW53						
403	KM	COMBINE CWP7 AND W53						
404	HC	2						
	*							
405	KK	RCW53						
406	KM	ROUTE CW53 TO CST3						
407	RD	300 0.050 0.013	0	CIRC		6		
	*							
408	KK	W50						
409	BA	0.0094						
410	LS	0	95.0					
411	UD	0.078						
	*							
412	KK	ST3						
413	BA	0.0033						
414	LS	0	98.0					
415	UD	0.040						
	*							
416	KK	CST3						
417	KM	COMBINE CW53, W50 AND ST3						
418	HC	3						
	*							
419	KK	SUMM2						
420	BA	0.0054						
421	LS	0	98					
422	UD	0.053						
	*							
423	KK	CP9						
424	KM	COMBINE CP8, SUMM2 AND CST3						
425	HC	3						
	*							
426	KK	RCP9						
427	KM	ROUTE CP9 THROUGH STORM DRAIN TO CP10						
428	RD	980 0.015 0.013	0	TRAP		10	0	
	*							

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HEC-1 INPUT

PAGE 13

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

429	KK	CARR1						
430	BA	0.0055						
431	LS	0	98.0					
432	UD	0.060						
	*							
433	KK	W52						
434	BA	0.0142						
435	LS	0	92.0					
436	UD	0.083						
	*							
437	KK	CP10						
438	KM	COMBINE CP9, CARR1. AND W52						
439	HC	3						
	*							
440	KK	W58						
441	BA	0.0106						
442	LS	0	92.0					
443	UD	0.080						
	*							
444	KK	DES3						
445	BA	0.0066						
446	LS	0	98					
447	UD	0.042						
	*							
448	KK	CDES3						
449	KM	COMBINE W58 AND DES3						
450	HC	2						
	*							
451	KK	RDES3						
452	KM	ROUTE DES3 TO CP59						
453	RD	840 0.050 0.013	0	CIRC		4		
	*							
454	KK	W54						
455	BA	0.0056						
456	PB	3.43						
457	LS	0	93.1					
458	UD	0.072						
	*							
459	KK	W59						

460 BA 0.0081
461 LS 0 93.1
462 UD 0.074
*

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HEC-1 INPUT

PAGE 14

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

463 KK CW59
464 KM COMBINE DES3, CP12 AND CST3
465 HC 3
*

466 KK RCW59
467 KM ROUTE CW59 TO CST4
468 RD 840 0.050 0.013 0 CIRC 5
*

469 KK ST4
470 BA 0.0056
471 LS 0 98
472 UD 0.053
*

473 KK CST4
474 KM COMBINE CW59 AND CST4
475 HC 2
*

476 KK CP11
477 KM COMBINE CP10, CST4
478 HC 2
*

479 KK RCP11
480 KM ROUTE CP11 THROUGH STORM DRAIN TO CP12
481 RD 360 0.015 0.013 0 TRAP 10 0
*

482 KK W60
483 BA 0.0085
484 LS 0 92.0
485 UD 0.081
*

486 KK ST5
487 BA 0.0023
488 PB 3.43
489 LS 0 98
490 UD 0.037
*

491 KK CP12
492 KM COMBINE CP11, W60 AND ST5
493 HC 3
*

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HEC-1 INPUT

PAGE 15

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

494 KK RCP12
495 KM ROUTE CP21 THROUGH STORM DRAIN TO CP13
496 RD 360 0.015 0.013 0 TRAP 10 0
*

497 KK W62
498 BA 0.0090
499 PB 3.43
500 LS 0 92.0
501 UD 0.092
*

502 KK CP13
503 KM COMBINE CP12 AND W62
504 HC 2
*

505 KK DES2
506 BA 0.0030
507 LS 0 98
508 UD 0.062
*

509 KK WPW3
510 BA 0.0142
511 LS 0 88.0
512 UD 0.107
*

513 KK CWPW3
514 KM COMBINE DES2 AND WPW3
515 HC 2
*

516 KK RCWPW3
 517 KM ROUTE CW59 TO CST4
 518 RD 1550 0.050 0.025 0 TRAP 5 0
 *
 519 KK WPW4
 520 BA 0.0171
 521 LS 0 88.0
 522 UD 0.110
 *
 523 KK CARR2
 524 BA 0.0039
 525 LS 0 98.0
 526 UD 0.068
 *

1

HEC-1 INPUT

PAGE 16

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

527 KK CP14
 528 KM COMBINE CP13, WPW3, WPW4, AND CARR2
 529 HC 4
 *
 530 KK W65
 531 BA 0.0206
 532 LS 0 91.0
 533 UD 0.107
 *
 534 KK RW65
 535 KM ROUTE W65 TO CST6
 536 RD 930 0.050 0.013 0 CIRC 3
 *
 537 KK ST6
 538 BA 0.0047
 539 PB 3.43
 540 LS 0 98
 541 UD 0.058
 *
 542 KK CST6
 543 KM COMBINE CP14 AND W62
 544 HC 2
 *
 545 KK CP15
 546 KM COMBINE CP14 AND CST6
 547 HC 2
 *
 548 KK RCP15
 549 KM ROUTE CP15 THROUGH STORM DRAIN TO CP16
 550 RD 550 0.015 0.013 0 TRAP 10 0
 *
 551 KK WP9
 552 BA 0.0039
 553 LS 0 88.0
 554 UD 0.081
 *
 555 KK RWP9
 556 KM ROUTE W65 TO CST6
 557 RD 900 0.050 0.013 0 CIRC 3
 *

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HEC-1 INPUT

PAGE 17

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

558 KK W66
 559 BA 0.0245
 560 LS 0 91.0
 561 UD 0.087
 *
 562 KK CP16
 563 KM COMBINE CP15, WP9 AND W66
 564 HC 3
 *
 565 KK RCP16
 566 KM ROUTE CP16 THROUGH STORM DRAIN TO CP17
 567 RD 920 0.015 0.013 0 TRAP 10 0
 *
 568 KK W69
 569 BA 0.0220
 570 PB 3.43
 571 LS 0 92

572	UD	0.103	
	*		
573	KK	CP17	
574	KM	COMBINE CP16 AND W69	
575	HC	2	
	*		
576	KK	W70	
577	BA	0.0030	
578	LS	0	95.0
579	UD	0.068	
	*		
580	KK	W71	
581	BA	0.0235	
582	LS	0	92.0
583	UD	0.088	
	*		
584	KK	CP18	
585	KM	COMBINE CP17, W70, AND W71	
586	HC	3	
	*		
587	KK	CP19	
588	KM	COMBINE CP18 AND CP7	
589	HC	2	
	*		

1

HEC-1 INPUT

PAGE 18

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

590	KK	W51	
591	BA	0.0317	
592	LS	0	95.0
593	UD	0.093	
	*		
594	KK	W61	
595	BA	0.0289	
596	LS	0	92.0
597	UD	0.106	
	*		
598	KK	W67	
599	BA	0.0090	
600	LS	0	95.0
601	UD	0.086	
	*		
602	KK	W68	
603	BA	0.0340	
604	LS	0	95.0
605	UD	0.091	
	*		
606	KK	CP20	
607	KM	COMBINE W51, W61, W67, AND W68	
608	KM	COMBINES IN EXISTING CHANNEL	
609	HC	4	
	*		
	*		
610	ZZ		

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT			
LINE	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW	
NO.	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW	
39	3-F		
	V		
	V		
53	R3-F		
	.		
57	.	3-G2	
	.	.	
	.	.	
63	CP3.8.....		
	V		
	V		
66	RCP3.8		
	.		
	.		
70	.	3-A	
	.	V	
	.	V	
76	.	R3-A	
	.	.	
	.	.	
79	.	.	3-B
	.	.	V

85	.	.	V	
	.	.	R3-B	
	.	.	.	
88	.	.	.	3-C
	.	.	.	.
	.	.	.	.
94	.	CPDBA-B	.	.
	.	V	.	.
	.	V	.	.
99	.	GPDB	.	.
	.	.	.	.
	.	.	.	.
124	.	.	3-G1	.
	.	.	V	.
	.	.	V	.
130	.	.	R3-G1	.
	.	.	.	.
	.	.	.	.
134	.	CP3-G1	.	.
	.	V	.	.
	.	V	.	.
137	.	RCP3-G1	.	.
	.	.	.	.
	.	.	.	.
141	.	.	3-H1	.
	.	.	.	.
	.	.	.	.
147	.	CP3-H1	.	.
	.	.	.	.
	.	.	.	.
154	.	.	W63	.
	.	.	.	.
	.	.	.	.
159	.	CP1	.	.
	.	V	.	.
	.	V	.	.
162	.	RCP1	.	.
	.	.	.	.
	.	.	.	.
166	.	.	WP8	.
	.	.	.	.
	.	.	.	.
170	.	CP2	.	.
	.	V	.	.
	.	V	.	.
173	.	RCP2	.	.
	.	.	.	.
	.	.	.	.
177	.	.	ST2	.
	.	.	.	.
	.	.	.	.
181	.	CP3	.	.
	.	V	.	.
	.	V	.	.
184	.	RCP3	.	.
	.	.	.	.
	.	.	.	.
188	.	.	W64	.
	.	.	.	.
	.	.	.	.
192	.	CP4	.	.
	.	V	.	.
	.	V	.	.
195	.	RCP4	.	.
	.	.	.	.
	.	.	.	.
199	.	.	W72	.
	.	.	.	.
	.	.	.	.
203	.	CP5	.	.
	.	V	.	.
	.	V	.	.
206	.	RCP5	.	.
	.	.	.	.
	.	.	.	.
210	.	.	DES5	.
	.	.	.	.
	.	.	.	.
214	.	CP6	.	.
	.	.	.	.
	.	.	.	.
217	.	.	W74	.
	.	.	V	.
	.	.	V	.
221	.	.	RW74	.
	.	.	.	.
	.	.	.	.
225	.	.	.	W73
	.	.	.	V
	.	.	.	V
229	.	.	.	RW73
	.	.	.	.
	.	.	.	.
233	.	CP7	.	.

242	.	3-O			
	.	V			
	.	V			
248	.	R3-O			
	.	.			
252	.	.	3-P		
	.	.	.		
258	.	CP3-P.....			
	.	V			
	.	V			
260	.	RCP3-P			
	.	.			
267	.	.	3-Q		
	.	.	.		
273	.	CP3-Q.....			
	.	.			
276	.	.	W44		
	.	.	.		
280	.	.	.	W45	
	.	.	.	.	
285	.	.	.	.	WP6
	.	.	.	.	.
289	.	CP8.....			
	.	V			
	.	V			
292	.	RCP8			
	.	.			
295	.	.	W42		
	.	.	.		
299	.	.	.	W43	
	.	.	.	.	
303	.	.	.	.	WP5
	.	.	.	.	.
307	.	.	CWP5.....		
	.	.	V		
	.	.	V		
310	.	.	RCWP5		
	.	.	.		
313	.	.	.	DES1	
	.	.	.	.	
317	.	.	CDES1.....		
	.	.	.		
320	.	.	.	W47	
	.	.	.	.	
324	.	.	.	.	W46
	.	.	.	.	.
328	.	.	.	.	SUMM1
	.	.	.	.	.
333	.	.	.	CW46.....	
	.	.	.	.	
336	.	.	CSUMM1.....		
	.	.	V		
	.	.	V		
339	.	.	RCSUMM1		
	.	.	.		
342	.	.	.	W48	
	.	.	.	V	
	.	.	.	V	
347	.	.	.	RW48	
	.	.	.	.	
350	.	.	.	.	W57
	.	.	.	.	.
354	.	.	.	Cw57.....	
	.	.	.	V	
	.	.	.	V	
357	.	.	.	RCW57	
	.	.	.	.	
360	.	.	.	.	W56
	.	.	.	.	.
	.	.	.	.	.

364	.	.	.	Cw56.....			
	.	.	.	V			
	.	.	.	V			
367	.	.	.	RCW56			
	.	.	.	.			
370	.	.	.	.	W55		
	.	.	.	.	.		
374	.	.	.	.	.	W49	
	.	.	.	.	.	.	
378	.	.	.	.	.	.	ST1
	.	.	.	.	.	.	.
	.	.	.	.	.	.	.
382	.	.	.	CST1.....			
	.	.	.	V			
	.	.	.	V			
385	.	.	.	RCST1			
	.	.	.	.			
388	.	.	.	.	WP7		
	.	.	.	.	.		
	.	.	.	.	.		
392	.	.	.	CWP7.....			
	.	.	.	V			
	.	.	.	V			
395	.	.	.	RCWP7			
	.	.	.	.			
398	.	.	.	.	W53		
	.	.	.	.	.		
	.	.	.	.	.		
402	.	.	.	CW53.....			
	.	.	.	V			
	.	.	.	V			
405	.	.	.	RCW53			
	.	.	.	.			
408	.	.	.	.	W50		
	.	.	.	.	.		
412	.	.	.	.	.	ST3	
	.	.	.	.	.	.	
	.	.	.	.	.	.	
416	.	.	.	CST3.....			
	.	.	.	.			
419	.	.	.	.	SUMM2		
	.	.	.	.	.		
	.	.	.	.	.		
423	.	.	.	CP9.....			
	.	.	.	V			
	.	.	.	V			
426	.	.	.	RCP9			
	.	.	.	.			
429	.	.	.	CARR1			
	.	.	.	.			
433	.	.	.	.	W52		
	.	.	.	.	.		
	.	.	.	.	.		
437	.	.	.	CP10.....			
	.	.	.	.			
440	.	.	.	.	W58		
	.	.	.	.	.		
444	.	.	.	.	DES3		
	.	.	.	.	.		
	.	.	.	.	.		
448	.	.	.	CDES3.....			
	.	.	.	V			
	.	.	.	V			
451	.	.	.	RDES3			
	.	.	.	.			
454	.	.	.	.	W54		
	.	.	.	.	.		
459	.	.	.	.	.	W59	
	.	.	.	.	.	.	
	.	.	.	.	.	.	
463	.	.	.	CW59.....			
	.	.	.	V			
	.	.	.	V			
466	.	.	.	RCW59			
	.	.	.	.			
469	.	.	.	.	ST4		
	.	.	.	.	.		
	.	.	.	.	.		
473	.	.	.	CST4.....			
	.	.	.	.			

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476 .      .      .
      .      CP11.....
      .      V
479 .      .      V
      .      RCP11
      .      .
482 .      .      .      W60
      .      .      .
486 .      .      .      .      ST5
      .      .      .
491 .      .      .      .      .
      .      .      CP12.....
      .      .      V
494 .      .      .      V
      .      .      RCP12
      .      .
497 .      .      .      W62
      .      .      .
502 .      .      .      .
      .      .      CP13.....
      .      .
505 .      .      .      DES2
      .      .      .
509 .      .      .      .      WPW3
      .      .      .
513 .      .      .      .      .
      .      .      .      CWPW3.....
      .      .      .      V
516 .      .      .      .      V
      .      .      .      RCWPW3
      .      .      .
519 .      .      .      .      WPW4
      .      .      .
523 .      .      .      .      .      CARR2
      .      .      .
527 .      .      .      .      .      .
      .      .      .      CP14.....
      .      .
530 .      .      .      .      W65
      .      .      .      V
534 .      .      .      .      V
      .      .      .      RW65
      .      .      .
537 .      .      .      .      .      ST6
      .      .      .
542 .      .      .      .      .      CST6.....
      .      .      .
545 .      .      .      .      .      .
      .      .      .      .      CP15.....
      .      .      .      .      V
548 .      .      .      .      .      V
      .      .      .      .      RCP15
      .      .
551 .      .      .      .      .      WP9
      .      .      .      .      V
555 .      .      .      .      .      V
      .      .      .      .      RWP9
      .      .      .
558 .      .      .      .      .      .      W66
      .      .      .
562 .      .      .      .      .      .
      .      .      .      .      .      CP16.....
      .      .      .      .      .      V
565 .      .      .      .      .      V
      .      .      .      .      .      RCP16
      .      .
568 .      .      .      .      .      W69
      .      .      .
573 .      .      .      .      .      .
      .      .      .      .      .      CP17.....
      .      .
576 .      .      .      .      .      W70
      .      .      .
580 .      .      .      .      .      .      W71
      .      .      .
584 .      .      .      .      .      .      .
      .      .      .      .      .      .      CP18.....
      .      .
587 .      .      .      .      .      .      .
      .      .      .      .      .      .      .      CP19.....

```

```

590      .      W51
      .      .
      .      .
594      .      W61
      .      .
      .      .
598      .      W67
      .      .
      .      .
602      .      W68
      .      .
      .      .
606      .      CP20.....

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1*****

```

*
*      FLOOD HYDROGRAPH PACKAGE (HEC-1)
*
*      JUN 1998
*
*      VERSION 4.1
*
*      RUN DATE 13SEP17 TIME 13:11:21
*
*****
*****

```

```

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

```

INPUT FILE DATE = SEPTEMBER 12,2017
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN #3
MODELED BY VTN (JYA)

```

*****
* AREA 1 HEC-1 MODEL
* REFER TO LAND USE EXHIBIT BY VTN FOR LOCATION OF AREAS 1
*
*****

```

AREA	DARF
SQ. MI.	
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)

100-YEAR, 6-HOUR STORM, SDN3

31 IO

OUTPUT CONTROL VARIABLES

```

IPRNT      5 PRINT CONTROL
IPLOT      0 PLOT CONTROL
QSCAL      0. HYDROGRAPH PLOT SCALE

```

```

*****
* THE FOLLOWING SECTION REFERENCES THE DB5/ALTA TRIBUTARY MODEL*
* "ALTA-SDN3.DAT" INCLUDED IN THIS DRAINAGE STUDY
* SEE FIGURE A.6.4 FOR DB5/ALTA TRIBUTARY BASINS
*****

```

IT

HYDROGRAPH TIME DATA

```

NMIN      5 MINUTES IN COMPUTATION INTERVAL
IDATE      1 0 STARTING DATE
ITIME      0000 STARTING TIME
NQ         200 NUMBER OF HYDROGRAPH ORDINATES
NDDATE     1 0 ENDING DATE
NDTIME     1635 ENDING TIME
ICENT      19 CENTURY MARK

```

```

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 16.58 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
        .99      .98      .95      .93      .92      .91      .90      .89      .88

***
***

*****
*          *
94 KK    *  CPDBA-B  *
*          *
*****

95 KO      OUTPUT CONTROL VARIABLES
          IPRNT      5  PRINT CONTROL
          IPLOT      0  PLOT CONTROL
          QSCAL      0.  HYDROGRAPH PLOT SCALE

***
***

*****
*          *
99 KK      GPDB  *
*          *
*****

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

HYDROGRAPH ROUTING DATA

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

118 SV      STORAGE      6.5      12.8      19.9      28.0      37.2      46.6      59.9      75.8      94.3
115.8
          129.6

120 SE      ELEVATION    10.00     12.00     14.00     16.00     18.00     20.00     22.00     24.00     26.00
28.00
          30.00

122 SQ      DISCHARGE    0.         26.         58.         78.         94.         107.        119.        130.        140.
150.
          159.

***

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

HYDROGRAPH AT STATION      GPDB
FOR PLAN 1, RATIO = .99

PEAK FLOW      TIME
+ (CFS)        (HR)
+ 147.         5.42
          (CFS)
          (INCHES)
          (AC-FT)
          6-HR      24-HR      72-HR      16.58-HR
          138.      88.      88.      88.
          .965      1.708      1.708      1.708
          68.      121.      121.      121.

PEAK STORAGE    TIME
+ (AC-FT)       (HR)
+ 110.          5.42
          6-HR      24-HR      72-HR      16.58-HR
          90.      49.      49.      49.

PEAK STAGE      TIME
+ (FEET)        (HR)
+ 27.43         5.42
          6-HR      24-HR      72-HR      16.58-HR
          25.48     18.92     18.92     18.92

CUMULATIVE AREA = 1.33 SQ MI

```


***	***	***	***	***
HYDROGRAPH AT STATION GPDB				
FOR PLAN 1, RATIO = .98				
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+	(CFS)	(HR)		16.58-HR
+	146.	5.42		
	(CFS)			
	(INCHES)	136.	86.	86.
	(AC-FT)	.955	1.673	1.673
		68.	118.	118.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+	(AC-FT)	(HR)		16.58-HR
	107.	5.42		
		88.	47.	47.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE	
		6-HR	24-HR	72-HR
+	(FEET)	(HR)		16.58-HR
	27.17	5.42		
		25.20	18.67	18.67
CUMULATIVE AREA = 1.33 SQ MI				

***	***	***	***	***
HYDROGRAPH AT STATION GPDB				
FOR PLAN 1, RATIO = .95				
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+	(CFS)	(HR)		16.58-HR
+	144.	5.42		
	(CFS)			
	(INCHES)	134.	83.	83.
	(AC-FT)	.939	1.614	1.614
		66.	114.	114.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+	(AC-FT)	(HR)		16.58-HR
	102.	5.42		
		83.	45.	45.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE	
		6-HR	24-HR	72-HR
+	(FEET)	(HR)		16.58-HR
	26.73	5.42		
		24.74	18.26	18.26
CUMULATIVE AREA = 1.33 SQ MI				

***	***	***	***	***
HYDROGRAPH AT STATION GPDB				
FOR PLAN 1, RATIO = .93				
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+	(CFS)	(HR)		16.58-HR
+	142.	5.42		
	(CFS)			
	(INCHES)	131.	80.	80.
	(AC-FT)	.922	1.553	1.553
		65.	110.	110.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+	(AC-FT)	(HR)		16.58-HR
	98.	5.42		
		79.	42.	42.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE	
		6-HR	24-HR	72-HR
+	(FEET)	(HR)		16.58-HR
	26.30	5.42		
		24.27	17.85	17.85
CUMULATIVE AREA = 1.33 SQ MI				

***	***	***	***	***
HYDROGRAPH AT STATION GPDB				
FOR PLAN 1, RATIO = .92				
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW	
		6-HR	24-HR	72-HR
+	(CFS)	(HR)		16.58-HR
+	141.	5.42		
	(CFS)			
	(INCHES)	130.	79.	79.
	(AC-FT)	.915	1.528	1.528
		65.	108.	108.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE	
		6-HR	24-HR	72-HR
+	(AC-FT)	(HR)		16.58-HR
	96.	5.42		
		77.	41.	41.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE	STAGE	
+ (FEET)	(HR)			24-HR	72-HR	16.58-HR
26.13	5.42		24.07	17.69	17.69	17.69

CUMULATIVE AREA = 1.33 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		16.58-HR
+ (CFS)	(HR)			24-HR	72-HR	
140.	5.42	(CFS)	130.	78.	78.	78.
		(INCHES)	.909	1.511	1.511	1.511
		(AC-FT)	64.	107.	107.	107.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		16.58-HR
+ (AC-FT)	(HR)			24-HR	72-HR	
94.	5.42		76.	40.	40.	40.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		16.58-HR
+ (FEET)	(HR)			24-HR	72-HR	
26.01	5.42		23.93	17.57	17.57	17.57

CUMULATIVE AREA = 1.33 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .90

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		16.58-HR
+ (CFS)	(HR)			24-HR	72-HR	
140.	5.33	(CFS)	129.	77.	77.	77.
		(INCHES)	.906	1.498	1.498	1.498
		(AC-FT)	64.	106.	106.	106.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		16.58-HR
+ (AC-FT)	(HR)			24-HR	72-HR	
94.	5.42		75.	40.	40.	40.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		16.58-HR
+ (FEET)	(HR)			24-HR	72-HR	
25.92	5.42		23.83	17.49	17.49	17.49

CUMULATIVE AREA = 1.33 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .89

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		16.58-HR
+ (CFS)	(HR)			24-HR	72-HR	
139.	5.33	(CFS)	128.	76.	76.	76.
		(INCHES)	.900	1.478	1.478	1.478
		(AC-FT)	64.	104.	104.	104.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		16.58-HR
+ (AC-FT)	(HR)			24-HR	72-HR	
92.	5.33		74.	39.	39.	39.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		16.58-HR
+ (FEET)	(HR)			24-HR	72-HR	
25.76	5.33		23.68	17.36	17.36	17.36

CUMULATIVE AREA = 1.33 SQ MI

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

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .88

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		16.58-HR
+ (CFS)	(HR)			24-HR	72-HR	

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ROUTED TO												
+ 138.	GPDB	1.33	1	FLOW	147.	146.	144.	142.	141.	140.	140.	139.
5.33				TIME	5.42	5.42	5.42	5.42	5.42	5.42	5.33	5.33
** PEAK STAGES IN FEET **												
25.56			1	STAGE	27.43	27.17	26.73	26.30	26.13	26.01	25.92	25.76
5.33				TIME	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.33
HYDROGRAPH AT												
+ 295.	3-G1	.17	1	FLOW	340.	333.	323.	312.	308.	305.	303.	299.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 293.	R3-G1	.17	1	FLOW	338.	332.	321.	310.	306.	303.	301.	298.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT												
+ 368.	CP3-G1	1.50	1	FLOW	425.	417.	404.	390.	385.	381.	378.	374.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 361.	RCP3-G1	1.50	1	FLOW	418.	410.	396.	383.	377.	374.	371.	366.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 79.	3-H1	.04	1	FLOW	91.	89.	86.	83.	82.	81.	81.	80.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT												
+ 429.	CP3-H1	1.54	1	FLOW	496.	487.	470.	455.	448.	444.	441.	435.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 55.	W63	.03	1	FLOW	62.	61.	59.	58.	57.	56.	56.	55.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT												
+ 475.	CP1	1.57	1	FLOW	548.	538.	520.	503.	496.	491.	488.	482.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 474.	RCP1	1.57	1	FLOW	547.	537.	520.	502.	495.	490.	487.	481.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 3.	WP8	.00	1	FLOW	4.	4.	4.	4.	4.	4.	4.	4.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT												
+ 477.	CP2	1.57	1	FLOW	551.	540.	523.	505.	498.	493.	490.	484.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO												
+ 476.	RCP2	1.57	1	FLOW	550.	539.	522.	504.	497.	492.	489.	483.
3.58				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT												
+ 12.	ST2	.00	1	FLOW	13.	13.	12.	12.	12.	12.	12.	12.
3.50				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT												
+ 482.	CP3	1.57	1	FLOW	557.	547.	529.	511.	504.	499.	496.	490.

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HYDROGRAPH AT + 6. 3.50	DES1	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50
2 COMBINED AT + 39. 3.50	CDES1	.02	1	FLOW TIME	44. 3.50	44. 3.50	42. 3.50	41. 3.50	41. 3.50	40. 3.50	40. 3.50	40. 3.50
HYDROGRAPH AT + 20. 3.50	W47	.01	1	FLOW TIME	22. 3.50	22. 3.50	21. 3.50	21. 3.50	21. 3.50	20. 3.50	20. 3.50	20. 3.50
HYDROGRAPH AT + 11. 3.50	W46	.00	1	FLOW TIME	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50
HYDROGRAPH AT + 15. 3.50	SUMM1	.01	1	FLOW TIME	17. 3.50	16. 3.50	16. 3.50	16. 3.50	15. 3.50	15. 3.50	15. 3.50	15. 3.50
3 COMBINED AT + 45. 3.50	CW46	.02	1	FLOW TIME	51. 3.50	50. 3.50	49. 3.50	47. 3.50	47. 3.50	47. 3.50	46. 3.50	46. 3.50
2 COMBINED AT + 84. 3.50	CSUMM1	.04	1	FLOW TIME	95. 3.50	94. 3.50	91. 3.50	89. 3.50	88. 3.50	87. 3.50	87. 3.50	86. 3.50
ROUTED TO + 82. 3.50	RCSUMM1	.04	1	FLOW TIME	93. 3.50	91. 3.50	89. 3.50	86. 3.50	85. 3.50	85. 3.50	84. 3.50	83. 3.50
HYDROGRAPH AT + 23. 3.50	W48	.01	1	FLOW TIME	27. 3.50	26. 3.50	25. 3.50	25. 3.50	24. 3.50	24. 3.50	24. 3.50	24. 3.50
ROUTED TO + 23. 3.50	RW48	.01	1	FLOW TIME	26. 3.50	26. 3.50	25. 3.50	24. 3.50	24. 3.50	24. 3.50	24. 3.50	23. 3.50
HYDROGRAPH AT + 10. 3.50	W57	.00	1	FLOW TIME	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50
2 COMBINED AT + 33. 3.50	Cw57	.02	1	FLOW TIME	38. 3.50	37. 3.50	36. 3.50	35. 3.50	35. 3.50	34. 3.50	34. 3.50	34. 3.50
ROUTED TO + 33. 3.50	RCW57	.02	1	FLOW TIME	38. 3.50	37. 3.50	36. 3.50	35. 3.50	34. 3.50	34. 3.50	34. 3.50	34. 3.50
HYDROGRAPH AT + 12. 3.50	W56	.01	1	FLOW TIME	13. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	12. 3.50	12. 3.50	12. 3.50
2 COMBINED AT + 45. 3.50	Cw56	.02	1	FLOW TIME	51. 3.50	50. 3.50	49. 3.50	47. 3.50	47. 3.50	46. 3.50	46. 3.50	46. 3.50
ROUTED TO + 45. 3.50	RCW56	.02	1	FLOW TIME	51. 3.50	50. 3.50	48. 3.50	47. 3.50	46. 3.50	46. 3.50	46. 3.50	45. 3.50

HYDROGRAPH AT + 10. 3.50	W55	.00	1	FLOW TIME	12. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	11. 3.50	10. 3.50	10. 3.50
HYDROGRAPH AT + 23. 3.50	W49	.01	1	FLOW TIME	26. 3.50	26. 3.50	25. 3.50	25. 3.50	24. 3.50	24. 3.50	24. 3.50	24. 3.50
HYDROGRAPH AT + 7. 3.50	ST1	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
5 COMBINED AT + 167. 3.50	CST1	.08	1	FLOW TIME	189. 3.50	186. 3.50	181. 3.50	175. 3.50	173. 3.50	172. 3.50	171. 3.50	169. 3.50
ROUTED TO + 166. 3.50	RCST1	.08	1	FLOW TIME	188. 3.50	185. 3.50	180. 3.50	174. 3.50	172. 3.50	171. 3.50	170. 3.50	168. 3.50
HYDROGRAPH AT + 3. 3.50	WP7	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50
2 COMBINED AT + 168. 3.50	CWP7	.08	1	FLOW TIME	191. 3.50	188. 3.50	183. 3.50	177. 3.50	175. 3.50	174. 3.50	173. 3.50	171. 3.50
ROUTED TO + 167. 3.50	RCWP7	.08	1	FLOW TIME	189. 3.50	186. 3.50	181. 3.50	175. 3.50	173. 3.50	172. 3.50	171. 3.50	169. 3.50
HYDROGRAPH AT + 9. 3.50	W53	.00	1	FLOW TIME	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50
2 COMBINED AT + 176. 3.50	CW53	.08	1	FLOW TIME	199. 3.50	196. 3.50	190. 3.50	185. 3.50	183. 3.50	181. 3.50	180. 3.50	178. 3.50
ROUTED TO + 174. 3.50	RCW53	.08	1	FLOW TIME	198. 3.50	195. 3.50	189. 3.50	184. 3.50	181. 3.50	180. 3.50	179. 3.50	177. 3.50
HYDROGRAPH AT + 21. 3.50	W50	.01	1	FLOW TIME	24. 3.50	23. 3.50	23. 3.50	22. 3.50	22. 3.50	21. 3.50	21. 3.50	21. 3.50
HYDROGRAPH AT + 9. 3.50	ST3	.00	1	FLOW TIME	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50
3 COMBINED AT + 204. 3.50	CST3	.10	1	FLOW TIME	231. 3.50	228. 3.50	221. 3.50	215. 3.50	212. 3.50	210. 3.50	209. 3.50	207. 3.50
HYDROGRAPH AT + 14. 3.50	SUMM2	.01	1	FLOW TIME	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50
3 COMBINED AT + 1186. 3.50	CP9	.76	1	FLOW TIME	1360. 1335.	1293. 1293.	1252. 1252.	1235. 1235.	1223. 1223.	1215. 1215.	1201. 1201.	

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+ 1269. 3.58	RCP11	.81	1	FLOW TIME	1454. 3.58	1427. 3.58	1382. 3.58	1339. 3.58	1320. 3.58	1308. 3.58	1299. 3.58	1285. 3.58
HYDROGRAPH AT + 17. 3.50	W60	.01	1	FLOW TIME	20. 3.50	19. 3.50	19. 3.50	18. 3.50	18. 3.50	18. 3.50	18. 3.50	18. 3.50
HYDROGRAPH AT + 6. 3.50	ST5	.00	1	FLOW TIME	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50
3 COMBINED AT + 1286. 3.58	CP12	.82	1	FLOW TIME	1474. 3.58	1446. 3.58	1401. 3.58	1357. 3.58	1338. 3.58	1326. 3.58	1316. 3.58	1302. 3.58
ROUTED TO + 1283. 3.58	RCP12	.82	1	FLOW TIME	1471. 3.58	1444. 3.58	1398. 3.58	1355. 3.58	1336. 3.58	1324. 3.58	1314. 3.58	1300. 3.58
HYDROGRAPH AT + 18. 3.50	W62	.01	1	FLOW TIME	20. 3.50	20. 3.50	19. 3.50	19. 3.50	18. 3.50	18. 3.50	18. 3.50	18. 3.50
2 COMBINED AT + 1299. 3.58	CP13	.83	1	FLOW TIME	1489. 3.58	1461. 3.58	1415. 3.58	1371. 3.58	1352. 3.58	1340. 3.58	1330. 3.58	1316. 3.58
HYDROGRAPH AT + 7. 3.50	DES2	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	7. 3.50
HYDROGRAPH AT + 23. 3.50	WPW3	.01	1	FLOW TIME	27. 3.50	26. 3.50	25. 3.50	24. 3.50	24. 3.50	24. 3.50	24. 3.50	23. 3.50
2 COMBINED AT + 30. 3.50	CWPW3	.02	1	FLOW TIME	35. 3.50	34. 3.50	33. 3.50	32. 3.50	32. 3.50	31. 3.50	31. 3.50	31. 3.50
ROUTED TO + 28. 3.58	RCWPW3	.02	1	FLOW TIME	33. 3.58	32. 3.58	31. 3.58	30. 3.58	30. 3.58	29. 3.58	29. 3.58	29. 3.58
HYDROGRAPH AT + 27. 3.50	WPW4	.02	1	FLOW TIME	32. 3.50	31. 3.50	30. 3.50	29. 3.50	29. 3.50	28. 3.50	28. 3.50	28. 3.50
HYDROGRAPH AT + 9. 3.50	CARR2	.00	1	FLOW TIME	11. 3.50	10. 3.50	10. 3.50	10. 3.50	10. 3.50	10. 3.50	10. 3.50	9. 3.50
4 COMBINED AT + 1361. 3.58	CP14	.87	1	FLOW TIME	1561. 3.58	1531. 3.58	1483. 3.58	1437. 3.58	1417. 3.58	1404. 3.58	1394. 3.58	1379. 3.58
HYDROGRAPH AT + 37. 3.50	W65	.02	1	FLOW TIME	43. 3.50	42. 3.50	40. 3.50	39. 3.50	39. 3.50	38. 3.50	38. 3.50	37. 3.50
ROUTED TO + 36. 3.58	RW65	.02	1	FLOW TIME	41. 3.50	41. 3.50	39. 3.50	38. 3.50	37. 3.50	37. 3.50	37. 3.50	36. 3.58

HYDROGRAPH AT + 12. 3.50	ST6	.00	1	FLOW TIME	13. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	12. 3.50	12. 3.50	12. 3.50
2 COMBINED AT + 48. 3.50	CST6	.03	1	FLOW TIME	54. 3.50	53. 3.50	52. 3.50	50. 3.50	50. 3.50	49. 3.50	49. 3.50	48. 3.50
2 COMBINED AT + 1404. 3.58	CP15	.89	1	FLOW TIME	1610. 3.58	1579. 3.58	1530. 3.58	1482. 3.58	1461. 3.58	1448. 3.58	1438. 3.58	1422. 3.58
ROUTED TO + 1401. 3.58	RCP15	.89	1	FLOW TIME	1606. 3.58	1576. 3.58	1527. 3.58	1478. 3.58	1458. 3.58	1445. 3.58	1434. 3.58	1419. 3.58
HYDROGRAPH AT + 7. 3.50	WP9	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
ROUTED TO + 7. 3.50	RWP9	.00	1	FLOW TIME	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
HYDROGRAPH AT + 47. 3.50	W66	.02	1	FLOW TIME	54. 3.50	53. 3.50	52. 3.50	50. 3.50	49. 3.50	49. 3.50	49. 3.50	48. 3.50
3 COMBINED AT + 1447. 3.58	CP16	.92	1	FLOW TIME	1660. 3.58	1629. 3.58	1577. 3.58	1528. 3.58	1506. 3.58	1493. 3.58	1482. 3.58	1466. 3.58
ROUTED TO + 1442. 3.58	RCP16	.92	1	FLOW TIME	1654. 3.58	1623. 3.58	1572. 3.58	1523. 3.58	1501. 3.58	1488. 3.58	1477. 3.58	1461. 3.58
HYDROGRAPH AT + 41. 3.50	W69	.02	1	FLOW TIME	47. 3.50	46. 3.50	45. 3.50	44. 3.50	43. 3.50	43. 3.50	42. 3.50	42. 3.50
2 COMBINED AT + 1481. 3.58	CP17	.95	1	FLOW TIME	1699. 3.58	1667. 3.58	1614. 3.58	1564. 3.58	1541. 3.58	1528. 3.58	1517. 3.58	1500. 3.58
HYDROGRAPH AT + 7. 3.50	W70	.00	1	FLOW TIME	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
HYDROGRAPH AT + 47. 3.50	W71	.02	1	FLOW TIME	53. 3.50	52. 3.50	51. 3.50	49. 3.50	49. 3.50	48. 3.50	48. 3.50	47. 3.50
3 COMBINED AT + 1526. 3.58	CP18	.97	1	FLOW TIME	1750. 3.58	1717. 3.58	1663. 3.58	1611. 3.58	1588. 3.58	1574. 3.58	1563. 3.58	1546. 3.58
2 COMBINED AT + 2854. 3.58	CP19	3.05	1	FLOW TIME	3279. 3.58	3219. 3.58	3116. 3.58	3015. 3.58	2971. 3.58	2946. 3.58	2923. 3.58	2892. 3.58
HYDROGRAPH AT + 67. 3.50	W51	.03	1	FLOW TIME	76. 3.50	74. 3.50	72. 3.50	70. 3.50	69. 3.50	69. 3.50	68. 3.50	68. 3.50

HYDROGRAPH AT
+ 54. W61 .03 1 FLOW 62. 60. 59. 57. 56. 55. 55. 54.
TIME 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50
3.50

HYDROGRAPH AT
+ 19. W67 .01 1 FLOW 22. 22. 21. 20. 20. 20. 20. 20.
TIME 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50
3.50

HYDROGRAPH AT
+ 72. W68 .03 1 FLOW 82. 80. 78. 76. 75. 74. 74. 73.
TIME 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50
3.50

4 COMBINED AT
+ 212. CP20 .10 1 FLOW 241. 237. 230. 223. 220. 218. 217. 215.
TIME 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50
3.50
1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL			
						DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)
FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.81	527.60	215.55	2.32	5.00	523.41	215.00	2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3477E+02 EXCESS= .0000E+00 OUTFLOW= .3477E+02 BASIN STORAGE= .1129E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.81	517.70	215.63	2.27	5.00	513.30	215.00	2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+02 EXCESS= .0000E+00 OUTFLOW= .3405E+02 BASIN STORAGE= .1120E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.82	498.43	215.27	2.19	5.00	495.77	215.00	2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3284E+02 EXCESS= .0000E+00 OUTFLOW= .3284E+02 BASIN STORAGE= .1138E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	484.02	215.79	2.11	5.00	479.43	215.00	2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3164E+02 EXCESS= .0000E+00 OUTFLOW= .3164E+02 BASIN STORAGE= .1137E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	474.73	215.35	2.08	5.00	471.52	215.00	2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3115E+02 EXCESS= .0000E+00 OUTFLOW= .3116E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.84	470.08	215.38	2.05	5.00	466.67	215.00	2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3082E+02 EXCESS= .0000E+00 OUTFLOW= .3082E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.85	467.16	216.01	2.04	5.00	463.75	215.00	2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3058E+02 EXCESS= .0000E+00 OUTFLOW= .3059E+02 BASIN STORAGE= .1092E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.85	460.86	215.33	2.01	5.00	457.79	215.00	2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3020E+02 EXCESS= .0000E+00 OUTFLOW= .3020E+02 BASIN STORAGE= .1236E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-F	MANE	.86	456.28	215.77	1.98	5.00	451.58	215.00	1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2972E+02 EXCESS= .0000E+00 OUTFLOW= .2973E+02 BASIN STORAGE= .1247E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.40	787.58	216.09	2.43	5.00	780.03	215.00	2.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5320E+02 EXCESS= .0000E+00 OUTFLOW= .5321E+02 BASIN STORAGE= .2760E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.41	772.94	216.30	2.38	5.00	766.72	215.00	2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5214E+02 EXCESS= .0000E+00 OUTFLOW= .5215E+02 BASIN STORAGE= .2510E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.43	748.03	216.31	2.30	5.00	741.15	215.00	2.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5035E+02 EXCESS= .0000E+00 OUTFLOW= .5036E+02 BASIN STORAGE= .2708E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.45	724.25	216.23	2.22	5.00	716.08	215.00	2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4859E+02 EXCESS= .0000E+00 OUTFLOW= .4860E+02 BASIN STORAGE= .2826E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.46	713.42	216.09	2.19	5.00	704.49	215.00	2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4787E+02 EXCESS= .0000E+00 OUTFLOW= .4788E+02 BASIN STORAGE= .2308E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.47	703.52	215.47	2.17	5.00	698.88	215.00	2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4737E+02 EXCESS= .0000E+00 OUTFLOW= .4738E+02 BASIN STORAGE= .2245E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.47	702.03	216.01	2.15	5.00	692.76	215.00	2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4703E+02 EXCESS= .0000E+00 OUTFLOW= .4704E+02 BASIN STORAGE= .2406E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.48	691.25	215.58	2.12	5.00	685.65	215.00	2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4645E+02 EXCESS= .0000E+00 OUTFLOW= .4646E+02 BASIN STORAGE= .2871E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.48	679.29	215.25	2.09	5.00	677.03	215.00	2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4576E+02 EXCESS= .0000E+00 OUTFLOW= .4577E+02 BASIN STORAGE= .2476E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.10	419.14	221.47	1.72	5.00	415.44	220.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3115E+02 EXCESS= .0000E+00 OUTFLOW= .3115E+02 BASIN STORAGE= .1477E-02 PERCENT ERROR=.0

FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	1.11	408.92	221.47	1.68	5.00	405.14	220.00	1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3036E+02 EXCESS= .0000E+00 OUTFLOW= .3037E+02 BASIN STORAGE= .1481E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.13 391.42 220.77 1.61 5.00 388.45 220.00 1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2907E+02 EXCESS= .0000E+00 OUTFLOW= .2907E+02 BASIN STORAGE= .1524E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.15 375.68 221.27 1.54 5.00 371.57 220.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2779E+02 EXCESS= .0000E+00 OUTFLOW= .2779E+02 BASIN STORAGE= .1544E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.15 367.40 221.73 1.51 5.00 364.31 220.00 1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2728E+02 EXCESS= .0000E+00 OUTFLOW= .2728E+02 BASIN STORAGE= .1379E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.16 362.76 221.72 1.49 5.00 359.55 220.00 1.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+02 EXCESS= .0000E+00 OUTFLOW= .2692E+02 BASIN STORAGE= .1385E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.17 360.49 221.38 1.47 5.00 356.48 220.00 1.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2667E+02 EXCESS= .0000E+00 OUTFLOW= .2667E+02 BASIN STORAGE= .1517E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.17 354.61 221.54 1.45 5.00 350.82 220.00 1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2626E+02 EXCESS= .0000E+00 OUTFLOW= .2626E+02 BASIN STORAGE= .1436E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-A MANE 1.18 347.64 220.88 1.42 5.00 344.62 220.00 1.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2576E+02 EXCESS= .0000E+00 OUTFLOW= .2576E+02 BASIN STORAGE= .1495E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .89 877.18 221.21 1.90 5.00 868.79 225.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7048E+02 EXCESS= .0000E+00 OUTFLOW= .7048E+02 BASIN STORAGE= .1519E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .90 856.91 221.51 1.85 5.00 849.44 225.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6880E+02 EXCESS= .0000E+00 OUTFLOW= .6880E+02 BASIN STORAGE= .1562E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .92 822.92 221.48 1.78 5.00 816.34 225.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6602E+02 EXCESS= .0000E+00 OUTFLOW= .6602E+02 BASIN STORAGE= .1543E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .93 789.13 221.52 1.70 5.00 783.31 225.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6326E+02 EXCESS= .0000E+00 OUTFLOW= .6326E+02 BASIN STORAGE= .1492E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .94 775.50 221.18 1.67 5.00 770.15 225.00 1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6215E+02 EXCESS= .0000E+00 OUTFLOW= .6216E+02 BASIN STORAGE= .1674E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .94 766.16 221.33 1.65 5.00 761.12 225.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6139E+02 EXCESS= .0000E+00 OUTFLOW= .6139E+02 BASIN STORAGE= .1548E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .95 759.35 221.17 1.64 5.00 754.45 225.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6084E+02 EXCESS= .0000E+00 OUTFLOW= .6084E+02 BASIN STORAGE= .1661E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .95 748.81 221.49 1.61 5.00 743.97 225.00 1.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5996E+02 EXCESS= .0000E+00 OUTFLOW= .5997E+02 BASIN STORAGE= .1716E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-B MANE .96 735.21 221.19 1.58 5.00 731.03 225.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5887E+02 EXCESS= .0000E+00 OUTFLOW= .5888E+02 BASIN STORAGE= .1571E-02 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .39 338.55 215.07 2.38 5.00 338.31 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2188E+02 EXCESS= .0000E+00 OUTFLOW= .2188E+02 BASIN STORAGE= .4500E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .39 332.15 215.15 2.33 5.00 331.79 215.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2143E+02 EXCESS= .0000E+00 OUTFLOW= .2143E+02 BASIN STORAGE= .4492E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .40 321.49 215.18 2.25 5.00 321.10 215.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2069E+02 EXCESS= .0000E+00 OUTFLOW= .2069E+02 BASIN STORAGE= .4643E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .40 310.84 215.28 2.17 5.00 310.48 215.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1996E+02 EXCESS= .0000E+00 OUTFLOW= .1996E+02 BASIN STORAGE= .4676E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .41 306.57 215.25 2.14 5.00 306.18 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1966E+02 EXCESS= .0000E+00 OUTFLOW= .1966E+02 BASIN STORAGE= .4487E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .41 303.59 215.28 2.11 5.00 303.22 215.00 2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1945E+02 EXCESS= .0000E+00 OUTFLOW= .1946E+02 BASIN STORAGE= .4493E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .41 301.41 215.07 2.10 5.00 301.18 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1931E+02 EXCESS= .0000E+00 OUTFLOW= .1931E+02 BASIN STORAGE= .4583E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

R3-G1	MANE	.41	298.03	215.23	2.07	5.00	297.62	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1907E+02 EXCESS= .0000E+00 OUTFLOW= .1907E+02 BASIN STORAGE= .4404E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R3-G1	MANE	.41	293.77	215.24	2.04	5.00	293.36	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1878E+02 EXCESS= .0000E+00 OUTFLOW= .1878E+02 BASIN STORAGE= .4453E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.04	420.83	216.36	1.78	5.00	417.71	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1426E+03 EXCESS= .0000E+00 OUTFLOW= .1425E+03 BASIN STORAGE= .1877E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.05	414.77	215.94	1.75	5.00	410.02	215.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1397E+03 EXCESS= .0000E+00 OUTFLOW= .1396E+03 BASIN STORAGE= .1778E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.06	399.44	215.60	1.69	5.00	396.15	215.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1348E+03 EXCESS= .0000E+00 OUTFLOW= .1347E+03 BASIN STORAGE= .1631E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.08	386.63	216.37	1.62	5.00	382.67	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1298E+03 EXCESS= .0000E+00 OUTFLOW= .1297E+03 BASIN STORAGE= .1490E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.08	380.55	216.49	1.60	5.00	377.25	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1277E+03 EXCESS= .0000E+00 OUTFLOW= .1276E+03 BASIN STORAGE= .1437E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.09	378.34	216.26	1.58	5.00	373.73	215.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1263E+03 EXCESS= .0000E+00 OUTFLOW= .1262E+03 BASIN STORAGE= .1405E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.09	375.11	215.81	1.57	5.00	371.02	215.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1252E+03 EXCESS= .0000E+00 OUTFLOW= .1251E+03 BASIN STORAGE= .1384E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.10	370.32	215.81	1.55	5.00	366.20	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1236E+03 EXCESS= .0000E+00 OUTFLOW= .1235E+03 BASIN STORAGE= .1345E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-G1	MANE	1.10	365.90	216.05	1.52	5.00	360.79	215.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1215E+03 EXCESS= .0000E+00 OUTFLOW= .1214E+03 BASIN STORAGE= .1303E+00 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP1	MANE	.12	547.57	215.06	1.81	5.00	547.38	215.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1515E+03 EXCESS= .0000E+00 OUTFLOW= .1515E+03 BASIN STORAGE= .2460E-01 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.12	537.50	215.05	1.78	5.00	537.32	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1484E+03 EXCESS= .0000E+00 OUTFLOW= .1484E+03 BASIN STORAGE= .2330E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	519.74	215.08	1.71	5.00	519.52	215.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1432E+03 EXCESS= .0000E+00 OUTFLOW= .1432E+03 BASIN STORAGE= .2138E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	502.37	215.10	1.65	5.00	502.12	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1379E+03 EXCESS= .0000E+00 OUTFLOW= .1379E+03 BASIN STORAGE= .1951E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	495.28	215.03	1.62	5.00	495.12	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1357E+03 EXCESS= .0000E+00 OUTFLOW= .1357E+03 BASIN STORAGE= .1883E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	490.71	215.07	1.61	5.00	490.44	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1342E+03 EXCESS= .0000E+00 OUTFLOW= .1342E+03 BASIN STORAGE= .1841E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	487.16	215.04	1.59	5.00	486.96	215.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1331E+03 EXCESS= .0000E+00 OUTFLOW= .1331E+03 BASIN STORAGE= .1813E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	481.17	215.09	1.57	5.00	480.89	215.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1314E+03 EXCESS= .0000E+00 OUTFLOW= .1314E+03 BASIN STORAGE= .1763E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP1	MANE	.13	474.09	215.04	1.55	5.00	473.85	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1292E+03 EXCESS= .0000E+00 OUTFLOW= .1292E+03 BASIN STORAGE= .1707E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.17	549.95	215.17	1.81	5.00	549.80	215.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1517E+03 EXCESS= .0000E+00 OUTFLOW= .1517E+03 BASIN STORAGE= .3369E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.17	539.74	215.08	1.78	5.00	539.43	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1487E+03 EXCESS= .0000E+00 OUTFLOW= .1486E+03 BASIN STORAGE= .3192E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.17	521.86	215.09	1.71	5.00	521.52	215.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1434E+03 EXCESS= .0000E+00 OUTFLOW= .1434E+03 BASIN STORAGE= .2929E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.17	504.35	215.09	1.65	5.00	503.99	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .2672E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.17	497.29	215.08	1.62	5.00	496.94	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1359E+03 EXCESS= .0000E+00 OUTFLOW= .1359E+03 BASIN STORAGE= .2578E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.18	492.51	215.20	1.61	5.00	492.31	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1344E+03 EXCESS= .0000E+00 OUTFLOW= .1344E+03 BASIN STORAGE= .2521E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.18	489.13	215.11	1.59	5.00	488.73	215.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1333E+03 EXCESS= .0000E+00 OUTFLOW= .1333E+03 BASIN STORAGE= .2482E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.18	483.07	215.13	1.57	5.00	482.63	215.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1316E+03 EXCESS= .0000E+00 OUTFLOW= .1316E+03 BASIN STORAGE= .2415E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP2	MANE	.18	476.07	215.16	1.55	5.00	475.61	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1294E+03 EXCESS= .0000E+00 OUTFLOW= .1294E+03 BASIN STORAGE= .2338E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.22	556.70	215.21	1.82	5.00	556.47	215.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1525E+03 EXCESS= .0000E+00 OUTFLOW= .1525E+03 BASIN STORAGE= .4499E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.22	546.08	215.06	1.78	5.00	545.84	215.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1494E+03 EXCESS= .0000E+00 OUTFLOW= .1494E+03 BASIN STORAGE= .4265E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	527.94	215.24	1.72	5.00	527.81	215.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1442E+03 EXCESS= .0000E+00 OUTFLOW= .1441E+03 BASIN STORAGE= .3911E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	510.44	215.21	1.65	5.00	510.05	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1388E+03 EXCESS= .0000E+00 OUTFLOW= .1388E+03 BASIN STORAGE= .3572E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	503.04	215.03	1.63	5.00	502.87	215.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1366E+03 EXCESS= .0000E+00 OUTFLOW= .1366E+03 BASIN STORAGE= .3445E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	498.52	215.14	1.61	5.00	498.04	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1351E+03 EXCESS= .0000E+00 OUTFLOW= .1351E+03 BASIN STORAGE= .3367E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	494.75	215.07	1.60	5.00	494.42	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1340E+03 EXCESS= .0000E+00 OUTFLOW= .1340E+03 BASIN STORAGE= .3315E-01 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.23	488.86	215.21	1.57	5.00	488.37	215.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1323E+03 EXCESS= .0000E+00 OUTFLOW= .1323E+03 BASIN STORAGE= .3226E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP3	MANE	.24	481.43	215.06	1.55	5.00	481.13	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1301E+03 EXCESS= .0000E+00 OUTFLOW= .1301E+03 BASIN STORAGE= .3122E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.22	601.20	215.16	1.83	5.00	601.07	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1557E+03 EXCESS= .0000E+00 OUTFLOW= .1557E+03 BASIN STORAGE= .4507E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.22	589.78	215.08	1.79	5.00	589.57	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1525E+03 EXCESS= .0000E+00 OUTFLOW= .1525E+03 BASIN STORAGE= .4272E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.22	570.42	215.10	1.73	5.00	570.16	215.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1472E+03 EXCESS= .0000E+00 OUTFLOW= .1472E+03 BASIN STORAGE= .3917E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.22	551.32	215.14	1.66	5.00	551.02	215.00	1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1417E+03 EXCESS= .0000E+00 OUTFLOW= .1417E+03 BASIN STORAGE= .3579E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.22	543.55	215.01	1.64	5.00	543.49	215.00	1.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1395E+03 EXCESS= .0000E+00 OUTFLOW= .1395E+03 BASIN STORAGE= .3452E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.23	538.42	215.17	1.62	5.00	538.12	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1380E+03 EXCESS= .0000E+00 OUTFLOW= .1379E+03 BASIN STORAGE= .3372E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.23	534.49	215.11	1.61	5.00	534.16	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1369E+03 EXCESS= .0000E+00 OUTFLOW= .1368E+03 BASIN STORAGE= .3320E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.23	527.92	215.02	1.58	5.00	527.81	215.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1351E+03 EXCESS= .0000E+00 OUTFLOW= .1351E+03 BASIN STORAGE= .3231E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	.23	520.26	215.16	1.56	5.00	519.86	215.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1328E+03 EXCESS= .0000E+00 OUTFLOW= .1328E+03 BASIN STORAGE= .3128E-01 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.15	667.03	215.04	1.85	5.00	667.00	215.00	1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1607E+03 EXCESS= .0000E+00 OUTFLOW= .1607E+03 BASIN STORAGE= .3348E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.15	654.48	214.98	1.81	5.00	654.43	215.00	1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1575E+03 EXCESS= .0000E+00 OUTFLOW= .1574E+03 BASIN STORAGE= .3173E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	633.28	215.01	1.75	5.00	633.26	215.00	1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1520E+03 EXCESS= .0000E+00 OUTFLOW= .1520E+03 BASIN STORAGE= .2910E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	612.18	215.06	1.68	5.00	612.13	215.00	1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1464E+03 EXCESS= .0000E+00 OUTFLOW= .1464E+03 BASIN STORAGE= .2659E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	603.92	214.96	1.66	5.00	603.89	215.00	1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1441E+03 EXCESS= .0000E+00 OUTFLOW= .1441E+03 BASIN STORAGE= .2565E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	598.12	214.99	1.64	5.00	598.11	215.00	1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1425E+03 EXCESS= .0000E+00 OUTFLOW= .1425E+03 BASIN STORAGE= .2505E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	593.75	214.98	1.62	5.00	593.72	215.00	1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1414E+03 EXCESS= .0000E+00 OUTFLOW= .1413E+03 BASIN STORAGE= .2466E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	586.85	215.01	1.60	5.00	586.81	215.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1395E+03 EXCESS= .0000E+00 OUTFLOW= .1395E+03 BASIN STORAGE= .2401E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCP5	MANE	.16	578.15	214.99	1.58	5.00	578.15	215.00	1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1372E+03 EXCESS= .0000E+00 OUTFLOW= .1372E+03 BASIN STORAGE= .2324E-01 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RW74	MANE	2.76	9.41	212.87	2.74	5.00	8.84	210.00	2.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5548E+00 EXCESS= .0000E+00 OUTFLOW= .5558E+00 BASIN STORAGE= .9132E-03 PERCENT ERROR= -.4

FOR PLAN = 1	RATIO=	.00							
RW74	MANE	2.78	9.05	211.53	2.69	5.00	8.56	210.00	2.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5435E+00 EXCESS= .0000E+00 OUTFLOW= .5445E+00 BASIN STORAGE= .9564E-03 PERCENT ERROR= -.4

FOR PLAN = 1	RATIO=	.00							
RW74	MANE	2.82	8.72	211.19	2.61	5.00	8.30	210.00	2.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5270E+00 EXCESS= .0000E+00 OUTFLOW= .5280E+00 BASIN STORAGE= .7821E-03 PERCENT ERROR= -.3

FOR PLAN = 1	RATIO=	.00							
RW74	MANE	2.85	8.37	210.88	2.52	5.00	8.06	210.00	2.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5102E+00 EXCESS= .0000E+00 OUTFLOW= .5111E+00 BASIN STORAGE= .8780E-03 PERCENT ERROR= -
.4

FOR PLAN = 1 RATIO= .00
RW74 MANE 2.86 8.48 211.91 2.49 5.00 7.94 210.00 2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5030E+00 EXCESS= .0000E+00 OUTFLOW= .5039E+00 BASIN STORAGE= .1013E-02 PERCENT ERROR= -
.4

FOR PLAN = 1 RATIO= .00
RW74 MANE 2.87 8.54 212.64 2.47 5.00 7.95 210.00 2.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4989E+00 EXCESS= .0000E+00 OUTFLOW= .4998E+00 BASIN STORAGE= .8490E-03 PERCENT ERROR= -
.4

FOR PLAN = 1 RATIO= .00
RW74 MANE 2.88 8.40 213.17 2.45 5.00 7.90 210.00 2.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4955E+00 EXCESS= .0000E+00 OUTFLOW= .4964E+00 BASIN STORAGE= .7681E-03 PERCENT ERROR= -
.3

FOR PLAN = 1 RATIO= .00
RW74 MANE 2.89 8.11 211.14 2.42 5.00 7.73 210.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4900E+00 EXCESS= .0000E+00 OUTFLOW= .4909E+00 BASIN STORAGE= .8823E-03 PERCENT ERROR= -
.4

FOR PLAN = 1 RATIO= .00
RW74 MANE 2.91 8.21 212.21 2.39 5.00 7.65 210.00 2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4829E+00 EXCESS= .0000E+00 OUTFLOW= .4838E+00 BASIN STORAGE= .1019E-02 PERCENT ERROR= -
.4

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.25 50.49 211.80 2.73 5.00 49.28 210.00 2.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3164E+01 EXCESS= .0000E+00 OUTFLOW= .3165E+01 BASIN STORAGE= .7855E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.25 49.63 210.75 2.68 5.00 48.43 210.00 2.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3106E+01 EXCESS= .0000E+00 OUTFLOW= .3107E+01 BASIN STORAGE= .7694E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.27 48.10 210.69 2.60 5.00 47.00 210.00 2.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3009E+01 EXCESS= .0000E+00 OUTFLOW= .3010E+01 BASIN STORAGE= .6811E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.28 46.65 211.96 2.52 5.00 45.57 210.00 2.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2913E+01 EXCESS= .0000E+00 OUTFLOW= .2914E+01 BASIN STORAGE= .7127E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.29 46.34 211.72 2.48 5.00 45.02 210.00 2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2875E+01 EXCESS= .0000E+00 OUTFLOW= .2876E+01 BASIN STORAGE= .7934E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.30 46.23 211.16 2.46 5.00 44.73 210.00 2.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2849E+01 EXCESS= .0000E+00 OUTFLOW= .2850E+01 BASIN STORAGE= .7861E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.30 45.68 211.69 2.45 5.00 44.35 210.00 2.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2829E+01 EXCESS= .0000E+00 OUTFLOW= .2830E+01 BASIN STORAGE= .6782E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.30 45.57 211.25 2.42 5.00 44.03 210.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2799E+01 EXCESS= .0000E+00 OUTFLOW= .2800E+01 BASIN STORAGE= .7894E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW73 MANE 1.31 44.72 211.02 2.39 5.00 43.34 210.00 2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2760E+01 EXCESS= .0000E+00 OUTFLOW= .2761E+01 BASIN STORAGE= .7035E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.43 235.57 215.72 2.62 5.00 234.51 215.00 2.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1573E+02 EXCESS= .0000E+00 OUTFLOW= .1573E+02 BASIN STORAGE= .1509E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.44 231.25 215.81 2.57 5.00 230.27 215.00 2.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1543E+02 EXCESS= .0000E+00 OUTFLOW= .1543E+02 BASIN STORAGE= .1508E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.46 224.33 215.51 2.49 5.00 223.79 215.00 2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1493E+02 EXCESS= .0000E+00 OUTFLOW= .1493E+02 BASIN STORAGE= .1408E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.47 217.26 215.26 2.41 5.00 217.07 215.00 2.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1443E+02 EXCESS= .0000E+00 OUTFLOW= .1444E+02 BASIN STORAGE= .1552E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.48 214.08 214.88 2.38 5.00 214.05 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1424E+02 EXCESS= .0000E+00 OUTFLOW= .1424E+02 BASIN STORAGE= .1442E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.49 212.59 215.65 2.35 5.00 212.00 215.00 2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1409E+02 EXCESS= .0000E+00 OUTFLOW= .1410E+02 BASIN STORAGE= .1444E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.49 210.72 216.21 2.34 5.00 210.38 215.00 2.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1400E+02 EXCESS= .0000E+00 OUTFLOW= .1400E+02 BASIN STORAGE= .1524E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.50 208.93 215.62 2.31 5.00 208.43 215.00 2.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1384E+02 EXCESS= .0000E+00 OUTFLOW= .1384E+02 BASIN STORAGE= .1485E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.51 206.04 215.26 2.28 5.00 205.90 215.00 2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1364E+02 EXCESS= .0000E+00 OUTFLOW= .1365E+02 BASIN STORAGE= .1707E-02 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00

RCP3-P	MANE	.98	882.27	215.83	2.45	5.00	863.78	215.00	2.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6543E+02 EXCESS= .0000E+00 OUTFLOW= .6543E+02 BASIN STORAGE= .1881E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	.98	865.51	216.50	2.40	5.00	846.72	215.00	2.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6411E+02 EXCESS= .0000E+00 OUTFLOW= .6412E+02 BASIN STORAGE= .1739E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.00	839.34	216.31	2.32	5.00	819.61	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6194E+02 EXCESS= .0000E+00 OUTFLOW= .6195E+02 BASIN STORAGE= .1870E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.01	812.51	216.20	2.24	5.00	792.44	215.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5978E+02 EXCESS= .0000E+00 OUTFLOW= .5978E+02 BASIN STORAGE= .1642E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.02	800.17	216.40	2.20	5.00	780.86	215.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5891E+02 EXCESS= .0000E+00 OUTFLOW= .5892E+02 BASIN STORAGE= .1819E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.02	793.11	216.24	2.18	5.00	773.29	215.00	2.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5831E+02 EXCESS= .0000E+00 OUTFLOW= .5832E+02 BASIN STORAGE= .1887E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.02	785.09	215.86	2.17	5.00	767.93	215.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5789E+02 EXCESS= .0000E+00 OUTFLOW= .5789E+02 BASIN STORAGE= .1832E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.03	775.96	216.81	2.14	5.00	759.11	215.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5719E+02 EXCESS= .0000E+00 OUTFLOW= .5720E+02 BASIN STORAGE= .1859E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP3-P	MANE	1.03	767.50	215.97	2.11	5.00	748.89	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5633E+02 EXCESS= .0000E+00 OUTFLOW= .5633E+02 BASIN STORAGE= .1722E-02 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP8	MANE	.29	1170.21	215.39	2.50	5.00	1164.04	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8720E+02 EXCESS= .0000E+00 OUTFLOW= .8720E+02 BASIN STORAGE= .5411E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP8	MANE	.29	1148.44	215.32	2.45	5.00	1142.05	215.00	2.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8548E+02 EXCESS= .0000E+00 OUTFLOW= .8548E+02 BASIN STORAGE= .5599E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCP8	MANE	.29	1111.40	215.45	2.37	5.00	1105.53	215.00	2.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8263E+02 EXCESS= .0000E+00 OUTFLOW= .8263E+02 BASIN STORAGE= .5627E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1076.20	215.34	2.29	5.00	1069.97	215.00	2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7978E+02 EXCESS= .0000E+00 OUTFLOW= .7978E+02 BASIN STORAGE= .5555E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1060.87	215.37	2.25	5.00	1054.65	215.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7865E+02 EXCESS= .0000E+00 OUTFLOW= .7865E+02 BASIN STORAGE= .5354E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1051.03	215.29	2.23	5.00	1044.98	215.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7786E+02 EXCESS= .0000E+00 OUTFLOW= .7786E+02 BASIN STORAGE= .5570E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1043.64	215.28	2.22	5.00	1037.75	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7729E+02 EXCESS= .0000E+00 OUTFLOW= .7729E+02 BASIN STORAGE= .5607E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1032.19	215.34	2.19	5.00	1025.92	215.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7638E+02 EXCESS= .0000E+00 OUTFLOW= .7638E+02 BASIN STORAGE= .5365E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP8	MANE	.30	1018.31	215.29	2.16	5.00	1012.36	215.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7525E+02 EXCESS= .0000E+00 OUTFLOW= .7525E+02 BASIN STORAGE= .5437E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.64	37.61	210.23	2.75	5.00	37.34	210.00	2.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2187E+01 EXCESS= .0000E+00 OUTFLOW= .2187E+01 BASIN STORAGE= .5430E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.64	37.00	210.30	2.70	5.00	36.70	210.00	2.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2147E+01 EXCESS= .0000E+00 OUTFLOW= .2147E+01 BASIN STORAGE= .5373E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.65	35.92	210.22	2.62	5.00	35.66	210.00	2.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2081E+01 EXCESS= .0000E+00 OUTFLOW= .2081E+01 BASIN STORAGE= .5032E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.65	34.84	210.18	2.54	5.00	34.63	210.00	2.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2015E+01 EXCESS= .0000E+00 OUTFLOW= .2015E+01 BASIN STORAGE= .5249E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.65	34.53	210.69	2.50	5.00	34.32	210.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1989E+01 EXCESS= .0000E+00 OUTFLOW= .1989E+01 BASIN STORAGE= .5549E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.65	34.21	210.40	2.48	5.00	33.89	210.00	2.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1970E+01 EXCESS= .0000E+00 OUTFLOW= .1970E+01 BASIN STORAGE= .5517E-04 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.65	34.08	210.66	2.46	5.00	33.84	210.00	2.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1957E+01 EXCESS= .0000E+00 OUTFLOW= .1957E+01 BASIN STORAGE= .5056E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.66	33.67	210.42	2.44	5.00	33.35	210.00	2.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1936E+01 EXCESS= .0000E+00 OUTFLOW= .1936E+01 BASIN STORAGE= .5549E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCWP5	MANE	.66	33.19	210.30	2.40	5.00	32.91	210.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1910E+01 EXCESS= .0000E+00 OUTFLOW= .1909E+01 BASIN STORAGE= .5230E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.67	93.73	210.75	2.89	5.00	93.06	210.00	2.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5741E+01 EXCESS= .0000E+00 OUTFLOW= .5740E+01 BASIN STORAGE= .6938E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.67	92.08	210.78	2.83	5.00	91.47	210.00	2.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5640E+01 EXCESS= .0000E+00 OUTFLOW= .5639E+01 BASIN STORAGE= .6937E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.68	89.85	210.60	2.75	5.00	88.98	210.00	2.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5473E+01 EXCESS= .0000E+00 OUTFLOW= .5472E+01 BASIN STORAGE= .6677E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.68	87.14	210.45	2.67	5.00	86.25	210.00	2.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5305E+01 EXCESS= .0000E+00 OUTFLOW= .5304E+01 BASIN STORAGE= .6357E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.68	85.93	210.22	2.63	5.00	85.33	210.00	2.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5240E+01 EXCESS= .0000E+00 OUTFLOW= .5239E+01 BASIN STORAGE= .6916E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.68	85.58	210.63	2.61	5.00	84.73	210.00	2.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5192E+01 EXCESS= .0000E+00 OUTFLOW= .5192E+01 BASIN STORAGE= .6793E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.68	84.84	210.81	2.59	5.00	84.24	210.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5160E+01 EXCESS= .0000E+00 OUTFLOW= .5159E+01 BASIN STORAGE= .6420E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.69	84.23	210.61	2.57	5.00	83.36	210.00	2.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5105E+01 EXCESS= .0000E+00 OUTFLOW= .5105E+01 BASIN STORAGE= .6907E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCSUMM1	MANE	.69	83.00	210.44	2.53	5.00	82.13	210.00	2.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5038E+01 EXCESS= .0000E+00 OUTFLOW= .5037E+01 BASIN STORAGE= .6566E-04 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.33	26.48	210.56	2.63	5.00	26.21	210.00	2.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1672E+01 EXCESS= .0000E+00 OUTFLOW= .1672E+01 BASIN STORAGE= .2456E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.33	26.02	210.31	2.58	5.00	25.76	210.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1640E+01 EXCESS= .0000E+00 OUTFLOW= .1640E+01 BASIN STORAGE= .2521E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	25.24	210.57	2.50	5.00	24.98	210.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1588E+01 EXCESS= .0000E+00 OUTFLOW= .1588E+01 BASIN STORAGE= .2479E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	24.47	210.54	2.42	5.00	24.21	210.00	2.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1536E+01 EXCESS= .0000E+00 OUTFLOW= .1536E+01 BASIN STORAGE= .2514E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	24.17	210.40	2.39	5.00	23.91	210.00	2.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1515E+01 EXCESS= .0000E+00 OUTFLOW= .1515E+01 BASIN STORAGE= .2506E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	23.95	210.44	2.36	5.00	23.68	210.00	2.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1500E+01 EXCESS= .0000E+00 OUTFLOW= .1500E+01 BASIN STORAGE= .2487E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	23.80	210.38	2.35	5.00	23.54	210.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1490E+01 EXCESS= .0000E+00 OUTFLOW= .1490E+01 BASIN STORAGE= .2422E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	23.54	210.48	2.32	5.00	23.28	210.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1473E+01 EXCESS= .0000E+00 OUTFLOW= .1473E+01 BASIN STORAGE= .2474E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RW48	MANE	.34	23.25	210.36	2.29	5.00	22.99	210.00	2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1452E+01 EXCESS= .0000E+00 OUTFLOW= .1452E+01 BASIN STORAGE= .2452E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW57	MANE	.24	38.03	210.35	2.64	5.00	37.79	210.00	2.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2350E+01 EXCESS= .0000E+00 OUTFLOW= .2350E+01 BASIN STORAGE= .1931E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW57	MANE	.24	37.37	210.36	2.59	5.00	37.14	210.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2306E+01 EXCESS= .0000E+00 OUTFLOW= .2306E+01 BASIN STORAGE= .1947E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW57	MANE	.24	36.26	210.19	2.51	5.00	36.03	210.00	2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2232E+01 EXCESS= .0000E+00 OUTFLOW= .2232E+01 BASIN STORAGE= .1930E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.24	35.18	210.29	2.42	5.00	34.92	210.00	2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2159E+01 EXCESS= .0000E+00 OUTFLOW= .2159E+01 BASIN STORAGE= .1900E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.24	34.72	210.33	2.39	5.00	34.48	210.00	2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2129E+01 EXCESS= .0000E+00 OUTFLOW= .2129E+01 BASIN STORAGE= .1887E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.24	34.43	210.23	2.37	5.00	34.18	210.00	2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2109E+01 EXCESS= .0000E+00 OUTFLOW= .2109E+01 BASIN STORAGE= .1886E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.24	34.23	210.25	2.35	5.00	33.96	210.00	2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2094E+01 EXCESS= .0000E+00 OUTFLOW= .2094E+01 BASIN STORAGE= .1875E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.25	33.83	210.21	2.32	5.00	33.59	210.00	2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2071E+01 EXCESS= .0000E+00 OUTFLOW= .2071E+01 BASIN STORAGE= .1914E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW57	MANE		.25	33.42	210.26	2.29	5.00	33.17	210.00	2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2041E+01 EXCESS= .0000E+00 OUTFLOW= .2041E+01 BASIN STORAGE= .1894E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.23	51.14	210.20	2.64	5.00	50.82	210.00	2.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3127E+01 EXCESS= .0000E+00 OUTFLOW= .3127E+01 BASIN STORAGE= .1974E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.23	50.30	210.22	2.59	5.00	49.96	210.00	2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3068E+01 EXCESS= .0000E+00 OUTFLOW= .3068E+01 BASIN STORAGE= .1986E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.24	48.74	210.32	2.51	5.00	48.44	210.00	2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2970E+01 EXCESS= .0000E+00 OUTFLOW= .2970E+01 BASIN STORAGE= .1960E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.24	47.28	210.21	2.43	5.00	46.96	210.00	2.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2872E+01 EXCESS= .0000E+00 OUTFLOW= .2872E+01 BASIN STORAGE= .2010E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.24	46.70	210.27	2.39	5.00	46.37	210.00	2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2833E+01 EXCESS= .0000E+00 OUTFLOW= .2833E+01 BASIN STORAGE= .1982E-04 PERCENT ERROR=.0

FOR PLAN	= 1	RATIO=	.00							
RCW56	MANE		.24	46.20	210.16	2.37	5.00	45.95	210.00	2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2806E+01 EXCESS= .0000E+00 OUTFLOW= .2806E+01 BASIN STORAGE= .1989E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCW56 MANE .24 45.95 210.19 2.35 5.00 45.67 210.00 2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2787E+01 EXCESS= .0000E+00 OUTFLOW= .2787E+01 BASIN STORAGE= .1979E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCW56 MANE .24 45.42 210.16 2.33 5.00 45.17 210.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2755E+01 EXCESS= .0000E+00 OUTFLOW= .2755E+01 BASIN STORAGE= .2017E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCW56 MANE .24 44.92 210.22 2.29 5.00 44.60 210.00 2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2717E+01 EXCESS= .0000E+00 OUTFLOW= .2717E+01 BASIN STORAGE= .1987E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .16 188.89 210.14 2.80 5.00 188.13 210.00 2.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1157E+02 EXCESS= .0000E+00 OUTFLOW= .1157E+02 BASIN STORAGE= .1784E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .16 185.60 210.20 2.75 5.00 184.89 210.00 2.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1137E+02 EXCESS= .0000E+00 OUTFLOW= .1137E+02 BASIN STORAGE= .1813E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 180.16 210.09 2.67 5.00 179.65 210.00 2.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1102E+02 EXCESS= .0000E+00 OUTFLOW= .1102E+02 BASIN STORAGE= .1806E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 174.88 210.21 2.59 5.00 174.21 210.00 2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1067E+02 EXCESS= .0000E+00 OUTFLOW= .1067E+02 BASIN STORAGE= .1808E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 172.93 210.20 2.55 5.00 172.25 210.00 2.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1054E+02 EXCESS= .0000E+00 OUTFLOW= .1054E+02 BASIN STORAGE= .1821E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 171.56 210.20 2.53 5.00 170.87 210.00 2.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1044E+02 EXCESS= .0000E+00 OUTFLOW= .1044E+02 BASIN STORAGE= .1770E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 170.44 210.12 2.51 5.00 169.84 210.00 2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1037E+02 EXCESS= .0000E+00 OUTFLOW= .1037E+02 BASIN STORAGE= .1786E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 168.69 210.22 2.49 5.00 168.05 210.00 2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1026E+02 EXCESS= .0000E+00 OUTFLOW= .1026E+02 BASIN STORAGE= .1780E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCST1 MANE .17 166.38 210.12 2.45 5.00 165.77 210.00 2.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+02 EXCESS= .0000E+00 OUTFLOW= .1012E+02 BASIN STORAGE= .1801E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .24 190.45 210.16 2.80 5.00 189.45 210.00 2.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1175E+02 EXCESS= .0000E+00 OUTFLOW= .1175E+02 BASIN STORAGE= .2741E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .24 187.18 210.17 2.75 5.00 186.18 210.00 2.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1154E+02 EXCESS= .0000E+00 OUTFLOW= .1154E+02 BASIN STORAGE= .2765E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .24 181.82 210.16 2.66 5.00 180.89 210.00 2.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1118E+02 EXCESS= .0000E+00 OUTFLOW= .1118E+02 BASIN STORAGE= .2681E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 176.63 210.23 2.58 5.00 175.48 210.00 2.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1083E+02 EXCESS= .0000E+00 OUTFLOW= .1083E+02 BASIN STORAGE= .2678E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 174.55 210.21 2.54 5.00 173.45 210.00 2.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1069E+02 EXCESS= .0000E+00 OUTFLOW= .1069E+02 BASIN STORAGE= .2700E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 173.03 210.31 2.52 5.00 172.01 210.00 2.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1060E+02 EXCESS= .0000E+00 OUTFLOW= .1060E+02 BASIN STORAGE= .2755E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 171.97 210.31 2.50 5.00 170.95 210.00 2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1053E+02 EXCESS= .0000E+00 OUTFLOW= .1053E+02 BASIN STORAGE= .2610E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 170.37 210.26 2.48 5.00 169.23 210.00 2.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+02 EXCESS= .0000E+00 OUTFLOW= .1041E+02 BASIN STORAGE= .2702E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCWP7 MANE .25 167.73 210.34 2.44 5.00 166.83 210.00 2.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1027E+02 EXCESS= .0000E+00 OUTFLOW= .1027E+02 BASIN STORAGE= .2627E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCW53 MANE .15 198.91 210.21 2.79 5.00 198.22 210.00 2.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1232E+02 EXCESS= .0000E+00 OUTFLOW= .1232E+02 BASIN STORAGE= .1730E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCW53 MANE .15 195.63 210.17 2.74 5.00 194.83 210.00 2.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1210E+02 EXCESS= .0000E+00 OUTFLOW= .1210E+02 BASIN STORAGE= .1726E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RCW53	MANE	.15	190.13	210.15	2.66	5.00	189.34	210.00	2.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1173E+02 EXCESS= .0000E+00 OUTFLOW= .1173E+02 BASIN STORAGE= .1726E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	184.32	210.19	2.57	5.00	183.62	210.00	2.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1136E+02 EXCESS= .0000E+00 OUTFLOW= .1136E+02 BASIN STORAGE= .1689E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	182.09	210.21	2.54	5.00	181.43	210.00	2.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1121E+02 EXCESS= .0000E+00 OUTFLOW= .1121E+02 BASIN STORAGE= .1745E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	180.46	210.09	2.52	5.00	179.90	210.00	2.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1111E+02 EXCESS= .0000E+00 OUTFLOW= .1111E+02 BASIN STORAGE= .1729E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	179.54	210.19	2.50	5.00	178.82	210.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1104E+02 EXCESS= .0000E+00 OUTFLOW= .1104E+02 BASIN STORAGE= .1722E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	177.85	210.15	2.47	5.00	177.09	210.00	2.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1092E+02 EXCESS= .0000E+00 OUTFLOW= .1092E+02 BASIN STORAGE= .1713E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCW53	MANE	.16	175.15	210.12	2.44	5.00	174.50	210.00	2.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1077E+02 EXCESS= .0000E+00 OUTFLOW= .1077E+02 BASIN STORAGE= .1699E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP9	MANE	.37	1357.05	215.41	2.54	5.00	1352.61	215.00	2.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1025E+03 EXCESS= .0000E+00 OUTFLOW= .1025E+03 BASIN STORAGE= .7926E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP9	MANE	.37	1329.96	215.16	2.50	5.00	1326.82	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1005E+03 EXCESS= .0000E+00 OUTFLOW= .1005E+03 BASIN STORAGE= .7391E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP9	MANE	.38	1289.50	215.27	2.41	5.00	1285.16	215.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9717E+02 EXCESS= .0000E+00 OUTFLOW= .9717E+02 BASIN STORAGE= .7514E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP9	MANE	.38	1249.83	215.37	2.33	5.00	1245.00	215.00	2.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9388E+02 EXCESS= .0000E+00 OUTFLOW= .9388E+02 BASIN STORAGE= .7310E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP9	MANE	.39	1231.93	215.43	2.30	5.00	1227.37	215.00	2.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9256E+02 EXCESS= .0000E+00 OUTFLOW= .9256E+02 BASIN STORAGE= .7566E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.39	1220.66	215.43	2.28	5.00	1216.13	215.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9165E+02 EXCESS= .0000E+00 OUTFLOW= .9165E+02 BASIN STORAGE= .7474E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.39	1211.37	215.24	2.26	5.00	1207.35	215.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9098E+02 EXCESS= .0000E+00 OUTFLOW= .9098E+02 BASIN STORAGE= .7471E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.39	1198.87	215.44	2.23	5.00	1194.34	215.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8993E+02 EXCESS= .0000E+00 OUTFLOW= .8993E+02 BASIN STORAGE= .7463E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.39	1183.94	215.39	2.20	5.00	1179.04	215.00	2.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8862E+02 EXCESS= .0000E+00 OUTFLOW= .8862E+02 BASIN STORAGE= .7485E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.61	43.49	210.41	2.78	5.00	42.94	210.00	2.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2547E+01 EXCESS= .0000E+00 OUTFLOW= .2548E+01 BASIN STORAGE= .5236E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.62	42.86	210.51	2.73	5.00	42.25	210.00	2.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2502E+01 EXCESS= .0000E+00 OUTFLOW= .2502E+01 BASIN STORAGE= .5119E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.62	41.62	210.49	2.64	5.00	41.03	210.00	2.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2425E+01 EXCESS= .0000E+00 OUTFLOW= .2425E+01 BASIN STORAGE= .5272E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.62	40.40	210.50	2.56	5.00	39.82	210.00	2.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2349E+01 EXCESS= .0000E+00 OUTFLOW= .2349E+01 BASIN STORAGE= .5363E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.62	39.80	210.39	2.53	5.00	39.30	210.00	2.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2319E+01 EXCESS= .0000E+00 OUTFLOW= .2319E+01 BASIN STORAGE= .5049E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.63	39.45	210.75	2.50	5.00	38.99	210.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2298E+01 EXCESS= .0000E+00 OUTFLOW= .2298E+01 BASIN STORAGE= .4953E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.63	39.21	210.39	2.49	5.00	38.72	210.00	2.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2282E+01 EXCESS= .0000E+00 OUTFLOW= .2282E+01 BASIN STORAGE= .5111E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.63	38.72	210.81	2.46	5.00	38.35	210.00	2.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2258E+01 EXCESS= .0000E+00 OUTFLOW= .2258E+01 BASIN STORAGE= .5506E-04 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RDES3	MANE	.63	38.41	210.71	2.43	5.00	37.90	210.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2228E+01 EXCESS= .0000E+00 OUTFLOW= .2228E+01 BASIN STORAGE= .5172E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.53	75.97	210.59	2.72	5.00	75.00	210.00	2.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4484E+01 EXCESS= .0000E+00 OUTFLOW= .4484E+01 BASIN STORAGE= .4918E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.53	74.26	210.23	2.67	5.00	73.66	210.00	2.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4401E+01 EXCESS= .0000E+00 OUTFLOW= .4401E+01 BASIN STORAGE= .5109E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.54	72.41	210.40	2.59	5.00	71.53	210.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4265E+01 EXCESS= .0000E+00 OUTFLOW= .4265E+01 BASIN STORAGE= .4894E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.54	70.38	210.59	2.50	5.00	69.45	210.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4128E+01 EXCESS= .0000E+00 OUTFLOW= .4128E+01 BASIN STORAGE= .5063E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.54	69.47	210.60	2.47	5.00	68.55	210.00	2.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4073E+01 EXCESS= .0000E+00 OUTFLOW= .4073E+01 BASIN STORAGE= .5123E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.54	68.77	210.40	2.45	5.00	67.92	210.00	2.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4035E+01 EXCESS= .0000E+00 OUTFLOW= .4035E+01 BASIN STORAGE= .5002E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.54	68.21	210.69	2.43	5.00	67.46	210.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4008E+01 EXCESS= .0000E+00 OUTFLOW= .4008E+01 BASIN STORAGE= .5004E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.55	67.83	210.56	2.41	5.00	66.87	210.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3964E+01 EXCESS= .0000E+00 OUTFLOW= .3965E+01 BASIN STORAGE= .5229E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCW59	MANE	.55	67.03	210.54	2.37	5.00	66.05	210.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3910E+01 EXCESS= .0000E+00 OUTFLOW= .3910E+01 BASIN STORAGE= .4838E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	.13	1454.88	215.03	2.56	5.00	1454.36	215.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1108E+03 EXCESS= .0000E+00 OUTFLOW= .1108E+03 BASIN STORAGE= .2747E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	.13	1427.63	215.07	2.51	5.00	1426.77	215.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1087E+03 EXCESS= .0000E+00 OUTFLOW= .1087E+03 BASIN STORAGE= .2741E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1383.23	215.10	2.43	5.00	1382.28	215.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1051E+03 EXCESS= .0000E+00 OUTFLOW= .1051E+03 BASIN STORAGE= .2746E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1340.14	215.10	2.35	5.00	1339.18	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1016E+03 EXCESS= .0000E+00 OUTFLOW= .1016E+03 BASIN STORAGE= .2745E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1321.24	215.07	2.32	5.00	1320.36	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1002E+03 EXCESS= .0000E+00 OUTFLOW= .1002E+03 BASIN STORAGE= .2733E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1309.01	215.17	2.29	5.00	1308.43	215.00	2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9918E+02 EXCESS= .0000E+00 OUTFLOW= .9918E+02 BASIN STORAGE= .2738E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1299.97	215.10	2.28	5.00	1299.04	215.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9846E+02 EXCESS= .0000E+00 OUTFLOW= .9846E+02 BASIN STORAGE= .2739E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1285.72	215.04	2.25	5.00	1285.04	215.00	2.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9734E+02 EXCESS= .0000E+00 OUTFLOW= .9734E+02 BASIN STORAGE= .2725E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI1	MANE	.14	1269.19	215.04	2.22	5.00	1268.64	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9592E+02 EXCESS= .0000E+00 OUTFLOW= .9592E+02 BASIN STORAGE= .2690E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.13	1472.17	215.10	2.56	5.00	1471.33	215.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1124E+03 EXCESS= .0000E+00 OUTFLOW= .1124E+03 BASIN STORAGE= .2732E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.13	1444.06	215.15	2.51	5.00	1443.54	215.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1102E+03 EXCESS= .0000E+00 OUTFLOW= .1102E+03 BASIN STORAGE= .2708E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.13	1399.04	215.06	2.43	5.00	1398.22	215.00	2.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1066E+03 EXCESS= .0000E+00 OUTFLOW= .1066E+03 BASIN STORAGE= .2730E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1355.48	215.07	2.35	5.00	1354.65	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1030E+03 EXCESS= .0000E+00 OUTFLOW= .1030E+03 BASIN STORAGE= .2756E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1336.34	215.05	2.32	5.00	1335.60	215.00	2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1016E+03 EXCESS= .0000E+00 OUTFLOW= .1016E+03 BASIN STORAGE= .2740E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1324.57	215.15	2.29	5.00	1323.85	215.00	2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1006E+03 EXCESS= .0000E+00 OUTFLOW= .1006E+03 BASIN STORAGE= .2755E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1314.87	215.07	2.28	5.00	1313.97	215.00	2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9987E+02 EXCESS= .0000E+00 OUTFLOW= .9987E+02 BASIN STORAGE= .2686E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1300.49	215.04	2.25	5.00	1299.92	215.00	2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9873E+02 EXCESS= .0000E+00 OUTFLOW= .9873E+02 BASIN STORAGE= .2728E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCPI2	MANE	.14	1283.90	215.17	2.22	5.00	1283.34	215.00	2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9729E+02 EXCESS= .0000E+00 OUTFLOW= .9729E+02 BASIN STORAGE= .2689E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	1.99	34.55	212.50	2.35	5.00	32.57	215.00	2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2152E+01 EXCESS= .0000E+00 OUTFLOW= .2154E+01 BASIN STORAGE= .9624E-03 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.00	34.07	212.16	2.30	5.00	31.89	215.00	2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2109E+01 EXCESS= .0000E+00 OUTFLOW= .2110E+01 BASIN STORAGE= .1096E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.03	32.56	212.97	2.22	5.00	30.95	215.00	2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2037E+01 EXCESS= .0000E+00 OUTFLOW= .2038E+01 BASIN STORAGE= .9345E-03 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.06	31.65	211.80	2.14	5.00	29.78	215.00	2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1964E+01 EXCESS= .0000E+00 OUTFLOW= .1966E+01 BASIN STORAGE= .1009E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.07	31.03	213.00	2.11	5.00	29.53	215.00	2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1936E+01 EXCESS= .0000E+00 OUTFLOW= .1937E+01 BASIN STORAGE= .9928E-03 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.08	30.85	211.77	2.09	5.00	29.10	215.00	2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1915E+01 EXCESS= .0000E+00 OUTFLOW= .1916E+01 BASIN STORAGE= .1046E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.08	30.80	212.38	2.07	5.00	29.07	215.00	2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1902E+01 EXCESS= .0000E+00 OUTFLOW= .1903E+01 BASIN STORAGE= .9289E-03 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCWPW3	MANE	2.09	30.00	213.37	2.05	5.00	28.59	215.00	2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1878E+01 EXCESS= .0000E+00 OUTFLOW= .1879E+01 BASIN STORAGE= .9551E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RCWPW3 MANE 2.10 29.95 212.52 2.02 5.00 28.38 215.00 2.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1850E+01 EXCESS= .0000E+00 OUTFLOW= .1852E+01 BASIN STORAGE= .9338E-03 PERCENT ERROR= -
.1

FOR PLAN = 1 RATIO= .00
RW65 MANE .71 42.46 211.08 2.44 5.00 41.29 210.00 2.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2683E+01 EXCESS= .0000E+00 OUTFLOW= .2683E+01 BASIN STORAGE= .5773E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .71 41.68 211.16 2.39 5.00 40.52 210.00 2.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2630E+01 EXCESS= .0000E+00 OUTFLOW= .2630E+01 BASIN STORAGE= .5673E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .72 40.35 211.10 2.31 5.00 39.22 210.00 2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2541E+01 EXCESS= .0000E+00 OUTFLOW= .2541E+01 BASIN STORAGE= .5923E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .72 39.03 211.06 2.23 5.00 37.92 210.00 2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2453E+01 EXCESS= .0000E+00 OUTFLOW= .2453E+01 BASIN STORAGE= .6165E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .72 38.48 210.91 2.20 5.00 37.41 210.00 2.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2418E+01 EXCESS= .0000E+00 OUTFLOW= .2418E+01 BASIN STORAGE= .5727E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .73 38.15 211.32 2.18 5.00 37.05 210.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2393E+01 EXCESS= .0000E+00 OUTFLOW= .2393E+01 BASIN STORAGE= .5671E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .73 37.85 210.89 2.16 5.00 36.79 210.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2375E+01 EXCESS= .0000E+00 OUTFLOW= .2375E+01 BASIN STORAGE= .5841E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .73 37.47 211.37 2.14 5.00 36.40 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2347E+01 EXCESS= .0000E+00 OUTFLOW= .2347E+01 BASIN STORAGE= .6511E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RW65 MANE .73 36.93 211.24 2.10 5.00 35.88 215.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2312E+01 EXCESS= .0000E+00 OUTFLOW= .2312E+01 BASIN STORAGE= .6016E-04 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .19 1607.38 215.12 2.56 5.00 1606.25 215.00 2.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1219E+03 EXCESS= .0000E+00 OUTFLOW= .1219E+03 BASIN STORAGE= .4221E-03 PERCENT ERROR= -
.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1577.31 215.19 2.51 5.00 1576.44 215.00 2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1196E+03 EXCESS= .0000E+00 OUTFLOW= .1196E+03 BASIN STORAGE= .4228E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1527.78 215.16 2.42 5.00 1526.68 215.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1156E+03 EXCESS= .0000E+00 OUTFLOW= .1156E+03 BASIN STORAGE= .4248E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1479.59 215.10 2.34 5.00 1478.45 215.00 2.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1118E+03 EXCESS= .0000E+00 OUTFLOW= .1118E+03 BASIN STORAGE= .4119E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1459.01 215.10 2.31 5.00 1457.93 215.00 2.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1102E+03 EXCESS= .0000E+00 OUTFLOW= .1102E+03 BASIN STORAGE= .4259E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1445.74 215.05 2.29 5.00 1444.96 215.00 2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1091E+03 EXCESS= .0000E+00 OUTFLOW= .1091E+03 BASIN STORAGE= .4117E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1435.27 215.07 2.27 5.00 1434.31 215.00 2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1083E+03 EXCESS= .0000E+00 OUTFLOW= .1083E+03 BASIN STORAGE= .4257E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .20 1420.33 215.19 2.24 5.00 1419.27 215.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1071E+03 EXCESS= .0000E+00 OUTFLOW= .1071E+03 BASIN STORAGE= .4225E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RCP15 MANE .21 1401.57 215.06 2.21 5.00 1400.71 215.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1055E+03 EXCESS= .0000E+00 OUTFLOW= .1055E+03 BASIN STORAGE= .4228E-03 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RWP9 MANE .96 8.00 210.75 2.17 5.00 7.78 210.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4522E+00 EXCESS= .0000E+00 OUTFLOW= .4522E+00 BASIN STORAGE= .6328E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RWP9 MANE .96 7.81 210.65 2.13 5.00 7.62 210.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4424E+00 EXCESS= .0000E+00 OUTFLOW= .4424E+00 BASIN STORAGE= .5680E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RWP9 MANE .97 7.60 211.15 2.05 5.00 7.36 210.00 2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4263E+00 EXCESS= .0000E+00 OUTFLOW= .4264E+00 BASIN STORAGE= .5840E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00
RWP9 MANE .98 7.29 210.72 1.97 5.00 7.09 210.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4103E+00 EXCESS= .0000E+00 OUTFLOW= .4103E+00 BASIN STORAGE= .5926E-04 PERCENT ERROR=.0

FOR PLAN = 1 RATIO= .00

RWP9	MANE	.98	7.19	211.34	1.94	5.00	6.98	210.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4039E+00 EXCESS= .0000E+00 OUTFLOW= .4039E+00 BASIN STORAGE= .5750E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RWP9	MANE	.98	7.13	210.80	1.92	5.00	6.92	210.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3994E+00 EXCESS= .0000E+00 OUTFLOW= .3994E+00 BASIN STORAGE= .5901E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RWP9	MANE	.98	7.10	211.12	1.91	5.00	6.87	210.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3963E+00 EXCESS= .0000E+00 OUTFLOW= .3963E+00 BASIN STORAGE= .6267E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RWP9	MANE	.98	6.95	210.65	1.88	5.00	6.77	210.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3911E+00 EXCESS= .0000E+00 OUTFLOW= .3911E+00 BASIN STORAGE= .6288E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RWP9	MANE	.99	6.88	211.30	1.85	5.00	6.67	210.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3847E+00 EXCESS= .0000E+00 OUTFLOW= .3847E+00 BASIN STORAGE= .6075E-04 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.32	1655.31	215.09	2.55	5.00	1654.02	215.00	2.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1256E+03 EXCESS= .0000E+00 OUTFLOW= .1256E+03 BASIN STORAGE= .6977E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.32	1624.49	215.08	2.50	5.00	1623.25	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1232E+03 EXCESS= .0000E+00 OUTFLOW= .1232E+03 BASIN STORAGE= .6935E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.33	1573.93	215.23	2.42	5.00	1571.80	215.00	2.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1191E+03 EXCESS= .0000E+00 OUTFLOW= .1191E+03 BASIN STORAGE= .6945E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.33	1524.29	215.35	2.34	5.00	1522.73	215.00	2.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1151E+03 EXCESS= .0000E+00 OUTFLOW= .1151E+03 BASIN STORAGE= .6993E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.33	1502.92	215.21	2.31	5.00	1500.77	215.00	2.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1135E+03 EXCESS= .0000E+00 OUTFLOW= .1135E+03 BASIN STORAGE= .7399E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.34	1490.05	215.31	2.28	5.00	1488.01	215.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1124E+03 EXCESS= .0000E+00 OUTFLOW= .1124E+03 BASIN STORAGE= .6977E-03 PERCENT ERROR=									
.0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	.34	1478.88	215.28	2.27	5.00	1476.69	215.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1116E+03 EXCESS= .0000E+00 OUTFLOW= .1116E+03 BASIN STORAGE= .7186E-03 PERCENT ERROR=									
.0									

FOR PLAN = 1 RATIO= .00
RCP16 MANE .34 1462.71 215.17 2.24 5.00 1460.66 215.00 2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1103E+03 EXCESS= .0000E+00 OUTFLOW= .1103E+03 BASIN STORAGE= .6865E-03 PERCENT ERROR=
.0

FOR PLAN = 1 RATIO= .00
RCP16 MANE .34 1444.19 215.29 2.21 5.00 1441.91 215.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1087E+03 EXCESS= .0000E+00 OUTFLOW= .1087E+03 BASIN STORAGE= .6952E-03 PERCENT ERROR=
.0

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

FLOOD CONTROL MASTER PLAN UPDATE

SUMMERLIN WEST PLANNING AREA

Las Vegas, Nevada

W.O. # 7809

Prepared for:
Howard Hughes Corp.

Submitted to:
Public Works Department
City of Las Vegas



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APPENDIX C

HYDRAULIC CALCULATIONS

C.1 REGIONAL FACILITY NORMAL DEPTH CALCULATIONS

Worksheet for SD-A

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01640	ft/ft
Normal Depth	4.50	ft
Height	5.00	ft
Discharge	422.00	ft ³ /s

Results

Bottom Width	4.77	ft
Flow Area	21.45	ft ²
Wetted Perimeter	13.77	ft
Hydraulic Radius	1.56	ft
Top Width	4.77	ft
Critical Depth	6.25	ft
Percent Full	90.0	%
Critical Slope	0.00743	ft/ft
Velocity	19.67	ft/s
Velocity Head	6.01	ft
Specific Energy	10.51	ft
Froude Number	1.63	
Discharge Full	398.36	ft ³ /s
Slope Full	0.01461	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	90.00	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-A

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.50	ft
Critical Depth	6.25	ft
Channel Slope	0.01640	ft/ft
Critical Slope	0.00743	ft/ft

Cross Section for SD-A

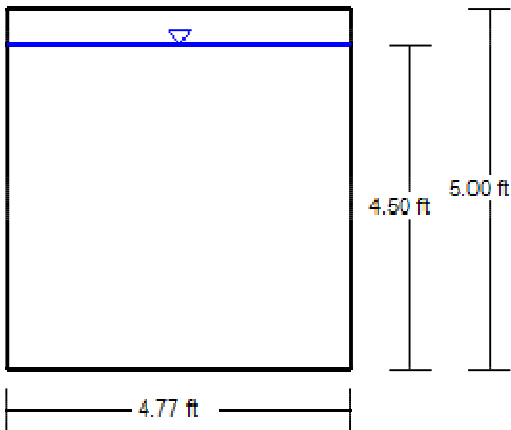
Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01640	ft/ft
Normal Depth	4.50	ft
Height	5.00	ft
Bottom Width	4.77	ft
Discharge	422.00	ft³/s

Cross Section Image



V: 1
H: 1

Worksheet for SD-A2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04500	ft/ft
Height	5.00	ft
Bottom Width	5.00	ft
Discharge	422.00	ft ³ /s

Results

Normal Depth	2.87	ft
Flow Area	14.35	ft ²
Wetted Perimeter	10.74	ft
Hydraulic Radius	1.34	ft
Top Width	5.00	ft
Critical Depth	6.05	ft
Percent Full	57.4	%
Critical Slope	0.00696	ft/ft
Velocity	29.41	ft/s
Velocity Head	13.44	ft
Specific Energy	16.31	ft
Froude Number	3.06	
Discharge Full	703.40	ft ³ /s
Slope Full	0.12502	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	57.39	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-A2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	2.87	ft
Critical Depth	6.05	ft
Channel Slope	0.04500	ft/ft
Critical Slope	0.00696	ft/ft

Cross Section for SD-A2

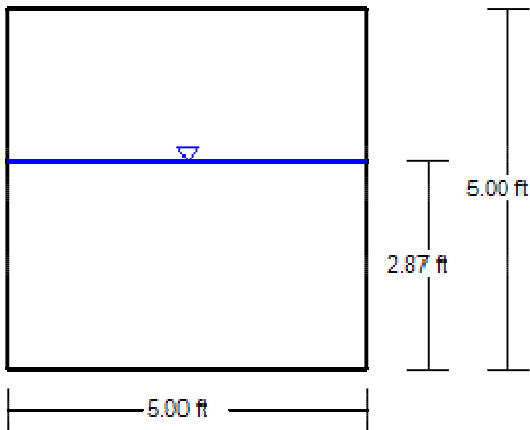
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04500	ft/ft
Normal Depth	2.87	ft
Height	5.00	ft
Bottom Width	5.00	ft
Discharge	422.00	ft³/s

Cross Section Image



V: 1
H: 1

Worksheet for SD-A3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.05700	ft/ft
Height	5.00	ft
Bottom Width	5.00	ft
Discharge	422.00	ft ³ /s

Results

Normal Depth	2.62	ft
Flow Area	13.12	ft ²
Wetted Perimeter	10.25	ft
Hydraulic Radius	1.28	ft
Top Width	5.00	ft
Critical Depth	6.05	ft
Percent Full	52.5	%
Critical Slope	0.00696	ft/ft
Velocity	32.17	ft/s
Velocity Head	16.09	ft
Specific Energy	18.71	ft
Froude Number	3.50	
Discharge Full	791.65	ft ³ /s
Slope Full	0.20060	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	52.47	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-A3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	2.62	ft
Critical Depth	6.05	ft
Channel Slope	0.05700	ft/ft
Critical Slope	0.00696	ft/ft

Cross Section for SD-A3

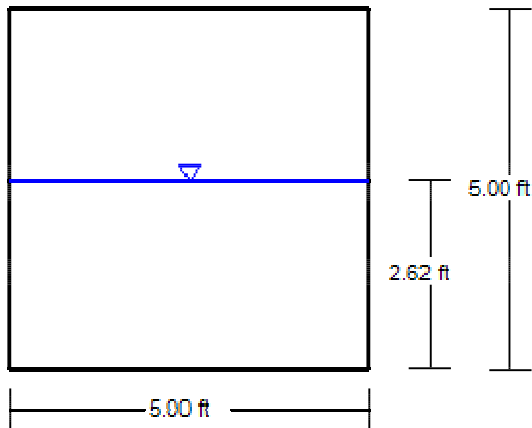
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.05700 ft/ft
Normal Depth	2.62 ft
Height	5.00 ft
Bottom Width	5.00 ft
Discharge	422.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-B

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.06000	ft/ft
Normal Depth	2.84	ft
Diameter	2.84	ft
Discharge	141.00	ft ³ /s

Results

Diameter	2.84	ft
Normal Depth	2.84	ft
Flow Area	6.33	ft ²
Wetted Perimeter	8.92	ft
Hydraulic Radius	0.71	ft
Top Width	0.00	ft
Critical Depth	2.82	ft
Percent Full	100.0	%
Critical Slope	0.05644	ft/ft
Velocity	22.27	ft/s
Velocity Head	7.71	ft
Specific Energy	10.55	ft
Froude Number	0.00	
Maximum Discharge	151.70	ft ³ /s
Discharge Full	141.02	ft ³ /s
Slope Full	0.05998	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Worksheet for SD-B

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	2.84	ft
Critical Depth	2.82	ft
Channel Slope	0.06000	ft/ft
Critical Slope	0.05644	ft/ft

Cross Section for SD-B

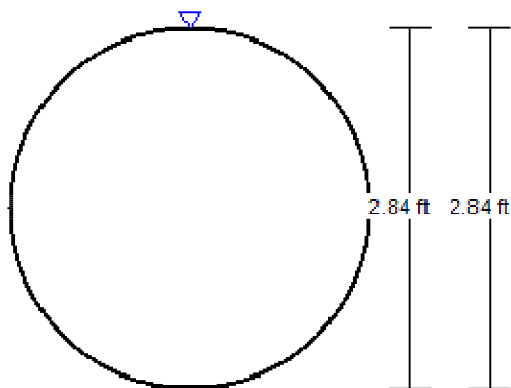
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	0.06000 ft/ft
Normal Depth	2.84 ft
Diameter	2.84 ft
Discharge	141.00 ft ³ /s

Cross Section Image



V: 1
H: 1



Worksheet for SD-B1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04220	ft/ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	474.00	ft ³ /s

Results

Normal Depth	3.22	ft
Flow Area	16.08	ft ²
Wetted Perimeter	11.43	ft
Hydraulic Radius	1.41	ft
Top Width	5.00	ft
Critical Depth	6.54	ft
Percent Full	80.4	%
Critical Slope	0.00731	ft/ft
Velocity	29.48	ft/s
Velocity Head	13.50	ft
Specific Energy	16.72	ft
Froude Number	2.90	
Discharge Full	503.78	ft ³ /s
Slope Full	0.04768	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	80.40	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-B1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.22	ft
Critical Depth	6.54	ft
Channel Slope	0.04220	ft/ft
Critical Slope	0.00731	ft/ft

Cross Section for SD-B1

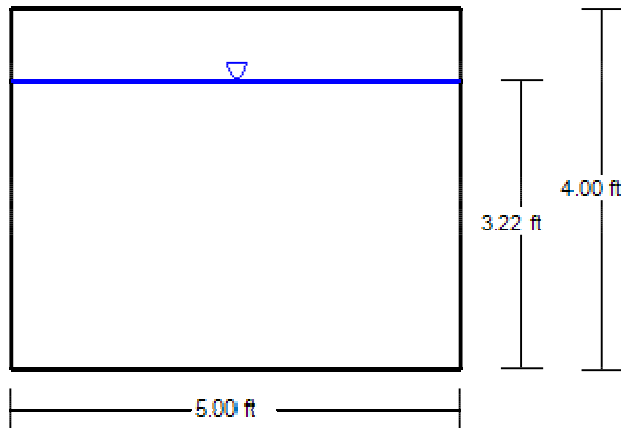
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.04220 ft/ft
Normal Depth	3.22 ft
Height	4.00 ft
Bottom Width	5.00 ft
Discharge	474.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-B2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Height	5.00	ft
Bottom Width	6.00	ft
Discharge	592.00	ft ³ /s

Results

Normal Depth	4.20	ft
Flow Area	25.21	ft ²
Wetted Perimeter	14.40	ft
Hydraulic Radius	1.75	ft
Top Width	6.00	ft
Critical Depth	6.71	ft
Percent Full	84.0	%
Critical Slope	0.00625	ft/ft
Velocity	23.48	ft/s
Velocity Head	8.57	ft
Specific Energy	12.77	ft
Froude Number	2.02	
Discharge Full	596.33	ft ³ /s
Slope Full	0.02030	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	84.05	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-B2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.20	ft
Critical Depth	6.71	ft
Channel Slope	0.02000	ft/ft
Critical Slope	0.00625	ft/ft

Cross Section for SD-B2

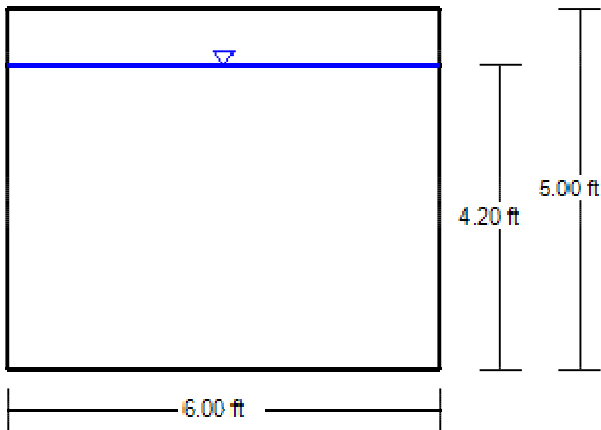
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Normal Depth	4.20	ft
Height	5.00	ft
Bottom Width	6.00	ft
Discharge	592.00	ft³/s

Cross Section Image



V: 1
H: 1

Worksheet for SD-B3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03550	ft/ft
Height	6.00	ft
Bottom Width	6.00	ft
Discharge	1057.00	ft ³ /s

Results

Normal Depth	5.30	ft
Flow Area	31.82	ft ²
Wetted Perimeter	16.61	ft
Hydraulic Radius	1.92	ft
Top Width	6.00	ft
Critical Depth	9.88	ft
Percent Full	88.4	%
Critical Slope	0.00801	ft/ft
Velocity	33.22	ft/s
Velocity Head	17.15	ft
Specific Energy	22.45	ft
Froude Number	2.54	
Discharge Full	1015.93	ft ³ /s
Slope Full	0.03279	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	88.38	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-B3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	5.30	ft
Critical Depth	9.88	ft
Channel Slope	0.03550	ft/ft
Critical Slope	0.00801	ft/ft

Cross Section for SD-B3

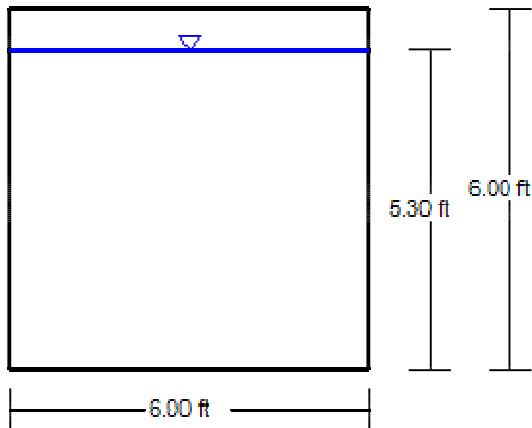
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03550	ft/ft
Normal Depth	5.30	ft
Height	6.00	ft
Bottom Width	6.00	ft
Discharge	1057.00	ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-F

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03000	ft/ft
Height	5.00	ft
Bottom Width	5.00	ft
Discharge	514.00	ft ³ /s

Results

Normal Depth	3.92	ft
Flow Area	19.59	ft ²
Wetted Perimeter	12.83	ft
Hydraulic Radius	1.53	ft
Top Width	5.00	ft
Critical Depth	6.90	ft
Percent Full	78.3	%
Critical Slope	0.00756	ft/ft
Velocity	26.24	ft/s
Velocity Head	10.70	ft
Specific Energy	14.62	ft
Froude Number	2.34	
Discharge Full	574.34	ft ³ /s
Slope Full	0.03746	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	78.34	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.92	ft
Critical Depth	6.90	ft
Channel Slope	0.03000	ft/ft
Critical Slope	0.00756	ft/ft

Cross Section for SD-F

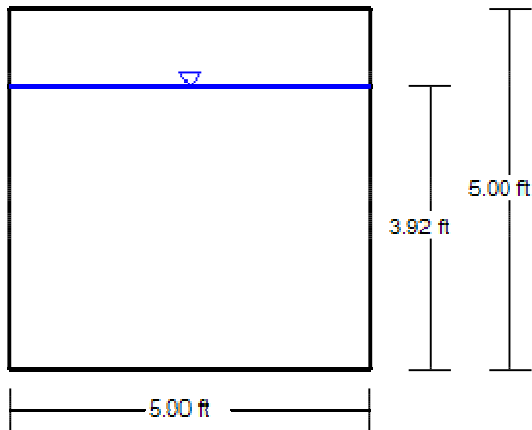
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.03000 ft/ft
Normal Depth	3.92 ft
Height	5.00 ft
Bottom Width	5.00 ft
Discharge	514.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-F1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01910	ft/ft
Height	4.00	ft
Bottom Width	4.00	ft
Discharge	254.00	ft ³ /s

Results

Normal Depth	3.44	ft
Flow Area	13.75	ft ²
Wetted Perimeter	10.88	ft
Hydraulic Radius	1.26	ft
Top Width	4.00	ft
Critical Depth	5.00	ft
Percent Full	85.9	%
Critical Slope	0.00766	ft/ft
Velocity	18.47	ft/s
Velocity Head	5.30	ft
Specific Energy	8.74	ft
Froude Number	1.76	
Discharge Full	252.75	ft ³ /s
Slope Full	0.01892	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	85.94	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.44	ft
Critical Depth	5.00	ft
Channel Slope	0.01910	ft/ft
Critical Slope	0.00766	ft/ft

Cross Section for SD-F1

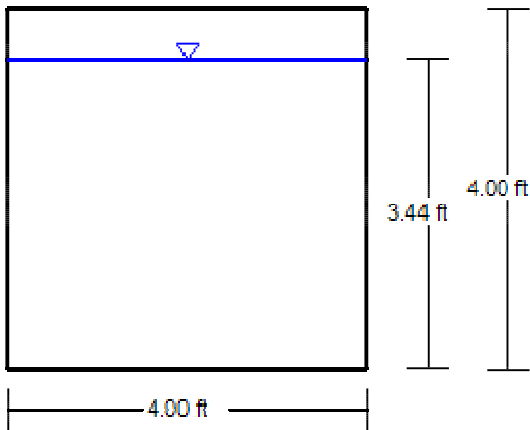
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01910	ft/ft
Normal Depth	3.44	ft
Height	4.00	ft
Bottom Width	4.00	ft
Discharge	254.00	ft³/s

Cross Section Image



V: 1
H: 1

Worksheet for SD-F2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04600	ft/ft
Height	6.00	ft
Bottom Width	7.00	ft
Discharge	1241.00	ft ³ /s

Results

Normal Depth	4.58	ft
Flow Area	32.06	ft ²
Wetted Perimeter	16.16	ft
Hydraulic Radius	1.98	ft
Top Width	7.00	ft
Critical Depth	9.92	ft
Percent Full	76.3	%
Critical Slope	0.00688	ft/ft
Velocity	38.71	ft/s
Velocity Head	23.29	ft
Specific Energy	27.87	ft
Froude Number	3.19	
Discharge Full	1417.52	ft ³ /s
Slope Full	0.06003	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	76.33	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.58	ft
Critical Depth	9.92	ft
Channel Slope	0.04600	ft/ft
Critical Slope	0.00688	ft/ft

Cross Section for SD-F2

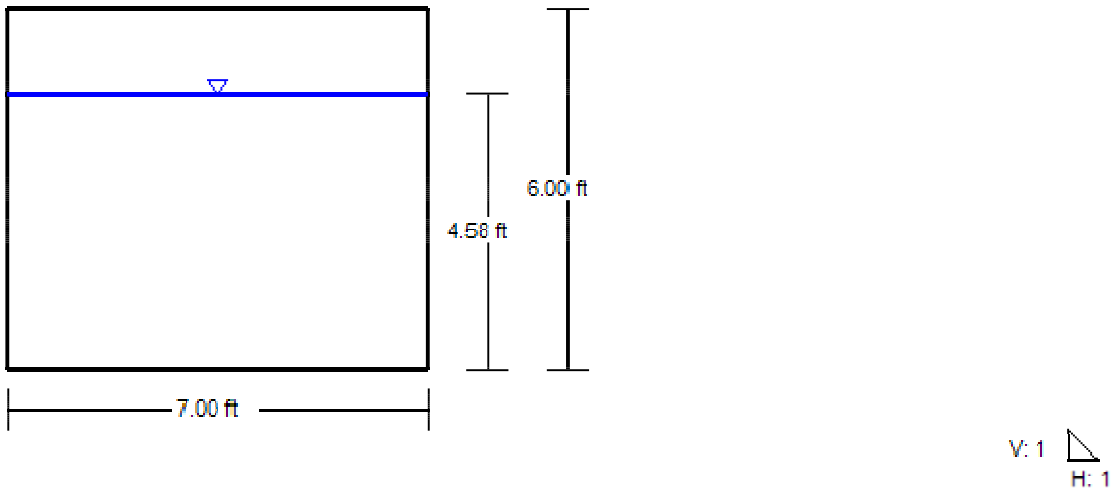
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04600	ft/ft
Normal Depth	4.58	ft
Height	6.00	ft
Bottom Width	7.00	ft
Discharge	1241.00	ft³/s

Cross Section Image



Worksheet for SD-F3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01300	ft/ft
Height	5.00	ft
Bottom Width	12.00	ft
Discharge	1241.00	ft ³ /s

Results

Normal Depth	4.30	ft
Flow Area	51.62	ft ²
Wetted Perimeter	20.60	ft
Hydraulic Radius	2.51	ft
Top Width	12.00	ft
Critical Depth	6.93	ft
Percent Full	86.0	%
Critical Slope	0.00359	ft/ft
Velocity	24.04	ft/s
Velocity Head	8.98	ft
Specific Energy	13.28	ft
Froude Number	2.04	
Discharge Full	1141.89	ft ³ /s
Slope Full	0.01101	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	86.04	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.30	ft
Critical Depth	6.93	ft
Channel Slope	0.01300	ft/ft
Critical Slope	0.00359	ft/ft

Cross Section for SD-F3

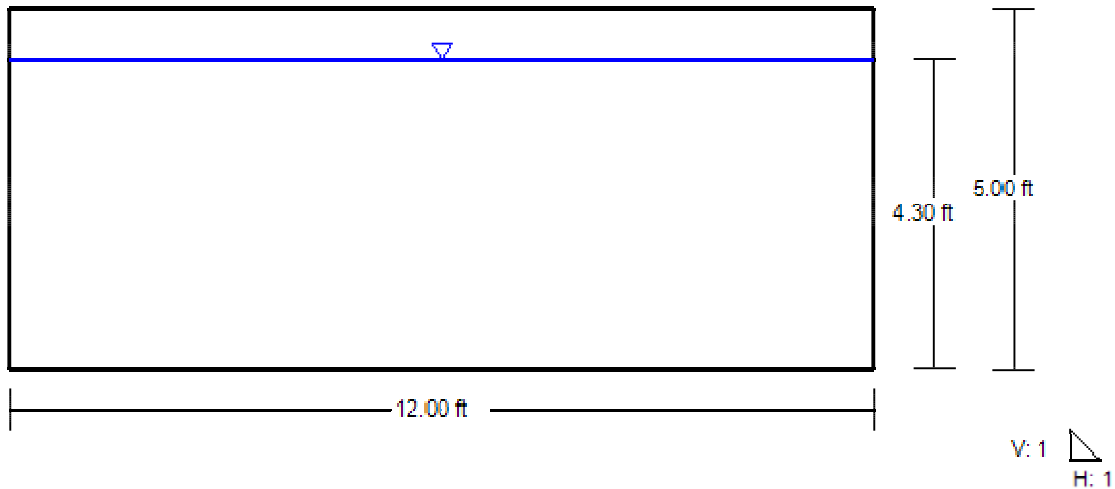
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.01300 ft/ft
Normal Depth	4.30 ft
Height	5.00 ft
Bottom Width	12.00 ft
Discharge	1241.00 ft ³ /s

Cross Section Image



Worksheet for SD-F4

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01380	ft/ft
Height	6.00	ft
Bottom Width	12.00	ft
Discharge	1552.00	ft ³ /s

Results

Normal Depth	4.95	ft
Flow Area	59.42	ft ²
Wetted Perimeter	21.90	ft
Hydraulic Radius	2.71	ft
Top Width	12.00	ft
Critical Depth	8.04	ft
Percent Full	82.5	%
Critical Slope	0.00382	ft/ft
Velocity	26.12	ft/s
Velocity Head	10.60	ft
Specific Energy	15.55	ft
Froude Number	2.07	
Discharge Full	1534.65	ft ³ /s
Slope Full	0.01350	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	82.53	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F4

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.95	ft
Critical Depth	8.04	ft
Channel Slope	0.01380	ft/ft
Critical Slope	0.00382	ft/ft

Cross Section for SD-F4

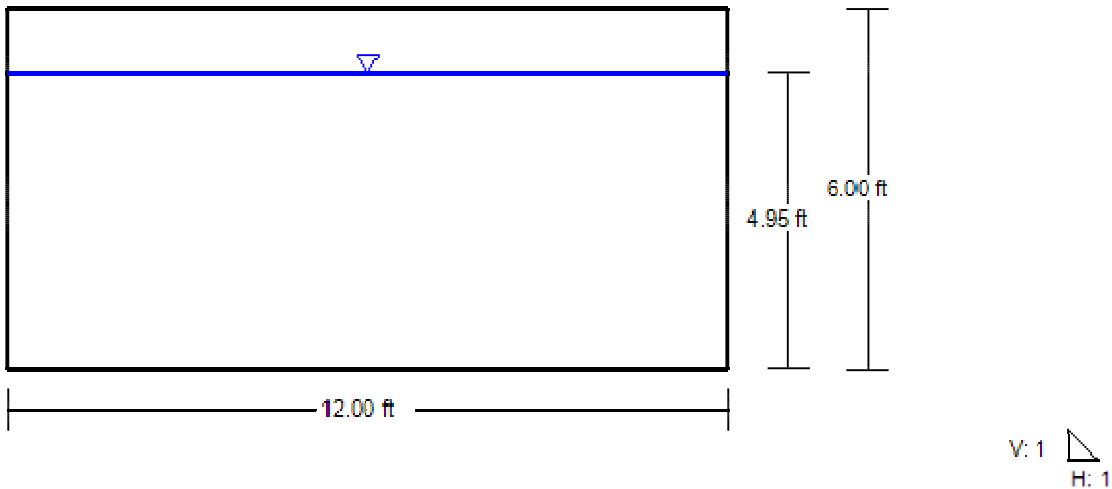
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01380	ft/ft
Normal Depth	4.95	ft
Height	6.00	ft
Bottom Width	12.00	ft
Discharge	1552.00	ft³/s

Cross Section Image



Worksheet for SD-F5

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01800	ft/ft
Height	6.00	ft
Bottom Width	12.00	ft
Discharge	1753.00	ft ³ /s

Results

Normal Depth	4.91	ft
Flow Area	58.94	ft ²
Wetted Perimeter	21.82	ft
Hydraulic Radius	2.70	ft
Top Width	12.00	ft
Critical Depth	8.72	ft
Percent Full	81.9	%
Critical Slope	0.00396	ft/ft
Velocity	29.74	ft/s
Velocity Head	13.75	ft
Specific Energy	18.66	ft
Froude Number	2.37	
Discharge Full	1752.70	ft ³ /s
Slope Full	0.01799	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	81.87	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-F5

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.91	ft
Critical Depth	8.72	ft
Channel Slope	0.01800	ft/ft
Critical Slope	0.00396	ft/ft

Cross Section for SD-F5

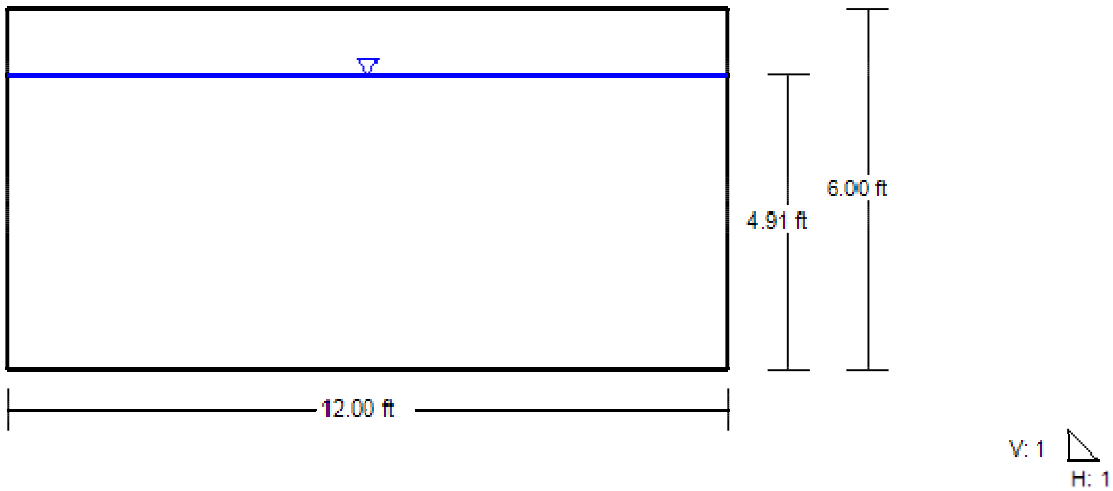
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01800	ft/ft
Normal Depth	4.91	ft
Height	6.00	ft
Bottom Width	12.00	ft
Discharge	1753.00	ft³/s

Cross Section Image



Worksheet for SD-G

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04000	ft/ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	428.00	ft ³ /s

Results

Normal Depth	3.03	ft
Flow Area	15.17	ft ²
Wetted Perimeter	11.07	ft
Hydraulic Radius	1.37	ft
Top Width	5.00	ft
Critical Depth	6.11	ft
Percent Full	75.9	%
Critical Slope	0.00700	ft/ft
Velocity	28.21	ft/s
Velocity Head	12.37	ft
Specific Energy	15.40	ft
Froude Number	2.86	
Discharge Full	490.47	ft ³ /s
Slope Full	0.05254	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.86	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-G

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.03	ft
Critical Depth	6.11	ft
Channel Slope	0.04000	ft/ft
Critical Slope	0.00700	ft/ft

Cross Section for SD-G

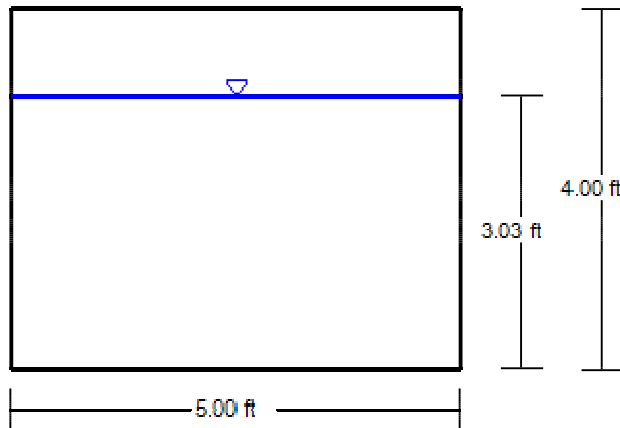
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04000	ft/ft
Normal Depth	3.03	ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	428.00	ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-G1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02950	ft/ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	428.00	ft ³ /s

Results

Normal Depth	3.41	ft
Flow Area	17.07	ft ²
Wetted Perimeter	11.83	ft
Hydraulic Radius	1.44	ft
Top Width	5.00	ft
Critical Depth	6.11	ft
Percent Full	85.4	%
Critical Slope	0.00700	ft/ft
Velocity	25.07	ft/s
Velocity Head	9.77	ft
Specific Energy	13.18	ft
Froude Number	2.39	
Discharge Full	421.21	ft ³ /s
Slope Full	0.02857	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	85.36	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-G1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.41	ft
Critical Depth	6.11	ft
Channel Slope	0.02950	ft/ft
Critical Slope	0.00700	ft/ft

Cross Section for SD-G1

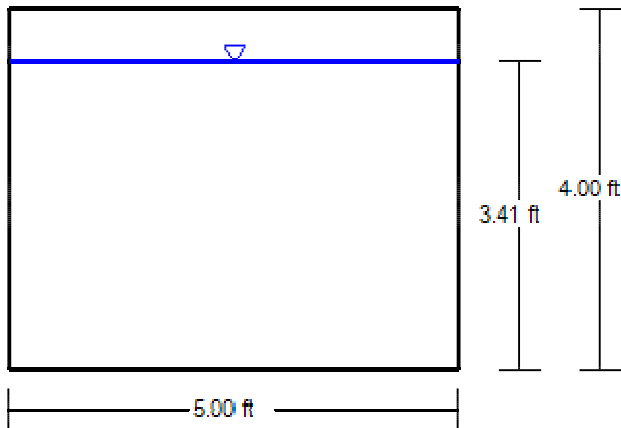
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.02950 ft/ft
Normal Depth	3.41 ft
Height	4.00 ft
Bottom Width	5.00 ft
Discharge	428.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-G2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03800	ft/ft
Height	5.00	ft
Bottom Width	6.00	ft
Discharge	856.00	ft ³ /s

Results

Normal Depth	4.36	ft
Flow Area	26.18	ft ²
Wetted Perimeter	14.73	ft
Hydraulic Radius	1.78	ft
Top Width	6.00	ft
Critical Depth	8.58	ft
Percent Full	87.3	%
Critical Slope	0.00729	ft/ft
Velocity	32.70	ft/s
Velocity Head	16.61	ft
Specific Energy	20.98	ft
Froude Number	2.76	
Discharge Full	821.98	ft ³ /s
Slope Full	0.03504	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	87.27	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-G2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.36	ft
Critical Depth	8.58	ft
Channel Slope	0.03800	ft/ft
Critical Slope	0.00729	ft/ft

Cross Section for SD-G2

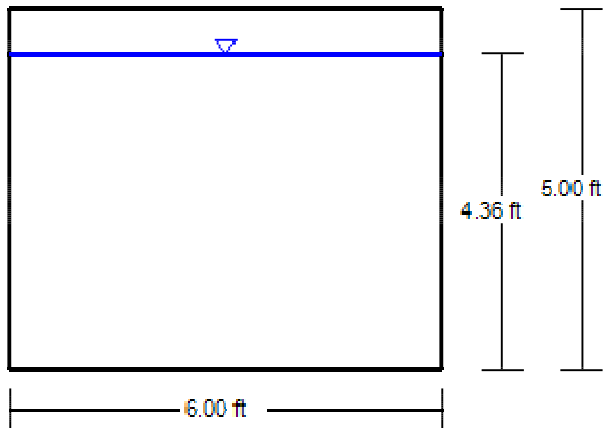
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03800	ft/ft
Normal Depth	4.36	ft
Height	5.00	ft
Bottom Width	6.00	ft
Discharge	856.00	ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-I

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02300	ft/ft
Height	4.00	ft
Bottom Width	4.00	ft
Discharge	266.00	ft ³ /s

Results

Normal Depth	3.31	ft
Flow Area	13.24	ft ²
Wetted Perimeter	10.62	ft
Hydraulic Radius	1.25	ft
Top Width	4.00	ft
Critical Depth	5.16	ft
Percent Full	82.8	%
Critical Slope	0.00781	ft/ft
Velocity	20.08	ft/s
Velocity Head	6.27	ft
Specific Energy	9.58	ft
Froude Number	1.95	
Discharge Full	277.35	ft ³ /s
Slope Full	0.02501	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	82.78	%
Downstream Velocity	Infinity	ft/s

Cross Section for SD-I

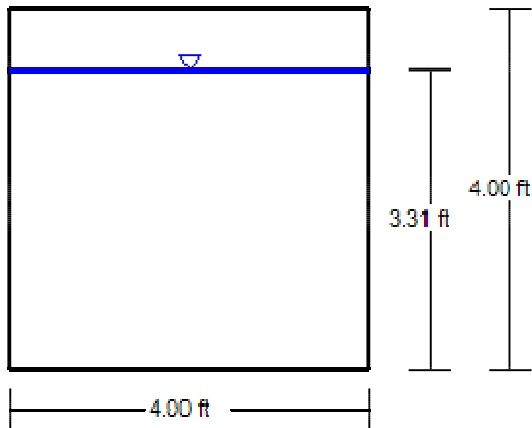
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02300	ft/ft
Normal Depth	3.31	ft
Height	4.00	ft
Bottom Width	4.00	ft
Discharge	266.00	ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for SD-I

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.31	ft
Critical Depth	5.16	ft
Channel Slope	0.02300	ft/ft
Critical Slope	0.00781	ft/ft

Worksheet for SD-I1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	266.00	ft ³ /s

Results

Normal Depth	3.59	ft
Flow Area	17.97	ft ²
Wetted Perimeter	12.19	ft
Hydraulic Radius	1.47	ft
Top Width	5.00	ft
Critical Depth	4.45	ft
Percent Full	89.8	%
Critical Slope	0.00585	ft/ft
Velocity	14.81	ft/s
Velocity Head	3.41	ft
Specific Energy	7.00	ft
Froude Number	1.38	
Discharge Full	245.24	ft ³ /s
Slope Full	0.00850	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	89.83	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-I1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.59	ft
Critical Depth	4.45	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00585	ft/ft

Cross Section for SD-I1

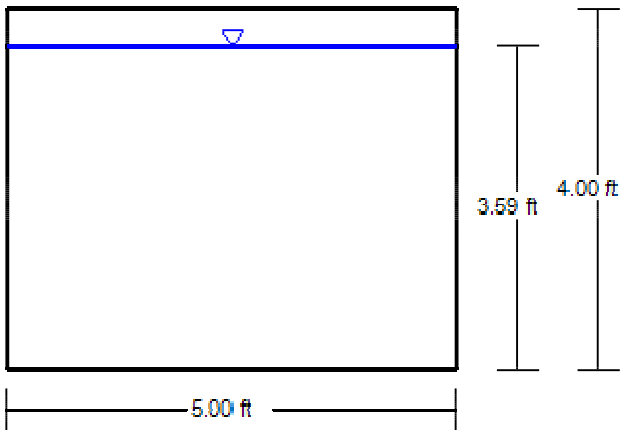
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	3.59	ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	266.00	ft³/s

Cross Section Image



V: 1
H: 1

Worksheet for SD-I2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.05500	ft/ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	532.00	ft ³ /s

Results

Normal Depth	3.17	ft
Flow Area	15.87	ft ²
Wetted Perimeter	11.35	ft
Hydraulic Radius	1.40	ft
Top Width	5.00	ft
Critical Depth	7.06	ft
Percent Full	79.4	%
Critical Slope	0.00768	ft/ft
Velocity	33.52	ft/s
Velocity Head	17.46	ft
Specific Energy	20.64	ft
Froude Number	3.32	
Discharge Full	575.13	ft ³ /s
Slope Full	0.06427	ft/ft
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	79.35	%
Downstream Velocity	Infinity	ft/s

Worksheet for SD-I2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.17	ft
Critical Depth	7.06	ft
Channel Slope	0.05500	ft/ft
Critical Slope	0.00768	ft/ft

Cross Section for SD-I2

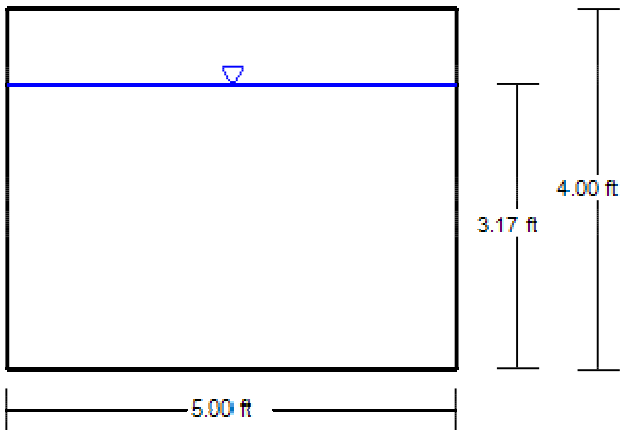
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.05500	ft/ft
Normal Depth	3.17	ft
Height	4.00	ft
Bottom Width	5.00	ft
Discharge	532.00	ft³/s

Cross Section Image



V: 1
H: 1

C.2 AREA 1 LOCAL FACILITY NORMAL DEPTH CALCULATIONS

Worksheet for Facility 1 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.0	%
Normal Depth	27.01	in
Diameter	27.01	in
Discharge	62.00	ft ³ /s

Results

Diameter	27.01	in
Normal Depth	27.01	in
Flow Area	3.98	ft ²
Wetted Perimeter	7.07	ft
Hydraulic Radius	6.75	in
Top Width	0.00	ft
Critical Depth	2.22	ft
Percent Full	100.0	%
Critical Slope	0.03640	ft/ft
Velocity	15.58	ft/s
Velocity Head	3.77	ft
Specific Energy	6.02	ft
Froude Number	0.00	
Maximum Discharge	66.69	ft ³ /s
Discharge Full	62.00	ft ³ /s
Slope Full	0.04000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 1 - 36" RCP

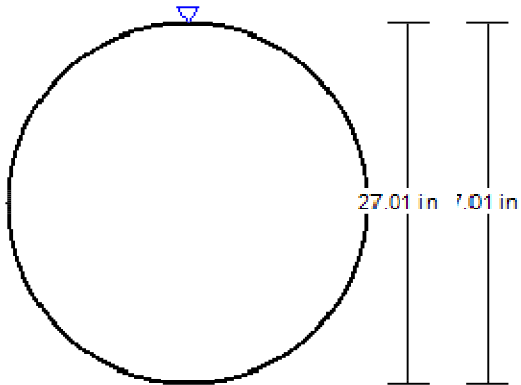
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.0 %
Normal Depth	27.01 in
Diameter	27.01 in
Discharge	62.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 1 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	27.01	in
Critical Depth	2.22	ft
Channel Slope	4.0	%
Critical Slope	0.03640	ft/ft

Worksheet for Facility 2 - 18" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	8.7 %
Normal Depth	8.36 in
Diameter	8.36 in
Discharge	4.00 ft ³ /s

Results

Diameter	8.36 in
Normal Depth	8.36 in
Flow Area	0.38 ft ²
Wetted Perimeter	2.19 ft
Hydraulic Radius	2.09 in
Top Width	0.00 ft
Critical Depth	0.69 ft
Percent Full	100.0 %
Critical Slope	0.08130 ft/ft
Velocity	10.51 ft/s
Velocity Head	1.72 ft
Specific Energy	2.41 ft
Froude Number	0.00
Maximum Discharge	4.30 ft ³ /s
Discharge Full	4.00 ft ³ /s
Slope Full	0.08692 ft/ft
Flow Type	SubCritical

GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %

Cross Section for Facility 2 - 18" RCP

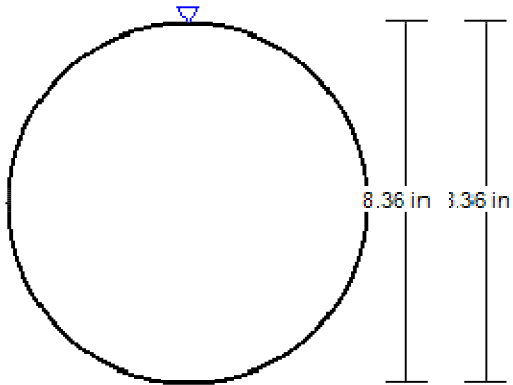
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	8.7 %
Normal Depth	8.36 in
Diameter	8.36 in
Discharge	4.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 2 - 18" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	8.36	in
Critical Depth	0.69	ft
Channel Slope	8.7	%
Critical Slope	0.08130	ft/ft

Worksheet for Facility 3 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.9	%
Normal Depth	24.69	in
Diameter	24.69	in
Discharge	54.00	ft ³ /s

Results

Diameter	24.69	in
Normal Depth	24.69	in
Flow Area	3.32	ft ²
Wetted Perimeter	6.46	ft
Hydraulic Radius	6.17	in
Top Width	0.00	ft
Critical Depth	2.04	ft
Percent Full	100.0	%
Critical Slope	0.04517	ft/ft
Velocity	16.24	ft/s
Velocity Head	4.10	ft
Specific Energy	6.16	ft
Froude Number	0.00	
Maximum Discharge	58.09	ft ³ /s
Discharge Full	54.00	ft ³ /s
Slope Full	0.04900	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 3 - 36" RCP

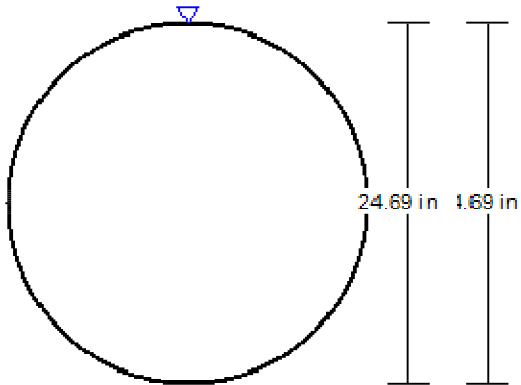
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.9 %
Normal Depth	24.69 in
Diameter	24.69 in
Discharge	54.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 3 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	24.69	in
Critical Depth	2.04	ft
Channel Slope	4.9	%
Critical Slope	0.04517	ft/ft

Worksheet for Facility 4 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	7.1	%
Normal Depth	26.94	in
Diameter	26.94	in
Discharge	82.00	ft ³ /s

Results

Diameter	26.94	in
Normal Depth	26.94	in
Flow Area	3.96	ft ²
Wetted Perimeter	7.05	ft
Hydraulic Radius	6.73	in
Top Width	0.00	ft
Critical Depth	2.23	ft
Percent Full	100.0	%
Critical Slope	0.06714	ft/ft
Velocity	20.72	ft/s
Velocity Head	6.67	ft
Specific Energy	8.92	ft
Froude Number	0.00	
Maximum Discharge	88.21	ft ³ /s
Discharge Full	82.00	ft ³ /s
Slope Full	0.07100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 4 - 36" RCP

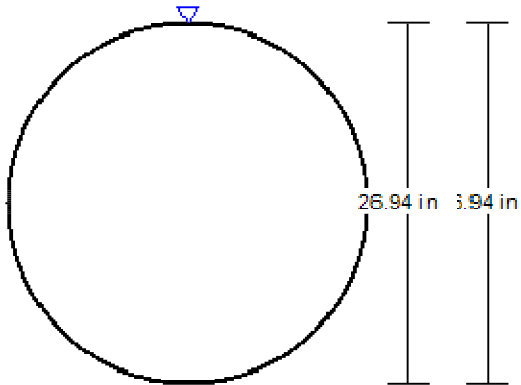
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.1 %
Normal Depth	26.94 in
Diameter	26.94 in
Discharge	82.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 4 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	26.94	in
Critical Depth	2.23	ft
Channel Slope	7.1	%
Critical Slope	0.06714	ft/ft

Worksheet for Facility 5 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.3	%
Normal Depth	23.05	in
Diameter	23.05	in
Discharge	51.00	ft ³ /s

Results

Diameter	23.05	in
Normal Depth	23.05	in
Flow Area	2.90	ft ²
Wetted Perimeter	6.04	ft
Hydraulic Radius	5.76	in
Top Width	0.00	ft
Critical Depth	1.91	ft
Percent Full	100.0	%
Critical Slope	0.05899	ft/ft
Velocity	17.59	ft/s
Velocity Head	4.81	ft
Specific Energy	6.73	ft
Froude Number	0.00	
Maximum Discharge	54.86	ft ³ /s
Discharge Full	51.00	ft ³ /s
Slope Full	0.06300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 5 - 30" RCP

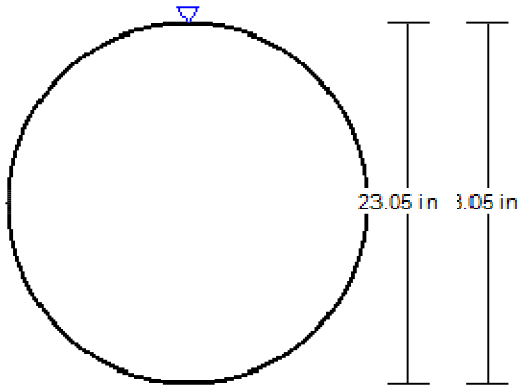
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.3 %
Normal Depth	23.05 in
Diameter	23.05 in
Discharge	51.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 5 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	23.05	in
Critical Depth	1.91	ft
Channel Slope	6.3	%
Critical Slope	0.05899	ft/ft

Worksheet for Facility 6 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.3	%
Normal Depth	12.93	in
Diameter	12.93	in
Discharge	10.00	ft ³ /s

Results

Diameter	12.93	in
Normal Depth	12.93	in
Flow Area	0.91	ft ²
Wetted Perimeter	3.38	ft
Hydraulic Radius	3.23	in
Top Width	0.00	ft
Critical Depth	1.06	ft
Percent Full	100.0	%
Critical Slope	0.04835	ft/ft
Velocity	10.97	ft/s
Velocity Head	1.87	ft
Specific Energy	2.95	ft
Froude Number	0.00	
Maximum Discharge	10.76	ft ³ /s
Discharge Full	10.00	ft ³ /s
Slope Full	0.05300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 12 - 30" RCP

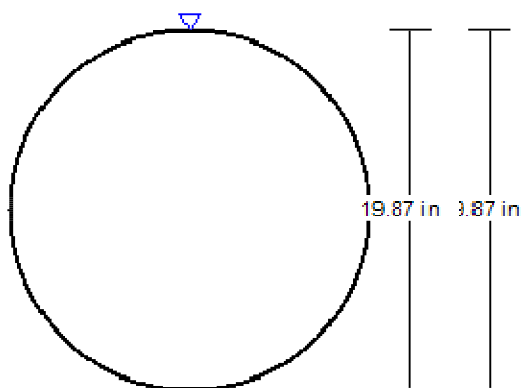
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.2 %
Normal Depth	19.87 in
Diameter	19.87 in
Discharge	28.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 6 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	12.93	in
Critical Depth	1.06	ft
Channel Slope	5.3	%
Critical Slope	0.04835	ft/ft

Worksheet for Facility 7 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.2	%
Normal Depth	17.51	in
Diameter	17.51	in
Discharge	20.00	ft ³ /s

Results

Diameter	17.51	in
Normal Depth	17.51	in
Flow Area	1.67	ft ²
Wetted Perimeter	4.58	ft
Hydraulic Radius	4.38	in
Top Width	0.00	ft
Critical Depth	1.44	ft
Percent Full	100.0	%
Critical Slope	0.03792	ft/ft
Velocity	11.96	ft/s
Velocity Head	2.22	ft
Specific Energy	3.68	ft
Froude Number	0.00	
Maximum Discharge	21.51	ft ³ /s
Discharge Full	20.00	ft ³ /s
Slope Full	0.04200	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 7 - 24" RCP

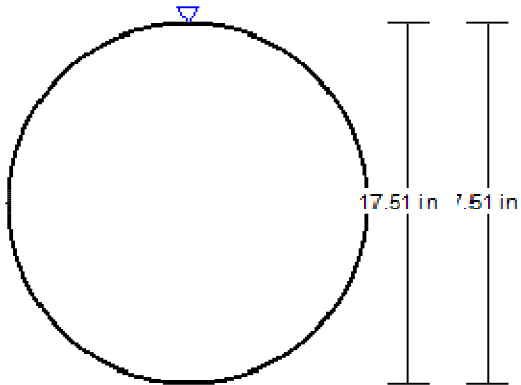
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.2 %
Normal Depth	17.51 in
Diameter	17.51 in
Discharge	20.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 7 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	17.51	in
Critical Depth	1.44	ft
Channel Slope	4.2	%
Critical Slope	0.03792	ft/ft

Worksheet for Facility 8 - 18" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	7.8	%
Normal Depth	10.52	in
Diameter	10.52	in
Discharge	7.00	ft ³ /s

Results

Diameter	10.52	in
Normal Depth	10.52	in
Flow Area	0.60	ft ²
Wetted Perimeter	2.75	ft
Hydraulic Radius	2.63	in
Top Width	0.00	ft
Critical Depth	0.87	ft
Percent Full	100.0	%
Critical Slope	0.07281	ft/ft
Velocity	11.60	ft/s
Velocity Head	2.09	ft
Specific Energy	2.97	ft
Froude Number	0.00	
Maximum Discharge	7.53	ft ³ /s
Discharge Full	7.00	ft ³ /s
Slope Full	0.07800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 8 - 18" RCP

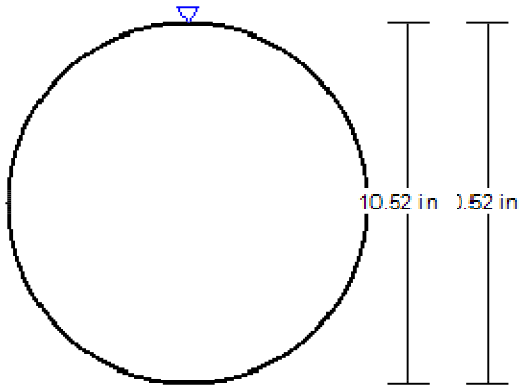
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.8 %
Normal Depth	10.52 in
Diameter	10.52 in
Discharge	7.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 8 - 18" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	10.52	in
Critical Depth	0.87	ft
Channel Slope	7.8	%
Critical Slope	0.07281	ft/ft

Worksheet for Facility 9 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.8	%
Normal Depth	19.37	in
Diameter	19.37	in
Discharge	28.00	ft ³ /s

Results

Diameter	19.37	in
Normal Depth	19.37	in
Flow Area	2.05	ft ²
Wetted Perimeter	5.07	ft
Hydraulic Radius	4.84	in
Top Width	0.00	ft
Critical Depth	1.60	ft
Percent Full	100.0	%
Critical Slope	0.04392	ft/ft
Velocity	13.68	ft/s
Velocity Head	2.91	ft
Specific Energy	4.52	ft
Froude Number	0.00	
Maximum Discharge	30.12	ft ³ /s
Discharge Full	28.00	ft ³ /s
Slope Full	0.04800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 9 - 30" RCP

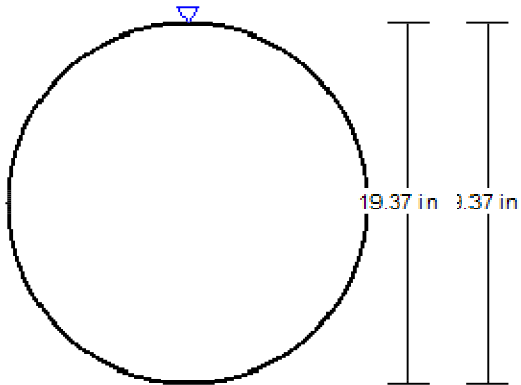
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.8 %
Normal Depth	19.37 in
Diameter	19.37 in
Discharge	28.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 9 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	19.37	in
Critical Depth	1.60	ft
Channel Slope	4.8	%
Critical Slope	0.04392	ft/ft

Worksheet for Facility 10 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.3	%
Normal Depth	17.44	in
Diameter	17.44	in
Discharge	11.00	ft ³ /s

Results

Diameter	17.44	in
Normal Depth	17.44	in
Flow Area	1.66	ft ²
Wetted Perimeter	4.56	ft
Hydraulic Radius	4.36	in
Top Width	0.00	ft
Critical Depth	1.27	ft
Percent Full	100.0	%
Critical Slope	0.01179	ft/ft
Velocity	6.63	ft/s
Velocity Head	0.68	ft
Specific Energy	2.14	ft
Froude Number	0.00	
Maximum Discharge	11.83	ft ³ /s
Discharge Full	11.00	ft ³ /s
Slope Full	0.01300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 10 - 24" RCP

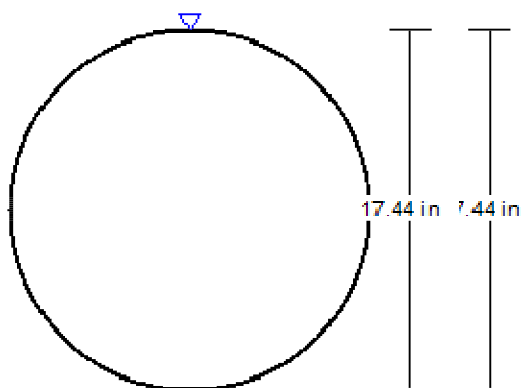
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.3 %
Normal Depth	17.44 in
Diameter	17.44 in
Discharge	11.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 10 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	17.44	in
Critical Depth	1.27	ft
Channel Slope	1.3	%
Critical Slope	0.01179	ft/ft

Worksheet for Facility 11 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.4	%
Normal Depth	18.29	in
Diameter	18.29	in
Discharge	23.00	ft ³ /s

Results

Diameter	18.29	in
Normal Depth	18.29	in
Flow Area	1.83	ft ²
Wetted Perimeter	4.79	ft
Hydraulic Radius	4.57	in
Top Width	0.00	ft
Critical Depth	1.50	ft
Percent Full	100.0	%
Critical Slope	0.03992	ft/ft
Velocity	12.60	ft/s
Velocity Head	2.47	ft
Specific Energy	3.99	ft
Froude Number	0.00	
Maximum Discharge	24.74	ft ³ /s
Discharge Full	23.00	ft ³ /s
Slope Full	0.04400	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 11 - 30" RCP

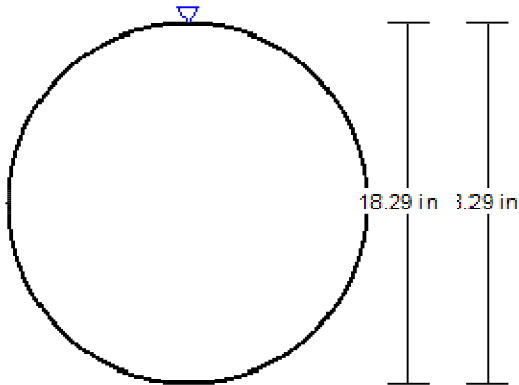
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.4 %
Normal Depth	18.29 in
Diameter	18.29 in
Discharge	23.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 11 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	18.29	in
Critical Depth	1.50	ft
Channel Slope	4.4	%
Critical Slope	0.03992	ft/ft

Worksheet for Facility 12 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.2	%
Normal Depth	19.87	in
Diameter	19.87	in
Discharge	28.00	ft ³ /s

Results

Diameter	19.87	in
Normal Depth	19.87	in
Flow Area	2.15	ft ²
Wetted Perimeter	5.20	ft
Hydraulic Radius	4.97	in
Top Width	0.00	ft
Critical Depth	1.63	ft
Percent Full	100.0	%
Critical Slope	0.03804	ft/ft
Velocity	13.01	ft/s
Velocity Head	2.63	ft
Specific Energy	4.28	ft
Froude Number	0.00	
Maximum Discharge	30.12	ft ³ /s
Discharge Full	28.00	ft ³ /s
Slope Full	0.04199	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 12 - 30" RCP

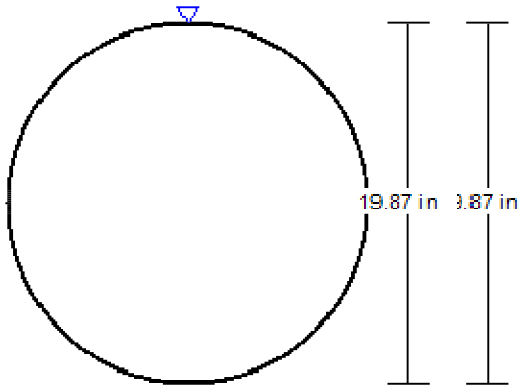
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.2 %
Normal Depth	19.87 in
Diameter	19.87 in
Discharge	28.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 12 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	19.87	in
Critical Depth	1.63	ft
Channel Slope	4.2	%
Critical Slope	0.03804	ft/ft

Worksheet for Facility 13 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.7	%
Normal Depth	26.39	in
Diameter	26.39	in
Discharge	38.00	ft ³ /s

Results

Diameter	26.39	in
Normal Depth	26.39	in
Flow Area	3.80	ft ²
Wetted Perimeter	6.91	ft
Hydraulic Radius	6.60	in
Top Width	0.00	ft
Critical Depth	2.05	ft
Percent Full	100.0	%
Critical Slope	0.01470	ft/ft
Velocity	10.00	ft/s
Velocity Head	1.55	ft
Specific Energy	3.75	ft
Froude Number	0.00	
Maximum Discharge	40.88	ft ³ /s
Discharge Full	38.00	ft ³ /s
Slope Full	0.01700	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 13 - 36" RCP

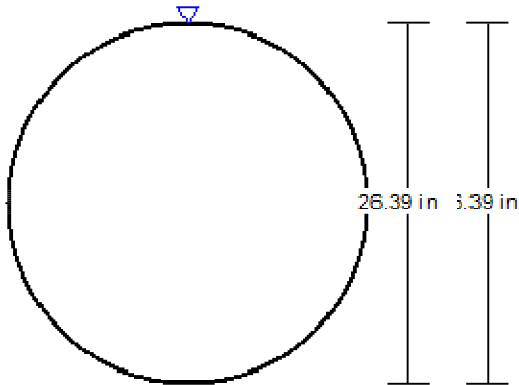
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.7 %
Normal Depth	26.39 in
Diameter	26.39 in
Discharge	38.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 13 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	26.39	in
Critical Depth	2.05	ft
Channel Slope	1.7	%
Critical Slope	0.01470	ft/ft

Worksheet for Facility 14 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.2 %
Normal Depth	16.40 in
Diameter	16.40 in
Discharge	22.00 ft ³ /s

Results

Diameter	16.40 in
Normal Depth	16.40 in
Flow Area	1.47 ft ²
Wetted Perimeter	4.29 ft
Hydraulic Radius	4.10 in
Top Width	0.00 ft
Critical Depth	1.36 ft
Percent Full	100.0 %
Critical Slope	0.06756 ft/ft
Velocity	15.00 ft/s
Velocity Head	3.50 ft
Specific Energy	4.86 ft
Froude Number	0.00
Maximum Discharge	23.65 ft ³ /s
Discharge Full	21.99 ft ³ /s
Slope Full	0.07207 ft/ft
Flow Type	SubCritical

GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %

Cross Section for Facility 14 - 24" RCP

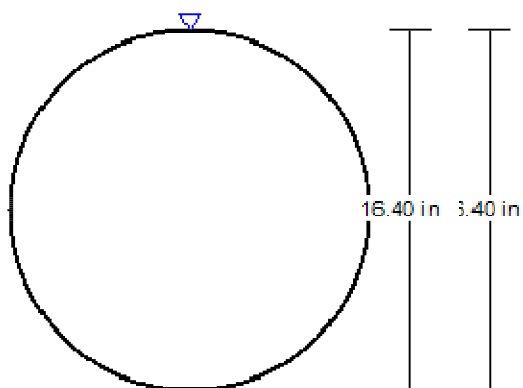
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.2 %
Normal Depth	16.40 in
Diameter	16.40 in
Discharge	22.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 14 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	16.40	in
Critical Depth	1.36	ft
Channel Slope	7.2	%
Critical Slope	0.06756	ft/ft

Worksheet for Facility 15 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	3.1	%
Normal Depth	19.21	in
Diameter	19.21	in
Discharge	22.00	ft ³ /s

Results

Diameter	19.21	in
Normal Depth	19.21	in
Flow Area	2.01	ft ²
Wetted Perimeter	5.03	ft
Hydraulic Radius	4.80	in
Top Width	0.00	ft
Critical Depth	1.56	ft
Percent Full	100.0	%
Critical Slope	0.02735	ft/ft
Velocity	10.93	ft/s
Velocity Head	1.86	ft
Specific Energy	3.46	ft
Froude Number	0.00	
Maximum Discharge	23.67	ft ³ /s
Discharge Full	22.01	ft ³ /s
Slope Full	0.03099	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 15 - 30" RCP

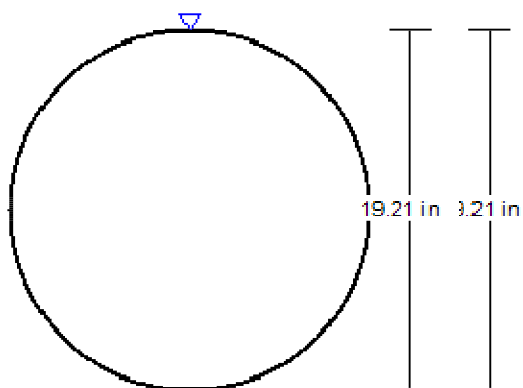
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	3.1 %
Normal Depth	19.21 in
Diameter	19.21 in
Discharge	22.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 15 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	19.21	in
Critical Depth	1.56	ft
Channel Slope	3.1	%
Critical Slope	0.02735	ft/ft

Worksheet for Facility 16 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	3.3	%
Normal Depth	15.13	in
Diameter	15.13	in
Discharge	12.00	ft ³ /s

Results

Diameter	15.13	in
Normal Depth	15.13	in
Flow Area	1.25	ft ²
Wetted Perimeter	3.96	ft
Hydraulic Radius	3.78	in
Top Width	0.00	ft
Critical Depth	1.22	ft
Percent Full	100.0	%
Critical Slope	0.02911	ft/ft
Velocity	9.62	ft/s
Velocity Head	1.44	ft
Specific Energy	2.70	ft
Froude Number	0.00	
Maximum Discharge	12.91	ft ³ /s
Discharge Full	12.00	ft ³ /s
Slope Full	0.03302	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 16 - 24" RCP

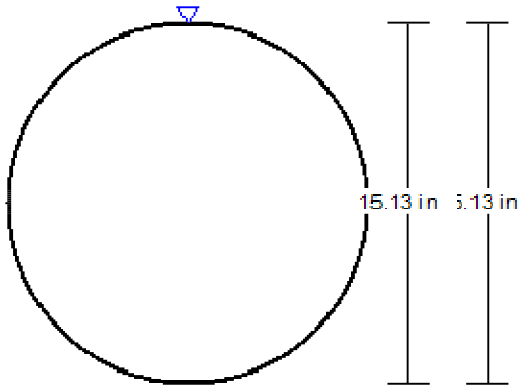
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	3.3 %
Normal Depth	15.13 in
Diameter	15.13 in
Discharge	12.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 16 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	15.13	in
Critical Depth	1.22	ft
Channel Slope	3.3	%
Critical Slope	0.02911	ft/ft

Worksheet for Facility 17 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	3.1	%
Normal Depth	26.33	in
Diameter	26.33	in
Discharge	51.00	ft ³ /s

Results

Diameter	26.33	in
Normal Depth	26.33	in
Flow Area	3.78	ft ²
Wetted Perimeter	6.89	ft
Hydraulic Radius	6.58	in
Top Width	0.00	ft
Critical Depth	2.14	ft
Percent Full	100.0	%
Critical Slope	0.02760	ft/ft
Velocity	13.49	ft/s
Velocity Head	2.83	ft
Specific Energy	5.02	ft
Froude Number	0.00	
Maximum Discharge	54.86	ft ³ /s
Discharge Full	51.00	ft ³ /s
Slope Full	0.03100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 17 - 36" RCP

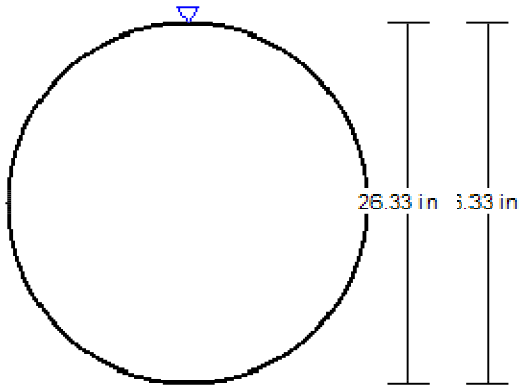
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	3.1 %
Normal Depth	26.33 in
Diameter	26.33 in
Discharge	51.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 17 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	26.33	in
Critical Depth	2.14	ft
Channel Slope	3.1	%
Critical Slope	0.02760	ft/ft

Worksheet for Facility 18 - 48" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.8	%
Normal Depth	36.82	in
Diameter	36.82	in
Discharge	95.00	ft ³ /s

Results

Diameter	36.82	in
Normal Depth	36.82	in
Flow Area	7.39	ft ²
Wetted Perimeter	9.64	ft
Hydraulic Radius	9.20	in
Top Width	0.00	ft
Critical Depth	2.91	ft
Percent Full	100.0	%
Critical Slope	0.01558	ft/ft
Velocity	12.85	ft/s
Velocity Head	2.57	ft
Specific Energy	5.63	ft
Froude Number	0.00	
Maximum Discharge	102.19	ft ³ /s
Discharge Full	95.00	ft ³ /s
Slope Full	0.01800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 18 - 48" RCP

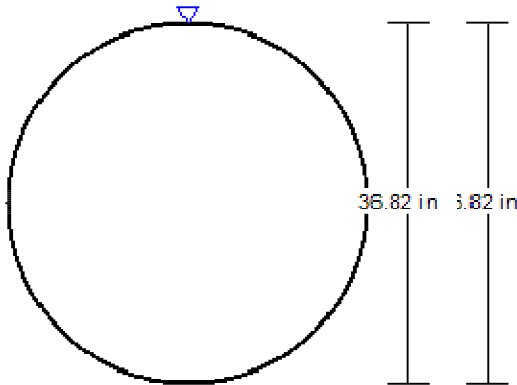
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.8 %
Normal Depth	36.82 in
Diameter	36.82 in
Discharge	95.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 18 - 48" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	36.82	in
Critical Depth	2.91	ft
Channel Slope	1.8	%
Critical Slope	0.01558	ft/ft

Worksheet for Facility 19 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.7	%
Normal Depth	17.95	in
Diameter	17.95	in
Discharge	27.00	ft ³ /s

Results

Diameter	17.95	in
Normal Depth	17.95	in
Flow Area	1.76	ft ²
Wetted Perimeter	4.70	ft
Hydraulic Radius	4.49	in
Top Width	0.00	ft
Critical Depth	1.49	ft
Percent Full	100.0	%
Critical Slope	0.06267	ft/ft
Velocity	15.36	ft/s
Velocity Head	3.67	ft
Specific Energy	5.16	ft
Froude Number	0.00	
Maximum Discharge	29.04	ft ³ /s
Discharge Full	26.99	ft ³ /s
Slope Full	0.06703	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 19 - 24" RCP

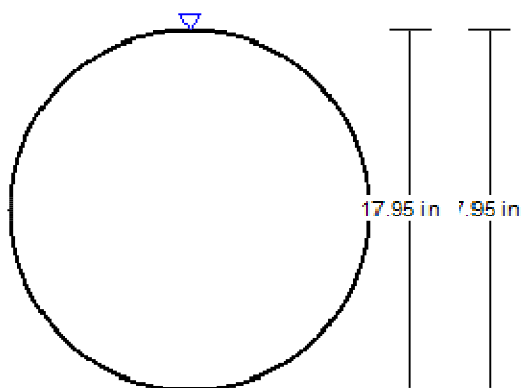
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.7 %
Normal Depth	17.95 in
Diameter	17.95 in
Discharge	27.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 19 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	17.95	in
Critical Depth	1.49	ft
Channel Slope	6.7	%
Critical Slope	0.06267	ft/ft

Worksheet for Facility 20 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.1	%
Normal Depth	16.46	in
Diameter	16.46	in
Discharge	12.00	ft ³ /s

Results

Diameter	16.46	in
Normal Depth	16.46	in
Flow Area	1.48	ft ²
Wetted Perimeter	4.31	ft
Hydraulic Radius	4.12	in
Top Width	0.00	ft
Critical Depth	1.29	ft
Percent Full	100.0	%
Critical Slope	0.01815	ft/ft
Velocity	8.12	ft/s
Velocity Head	1.02	ft
Specific Energy	2.40	ft
Froude Number	0.00	
Maximum Discharge	12.91	ft ³ /s
Discharge Full	12.00	ft ³ /s
Slope Full	0.02100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 20 - 24" RCP

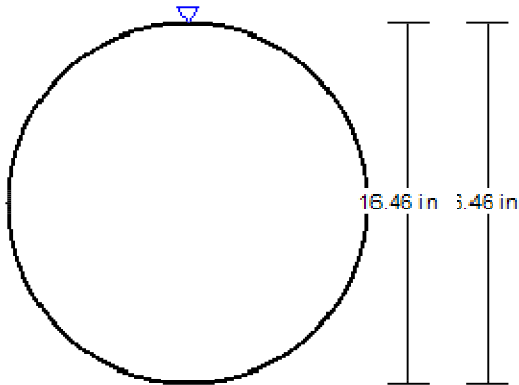
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.1 %
Normal Depth	16.46 in
Diameter	16.46 in
Discharge	12.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 20 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	16.46	in
Critical Depth	1.29	ft
Channel Slope	2.1	%
Critical Slope	0.01815	ft/ft

Worksheet for Facility 21 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.4	%
Normal Depth	21.25	in
Diameter	21.25	in
Discharge	38.00	ft ³ /s

Results

Diameter	21.25	in
Normal Depth	21.25	in
Flow Area	2.46	ft ²
Wetted Perimeter	5.56	ft
Hydraulic Radius	5.31	in
Top Width	0.00	ft
Critical Depth	1.76	ft
Percent Full	100.0	%
Critical Slope	0.04992	ft/ft
Velocity	15.43	ft/s
Velocity Head	3.70	ft
Specific Energy	5.47	ft
Froude Number	0.00	
Maximum Discharge	40.89	ft ³ /s
Discharge Full	38.01	ft ³ /s
Slope Full	0.05397	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 21 - 30" RCP

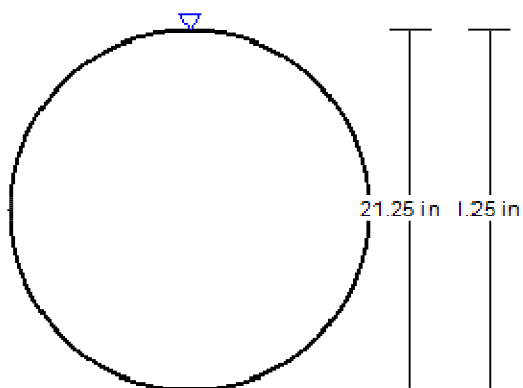
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.4 %
Normal Depth	21.25 in
Diameter	21.25 in
Discharge	38.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 21 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	21.25	in
Critical Depth	1.76	ft
Channel Slope	5.4	%
Critical Slope	0.04992	ft/ft

Worksheet for Facility 22 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.0	%
Normal Depth	19.50	in
Diameter	19.50	in
Discharge	13.00	ft ³ /s

Results

Diameter	19.50	in
Normal Depth	19.50	in
Flow Area	2.07	ft ²
Wetted Perimeter	5.10	ft
Hydraulic Radius	4.87	in
Top Width	0.00	ft
Critical Depth	1.36	ft
Percent Full	100.0	%
Critical Slope	0.00968	ft/ft
Velocity	6.27	ft/s
Velocity Head	0.61	ft
Specific Energy	2.24	ft
Froude Number	0.00	
Maximum Discharge	13.98	ft ³ /s
Discharge Full	13.00	ft ³ /s
Slope Full	0.01000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 22 - 30" RCP

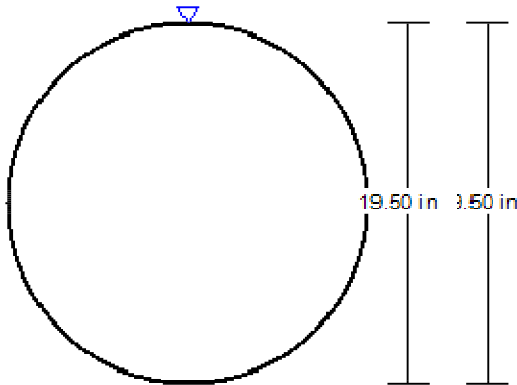
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.0 %
Normal Depth	19.50 in
Diameter	19.50 in
Discharge	13.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 22 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	19.50	in
Critical Depth	1.36	ft
Channel Slope	1.0	%
Critical Slope	0.00968	ft/ft

Worksheet for Facility 23 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.9	%
Normal Depth	23.34	in
Diameter	23.34	in
Discharge	51.00	ft ³ /s

Results

Diameter	23.34	in
Normal Depth	23.34	in
Flow Area	2.97	ft ²
Wetted Perimeter	6.11	ft
Hydraulic Radius	5.83	in
Top Width	0.00	ft
Critical Depth	1.93	ft
Percent Full	100.0	%
Critical Slope	0.05503	ft/ft
Velocity	17.17	ft/s
Velocity Head	4.58	ft
Specific Energy	6.52	ft
Froude Number	0.00	
Maximum Discharge	54.86	ft ³ /s
Discharge Full	51.00	ft ³ /s
Slope Full	0.05900	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 23 - 30" RCP

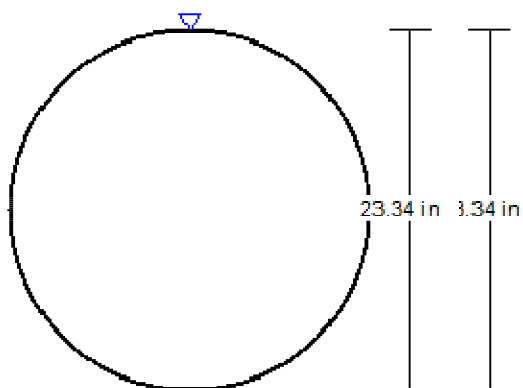
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.9 %
Normal Depth	23.34 in
Diameter	23.34 in
Discharge	51.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 23 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	23.34	in
Critical Depth	1.93	ft
Channel Slope	5.9	%
Critical Slope	0.05503	ft/ft

Worksheet for Facility 24 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.4	%
Normal Depth	21.46	in
Diameter	21.46	in
Discharge	26.00	ft ³ /s

Results

Diameter	21.46	in
Normal Depth	21.46	in
Flow Area	2.51	ft ²
Wetted Perimeter	5.62	ft
Hydraulic Radius	5.36	in
Top Width	0.00	ft
Critical Depth	1.71	ft
Percent Full	100.0	%
Critical Slope	0.02087	ft/ft
Velocity	10.35	ft/s
Velocity Head	1.67	ft
Specific Energy	3.45	ft
Froude Number	0.00	
Maximum Discharge	27.97	ft ³ /s
Discharge Full	26.00	ft ³ /s
Slope Full	0.02400	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 24 - 30" RCP

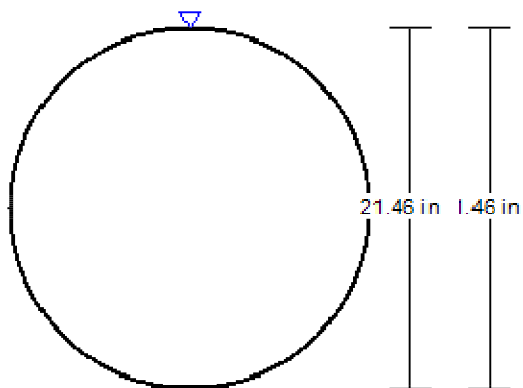
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.4 %
Normal Depth	21.46 in
Diameter	21.46 in
Discharge	26.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 24 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	21.46	in
Critical Depth	1.71	ft
Channel Slope	2.4	%
Critical Slope	0.02087	ft/ft

Worksheet for Facility 25 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.8	%
Normal Depth	26.84	in
Diameter	26.84	in
Discharge	51.00	ft ³ /s

Results

Diameter	26.84	in
Normal Depth	26.84	in
Flow Area	3.93	ft ²
Wetted Perimeter	7.03	ft
Hydraulic Radius	6.71	in
Top Width	0.00	ft
Critical Depth	2.17	ft
Percent Full	100.0	%
Critical Slope	0.02474	ft/ft
Velocity	12.98	ft/s
Velocity Head	2.62	ft
Specific Energy	4.86	ft
Froude Number	0.00	
Maximum Discharge	54.86	ft ³ /s
Discharge Full	51.00	ft ³ /s
Slope Full	0.02800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 25 - 36" RCP

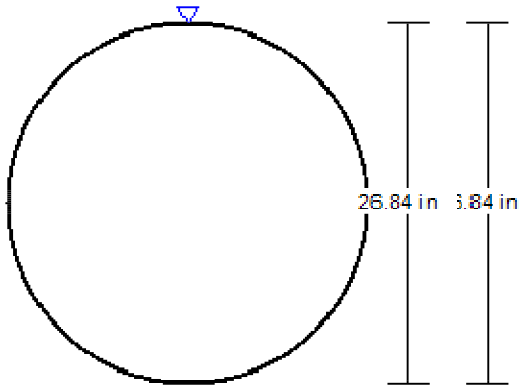
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.8 %
Normal Depth	26.84 in
Diameter	26.84 in
Discharge	51.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 25 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	26.84	in
Critical Depth	2.17	ft
Channel Slope	2.8	%
Critical Slope	0.02474	ft/ft

Worksheet for Facility 26 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.9	%
Normal Depth	16.78	in
Diameter	16.78	in
Discharge	12.00	ft ³ /s

Results

Diameter	16.78	in
Normal Depth	16.78	in
Flow Area	1.54	ft ²
Wetted Perimeter	4.39	ft
Hydraulic Radius	4.19	in
Top Width	0.00	ft
Critical Depth	1.30	ft
Percent Full	100.0	%
Critical Slope	0.01645	ft/ft
Velocity	7.82	ft/s
Velocity Head	0.95	ft
Specific Energy	2.35	ft
Froude Number	0.00	
Maximum Discharge	12.91	ft ³ /s
Discharge Full	12.00	ft ³ /s
Slope Full	0.01900	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 26 - 24" RCP

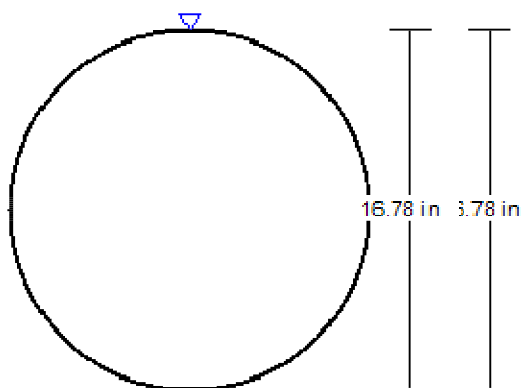
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.9 %
Normal Depth	16.78 in
Diameter	16.78 in
Discharge	12.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 26 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	16.78	in
Critical Depth	1.30	ft
Channel Slope	1.9	%
Critical Slope	0.01645	ft/ft

Worksheet for Facility 27 - 42" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	7.8	%
Normal Depth	36.20	in
Diameter	36.20	in
Discharge	189.00	ft ³ /s

Results

Diameter	36.20	in
Normal Depth	36.20	in
Flow Area	7.15	ft ²
Wetted Perimeter	9.48	ft
Hydraulic Radius	9.05	in
Top Width	0.00	ft
Critical Depth	3.01	ft
Percent Full	100.0	%
Critical Slope	0.07447	ft/ft
Velocity	26.45	ft/s
Velocity Head	10.87	ft
Specific Energy	13.89	ft
Froude Number	0.00	
Maximum Discharge	203.31	ft ³ /s
Discharge Full	189.00	ft ³ /s
Slope Full	0.07800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 27 - 42" RCP

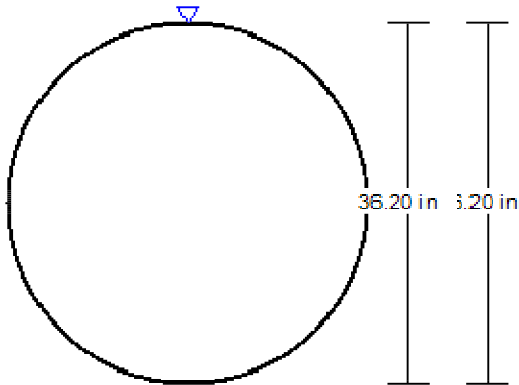
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.8 %
Normal Depth	36.20 in
Diameter	36.20 in
Discharge	189.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 27 - 42" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	36.20	in
Critical Depth	3.01	ft
Channel Slope	7.8	%
Critical Slope	0.07447	ft/ft

Worksheet for Facility 28 - 18" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	9.0	%
Normal Depth	7.45	in
Diameter	7.45	in
Discharge	3.00	ft ³ /s

Results

Diameter	7.45	in
Normal Depth	7.45	in
Flow Area	0.30	ft ²
Wetted Perimeter	1.95	ft
Hydraulic Radius	1.86	in
Top Width	0.00	ft
Critical Depth	0.62	ft
Percent Full	100.0	%
Critical Slope	0.08402	ft/ft
Velocity	9.90	ft/s
Velocity Head	1.52	ft
Specific Energy	2.14	ft
Froude Number	0.00	
Maximum Discharge	3.23	ft ³ /s
Discharge Full	3.00	ft ³ /s
Slope Full	0.08986	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 28 - 18" RCP

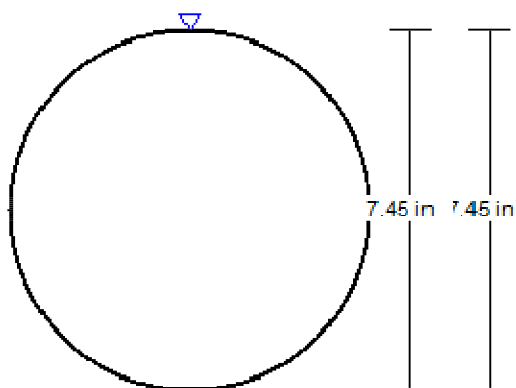
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	9.0 %
Normal Depth	7.45 in
Diameter	7.45 in
Discharge	3.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 28 - 18" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	7.45	in
Critical Depth	0.62	ft
Channel Slope	9.0	%
Critical Slope	0.08402	ft/ft

Worksheet for Facility 29 - 48" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.3	%
Normal Depth	39.07	in
Diameter	39.07	in
Discharge	191.00	ft ³ /s

Results

Diameter	39.07	in
Normal Depth	39.07	in
Flow Area	8.33	ft ²
Wetted Perimeter	10.23	ft
Hydraulic Radius	9.77	in
Top Width	0.00	ft
Critical Depth	3.24	ft
Percent Full	100.0	%
Critical Slope	0.04963	ft/ft
Velocity	22.94	ft/s
Velocity Head	8.18	ft
Specific Energy	11.43	ft
Froude Number	0.00	
Maximum Discharge	205.46	ft ³ /s
Discharge Full	191.00	ft ³ /s
Slope Full	0.05300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 29 - 48" RCP

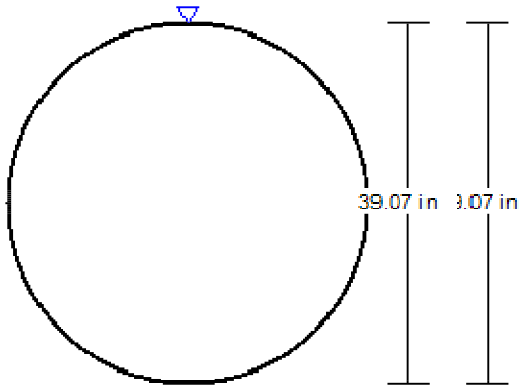
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.3 %
Normal Depth	39.07 in
Diameter	39.07 in
Discharge	191.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 29 - 48" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	39.07	in
Critical Depth	3.24	ft
Channel Slope	5.3	%
Critical Slope	0.04963	ft/ft

Worksheet for Facility 30 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.9	%
Normal Depth	14.47	in
Diameter	14.47	in
Discharge	10.00	ft ³ /s

Results

Diameter	14.47	in
Normal Depth	14.47	in
Flow Area	1.14	ft ²
Wetted Perimeter	3.79	ft
Hydraulic Radius	3.62	in
Top Width	0.00	ft
Critical Depth	1.16	ft
Percent Full	100.0	%
Critical Slope	0.02529	ft/ft
Velocity	8.75	ft/s
Velocity Head	1.19	ft
Specific Energy	2.40	ft
Froude Number	0.00	
Maximum Discharge	10.76	ft ³ /s
Discharge Full	10.00	ft ³ /s
Slope Full	0.02899	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 30 - 24" RCP

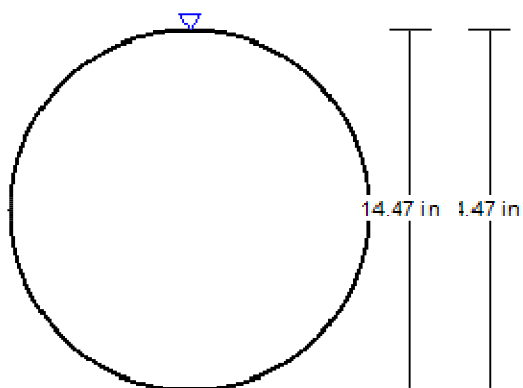
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.9 %
Normal Depth	14.47 in
Diameter	14.47 in
Discharge	10.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 30 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	14.47	in
Critical Depth	1.16	ft
Channel Slope	2.9	%
Critical Slope	0.02529	ft/ft

Worksheet for Facility 31 - 48" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.9	%
Normal Depth	38.89	in
Diameter	38.89	in
Discharge	199.00	ft ³ /s

Results

Diameter	38.89	in
Normal Depth	38.89	in
Flow Area	8.25	ft ²
Wetted Perimeter	10.18	ft
Hydraulic Radius	9.72	in
Top Width	0.00	ft
Critical Depth	3.22	ft
Percent Full	100.0	%
Critical Slope	0.05560	ft/ft
Velocity	24.13	ft/s
Velocity Head	9.05	ft
Specific Energy	12.29	ft
Froude Number	0.00	
Maximum Discharge	214.07	ft ³ /s
Discharge Full	199.00	ft ³ /s
Slope Full	0.05900	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 31 - 48" RCP

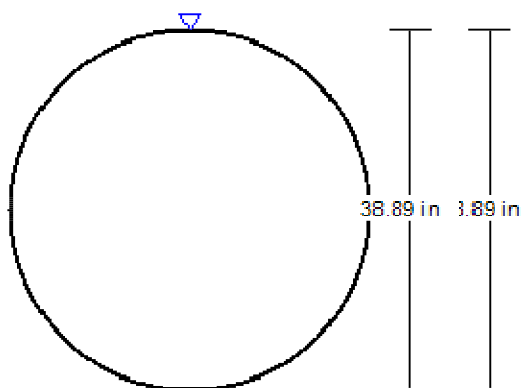
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.9 %
Normal Depth	38.89 in
Diameter	38.89 in
Discharge	199.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 31 - 48" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	38.89	in
Critical Depth	3.22	ft
Channel Slope	5.9	%
Critical Slope	0.05560	ft/ft

Worksheet for Facility 32 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	7.3	%
Normal Depth	16.90	in
Diameter	16.90	in
Discharge	24.00	ft ³ /s

Results

Diameter	16.90	in
Normal Depth	16.90	in
Flow Area	1.56	ft ²
Wetted Perimeter	4.43	ft
Hydraulic Radius	4.23	in
Top Width	0.00	ft
Critical Depth	1.40	ft
Percent Full	100.0	%
Critical Slope	0.06853	ft/ft
Velocity	15.40	ft/s
Velocity Head	3.69	ft
Specific Energy	5.09	ft
Froude Number	0.00	
Maximum Discharge	25.82	ft ³ /s
Discharge Full	24.00	ft ³ /s
Slope Full	0.07300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 32 - 24" RCP

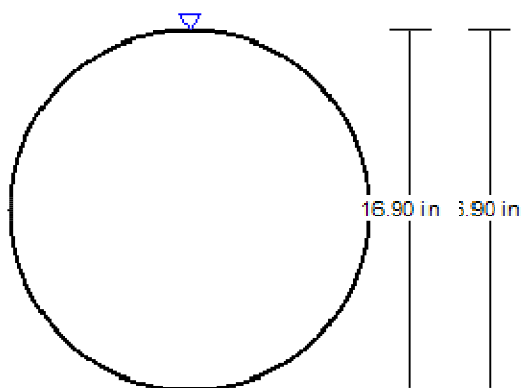
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	7.3 %
Normal Depth	16.90 in
Diameter	16.90 in
Discharge	24.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 32 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	16.90	in
Critical Depth	1.40	ft
Channel Slope	7.3	%
Critical Slope	0.06853	ft/ft

Worksheet for Facility 33 - 48" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.6	%
Normal Depth	40.27	in
Diameter	40.27	in
Discharge	231.00	ft ³ /s

Results

Diameter	40.27	in
Normal Depth	40.27	in
Flow Area	8.84	ft ²
Wetted Perimeter	10.54	ft
Hydraulic Radius	10.07	in
Top Width	0.00	ft
Critical Depth	3.34	ft
Percent Full	100.0	%
Critical Slope	0.06262	ft/ft
Velocity	26.12	ft/s
Velocity Head	10.60	ft
Specific Energy	13.96	ft
Froude Number	0.00	
Maximum Discharge	248.49	ft ³ /s
Discharge Full	231.00	ft ³ /s
Slope Full	0.06600	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 33 - 48" RCP

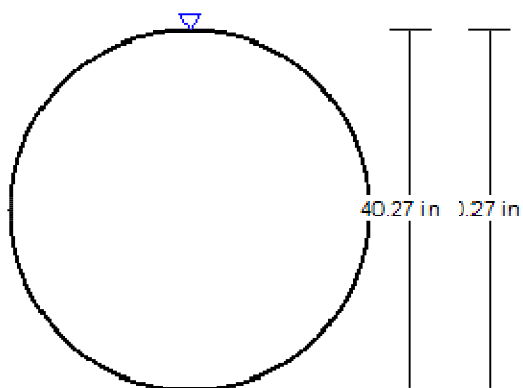
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.6 %
Normal Depth	40.27 in
Diameter	40.27 in
Discharge	231.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 33 - 48" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	40.27	in
Critical Depth	3.34	ft
Channel Slope	6.6	%
Critical Slope	0.06262	ft/ft

Worksheet for Facility 34 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.8	%
Normal Depth	19.89	in
Diameter	19.89	in
Discharge	33.00	ft ³ /s

Results

Diameter	19.89	in
Normal Depth	19.89	in
Flow Area	2.16	ft ²
Wetted Perimeter	5.21	ft
Hydraulic Radius	4.97	in
Top Width	0.00	ft
Critical Depth	1.64	ft
Percent Full	100.0	%
Critical Slope	0.05381	ft/ft
Velocity	15.30	ft/s
Velocity Head	3.64	ft
Specific Energy	5.29	ft
Froude Number	0.00	
Maximum Discharge	35.51	ft ³ /s
Discharge Full	33.01	ft ³ /s
Slope Full	0.05797	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 34 - 30" RCP

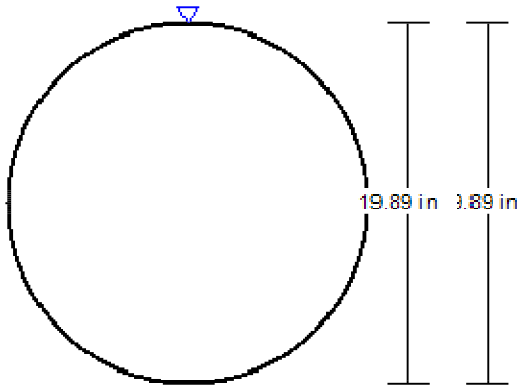
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.8 %
Normal Depth	19.89 in
Diameter	19.89 in
Discharge	33.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 34 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	19.89	in
Critical Depth	1.64	ft
Channel Slope	5.8	%
Critical Slope	0.05381	ft/ft

Worksheet for Facility 35 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.6	%
Normal Depth	18.04	in
Diameter	18.04	in
Discharge	25.00	ft ³ /s

Results

Diameter	18.04	in
Normal Depth	18.04	in
Flow Area	1.77	ft ²
Wetted Perimeter	4.72	ft
Hydraulic Radius	4.51	in
Top Width	0.00	ft
Critical Depth	1.49	ft
Percent Full	100.0	%
Critical Slope	0.05173	ft/ft
Velocity	14.09	ft/s
Velocity Head	3.08	ft
Specific Energy	4.59	ft
Froude Number	0.00	
Maximum Discharge	26.89	ft ³ /s
Discharge Full	25.00	ft ³ /s
Slope Full	0.05600	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 35 - 24" RCP

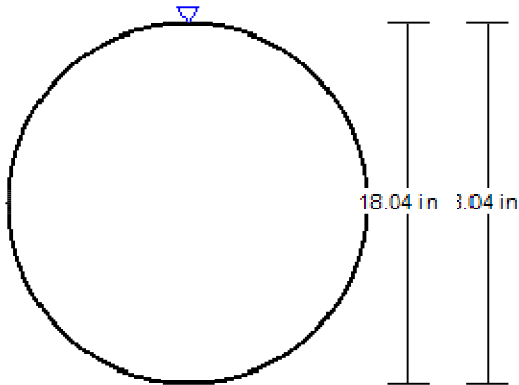
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.6 %
Normal Depth	18.04 in
Diameter	18.04 in
Discharge	25.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 35 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	18.04	in
Critical Depth	1.49	ft
Channel Slope	5.6	%
Critical Slope	0.05173	ft/ft

Worksheet for Facility 36 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.6	%
Normal Depth	15.06	in
Diameter	15.06	in
Discharge	14.00	ft ³ /s

Results

Diameter	15.06	in
Normal Depth	15.06	in
Flow Area	1.24	ft ²
Wetted Perimeter	3.94	ft
Hydraulic Radius	3.76	in
Top Width	0.00	ft
Critical Depth	1.24	ft
Percent Full	100.0	%
Critical Slope	0.04171	ft/ft
Velocity	11.32	ft/s
Velocity Head	1.99	ft
Specific Energy	3.25	ft
Froude Number	0.00	
Maximum Discharge	15.05	ft ³ /s
Discharge Full	13.99	ft ³ /s
Slope Full	0.04604	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 36 - 24" RCP

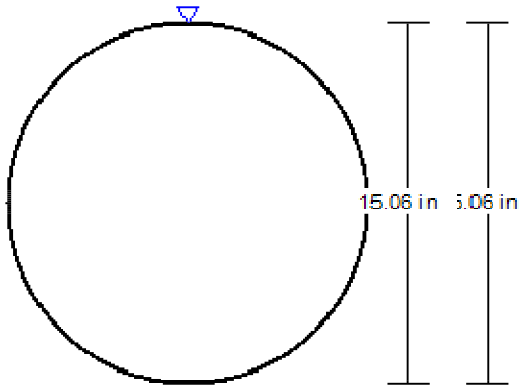
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.6 %
Normal Depth	15.06 in
Diameter	15.06 in
Discharge	14.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 36 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	15.06	in
Critical Depth	1.24	ft
Channel Slope	4.6	%
Critical Slope	0.04171	ft/ft

Worksheet for Facility 37 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.0	%
Normal Depth	22.92	in
Diameter	22.92	in
Discharge	20.00	ft ³ /s

Results

Diameter	22.92	in
Normal Depth	22.92	in
Flow Area	2.86	ft ²
Wetted Perimeter	6.00	ft
Hydraulic Radius	5.73	in
Top Width	0.00	ft
Critical Depth	1.61	ft
Percent Full	100.0	%
Critical Slope	0.00951	ft/ft
Velocity	6.98	ft/s
Velocity Head	0.76	ft
Specific Energy	2.67	ft
Froude Number	0.00	
Maximum Discharge	21.51	ft ³ /s
Discharge Full	20.00	ft ³ /s
Slope Full	0.01000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 37 - 30" RCP

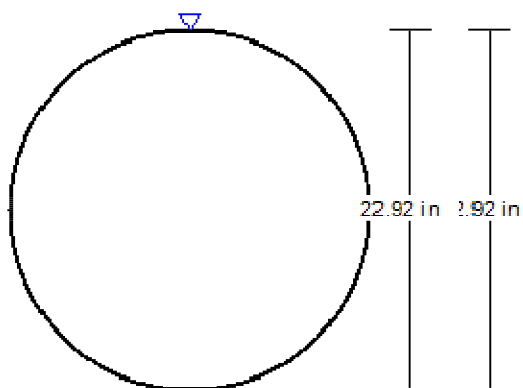
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.0 %
Normal Depth	22.92 in
Diameter	22.92 in
Discharge	20.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 37 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	22.92	in
Critical Depth	1.61	ft
Channel Slope	1.0	%
Critical Slope	0.00951	ft/ft

Worksheet for Facility 38 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.0	%
Normal Depth	28.91	in
Diameter	28.91	in
Discharge	91.00	ft ³ /s

Results

Diameter	28.91	in
Normal Depth	28.91	in
Flow Area	4.56	ft ²
Wetted Perimeter	7.57	ft
Hydraulic Radius	7.23	in
Top Width	0.00	ft
Critical Depth	2.39	ft
Percent Full	100.0	%
Critical Slope	0.05629	ft/ft
Velocity	19.97	ft/s
Velocity Head	6.20	ft
Specific Energy	8.61	ft
Froude Number	0.00	
Maximum Discharge	97.87	ft ³ /s
Discharge Full	90.98	ft ³ /s
Slope Full	0.06002	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 38 - 36" RCP

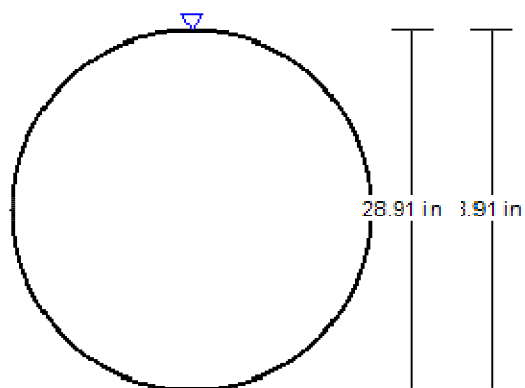
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.0 %
Normal Depth	28.91 in
Diameter	28.91 in
Discharge	91.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 38 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	28.91	in
Critical Depth	2.39	ft
Channel Slope	6.0	%
Critical Slope	0.05629	ft/ft

Worksheet for Facility 39 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.1	%
Normal Depth	18.27	in
Diameter	18.27	in
Discharge	27.00	ft ³ /s

Results

Diameter	18.27	in
Normal Depth	18.27	in
Flow Area	1.82	ft ²
Wetted Perimeter	4.78	ft
Hydraulic Radius	4.57	in
Top Width	0.00	ft
Critical Depth	1.51	ft
Percent Full	100.0	%
Critical Slope	0.05671	ft/ft
Velocity	14.83	ft/s
Velocity Head	3.42	ft
Specific Energy	4.94	ft
Froude Number	0.00	
Maximum Discharge	29.04	ft ³ /s
Discharge Full	27.00	ft ³ /s
Slope Full	0.06100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 39 - 24" RCP

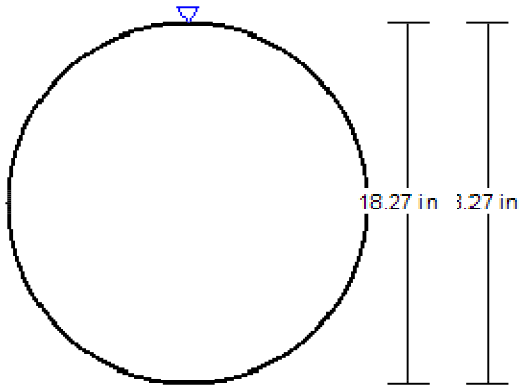
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.1 %
Normal Depth	18.27 in
Diameter	18.27 in
Discharge	27.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 39 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	18.27	in
Critical Depth	1.51	ft
Channel Slope	6.1	%
Critical Slope	0.05671	ft/ft

Worksheet for Facility 40 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.1	%
Normal Depth	16.33	in
Diameter	16.33	in
Discharge	20.00	ft ³ /s

Results

Diameter	16.33	in
Normal Depth	16.33	in
Flow Area	1.45	ft ²
Wetted Perimeter	4.27	ft
Hydraulic Radius	4.08	in
Top Width	0.00	ft
Critical Depth	1.35	ft
Percent Full	100.0	%
Critical Slope	0.05657	ft/ft
Velocity	13.76	ft/s
Velocity Head	2.94	ft
Specific Energy	4.30	ft
Froude Number	0.00	
Maximum Discharge	21.51	ft ³ /s
Discharge Full	20.00	ft ³ /s
Slope Full	0.06101	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 40 - 24" RCP

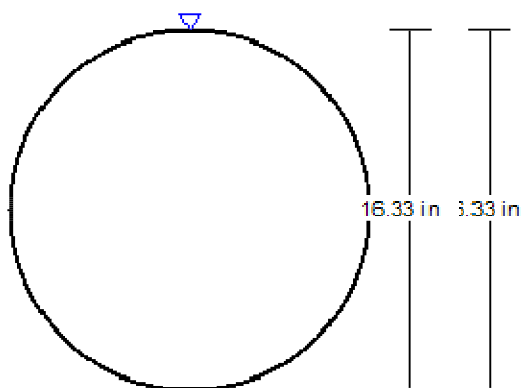
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.1 %
Normal Depth	16.33 in
Diameter	16.33 in
Discharge	20.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 40 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	16.33	in
Critical Depth	1.35	ft
Channel Slope	6.1	%
Critical Slope	0.05657	ft/ft

Worksheet for Facility 41 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.2	%
Normal Depth	20.08	in
Diameter	20.08	in
Discharge	35.00	ft ³ /s

Results

Diameter	20.08	in
Normal Depth	20.08	in
Flow Area	2.20	ft ²
Wetted Perimeter	5.26	ft
Hydraulic Radius	5.02	in
Top Width	0.00	ft
Critical Depth	1.66	ft
Percent Full	100.0	%
Critical Slope	0.05782	ft/ft
Velocity	15.92	ft/s
Velocity Head	3.94	ft
Specific Energy	5.61	ft
Froude Number	0.00	
Maximum Discharge	37.65	ft ³ /s
Discharge Full	35.00	ft ³ /s
Slope Full	0.06200	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 41 - 24" RCP

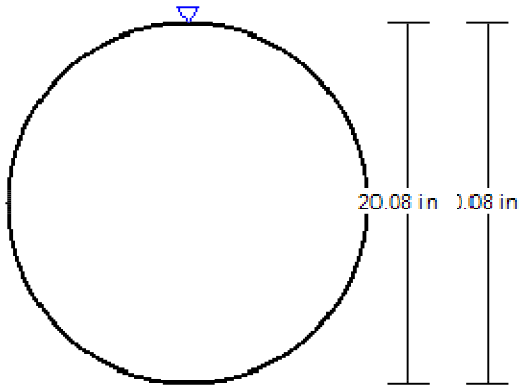
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	6.2 %
Normal Depth	20.08 in
Diameter	20.08 in
Discharge	35.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 41 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	20.08	in
Critical Depth	1.66	ft
Channel Slope	6.2	%
Critical Slope	0.05782	ft/ft

Worksheet for Facility 42 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	4.9	%
Normal Depth	26.47	in
Diameter	26.47	in
Discharge	65.00	ft ³ /s

Results

Diameter	26.47	in
Normal Depth	26.47	in
Flow Area	3.82	ft ²
Wetted Perimeter	6.93	ft
Hydraulic Radius	6.62	in
Top Width	0.00	ft
Critical Depth	2.18	ft
Percent Full	100.0	%
Critical Slope	0.04525	ft/ft
Velocity	17.01	ft/s
Velocity Head	4.50	ft
Specific Energy	6.70	ft
Froude Number	0.00	
Maximum Discharge	69.92	ft ³ /s
Discharge Full	65.00	ft ³ /s
Slope Full	0.04900	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 42 - 36" RCP

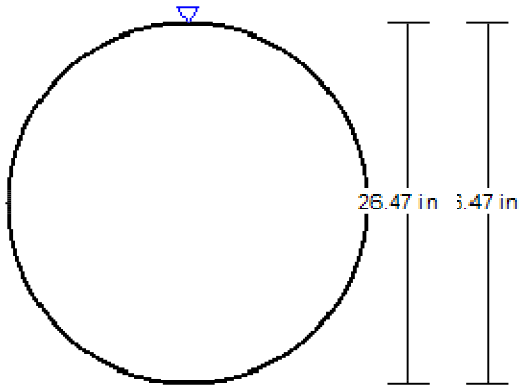
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.9 %
Normal Depth	26.47 in
Diameter	26.47 in
Discharge	65.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 42 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	26.47	in
Critical Depth	2.18	ft
Channel Slope	4.9	%
Critical Slope	0.04525	ft/ft

Worksheet for Facility 43 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.0	%
Normal Depth	22.58	in
Diameter	22.58	in
Discharge	43.00	ft ³ /s

Results

Diameter	22.58	in
Normal Depth	22.58	in
Flow Area	2.78	ft ²
Wetted Perimeter	5.91	ft
Hydraulic Radius	5.65	in
Top Width	0.00	ft
Critical Depth	1.86	ft
Percent Full	100.0	%
Critical Slope	0.04605	ft/ft
Velocity	15.46	ft/s
Velocity Head	3.71	ft
Specific Energy	5.60	ft
Froude Number	0.00	
Maximum Discharge	46.26	ft ³ /s
Discharge Full	43.01	ft ³ /s
Slope Full	0.04998	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 43 - 30" RCP

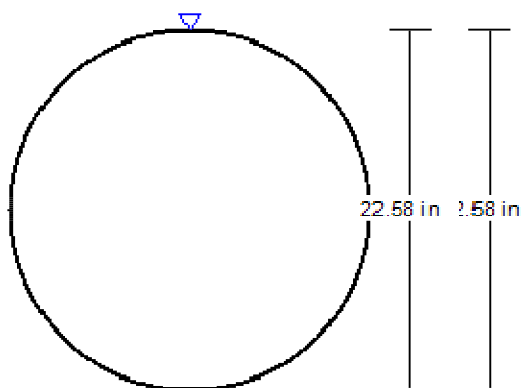
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.0 %
Normal Depth	22.58 in
Diameter	22.58 in
Discharge	43.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 43 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	22.58	in
Critical Depth	1.86	ft
Channel Slope	5.0	%
Critical Slope	0.04605	ft/ft

Worksheet for Facility 44 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.0	%
Normal Depth	24.60	in
Diameter	24.60	in
Discharge	54.00	ft ³ /s

Results

Diameter	24.60	in
Normal Depth	24.60	in
Flow Area	3.30	ft ²
Wetted Perimeter	6.44	ft
Hydraulic Radius	6.15	in
Top Width	0.00	ft
Critical Depth	2.03	ft
Percent Full	100.0	%
Critical Slope	0.04616	ft/ft
Velocity	16.37	ft/s
Velocity Head	4.16	ft
Specific Energy	6.21	ft
Froude Number	0.00	
Maximum Discharge	58.09	ft ³ /s
Discharge Full	54.00	ft ³ /s
Slope Full	0.05000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 44 - 36" RCP

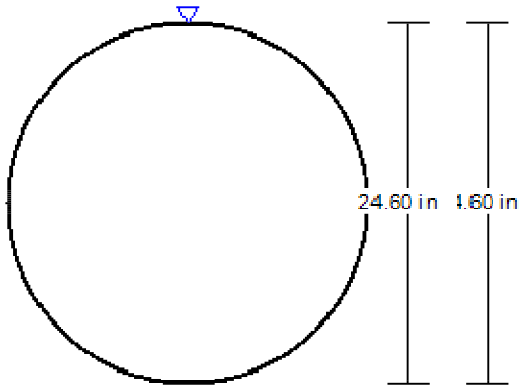
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.0 %
Normal Depth	24.60 in
Diameter	24.60 in
Discharge	54.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 44 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	24.60	in
Critical Depth	2.03	ft
Channel Slope	5.0	%
Critical Slope	0.04616	ft/ft

Worksheet for Facility 45 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	5.0	%
Normal Depth	25.90	in
Diameter	25.90	in
Discharge	62.00	ft ³ /s

Results

Diameter	25.90	in
Normal Depth	25.90	in
Flow Area	3.66	ft ²
Wetted Perimeter	6.78	ft
Hydraulic Radius	6.48	in
Top Width	0.00	ft
Critical Depth	2.14	ft
Percent Full	100.0	%
Critical Slope	0.04621	ft/ft
Velocity	16.94	ft/s
Velocity Head	4.46	ft
Specific Energy	6.62	ft
Froude Number	0.00	
Maximum Discharge	66.70	ft ³ /s
Discharge Full	62.00	ft ³ /s
Slope Full	0.04999	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 45 - 36" RCP

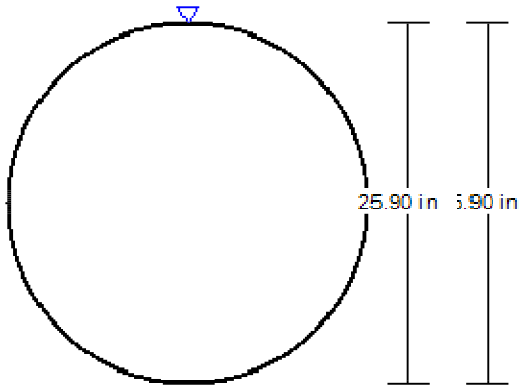
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	5.0 %
Normal Depth	25.90 in
Diameter	25.90 in
Discharge	62.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 45 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	25.90	in
Critical Depth	2.14	ft
Channel Slope	5.0	%
Critical Slope	0.04621	ft/ft

Worksheet for Facility 46 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.2 %
Normal Depth	24.12 in
Diameter	24.12 in
Discharge	47.00 ft ³ /s

Results

Diameter	24.12 in
Normal Depth	24.12 in
Flow Area	3.17 ft ²
Wetted Perimeter	6.32 ft
Hydraulic Radius	6.03 in
Top Width	0.00 ft
Critical Depth	1.98 ft
Percent Full	100.0 %
Critical Slope	0.03824 ft/ft
Velocity	14.81 ft/s
Velocity Head	3.41 ft
Specific Energy	5.42 ft
Froude Number	0.00
Maximum Discharge	50.56 ft ³ /s
Discharge Full	47.00 ft ³ /s
Slope Full	0.04199 ft/ft
Flow Type	SubCritical

GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %

Cross Section for Facility 46 - 30" RCP

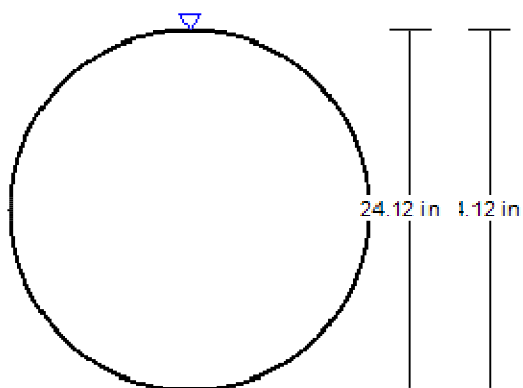
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	4.2 %
Normal Depth	24.12 in
Diameter	24.12 in
Discharge	47.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 46 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	24.12	in
Critical Depth	1.98	ft
Channel Slope	4.2	%
Critical Slope	0.03824	ft/ft

Worksheet for Facility 47 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	1.2	%
Normal Depth	15.70	in
Diameter	15.70	in
Discharge	8.00	ft ³ /s

Results

Diameter	15.70	in
Normal Depth	15.70	in
Flow Area	1.35	ft ²
Wetted Perimeter	4.11	ft
Hydraulic Radius	3.93	in
Top Width	0.00	ft
Critical Depth	1.12	ft
Percent Full	100.0	%
Critical Slope	0.01122	ft/ft
Velocity	5.95	ft/s
Velocity Head	0.55	ft
Specific Energy	1.86	ft
Froude Number	0.00	
Maximum Discharge	8.60	ft ³ /s
Discharge Full	8.00	ft ³ /s
Slope Full	0.01201	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 47 - 24" RCP

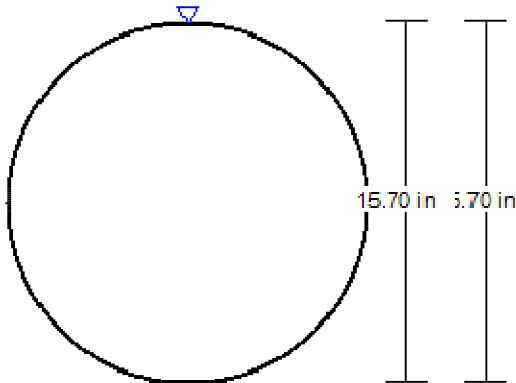
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	1.2 %
Normal Depth	15.70 in
Diameter	15.70 in
Discharge	8.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 47 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	15.70	in
Critical Depth	1.12	ft
Channel Slope	1.2	%
Critical Slope	0.01122	ft/ft

Worksheet for Facility 48 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.3	%
Normal Depth	28.25	in
Diameter	28.25	in
Discharge	53.00	ft ³ /s

Results

Diameter	28.25	in
Normal Depth	28.25	in
Flow Area	4.35	ft ²
Wetted Perimeter	7.40	ft
Hydraulic Radius	7.06	in
Top Width	0.00	ft
Critical Depth	2.26	ft
Percent Full	100.0	%
Critical Slope	0.02006	ft/ft
Velocity	12.17	ft/s
Velocity Head	2.30	ft
Specific Energy	4.66	ft
Froude Number	0.00	
Maximum Discharge	57.01	ft ³ /s
Discharge Full	53.00	ft ³ /s
Slope Full	0.02300	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 48 - 36" RCP

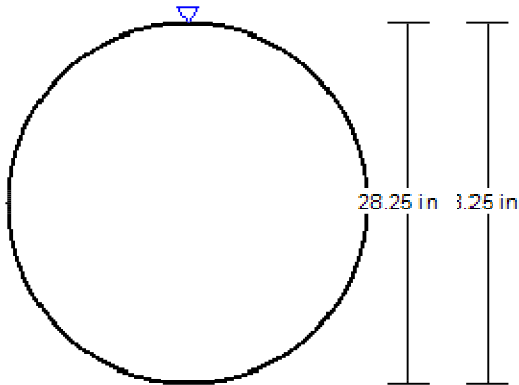
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.3 %
Normal Depth	28.25 in
Diameter	28.25 in
Discharge	53.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 48 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	28.25	in
Critical Depth	2.26	ft
Channel Slope	2.3	%
Critical Slope	0.02006	ft/ft

Worksheet for Facility 49 - 30" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	11.8	%
Normal Depth	23.80	in
Diameter	23.80	in
Discharge	76.00	ft ³ /s

Results

Diameter	23.80	in
Normal Depth	23.80	in
Flow Area	3.09	ft ²
Wetted Perimeter	6.23	ft
Hydraulic Radius	5.95	in
Top Width	0.00	ft
Critical Depth	1.98	ft
Percent Full	100.0	%
Critical Slope	0.11391	ft/ft
Velocity	24.60	ft/s
Velocity Head	9.40	ft
Specific Energy	11.39	ft
Froude Number	0.00	
Maximum Discharge	81.75	ft ³ /s
Discharge Full	76.00	ft ³ /s
Slope Full	0.11800	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 49 - 30" RCP

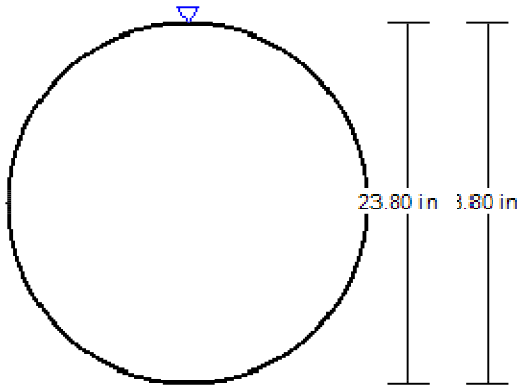
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	11.8 %
Normal Depth	23.80 in
Diameter	23.80 in
Discharge	76.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 49 - 30" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	23.80	in
Critical Depth	1.98	ft
Channel Slope	11.8	%
Critical Slope	0.11391	ft/ft

Worksheet for Facility 50 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	2.0	%
Normal Depth	30.76	in
Diameter	30.76	in
Discharge	62.00	ft ³ /s

Results

Diameter	30.76	in
Normal Depth	30.76	in
Flow Area	5.16	ft ²
Wetted Perimeter	8.05	ft
Hydraulic Radius	7.69	in
Top Width	0.00	ft
Critical Depth	2.44	ft
Percent Full	100.0	%
Critical Slope	0.01734	ft/ft
Velocity	12.01	ft/s
Velocity Head	2.24	ft
Specific Energy	4.81	ft
Froude Number	0.00	
Maximum Discharge	66.69	ft ³ /s
Discharge Full	62.00	ft ³ /s
Slope Full	0.02000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 50 - 36" RCP

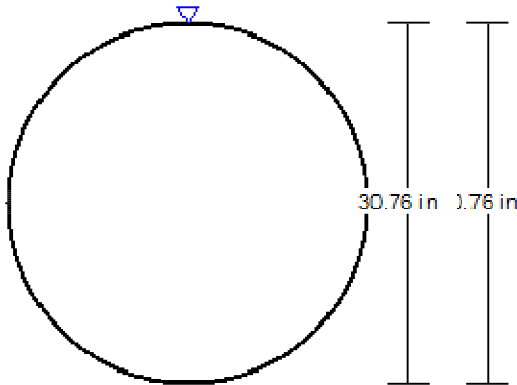
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	2.0 %
Normal Depth	30.76 in
Diameter	30.76 in
Discharge	62.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 50 - 36" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	30.76	in
Critical Depth	2.44	ft
Channel Slope	2.0	%
Critical Slope	0.01734	ft/ft

Worksheet for Facility 51 - 24" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	8.5	%
Normal Depth	15.90	in
Diameter	15.90	in
Discharge	22.00	ft ³ /s

Results

Diameter	15.90	in
Normal Depth	15.90	in
Flow Area	1.38	ft ²
Wetted Perimeter	4.16	ft
Hydraulic Radius	3.97	in
Top Width	0.00	ft
Critical Depth	1.32	ft
Percent Full	100.0	%
Critical Slope	0.08046	ft/ft
Velocity	15.96	ft/s
Velocity Head	3.96	ft
Specific Energy	5.28	ft
Froude Number	0.00	
Maximum Discharge	23.66	ft ³ /s
Discharge Full	21.99	ft ³ /s
Slope Full	0.08505	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 51 - 24" RCP

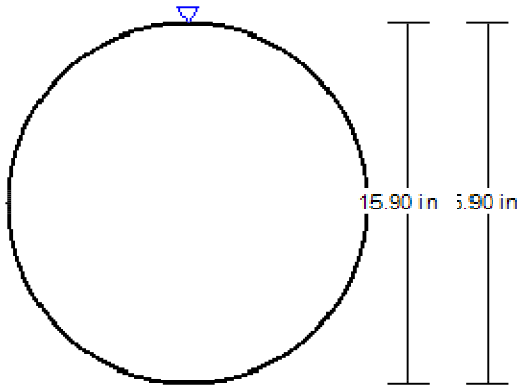
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	8.5 %
Normal Depth	15.90 in
Diameter	15.90 in
Discharge	22.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 51 - 24" RCP

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	15.90	in
Critical Depth	1.32	ft
Channel Slope	8.5	%
Critical Slope	0.08046	ft/ft

Worksheet for Facility 52 - 36" RCP

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013	
Channel Slope	12.0	%
Normal Depth	24.41	in
Diameter	24.41	in
Discharge	82.00	ft ³ /s

Results

Diameter	24.41	in
Normal Depth	24.41	in
Flow Area	3.25	ft ²
Wetted Perimeter	6.39	ft
Hydraulic Radius	6.10	in
Top Width	0.00	ft
Critical Depth	2.03	ft
Percent Full	100.0	%
Critical Slope	0.11591	ft/ft
Velocity	25.23	ft/s
Velocity Head	9.89	ft
Specific Energy	11.92	ft
Froude Number	0.00	
Maximum Discharge	88.22	ft ³ /s
Discharge Full	82.01	ft ³ /s
Slope Full	0.11996	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Cross Section for Facility 52 - 36" RCP

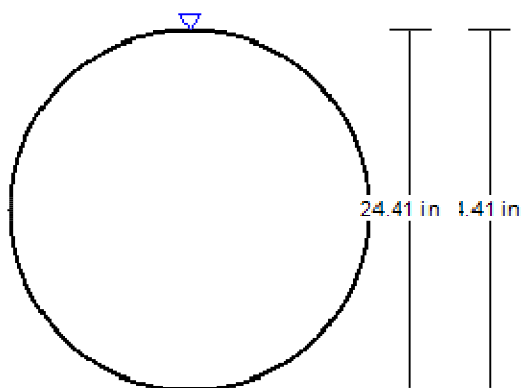
Project Description

Friction Method	Manning Formula
Solve For	Full Flow Diameter

Input Data

Roughness Coefficient	0.013
Channel Slope	12.0 %
Normal Depth	24.41 in
Diameter	24.41 in
Discharge	82.00 ft ³ /s

Cross Section Image



V: 1
H: 1

Worksheet for Facility 52 - 36" RCP

GVF Output Data

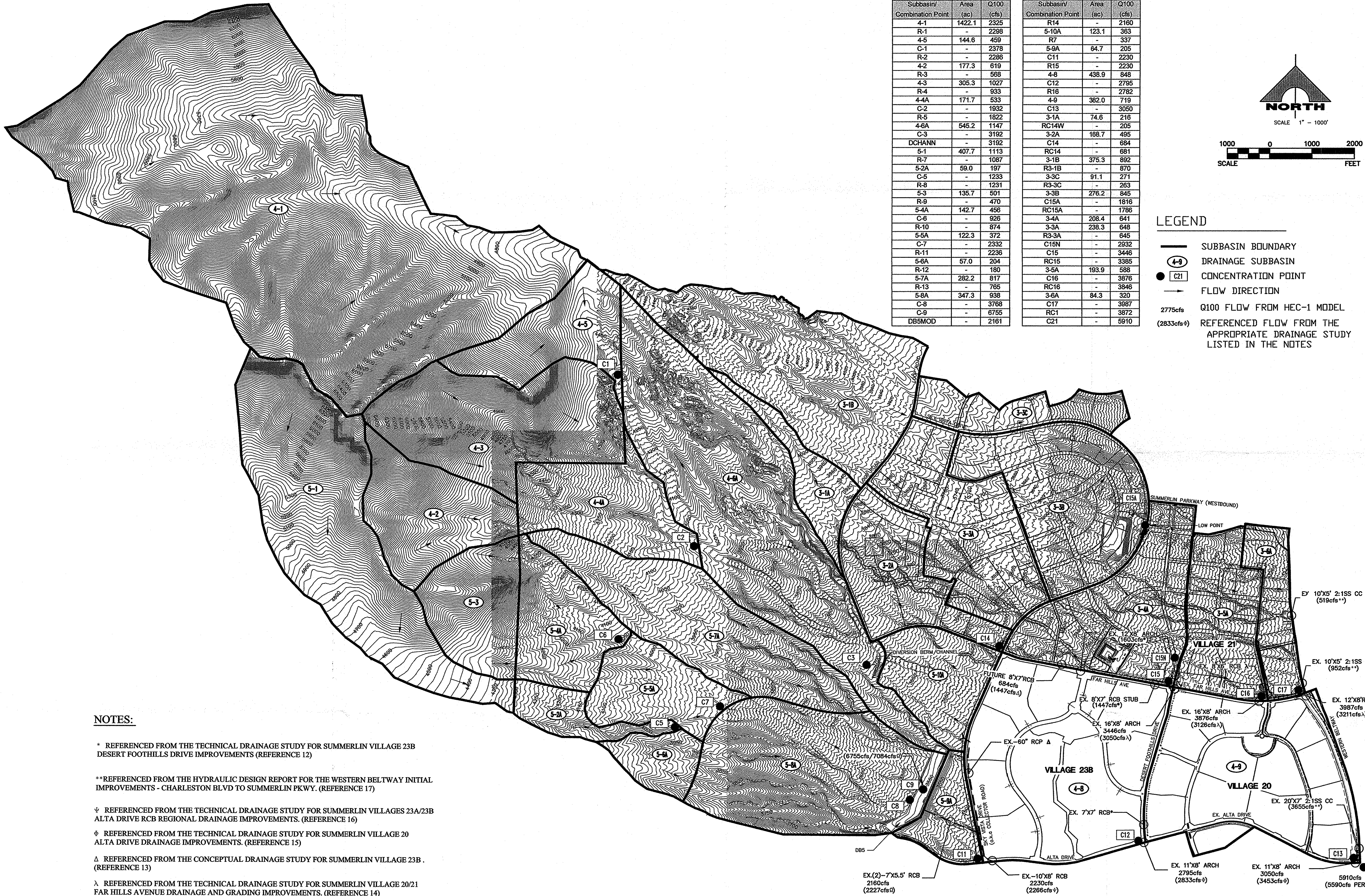
Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	24.41	in
Critical Depth	2.03	ft
Channel Slope	12.0	%
Critical Slope	0.11591	ft/ft

APPENDIX D

REFERENCE MATERIAL

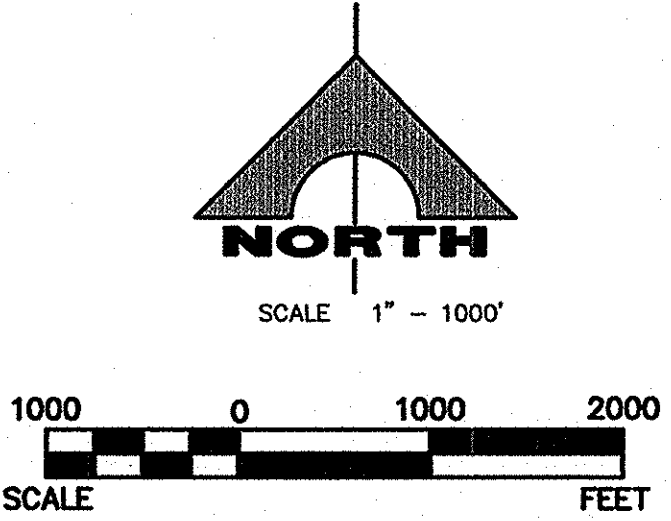
**D.1 2007 SUMMERLIN WEST PLANNING AREA
FLOOD CONTROL MASTER PLAN UPDATE**

D.1.1 – DB5



SUMMARY OF HEC-1 MODEL (Q100) DBS/ALTA TRIBUTARY PROPOSED CONDITIONS		
Subbasin/ Combination Point	Area (ac)	Q100 (cfs)
4-1	1422.1	2325
R-1	-	2298
4-5	144.6	459
C-1	-	2378
R-2	-	2286
4-2	177.3	619
R-3	-	568
4-3	305.3	1027
R-4	-	933
4-4A	171.7	533
C-2	-	1832
R-5	-	1822
4-6A	545.2	1147
C-3	-	3192
DCHANN	-	3192
5-1	407.7	1113
R-7	-	1087
5-2A	59.0	197
C-5	-	1233
R-8	-	1231
5-3	135.7	501
R-9	-	470
5-4A	142.7	456
C-6	-	926
R-10	-	874
5-5A	122.3	372
C-7	-	2332
R-11	-	2236
5-6A	57.0	204
R-12	-	180
5-7A	282.2	817
R-13	-	765
5-8A	347.3	938
C-8	-	3768
C-9	-	6755
DB5MOD	-	2161

SUMMARY OF HEC-1 MODEL (Q100) DBS/ALTA TRIBUTARY PROPOSED CONDITIONS		
Subbasin/ Combination Point	Area (ac)	Q100 (cfs)
R14	-	2160
5-10A	123.1	363
R7	-	337
5-9A	64.7	205
C11	-	2230
R15	-	2230
4-8	438.9	848
C12	-	2795
R16	-	2782
4-9	382.0	719
C13	-	3050
3-1A	74.6	216
RC14W	-	205
3-2A	168.7	495
C14	-	684
RC14	-	681
3-1B	375.3	892
R3-1B	-	870
3-3C	91.1	271
R3-3C	-	263
3-3B	276.2	845
C15A	-	1816
RC15A	-	1786
3-4A	208.4	641
3-3A	238.3	648
R3-3A	-	645
C15N	-	2832
C15	-	3446
RC15	-	3385
3-5A	193.9	588
C16	-	3876
RC16	-	3846
3-6A	84.3	320
C17	-	3887
RC1	-	3872
C21	-	5810



- LEGEND
- SUBBASIN BOUNDARY
 - DRAINAGE SUBBASIN
 - CONCENTRATION POINT
 - FLOW DIRECTION
 - Q100 FLOW FROM HEC-1 MODEL
 - REFERENCED FLOW FROM THE APPROPRIATE DRAINAGE STUDY LISTED IN THE NOTES

NOTES:

- * REFERENCED FROM THE TECHNICAL DRAINAGE STUDY FOR SUMMERLIN VILLAGE 23B DESERT FOOTHILLS DRIVE IMPROVEMENTS (REFERENCE 12)
- **REFERENCED FROM THE HYDRAULIC DESIGN REPORT FOR THE WESTERN BELTWAY INITIAL IMPROVEMENTS - CHARLESTON BLVD TO SUMMERLIN PKWY. (REFERENCE 17)
- ψ REFERENCED FROM THE TECHNICAL DRAINAGE STUDY FOR SUMMERLIN VILLAGES 23A/23B ALTA DRIVE RCB REGIONAL DRAINAGE IMPROVEMENTS. (REFERENCE 16)
- φ REFERENCED FROM THE TECHNICAL DRAINAGE STUDY FOR SUMMERLIN VILLAGE 20 ALTA DRIVE DRAINAGE IMPROVEMENTS. (REFERENCE 15)
- Δ REFERENCED FROM THE CONCEPTUAL DRAINAGE STUDY FOR SUMMERLIN VILLAGE 23B. (REFERENCE 13)
- λ REFERENCED FROM THE TECHNICAL DRAINAGE STUDY FOR SUMMERLIN VILLAGE 20/21 FAR HILLS AVENUE DRAINAGE AND GRADING IMPROVEMENTS. (REFERENCE 14)
- Ω REFERENCED FROM THE DETENTION BASIN 5 / DIVERSION BERM FINAL DESIGN REPORT (REFERENCE 7)

G.C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
1535 S. RAINBOW BOULEVARD • LAS VEGAS, NV 89146
P: 702.894.2000 • F: 702.894.2299 • GCWALLACE.COM

2006 SUMMERLIN WEST PLANNING AREA
FLOOD CONTROL MASTER PLAN UPDATE
FIGURE 8
PROPOSED CONDITION DRAINAGE MAP
DBS/ALTA DRIVE TRIBUTARY

D.1.2 – RED ROCK

```

1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 25JUL06 TIME 11:32:01
*****

```

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

```

```

      X  X  XXXXXX  XXXXX  X
      X  X  X      X  X  XX
      X  X  X      X  X  X
      XXXXXX XXXX  X      XXXXX  X
      X  X  X      X  X  X
      X  X  X      X  X  X
      X  X  XXXXXX  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

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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*DIAGRAM
1 ID 2006 SUMMERLIN WEST PLANNING AREA
2 ID FLOOD CONTROL MASTER PLAN UPDATE
3 ID "G.C. WALLACE, INC. "
4 ID REDROCK.H1
5 ID DEVELOPED CONDITION-TRIBUTARY TO RED ROCK DETENTION BASIN
6 ID DESIGN STORM = 100-YEAR 6-HOUR STORM
7 ID STORM DISTRIBUTION = SDN3
*
8 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
9 ID
10 ID AREA (SQUARE MILES) DARF
11 ID 0-0.5 ----- 0.990
12 ID 0.5-1 ----- 0.975
13 ID 1-2 ----- 0.950
14 ID 2-3 ----- 0.925
15 ID 3-4 ----- 0.915
16 ID 4-5 ----- 0.908
17 ID 5-6 ----- 0.903
18 ID 6-7 ----- 0.895
19 ID 7-8 ----- 0.885
20 ID
21 IT 5 0 0 300
22 IO 5
23 IN 5 0 0
24 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
*
25 KK 7-7A
26 KM SUBBASIN 7-7A
27 KM AREA 51.8 ACRES
28 BA 0.081
29 PB 3.44
30 PC .000 .020 .057 .070 .087 .108 .124 .130 .130 .130
31 PC .130 .130 .130 .133 .140 .142 .148 .158 .172 .181
32 PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
33 PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
34 PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .856
35 PC .860 .868 .876 .888 .910 .926 .937 .950 .970 .976
36 PC .982 .985 .987 .989 .990 .993 .994 .995 .995 .998
37 PC .998 .999 1.00
38 LS 0 88.7
39 UD 0.143
*
40 KK R7-7A
41 KM ROUTE 7-7A THRU ST-7 TO CP1
42 RD 1350 .028 .017 TRAP 0 50
*

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1 HEC-1 INPUT PAGE 2

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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*
43 KK L
44 KM SUBBASIN PARCEL L
45 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
46 KM AREA 15.0 ACRES
47 BA .02344
48 PB 3.34
49 LS 0 92
50 UD .101
*
51 KK M
52 KM SUBBASIN PARCEL M
53 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
54 KM AREA 30.3 ACRES (USE 2/3 AREA 20.2 ACRES)
55 BA .03156
56 PB 3.34

```

57 LS 0 92
 58 UD .138
 *
 59 KK CP1
 60 KM CONCENTRATION POINT CP1
 61 KM COMBINE R7-7A, PARCEL L AND PARCEL M IN SD
 62 HC 3
 *
 63 KK RCP1
 64 KM ROUTE CP1 TO CP3
 65 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 66 RD 800 .028 .017 TRAP 0 50
 *
 67 KK K
 68 KM SUBBASIN PARCEL K
 69 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 70 KM AREA 23.4 ACRES
 71 BA .04641
 72 PB 3.34
 73 LS 0 91
 74 UD .124
 *
 75 KK CP2
 76 KM CONCENTRATION POINT CP2
 77 KM COMBINE K AND CP1
 78 HC 2
 *
 79 KK ST4
 80 KM SUBBASIN STREET AREA ST4
 81 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 82 KM AREA 10.2 ACRES
 83 BA .01594
 84 PB 3.34

HEC-1 INPUT

PAGE 3

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

85 LS 0 94
 86 UD .184
 *

87 KK CP3
 88 KM CONCENTRATION POINT CP3
 89 KM COMBINE ST4 AND CP2
 90 HC 2
 *

91 KK ST6
 92 KM SUBBASIN SPOKE "A"
 93 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 94 KM AREA 1.5 ACRES
 95 BA .00234
 96 PB 3.34
 97 LS 0 94
 98 UD .075
 *

99 KK CP4
 100 KM CONCENTRATION POINT CP4
 101 KM COMBINE CP3 AND ST6
 102 HC 2
 *

103 KK M
 104 KM SUBBASIN PARCEL M
 105 KM PARAMETERS REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 106 KM BUT WITH 1/3 ACRES - TO VERIFY ACTUAL FLOW VALUE
 107 KM AT THE CROSSBRIDGE/SKY VISTA INTERSECTION (CP7)
 108 KM AREA 30.3 ACRES (USE 1/3 AREA 10.1 ACRES)
 109 BA .01578
 110 PB 3.34
 111 LS 0 92
 112 UD .138
 *

113 KK ES-1
 114 KM SUBBASIN PARCEL ES-1
 115 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 116 KM AREA 12.1 ACRES
 117 BA .01883
 118 PB 3.34
 119 LS 0 92
 120 UD .103
 *

121 KK CP5
 122 KM CONCENTRATION POINT CP5
 123 KM COMBINE M AND ES-1 IN SKY VISTA
 124 HC 2
 *

HEC-1 INPUT

PAGE 4

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

125 KK CP6
 126 KM CONCENTRATION POINT CP5
 127 KM COMBINE CP4 AND CP5A IN SKY VISTA
 128 HC 2
 *

129 KK RCP6
 130 KM ROUTE CP6 TO CP7

131	RD	1830	.036	.017	TRAP	0	50
	*						
132	KK	ST2					
133	KM	SUBBASIN ST2 - SKY VISTA DRIVE					
134	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
135	KM	AREA 10.0 ACRES					
136	BA	.01563					
137	PB	3.34					
138	LS	0	94				
139	UD	.140					
	*						
140	KK	CP7					
141	KM	CONCENTRATION POINT CP7					
142	KM	COMBINE ST2 AND CP6					
143	HC	2					
	*						
144	KK	7-2B					
145	KM	SUBBASIN 7-2B					
146	KM	AREA 60.4 ACRES					
147	BA	0.0944					
148	PB	3.58					
149	LS	0	88				
150	UD	0.149					
	*						
151	KK	R7-2B					
152	KM	ROUTE 7-2B THRU 7-2A TO CRR1					
153	KM	LENGTH 9625 FEET					
154	KM	SLOPE 7.1 %					
155	KM	NSTEPS K X					
156	RM	2 .129 .15					
	*						
157	KK	7-2A					
158	KM	SUBBASIN 7-2A					
159	KM	AREA 288.8 ACRES					
160	BA	0.4513					
161	PB	3.50					
162	LS	0	88.2				
163	UD	0.247					
	*						

1

HEC-1 INPUT

PAGE 5

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

164	KK	CRR1					
165	KM	COMBINE 7-2B AND 7-2A WEST OF SV24 SUBBASIN COS-1					
166	HC	2					
	*						
167	KK	FS1					
168	KM	DIVERT 300 CFS TO COMBINATION POINT CRR2					
169	DT	DIV1					
170	DI	0	884				
171	DQ	0	300				
	*						
172	KK	RCRR1					
173	KM	ROUTE CRR1 THRU SUBBASINS COS-1 AND COS-2 TO CP8					
174	KM	LENGTH 3920 FEET					
175	KM	SLOPE 5.8 %					
176	KM	NSTEPS K X					
177	RM	1 .058 .15					
	*						
178	KK	COS-1					
179	KM	SUBBASIN OPEN SPACE AREA COS-1					
180	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
181	KM	AREA 3.1 ACRES					
182	BA	.00484					
183	PB	3.34					
184	LS	0	86				
185	UD	.083					
	*						
186	KK	COS-2					
187	KM	SUBBASIN OPEN AREA COS-2					
188	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
189	KM	AREA 2.2 ACRES					
190	BA	.00344					
191	PB	3.34					
192	LS	0	86				
193	UD	.085					
	*						
194	KK	C					
195	KM	SUBBASIN PARCEL C					
196	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
197	KM	AREA 25.8 ACRES					
198	BA	.04038					
199	PB	3.34					
200	LS	0	90				
201	UD	.163					
	*						

1

HEC-1 INPUT

PAGE 6

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

202	KK	CP8					
203	KM	CONCENTRATION POINT CP8					
204	KM	COMBINE CRR1, PARCEL C, COS-1, AND COS-2					
205	HC	4					
	*						

206 KK CP9
 207 KM CONCENTRATION POINT CP9
 208 KM COMBINE CP7 AND CP8
 209 HC 2
 *

 210 KK D
 211 KM SUBBASIN PARCEL D
 212 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 213 KM AREA 33.5 ACRES
 214 BA .05230
 215 PB 3.34
 216 LS 0 91
 217 UD .159
 *

 218 KK CP10
 219 KM CONCENTRATION POINT CP10
 220 KM COMBINE CP9 AND D IN DESERT MOON
 221 HC 2
 *

 222 KK E
 223 KM SUBBASIN PARCEL E
 224 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 225 KM AREA 32.2 ACRES
 226 BA .05036
 227 PB 3.34
 228 LS 0 91
 229 UD .151
 *

 230 KK NP-1
 231 KM SUBBASIN PARK AREA NP-1
 232 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 233 KM AREA 9.8 ACRES
 234 BA .01531
 235 PB 3.34
 236 LS 0 82
 237 UD .132
 *

 238 KK CP11
 239 KM CONCENTRATION POINT CP11
 240 KM COMBINE E AND NP-1
 241 HC 2
 *

1

HEC-1 INPUT

PAGE 7

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

242 KK CP12
 243 KM CONCENTRATION POINT CP12
 244 KM COMBINE CP11 AND CP10
 245 HC 2
 *

 246 KK ST5
 247 KM SUBBASIN DESERT MOON ROAD ST5
 248 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 249 KM AREA 16.3 ACRES
 250 BA .02541
 251 PB 3.34
 252 LS 0 94
 253 UD .204
 *

 254 KK CP13
 255 KM CONCENTRATION POINT CP13
 256 KM COMBINE ST5 AND CP12
 257 HC 2
 *

 258 KK RCP13
 259 KM ROUTE CP13 THROUGH COS-6
 260 RD 908 .066 .025 TRAP 0 50
 *

 261 KK B
 262 KM SUBBASIN PARCEL B
 263 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 264 KM AREA 31.1 ACRES
 265 BA .04859
 266 PB 3.34
 267 LS 0 91
 268 UD .120
 *

 269 KK COS-5
 270 KM SUBBASIN OPEN AREA COS-5
 271 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 272 KM AREA 0.9 ACRES
 273 BA .00141
 274 PB 3.34
 275 LS 0 86
 276 UD .090
 *

 277 KK CP14
 278 KM CONCENTRATION POINT CP14
 279 KM COMBINE CP13, B, AND COS-5
 280 HC 3
 *

1

HEC-1 INPUT

PAGE 8

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

281 KK A
 282 KM SUBBASIN PARCEL A
 283 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 284 KM AREA 39.9 ACRES
 285 BA .06234
 286 PB 3.34
 287 LS 0 90
 288 UD .150
 *
 289 KK ST3A
 290 KM SUBBASIN STREET AREA FOR SKY VISTA DRIVE
 291 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 292 KM AREA ACRES
 293 BA .00609
 294 PB 3.34
 295 LS 0 94
 296 UD .052
 *
 297 KK CP15
 298 KM CONCENTRATION POINT CP15
 299 KM COMBINE ST3A AND A
 300 HC 2
 *
 301 KK CP16
 302 KM CONCENTRATION POINT CP16
 303 KM COMBINE CP14 AND CP15
 304 HC 2
 *
 305 KK 7-5A
 306 KM SUBBASIN 7-5A
 307 KM AREA 190.0 ACRES
 308 BA 0.297
 309 PB 3.43
 310 LS 0 87
 311 UD 0.154
 *
 312 KK RETD1
 313 KM RETRIEVE DIVERTED FLOW FROM CRR1
 314 DR DIV1
 *
 315 KK RDIV1
 316 KM ROUTE DIVERTED FLOW FROM CRR1 TO CRR2
 317 RD 1890 .010 .016 TRAP 0 25
 *

1

HEC-1 INPUT

PAGE 9

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

318 KK CRR2
 319 KM COMBINE 7-5A AND DIVERTED FLOW FROM CRR1 WEST OF SV24 SUBBASIN COS-1
 320 HC 2
 *
 321 KK RCRR2
 322 KM ROUTE CRR2 THRU SV24 SUBBASINS COS-3 AND COS-4 TO CP21
 323 KM LENGTH 3845 FEET
 324 KM SLOPE 6.4 %
 325 KM NSTEPS K X
 326 RM 1 .054 .15
 *
 327 KK J
 328 KM SUBBASIN PARCEL J
 329 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 330 KM AREA 42.96 ACRES
 331 BA .06713
 332 PB 3.34
 333 LS 0 91
 334 UD .165
 *
 335 KK I
 336 KM SUBBASIN PARCEL I
 337 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 338 KM AREA 40.5 ACRES
 339 BA .06328
 340 PB 3.34
 341 LS 0 91
 342 UD .143
 *
 343 KK CP18
 344 KM CONCENTRATION POINT CP18
 345 KM COMBINE J AND I
 346 HC 2
 *
 347 KK G
 348 KM SUBBASIN PARCEL G
 349 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 350 KM AREA 42.7 ACRES
 351 BA .06672
 352 PB 3.34
 353 LS 0 86
 354 UD .159
 *

1

HEC-1 INPUT

PAGE 10

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

355 KK H
 356 KM SUBBASIN PARCEL H
 357 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 358 KM AREA 22.1 ACRES
 359 BA .03453
 360 PB 3.34
 361 LS 0 86
 362 UD .106
 *

363 KK CP19A
 364 KM CONCENTRATION POINT CP19A
 365 KM COMBINE G AND H
 366 HC 2
 *

367 KK COS-3
 368 KM SUBBASIN OPEN SPACE AREA COS-3
 369 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 370 KM AREA 5.2 ACRES
 371 BA .00813
 372 PB 3.34
 373 LS 0 86
 374 UD .078
 *

375 KK CP19
 376 KM CONCENTRATION POINT CP19
 377 KM COMBINE CP18, CP19A, AND COS-3
 378 HC 3
 *

379 KK F
 380 KM SUBBASIN PARCEL F
 381 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 382 KM AREA 38.0 ACRES
 383 BA .05938
 384 PB 3.34
 385 LS 0 86
 386 UD .141
 *

387 KK COS-4
 388 KM SUBBASIN OPEN SPACE AREA COS-4
 389 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 390 KM AREA 9.1 ACRES
 391 BA .01422
 392 PB 3.34
 393 LS 0 86
 394 UD .068
 *

1

HEC-1 INPUT

PAGE 11

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

395 KK CP20
 396 KM CONCENTRATION POINT CP20
 397 KM COMBINE F AND COS4
 398 HC 2
 *

399 KK CP21
 400 KM CONCENTRATION POINT CP21
 401 KM COMBINE CRR2, CP20, AND CP19
 402 HC 3
 *

403 KK 7-1
 404 KM OFFSITE SUBBASIN 7-1
 405 KM MODIFIED BASIN RR14A FROM THE CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT
 406 KM 2002 MASTER PLAN UPDATE - TROPICANA/FLAMINGO WASH WATERSHED
 407 KM BASIN RR14A = 7-1 AND 7-2B (7-1 = 2884.2 ACRES)
 408 BA 4.507
 409 PB 3.75
 410 LU 0 0.5 0
 411 UD 0.725
 *

412 KK R7-1
 413 KM ROUTE SUBBASIN 7-1 THRU BASIN 7-4 TO CRR3
 414 KM LENGTH 11,231 FEET
 415 KM SLOPE 6.9 %
 416 KM NSTEPS K X
 417 RM 2 .152 .15
 *

418 KK 7-3
 419 KM SUBBASIN 7-3
 420 KM AREA 141.84 ACRES
 421 KM REFERENCED FROM THE 1997 SUMMERLIN WEST STUDY
 422 BA .222
 423 PB 3.43
 424 LS 0 87
 425 UD .120
 *

426 KK R7-3
 427 KM ROUTE SUBBASIN 7-3 TO THRU SUBBASIN 7-4 TO CRR3
 428 KM LENGTH 5377 FEET
 429 KM SLOPE 6.6 %
 430 KM NSTEPS K X
 431 RM 1 .074 .15
 *

1

HEC-1 INPUT

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LINE	ID	1	2	3	4	5	6	7	8	9	10
432	KK	7-4A									
433	KM	SUBBASIN 7-4A									
434	KM	AREA 214.1 ACRES									
435	BA	.3345									
436	PB	3.46									
437	LS	0	88								
438	UD	.307									
	*										
439	KK	CRR3									
440	KM	COMBINE 7-1, 7-3, AND 7-4A									
441	HC	3									
	*										
442	KK	RCRR3									
443	KM	ROUTE CRR3 TO CP22									
444	KM	LENGTH 2951 FEET									
445	KM	SLOPE 5.4 %									
446	KM	NSTEPS K X									
447	RM	1 .045 .15									
	*										
448	KK	CP22									
449	KM	CONCENTRATION POINT CP21									
450	KM	COMBINE CP21 AND CRR3									
451	HC	2									
	*										
452	KK	RCP22									
453	KM	ROUTE CP22 TO CRR4									
454	KM	LENGTH 2876 FEET									
455	KM	SLOPE 2.3 %									
456	KM	NSTEPS K X									
457	RM	1 .067 .15									
	*										
458	KK	CRR4									
459	KM	COMBINE ALL AT THE EXISTING CHARLESTON BRIDGE OPENING									
460	HC	2									
	*										
461	ZZ										

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW

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

```

25  7-7A
    V
40  R7-7A
    .
    .
43  .
    .
    .
51  .
    .
    .
59  CP1.....
    V
63  RCP1
    .
    .
67  .
    .
    .
75  CP2.....
    .
    .
79  .
    .
    .
87  CP3.....
    .
    .
91  .
    .
    .
99  CP4.....
    .
    .
103 .
    .
    .
113 .
    .
    .
121 .
    .
    .
125 CP6.....
    V
129 RCP6
    .
    .
132 .
    .
    .
140 CP7.....
    .
    .
    .

```

Diagram details: The schematic shows a stream network with various connectors (CP1-CP7, RCP1, RCP6) and routing points (V). Diversion or pump flow is indicated by arrows (--->). Return of diverted or pumped flow is indicated by arrows (<---). The network includes a main line (7-7A) and several branches (R7-7A, CP1, CP2, CP3, CP4, CP5, CP6, CP7). The flow direction is generally from top to bottom, with some lateral connections.

144	.	7-2B	.
	.	V	.
151	.	R7-2B	.
	.	.	.
157	.	.	7-2A
	.	.	.
164	.	CRR1	.....
	.	.	.
169	.	----->	DIV1
167	.	FS1	.
	.	V	.
172	.	RCRR1	.
	.	.	.
178	.	.	COS-1
	.	.	.
186	.	.	COS-2
	.	.	.
194	.	.	C
	.	.	.
202	.	CP8	.....
	.	.	.
206	CP9	.....	.
	.	.	.
210	.	D	.
	.	.	.
218	CP10	.....	.
	.	.	.
222	.	E	.
	.	.	.
230	.	.	NP-1
	.	.	.
238	.	CP11	.....
	.	.	.
242	CP12	.....	.
	.	.	.
246	.	ST5	.
	.	.	.
254	CP13	.....	.
	.	V	.
258	RCP13	.	.
	.	.	.
261	.	B	.
	.	.	.
269	.	.	COS-5
	.	.	.
277	CP14	.....	.
	.	.	.
281	.	A	.
	.	.	.
289	.	.	ST3A
	.	.	.
297	.	CP15	.....
	.	.	.
301	CP16	.....	.
	.	.	.
305	.	7-5A	.
	.	.	.
314	.	.	<----- DIV1
312	.	RETD1	.
	.	V	.
315	.	RDIV1	.
	.	.	.
318	.	CRR2	.....
	.	V	.
321	.	RCRR2	.
	.	.	.
327	.	.	J
	.	.	.
335	.	.	I
	.	.	.
343	.	CP18	.....
	.	.	.
347	.	.	G

1 NUMBER OF PLANS

1

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION								
					RATIO 1 .99	RATIO 2 .98	RATIO 3 .95	RATIO 4 .93	RATIO 5 .92	RATIO 6 .91	RATIO 7 .90	RATIO 8 .89	RATIO 9 .88
HYDROGRAPH AT +	7-7A	.08	1	FLOW TIME	151. 3.58	148. 3.58	143. 3.58	138. 3.58	136. 3.58	135. 3.58	134. 3.58	132. 3.58	130. 3.58
ROUTED TO +	R7-7A	.08	1	FLOW TIME	145. 3.58	141. 3.58	137. 3.58	131. 3.58	130. 3.58	128. 3.58	127. 3.58	125. 3.58	124. 3.58
HYDROGRAPH AT +	L	.02	1	FLOW TIME	49. 3.50	48. 3.50	47. 3.50	45. 3.50	45. 3.50	44. 3.50	44. 3.50	44. 3.50	43. 3.50
HYDROGRAPH AT +	M	.03	1	FLOW TIME	62. 3.58	61. 3.58	59. 3.58	58. 3.58	57. 3.58	56. 3.58	56. 3.58	55. 3.58	55. 3.58
3 COMBINED AT +	CP1	.14	1	FLOW TIME	253. 3.58	247. 3.58	240. 3.58	231. 3.58	229. 3.58	226. 3.58	224. 3.58	221. 3.58	218. 3.58
ROUTED TO +	RCP1	.14	1	FLOW TIME	245. 3.58	240. 3.58	233. 3.58	224. 3.58	221. 3.58	219. 3.58	217. 3.58	214. 3.58	211. 3.58
HYDROGRAPH AT +	K	.05	1	FLOW TIME	90. 3.58	89. 3.58	86. 3.58	83. 3.58	82. 3.58	81. 3.58	81. 3.58	80. 3.58	79. 3.58
2 COMBINED AT +	CP2	.18	1	FLOW TIME	336. 3.58	328. 3.58	318. 3.58	307. 3.58	303. 3.58	300. 3.58	297. 3.58	293. 3.58	290. 3.58
HYDROGRAPH AT +	ST4	.02	1	FLOW TIME	31. 3.58	30. 3.58	29. 3.58	28. 3.58	28. 3.58	28. 3.58	28. 3.58	27. 3.58	27. 3.58
2 COMBINED AT +	CP3	.20	1	FLOW TIME	366. 3.58	358. 3.58	348. 3.58	335. 3.58	331. 3.58	328. 3.58	325. 3.58	321. 3.58	317. 3.58
HYDROGRAPH AT +	ST6	.00	1	FLOW TIME	6. 3.50	6. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50
2 COMBINED AT +	CP4	.20	1	FLOW TIME	371. 3.58	363. 3.58	352. 3.58	339. 3.58	335. 3.58	332. 3.58	329. 3.58	325. 3.58	320. 3.58
HYDROGRAPH AT +	M	.02	1	FLOW TIME	31. 3.58	31. 3.58	30. 3.58	29. 3.58	28. 3.58	28. 3.58	28. 3.58	28. 3.58	27. 3.58
HYDROGRAPH AT +	ES-1	.02	1	FLOW TIME	39. 3.50	39. 3.50	37. 3.50	36. 3.50	36. 3.50	35. 3.50	35. 3.50	35. 3.50	34. 3.50
2 COMBINED AT +	CP5	.03	1	FLOW TIME	68. 3.50	67. 3.50	65. 3.50	63. 3.50	62. 3.58	61. 3.58	61. 3.58	60. 3.58	60. 3.58
2 COMBINED AT +	CP6	.24	1	FLOW TIME	439. 3.58	430. 3.58	417. 3.58	402. 3.58	397. 3.58	393. 3.58	390. 3.58	385. 3.58	380. 3.58

ROUTED TO													
+	RCP6	.24	1	FLOW TIME	419. 3.58	414. 3.58	398. 3.58	383. 3.58	378. 3.58	376. 3.58	376. 3.58	368. 3.58	361. 3.58
HYDROGRAPH AT													
+	ST2	.02	1	FLOW TIME	32. 3.58	32. 3.58	31. 3.58	30. 3.58	30. 3.58	29. 3.58	29. 3.58	29. 3.58	28. 3.58
2 COMBINED AT													
+	CP7	.25	1	FLOW TIME	452. 3.58	445. 3.58	429. 3.58	413. 3.58	408. 3.58	406. 3.58	405. 3.58	397. 3.58	390. 3.58
HYDROGRAPH AT													
+	7-2B	.09	1	FLOW TIME	180. 3.58	176. 3.58	170. 3.58	164. 3.58	162. 3.58	160. 3.58	159. 3.58	157. 3.58	155. 3.58
ROUTED TO													
+	R7-2B	.09	1	FLOW TIME	160. 3.67	157. 3.67	152. 3.67	146. 3.67	144. 3.67	143. 3.67	141. 3.67	140. 3.67	138. 3.67
HYDROGRAPH AT													
+	7-2A	.45	1	FLOW TIME	697. 3.67	683. 3.67	659. 3.67	636. 3.67	627. 3.67	620. 3.67	615. 3.67	608. 3.67	599. 3.67
2 COMBINED AT													
+	CRR1	.55	1	FLOW TIME	857. 3.67	840. 3.67	811. 3.67	782. 3.67	771. 3.67	763. 3.67	757. 3.67	748. 3.67	736. 3.67
DIVERSION TO													
+	DIV1	.55	1	FLOW TIME	291. 3.67	285. 3.67	275. 3.67	265. 3.67	262. 3.67	259. 3.67	257. 3.67	254. 3.67	250. 3.67
HYDROGRAPH AT													
+	FS1	.55	1	FLOW TIME	566. 3.67	555. 3.67	536. 3.67	517. 3.67	509. 3.67	504. 3.67	500. 3.67	494. 3.67	486. 3.67
ROUTED TO													
+	RCRR1	.55	1	FLOW TIME	551. 3.75	540. 3.75	522. 3.75	503. 3.75	496. 3.75	491. 3.75	487. 3.75	481. 3.75	474. 3.75
HYDROGRAPH AT													
+	COS-1	.00	1	FLOW TIME	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50
HYDROGRAPH AT													
+	COS-2	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	5. 3.50	5. 3.50
HYDROGRAPH AT													
+	C	.04	1	FLOW TIME	73. 3.58	71. 3.58	69. 3.58	67. 3.58	66. 3.58	65. 3.58	65. 3.58	64. 3.58	63. 3.58
4 COMBINED AT													
+	CP8	.59	1	FLOW TIME	608. 3.75	595. 3.75	575. 3.75	555. 3.75	547. 3.75	541. 3.75	537. 3.75	531. 3.75	523. 3.75
2 COMBINED AT													
+	CP9	.85	1	FLOW TIME	1033. 3.67	1012. 3.67	980. 3.67	943. 3.67	932. 3.67	925. 3.67	918. 3.67	903. 3.67	890. 3.67
HYDROGRAPH AT													
+	D	.05	1	FLOW TIME	98. 3.58	96. 3.58	93. 3.58	90. 3.58	89. 3.58	88. 3.58	87. 3.58	86. 3.58	85. 3.58
2 COMBINED AT													
+	CP10	.90	1	FLOW TIME	1117. 3.67	1095. 3.67	1060. 3.67	1021. 3.67	1009. 3.67	1000. 3.67	993. 3.67	978. 3.67	963. 3.67
HYDROGRAPH AT													
+	E	.05	1	FLOW TIME	95. 3.58	94. 3.58	91. 3.58	88. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58
HYDROGRAPH AT													
+	NP-1	.02	1	FLOW TIME	22. 3.58	21. 3.58	21. 3.58	20. 3.58	19. 3.58	19. 3.58	19. 3.58	19. 3.58	18. 3.58
2 COMBINED AT													
+	CP11	.07	1	FLOW TIME	117. 3.58	115. 3.58	111. 3.58	107. 3.58	106. 3.58	105. 3.58	104. 3.58	103. 3.58	101. 3.58
2 COMBINED AT													
+	CP12	.96	1	FLOW TIME	1215. 3.67	1191. 3.67	1153. 3.67	1110. 3.67	1097. 3.67	1088. 3.67	1080. 3.67	1064. 3.67	1048. 3.67
HYDROGRAPH AT													
+	ST5	.03	1	FLOW TIME	47. 3.58	46. 3.58	44. 3.58	43. 3.58	42. 3.58	42. 3.58	42. 3.58	41. 3.58	41. 3.58
2 COMBINED AT													
+	CP13	.99	1	FLOW TIME	1260. 3.67	1236. 3.67	1196. 3.67	1152. 3.67	1139. 3.67	1129. 3.67	1121. 3.67	1104. 3.67	1088. 3.67
ROUTED TO													
+	RCP13	.99	1	FLOW TIME	1255. 3.67	1230. 3.67	1189. 3.67	1145. 3.67	1133. 3.67	1121. 3.67	1115. 3.67	1097. 3.67	1081. 3.67
HYDROGRAPH AT													
+	B	.05	1	FLOW TIME	94. 3.58	93. 3.58	90. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58	82. 3.58
HYDROGRAPH AT													
+	COS-5	.00	1	FLOW TIME	3. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50
3 COMBINED AT													
+	CP14	1.04	1	FLOW TIME	1326. 3.67	1301. 3.67	1257. 3.67	1211. 3.67	1198. 3.67	1186. 3.67	1179. 3.67	1160. 3.67	1144. 3.67

HYDROGRAPH AT +	A	.06	1	FLOW TIME	115. 3.58	113. 3.58	109. 3.58	105. 3.58	104. 3.58	103. 3.58	102. 3.58	101. 3.58	99. 3.58
HYDROGRAPH AT +	ST3A	.01	1	FLOW TIME	16. 3.50	16. 3.50	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50
2 COMBINED AT +	CP15	.07	1	FLOW TIME	124. 3.58	122. 3.58	118. 3.58	114. 3.58	112. 3.58	111. 3.58	110. 3.58	109. 3.58	107. 3.58
2 COMBINED AT +	CP16	1.11	1	FLOW TIME	1429. 3.67	1401. 3.67	1355. 3.67	1306. 3.67	1291. 3.67	1278. 3.67	1271. 3.67	1251. 3.67	1233. 3.67
HYDROGRAPH AT +	7-5A	.30	1	FLOW TIME	513. 3.58	502. 3.58	484. 3.58	467. 3.58	460. 3.58	455. 3.58	451. 3.58	445. 3.58	438. 3.58
HYDROGRAPH AT +	RET01	.00	1	FLOW TIME	291. 3.67	285. 3.67	275. 3.67	265. 3.67	262. 3.67	259. 3.67	257. 3.67	254. 3.67	250. 3.67
ROUTED TO +	RDIV1	.00	1	FLOW TIME	283. 3.75	277. 3.75	272. 3.75	258. 3.75	256. 3.75	256. 3.75	254. 3.75	249. 3.75	243. 3.75
2 COMBINED AT +	CRR2	.30	1	FLOW TIME	729. 3.58	715. 3.58	688. 3.58	662. 3.58	652. 3.58	645. 3.58	639. 3.58	631. 3.58	620. 3.58
ROUTED TO +	RCRR2	.30	1	FLOW TIME	717. 3.67	703. 3.67	677. 3.67	653. 3.67	643. 3.67	636. 3.67	630. 3.67	621. 3.67	611. 3.67
HYDROGRAPH AT +	J	.07	1	FLOW TIME	124. 3.58	122. 3.58	118. 3.58	114. 3.58	113. 3.58	112. 3.58	111. 3.58	110. 3.58	108. 3.58
HYDROGRAPH AT +	I	.06	1	FLOW TIME	121. 3.58	119. 3.58	115. 3.58	111. 3.58	110. 3.58	109. 3.58	108. 3.58	107. 3.58	105. 3.58
2 COMBINED AT +	CP18	.13	1	FLOW TIME	246. 3.58	241. 3.58	233. 3.58	226. 3.58	223. 3.58	221. 3.58	219. 3.58	217. 3.58	213. 3.58
HYDROGRAPH AT +	G	.07	1	FLOW TIME	106. 3.58	104. 3.58	100. 3.58	96. 3.58	95. 3.58	94. 3.58	93. 3.58	92. 3.58	90. 3.58
HYDROGRAPH AT +	H	.03	1	FLOW TIME	59. 3.50	57. 3.50	55. 3.50	53. 3.50	52. 3.50	52. 3.50	51. 3.50	51. 3.50	50. 3.50
2 COMBINED AT +	CP19A	.10	1	FLOW TIME	164. 3.58	160. 3.58	154. 3.58	148. 3.58	146. 3.58	145. 3.58	143. 3.58	142. 3.58	139. 3.58
HYDROGRAPH AT +	COS-3	.01	1	FLOW TIME	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50
3 COMBINED AT +	CP19	.24	1	FLOW TIME	422. 3.58	413. 3.58	399. 3.58	386. 3.58	380. 3.58	376. 3.58	373. 3.58	369. 3.58	363. 3.58
HYDROGRAPH AT +	F	.06	1	FLOW TIME	98. 3.58	95. 3.58	92. 3.58	89. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58
HYDROGRAPH AT +	COS-4	.01	1	FLOW TIME	28. 3.50	28. 3.50	27. 3.50	26. 3.50	25. 3.50	25. 3.50	25. 3.50	24. 3.50	24. 3.50
2 COMBINED AT +	CP20	.07	1	FLOW TIME	118. 3.58	116. 3.58	111. 3.58	107. 3.58	106. 3.58	104. 3.58	104. 3.58	102. 3.58	101. 3.58
3 COMBINED AT +	CP21	.61	1	FLOW TIME	1181. 3.58	1158. 3.58	1115. 3.58	1074. 3.58	1058. 3.58	1046. 3.58	1038. 3.58	1024. 3.58	1007. 3.58
HYDROGRAPH AT +	7-1	4.51	1	FLOW TIME	4104. 4.17	4025. 4.17	3893. 4.17	3761. 4.17	3710. 4.17	3673. 4.17	3647. 4.17	3606. 4.17	3554. 4.17
ROUTED TO +	R7-1	4.51	1	FLOW TIME	4010. 4.25	3933. 4.25	3804. 4.25	3675. 4.25	3625. 4.25	3589. 4.25	3564. 4.25	3524. 4.25	3473. 4.25
HYDROGRAPH AT +	7-3	.22	1	FLOW TIME	398. 3.58	390. 3.58	376. 3.58	363. 3.58	357. 3.58	353. 3.58	351. 3.58	346. 3.58	341. 3.58
ROUTED TO +	R7-3	.22	1	FLOW TIME	370. 3.58	362. 3.58	349. 3.58	336. 3.58	331. 3.58	328. 3.58	325. 3.58	321. 3.58	316. 3.58
HYDROGRAPH AT +	7-4A	.33	1	FLOW TIME	457. 3.75	448. 3.75	432. 3.75	417. 3.75	411. 3.75	407. 3.75	403. 3.75	399. 3.75	392. 3.75
3 COMBINED AT +	CRR3	5.06	1	FLOW TIME	4215. 4.25	4134. 4.25	3999. 4.25	3863. 4.25	3810. 4.25	3773. 4.25	3747. 4.25	3704. 4.25	3651. 4.25

+ ROUTED TO	RCCR3	5.06	1	FLOW TIME	4197. 4.33	4116. 4.33	3981. 4.33	3847. 4.33	3794. 4.33	3756. 4.33	3730. 4.33	3688. 4.33	3635. 4.33
+ 2 COMBINED AT	CP22	5.67	1	FLOW TIME	4403. 4.25	4319. 4.25	4177. 4.25	4037. 4.25	3982. 4.25	3943. 4.25	3915. 4.25	3871. 4.25	3816. 4.25
+ ROUTED TO	RCP22	5.67	1	FLOW TIME	4383. 4.33	4299. 4.33	4158. 4.33	4018. 4.33	3963. 4.33	3924. 4.33	3897. 4.33	3853. 4.33	3798. 4.33
+ 2 COMBINED AT	CRR4	6.78	1	FLOW TIME	4634. 4.33	4546. 4.33	4398. 4.33	4250. 4.33	4193. 4.33	4152. 4.33	4123. 4.33	4076. 4.33	4019. 4.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9695E+01 EXCESS= .0000E+00 OUTFLOW= .9697E+01 BASIN STORAGE= .5483E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9487E+01 EXCESS= .0000E+00 OUTFLOW= .9490E+01 BASIN STORAGE= .6204E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9150E+01 EXCESS= .0000E+00 OUTFLOW= .9152E+01 BASIN STORAGE= .5569E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8806E+01 EXCESS= .0000E+00 OUTFLOW= .8808E+01 BASIN STORAGE= .5065E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8684E+01 EXCESS= .0000E+00 OUTFLOW= .8686E+01 BASIN STORAGE= .6185E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8584E+01 EXCESS= .0000E+00 OUTFLOW= .8586E+01 BASIN STORAGE= .5295E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8514E+01 EXCESS= .0000E+00 OUTFLOW= .8516E+01 BASIN STORAGE= .7055E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8402E+01 EXCESS= .0000E+00 OUTFLOW= .8404E+01 BASIN STORAGE= .6093E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8275E+01 EXCESS= .0000E+00 OUTFLOW= .8277E+01 BASIN STORAGE= .7170E-03 PERCENT ERROR= .0

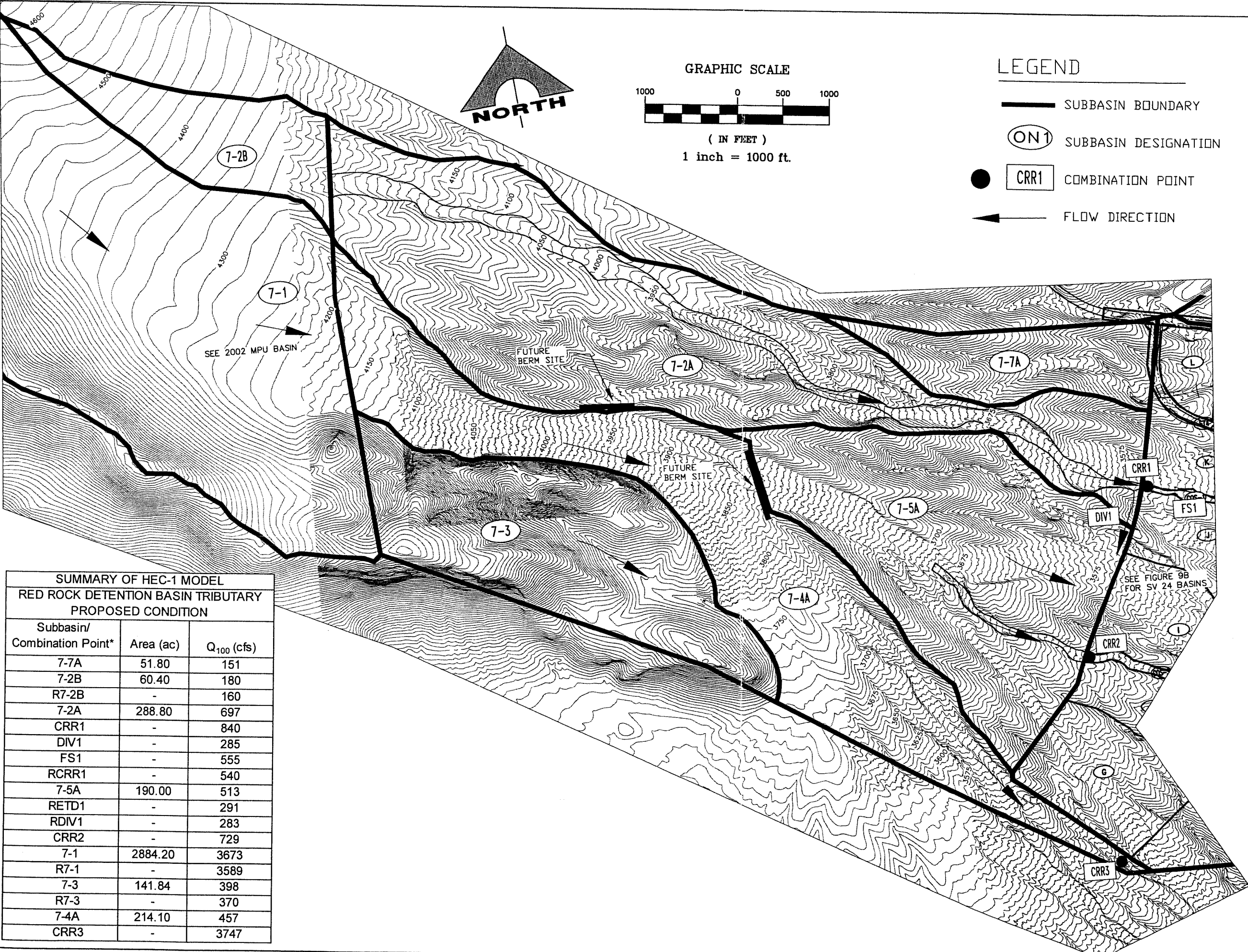
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1654E+02 EXCESS= .0000E+00 OUTFLOW= .1654E+02 BASIN STORAGE= .3556E-03 PERCENT ERROR= .0

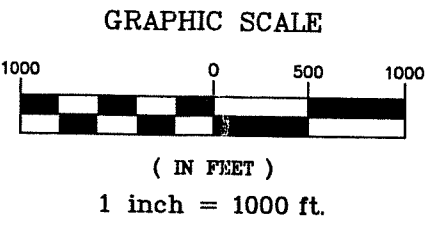
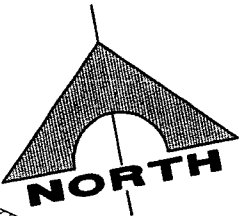
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1597E+02 EXCESS= .0000E+00 OUTFLOW= .1597E+02 BASIN STORAGE= .3519E-03 PERCENT ERROR= .0

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

U7-2/-uo 06:10:51 G:\02A-wu4-00\awg\Hydro\Supplement\Fig 9A.dwg g:\02A-wu4-00\awg\Hydro\Supplement\Fig 9A.dwg



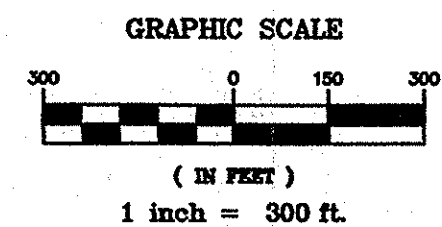
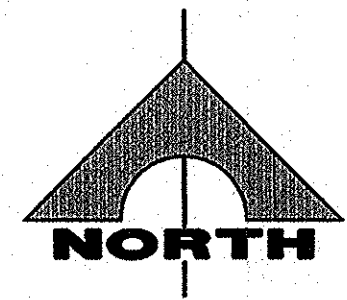
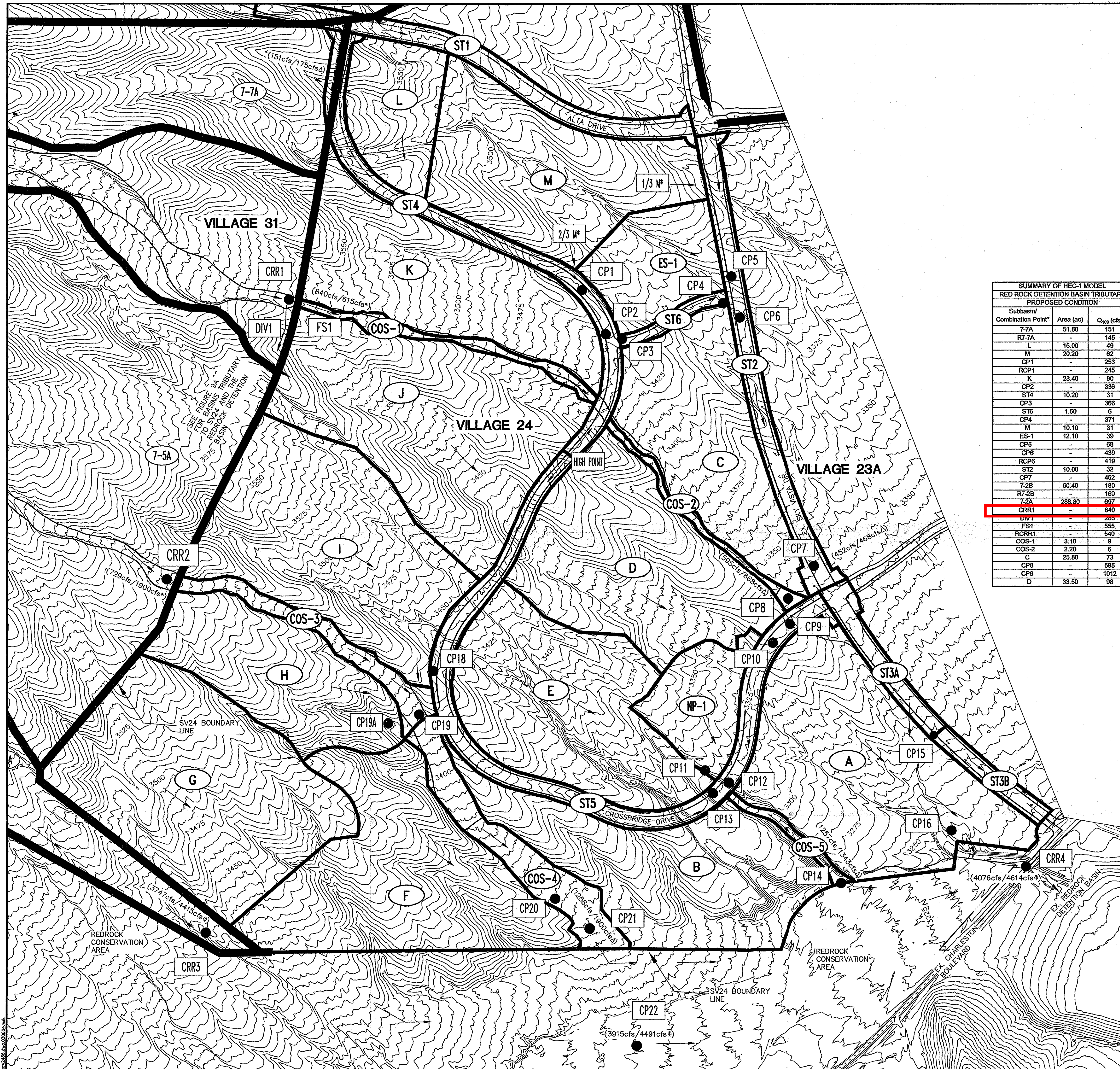
SUMMARY OF HEC-1 MODEL RED ROCK DETENTION BASIN TRIBUTARY PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
7-7A	51.80	151
7-2B	60.40	180
R7-2B	-	160
7-2A	288.80	697
CRR1	-	840
DIV1	-	285
FS1	-	555
RCRR1	-	540
7-5A	190.00	513
RETD1	-	291
RDIV1	-	283
CRR2	-	729
7-1	2884.20	3673
R7-1	-	3589
7-3	141.84	398
R7-3	-	370
7-4A	214.10	457
CRR3	-	3747



- LEGEND
- SUBBASIN BOUNDARY
 - ON1 SUBBASIN DESIGNATION
 - CRR1 COMBINATION POINT
 - FLOW DIRECTION

2006 SUMMERLIN WEST PLANNING AREA
FLOOD CONTROL MASTER PLAN UPDATE
FIGURE 9A - PROPOSED CONDITION DRAINAGE MAP - 1
RED ROCK DETENTION BASIN TRIBUTARY

G. C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
1555 S. RAINBOW BOULEVARD - LAS VEGAS, NV 89146
T: 702.804.2000 • F: 702.804.2299 • GCWALLACE.COM



LEGEND

- SUBBASIN BOUNDARY
- SUBBASIN DESIGNATION
- CP1 COMBINATION POINT
- FLOW DIRECTION

SUMMARY OF HEC-1 MODEL RED ROCK DETENTION BASIN TRIBUTARY PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
7-7A	51.80	151
R7-7A	-	145
L	15.00	49
M	20.20	62
CP1	-	253
RCP1	-	245
K	23.40	90
CP2	-	336
ST4	10.20	31
CP3	-	366
ST6	1.50	6
CP4	-	371
M	10.10	31
ES-1	12.10	39
CP5	-	68
CP6	-	439
RCP6	-	419
ST2	10.00	32
CP7	-	452
7-2B	60.40	180
R7-2B	-	160
7-2A	288.80	697
CRR1	-	840
DIV1	-	263
FS1	-	555
RORR1	-	540
COS-1	3.10	9
COS-2	2.20	6
C	25.80	73
CP8	-	595
CP9	-	1012
D	33.50	98

SUMMARY OF HEC-1 MODEL RED ROCK DETENTION BASIN TRIBUTARY PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
CP10	-	1095
E	32.20	95
NP-1	9.80	21
CP11	-	117
CP12	-	1191
ST5	16.30	47
CP13	-	1236
RCP13	-	1230
B	31.10	94
COS-5	0.90	3
CP14	-	1257
A	39.90	115
ST3A	3.90	16
CP15	-	124
CP16	-	1355
7-5A	190.00	513
RETD1	-	291
RORR4	-	582
CRR2	-	729
RORR2	-	717
J	42.96	124
I	40.50	121
CP18	-	246
G	42.70	106
H	22.10	59
CP19A	-	164
COS-3	5.20	15
CP19	-	422
F	38.00	98
COS-4	9.10	28
CP20	-	118
CP21	-	1158

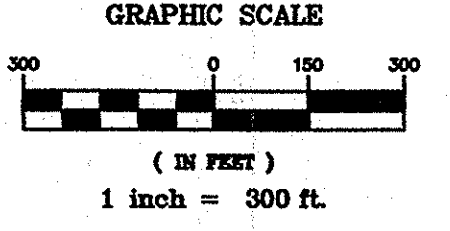
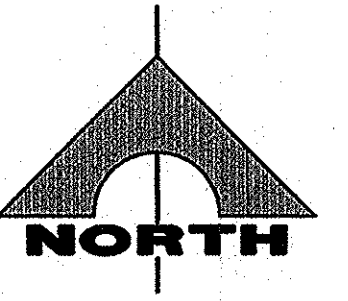
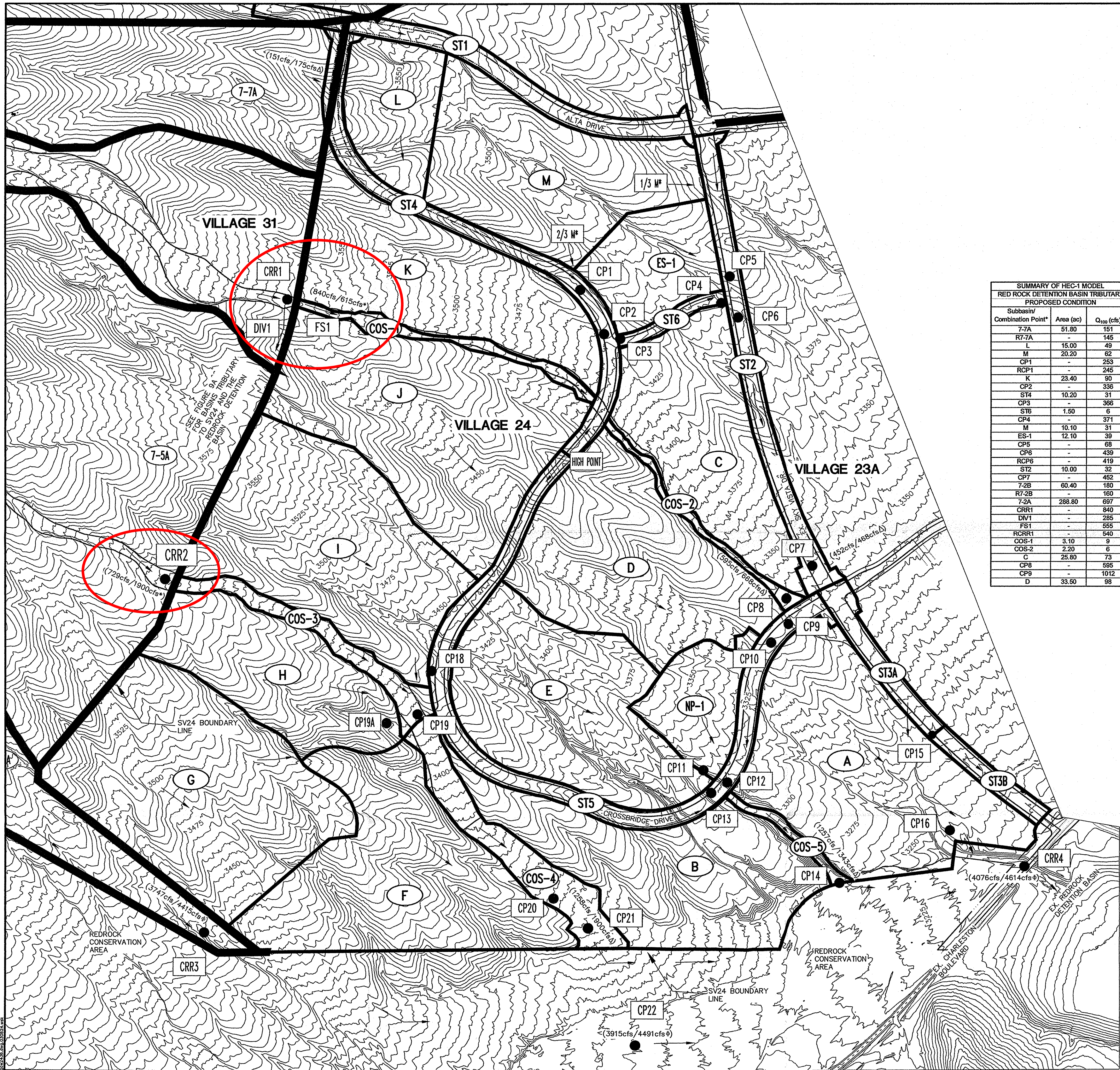
SUMMARY OF HEC-1 MODEL RED ROCK DETENTION BASIN TRIBUTARY PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
7-1	2884.20	3673
R7-1	-	3589
7-3	141.84	398
R7-3	-	370
7-4A	214.10	457
CRR3	-	3747
RORR3	-	3730
CP22	-	3915
RCP22	-	3897
CRR4	-	4076

*PER VILLAGE 24 CONCEPTUAL DRAINAGE STUDY.

ΦPER 1997 SUMMERLIN WEST STUDY.

ΔPER VILLAGE 24 UNIT 1 STUDY.

D.1.3 – VILLAGE 24



- LEGEND
- SUBBASIN BOUNDARY
 - SUBBASIN DESIGNATION
 - CP1 COMBINATION POINT
 - FLOW DIRECTION

SUMMARY OF HEC-1 MODEL		
RED ROCK DETENTION BASIN TRIBUTARY		
PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
7-7A	51.80	151
R7-7A	-	145
L	15.00	49
M	20.20	62
CP1	-	253
RCP1	-	245
K	23.40	90
CP2	-	336
ST4	10.20	31
CP3	-	366
ST6	1.50	6
CP4	-	371
M	10.10	31
ES-1	12.10	39
CP5	-	68
CP6	-	439
RCP6	-	419
ST2	10.00	32
CP7	-	452
7-2B	60.40	180
R7-2B	-	160
7-2A	288.80	697
CRR1	-	840
DIV1	-	285
FS1	-	555
RORR1	-	540
COS-1	3.10	9
COS-2	2.20	6
C	25.80	73
CP8	-	595
CP9	-	1012
D	33.50	98

SUMMARY OF HEC-1 MODEL		
RED ROCK DETENTION BASIN TRIBUTARY		
PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
CP10	-	1095
E	32.20	95
NP-1	9.80	21
CP11	-	117
CP12	-	1191
ST5	16.30	47
CP13	-	1236
RCP13	-	1230
B	31.10	94
COS-5	0.90	3
CP14	-	1257
A	39.90	115
ST3A	3.90	16
CP15	-	124
CP16	-	1355
7-5A	190.00	513
RETD1	-	291
RDIV1	-	283
CRR2	-	729
RORR2	-	717
J	42.96	124
I	40.50	121
CP18	-	246
G	42.70	106
H	22.10	59
CP19A	-	164
COS-3	5.20	15
CP19	-	422
F	38.00	98
COS-4	9.10	28
CP20	-	118
CP21	-	1158

SUMMARY OF HEC-1 MODEL		
RED ROCK DETENTION BASIN TRIBUTARY		
PROPOSED CONDITION		
Subbasin/ Combination Point*	Area (ac)	Q ₁₀₀ (cfs)
7-1	2884.20	3673
R7-1	-	3589
7-3	141.84	398
R7-3	-	370
7-4A	214.10	457
CRR3	-	3747
RORR3	-	3730
CP22	-	3915
RCP22	-	3897
CRR4	-	4076

*PER VILLAGE 24 CONCEPTUAL DRAINAGE STUDY.
ΦPER 1997 SUMMERLIN WEST STUDY.
ΔPER VILLAGE 24 UNIT 1 STUDY.


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1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 25JUL06 TIME 11:32:01
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*****
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*****

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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
1 ID 2006 SUMMERLIN WEST PLANNING AREA
2 ID FLOOD CONTROL MASTER PLAN UPDATE
3 ID "G.C. WALLACE, INC. "
4 ID REDROCK.H1
5 ID DEVELOPED CONDITION-TRIBUTARY TO RED ROCK DETENTION BASIN
6 ID DESIGN STORM = 100-YEAR 6-HOUR STORM
7 ID STORM DISTRIBUTION = SDN3
*
8 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
9 ID
10 ID AREA (SQUARE MILES) DARF
11 ID 0-0.5 ----- 0.990
12 ID 0.5-1 ----- 0.975
13 ID 1-2 ----- 0.950
14 ID 2-3 ----- 0.925
15 ID 3-4 ----- 0.915
16 ID 4-5 ----- 0.908
17 ID 5-6 ----- 0.903
18 ID 6-7 ----- 0.895
19 ID 7-8 ----- 0.885
20 ID
21 IT 5 0 0 300
22 IO 5
23 IN 5 0 0
24 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
*
25 KK 7-7A
26 KM SUBBASIN 7-7A
27 KM AREA 51.8 ACRES
28 BA 0.081
29 PB 3.44
30 PC .000 .020 .057 .070 .087 .108 .124 .130 .130 .130
31 PC .130 .130 .130 .133 .140 .142 .148 .158 .172 .181
32 PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
33 PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
34 PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .856
35 PC .860 .868 .876 .888 .910 .926 .937 .950 .970 .976
36 PC .982 .985 .987 .989 .990 .993 .994 .995 .998
37 PC .998 .999 1.00
38 LS 0 88.7
39 UD 0.143
*
40 KK R7-7A
41 KM ROUTE 7-7A THRU ST-7 TO CP1
42 RD 1350 .028 .017 TRAP 0 50
*

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1 HEC-1 INPUT PAGE 2

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
43 KK L
44 KM SUBBASIN PARCEL L
45 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
46 KM AREA 15.0 ACRES
47 BA .02344
48 PB 3.34
49 LS 0 92
50 UD .101
*
51 KK M
52 KM SUBBASIN PARCEL M
53 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
54 KM AREA 30.3 ACRES (USE 2/3 AREA 20.2 ACRES)
55 BA .03156
56 PB 3.34

```

57 LS 0 92
 58 UD .138
 *
 59 KK CP1
 60 KM CONCENTRATION POINT CP1
 61 KM COMBINE R7-7A, PARCEL L AND PARCEL M IN SD
 62 HC 3
 *
 63 KK RCP1
 64 KM ROUTE CP1 TO CP3
 65 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 66 RD 800 .028 .017 TRAP 0 50
 *
 67 KK K
 68 KM SUBBASIN PARCEL K
 69 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 70 KM AREA 23.4 ACRES
 71 BA .04641
 72 PB 3.34
 73 LS 0 91
 74 UD .124
 *
 75 KK CP2
 76 KM CONCENTRATION POINT CP2
 77 KM COMBINE K AND CP1
 78 HC 2
 *
 79 KK ST4
 80 KM SUBBASIN STREET AREA ST4
 81 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 82 KM AREA 10.2 ACRES
 83 BA .01594
 84 PB 3.34

HEC-1 INPUT

PAGE 3

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

85 LS 0 94
 86 UD .184
 *
 87 KK CP3
 88 KM CONCENTRATION POINT CP3
 89 KM COMBINE ST4 AND CP2
 90 HC 2
 *
 91 KK ST6
 92 KM SUBBASIN SPOKE "A"
 93 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 94 KM AREA 1.5 ACRES
 95 BA .00234
 96 PB 3.34
 97 LS 0 94
 98 UD .075
 *
 99 KK CP4
 100 KM CONCENTRATION POINT CP4
 101 KM COMBINE CP3 AND ST6
 102 HC 2
 *
 103 KK M
 104 KM SUBBASIN PARCEL M
 105 KM PARAMETERS REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 106 KM BUT WITH 1/3 ACRES - TO VERIFY ACTUAL FLOW VALUE
 107 KM AT THE CROSSBRIDGE/SKY VISTA INTERSECTION (CP7)
 108 KM AREA 30.3 ACRES (USE 1/3 AREA 10.1 ACRES)
 109 BA .01578
 110 PB 3.34
 111 LS 0 92
 112 UD .138
 *
 113 KK ES-1
 114 KM SUBBASIN PARCEL ES-1
 115 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 116 KM AREA 12.1 ACRES
 117 BA .01883
 118 PB 3.34
 119 LS 0 92
 120 UD .103
 *
 121 KK CP5
 122 KM CONCENTRATION POINT CP5
 123 KM COMBINE M AND ES-1 IN SKY VISTA
 124 HC 2
 *

HEC-1 INPUT

PAGE 4

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

125 KK CP6
 126 KM CONCENTRATION POINT CP5
 127 KM COMBINE CP4 AND CP5A IN SKY VISTA
 128 HC 2
 *
 129 KK RCP6
 130 KM ROUTE CP6 TO CP7

131	RD	1830	.036	.017	TRAP	0	50
	*						
132	KK	ST2					
133	KM	SUBBASIN ST2 - SKY VISTA DRIVE					
134	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
135	KM	AREA 10.0 ACRES					
136	BA	.01563					
137	PB	3.34					
138	LS	0	94				
139	UD	.140					
	*						
140	KK	CP7					
141	KM	CONCENTRATION POINT CP7					
142	KM	COMBINE ST2 AND CP6					
143	HC	2					
	*						
144	KK	7-2B					
145	KM	SUBBASIN 7-2B					
146	KM	AREA 60.4 ACRES					
147	BA	0.0944					
148	PB	3.58					
149	LS	0	88				
150	UD	0.149					
	*						
151	KK	R7-2B					
152	KM	ROUTE 7-2B THRU 7-2A TO CRR1					
153	KM	LENGTH 9625 FEET					
154	KM	SLOPE 7.1 %					
155	KM	NSTEPS K X					
156	RM	2 .129 .15					
	*						
157	KK	7-2A					
158	KM	SUBBASIN 7-2A					
159	KM	AREA 288.8 ACRES					
160	BA	0.4513					
161	PB	3.50					
162	LS	0	88.2				
163	UD	0.247					
	*						

1

HEC-1 INPUT

PAGE 5

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

164	KK	CRR1					
165	KM	COMBINE 7-2B AND 7-2A WEST OF SV24 SUBBASIN COS-1					
166	HC	2					
	*						
167	KK	FS1					
168	KM	DIVERT 300 CFS TO COMBINATION POINT CRR2					
169	DT	DIV1					
170	DI	0	884				
171	DQ	0	300				
	*						
172	KK	RCRR1					
173	KM	ROUTE CRR1 THRU SUBBASINS COS-1 AND COS-2 TO CP8					
174	KM	LENGTH 3920 FEET					
175	KM	SLOPE 5.8 %					
176	KM	NSTEPS K X					
177	RM	1 .058 .15					
	*						
178	KK	COS-1					
179	KM	SUBBASIN OPEN SPACE AREA COS-1					
180	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
181	KM	AREA 3.1 ACRES					
182	BA	.00484					
183	PB	3.34					
184	LS	0	86				
185	UD	.083					
	*						
186	KK	COS-2					
187	KM	SUBBASIN OPEN AREA COS-2					
188	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
189	KM	AREA 2.2 ACRES					
190	BA	.00344					
191	PB	3.34					
192	LS	0	86				
193	UD	.085					
	*						
194	KK	C					
195	KM	SUBBASIN PARCEL C					
196	KM	REFERENCED FROM THE SV24 CONCEPTUAL STUDY					
197	KM	AREA 25.8 ACRES					
198	BA	.04038					
199	PB	3.34					
200	LS	0	90				
201	UD	.163					
	*						

1

HEC-1 INPUT

PAGE 6

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

202	KK	CP8					
203	KM	CONCENTRATION POINT CP8					
204	KM	COMBINE CRR1, PARCEL C, COS-1, AND COS-2					
205	HC	4					
	*						

206 KK CP9
 207 KM CONCENTRATION POINT CP9
 208 KM COMBINE CP7 AND CP8
 209 HC 2
 *

 210 KK D
 211 KM SUBBASIN PARCEL D
 212 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 213 KM AREA 33.5 ACRES
 214 BA .05230
 215 PB 3.34
 216 LS 0 91
 217 UD .159
 *

 218 KK CP10
 219 KM CONCENTRATION POINT CP10
 220 KM COMBINE CP9 AND D IN DESERT MOON
 221 HC 2
 *

 222 KK E
 223 KM SUBBASIN PARCEL E
 224 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 225 KM AREA 32.2 ACRES
 226 BA .05036
 227 PB 3.34
 228 LS 0 91
 229 UD .151
 *

 230 KK NP-1
 231 KM SUBBASIN PARK AREA NP-1
 232 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 233 KM AREA 9.8 ACRES
 234 BA .01531
 235 PB 3.34
 236 LS 0 82
 237 UD .132
 *

 238 KK CP11
 239 KM CONCENTRATION POINT CP11
 240 KM COMBINE E AND NP-1
 241 HC 2
 *

1

HEC-1 INPUT

PAGE 7

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

242 KK CP12
 243 KM CONCENTRATION POINT CP12
 244 KM COMBINE CP11 AND CP10
 245 HC 2
 *

 246 KK ST5
 247 KM SUBBASIN DESERT MOON ROAD ST5
 248 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 249 KM AREA 16.3 ACRES
 250 BA .02541
 251 PB 3.34
 252 LS 0 94
 253 UD .204
 *

 254 KK CP13
 255 KM CONCENTRATION POINT CP13
 256 KM COMBINE ST5 AND CP12
 257 HC 2
 *

 258 KK RCP13
 259 KM ROUTE CP13 THROUGH COS-6
 260 RD 908 .066 .025 TRAP 0 50
 *

 261 KK B
 262 KM SUBBASIN PARCEL B
 263 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 264 KM AREA 31.1 ACRES
 265 BA .04859
 266 PB 3.34
 267 LS 0 91
 268 UD .120
 *

 269 KK COS-5
 270 KM SUBBASIN OPEN AREA COS-5
 271 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 272 KM AREA 0.9 ACRES
 273 BA .00141
 274 PB 3.34
 275 LS 0 86
 276 UD .090
 *

 277 KK CP14
 278 KM CONCENTRATION POINT CP14
 279 KM COMBINE CP13, B, AND COS-5
 280 HC 3
 *

1

HEC-1 INPUT

PAGE 8

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

281 KK A
 282 KM SUBBASIN PARCEL A
 283 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 284 KM AREA 39.9 ACRES
 285 BA .06234
 286 PB 3.34
 287 LS 0 90
 288 UD .150
 *
 289 KK ST3A
 290 KM SUBBASIN STREET AREA FOR SKY VISTA DRIVE
 291 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 292 KM AREA ACRES
 293 BA .00609
 294 PB 3.34
 295 LS 0 94
 296 UD .052
 *
 297 KK CP15
 298 KM CONCENTRATION POINT CP15
 299 KM COMBINE ST3A AND A
 300 HC 2
 *
 301 KK CP16
 302 KM CONCENTRATION POINT CP16
 303 KM COMBINE CP14 AND CP15
 304 HC 2
 *
 305 KK 7-5A
 306 KM SUBBASIN 7-5A
 307 KM AREA 190.0 ACRES
 308 BA 0.297
 309 PB 3.43
 310 LS 0 87
 311 UD 0.154
 *
 312 KK RETD1
 313 KM RETRIEVE DIVERTED FLOW FROM CRR1
 314 DR DIV1
 *
 315 KK RDIV1
 316 KM ROUTE DIVERTED FLOW FROM CRR1 TO CRR2
 317 RD 1890 .010 .016 TRAP 0 25
 *

1

HEC-1 INPUT

PAGE 9

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

318 KK CRR2
 319 KM COMBINE 7-5A AND DIVERTED FLOW FROM CRR1 WEST OF SV24 SUBBASIN COS-1
 320 HC 2
 *
 321 KK RCRR2
 322 KM ROUTE CRR2 THRU SV24 SUBBASINS COS-3 AND COS-4 TO CP21
 323 KM LENGTH 3845 FEET
 324 KM SLOPE 6.4 %
 325 KM NSTEPS K X
 326 RM 1 .054 .15
 *
 327 KK J
 328 KM SUBBASIN PARCEL J
 329 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 330 KM AREA 42.96 ACRES
 331 BA .06713
 332 PB 3.34
 333 LS 0 91
 334 UD .165
 *
 335 KK I
 336 KM SUBBASIN PARCEL I
 337 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 338 KM AREA 40.5 ACRES
 339 BA .06328
 340 PB 3.34
 341 LS 0 91
 342 UD .143
 *
 343 KK CP18
 344 KM CONCENTRATION POINT CP18
 345 KM COMBINE J AND I
 346 HC 2
 *
 347 KK G
 348 KM SUBBASIN PARCEL G
 349 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 350 KM AREA 42.7 ACRES
 351 BA .06672
 352 PB 3.34
 353 LS 0 86
 354 UD .159
 *

1

HEC-1 INPUT

PAGE 10

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

355 KK H
 356 KM SUBBASIN PARCEL H
 357 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 358 KM AREA 22.1 ACRES
 359 BA .03453
 360 PB 3.34
 361 LS 0 86
 362 UD .106
 *

363 KK CP19A
 364 KM CONCENTRATION POINT CP19A
 365 KM COMBINE G AND H
 366 HC 2
 *

367 KK COS-3
 368 KM SUBBASIN OPEN SPACE AREA COS-3
 369 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 370 KM AREA 5.2 ACRES
 371 BA .00813
 372 PB 3.34
 373 LS 0 86
 374 UD .078
 *

375 KK CP19
 376 KM CONCENTRATION POINT CP19
 377 KM COMBINE CP18, CP19A, AND COS-3
 378 HC 3
 *

379 KK F
 380 KM SUBBASIN PARCEL F
 381 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 382 KM AREA 38.0 ACRES
 383 BA .05938
 384 PB 3.34
 385 LS 0 86
 386 UD .141
 *

387 KK COS-4
 388 KM SUBBASIN OPEN SPACE AREA COS-4
 389 KM REFERENCED FROM THE SV24 CONCEPTUAL STUDY
 390 KM AREA 9.1 ACRES
 391 BA .01422
 392 PB 3.34
 393 LS 0 86
 394 UD .068
 *

1

HEC-1 INPUT

PAGE 11

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

395 KK CP20
 396 KM CONCENTRATION POINT CP20
 397 KM COMBINE F AND COS4
 398 HC 2
 *

399 KK CP21
 400 KM CONCENTRATION POINT CP21
 401 KM COMBINE CRR2, CP20, AND CP19
 402 HC 3
 *

403 KK 7-1
 404 KM OFFSITE SUBBASIN 7-1
 405 KM MODIFIED BASIN RR14A FROM THE CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT
 406 KM 2002 MASTER PLAN UPDATE - TROPICANA/FLAMINGO WASH WATERSHED
 407 KM BASIN RR14A = 7-1 AND 7-2B (7-1 = 2884.2 ACRES)
 408 BA 4.507
 409 PB 3.75
 410 LU 0 0.5 0
 411 UD 0.725
 *

412 KK R7-1
 413 KM ROUTE SUBBASIN 7-1 THRU BASIN 7-4 TO CRR3
 414 KM LENGTH 11,231 FEET
 415 KM SLOPE 6.9 %
 416 KM NSTEPS K X
 417 RM 2 .152 .15
 *

418 KK 7-3
 419 KM SUBBASIN 7-3
 420 KM AREA 141.84 ACRES
 421 KM REFERENCED FROM THE 1997 SUMMERLIN WEST STUDY
 422 BA .222
 423 PB 3.43
 424 LS 0 87
 425 UD .120
 *

426 KK R7-3
 427 KM ROUTE SUBBASIN 7-3 TO THRU SUBBASIN 7-4 TO CRR3
 428 KM LENGTH 5377 FEET
 429 KM SLOPE 6.6 %
 430 KM NSTEPS K X
 431 RM 1 .074 .15
 *

1

HEC-1 INPUT

PAGE 12

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

```

432      KK      7-4A
433      KM      SUBBASIN 7-4A
434      KM      AREA 214.1 ACRES
435      BA      .3345
436      PB      3.46
437      LS      0      88
438      UD      .307
      *

439      KK      CRR3
440      KM      COMBINE 7-1, 7-3, AND 7-4A
441      HC      3
      *

442      KK      RCRR3
443      KM      ROUTE CRR3 TO CP22
444      KM      LENGTH 2951 FEET
445      KM      SLOPE 5.4 %
446      KM      NSTEPS K      X
447      RM      1      .045      .15
      *

448      KK      CP22
449      KM      CONCENTRATION POINT CP21
450      KM      COMBINE CP21 AND CRR3
451      HC      2
      *

452      KK      RCP22
453      KM      ROUTE CP22 TO CRR4
454      KM      LENGTH 2876 FEET
455      KM      SLOPE 2.3 %
456      KM      NSTEPS K      X
457      RM      1      .067      .15
      *

458      KK      CRR4
459      KM      COMBINE ALL AT THE EXISTING CHARLESTON BRIDGE OPENING
460      HC      2
      *

461      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE
NO.
(V) ROUTING      (--->) DIVERSION OR PUMP FLOW
(.) CONNECTOR    (<---) RETURN OF DIVERTED OR PUMPED FLOW

25      7-7A
      V
      V
40      R7-7A
      .
      .
43      .      L
      .
      .
51      .      M
      .
      .
59      CP1.....
      V
      V
63      RCP1
      .
      .
67      .      K
      .
      .
75      CP2.....
      .
      .
79      .      ST4
      .
      .
87      CP3.....
      .
      .
91      .      ST6
      .
      .
99      CP4.....
      .
      .
103     .      M
      .
      .
113     .      ES-1
      .
      .
121     .      CP5.....
      .
      .
125     CP6.....
      V
      V
129     RCP6
      .
      .
132     .      ST2
      .
      .
140     CP7.....
      .
      .

```

144	.	7-2B	.
	.	V	.
151	.	R7-2B	.
	.	.	.
157	.	.	7-2A
	.	.	.
164	.	CRR1	.....
	.	.	.
169	.	----->	DIV1
167	.	FS1	.
	.	V	.
172	.	RCRR1	.
	.	.	.
178	.	.	COS-1
	.	.	.
186	.	.	COS-2
	.	.	.
194	.	.	C
	.	.	.
202	.	CP8	.....
	.	.	.
206	CP9	.....	.
	.	.	.
210	.	D	.
	.	.	.
218	CP10	.....	.
	.	.	.
222	.	E	.
	.	.	.
230	.	.	NP-1
	.	.	.
238	.	CP11	.....
	.	.	.
242	CP12	.....	.
	.	.	.
246	.	ST5	.
	.	.	.
254	CP13	.....	.
	.	V	.
258	RCP13	.	.
	.	.	.
261	.	B	.
	.	.	.
269	.	.	COS-5
	.	.	.
277	CP14	.....	.
	.	.	.
281	.	A	.
	.	.	.
289	.	.	ST3A
	.	.	.
297	.	CP15	.....
	.	.	.
301	CP16	.....	.
	.	.	.
305	.	7-5A	.
	.	.	.
314	.	.	<----- DIV1
312	.	RETD1	.
	.	V	.
315	.	RDIV1	.
	.	.	.
318	.	CRR2	.....
	.	V	.
321	.	RCRR2	.
	.	.	.
327	.	.	J
	.	.	.
335	.	.	I
	.	.	.
343	.	CP18	.....
	.	.	.
347	.	.	G

1 NUMBER OF PLANS

1

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION								
					RATIO 1 .99	RATIO 2 .98	RATIO 3 .95	RATIO 4 .93	RATIO 5 .92	RATIO 6 .91	RATIO 7 .90	RATIO 8 .89	RATIO 9 .88
HYDROGRAPH AT +	7-7A	.08	1	FLOW TIME	151. 3.58	148. 3.58	143. 3.58	138. 3.58	136. 3.58	135. 3.58	134. 3.58	132. 3.58	130. 3.58
ROUTED TO +	R7-7A	.08	1	FLOW TIME	145. 3.58	141. 3.58	137. 3.58	131. 3.58	130. 3.58	128. 3.58	127. 3.58	125. 3.58	124. 3.58
HYDROGRAPH AT +	L	.02	1	FLOW TIME	49. 3.50	48. 3.50	47. 3.50	45. 3.50	45. 3.50	44. 3.50	44. 3.50	44. 3.50	43. 3.50
HYDROGRAPH AT +	M	.03	1	FLOW TIME	62. 3.58	61. 3.58	59. 3.58	58. 3.58	57. 3.58	56. 3.58	56. 3.58	55. 3.58	55. 3.58
3 COMBINED AT +	CP1	.14	1	FLOW TIME	253. 3.58	247. 3.58	240. 3.58	231. 3.58	229. 3.58	226. 3.58	224. 3.58	221. 3.58	218. 3.58
ROUTED TO +	RCP1	.14	1	FLOW TIME	245. 3.58	240. 3.58	233. 3.58	224. 3.58	221. 3.58	219. 3.58	217. 3.58	214. 3.58	211. 3.58
HYDROGRAPH AT +	K	.05	1	FLOW TIME	90. 3.58	89. 3.58	86. 3.58	83. 3.58	82. 3.58	81. 3.58	81. 3.58	80. 3.58	79. 3.58
2 COMBINED AT +	CP2	.18	1	FLOW TIME	336. 3.58	328. 3.58	318. 3.58	307. 3.58	303. 3.58	300. 3.58	297. 3.58	293. 3.58	290. 3.58
HYDROGRAPH AT +	ST4	.02	1	FLOW TIME	31. 3.58	30. 3.58	29. 3.58	28. 3.58	28. 3.58	28. 3.58	28. 3.58	27. 3.58	27. 3.58
2 COMBINED AT +	CP3	.20	1	FLOW TIME	366. 3.58	358. 3.58	348. 3.58	335. 3.58	331. 3.58	328. 3.58	325. 3.58	321. 3.58	317. 3.58
HYDROGRAPH AT +	ST6	.00	1	FLOW TIME	6. 3.50	6. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50
2 COMBINED AT +	CP4	.20	1	FLOW TIME	371. 3.58	363. 3.58	352. 3.58	339. 3.58	335. 3.58	332. 3.58	329. 3.58	325. 3.58	320. 3.58
HYDROGRAPH AT +	M	.02	1	FLOW TIME	31. 3.58	31. 3.58	30. 3.58	29. 3.58	28. 3.58	28. 3.58	28. 3.58	28. 3.58	27. 3.58
HYDROGRAPH AT +	ES-1	.02	1	FLOW TIME	39. 3.50	39. 3.50	37. 3.50	36. 3.50	36. 3.50	35. 3.50	35. 3.50	35. 3.50	34. 3.50
2 COMBINED AT +	CP5	.03	1	FLOW TIME	68. 3.50	67. 3.50	65. 3.50	63. 3.50	62. 3.58	61. 3.58	61. 3.58	60. 3.58	60. 3.58
2 COMBINED AT +	CP6	.24	1	FLOW TIME	439. 3.58	430. 3.58	417. 3.58	402. 3.58	397. 3.58	393. 3.58	390. 3.58	385. 3.58	380. 3.58

ROUTED TO													
+	RCP6	.24	1	FLOW TIME	419. 3.58	414. 3.58	398. 3.58	383. 3.58	378. 3.58	376. 3.58	376. 3.58	368. 3.58	361. 3.58
HYDROGRAPH AT													
+	ST2	.02	1	FLOW TIME	32. 3.58	32. 3.58	31. 3.58	30. 3.58	30. 3.58	29. 3.58	29. 3.58	29. 3.58	28. 3.58
2 COMBINED AT													
+	CP7	.25	1	FLOW TIME	452. 3.58	445. 3.58	429. 3.58	413. 3.58	408. 3.58	406. 3.58	405. 3.58	397. 3.58	390. 3.58
HYDROGRAPH AT													
+	7-2B	.09	1	FLOW TIME	180. 3.58	176. 3.58	170. 3.58	164. 3.58	162. 3.58	160. 3.58	159. 3.58	157. 3.58	155. 3.58
ROUTED TO													
+	R7-2B	.09	1	FLOW TIME	160. 3.67	157. 3.67	152. 3.67	146. 3.67	144. 3.67	143. 3.67	141. 3.67	140. 3.67	138. 3.67
HYDROGRAPH AT													
+	7-2A	.45	1	FLOW TIME	697. 3.67	683. 3.67	659. 3.67	636. 3.67	627. 3.67	620. 3.67	615. 3.67	608. 3.67	599. 3.67
2 COMBINED AT													
+	CRR1	.55	1	FLOW TIME	857. 3.67	840. 3.67	811. 3.67	782. 3.67	771. 3.67	763. 3.67	757. 3.67	748. 3.67	736. 3.67
DIVERSION TO													
+	DIV1	.55	1	FLOW TIME	291. 3.67	285. 3.67	275. 3.67	265. 3.67	262. 3.67	259. 3.67	257. 3.67	254. 3.67	250. 3.67
HYDROGRAPH AT													
+	FS1	.55	1	FLOW TIME	566. 3.67	555. 3.67	536. 3.67	517. 3.67	509. 3.67	504. 3.67	500. 3.67	494. 3.67	486. 3.67
ROUTED TO													
+	RCRR1	.55	1	FLOW TIME	551. 3.75	540. 3.75	522. 3.75	503. 3.75	496. 3.75	491. 3.75	487. 3.75	481. 3.75	474. 3.75
HYDROGRAPH AT													
+	COS-1	.00	1	FLOW TIME	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50
HYDROGRAPH AT													
+	COS-2	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	5. 3.50	5. 3.50
HYDROGRAPH AT													
+	C	.04	1	FLOW TIME	73. 3.58	71. 3.58	69. 3.58	67. 3.58	66. 3.58	65. 3.58	65. 3.58	64. 3.58	63. 3.58
4 COMBINED AT													
+	CP8	.59	1	FLOW TIME	608. 3.75	595. 3.75	575. 3.75	555. 3.75	547. 3.75	541. 3.75	537. 3.75	531. 3.75	523. 3.75
2 COMBINED AT													
+	CP9	.85	1	FLOW TIME	1033. 3.67	1012. 3.67	980. 3.67	943. 3.67	932. 3.67	925. 3.67	918. 3.67	903. 3.67	890. 3.67
HYDROGRAPH AT													
+	D	.05	1	FLOW TIME	98. 3.58	96. 3.58	93. 3.58	90. 3.58	89. 3.58	88. 3.58	87. 3.58	86. 3.58	85. 3.58
2 COMBINED AT													
+	CP10	.90	1	FLOW TIME	1117. 3.67	1095. 3.67	1060. 3.67	1021. 3.67	1009. 3.67	1000. 3.67	993. 3.67	978. 3.67	963. 3.67
HYDROGRAPH AT													
+	E	.05	1	FLOW TIME	95. 3.58	94. 3.58	91. 3.58	88. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58
HYDROGRAPH AT													
+	NP-1	.02	1	FLOW TIME	22. 3.58	21. 3.58	21. 3.58	20. 3.58	19. 3.58	19. 3.58	19. 3.58	19. 3.58	18. 3.58
2 COMBINED AT													
+	CP11	.07	1	FLOW TIME	117. 3.58	115. 3.58	111. 3.58	107. 3.58	106. 3.58	105. 3.58	104. 3.58	103. 3.58	101. 3.58
2 COMBINED AT													
+	CP12	.96	1	FLOW TIME	1215. 3.67	1191. 3.67	1153. 3.67	1110. 3.67	1097. 3.67	1088. 3.67	1080. 3.67	1064. 3.67	1048. 3.67
HYDROGRAPH AT													
+	ST5	.03	1	FLOW TIME	47. 3.58	46. 3.58	44. 3.58	43. 3.58	42. 3.58	42. 3.58	42. 3.58	41. 3.58	41. 3.58
2 COMBINED AT													
+	CP13	.99	1	FLOW TIME	1260. 3.67	1236. 3.67	1196. 3.67	1152. 3.67	1139. 3.67	1129. 3.67	1121. 3.67	1104. 3.67	1088. 3.67
ROUTED TO													
+	RCP13	.99	1	FLOW TIME	1255. 3.67	1230. 3.67	1189. 3.67	1145. 3.67	1133. 3.67	1121. 3.67	1115. 3.67	1097. 3.67	1081. 3.67
HYDROGRAPH AT													
+	B	.05	1	FLOW TIME	94. 3.58	93. 3.58	90. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58	82. 3.58
HYDROGRAPH AT													
+	COS-5	.00	1	FLOW TIME	3. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50
3 COMBINED AT													
+	CP14	1.04	1	FLOW TIME	1326. 3.67	1301. 3.67	1257. 3.67	1211. 3.67	1198. 3.67	1186. 3.67	1179. 3.67	1160. 3.67	1144. 3.67

HYDROGRAPH AT +	A	.06	1	FLOW TIME	115. 3.58	113. 3.58	109. 3.58	105. 3.58	104. 3.58	103. 3.58	102. 3.58	101. 3.58	99. 3.58
HYDROGRAPH AT +	ST3A	.01	1	FLOW TIME	16. 3.50	16. 3.50	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50
2 COMBINED AT +	CP15	.07	1	FLOW TIME	124. 3.58	122. 3.58	118. 3.58	114. 3.58	112. 3.58	111. 3.58	110. 3.58	109. 3.58	107. 3.58
2 COMBINED AT +	CP16	1.11	1	FLOW TIME	1429. 3.67	1401. 3.67	1355. 3.67	1306. 3.67	1291. 3.67	1278. 3.67	1271. 3.67	1251. 3.67	1233. 3.67
HYDROGRAPH AT +	7-5A	.30	1	FLOW TIME	513. 3.58	502. 3.58	484. 3.58	467. 3.58	460. 3.58	455. 3.58	451. 3.58	445. 3.58	438. 3.58
HYDROGRAPH AT +	RET01	.00	1	FLOW TIME	291. 3.67	285. 3.67	275. 3.67	265. 3.67	262. 3.67	259. 3.67	257. 3.67	254. 3.67	250. 3.67
ROUTED TO +	RDIV1	.00	1	FLOW TIME	283. 3.75	277. 3.75	272. 3.75	258. 3.75	256. 3.75	256. 3.75	254. 3.75	249. 3.75	243. 3.75
2 COMBINED AT +	CRR2	.30	1	FLOW TIME	729. 3.58	715. 3.58	688. 3.58	662. 3.58	652. 3.58	645. 3.58	639. 3.58	631. 3.58	620. 3.58
ROUTED TO +	RCRR2	.30	1	FLOW TIME	717. 3.67	703. 3.67	677. 3.67	653. 3.67	643. 3.67	636. 3.67	630. 3.67	621. 3.67	611. 3.67
HYDROGRAPH AT +	J	.07	1	FLOW TIME	124. 3.58	122. 3.58	118. 3.58	114. 3.58	113. 3.58	112. 3.58	111. 3.58	110. 3.58	108. 3.58
HYDROGRAPH AT +	I	.06	1	FLOW TIME	121. 3.58	119. 3.58	115. 3.58	111. 3.58	110. 3.58	109. 3.58	108. 3.58	107. 3.58	105. 3.58
2 COMBINED AT +	CP18	.13	1	FLOW TIME	246. 3.58	241. 3.58	233. 3.58	226. 3.58	223. 3.58	221. 3.58	219. 3.58	217. 3.58	213. 3.58
HYDROGRAPH AT +	G	.07	1	FLOW TIME	106. 3.58	104. 3.58	100. 3.58	96. 3.58	95. 3.58	94. 3.58	93. 3.58	92. 3.58	90. 3.58
HYDROGRAPH AT +	H	.03	1	FLOW TIME	59. 3.50	57. 3.50	55. 3.50	53. 3.50	52. 3.50	52. 3.50	51. 3.50	51. 3.50	50. 3.50
2 COMBINED AT +	CP19A	.10	1	FLOW TIME	164. 3.58	160. 3.58	154. 3.58	148. 3.58	146. 3.58	145. 3.58	143. 3.58	142. 3.58	139. 3.58
HYDROGRAPH AT +	COS-3	.01	1	FLOW TIME	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50
3 COMBINED AT +	CP19	.24	1	FLOW TIME	422. 3.58	413. 3.58	399. 3.58	386. 3.58	380. 3.58	376. 3.58	373. 3.58	369. 3.58	363. 3.58
HYDROGRAPH AT +	F	.06	1	FLOW TIME	98. 3.58	95. 3.58	92. 3.58	89. 3.58	87. 3.58	86. 3.58	85. 3.58	84. 3.58	83. 3.58
HYDROGRAPH AT +	COS-4	.01	1	FLOW TIME	28. 3.50	28. 3.50	27. 3.50	26. 3.50	25. 3.50	25. 3.50	25. 3.50	24. 3.50	24. 3.50
2 COMBINED AT +	CP20	.07	1	FLOW TIME	118. 3.58	116. 3.58	111. 3.58	107. 3.58	106. 3.58	104. 3.58	104. 3.58	102. 3.58	101. 3.58
3 COMBINED AT +	CP21	.61	1	FLOW TIME	1181. 3.58	1158. 3.58	1115. 3.58	1074. 3.58	1058. 3.58	1046. 3.58	1038. 3.58	1024. 3.58	1007. 3.58
HYDROGRAPH AT +	7-1	4.51	1	FLOW TIME	4104. 4.17	4025. 4.17	3893. 4.17	3761. 4.17	3710. 4.17	3673. 4.17	3647. 4.17	3606. 4.17	3554. 4.17
ROUTED TO +	R7-1	4.51	1	FLOW TIME	4010. 4.25	3933. 4.25	3804. 4.25	3675. 4.25	3625. 4.25	3589. 4.25	3564. 4.25	3524. 4.25	3473. 4.25
HYDROGRAPH AT +	7-3	.22	1	FLOW TIME	398. 3.58	390. 3.58	376. 3.58	363. 3.58	357. 3.58	353. 3.58	351. 3.58	346. 3.58	341. 3.58
ROUTED TO +	R7-3	.22	1	FLOW TIME	370. 3.58	362. 3.58	349. 3.58	336. 3.58	331. 3.58	328. 3.58	325. 3.58	321. 3.58	316. 3.58
HYDROGRAPH AT +	7-4A	.33	1	FLOW TIME	457. 3.75	448. 3.75	432. 3.75	417. 3.75	411. 3.75	407. 3.75	403. 3.75	399. 3.75	392. 3.75
3 COMBINED AT +	CRR3	5.06	1	FLOW TIME	4215. 4.25	4134. 4.25	3999. 4.25	3863. 4.25	3810. 4.25	3773. 4.25	3747. 4.25	3704. 4.25	3651. 4.25

+ ROUTED TO	RCCR3	5.06	1	FLOW TIME	4197. 4.33	4116. 4.33	3981. 4.33	3847. 4.33	3794. 4.33	3756. 4.33	3730. 4.33	3688. 4.33	3635. 4.33
+ 2 COMBINED AT	CP22	5.67	1	FLOW TIME	4403. 4.25	4319. 4.25	4177. 4.25	4037. 4.25	3982. 4.25	3943. 4.25	3915. 4.25	3871. 4.25	3816. 4.25
+ ROUTED TO	RCP22	5.67	1	FLOW TIME	4383. 4.33	4299. 4.33	4158. 4.33	4018. 4.33	3963. 4.33	3924. 4.33	3897. 4.33	3853. 4.33	3798. 4.33
+ 2 COMBINED AT	CRR4	6.78	1	FLOW TIME	4634. 4.33	4546. 4.33	4398. 4.33	4250. 4.33	4193. 4.33	4152. 4.33	4123. 4.33	4076. 4.33	4019. 4.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9695E+01 EXCESS= .0000E+00 OUTFLOW= .9697E+01 BASIN STORAGE= .5483E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9487E+01 EXCESS= .0000E+00 OUTFLOW= .9490E+01 BASIN STORAGE= .6204E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9150E+01 EXCESS= .0000E+00 OUTFLOW= .9152E+01 BASIN STORAGE= .5569E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8806E+01 EXCESS= .0000E+00 OUTFLOW= .8808E+01 BASIN STORAGE= .5065E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8684E+01 EXCESS= .0000E+00 OUTFLOW= .8686E+01 BASIN STORAGE= .6185E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8584E+01 EXCESS= .0000E+00 OUTFLOW= .8586E+01 BASIN STORAGE= .5295E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8514E+01 EXCESS= .0000E+00 OUTFLOW= .8516E+01 BASIN STORAGE= .7055E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8402E+01 EXCESS= .0000E+00 OUTFLOW= .8404E+01 BASIN STORAGE= .6093E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8275E+01 EXCESS= .0000E+00 OUTFLOW= .8277E+01 BASIN STORAGE= .7170E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1689E+02 EXCESS= .0000E+00 OUTFLOW= .1689E+02 BASIN STORAGE= .3303E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1654E+02 EXCESS= .0000E+00 OUTFLOW= .1654E+02 BASIN STORAGE= .3556E-03 PERCENT ERROR= .0

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1597E+02 EXCESS= .0000E+00 OUTFLOW= .1597E+02 BASIN STORAGE= .3519E-03 PERCENT ERROR= .0

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

D.1.4 – VILLAGE 26


```

1.....
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
* RUN DATE 19SEP07 TIME 09:18:12
*.....

```

```

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

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X X XXXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXXX XXXX XXX

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

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSK- 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
1 ID .....
2 ID .....
3 ID .....
4 ID ..... UPDATE #2 SUMMERLIN VILLAGE 26 .....
5 ID ..... ULTIMATE CONDITION .....
6 ID ..... THIS MODEL DETERMINES THE RUNOFF DURING .....
7 ID ..... ULTIMATE DEVELOPMENT CONDITIONS .....
8 ID .....
9 ID ..... RETURN PERIOD 100-YEAR .....
10 ID ..... DISTRIBUTION 6-HOUR SDN3 .....
11 ID ..... PROJECT NO 764.20101 .....
12 ID ..... FILENAME V26ULT.H1 .....
13 ID ..... DATE 9/13/07 .....
14 ID ..... MODELED BY REH/BJK .....
15 ID .....
16 ID ..... DEPTH AREA REDUCTION FACTORS: .....
17 ID ..... AREA DRRF .....
18 ID ..... 0.00 TO 0.24 SQ MI 1.00 .....
19 ID ..... 0.25 TO 0.49 SQ MI 0.99 .....
20 ID ..... 0.50 TO 0.99 SQ MI 0.98 .....
21 ID ..... 1.00 TO 1.24 SQ MI 0.97 .....
22 ID ..... 1.25 TO 1.50 SQ MI 0.96 .....
23 ID ..... 1.51 TO 1.74 SQ MI 0.95 .....
24 ID ..... 1.75 TO 1.99 SQ MI 0.94 .....
25 ID ..... 2.00 TO 2.99 SQ MI 0.93 .....
26 ID ..... 3.00 TO 3.99 SQ MI 0.92 .....
27 ID ..... 4.00 TO 4.99 SQ MI 0.91 .....
28 ID .....
29 ID .....
30 ID .....
31 IT 5 0 0 300
32 IO 5
33 IN 5 0 0
34 JR PREC 1.0 0.99 0.98 0.94 0.93 0.92 0.91
*
35 KK 1-1A
36 BA 2.339
37 PB 3.66
38 PC 0.000 .0200 .0570 .0700 .0870 .1080 .1240 .1300 .1300 .1300
39 PC .1300 .1300 .1300 .1330 .1400 .1420 .1480 .1580 .1720 .1810
40 PC .1900 .1970 .1990 .2000 .2010 .2040 .2140 .2290 .2410 .2490
41 PC .2510 .2560 .2700 .2780 .2810 .2830 .2950 .3220 .3520 .4090
42 PC .4990 .5900 .7100 .7440 .7810 .8120 .8190 .8350 .8510 .8560
43 PC .8600 .8680 .8760 .8880 .9100 .9260 .9370 .9500 .9700 .9760
44 PC .9820 .9850 .9870 .9890 .9900 .9930 .9930 .9940 .9950 .9980
45 PC .9980 .9990 1.000
46 LS 0 86 2
47 UD 0.488

```

1 HEC-1 INPUT PAGE 2

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
48 KK 1-1B
49 PB 3.61
50 BA 0.175
51 LS 0 84.1
52 UD .162
*
53 KK R2
54 RM ROUTE 1-1B THROUGH PORTION OF 1-1A
55 RM ASSUME EXISTING WASH
56 RM LEH SLOPE n SHAPE BW SS
57 RD 1885 0 0680 0 04 0 TRAP 20 10
*
58 KK CP1
59 RM COMBINE 1-1A AND R2
60 HC 2
*

```

61 KK R3
 62 KM ROUTE CP1 THROUGH 1-2B TO CP2
 63 KM ASSUME EXISTING WASH IS MAINTAINED THROUGH DEVELOPED AREA
 64 KM NSTEPS K X
 65 RM 1 .092 .15

66 KK 1-2A
 67 PB 3.52
 68 BA 0.864
 69 LS 0 86.8
 70 UD .123

71 KK R4
 72 KM ROUTE 1-2A THROUGH 1-2B TO CP2
 73 KM ASSUME EXISTING WASH IS MAINTAINED THROUGH DEVELOPED AREA
 74 KM NSTEPS K X
 75 RM 1 054 .15

76 KK 1-2B
 77 PB 3.51
 78 BA 0.215 86.1
 79 LS 0
 80 UD .170

81 KK CP2
 82 KM COMBINE 1-2B, R4 AND R3
 83 HC 3

HEC-1 INPUT

PAGE 3

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

84 KK R5
 85 KM ROUTE CP2 THROUGH 1-2C TO CP3
 86 KM ASSUME EXISTING WASH
 87 KM NSTEPS K X
 88 RM 1 .087 .15

89 KK 1-2CR
 90 PB 3.52
 91 BA 0.571
 92 LS 0 86.2
 93 UD .178

94 KK CP3
 95 KM COMBINE 1-2C AND R5
 96 HC 2

97 KK R6
 98 KM ROUTE CP3 TO CP4
 99 KM ASSUME BOX CULVERT
 100 KM LEN SLOPE n SHAPE BW
 101 RM 1745 0.0050 0.015 0 DEEP 14

102 KK 1-3P
 103 PB 3.35
 104 BA .0475
 105 LS 0 94.5
 106 UD .126

107 KK CP4
 108 KM COMBINE CP3 and 1-3P
 109 HC 2

110 KK R7
 111 KM ROUTE CP4 THROUGH 1-12P TO CP5 (DETENTION BASIN)
 112 KM ASSUME RCP
 113 KM LEN SLOPE n SHAPE BW
 114 RM 2258 0.0050 0.016 0 DEEP 12

115 KK 1-12P
 116 PB 3.32
 117 BA .1654
 118 LS 0 90.0
 119 UD .151

HEC-1 INPUT

PAGE 4

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

120 KK CP5
 121 KM COMBINE CP4 AND 1-12P
 122 HC 2

123 KK 1-14
 124 PB 3.31
 125 BA .0019
 126 LS 0 86.9
 127 UD .100

128 KK 1-15
 129 PB 3.32
 130 BA .0044
 131 LS 0 87
 132 UD .100

133 KK 1-16

```

134      PB      3.31
135      BA      .0024
136      LS              87
137      UD      .100
      *

138      KK      1-17
139      PB      3.28
140      BA      .0033
141      LS              87
142      UD      .100
      *

143      KK      1-18
144      PB      3.28
145      BA      .0046
146      LS              86.7
147      UD      .100
      *

148      KK      CP5B
149      KM      COMBINE CP5. 1-14. 1-15, 1-16, 1-17, AND 1-18 AT DETENTION BASIN
150      HC              6
      *

151      KK      EXDB
152      KO      1
153      KM      DETENTION BASIN CHEYENNE AND BELTWAY
154      KM      LOW-FLOW OUTLET IS 66" PIPE
155      RS      1      STOR      0
156      SV      0      20.95      29.57      38.62      169.33      234.33      276.38      290.95      305.66      320.37
157      SV      335.08
158      SE      2991      2996      2997      2998      3010      3015      3018      3019      3020      3021
159      SE      3022

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HEC-1 INPUT

PAGE 5

```

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

160      SL      2993.8      23.76      0.7      0.5
161      SS      3021.9      200      2.6      1.5
      *

162      KK      1-4R
163      PB      3.44
164      BA      .0535
165      LS              87
166      UD      .100
      *

167      KK      1-5R
168      PB      3.42
169      BA      .0336
170      LS              87
171      UD      .100
      *

172      KK      CP6
173      KM      COMBINE 1-4R AND 1-5R
174      HC              2
      *

175      KK      R8
176      KM      ROUTE CP6 THROUGH 1-11P TO CP9
177      KM      ASSUME RCP
178      KM      LEN      SLOPE      n      SHAPE      DIAMETER
179      RD      1800      0.0610      0.013      0      CIRC      4
      *

180      KK      1-6R
181      PB      3.43
182      BA      .0151
183      LS              87
184      UD      .100
      *

185      KK      1-7R
186      PB      3.44
187      BA      .0270
188      LS              87
189      UD      .100
      *

190      KK      CP7
191      KM      COMBINE 1-6R AND 1-7R
192      HC              2
      *

193      KK      R9
194      KM      ROUTE CP7 THROUGH 1-11P TO CP9
195      KM      ASSUME RCP
196      KM      LEN      SLOPE      n      SHAPE      DIAMETER
197      RD      3150      0.0400      0.013      0      CIRC      4.5
      *

```

HEC-1 INPUT

PAGE 6

```

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

198      KK      1-8R
199      PB      3.42
200      BA      .0026
201      LS              87
202      UD      .100
      *

203      KK      1-10R
204      PB      3.41
205      BA      .0524
206      LS              87
207      UD      .100
      *

208      KK      CP8

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209      KM COMBINE 1-8R AND 1-10R
210      HC 2
      *

211      KK R10
212      KM ROUTE CP8 THROUGH 1-11P TO CP9
213      KM ASSUME RCP
214      KM LEN SLOPE n SHAPE DIAMETER
215      RD 2900 0.0400 0.013 0 CIRC 4.5
      *

216      KK 1-11P
217      PB 3.38
218      BA .1859
219      LS 0 90.1
220      UD .167
      *

221      KK CP9
222      KM COMBINE CP6, CP7, CP8 AND 1-11P
223      HC 4
      *

224      KK 1-13
225      PB 3.34
226      BA .0009
227      LS 0 87
228      UD .100
      *

229      KK 1M11R
230      PB 3.44
231      BA 1.959
232      LS 0 87 4
233      UD .435
      *

```

HEC-1 INPUT

PAGE 7

```

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

234      KK CP10
235      KM COMBINE CP9, 1-13, AND 1M11R
236      HC 3
      *
237      ZZ

```

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

```

35      1-1A
      .
      .
48      .      1-1B
      .      V
      .      V
53      .      R2
      .
      .
58      CP1.....
      V
      V
61      R3
      .
      .
66      .      1-2A
      .      V
      .      V
71      .      R4
      .
      .
76      .      1-2B
      .
      .
81      CP2.....
      V
      V
84      R5
      .
      .
89      1-2CR
      .
      .
94      CP3.....
      V
      V
97      R6
      .
      .
102     1-3P
      .
      .
107     CP4.....
      V
      V
110     R7
      .
      .
115     1-12P
      .
      .
120     CP5.....
      .
      .
123     1-14
      .
      .
128     1-15
      .
      .

```

```

133      1-16
138      1-17
143      1-18
148      CP5B .....
151      V
          V
          EXDB
162      1-4R
167      1-5R
172      CP6 .....
175      V
          V
          R8
180      1-6R
185      1-7R
190      CP7 .....
193      V
          V
          R9
198      1-8R
203      1-10R
208      CP8 .....
211      V
          V
          R10
216      1-11P
221      CP9 .....
224      1-13
229      LMT1R
234      CP10 .....

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 19SEP07 TIME 09:18:12

```

```

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

```

```

.....
* UPDATE #2 SUMMERLIN VILLAGE 26
* ULTIMATE CONDITION
* THIS MODEL DETERMINES THE RUNOFF DURING
* ULTIMATE DEVELOPMENT CONDITIONS

```

```

* RETURN PERIOD --- 100-YEAR
* DISTRIBUTION --- 5-HOUR SDN3
* PROJECT NO --- 764.20101
* FILENAME --- V26ULT.H1
* DATE --- 9/13/07
* MODELED BY --- REH/BJK

```

```

* DEPTH AREA REDUCTION FACTORS:
* AREA DARE
* 0.00 TO 0.24 SQ MI 1.00
* 0.25 TO 0.49 SQ MI 0.99
* 0.50 TO 0.99 SQ MI 0.98
* 1.00 TO 1.24 SQ MI 0.97
* 1.25 TO 1.50 SQ MI 0.96
* 1.51 TO 1.74 SQ MI 0.95
* 1.75 TO 1.99 SQ MI 0.94
* 2.00 TO 2.99 SQ MI 0.93
* 3.00 TO 3.99 SQ MI 0.92
* 4.00 TO 4.99 SQ MI 0.91

```

IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE
 17 HYDROGRAPH TIME DATA
 NMIN 5 MINUTES IN COMPUTATION INTERVAL
 IDATE 1 0 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES
 HDDATE 2 0 ENDING DATE
 HDTIME 0055 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
 TOTAL TIME BASE 24.92 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 .99 .98 .94 .93 .92 .91

.....

151 KK

 EXDB

152 KO OUTPUT CONTROL VARIABLES
 IPRNT 1 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE
 DETENTION BASIN CHEYENNE AND BELTWAY
 LOW-FLOW OUTLET IS 66" PIPE

HYDROGRAPH ROUTING DATA

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

156 SV	STORAGE	.0	21.0	29.6	38.6	169.3	234.3	276.4	291.0	305.7	320.4
		335.1									

158 SE	ELEVATION	2991.00	2996.00	2997.00	2998.00	3010.00	3015.00	3018.00	3019.00	3020.00	3021.00
		3022.00									

160 SL LOW-LEVEL OUTLET
 ELEV. 2993.80 ELEVATION AT CENTER OF OUTLET
 CAREA 23.76 CROSS-SECTIONAL AREA
 COEF. .70 COEFFICIENT
 EXPL. .50 EXPONENT OF HEAD

161 SS SPILLWAY
 CREL 3021.90 SPILLWAY CREST ELEVATION
 SPWID 200.00 SPILLWAY WIDTH
 COEW 2.60 WEIR COEFFICIENT
 EXPW 1.50 EXPONENT OF HEAD

...

COMPUTED OUTFLOW-ELEVATION DATA

OUTFLOW	.00	.00	223.27	247.47	277.53	315.91	366.62	436.71	539.94	707.08
ELEVATION	2991.00	2993.80	2996.60	2997.24	2998.13	2999.41	3001.35	3004.52	3010.19	3021.90
OUTFLOW	707.16	707.39	707.84	708.63	709.81	711.51	713.77	716.66	720.33	724.81
ELEVATION	3021.90	3021.91	3021.91	3021.92	3021.93	3021.94	3021.95	3021.97	3021.98	3022.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	11.73	20.95	26.14	29.57	31.76	38.62	40.03	53.97	75.16
OUTFLOW	.00	.00	197.85	223.27	238.61	247.47	273.36	277.53	315.91	366.62
ELEVATION	2991.00	2993.80	2996.00	2996.60	2997.00	2997.24	2998.00	2998.13	2999.41	3001.35
STORAGE	109.63	169.33	171.74	234.33	276.38	290.95	305.66	320.37	333.61	333.77
OUTFLOW	436.71	536.88	539.94	614.17	656.18	669.61	682.76	695.67	707.08	707.84
ELEVATION	3004.52	3010.00	3010.19	3015.00	3018.00	3019.00	3020.00	3021.00	3021.90	3021.91
STORAGE	334.01	334.17	334.36	334.57	334.81	335.08				
OUTFLOW	709.81	711.51	713.77	716.66	720.33	724.81				
ELEVATION	3021.93	3021.94	3021.95	3021.97	3021.98	3022.00				

WARNING --- ROUTED OUTFLOW (781.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (863.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (926.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (967.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (990.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (996.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (988.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (969) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (941) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (905) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (864) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (818) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE
 WARNING --- ROUTED OUTFLOW (770) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB
 PLAN 1. RATIO = 1.00

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000		1	0	.0	2991.0	1		0820		101	600.	222.7	3014.1	1		1640		201	3.	11.9	2993.8
1		0005		2	0	.0	2991.0	1		0825		102	595.	218.5	3013.8	1		1645		202	3.	11.8	2993.8
1		0010		3	0	.0	2991.0	1		0830		103	591.	214.5	3013.5	1		1650		203	2.	11.8	2993.8
1		0015		4	0	.0	2991.0	1		0835		104	586.	210.4	3013.2	1		1655		204	2.	11.8	2993.8
1		0020		5	0	.0	2991.0	1		0840		105	581.	206.4	3012.9	1		1700		205	2.	11.8	2993.8
1		0025		6	0	.1	2991.0	1		0845		106	576.	202.4	3012.5	1		1705		206	1.	11.8	2993.8
1		0030		7	0	.2	2991.0	1		0850		107	572.	198.5	3012.2	1		1710		207	1.	11.8	2993.8
1		0035		8	0	.3	2991.1	1		0855		108	567.	194.5	3011.9	1		1715		208	1.	11.8	2993.8
1		0040		9	0	.6	2991.1	1		0900		109	562.	190.6	3011.6	1		1720		209	1.	11.8	2993.8
1		0045		10	0	.9	2991.2	1		0905		110	558.	186.8	3011.3	1		1725		210	1.	11.8	2993.8
1		0050		11	0	1.2	2991.3	1		0910		111	553.	183.0	3011.0	1		1730		211	1.	11.8	2993.8
1		0055		12	0	1.5	2991.4	1		0915		112	549.	179.2	3010.8	1		1735		212	1.	11.8	2993.8
1		0100		13	0	1.8	2991.4	1		0920		113	544.	175.4	3010.5	1		1740		213	0.	11.8	2993.8
1		0105		14	0	2.0	2991.5	1		0925		114	540.	171.7	3010.2	1		1745		214	0.	11.8	2993.8
1		0110		15	0	2.3	2991.5	1		0930		115	535.	168.0	3009.9	1		1750		215	0.	11.7	2993.8
1		0115		16	0	2.6	2991.6	1		0935		116	528.	164.3	3009.5	1		1755		216	0.	11.7	2993.8
1		0120		17	0	2.9	2991.7	1		0940		117	522.	160.7	3009.2	1		1800		217	0.	11.7	2993.8
1		0125		18	0	3.3	2991.8	1		0945		118	516.	157.1	3008.9	1		1805		218	0.	11.7	2993.8
1		0130		19	0	3.8	2991.9	1		0950		119	510.	153.6	3008.6	1		1810		219	0.	11.7	2993.8
1		0135		20	0	4.4	2992.1	1		0955		120	505.	150.1	3008.2	1		1815		220	0.	11.7	2993.8
1		0140		21	0	5.3	2992.3	1		1000		121	499.	146.6	3007.9	1		1820		221	0.	11.7	2993.8
1		0145		22	0	6.4	2992.5	1		1005		122	493.	143.2	3007.6	1		1825		222	0.	11.7	2993.8
1		0150		23	0	7.7	2992.8	1		1010		123	487.	139.8	3007.3	1		1830		223	0.	11.7	2993.8
1		0155		24	0	9.1	2993.2	1		1015		124	482.	136.5	3007.0	1		1835		224	0.	11.7	2993.8
1		0200		25	0	10.4	2993.5	1		1020		125	476.	133.2	3006.7	1		1840		225	0.	11.7	2993.8
1		0205		26	1	11.8	2993.8	1		1025		126	471.	129.9	3006.4	1		1845		226	0.	11.7	2993.8
1		0210		27	27	13.0	2994.1	1		1030		127	465.	126.7	3006.1	1		1850		227	0.	11.7	2993.8
1		0215		28	50	14.0	2994.4	1		1035		128	460.	123.5	3005.8	1		1855		228	0.	11.7	2993.8
1		0220		29	73	15.1	2994.6	1		1040		129	455.	120.4	3005.5	1		1900		229	0.	11.7	2993.8
1		0225		30	99	16.4	2994.9	1		1045		130	450.	117.3	3005.2	1		1905		230	0.	11.7	2993.8
1		0230		31	127	17.7	2995.2	1		1050		131	444.	114.2	3004.9	1		1910		231	0.	11.7	2993.8
1		0235		32	154	18.9	2995.5	1		1055		132	439.	111.1	3004.7	1		1915		232	0.	11.7	2993.8
1		0240		33	179	20.1	2995.8	1		1100		133	434.	108.1	3004.4	1		1920		233	0.	11.7	2993.8
1		0245		34	199	21.1	2996.0	1		1105		134	428.	105.2	3004.1	1		1925		234	0.	11.7	2993.8
1		0250		35	204	22.2	2996.1	1		1110		135	422.	102.2	3003.8	1		1930		235	0.	11.7	2993.8
1		0255		36	210	23.4	2996.3	1		1115		136	416.	99.4	3003.6	1		1935		236	0.	11.7	2993.8
1		0300		37	216	24.6	2996.4	1		1120		137	410.	96.5	3003.3	1		1940		237	0.	11.7	2993.8
1		0305		38	222	25.9	2996.6	1		1125		138	404.	93.7	3003.1	1		1945		238	0.	11.7	2993.8
1		0310		39	229	27.4	2996.8	1		1130		139	399.	91.0	3002.8	1		1950		239	0.	11.7	2993.8
1		0315		40	239	29.8	2997.0	1		1135		140	393.	88.2	3002.6	1		1955		240	0.	11.7	2993.8
1		0320		41	255	33.8	2997.5	1		1140		141	388.	85.5	3002.3	1		2000		241	0.	11.7	2993.8
1		0325		42	280	40.8	2998.2	1		1145		142	382.	82.9	3002.1	1		2005		242	0.	11.7	2993.8
1		0330		43	312	52.4	2999.3	1		1150		143	377.	80.3	3001.8	1		2010		243	0.	11.7	2993.8
1		0335		44	353	69.6	3000.8	1		1155		144	372.	77.7	3001.6	1		2015		244	0.	11.7	2993.8
1		0340		45	400	91.6	3002.9	1		1200		145	367.	75.1	3001.4	1		2020		245	0.	11.7	2993.8
1		0345		46	448	116.3	3005.1	1		1205		146	361.	72.6	3001.1	1		2025		246	0.	11.7	2993.8
1		0350		47	491	141.0	3007.5	1		1210		147	355.	70.2	3000.9	1		2030		247	0.	11.7	2993.8
1		0355		48	532	166.5	3009.7	1		1215		148	349.	67.8	3000.7	1		2035		248	0.	11.7	2993.8
1		0400		49	561	189.8	3011.6	1		1220		149	343.	65.4	3000.5	1		2040		249	0.	11.7	2993.8
1		0405		50	587	211.6	3013.3	1		1225		150	338.	63.0	3000.2	1		2045		250	0.	11.7	2993.8
1		0410		51	611	231.7	3014.8	1		1230		151	332.	60.7	3000.0	1		2050		251	0.	11.7	2993.8
1		0415		52	630	249.9	3016.1	1		1235		152	327.	58.5	2999.8	1		2055		252	0.	11.7	2993.8
1		0420		53	646	265.7	3017.2	1		1240		153	321.	56.2	2999.6	1		2100		253	0.	11.7	2993.8
1		0425		54	659	279.3	3018.2	1		1245		154	316.	54.0	2999.4	1		2105		254	0.	11.7	2993.8
1		0430		55	670	290.9	3019.0	1		1250		155	310.	51.9	2999.2	1		2110		255	0.	11.7	2993.8
1		0435		56	679	300.9	3019.7	1		1255		156	304.	49.8	2999.0	1		2115		256	0.	11.7	2993.8
1		0440		57	686	309.9	3020.3	1		1300		157	299.	47.7	2998.8	1		2120		257	0.	11.7	2993.8
1		0445		58	694	318.1	3020.8	1		1305		158	293.	45.6	2998.6	1		2125		258	0.	11.7	2993.8
1		0450		59	700	325.5	3021.3	1		1310		159	287.	43.6	2998.5	1		2130		259	0.	11.7	2993.8
1		0455		60	706	332.3	3021.8	1		1315		160	282.	41									

1	0735	92	641	261.1	3016.9	1	1555	192	11	12.2	2993.9	2	0015	292	0	11.7	2993.8
1	0740	93	637	256.7	3016.6	1	1600	193	9	12.2	2993.9	2	0020	293	0	11.7	2993.8
1	0745	94	632	252.4	3016.3	1	1605	194	8	12.1	2993.9	2	0025	294	0	11.7	2993.8
1	0750	95	628	248.0	3016.0	1	1610	195	7	12.1	2993.9	2	0030	295	0	11.7	2993.8
1	0755	96	624	243.7	3015.7	1	1615	196	6	12.0	2993.9	2	0035	296	0	11.7	2993.8
1	0800	97	619	239.5	3015.4	1	1620	197	5	12.0	2993.9	2	0040	297	0	11.7	2993.8
1	0805	98	615	235.2	3015.1	1	1625	198	5	11.9	2993.9	2	0045	298	0	11.7	2993.8
1	0810	99	610	231.0	3014.7	1	1630	199	4	11.9	2993.8	2	0050	299	0	11.7	2993.8
1	0815	100	605	226.8	3014.4	1	1635	200	3	11.9	2993.8	2	0055	300	0	11.7	2993.8

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	
+	(CFS)	(HR)		24-HR	72-HR
					24.92-HR
+	996.	5.42	(CFS)	674.	256.
			(INCHES)	1.427	2.166
			(AC-FT)	334.	507
					507
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	
+	(AC-FT)	(HR)		24-HR	72-HR
					24.92-HR
+	351.	5.42	266.	89.	86.
					86.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	
+	(FEET)	(HR)		24-HR	72-HR
					24.92-HR
+	3023.09	5.42	3017.09	3001.30	3000.92
					3000.92

CUMULATIVE AREA = 4.39 SQ MI

WARNING --- ROUTED OUTFLOW (785.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (854.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (901.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (929.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (941.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (938.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (924.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (900.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (867.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (829.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (787.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (742.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB PLAN 1. RATIO = .99

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000		1	0	0	2991.0	1		0820		101	599.	221.3	3014.0	1		1640		201	3.	11.9	2993.8
1		0005		2	0	0	2991.0	1		0825		102	594.	217.2	3013.7	1		1645		202	2.	11.8	2993.8
1		0010		3	0	0	2991.0	1		0830		103	589.	213.1	3013.4	1		1650		203	2	11.8	2993.8
1		0015		4	0	0	2991.0	1		0835		104	584.	209.1	3013.1	1		1655		204	2.	11.8	2993.8
1		0020		5	0	0	2991.0	1		0840		105	579.	205.1	3012.7	1		1700		205	2.	11.8	2993.8
1		0025		6	0	1	2991.0	1		0845		106	575.	201.1	3012.4	1		1705		206	1.	11.8	2993.8
1		0030		7	0	2	2991.0	1		0850		107	570.	197.2	3012.1	1		1710		207	1.	11.8	2993.8
1		0035		8	0	3	2991.1	1		0855		108	565.	193.3	3011.8	1		1715		208	1.	11.8	2993.8
1		0040		9	0	6	2991.1	1		0900		109	561.	189.4	3011.5	1		1720		209	1.	11.8	2993.8
1		0045		10	0	9	2991.2	1		0905		110	556.	185.5	3011.2	1		1725		210	1.	11.8	2993.8
1		0050		11	0	1.2	2991.3	1		0910		111	552.	181.7	3011.0	1		1730		211	1	11.8	2993.8
1		0055		12	0	1.4	2991.3	1		0915		112	547.	177.9	3010.7	1		1735		212	1.	11.8	2993.8
1		0100		13	0	1.7	2991.4	1		0920		113	543.	174.2	3010.4	1		1740		213	0.	11.8	2993.8
1		0105		14	0	1.9	2991.5	1		0925		114	538.	170.4	3010.1	1		1745		214	0.	11.8	2993.8
1		0110		15	0	2.2	2991.5	1		0930		115	533.	166.8	3009.8	1		1750		215	0.	11.7	2993.8
1		0115		16	0	2.4	2991.6	1		0935		116	526.	163.1	3009.4	1		1755		216	0.	11.7	2993.8
1		0120		17	0	2.7	2991.7	1		0940		117	520.	159.5	3009.1	1		1800		217	0.	11.7	2993.8
1		0125		18	0	3.1	2991.7	1		0945		118	514.	155.9	3008.8	1		1805		218	0.	11.7	2993.8
1		0130		19	0	3.6	2991.9	1		0950		119	509.	152.4	3008.4	1		1810		219	0.	11.7	2993.8
1		0135		20	0	4.2	2992.0	1		0955		120	503.	148.9	3008.1	1		1815		220	0	11.7	2993.8
1		0140		21	0	5.1	2992.2	1		1000		121	497.	145.5	3007.8	1		1820		221	0.	11.7	2993.8
1		0145		22	0	6.1	2992.5	1		1005		122	491.	142.1	3007.5	1		1825		222	0.	11.7	2993.8
1		0150		23	0	7.4	2992.8	1		1010		123	486.	138.7	3007.2	1		1830		223	0.	11.7	2993.8
1		0155		24	0	8.7	2993.1	1		1015		124	480.	135.4	3006.9	1		1835		224	0.	11.7	2993.8
1		0200		25	0	10.1	2993.4	1		1020		125	474.	132.1	3006.6	1		1840		225	0.	11.7	2993.8
1		0205		26	0	11.4	2993.7	1		1025		126	469.	128.9	3006.3	1		1845		226	0.	11.7	2993.8
1		0210		27	18	12.6	2994.0	1		1030		127	464.	125.7	3006.0	1		1850		227	0.	11.7	2993.8
1		0215		28	41	13.7	2994.3	1		1035		128	458.	122.5	3005.7	1		1855		228	0.	11.7	2993.8
1		0220		29	65	14.8	2994.5	1		1040		129	453.	119.3	3005.4	1		1900		229	0.	11.7	2993.8
1		0225		30	92	16.0	2994.8	1		1045		130	448.	116.2	3005.1	1		1905		230	0.	11.7	2993.8
1		0230		31	120	17.3	2995.1	1		1050		131	443.	113.2	3004.8	1		1910		231	0.	11.7	2993.8
1		0235		32	147	18.6	2995.4	1		1055		132	438.	110.1	3004.6	1		1915		232	0.	11.7	2993.8
1		0240		33	171	19.7	2995.7	1		1100		133	432.	107.2	3004.3	1		1920		233	0.	11.7	2993.8
1		0245		34	194	20.8	2996.0	1		1105		134	426.	104.2	3004.0	1		1925		234	0.	11.7	2993.8
1		0250		35	202	21.8	2996.1	1		1110		135	420.	101.3	3003.8	1		1930		235	0.	11.7	2993.8
1		0255		36	208	23.0	2996.2	1		1115		136	414.	98.4	3003.5	1		1935		236	0	11.7	2993.8
1		0300		37	214	24.1	2996.4	1		1120		137	408.	95.6	3003.2	1		1940		237	0.	11.7	2993.8
1		0305		38	220	25.4	2996.5	1		1125		138	402.	92.8	3003.0	1		1945		238	0.	11.7	2993.8
1		0310		39	227	26.9	2996.7	1		1130		139	397.	90.0	3002.7	1		1950		239	0.	11.7	2993.8
1		0315		40	237	29.2	2997.0	1		1135		140	391	87.3	3002.5	1		1955		240	0.	11.7	2993.8
1		0320		41	253	33.1	2997.4	1		1140		141	386	84.7	3002.2	1		2000		241	0.	11.7	2993.8
1		0325		42	277	40.0	2998.1	1		1145		142	381.	82.0	3002.0	1		2005		242	0.	11.7	2993.8
1		0330		43	309	51.4	2999.2	1		1150		143	375.	79.4	3001.7	1		2010		243	0.	11.7	2993.8
1		0335		44	350	68.3	3000.7	1		1155		144	370.	76.8	3001.5	1		2015		244	0.	11.7	2993.8
1		0340		45	397	90.0	3002.7	1		1200		145	365.	74.3	3001.3	1		2020		245	0.	11.7	2993.8
1		0345		46	445	114.4	3005.0	1		1205		146	359.	71.8	3001.0	1		2025		246	0.	11.7	2993.8
1		0350		47	487	139.5	3007.3	1		1210		147	353.	69.4	3000.8	1		2030		247	0.	11.7	2993.8

1	0355	48	528.	163.8	3009.5	*	1	1215	148	347.	67.0	3000.6	*	1	2035	248	0.	11.7	2993.8
1	0400	49	558.	186.7	3011.3	*	1	1220	149	341.	64.6	3000.4	*	1	2040	249	0.	11.7	2993.8
1	0405	50	583.	208.2	3013.0	*	1	1225	150	336.	62.3	3000.2	*	1	2045	250	0.	11.7	2993.8
1	0410	51	607.	228.1	3014.5	*	1	1230	151	330.	60.0	3000.0	*	1	2050	251	0.	11.7	2993.8
1	0415	52	626.	245.9	3015.8	*	1	1235	152	325.	57.7	2999.8	*	1	2055	252	0.	11.7	2993.8
1	0420	53	641.	261.6	3016.9	*	1	1240	153	320.	55.5	2999.5	*	1	2100	253	0.	11.7	2993.8
1	0425	54	655.	275.0	3017.9	*	1	1245	154	314.	53.3	2999.3	*	1	2105	254	0.	11.7	2993.8
1	0430	55	665.	286.4	3018.7	*	1	1250	155	308.	51.2	2999.2	*	1	2110	255	0.	11.7	2993.8
1	0435	56	674.	296.2	3019.4	*	1	1255	156	302.	49.1	2999.0	*	1	2115	256	0.	11.7	2993.8
1	0440	57	682.	305.1	3020.0	*	1	1300	157	297.	47.0	2998.8	*	1	2120	257	0.	11.7	2993.8
1	0445	58	689.	313.1	3020.5	*	1	1305	158	291.	45.0	2998.6	*	1	2125	258	0.	11.7	2993.8
1	0450	59	696.	320.4	3021.0	*	1	1310	159	286.	43.0	2998.4	*	1	2130	259	0.	11.7	2993.8
1	0455	60	701.	327.1	3021.5	*	1	1315	160	280.	41.0	2998.2	*	1	2135	260	0.	11.7	2993.8
1	0500	61	707.	333.3	3021.9	*	1	1320	161	275.	39.1	2998.0	*	1	2140	261	0.	11.7	2993.8
1	0505	62	785.	338.6	3022.2	*	1	1325	162	268.	37.3	2997.9	*	1	2145	262	0.	11.7	2993.8
1	0510	63	854.	342.7	3022.5	*	1	1330	163	261.	35.4	2997.6	*	1	2150	263	0.	11.7	2993.8
1	0515	64	901.	345.6	3022.7	*	1	1335	164	255.	33.7	2997.5	*	1	2155	264	0.	11.7	2993.8
1	0520	65	929.	347.2	3022.8	*	1	1340	165	248.	31.9	2997.3	*	1	2200	265	0.	11.7	2993.8
1	0525	66	941.	347.9	3022.9	*	1	1345	166	241.	30.2	2997.1	*	1	2205	266	0.	11.7	2993.8
1	0530	67	938.	347.7	3022.9	*	1	1350	167	234.	28.6	2996.9	*	1	2210	267	0.	11.7	2993.8
1	0535	68	924.	346.9	3022.8	*	1	1355	168	227.	27.0	2996.7	*	1	2215	268	0.	11.7	2993.8
1	0540	69	900.	345.5	3022.7	*	1	1400	169	220.	25.5	2996.5	*	1	2220	269	0.	11.7	2993.8
1	0545	70	867.	343.5	3022.6	*	1	1405	170	213.	24.0	2996.4	*	1	2225	270	0.	11.7	2993.8
1	0550	71	829.	341.3	3022.4	*	1	1410	171	206.	22.5	2996.2	*	1	2230	271	0.	11.7	2993.8
1	0555	72	787.	338.8	3022.3	*	1	1415	172	199.	21.2	2996.0	*	1	2235	272	0.	11.7	2993.8
1	0600	73	742.	336.1	3022.1	*	1	1420	173	175.	19.9	2995.7	*	1	2240	273	0.	11.7	2993.8
1	0605	74	707.	333.3	3021.9	*	1	1425	174	151.	18.7	2995.5	*	1	2245	274	0.	11.7	2993.8
1	0610	75	704.	330.4	3021.7	*	1	1430	175	130.	17.8	2995.2	*	1	2250	275	0.	11.7	2993.8
1	0615	76	701.	327.1	3021.5	*	1	1435	176	112.	16.9	2995.0	*	1	2255	276	0.	11.7	2993.8
1	0620	77	698.	323.6	3021.2	*	1	1440	177	97.	16.2	2994.9	*	1	2300	277	0.	11.7	2993.8
1	0625	78	695.	319.8	3021.0	*	1	1445	178	83.	15.6	2994.7	*	1	2305	278	0.	11.7	2993.8
1	0630	79	692.	315.9	3020.7	*	1	1450	179	72.	15.1	2994.6	*	1	2310	279	0.	11.7	2993.8
1	0635	80	688.	311.9	3020.4	*	1	1455	180	62.	14.6	2994.5	*	1	2315	280	0.	11.7	2993.8
1	0640	81	685.	307.8	3020.1	*	1	1500	181	53.	14.2	2994.4	*	1	2320	281	0.	11.7	2993.8
1	0645	82	681.	303.5	3019.9	*	1	1505	182	46.	13.9	2994.3	*	1	2325	282	0.	11.7	2993.8
1	0650	83	677.	299.3	3019.6	*	1	1510	183	40.	13.6	2994.2	*	1	2330	283	0.	11.7	2993.8
1	0655	84	673.	294.9	3019.3	*	1	1515	184	34.	13.3	2994.2	*	1	2335	284	0.	11.7	2993.8
1	0700	85	669.	290.5	3019.0	*	1	1520	185	30.	13.1	2994.1	*	1	2340	285	0.	11.7	2993.8
1	0705	86	665.	286.1	3018.7	*	1	1525	186	25.	12.9	2994.1	*	1	2345	286	0.	11.7	2993.8
1	0710	87	661.	281.7	3018.4	*	1	1530	187	22.	12.8	2994.0	*	1	2350	287	0.	11.7	2993.8
1	0715	88	657.	277.3	3018.1	*	1	1535	188	19.	12.6	2994.0	*	1	2355	288	0.	11.7	2993.8
1	0720	89	653.	272.8	3017.7	*	1	1540	189	16.	12.5	2994.0	*	2	0000	289	0.	11.7	2993.8
1	0725	90	648.	268.4	3017.4	*	1	1545	190	14.	12.4	2994.0	*	2	0005	290	0.	11.7	2993.8
1	0730	91	644.	264.0	3017.1	*	1	1550	191	12.	12.3	2993.9	*	2	0010	291	0.	11.7	2993.8
1	0735	92	639.	259.6	3016.8	*	1	1555	192	10.	12.2	2993.9	*	2	0015	292	0.	11.7	2993.8
1	0740	93	635.	255.3	3016.5	*	1	1600	193	9.	12.2	2993.9	*	2	0020	293	0.	11.7	2993.8
1	0745	94	631.	250.9	3016.2	*	1	1605	194	8.	12.1	2993.9	*	2	0025	294	0.	11.7	2993.8
1	0750	95	626.	246.6	3015.9	*	1	1610	195	7.	12.0	2993.9	*	2	0030	295	0.	11.7	2993.8
1	0755	96	622.	242.3	3015.6	*	1	1615	196	6.	12.0	2993.9	*	2	0035	296	0.	11.7	2993.8
1	0800	97	618.	238.0	3015.3	*	1	1620	197	5.	12.0	2993.9	*	2	0040	297	0.	11.7	2993.8
1	0805	98	614.	233.8	3015.0	*	1	1625	198	4.	11.9	2993.8	*	2	0045	298	0.	11.7	2993.8
1	0810	99	609.	229.6	3014.6	*	1	1630	199	4.	11.9	2993.8	*	2	0050	299	0.	11.7	2993.8
1	0815	100	604.	225.4	3014.3	*	1	1635	200	3.	11.9	2993.8	*	2	0055	300	0.	11.7	2993.8

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	941.	5.42	663.	252.	243.	243.
		(INCHES)	1.403	2.134	2.134	2.134
		(AC-FT)	329.	500.	500.	500.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	348.	5.42	264.	89.	65.	85.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3022.87	5.42	3016.94	3001.24	3000.86	3000.86
CUMULATIVE AREA =			4.39 SQ MI			

WARNING --- ROUTED OUTFLOW (770.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (825.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (860) IS GREATER THAN MAXIMUM OUTFLOW (725) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (878.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (881.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (872) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (852.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (824.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (790) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (752.) IS GREATER THAN MAXIMUM OUTFLOW (725.) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .98

DA	MON	HR:HN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR:HN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR:HN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	0	2991.0 *	1	0820	101	597	219.7	3013.9 *	1	1640	201	3.	11.9	2993.8		
1	0005	2	0.	0.	0	2991.0 *	1	0825	102	592.	215.6	3013.6 *	1	1645	202	2.	11.8	2993.8		
1	0010	3	0.	0.	0	2991.0 *	1	0830	103	587.	211.5	3013.2 *	1	1650	203	2.	11.8	2993.8		
1	0015	4	0.	0.	0	2991.0 *	1	0835	104	582.	207.5	3012.9 *	1	1655	204	2.	11.8	2993.8		
1	0020	5	0.	0	0	2991.0 *	1	0840	105	578.	203.5	3012.6 *	1	1700	205	1.	11.8	2993.8		
1	0025	6	0.	.1	2991.0 *	1	0845	106	573.	199.6	3012.3 *	1	1705	206	1	11.8	2993.8			
1	0030	7	0.	.1	2991.0 *	1	0850	107	568.	195.6	3012.0 *	1	1710	207	1	11.8	2993.8			

1	0035	8	0.	3	2991.1	*	1	0855	108	564	191.7	3011.7	*	1	1715	208	1.	11.8	2993.8
1	0040	9	0	5	2991.1	*	1	0900	109	559	187.9	3011.4	*	1	1720	209	1.	11.8	2993.8
1	0045	10	0.	8	2991.2	*	1	0905	110	555	184.0	3011.1	*	1	1725	210	1.	11.8	2993.8
1	0050	11	0.	1.1	2991.3	*	1	0910	111	550	180.2	3010.8	*	1	1730	211	1.	11.8	2993.8
1	0055	12	0.	1.4	2991.3	*	1	0915	112	546	176.4	3010.5	*	1	1735	212	1.	11.8	2993.8
1	0100	13	0.	1.6	2991.4	*	1	0920	113	541	172.7	3010.3	*	1	1740	213	0.	11.8	2993.8
1	0105	14	0.	1.8	2991.4	*	1	0925	114	536	169.0	3010.0	*	1	1745	214	0.	11.7	2993.8
1	0110	15	0.	2.0	2991.5	*	1	0930	115	530	165.3	3009.6	*	1	1750	215	0.	11.7	2993.8
1	0115	16	0.	2.3	2991.5	*	1	0935	116	524	161.7	3009.3	*	1	1755	216	0.	11.7	2993.8
1	0120	17	0	2.6	2991.6	*	1	0940	117	518	158.1	3009.0	*	1	1800	217	0.	11.7	2993.8
1	0125	18	0.	3.0	2991.7	*	1	0945	118	512	154.6	3008.6	*	1	1805	218	0.	11.7	2993.8
1	0130	19	0.	3.4	2991.8	*	1	0950	119	506	151.1	3008.3	*	1	1810	219	0.	11.7	2993.8
1	0135	20	0.	4.0	2992.0	*	1	0955	120	500	147.6	3008.0	*	1	1815	220	0.	11.7	2993.8
1	0140	21	0.	4.9	2992.2	*	1	1000	121	495	144.2	3007.7	*	1	1820	221	0.	11.7	2993.8
1	0145	22	0.	5.9	2992.4	*	1	1005	122	489	140.8	3007.4	*	1	1825	222	0.	11.7	2993.8
1	0150	23	0	7.1	2992.7	*	1	1010	123	483	137.4	3007.1	*	1	1830	223	0.	11.7	2993.8
1	0155	24	0.	8.4	2993.0	*	1	1015	124	478	134.1	3006.8	*	1	1835	224	0.	11.7	2993.8
1	0200	25	0.	9.7	2993.3	*	1	1020	125	472	130.8	3006.5	*	1	1840	225	0.	11.7	2993.8
1	0205	26	0.	11.0	2993.6	*	1	1025	126	467	127.6	3006.2	*	1	1845	226	0.	11.7	2993.8
1	0210	27	9.	12.2	2993.9	*	1	1030	127	462	124.4	3005.9	*	1	1850	227	0.	11.7	2993.8
1	0215	28	33.	13.3	2994.2	*	1	1035	128	456	121.3	3005.6	*	1	1855	228	0.	11.7	2993.8
1	0220	29	57.	14.4	2994.4	*	1	1040	129	451	118.1	3005.3	*	1	1900	229	0.	11.7	2993.8
1	0225	30	84.	15.6	2994.7	*	1	1045	130	446	115.0	3005.0	*	1	1905	230	0.	11.7	2993.8
1	0230	31	112	17.0	2995.0	*	1	1050	131	441	112.0	3004.7	*	1	1910	231	0.	11.7	2993.8
1	0235	32	139	18.2	2995.4	*	1	1055	132	435	109.0	3004.5	*	1	1915	232	0.	11.7	2993.8
1	0240	33	164.	19.4	2995.6	*	1	1100	133	429	106.0	3004.2	*	1	1920	233	0.	11.7	2993.8
1	0245	34	187.	20.4	2995.9	*	1	1105	134	423	103.1	3003.9	*	1	1925	234	0.	11.7	2993.8
1	0250	35	200.	21.5	2996.1	*	1	1110	135	417	100.2	3003.6	*	1	1930	235	0.	11.7	2993.8
1	0255	36	206.	22.6	2996.2	*	1	1115	136	412	97.3	3003.4	*	1	1935	236	0.	11.7	2993.8
1	0300	37	211.	23.7	2996.3	*	1	1120	137	406	94.5	3003.1	*	1	1940	237	0.	11.7	2993.8
1	0305	38	217.	24.9	2996.5	*	1	1125	138	400	91.7	3002.9	*	1	1945	238	0.	11.7	2993.8
1	0310	39	224.	26.4	2996.6	*	1	1130	139	395	89.0	3002.6	*	1	1950	239	0.	11.7	2993.8
1	0315	40	234.	28.6	2996.9	*	1	1135	140	389	86.3	3002.4	*	1	1955	240	0.	11.7	2993.8
1	0320	41	250.	32.4	2997.3	*	1	1140	141	384	83.6	3002.1	*	1	2000	241	0.	11.7	2993.8
1	0325	42	275.	39.2	2998.1	*	1	1145	142	378	81.0	3001.9	*	1	2005	242	0.	11.7	2993.8
1	0330	43	306.	50.4	2999.1	*	1	1150	143	373	78.4	3001.7	*	1	2010	243	0.	11.7	2993.8
1	0335	44	347.	67.0	3000.6	*	1	1155	144	368	75.8	3001.4	*	1	2015	244	0.	11.7	2993.8
1	0340	45	393.	88.2	3002.6	*	1	1200	145	362	73.3	3001.2	*	1	2020	245	0.	11.7	2993.8
1	0345	46	441.	112.2	3004.8	*	1	1205	146	356	70.9	3001.0	*	1	2025	246	0.	11.7	2993.8
1	0350	47	482	136.9	3007.0	*	1	1210	147	351	68.4	3000.7	*	1	2030	247	0.	11.7	2993.8
1	0355	48	523.	160.9	3009.2	*	1	1215	148	345	66.0	3000.5	*	1	2035	248	0.	11.7	2993.8
1	0400	49	554.	183.5	3011.1	*	1	1220	149	339	63.7	3000.3	*	1	2040	249	0.	11.7	2993.8
1	0405	50	579.	204.7	3012.7	*	1	1225	150	334	61.4	3000.1	*	1	2045	250	0.	11.7	2993.8
1	0410	51	602.	224.2	3014.2	*	1	1230	151	328	59.1	2999.9	*	1	2050	251	0.	11.7	2993.8
1	0415	52	622.	241.8	3015.5	*	1	1235	152	323	56.8	2999.7	*	1	2055	252	0.	11.7	2993.8
1	0420	53	637.	257.2	3016.6	*	1	1240	153	318	54.6	2999.5	*	1	2100	253	0.	11.7	2993.8
1	0425	54	650.	270.4	3017.6	*	1	1245	154	312	52.5	2999.3	*	1	2105	254	0.	11.7	2993.8
1	0430	55	661.	281.6	3018.4	*	1	1250	155	306	50.3	2999.1	*	1	2110	255	0.	11.7	2993.8
1	0435	56	670.	291.3	3019.0	*	1	1255	156	300	48.3	2998.9	*	1	2115	256	0.	11.7	2993.8
1	0440	57	678.	300.0	3019.6	*	1	1300	157	295	46.2	2998.7	*	1	2120	257	0.	11.7	2993.8
1	0445	58	685.	307.9	3020.2	*	1	1305	158	289	44.2	2998.5	*	1	2125	258	0.	11.7	2993.8
1	0450	59	691.	315.1	3020.6	*	1	1310	159	284	42.2	2998.3	*	1	2130	259	0.	11.7	2993.8
1	0455	60	697.	321.7	3021.1	*	1	1315	160	278	40.3	2998.2	*	1	2135	260	0.	11.7	2993.8
1	0500	61	702.	327.8	3021.5	*	1	1320	161	273	38.4	2998.0	*	1	2140	261	0.	11.7	2993.8
1	0505	62	707.	333.2	3021.9	*	1	1325	162	266	36.5	2997.8	*	1	2145	262	0.	11.7	2993.8
1	0510	63	770	337.8	3022.2	*	1	1330	163	259	34.7	2997.6	*	1	2150	263	0.	11.7	2993.8
1	0515	64	825.	341.0	3022.4	*	1	1335	164	252	33.0	2997.4	*	1	2155	264	0.	11.7	2993.8
1	0520	65	860.	343.1	3022.5	*	1	1340	165	245	31.3	2997.2	*	1	2200	265	0.	11.7	2993.8
1	0525	66	878.	344.2	3022.6	*	1	1345	166	239	29.6	2997.0	*	1	2205	266	0.	11.7	2993.8
1	0530	67	881.	344.3	3022.6	*	1	1350	167	231	28.0	2996.8	*	1	2210	267	0.	11.7	2993.8
1	0535	68	872.	343.8	3022.6	*	1	1355	168	224	26.4	2996.6	*	1	2215	268	0.	11.7	2993.8
1	0540	69	852.	342.6	3022.5	*	1	1400	169	217	24.9	2996.5	*	1	2220	269	0.	11.7	2993.8
1	0545	70	824	341.0	3022.4	*	1	1405	170	210	23.4	2996.3	*	1	2225	270	0.	11.7	2993.8
1	0550	71	790.	339.0	3022.3	*	1	1410	171	203	22.0	2996.1	*	1	2230	271	0.	11.7	2993.8
1	0555	72	752.	336.7	3022.1	*	1	1415	172	191	20.6	2995.9	*	1	2235	272	0.	11.7	2993.8
1	0600	73	712.	334.2	3021.9	*	1	1420	173	165	19.4	2995.6	*	1	2240	273	0.	11.7	2993.8
1	0605	74	705.	331.5	3021.8	*	1	1425	174	142	18.4	2995.4	*	1	2245	274	0.	11.7	2993.8
1	0610	75	703.	328.5	3021.6	*	1	1430	175	123	17.4	2995.2	*	1	2250	275	0.	11.7	2993.8
1	0615	76	700.	325.2	3021.3	*	1	1435	176	106	16.7	2995.0	*	1	2255	276	0.	11.7	2993.8
1	0620	77	697.	321.7	3021.1	*	1	1440	177	91	16.0	2994.8	*	1	2300	277	0.	11.7	2993.8
1	0625	78	694.	318.0	3020.8	*	1	1445	178	79	15.4	2994.7	*	1	2305	278	0.	11.7	2993.8
1	0630	79	690.	314.1	3020.6	*	1	1450	179	68	14.9	2994.6	*	1	2310	279	0.	11.7	2993.8
1	0635	80	687.	310.1	3020.3	*	1	1455	180	58	14.5	2994.4	*	1	2315	280	0.	11.7	2993.8
1	0640	81	683.	305.9	3020.0	*	1	1500	181	50	14.1	2994.4	*	1	2320	281	0.	11.7	2993.8
1	0645	82	679.	301.7	3019.7	*	1	1505	182	43	13.8	2994.3	*	1	2325	282	0.	11.7	2993.8
1	0650	83	675.	297.4	3019.4	*	1	1510	183	37	13.5	2994.2	*	1	2330	283	0.		

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .94

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0	0	2991 0	1		0820	101	581.	206.4	3012 8	1		1640	201	2.	11 8	2993.8		
1		0005	2	0.	0	0	2991.0	1		0825	102	576.	202.4	3012 5	1		1645	202	1.	11 8	2993.8		
1		0010	3	0.	0	0	2991.0	1		0830	103	572.	198.4	3012 2	1		1650	203	1.	11 8	2993.8		
1		0015	4	0.	0	0	2991.0	1		0835	104	567.	194.5	3011 9	1		1655	204	1.	11 8	2993.8		
1		0020	5	0.	0	0	2991.0	1		0840	105	562.	190.6	3011 6	1		1700	205	1.	11 8	2993.8		
1		0025	6	0.	0	0	2991.0	1		0845	106	558.	186.8	3011 3	1		1705	206	1.	11 8	2993.8		
1		0030	7	0.	0	0	2991.0	1		0850	107	553.	182.9	3011 0	1		1710	207	1.	11 8	2993.8		
1		0035	8	0.	0	0	2991.1	1		0855	108	549.	179.1	3010 8	1		1715	208	1.	11 8	2993.8		
1		0040	9	0.	0	0	2991.1	1		0900	109	544.	175.4	3010 5	1		1720	209	0.	11 8	2993.8		
1		0045	10	0.	0	0	2991.2	1		0905	110	540.	171.7	3010 2	1		1725	210	0.	11 8	2993.8		
1		0050	11	0.	0	0	2991.2	1		0910	111	535.	168.0	3009 9	1		1730	211	0.	11 7	2993.8		
1		0055	12	0.	0	0	2991.3	1		0915	112	528.	164.3	3009 5	1		1735	212	0.	11 7	2993.8		
1		0100	13	0.	0	0	2991.3	1		0920	113	522.	160.7	3009 2	1		1740	213	0.	11 7	2993.8		
1		0105	14	0.	0	0	2991.3	1		0925	114	516.	157.1	3008 9	1		1745	214	0.	11 7	2993.8		
1		0110	15	0.	0	0	2991.4	1		0930	115	510.	153.6	3008 6	1		1750	215	0.	11 7	2993.8		
1		0115	16	0.	0	0	2991.4	1		0935	116	505.	150.1	3008 2	1		1755	216	0.	11 7	2993.8		
1		0120	17	0.	0	0	2991.5	1		0940	117	499.	146.6	3007 9	1		1800	217	0.	11 7	2993.8		
1		0125	18	0.	0	0	2991.6	1		0945	118	493.	143.2	3007 6	1		1805	218	0.	11 7	2993.8		
1		0130	19	0.	0	0	2991.7	1		0950	119	487.	139.8	3007 3	1		1810	219	0.	11 7	2993.8		
1		0135	20	0.	0	0	2991.8	1		0955	120	482.	136.5	3007 0	1		1815	220	0.	11 7	2993.8		
1		0140	21	0.	0	0	2992.0	1		1000	121	476.	133.2	3006 7	1		1820	221	0.	11 7	2993.8		
1		0145	22	0.	0	0	2992.2	1		1005	122	471.	129.9	3006 4	1		1825	222	0.	11 7	2993.8		
1		0150	23	0.	0	0	2992.4	1		1010	123	465.	126.7	3006 1	1		1830	223	0.	11 7	2993.8		
1		0155	24	0.	0	0	2992.7	1		1015	124	460.	123.5	3005 8	1		1835	224	0.	11 7	2993.8		
1		0200	25	0.	0	0	2993.0	1		1020	125	455.	120.4	3005 5	1		1840	225	0.	11 7	2993.8		
1		0205	26	0.	0	0	2993.2	1		1025	126	449.	117.2	3005 2	1		1845	226	0.	11 7	2993.8		
1		0210	27	0.	0	0	2993.5	1		1030	127	444.	114.2	3004 9	1		1850	227	0.	11 7	2993.8		
1		0215	28	0.	0	0	2993.8	1		1035	128	439.	111.1	3004 7	1		1855	228	0.	11 7	2993.8		
1		0220	29	24.	12.8	2994.1	1		1040	129	434.	108.1	3004 4	1		1900	229	0.	11 7	2993.8			
1		0225	30	52.	14.1	2994.4	1		1045	130	428.	105.2	3004 1	1		1905	230	0.	11 7	2993.8			
1		0230	31	81.	15.5	2994.7	1		1050	131	422.	102.2	3003 8	1		1910	231	0.	11 7	2993.8			
1		0235	32	108.	16.8	2995.0	1		1055	132	416.	99.3	3003 6	1		1915	232	0.	11 7	2993.8			
1		0240	33	133.	17.9	2995.3	1		1100	133	410.	96.5	3003 3	1		1920	233	0.	11 7	2993.8			
1		0245	34	156.	19.0	2995.5	1		1105	134	404.	93.7	3003 1	1		1925	234	0.	11 7	2993.8			
1		0250	35	178.	20.0	2995.8	1		1110	135	399.	90.9	3002 8	1		1930	235	0.	11 7	2993.8			
1		0255	36	198.	21.0	2996.0	1		1115	136	393.	88.2	3002 6	1		1935	236	0.	11 7	2993.8			
1		0300	37	203.	22.0	2996.1	1		1120	137	388.	85.5	3002 3	1		1940	237	0.	11 7	2993.8			
1		0305	38	200.	23.0	2996.2	1		1125	138	382.	82.9	3002 1	1		1945	238	0.	11 7	2993.8			
1		0310	39	214.	24.3	2996.4	1		1130	139	377.	80.3	3001 8	1		1950	239	0.	11 7	2993.8			
1		0315	40	224.	25.3	2996.6	1		1135	140	372.	77.7	3001 6	1		1955	240	0.	11 7	2993.8			
1		0320	41	240.	29.8	2997.0	1		1140	141	367.	75.1	3001 4	1		2000	241	0.	11 7	2993.8			
1		0325	42	264.	36.1	2997.7	1		1145	142	361.	72.6	3001 1	1		2005	242	0.	11 7	2993.8			
1		0330	43	295.	46.4	2998.7	1		1150	143	355.	70.2	3000 9	1		2010	243	0.	11 7	2993.8			
1		0335	44	335.	61.9	3000.1	1		1155	144	349.	67.7	3000 7	1		2015	244	0.	11 7	2993.8			
1		0340	45	380.	81.8	3002.0	1		1200	145	343.	65.4	3000 5	1		2020	245	0.	11 7	2993.8			
1		0345	46	426.	104.3	3004.0	1		1205	146	338.	63.0	3000 2	1		2025	246	0.	11 7	2993.8			
1		0350	47	467.	127.5	3006.2	1		1210	147	332.	60.7	3000 0	1		2030	247	0.	11 7	2993.8			
1		0355	48	504.	150.0	3008.2	1		1215	148	327.	58.4	2999 8	1		2035	248	0.	11 7	2993.8			
1		0400	49	539.	171.3	3010.1	1		1220	149	321.	56.2	2999 6	1		2040	249	0.	11 7	2993.8			
1		0405	50	563.	191.1	3011.7	1		1225	150	316.	54.0	2999 4	1		2045	250	0.	11 7	2993.8			
1		0410	51	585.	209.5	3013.1	1		1230	151	310.	51.9	2999 2	1		2050	251	0.	11 7	2993.8			
1		0415	52	604.	226.0	3014.4	1		1235	152	304.	49.7	2999 0	1		2055	252	0.	11 7	2993.8			
1		0420	53	620.	240.5	3015 4	1		1240	153	299.	47.7	2998 8	1		2100	253	0.	11 7	2993.8			
1		0425	54	633.	252.8	3016 3	1		1245	154	293.	45.6	2998 6	1		2105	254	0.	11 7	2993.8			
1		0430	55	643.	263.3	3017 1	1		1250	155	287.	43.6	2998 5	1		2110	255	0.	11 7	2993.8			
1		0435	56	652.	272.4	3017 7	1		1255	156	282.	41.7	2998 3	1		2115	256	0.	11 7	2993.8			
1		0440	57	660.	280.5	3018 3	1		1300	157	277.	39.7	2998 1	1		2120	257	0.	11 7	2993.8			
1		0445	58	667.	287.9	3018 8	1		1305	158	271.	37.9	2997 9	1		2125	258	0.	11 7	2993.8			
1		0450	59	673.	294.6	3019 2	1		1310	159	264.	36.0	2997 7	1		2130	259	0.	11 7	2993.8			
1		0455	60	678.	300.8	3019 7	1		1315	160	257.	34.2	2997 5	1		2135	260	0.	11 7	2993.8			
1		0500	61	683.	306.4	3020.1	1		1320	161	250.	32.5	2997 3	1		2140	261	0.	11 7	2993.8			
1		0505	62	688.	311.5	3020.4	1		1325	162	244.	30.8	2997 1	1		2145	262	0.	11 7	2993.8			
1		0510	63	692.	315.9	3020.7	1		1330	163	237.	29.1	2996 9	1		2150	263	0.	11 7	2993.8			
1		0515	64	695.	319.5	3020.9	1		1335	164	229.	27.5	2996 8	1		2155	264	0.	11 7	2993.8			
1		0520	65	697.	322.2	3021.1	1		1340	165	222.	26.0	2996 6	1		2200	265	0.	11 7	2993.8			
1		0525	66	699.	324.0	3021.2	1		1345	166	215.	24.5	2996 4	1		2205	266	0.	11 7	2993.8			
1		0530	67	700.	325.1	3021 3	1		1350	167	208.	23.0	2996 2	1		2210	267	0.	11 7	2993.8			
1		0535	68	700.	325.6	3021 4	1		1355	168	201.	21.6	2996 1	1		2215	268	0.	11 7	2993.8			
1		0540	69	700.	325.3	3021 3	1		1400	169	183.	20.3	2995 8	1									

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	700	5.58	(CFS)	620.	233.	225.	225.
			(INCHES)	1.311	1.974	1.974	1.974
			(AC-FT)	307	463.	463.	463.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	326.	5.58	246	82.	79.	79.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	3021.35	5.58	3015.65	3000.69	3000.34	3000.34	

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = 93

DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0	2991.0	1		0820	101	575.	201.5	3012.5	1		1640	201	1.	11.8	2993.8
1		0005	2	0.	0	2991.0	1		0825	102	571.	197.5	3012.2	1		1645	202	1.	11.8	2993.8
1		0010	3	0.	0	2991.0	1		0830	103	566.	193.6	3011.9	1		1650	203	1.	11.8	2993.8
1		0015	4	0.	0	2991.0	1		0835	104	561.	189.7	3011.6	1		1655	204	1.	11.8	2993.8
1		0020	5	0.	0	2991.0	1		0840	105	557.	185.9	3011.3	1		1700	205	1.	11.8	2993.8
1		0025	6	0.	0	2991.0	1		0845	106	552.	182.1	3011.0	1		1705	206	1.	11.8	2993.8
1		0030	7	0.	1	2991.0	1		0850	107	548.	178.3	3010.7	1		1710	207	1.	11.8	2993.8
1		0035	8	0.	2	2991.1	1		0855	108	543.	174.5	3010.4	1		1715	208	0.	11.8	2993.8
1		0040	9	0.	4	2991.1	1		0900	109	539.	170.8	3010.1	1		1720	209	0.	11.8	2993.8
1		0045	10	0.	6	2991.1	1		0905	110	533.	167.1	3009.8	1		1725	210	0.	11.7	2993.8
1		0050	11	0.	8	2991.2	1		0910	111	527.	163.5	3009.5	1		1730	211	0.	11.7	2993.8
1		0055	12	0.	10	2991.2	1		0915	112	521.	159.9	3009.1	1		1735	212	0.	11.7	2993.8
1		0100	13	0.	1.2	2991.3	1		0920	113	515.	156.3	3008.8	1		1740	213	0.	11.7	2993.8
1		0105	14	0.	1.3	2991.3	1		0925	114	509.	152.8	3008.5	1		1745	214	0.	11.7	2993.8
1		0110	15	0.	1.5	2991.4	1		0930	115	503.	149.3	3008.2	1		1750	215	0.	11.7	2993.8
1		0115	16	0.	1.7	2991.4	1		0935	116	497.	145.8	3007.8	1		1755	216	0.	11.7	2993.8
1		0120	17	0.	1.9	2991.5	1		0940	117	492.	142.4	3007.5	1		1800	217	0.	11.7	2993.8
1		0125	18	0.	2.2	2991.5	1		0945	118	486.	139.1	3007.2	1		1805	218	0.	11.7	2993.8
1		0130	19	0.	2.6	2991.6	1		0950	119	480.	135.7	3006.9	1		1810	219	0.	11.7	2993.8
1		0135	20	0.	3.1	2991.7	1		0955	120	475.	132.4	3006.6	1		1815	220	0.	11.7	2993.8
1		0140	21	0.	3.8	2991.9	1		1000	121	470.	129.2	3006.3	1		1820	221	0.	11.7	2993.8
1		0145	22	0.	4.7	2992.1	1		1005	122	464.	126.0	3006.0	1		1825	222	0.	11.7	2993.8
1		0150	23	0.	5.7	2992.4	1		1010	123	459.	122.8	3005.7	1		1830	223	0.	11.7	2993.8
1		0155	24	0.	6.8	2992.6	1		1015	124	454.	119.6	3005.4	1		1835	224	0.	11.7	2993.8
1		0200	25	0.	7.9	2992.9	1		1020	125	448.	116.5	3005.2	1		1840	225	0.	11.7	2993.8
1		0205	26	0.	9.0	2993.2	1		1025	126	443.	113.5	3004.9	1		1845	226	0.	11.7	2993.8
1		0210	27	0.	10.1	2993.4	1		1030	127	438.	110.4	3004.6	1		1850	227	0.	11.7	2993.8
1		0215	28	0.	11.2	2993.7	1		1035	128	432.	107.4	3004.3	1		1855	228	0.	11.7	2993.8
1		0220	29	14.	12.4	2994.0	1		1040	129	426.	104.5	3004.0	1		1900	229	0.	11.7	2993.8
1		0225	30	43.	13.7	2994.3	1		1045	130	420.	101.6	3003.8	1		1905	230	0.	11.7	2993.8
1		0230	31	72.	15.1	2994.6	1		1050	131	414.	98.7	3003.5	1		1910	231	0.	11.7	2993.8
1		0235	32	100.	16.4	2994.9	1		1055	132	409.	95.9	3003.3	1		1915	232	0.	11.7	2993.8
1		0240	33	125.	17.6	2995.2	1		1100	133	403.	93.1	3003.0	1		1920	233	0.	11.7	2993.8
1		0245	34	148.	18.6	2995.4	1		1105	134	397.	90.3	3002.7	1		1925	234	0.	11.7	2993.8
1		0250	35	170.	19.7	2995.7	1		1110	135	392.	87.6	3002.5	1		1930	235	0.	11.7	2993.8
1		0255	36	192.	20.7	2995.9	1		1115	136	386.	84.9	3002.2	1		1935	236	0.	11.7	2993.8
1		0300	37	201.	21.6	2996.1	1		1120	137	381.	82.3	3002.0	1		1940	237	0.	11.7	2993.8
1		0305	38	206.	22.6	2996.2	1		1125	138	376.	79.7	3001.8	1		1945	238	0.	11.7	2993.8
1		0310	39	212.	23.9	2996.3	1		1130	139	371.	77.1	3001.5	1		1950	239	0.	11.7	2993.8
1		0315	40	222.	25.8	2996.6	1		1135	140	365.	74.6	3001.3	1		1955	240	0.	11.7	2993.8
1		0320	41	237.	29.2	2997.0	1		1140	141	359.	72.1	3001.1	1		2000	241	0.	11.7	2993.8
1		0325	42	261.	35.3	2997.6	1		1145	142	353.	69.6	3000.8	1		2005	242	0.	11.7	2993.8
1		0330	43	293.	45.5	2998.6	1		1150	143	348.	67.2	3000.6	1		2010	243	0.	11.7	2993.8
1		0335	44	332.	60.6	3000.0	1		1155	144	342.	64.8	3000.4	1		2015	244	0.	11.7	2993.8
1		0340	45	377.	80.2	3001.8	1		1200	145	336.	62.5	3000.2	1		2020	245	0.	11.7	2993.8
1		0345	46	422.	102.4	3003.9	1		1205	146	331.	60.2	3000.0	1		2025	246	0.	11.7	2993.8
1		0350	47	463.	125.2	3005.9	1		1210	147	325.	57.9	2999.8	1		2030	247	0.	11.7	2993.8
1		0355	48	500.	147.3	3008.0	1		1215	148	320.	55.7	2999.6	1		2035	248	0.	11.7	2993.8
1		0400	49	535.	168.2	3009.9	1		1220	149	315.	53.5	2999.4	1		2040	249	0.	11.7	2993.8
1		0405	50	559.	187.8	3011.4	1		1225	150	309.	51.4	2999.2	1		2045	250	0.	11.7	2993.8
1		0410	51	580.	205.8	3012.8	1		1230	151	303.	49.3	2999.0	1		2050	251	0.	11.7	2993.8
1		0415	52	600.	222.1	3014.1	1		1235	152	297.	47.2	2998.8	1		2055	252	0.	11.7	2993.8
1		0420	53	616.	236.3	3015.1	1		1240	153	292.	45.2	2998.6	1		2100	253	0.	11.7	2993.8
1		0425	54	628.	248.5	3016.0	1		1245	154	286.	43.2	2998.4	1		2105	254	0.	11.7	2993.8
1		0430	55	639.	258.8	3016.7	1		1250	155	281.	41.2	2998.2	1		2110	255	0.	11.7	2993.8
1		0435	56	648.	267.7	3017.4	1		1255	156	275.	39.3	2998.1	1		2115	256	0.	11.7	2993.8
1		0440	57	655.	275.7	3018.0	1		1300	157	269.	37.4	2997.9	1		2120	257	0.	11.7	2993.8
1		0445	58	662.	282.9	3018.4	1		1305	158	262.	35.6	2997.7	1		2125	258	0.	11.7	2993.8
1		0450	59	668.	289.5	3018.9	1		1310	159	255.	33.8	2997.5	1		2130	259	0.	11.7	2993.8
1		0455	60	674.	295.5	3019.3	1		1315	160	249.	32.1	2997.3	1		2135	260	0.	11.7	2993.8
1		0500	61	679.	301.1	3019.7	1		1320	161	242.	30.4	2997.1	1		2140	261	0.	11.7	2993.8
1		0505	62	683.	306.1	3020.0	1		1325	162	235.	28.8	2996.9	1		2145	262	0.	11.7	2993.8
1		0510	63	687.	310.4	3020.3	1		1330	163	228.	27.2	2996.7	1		2150	263	0.	11.7	2993.8
1		0515	64	690.	313.9	3020.6	1		1335	164	221.	25.6	2996.5	1		2155	264	0.	11.7	2993.8
1		0520	65	692.	316.5	3020.7	1		1340	165	213.	24.1	2996.4	1		2200	265	0.	11.7	2993.8
1		0525	66	694.	318.3	3020.9	1		1345	166	206.	22.7	2996.2	1		2205	266	0.	11.7	2993.8
1		0530	67	695.	319.4	3020.9	1		1350	167	199.	21.3	2996.0	1		2210	267	0.	11.7	2993.8
1		0535	68	695.	319.8	3021.0	1		1355	168	177.	20.0	2995.8	1		2215	268	0.	11.7	2993.8
1		0540	69	695.	319.5	3020.9	1													

1	0640	81	664.	285.1	3018.6	*	1	1500	181	26.	12.9	2994.1	*	1	2320	281	0.	11.7	2993.8
1	0645	82	660.	281.0	3018.3	*	1	1505	182	22.	12.8	2994.0	*	1	2325	282	0.	11.7	2993.8
1	0650	83	657.	276.8	3018.0	*	1	1510	183	19.	12.6	2994.0	*	1	2330	283	0.	11.7	2993.8
1	0655	84	652.	272.5	3017.7	*	1	1515	184	17.	12.5	2994.0	*	1	2335	284	0.	11.7	2993.8
1	0700	85	648.	268.3	3017.4	*	1	1520	185	14.	12.4	2994.0	*	1	2340	285	0.	11.7	2993.8
1	0705	86	644.	264.0	3017.1	*	1	1525	186	12.	12.3	2993.9	*	1	2345	286	0.	11.7	2993.8
1	0710	87	640.	259.7	3016.8	*	1	1530	187	11.	12.2	2993.9	*	1	2350	287	0.	11.7	2993.8
1	0715	88	635	255.4	3016.5	*	1	1535	188	9.	12.2	2993.9	*	1	2355	288	0.	11.7	2993.8
1	0720	89	631.	251.2	3016.2	*	1	1540	189	8.	12.1	2993.9	*	2	0000	289	0.	11.7	2993.8
1	0725	90	627	246.9	3015.9	*	1	1545	190	7.	12.0	2993.9	*	2	0005	290	0.	11.7	2993.8
1	0730	91	622.	242.6	3015.6	*	1	1550	191	6.	12.0	2993.9	*	2	0010	291	0.	11.7	2993.8
1	0735	92	618.	238.4	3015.3	*	1	1555	192	5.	12.0	2993.9	*	2	0015	292	0.	11.7	2993.8
1	0740	93	614.	234.2	3015.0	*	1	1600	193	4.	11.9	2993.8	*	2	0020	293	0.	11.7	2993.8
1	0745	94	609.	230.0	3014.7	*	1	1605	194	4.	11.9	2993.8	*	2	0025	294	0.	11.7	2993.8
1	0750	95	604.	225.8	3014.3	*	1	1610	195	3.	11.9	2993.8	*	2	0030	295	0.	11.7	2993.8
1	0755	96	599.	221.7	3014.0	*	1	1615	196	3.	11.9	2993.8	*	2	0035	296	0.	11.7	2993.8
1	0800	97	594.	217.6	3013.7	*	1	1620	197	2.	11.8	2993.8	*	2	0040	297	0.	11.7	2993.8
1	0805	98	589.	213.5	3013.4	*	1	1625	198	2.	11.8	2993.8	*	2	0045	298	0.	11.7	2993.8
1	0810	99	585.	209.5	3013.1	*	1	1630	199	2.	11.8	2993.8	*	2	0050	299	0.	11.7	2993.8
1	0815	100	580.	205.5	3012.8	*	1	1635	200	2.	11.8	2993.8	*	2	0055	300	0.	11.7	2993.8

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	695	5.58	614.	229.	221.	221.
			1,300	1,942	1,942	1,942
		(INCHES)				
		(AC-FT)	305.	455.	455.	455.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	320.	5.58	241.	80.	77.	77.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3020.96	5.58	3015.28	3000.53	3000.18	3000.18

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1. RATIO = .92

DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HR:MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0	2991.0	*	1		0820	101	569.	196.6	3012.1	*	1		1640	201	1.	11.8	2993.8
1		0005	2	0.	0	2991.0	*	1		0825	102	565.	192.7	3011.8	*	1		1645	202	1.	11.8	2993.8
1		0010	3	0.	0	2991.0	*	1		0830	103	560.	188.9	3011.5	*	1		1650	203	1.	11.8	2993.8
1		0015	4	0.	0	2991.0	*	1		0835	104	556.	185.0	3011.2	*	1		1655	204	1.	11.8	2993.8
1		0020	5	0.	0	2991.0	*	1		0840	105	551.	181.2	3010.9	*	1		1700	205	1.	11.8	2993.8
1		0025	6	0.	0	2991.0	*	1		0845	106	547.	177.4	3010.6	*	1		1705	206	1.	11.8	2993.8
1		0030	7	0.	1	2991.0	*	1		0850	107	542.	173.7	3010.3	*	1		1710	207	0.	11.8	2993.8
1		0035	8	0.	2	2991.1	*	1		0855	108	538.	170.0	3010.0	*	1		1715	208	0.	11.8	2993.8
1		0040	9	0.	4	2991.1	*	1		0900	109	532.	166.3	3009.7	*	1		1720	209	0.	11.7	2993.8
1		0045	10	0.	6	2991.1	*	1		0905	110	526.	162.6	3009.4	*	1		1725	210	0.	11.7	2993.8
1		0050	11	0.	8	2991.2	*	1		0910	111	520.	159.0	3009.1	*	1		1730	211	0.	11.7	2993.8
1		0055	12	0.	1.0	2991.2	*	1		0915	112	514.	155.5	3008.7	*	1		1735	212	0.	11.7	2993.8
1		0100	13	0.	1.1	2991.3	*	1		0920	113	508.	152.0	3008.4	*	1		1740	213	0.	11.7	2993.8
1		0105	14	0.	1.3	2991.3	*	1		0925	114	502.	148.5	3008.1	*	1		1745	214	0.	11.7	2993.8
1		0110	15	0.	1.4	2991.3	*	1		0930	115	496.	145.0	3007.8	*	1		1750	215	0.	11.7	2993.8
1		0115	16	0.	1.6	2991.4	*	1		0935	116	490.	141.6	3007.5	*	1		1755	216	0.	11.7	2993.8
1		0120	17	0.	1.8	2991.4	*	1		0940	117	485.	138.3	3007.2	*	1		1800	217	0.	11.7	2993.8
1		0125	18	0.	2.1	2991.5	*	1		0945	118	479.	135.0	3006.8	*	1		1805	218	0.	11.7	2993.8
1		0130	19	0.	2.4	2991.6	*	1		0950	119	474.	131.7	3006.5	*	1		1810	219	0.	11.7	2993.8
1		0135	20	0.	2.9	2991.7	*	1		0955	120	468.	128.4	3006.2	*	1		1815	220	0.	11.7	2993.8
1		0140	21	0.	3.6	2991.9	*	1		1000	121	463.	125.2	3006.0	*	1		1820	221	0.	11.7	2993.8
1		0145	22	0.	4.4	2992.1	*	1		1005	122	458.	122.1	3005.7	*	1		1825	222	0.	11.7	2993.8
1		0150	23	0.	5.4	2992.3	*	1		1010	123	452.	118.9	3005.4	*	1		1830	223	0.	11.7	2993.8
1		0155	24	0.	6.5	2992.6	*	1		1015	124	447.	115.8	3005.1	*	1		1835	224	0.	11.7	2993.8
1		0200	25	0.	7.6	2992.8	*	1		1020	125	442.	112.8	3004.8	*	1		1840	225	0.	11.7	2993.8
1		0205	26	0.	8.7	2993.1	*	1		1025	126	437.	109.8	3004.5	*	1		1845	226	0.	11.7	2993.8
1		0210	27	0.	9.7	2993.3	*	1		1030	127	431.	106.8	3004.3	*	1		1850	227	0.	11.7	2993.8
1		0215	28	0.	10.8	2993.6	*	1		1035	128	425.	103.8	3004.0	*	1		1855	228	0.	11.7	2993.8
1		0220	29	5.	12.0	2993.9	*	1		1040	129	419.	100.9	3003.7	*	1		1900	229	0.	11.7	2993.8
1		0225	30	34.	13.3	2994.2	*	1		1045	130	413.	98.0	3003.5	*	1		1905	230	0.	11.7	2993.8
1		0230	31	63.	14.7	2994.5	*	1		1050	131	407.	95.2	3003.2	*	1		1910	231	0.	11.7	2993.8
1		0235	32	92.	16.0	2994.8	*	1		1055	132	402.	92.4	3002.9	*	1		1915	232	0.	11.7	2993.8
1		0240	33	117.	17.2	2995.1	*	1		1100	133	396.	89.7	3002.7	*	1		1920	233	0.	11.7	2993.8
1		0245	34	140.	18.3	2995.4	*	1		1105	134	391.	87.0	3002.4	*	1		1925	234	0.	11.7	2993.8
1		0250	35	162.	19.3	2995.6	*	1		1110	135	385.	84.3	3002.2	*	1		1930	235	0.	11.7	2993.8
1		0255	36	184.	20.3	2995.8	*	1		1115	136	380.	81.7	3002.0	*	1		1935	236	0.	11.7	2993.8
1		0300	37	199.	21.2	2996.0	*	1		1120	137	375.	79.1	3001.7	*	1		1940	237	0.	11.7	2993.8
1		0305	38	204.	22.2	2996.1	*	1		1125	138	369.	76.5	3001.5	*	1		1945	238	0.	11.7	2993.8
1		0310	39	210.	23.4	2996.3	*	1		1130	139	364.	74.0	3001.2	*	1		1950	239	0.	11.7	2993.8
1		0315	40	219.	25.3	2996.5	*	1		1135	140	358.	71.5	3001.0	*	1		1955	240	0.	11.7	2993.8
1		0320	41	234.	28.6	2996.9	*	1		1140	141	352.	69.1	3000.8	*	1		2000	241	0.	11.7	2993.8
1		0325	42	258.	34.6	2997.6	*	1		1145	142	346.	66.7	3000.6	*	1		2005	242	0.	11.7	2993.8
1		0330	43	290.	44.5	2998.5	*	1		1150	143	341.	64.3	3000.4	*	1		2010	243	0.	11.7	2993.8
1		0335	44	329.	59.5	2999.9	*	1		1155	144	335.	62.0	3000.1	*	1		2015	244	0.	11.7	2993.8
1		0340	45	374.	78.7	3001.7	*	1		1200	145	330.	59.7	2999.9	*	1		2020	245	0.	11.7	2993.8
1		0345	46	418.	100.5	3003.7	*	1		1205	146	324.	57.4	2999.7	*	1		2025	246	0.	11.7	2993.8
1		0350	47	459.	122.9	3005.7	*	1		1210	147	319.	55.2	2999.5	*	1		2030	247	0.	11.7	2993.8
1		0355	48	496.	144.7	3007.7	*	1		1215	148	313.	53.0	2999.3	*	1		2035	248	0.	11.7	2993.8
1		0400	49	530	165.3	3009.6	*	1		1220	149	307.	50.9	2999.1	*	1		2040	249	0.	11.7	2993.8
1		0405	50	555.	184.5	3011.2	*	1		1225	150	302.	48.8	2998.9	*	1		2045	250	0.	11.7	2993.8
1		0410	51	576.	202.2	3012.5	*	1		1230	151	296.	46.7	2998.7	*	1		2050	251	0.	11.7	2993.8
1		0415	52	595.	218.2	3013.8	*	1		1235	152	290.	44.7	2998.6	*	1		2055	252	0.	11.7	2993.8
1		0420	53	612.	232.2	3014.8	*	1		1240	153	285.	42.7	2998.4	*	1		2100	253	0.	11.7	2993.8
1		0425	54	624.	244.2	3015.7	*	1		1245	154	280.	40.8	2998.2	*	1		2105	254	0.	11.7	2993.8
1		0430	55	634.	254.3	3016.4	*	1		1250	155	274.	38.9	2998.0	*	1		2110	255	0.	11.7	2993.8
1		0435	56	643.	263.1	3017.1	*	1		1255	156	267.	37.0	2997.8	*	1		2115	256	0.	11.7	2993.8
1		0440	57	651.	270.9	3017.6	*	1		1300	157	260.	35.2	2997.6	*	1		2120	257	0.	11.7	2993.8
1		0445	58	658.	278.0	3018.1	*	1		1305	158	254.	33.4	2997.4	*	1		2125	258	0.	11.7	2993.8
1		0450	59	664	284.5	3018.6	*	1		1310	159	247.	31.7	2997.2	*	1		2130	259	0.	11.7	2993.8
1		0455	60	669.	290.4	3019.0	*	1		1315	160	240.	30.0	2997.1	*	1		2135	260	0.	11.7	2993.8

1	0500	61	674.	295.8	3019.3	*	1	1320	161	233.	28.4	2996.9	*	1	2140	261	0.	11.7	2993.8
1	0505	62	678	300.7	3019.7	*	1	1325	162	226.	26.8	2996.7	*	1	2145	262	0.	11.7	2993.8
1	0510	63	682	305.0	3020.0	*	1	1330	163	219.	25.3	2996.5	*	1	2150	263	0.	11.7	2993.8
1	0515	64	685.	308.4	3020.2	*	1	1335	164	212.	23.8	2996.3	*	1	2155	264	0.	11.7	2993.8
1	0520	65	687.	310.9	3020.4	*	1	1340	165	205.	22.4	2996.2	*	1	2200	265	0.	11.7	2993.8
1	0525	66	689.	312.7	3020.5	*	1	1345	166	198.	21.0	2996.0	*	1	2205	266	0.	11.7	2993.8
1	0530	67	690.	313.8	3020.6	*	1	1350	167	171.	19.7	2995.7	*	1	2210	267	0.	11.7	2993.8
1	0535	68	690.	314.1	3020.6	*	1	1355	168	148.	18.6	2995.4	*	1	2215	268	0.	11.7	2993.8
1	0540	69	690.	313.8	3020.6	*	1	1400	169	127.	17.7	2995.2	*	1	2220	269	0.	11.7	2993.8
1	0545	70	689.	312.9	3020.5	*	1	1405	170	110.	16.8	2995.0	*	1	2225	270	0.	11.7	2993.8
1	0550	71	688.	311.4	3020.4	*	1	1410	171	95.	16.1	2994.9	*	1	2230	271	0.	11.7	2993.8
1	0555	72	686.	309.5	3020.3	*	1	1415	172	82.	15.5	2994.7	*	1	2235	272	0.	11.7	2993.8
1	0600	73	684.	307.1	3020.1	*	1	1420	173	70.	15.0	2994.6	*	1	2240	273	0.	11.7	2993.8
1	0605	74	682.	304.5	3019.9	*	1	1425	174	61.	14.6	2994.5	*	1	2245	274	0.	11.7	2993.8
1	0610	75	679.	301.5	3019.7	*	1	1430	175	52.	14.2	2994.4	*	1	2250	275	0.	11.7	2993.8
1	0615	76	676.	298.3	3019.5	*	1	1435	176	45.	13.8	2994.3	*	1	2255	276	0.	11.7	2993.8
1	0620	77	673.	294.8	3019.3	*	1	1440	177	39.	13.5	2994.2	*	1	2300	277	0.	11.7	2993.8
1	0625	78	670.	291.2	3019.0	*	1	1445	178	34.	13.3	2994.2	*	1	2305	278	0.	11.7	2993.8
1	0630	79	666.	287.4	3018.8	*	1	1450	179	29.	13.1	2994.1	*	1	2310	279	0.	11.7	2993.8
1	0635	80	663.	283.5	3018.5	*	1	1455	180	25.	12.9	2994.1	*	1	2315	280	0.	11.7	2993.8
1	0640	81	659.	279.5	3018.2	*	1	1500	181	22.	12.7	2994.0	*	1	2320	281	0.	11.7	2993.8
1	0645	82	655.	275.4	3017.9	*	1	1505	182	19.	12.6	2994.0	*	1	2325	282	0.	11.7	2993.8
1	0650	83	651	271.3	3017.6	*	1	1510	183	16.	12.5	2994.0	*	1	2330	283	0.	11.7	2993.8
1	0655	84	647.	267.1	3017.3	*	1	1515	184	14.	12.4	2994.0	*	1	2335	284	0.	11.7	2993.8
1	0700	85	643.	262.8	3017.0	*	1	1520	185	12.	12.3	2993.9	*	1	2340	285	0.	11.7	2993.8
1	0705	86	638.	258.6	3016.7	*	1	1525	186	10.	12.2	2993.9	*	1	2345	286	0.	11.7	2993.8
1	0710	87	634.	254.3	3016.4	*	1	1530	187	9.	12.1	2993.9	*	1	2350	287	0.	11.7	2993.8
1	0715	88	630.	250.1	3016.1	*	1	1535	188	8.	12.1	2993.9	*	1	2355	288	0.	11.7	2993.8
1	0720	89	626.	245.8	3015.8	*	1	1540	189	7.	12.0	2993.9	*	2	0000	289	0.	11.7	2993.8
1	0725	90	621.	241.6	3015.5	*	1	1545	190	6.	12.0	2993.9	*	2	0005	290	0.	11.7	2993.8
1	0730	91	617.	237.4	3015.2	*	1	1550	191	5.	12.0	2993.9	*	2	0010	291	0.	11.7	2993.8
1	0735	92	613.	233.2	3014.9	*	1	1555	192	4.	11.9	2993.8	*	2	0015	292	0.	11.7	2993.8
1	0740	93	608.	229.0	3014.6	*	1	1600	193	4.	11.9	2993.8	*	2	0020	293	0.	11.7	2993.8
1	0745	94	603.	224.8	3014.3	*	1	1605	194	3.	11.9	2993.8	*	2	0025	294	0.	11.7	2993.8
1	0750	95	598.	220.7	3014.0	*	1	1610	195	3.	11.9	2993.8	*	2	0030	295	0.	11.7	2993.8
1	0755	96	593.	216.6	3013.6	*	1	1615	196	2.	11.8	2993.8	*	2	0035	296	0.	11.7	2993.8
1	0800	97	588.	212.6	3013.3	*	1	1620	197	2.	11.8	2993.8	*	2	0040	297	0.	11.7	2993.8
1	0805	98	584.	208.5	3013.0	*	1	1625	198	2.	11.8	2993.8	*	2	0045	298	0.	11.7	2993.8
1	0810	99	579.	204.5	3012.7	*	1	1630	199	1.	11.8	2993.8	*	2	0050	299	0.	11.7	2993.8
1	0815	100	574.	200.6	3012.4	*	1	1635	200	1.	11.8	2993.8	*	2	0055	300	0.	11.7	2993.8

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
+	(CFS)	(HR)	6-HR	24-HR	72-HR
+	690.	5.58	609.	226.	217.
			(INCHES)	1.911	1.911
			(AC-FT)	302.	448.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR
+	314.	5.58	236.	78.	76.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
+	(FEET)	(HR)	6-HR	24-HR	72-HR
+	3020.57	5.58	3014.91	3000.38	3000.03
			CUMULATIVE AREA =	4.39 SQ MI	

HYDROGRAPH AT STATION EXDB
PLAN 1. RATIO = .91

DA	MOH	HRHH	ORD	OUTFLOW	STORAGE	STAGE	DA	MOH	HRHH	ORD	OUTFLOW	STORAGE	STAGE	DA	MOH	HRHH	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	2991.0	*	1	0820	101	564.	191.8	3011.7	*	1	1640	201	1.	11.8	2993.8	
1	0005	2	0.	0.	2991.0	*	1	0825	102	559.	187.9	3011.4	*	1	1645	202	1.	11.8	2993.8	
1	0010	3	0.	0.	2991.0	*	1	0830	103	555.	184.1	3011.1	*	1	1650	203	1.	11.8	2993.8	
1	0015	4	0.	0.	2991.0	*	1	0835	104	550.	180.3	3010.8	*	1	1655	204	1.	11.8	2993.8	
1	0020	5	0.	0.	2991.0	*	1	0840	105	546.	176.5	3010.6	*	1	1700	205	1.	11.8	2993.8	
1	0025	6	0.	0.	2991.0	*	1	0845	106	541.	172.8	3010.3	*	1	1705	206	0.	11.8	2993.8	
1	0030	7	0.	0.	2991.0	*	1	0850	107	536.	169.1	3010.0	*	1	1710	207	0.	11.7	2993.8	
1	0035	8	0.	0.	2991.1	*	1	0855	108	530	165.4	3009.6	*	1	1715	208	0.	11.7	2993.8	
1	0040	9	0.	0.	2991.1	*	1	0900	109	524.	161.8	3009.3	*	1	1720	209	0.	11.7	2993.8	
1	0045	10	0.	0.	2991.1	*	1	0905	110	518.	158.2	3009.0	*	1	1725	210	0.	11.7	2993.8	
1	0050	11	0.	0.	2991.2	*	1	0910	111	512.	154.6	3008.7	*	1	1730	211	0.	11.7	2993.8	
1	0055	12	0.	0.	2991.2	*	1	0915	112	506.	151.1	3008.3	*	1	1735	212	0.	11.7	2993.8	
1	0100	13	0.	1.0	2991.2	*	1	0920	113	501.	147.7	3008.0	*	1	1740	213	0.	11.7	2993.8	
1	0105	14	0.	1.2	2991.3	*	1	0925	114	495.	144.2	3007.7	*	1	1745	214	0.	11.7	2993.8	
1	0110	15	0.	1.3	2991.3	*	1	0930	115	489.	140.8	3007.4	*	1	1750	215	0.	11.7	2993.8	
1	0115	16	0.	1.5	2991.4	*	1	0935	116	483	137.5	3007.1	*	1	1755	216	0.	11.7	2993.8	
1	0120	17	0.	1.7	2991.4	*	1	0940	117	478.	134.2	3006.8	*	1	1800	217	0.	11.7	2993.8	
1	0125	18	0.	1.9	2991.5	*	1	0945	118	472.	130.9	3006.5	*	1	1805	218	0.	11.7	2993.8	
1	0130	19	0.	2.3	2991.5	*	1	0950	119	467.	127.7	3006.2	*	1	1810	219	0.	11.7	2993.8	
1	0135	20	0.	2.7	2991.7	*	1	0955	120	462.	124.5	3005.9	*	1	1815	220	0.	11.7	2993.8	
1	0140	21	0.	3.4	2991.8	*	1	1000	121	456.	121.3	3005.6	*	1	1820	221	0.	11.7	2993.8	
1	0145	22	0.	4.2	2992.0	*	1	1005	122	451.	118.2	3005.3	*	1	1825	222	0.	11.7	2993.8	
1	0150	23	0.	5.2	2992.2	*	1	1010	123	446.	115.1	3005.0	*	1	1830	223	0.	11.7	2993.8	
1	0155	24	0.	6.2	2992.5	*	1	1015	124	441.	112.0	3004.7	*	1	1835	224	0.	11.7	2993.8	
1	0200	25	0.	7.3	2992.7	*	1	1020	125	435.	109.0	3004.5	*	1	1840	225	0.	11.7	2993.8	
1	0205	26	0.	8.3	2993.0	*	1	1025	126	429.	106.1	3004.2	*	1	1845	226	0.	11.7	2993.8	
1	0210	27	0.	9.3	2993.2	*	1	1030	127	423.	103.1	3003.9	*	1	1850	227	0.	11.7	2993.8	
1	0215	28	0.	10.3	2993.5	*	1	1035	128	418.	100.2	3003.7	*	1	1855	228	0.	11.7	2993.8	
1	0220	29	0.	11.5	2993.8	*	1	1040	129	412.	97.4	3003.4	*	1	1900	229	0.	11.7	2993.8	
1	0225	30	25.	12.9	2994.1	*	1	1045	130	406.	94.5	3003.1	*	1	1905	230	0.	11.7	2993.8	
1	0230	31	54.	14.3	2994.4	*	1	1050	131	400.	91.8	3002.9	*	1	1910	231	0.	11.7	2993.8	
1	0235	32	83.	15.6	2994.7	*	1	1055	132	395.	89.0	3002.6	*	1	1915	232	0.	11.7	2993.8	
1	0240	33	109.	16.8	2995.0	*	1	1100	133	389.	86.3	3002.4	*	1	1920	233	0.	11.7	2993.8	
1	0245	34	132.	17.9	2995.3	*	1	1105	134	384.	83.7	3002.1	*	1	1925	234	0.	11.7	2993.8	
1	0250	35	154.	18.9	2995.5	*	1	1110	135	379.	81.0	3001.9	*	1	1930	235	0.	11.7	2993.8	
1	0255	36	176.	19.9	2995.8	*	1	1115	136	373.	78.5	3001.7	*	1	1935	236	0.	11.7	2993.8	
1	0300	37	196.	20.8	2996.0	*	1	1120	137	368	75.9	3001.4	*	1	1940	237	0.	11.7	2993.8	
1	0305	38	202.	21.8	2996.1	*	1	1125	138	362	73.4	3001.2	*	1	1945	238	0.	11.7	2993.8	
1	0310	39	208.	22.9	2996.2	*	1	1130	139	356	70.9	3001.0	*	1	1950	239	0.	11.7	2993.8	
1	0315	40	217.	24.8	2996.4	*	1	1135	140	351.	68.5	3000.7	*	1	1955	240	0.	11.7	2993.8	

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION						
				RATIO 1 1.00	RATIO 2 .99	RATIO 3 .98	RATIO 4 .94	RATIO 5 .93	RATIO 6 .92	RATIO 7 .91
HYDROGRAPH AT +	1-1A	2.34	1 FLOW TIME	2600. 3.92	2564. 3.92	2528. 3.92	2383. 3.92	2347. 3.92	2311. 3.92	2275. 3.92
HYDROGRAPH AT +	1-1B	.17	1 FLOW TIME	294. 3.58	290. 3.58	286. 3.58	268. 3.58	264. 3.58	260. 3.58	256. 3.58
ROUTED TO +	R2	.17	1 FLOW TIME	282. 3.67	277. 3.67	271. 3.67	255. 3.67	254. 3.67	249. 3.67	243. 3.67
2 COMBINED AT +	CP1	2.51	1 FLOW TIME	2745. 3.92	2707. 3.92	2669. 3.92	2517. 3.92	2479. 3.92	2441. 3.92	2403. 3.92
ROUTED TO +	R3	2.51	1 FLOW TIME	2685. 4.00	2648. 4.00	2611. 4.00	2462. 4.00	2424. 4.00	2387. 4.00	2350. 4.00

HYDROGRAPH AT +	1-2A	.86	1	FLOW TIME	1615. 3.58	1593. 3.58	1572. 3.58	1485. 3.58	1463. 3.58	1442. 3.58	1420. 3.58
ROUTED TO +	R4	.86	1	FLOW TIME	1556. 3.58	1535. 3.58	1513. 3.58	1428. 3.58	1406. 3.58	1385. 3.58	1364. 3.58
HYDROGRAPH AT +	1-2B	.22	1	FLOW TIME	365. 3.58	360. 3.58	355. 3.58	334. 3.58	329. 3.58	324. 3.58	319. 3.58
3 COMBINED AT +	CP2	3.59	1	FLOW TIME	3438. 3.83	3392. 3.83	3344. 3.83	3152. 3.83	3103. 3.83	3057. 3.83	3009. 3.83
ROUTED TO +	R5	3.59	1	FLOW TIME	3407. 3.92	3360. 3.92	3312. 3.92	3122. 3.92	3074. 3.92	3028. 3.92	2981. 3.92
HYDROGRAPH AT +	1-2CR	.57	1	FLOW TIME	957. 3.58	943. 3.58	930. 3.58	876. 3.58	863. 3.58	850. 3.58	836. 3.58
2 COMBINED AT +	CP3	4.16	1	FLOW TIME	4014. 3.75	3956. 3.75	3899. 3.75	3672. 3.75	3617. 3.75	3559. 3.75	3503. 3.75
ROUTED TO +	R6	4.16	1	FLOW TIME	3971. 3.75	3919. 3.75	3857. 3.75	3633. 3.75	3577. 3.83	3521. 3.83	3465. 3.83
HYDROGRAPH AT +	1-3P	.05	1	FLOW TIME	102. 3.58	101. 3.58	99. 3.58	95. 3.58	94. 3.58	93. 3.58	92. 3.58
2 COMBINED AT +	CP4	4.21	1	FLOW TIME	4027. 3.75	3974. 3.75	3912. 3.75	3686. 3.75	3629. 3.75	3570. 3.75	3516. 3.75
ROUTED TO +	R7	4.21	1	FLOW TIME	4008. 3.83	3951. 3.83	3895. 3.83	3669. 3.83	3614. 3.83	3557. 3.83	3501. 3.83
HYDROGRAPH AT +	1-12P	.17	1	FLOW TIME	306. 3.58	302. 3.58	298. 3.58	283. 3.58	279. 3.58	275. 3.58	271. 3.58
2 COMBINED AT +	CP5	4.38	1	FLOW TIME	4157. 3.83	4098. 3.83	4040. 3.83	3808. 3.83	3751. 3.83	3692. 3.83	3634. 3.83
HYDROGRAPH AT +	1-14	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50
HYDROGRAPH AT +	1-15	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
HYDROGRAPH AT +	1-16	.00	1	FLOW TIME	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50
HYDROGRAPH AT +	1-17	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50
HYDROGRAPH AT +	1-18	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50
5 COMBINED AT +	CP5B	4.39	1	FLOW TIME	4167. 3.83	4108. 3.83	4050. 3.83	3817. 3.83	3760. 3.83	3701. 3.83	3643. 3.83
ROUTED TO +	EXDB	4.39	1	FLOW TIME	996. 5.42	941. 5.42	881. 5.50	700. 5.58	695. 5.58	690. 5.58	685. 5.58
** PEAK STAGES IN FEET **											
1 STAGE					3023.09 5.42	3022.87 5.42	3022.63 5.50	3021.35 5.58	3020.96 5.58	3020.57 5.58	3020.18 5.58
HYDROGRAPH AT +	1-4R	.05	1	FLOW TIME	102. 3.50	100. 3.50	99. 3.50	93. 3.50	92. 3.50	91. 3.50	89. 3.50
HYDROGRAPH AT +	1-5R	.03	1	FLOW TIME	63. 3.50	63. 3.50	62. 3.50	58. 3.50	57. 3.50	56. 3.50	56. 3.50
2 COMBINED AT +	CP6	.09	1	FLOW TIME	165. 3.50	163. 3.50	161. 3.50	152. 3.50	149. 3.50	147. 3.50	145. 3.50
ROUTED TO +	R8	.09	1	FLOW TIME	159. 3.50	156. 3.50	154. 3.50	145. 3.50	143. 3.50	141. 3.50	139. 3.50
HYDROGRAPH AT +	1-6R	.02	1	FLOW TIME	29. 3.50	28. 3.50	28. 3.50	26. 3.50	26. 3.50	25. 3.50	25. 3.50
HYDROGRAPH AT +	1-7R	.03	1	FLOW TIME	51. 3.50	51. 3.50	50. 3.50	47. 3.50	46. 3.50	46. 3.50	45. 3.50
2 COMBINED AT +	CP7	.04	1	FLOW TIME	80. 3.50	79. 3.50	78. 3.50	73. 3.50	72. 3.50	71. 3.50	70. 3.50

R6	NAME	1.31	3879.36	227.10	2.14	5.00	3856.62	225.00	2.14
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4762E+03 EXCESS= .0000E+00 OUTFLOW= .4761E+03 BASIN STORAGE= .5558E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R6	NAME	1.33	3655.79	226.54	2.02	5.00	3633.25	225.00	2.02
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4479E+03 EXCESS= .0000E+00 OUTFLOW= .4478E+03 BASIN STORAGE= .5423E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R6	NAME	1.34	3598.11	227.40	1.98	5.00	3577.13	230.00	1.98
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4408E+03 EXCESS= .0000E+00 OUTFLOW= .4407E+03 BASIN STORAGE= .5914E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R6	NAME	1.34	3542.71	226.97	1.95	5.00	3520.75	230.00	1.95
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4338E+03 EXCESS= .0000E+00 OUTFLOW= .4337E+03 BASIN STORAGE= .5276E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R6	NAME	1.35	3487.55	226.53	1.92	5.00	3465.03	230.00	1.92
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4268E+03 EXCESS= .0000E+00 OUTFLOW= .4267E+03 BASIN STORAGE= .5687E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.77	4009.51	228.14	2.21	5.00	4008.02	230.00	2.21
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4974E+03 EXCESS= .0000E+00 OUTFLOW= .4972E+03 BASIN STORAGE= .7540E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.77	3956.84	228.90	2.18	5.00	3950.55	230.00	2.18
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4903E+03 EXCESS= .0000E+00 OUTFLOW= .4901E+03 BASIN STORAGE= .7525E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.78	3896.50	229.81	2.15	5.00	3894.59	230.00	2.15
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4829E+03 EXCESS= .0000E+00 OUTFLOW= .4827E+03 BASIN STORAGE= .7143E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.81	3672.14	229.63	2.02	5.00	3669.15	230.00	2.02
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4543E+03 EXCESS= .0000E+00 OUTFLOW= .4541E+03 BASIN STORAGE= .8126E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.82	3617.64	228.71	1.99	5.00	3613.95	230.00	1.99
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4472E+03 EXCESS= .0000E+00 OUTFLOW= .4470E+03 BASIN STORAGE= .7630E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.82	3559.59	229.66	1.96	5.00	3557.13	230.00	1.96
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4401E+03 EXCESS= .0000E+00 OUTFLOW= .4399E+03 BASIN STORAGE= .7378E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R7	NAME	1.83	3504.76	228.70	1.93	5.00	3501.22	230.00	1.93
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4329E+03 EXCESS= .0000E+00 OUTFLOW= .4328E+03 BASIN STORAGE= .7018E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	NAME	.93	164.73	211.50	2.12	5.00	158.64	210.00	2.12
CONTINUITY SUMMARY (AC-FI) - INFLOW= .9855E+01 EXCESS= .0000E+00 OUTFLOW= .9855E+01 BASIN STORAGE= .1154E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	NAME	.93	162.53	211.16	2.09	5.00	156.50	210.00	2.09
CONTINUITY SUMMARY (AC-FI) - INFLOW= .9714E+01 EXCESS= .0000E+00 OUTFLOW= .9714E+01 BASIN STORAGE= .1114E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	NAME	.94	160.17	211.75	2.06	5.00	154.37	210.00	2.06
CONTINUITY SUMMARY (AC-FI) - INFLOW= .9570E+01 EXCESS= .0000E+00 OUTFLOW= .9570E+01 BASIN STORAGE= .1072E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	NAME	.95	151.20	211.39	1.94	5.00	145.32	210.00	1.94
CONTINUITY SUMMARY (AC-FI) - INFLOW= .9003E+01 EXCESS= .0000E+00 OUTFLOW= .9003E+01 BASIN STORAGE= .1063E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	NAME	.95	148.97	211.07	1.91	5.00	143.29	210.00	1.91

CONTINUITY SUMMARY (AC-FI) - INFLOW= .8863E+01 EXCESS= .0000E+00 OUTFLOW= .8863E+01 BASIN STORAGE= .1001E-03 PERCENT ERROR= 0									
FOR PLAN = 1 RATIO= .00									
R8	MAINE	.95	146.68	211.72	1.89	5.00	141.02	210.00	1.88
CONTINUITY SUMMARY (AC-FI) - INFLOW= .8732E+01 EXCESS= .0000E+00 OUTFLOW= .8732E+01 BASIN STORAGE= .1129E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R8	MAINE	.96	144.44	211.42	1.85	5.00	138.69	210.00	1.85
CONTINUITY SUMMARY (AC-FI) - INFLOW= .8580E+01 EXCESS= .0000E+00 OUTFLOW= .8580E+01 BASIN STORAGE= .1073E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.23	79.33	214.25	2.13	5.00	77.52	215.00	2.13
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4774E+01 EXCESS= .0000E+00 OUTFLOW= .4775E+01 BASIN STORAGE= .2191E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.24	78.39	212.60	2.10	5.00	77.06	215.00	2.10
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4704E+01 EXCESS= .0000E+00 OUTFLOW= .4704E+01 BASIN STORAGE= .2595E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.24	77.25	213.20	2.06	5.00	75.32	215.00	2.06
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4631E+01 EXCESS= .0000E+00 OUTFLOW= .4631E+01 BASIN STORAGE= .2176E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.27	72.91	213.43	1.94	5.00	71.01	215.00	1.94
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4358E+01 EXCESS= .0000E+00 OUTFLOW= .4358E+01 BASIN STORAGE= .2098E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.28	71.80	214.07	1.91	5.00	70.07	215.00	1.91
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4289E+01 EXCESS= .0000E+00 OUTFLOW= .4290E+01 BASIN STORAGE= .2467E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.28	70.78	212.44	1.88	5.00	69.79	215.00	1.88
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4226E+01 EXCESS= .0000E+00 OUTFLOW= .4226E+01 BASIN STORAGE= .2036E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R9	MAINE	2.29	69.68	213.10	1.85	5.00	68.21	215.00	1.85
CONTINUITY SUMMARY (AC-FI) - INFLOW= .4155E+01 EXCESS= .0000E+00 OUTFLOW= .4155E+01 BASIN STORAGE= .2377E-03 PERCENT ERROR= 0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.92	102.72	213.27	2.10	5.00	99.09	215.00	2.10
CONTINUITY SUMMARY (AC-FI) - INFLOW= .6168E+01 EXCESS= .0000E+00 OUTFLOW= .6168E+01 BASIN STORAGE= .2447E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.93	101.45	211.93	2.07	5.00	97.72	215.00	2.07
CONTINUITY SUMMARY (AC-FI) - INFLOW= .6078E+01 EXCESS= .0000E+00 OUTFLOW= .6078E+01 BASIN STORAGE= .2047E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.93	99.98	212.53	2.04	5.00	96.90	215.00	2.04
CONTINUITY SUMMARY (AC-FI) - INFLOW= .5986E+01 EXCESS= .0000E+00 OUTFLOW= .5986E+01 BASIN STORAGE= .2316E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.95	94.32	213.07	1.92	5.00	91.44	215.00	1.92
CONTINUITY SUMMARY (AC-FI) - INFLOW= .5634E+01 EXCESS= .0000E+00 OUTFLOW= .5634E+01 BASIN STORAGE= .1981E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.96	92.89	213.71	1.89	5.00	89.69	215.00	1.89
CONTINUITY SUMMARY (AC-FI) - INFLOW= .5544E+01 EXCESS= .0000E+00 OUTFLOW= .5544E+01 BASIN STORAGE= .2258E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.97	91.53	212.40	1.86	5.00	88.91	215.00	1.86
CONTINUITY SUMMARY (AC-FI) - INFLOW= .5455E+01 EXCESS= .0000E+00 OUTFLOW= .5455E+01 BASIN STORAGE= .1833E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R10	MAINE	1.97	90.11	213.07	1.83	5.00	87.48	215.00	1.83

CONTINUITY SUMMARY (AC-F7) - INFLOW= .5369E+01 EXCESS= .0000E+00 OUTFLOW= .5369E+01 BASIN STORAGE= .2071E-03 PERCENT ERROR= .0

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

**D.2 RESPONSE TO COMMENTS ON THE MASTER
DRAINAGE STUDY FOR VILLAGE 26
REVERENCE**

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 18, 2016
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	COPIES TO:	
Drainage Study for:	GCW Engineers & Surveyors	
Summerlin Village 26 – Reverence (Updated Master Drainage Study)		
Cross Streets:	West of I-215 between Lake Mead & Cheyenne	Pulte Homes
File Number:	F:\Depot\DSMemos\DS4752D.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-14-601-002 & 137-14-501-004	CCRFCD
Zoning Action:	TMP-60968	CCPW
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	9/15/2015 & 10/15/2015	10/22/2015	Not Approved	\$400.00	414615: \$400
2 nd Submittal	11/25/2015 & 12/17/2015	1/27/2016	Conditional Approval	\$400.00	423916: \$400
CCRFCD	3/1/2016	3/15/2016	Concurrence Recv'd	N/C	N/C
CCPW	5/10/2016	5/18/2016	Concurrence Recv'd	N/C	N/C
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. The final approval of this *Master Drainage Study* is only as a precursor to allow the submittal of technical drainage studies such as but not limited to the Modified Detention Basin, Debris Basin, Infrastructures and Phases of housing subdivisions etc.
2. Technical drainage studies are required for each of the development phases (PODs). The studies for the PODs may not be submitted prior to the conditional approval of the Master Drainage Study. No conditional approval of the PODS studies will be granted prior to the conditional approval of the pertinent infrastructure drainage studies. No building permits will be issued prior to the final approval of the pertinent technical drainage studies and improvement plans.

3. The master drainage study proposes a mixed-use detention basin that may include a park, amphitheatre, basketball court etc. Design multi-use facilities per *Section 304.8* of the *CCRFCD Hydrologic Criteria and Drainage Design Manual*. The modification of the existing detention basin will require a technical drainage study with *State* and *CCRFCD* approval. Any technical drainage studies for future onsite developments will not be accepted for review prior to the conditional approval of the modified detention basin study.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS

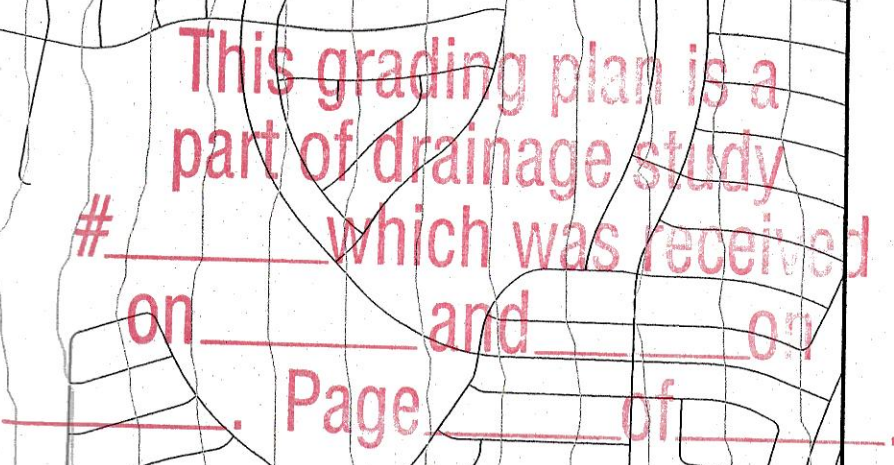
ays

T/R/S: T20S/R59E/14

AREA K-14



- 1-3P** DRAINAGE BASIN
- CP3** ● CONCENTRATION POINT
- BASIN BOUNDARY
- FLOW DIRECTION



MASTER DRAINAGE STUDY ULTIMATE CONDITIONS OVERALL DRAINAGE MAP

DRAWING
FIG 5R
OF SHTS

GCV' ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gvsurveying.com
DESIGN: _____
DRAWN: _____
CHECK: _____
ISSUE DATE: _____
ISSUE EDITOR: _____
PLOT DATE: 11-23-15
PLOT TIME: 16:57:14
F:\Projects\700.784-204-01\Division_Vect\Figures\Fig5.dwg, addplot

[illegible][illegible]

DATE: _____

[illegible]

**RESPONSE TO COMMENTS
ON THE
MASTER DRAINAGE STUDY
FOR
SUMMERLIN VILLAGE 26
REVERENCE**

Rec'd: 11/25/15

DS4752

K-14

\$400-

764-204-011

November 2015

Prepared For:

**Pulte Homes
7255 S. Tenaya Way, #200
Las Vegas, NV 89113
(702) 914-4800**

GCV
ENGINEERS \ SURVEYORS


```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 23NOV15 TIME 13:13:11
*
*****

```

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

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X X XXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXX XXXX XXX

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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

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*DIAGRAM
*** FREE ***
1 ID *****
2 ID *
3 ID * SUMMERLIN VILLAGE 26 REVERENCE *
4 ID * ULTIMATE CONDITION *
5 ID * THIS MODEL DETERMINES THE RUNOFF DURING *
6 ID * ULTIMATE DEVELOPMENT CONDITIONS *
7 ID *
8 ID * RETURN PERIOD 100-YEAR *
9 ID * DISTRIBUTION 6-HOUR SDN3 *
10 ID * PROJECT NO 764.204.011 *
11 ID * FILENAME V26ULT.H1 *
12 ID * DATE 11/23/2015 *
13 ID * MODELED BY JAM *
14 ID *
15 ID * DEPTH AREA REDUCTION FACTORS: *
16 ID * AREA DARP *
17 ID * 0.00 TO 0.24 SQ MI 1.00 *
18 ID * 0.25 TO 0.49 SQ MI 0.99 *
19 ID * 0.50 TO 0.99 SQ MI 0.98 *
20 ID * 1.00 TO 1.24 SQ MI 0.97 *
21 ID * 1.25 TO 1.50 SQ MI 0.96 *
22 ID * 1.51 TO 1.74 SQ MI 0.95 *
23 ID * 1.75 TO 1.99 SQ MI 0.94 *
24 ID * 2.00 TO 2.99 SQ MI 0.93 *
25 ID * 3.00 TO 3.99 SQ MI 0.92 *
26 ID * 4.00 TO 4.99 SQ MI 0.91 *
27 ID *
28 ID *****
29 ID
30 ID
31 IT 5 0 0 300
32 IO 5
33 IN 5 0 0
34 JR PREC 1.0 0.99 0.98 0.94 0.93 0.92 0.91 0.70 0.54
*
35 KK 1-1A
36 BA 2.339
37 PB 3.67
38 PC 0.000 .0200 .0570 .0700 .0870 .1080 .1240 .1300 .1300 .1300
39 PC .1300 .1300 .1300 .1330 .1400 .1420 .1480 .1580 .1720 .1810
40 PC .1900 .1970 .1990 .2000 .2010 .2040 .2140 .2290 .2410 .2490
41 PC .2510 .2560 .2700 .2780 .2810 .2830 .2950 .3220 .3520 .4090
42 PC .4990 .5900 .7100 .7440 .7810 .8120 .8190 .8350 .8510 .8560
43 PC .8600 .8680 .8760 .8880 .9100 .9260 .9370 .9500 .9700 .9760
44 PC .9820 .9850 .9870 .9890 .9900 .9930 .9930 .9940 .9950 .9980
45 PC .9980 .9990 1.000
46 LS 0 85.4
47 UD 0.488
*

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1

HEC-1 INPUT

PAGE 2

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
48 KK 1-1B
49 PB 3.61
50 BA 0.175
51 LS 0 78.3
52 UD .176
*
53 KK R2
54 KM ROUTE 1-1B THROUGH PORTION OF 1-1A

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55      KM  ASSUME EXISTING WASH
56      KM  LEN  SLOPE  n          SHAPE  BW  SS
57      RD  1885 0.0680 0.04      0  TRAP  20  10
      *

58      KK  CP1
59      KM  COMBINE 1-1A AND R2
60      HC  2
      *

61      KK  R3
62      KM  ROUTE CP1 THROUGH 1-2B TO CP2
63      KM  ASSUME EXISTING WASH IS MAINTAINED THROUGH DEVELOPED AREA
64      KM  NSTEPS      K      X
65      RM  1      .092      .15
      *

66      KK  1-2A
67      PB  3.55
68      BA  0.864
69      LS  0      85.8
70      UD  .125
      *

71      KK  R4
72      KM  ROUTE 1-2A THROUGH 1-2B TO CP2
73      KM  ASSUME EXISTING WASH IS MAINTAINED THROUGH DEVELOPED AREA
74      KM  NSTEPS      K      X
75      RM  1      .054      .15
      *

76      KK  1-2B
77      PB  3.51
78      BA  0.215
79      LS  0      82.6
80      UD  .178
      *

81      KK  CP2
82      KM  COMBINE 1-2B, R4 AND R3
83      HC  3
      *

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1

HEC-1 INPUT

PAGE 3

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

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84      KK  R5
85      KM  ROUTE CP2 THROUGH 1-2C TO CP3
86      KM  ASSUME EXISTING WASH
87      KM  NSTEPS      K      X
88      RM  1      .087      .15
      *

89      KK  1-2CR
90      PB  3.46
91      BA  0.574
92      LS  0      84.7
93      UD  .180
      *

94      KK  CP3
95      KM  COMBINE 1-2C AND R5
96      KO  1
97      HC  2
      *

98      KK  R6
99      KM  ROUTE CP3 TO CP4
100     KM  ASSUME BOX CULVERT
101     KM  LEN  SLOPE  n          SHAPE  BW
102     RD  1745 0.0050 0.015      0  DEEP  14
      *

103     KK  1-3P
104     PB  3.36
105     BA  .0258
106     LS  0      94.9
107     UD  .084
      *

108     KK  CP4
109     KM  COMBINE CP3 and 1-3P
110     HC  2
      *

111     KK  R7
112     KM  ROUTE CP4 THROUGH 1-12P TO CP5 (DETENTION BASIN)
113     KM  ASSUME RCP
114     KM  LEN  SLOPE  n          SHAPE  BW
115     RD  2258 0.0050 0.016      0  DEEP  12
      *

116     KK  1-12P
117     PB  3.32
118     BA  .1814
119     LS  0      83.8
120     UD  .234
      *

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1

HEC-1 INPUT

PAGE 4

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

193 KM COMBINE 1-6R AND 1-7R
194 HC 2
*

HEC-1 INPUT

PAGE 6

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

195 KK R9
196 KM ROUTE CP7 THROUGH 1-11P TO CP9
197 KM ASSUME RCP
198 KM LEN SLOPE n SHAPE DIAMETER
199 RD 3150 0.0400 0.013 0 CIRC 4.5
*

200 KK 1-8R
201 PB 3.42
202 BA .0025
203 LS 0 86.3
204 UD .100
*

205 KK 1-10R
206 PB 3.41
207 BA .0556
208 LS 0 86.1
209 UD .100
*

210 KK CP8
211 KM COMBINE 1-8R AND 1-10R
212 HC 2
*

213 KK R10
214 KM ASSUME RCP
215 KM LEN SLOPE n SHAPE DIAMETER
216 RD 2900 0.0400 0.013 0 CIRC 4.5
*

217 KK 1-11P
218 PB 3.38
219 BA .1775
220 LS 0 81.7
221 UD .214
*

222 KK CP9
223 KM COMBINE CP6, CP7, CP8 AND 1-11P
224 HC 4
*

225 KK 1-13
226 PB 3.34
227 BA .0008
228 LS 0 86.3
229 UD .100
*

HEC-1 INPUT

PAGE 7

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

230 KK LMT1R
231 KM REFERENCED FROM LAS VEGAS VALLEY MPU
232 PB 3.45
233 BA 1.964
234 LS 0 86.8
235 UD .447
*

236 KK CP10
237 KM COMBINE CP9, 1-13, AND LMT1R
238 HC 3
*
239 ZZ

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

35 1-1A
.
48 1-1B
V
V
53 R2
.
58 CP1.....
V
V
61 R3
.
66 1-2A
V
V
71 R4
.
.

76	.	.	1-2B
81	CP2.....		
	V		
84	R5		
89	.	1-2CR	
94	CP3.....		
	V		
98	R6		
103	.	1-3P	
108	CP4.....		
	V		
111	R7		
116	.	1-12P	
121	CP5.....		
124	.	1-14	
129	.	1-15	
134	.	1-16	
139	.	1-17	
144	.	1-18	
149	CP5B.....		
	V		
153	EXDB		
164	.	1-4R	
169	.	1-5R	
174	CP6.....		
	V		
177	R8		
182	.	1-6R	
187	.	1-7R	
192	CP7.....		
	V		
195	R9		
200	.	1-8R	
205	.	1-10R	
210	CP8.....		
	V		
213	R10		
217	.	1-11P	
222	CP9.....		
225	.	1-13	
230	.	LMT1R	
236	CP10.....		

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*   JUN 1998 *
*   VERSION 4.1 *
* RUN DATE 23NOV15 TIME 13:13:11 *
*****
```

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

```
*****
* : SUMMERLIN VILLAGE 26 REVERENCE *
* : ULTIMATE CONDITION *
* : THIS MODEL DETERMINES THE RUNOFF DURING *
* : ULTIMATE DEVELOPMENT CONDITIONS *
* : *****
* : RETURN PERIOD 100-YEAR *
* : DISTRIBUTION 6-HOUR SDN3 *
* : PROJECT NO 764.204.011 *
* : FILENAME V26ULT.H1 *
* : DATE 11/23/2015 *
* : MODELED BY JAM *
* : *****
* : DEPTH AREA REDUCTION FACTORS: *
* : AREA DARF *
* : 0.00 TO 0.24 SQ MI 1.00 *
* : 0.25 TO 0.49 SQ MI 0.99 *
* : 0.50 TO 0.99 SQ MI 0.98 *
* : 1.00 TO 1.24 SQ MI 0.97 *
* : 1.25 TO 1.50 SQ MI 0.96 *
* : 1.51 TO 1.74 SQ MI 0.95 *
* : 1.75 TO 1.99 SQ MI 0.94 *
* : 2.00 TO 2.99 SQ MI 0.93 *
* : 3.00 TO 3.99 SQ MI 0.92 *
* : 4.00 TO 4.99 SQ MI 0.91 *
* : *****
*****
```

```
32 IO OUTPUT CONTROL VARIABLES
      IPRNT 5 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
      NMIN 5 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 0055 ENDING TIME
      ICENT 19 CENTURY MARK
```

```
COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 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 .99 .98 .94 .93 .92 .91 .70 .54
```

.....

```
*****
* : CP3 *
* : *****
*****
```

```
96 KD OUTPUT CONTROL VARIABLES
      IPRNT 1 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0. HYDROGRAPH PLOT SCALE
```

```
97 HC HYDROGRAPH COMBINATION
      ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE
```

...

.....

```
HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
```


PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	176.	*	1	1230	151	0.	*	1	1845	226	0.	
1	0005	2	0.	*	1	0620	77	144.	*	1	1235	152	0.	*	1	1850	227	0.	
1	0010	3	0.	*	1	0625	78	119.	*	1	1240	153	0.	*	1	1855	228	0.	
1	0015	4	0.	*	1	0630	79	98.	*	1	1245	154	0.	*	1	1900	229	0.	
1	0020	5	0.	*	1	0635	80	80.	*	1	1250	155	0.	*	1	1905	230	0.	
1	0025	6	0.	*	1	0640	81	64.	*	1	1255	156	0.	*	1	1910	231	0.	
1	0030	7	3.	*	1	0645	82	51.	*	1	1300	157	0.	*	1	1915	232	0.	
1	0035	8	10.	*	1	0650	83	40.	*	1	1305	158	0.	*	1	1920	233	0.	
1	0040	9	20.	*	1	0655	84	31.	*	1	1310	159	0.	*	1	1925	234	0.	
1	0045	10	25.	*	1	0700	85	24.	*	1	1315	160	0.	*	1	1930	235	0.	
1	0050	11	24.	*	1	0705	86	18.	*	1	1320	161	0.	*	1	1935	236	0.	
1	0055	12	22.	*	1	0710	87	14.	*	1	1325	162	0.	*	1	1940	237	0.	
1	0100	13	22.	*	1	0715	88	10.	*	1	1330	163	0.	*	1	1945	238	0.	
1	0105	14	22.	*	1	0720	89	8.	*	1	1335	164	0.	*	1	1950	239	0.	
1	0110	15	24.	*	1	0725	90	6.	*	1	1340	165	0.	*	1	1955	240	0.	
1	0115	16	29.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.	
1	0120	17	35.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.	
1	0125	18	42.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.	
1	0130	19	57.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.	
1	0135	20	83.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.	
1	0140	21	121.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.	
1	0145	22	136.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.	
1	0150	23	152.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.	
1	0155	24	158.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.	
1	0200	25	154.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.	
1	0205	26	147.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.	
1	0210	27	148.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.	
1	0215	28	167.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.	
1	0220	29	205.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.	
1	0225	30	247.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.	
1	0230	31	272.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.	
1	0235	32	272.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.	
1	0240	33	272.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.	
1	0245	34	294.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.	
1	0250	35	325.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.	
1	0255	36	337.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.	
1	0300	37	330.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.	
1	0305	38	353.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.	
1	0310	39	445.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.	
1	0315	40	628.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.	
1	0320	41	962.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.	
1	0325	42	1509.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.	
1	0330	43	2268.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.	
1	0335	44	3079.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.	
1	0340	45	3618.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.	
1	0345	46	3812.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.	
1	0350	47	3787.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.	
1	0355	48	3685.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.	
1	0400	49	3538.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.	
1	0405	50	3363.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.	
1	0410	51	3134.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.	
1	0415	52	2826.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.	
1	0420	53	2493.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.	
1	0425	54	2193.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.	
1	0430	55	1966.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.	
1	0435	56	1828.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.	
1	0440	57	1737.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.	
1	0445	58	1643.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.	
1	0450	59	1555.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.	
1	0455	60	1503.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.	
1	0500	61	1449.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.	
1	0505	62	1358.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.	
1	0510	63	1234.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.	
1	0515	64	1109.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.	
1	0520	65	988.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.	
1	0525	66	874.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.	
1	0530	67	768.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.	
1	0535	68	665.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.	
1	0540	69	566.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.	
1	0545	70	478.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.	
1	0550	71	410.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.	
1	0555	72	351.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.	
1	0600	73	298.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.	
1	0605	74	251.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.	
1	0610	75	212.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.	

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
			(CFS)			
+	3812.	3.75	941.	236.	227.	227.
			(INCHES)	2.100	2.107	2.107
			(AC-FT)	467.	468.	468.
CUMULATIVE AREA =			4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
----	-----	------	-----	------	----	-----	------	-----	------	----	-----	------	-----	------	----	-----	------	-----	------

1	0000	1	0.	*	1	0615	76	174.	*	1	1230	151	0.	*	1	1845	226	0.
1	0005	2	0.	*	1	0620	77	143.	*	1	1235	152	0.	*	1	1850	227	0.
1	0010	3	0.	*	1	0625	78	117.	*	1	1240	153	0.	*	1	1855	228	0.
1	0015	4	0.	*	1	0630	79	96.	*	1	1245	154	0.	*	1	1900	229	0.
1	0020	5	0.	*	1	0635	80	79.	*	1	1250	155	0.	*	1	1905	230	0.
1	0025	6	0.	*	1	0640	81	63.	*	1	1255	156	0.	*	1	1910	231	0.
1	0030	7	2.	*	1	0645	82	50.	*	1	1300	157	0.	*	1	1915	232	0.
1	0035	8	9.	*	1	0650	83	39.	*	1	1305	158	0.	*	1	1920	233	0.
1	0040	9	18.	*	1	0655	84	30.	*	1	1310	159	0.	*	1	1925	234	0.
1	0045	10	23.	*	1	0700	85	23.	*	1	1315	160	0.	*	1	1930	235	0.
1	0050	11	22.	*	1	0705	86	18.	*	1	1320	161	0.	*	1	1935	236	0.
1	0055	12	21.	*	1	0710	87	14.	*	1	1325	162	0.	*	1	1940	237	0.
1	0100	13	20.	*	1	0715	88	10.	*	1	1330	163	0.	*	1	1945	238	0.
1	0105	14	20.	*	1	0720	89	8.	*	1	1335	164	0.	*	1	1950	239	0.
1	0110	15	23.	*	1	0725	90	6.	*	1	1340	165	0.	*	1	1955	240	0.
1	0115	16	28.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.
1	0120	17	33.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.
1	0125	18	40.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.
1	0130	19	55.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.
1	0135	20	80.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	108.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	132.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	148.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	153.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	150.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	143.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	144.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	162.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	200.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	241.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	265.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	266.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	266.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	287.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	318.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	330.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	323.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	345.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	436.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	616.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	944.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1483.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	2230.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	3031.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3564.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3756.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3731.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3631.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3488.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3316.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3090.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2787.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2459.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2163.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1940.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1804.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1715.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1622.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1536.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1484.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1431.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1341.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1219.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1096.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	976.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	863.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	759.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	657.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	559.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	472.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	405.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	347.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	294.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	248.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	209.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
3756.	3.75	927.	233.	224.	224.
		(INCHES)	2.069	2.075	2.075
		(AC-FT)	460.	461.	461.
CUMULATIVE AREA =		4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .98

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	172.	*	1	1230	151	0.	*	1	1845	226	0.	
1	0005	2	0.	*	1	0620	77	141.	*	1	1235	152	0.	*	1	1850	227	0.	
1	0010	3	0.	*	1	0625	78	116.	*	1	1240	153	0.	*	1	1855	228	0.	
1	0015	4	0.	*	1	0630	79	95.	*	1	1245	154	0.	*	1	1900	229	0.	

1	0020	5	0.	*	1	0635	80	78.	*	1	1250	155	0.	*	1	1905	230	0.
1	0025	6	0.	*	1	0640	81	62.	*	1	1255	156	0.	*	1	1910	231	0.
1	0030	7	2.	*	1	0645	82	49.	*	1	1300	157	0.	*	1	1915	232	0.
1	0035	8	8.	*	1	0650	83	39.	*	1	1305	158	0.	*	1	1920	233	0.
1	0040	9	16.	*	1	0655	84	30.	*	1	1310	159	0.	*	1	1925	234	0.
1	0045	10	21.	*	1	0700	85	23.	*	1	1315	160	0.	*	1	1930	235	0.
1	0050	11	21.	*	1	0705	86	18.	*	1	1320	161	0.	*	1	1935	236	0.
1	0055	12	19.	*	1	0710	87	14.	*	1	1325	162	0.	*	1	1940	237	0.
1	0100	13	19.	*	1	0715	88	10.	*	1	1330	163	0.	*	1	1945	238	0.
1	0105	14	19.	*	1	0720	89	8.	*	1	1335	164	0.	*	1	1950	239	0.
1	0110	15	21.	*	1	0725	90	6.	*	1	1340	165	0.	*	1	1955	240	0.
1	0115	16	26.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.
1	0120	17	32.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.
1	0125	18	38.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.
1	0130	19	52.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.
1	0135	20	77.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	104.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	127.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	143.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	149.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	145.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	139.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	139.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	158.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	195.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	235.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	259.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	259.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	259.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	281.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	311.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	322.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	316.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	338.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	427.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	604.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	927.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1457.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	2194.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2983.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3509.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3700.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3677.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3579.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3438.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3269.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3047.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2749.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2425.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2134.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1913.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1780.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1692.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1601.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1515.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1465.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1413.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1324.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1204.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1082.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	964.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	852.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	749.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	649.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	552.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	466.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	400.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	343.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	291.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	245.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	207.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+		(CFS)			
+	3700.	913.	229.	221.	221.
		(INCHES)	2.038	2.044	2.044
		(AC-FT)	453.	454.	454.
CUMULATIVE AREA =		4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .94

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	163.	*	1	1230	151	0.	*	1	1845	226	0.	0.
1	0005	2	0.	*	1	0620	77	134.	*	1	1235	152	0.	*	1	1850	227	0.	0.
1	0010	3	0.	*	1	0625	78	110.	*	1	1240	153	0.	*	1	1855	228	0.	0.
1	0015	4	0.	*	1	0630	79	91.	*	1	1245	154	0.	*	1	1900	229	0.	0.
1	0020	5	0.	*	1	0635	80	74.	*	1	1250	155	0.	*	1	1905	230	0.	0.
1	0025	6	0.	*	1	0640	81	59.	*	1	1255	156	0.	*	1	1910	231	0.	0.
1	0030	7	1.	*	1	0645	82	47.	*	1	1300	157	0.	*	1	1915	232	0.	0.
1	0035	8	5.	*	1	0650	83	37.	*	1	1305	158	0.	*	1	1920	233	0.	0.
1	0040	9	11.	*	1	0655	84	29.	*	1	1310	159	0.	*	1	1925	234	0.	0.

1	0110	15	14.	*	1	0725	90	5.	*	1	1340	165	0.	*	1	1955	240	0.
1	0115	16	18.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.
1	0120	17	23.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.
1	0125	18	29.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.
1	0130	19	41.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.
1	0135	20	62.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	85.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	106.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	120.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	126.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	123.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	118.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	119.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	136.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	169.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	205.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	227.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	228.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	228.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	248.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	276.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	287.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	282.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	302.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	384.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	545.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	840.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1329.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	2011.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2745.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3238.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3419.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3402.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3315.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3188.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3034.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	2830.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2555.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2255.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	1986.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1782.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1659.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1579.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1494.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1416.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1370.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1321.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1239.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1127.	*	1	1125	138	0.	*	1	1740	213	0.	*	2	2355	288	0.
1	0515	64	1013.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	903.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	798.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	702.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	608.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	517.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	437.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	375.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	321.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	273.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	230.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	194.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

+ PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ 3419.	3.75	844.	211.	204.	204.
		(INCHES)	1.883	1.887	1.887
		(AC-FT)	419.	419.	419.
CUMULATIVE AREA =		4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .92

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	
1	0000	1	0.	*	1	0615	76	159.	*	1	1230	151	0.	*	1	1845	226	0.	*	1	2015	244	0.
1	0005	2	0.	*	1	0620	77	131.	*	1	1235	152	0.	*	1	1850	227	0.	*	1	2020	245	0.
1	0010	3	0.	*	1	0625	78	107.	*	1	1240	153	0.	*	1	1855	228	0.	*	1	2025	246	0.
1	0015	4	0.	*	1	0630	79	88.	*	1	1245	154	0.	*	1	1900	229	0.	*	1	2030	247	0.
1	0020	5	0.	*	1	0635	80	72.	*	1	1250	155	0.	*	1	1905	230	0.	*	1	2035	248	0.
1	0025	6	0.	*	1	0640	81	58.	*	1	1255	156	0.	*	1	1910	231	0.	*	1	2040	249	0.
1	0030	7	1.	*	1	0645	82	46.	*	1	1300	157	0.	*	1	1915	232	0.	*	1	2045	250	0.
1	0035	8	4.	*	1	0650	83	36.	*	1	1305	158	0.	*	1	1920	233	0.	*	1	2050	251	0.
1	0040	9	9.	*	1	0655	84	28.	*	1	1310	159	0.	*	1	1925	234	0.	*	1	2055	252	0.
1	0045	10	12.	*	1	0700	85	21.	*	1	1315	160	0.	*	1	1930	235	0.	*	1	2100	253	0.
1	0050	11	12.	*	1	0705	86	16.	*	1	1320	161	0.	*	1	1935	236	0.	*	1	2105	254	0.
1	0055	12	11.	*	1	0710	87	13.	*	1	1325	162	0.	*	1	1940	237	0.	*	1	2110	255	0.
1	0100	13	11.	*	1	0715	88	9.	*	1	1330	163	0.	*	1	1945	238	0.	*	1	2115	256	0.
1	0105	14	11.	*	1	0720	89	7.	*	1	1335	164	0.	*	1	1950	239	0.	*	1	2120	257	0.
1	0110	15	13.	*	1	0725	90	5.	*	1	1340	165	0.	*	1	1955	240	0.	*	1	2125	258	0.
1	0115	16	17.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.	*	1	2130	259	0.
1	0120	17	21.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.	*	1	2135	260	0.
1	0125	18	27.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.	*	1	2140	261	0.
1	0130	19	39.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.	*	1	2145	262	0.

1	0135	20	59.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	82.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	102.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	116.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	121.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	119.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	114.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	115.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	131.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	164.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	199.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	220.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	222.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	222.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	242.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	269.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	280.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	275.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	295.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	375.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	533.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	823.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1303.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1974.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2698.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3184.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3365.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3348.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3263.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3138.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	2987.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	2787.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2516.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2222.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	1957.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1756.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1635.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1556.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1473.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1396.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1350.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1303.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1221.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1111.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	999.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	890.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	788.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	693.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	600.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	510.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	431.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	370.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	317.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	269.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	227.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	191.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
		(CFS)				
+	3365.	3.75	830.	208.	200.	200.
		(INCHES)	1.853	1.857	1.857	1.857
		(AC-FT)	412.	413.	413.	413.
CUMULATIVE AREA =			4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1	0000	1		0.	*	1	0615	76		157.	*	1	1230	151		0.	*	1	1845	226		0.
1	0005	2		0.	*	1	0620	77		129.	*	1	1235	152		0.	*	1	1850	227		0.
1	0010	3		0.	*	1	0625	78		106.	*	1	1240	153		0.	*	1	1855	228		0.
1	0015	4		0.	*	1	0630	79		87.	*	1	1245	154		0.	*	1	1900	229		0.
1	0020	5		0.	*	1	0635	80		71.	*	1	1250	155		0.	*	1	1905	230		0.
1	0025	6		0.	*	1	0640	81		57.	*	1	1255	156		0.	*	1	1910	231		0.
1	0030	7	1.		*	1	0645	82		45.	*	1	1300	157		0.	*	1	1915	232		0.
1	0035	8	3.		*	1	0650	83		35.	*	1	1305	158		0.	*	1	1920	233		0.
1	0040	9	8.		*	1	0655	84		28.	*	1	1310	159		0.	*	1	1925	234		0.
1	0045	10	11.		*	1	0700	85		21.	*	1	1315	160		0.	*	1	1930	235		0.
1	0050	11	11.		*	1	0705	86		16.	*	1	1320	161		0.	*	1	1935	236		0.
1	0055	12	10.		*	1	0710	87		12.	*	1	1325	162		0.	*	1	1940	237		0.
1	0100	13	10.		*	1	0715	88		9.	*	1	1330	163		0.	*	1	1945	238		0.
1	0105	14	10.		*	1	0720	89		7.	*	1	1335	164		0.	*	1	1950	239		0.
1	0110	15	12.		*	1	0725	90		5.	*	1	1340	165		0.	*	1	1955	240		0.
1	0115	16	16.		*	1	0730	91		4.	*	1	1345	166		0.	*	1	2000	241		0.
1	0120	17	20.		*	1	0735	92		3.	*	1	1350	167		0.	*	1	2005	242		0.
1	0125	18	25.		*	1	0740	93		2.	*	1	1355	168		0.	*	1	2010	243		0.
1	0130	19	37.		*	1	0745	94		2.	*	1	1400	169		0.	*	1	2015	244		0.
1	0135	20	56.		*	1	0750	95		1.	*	1	1405	170		0.	*	1	2020	245		0.
1	0140	21	78.		*	1	0755	96		1.	*	1	1410	171		0.	*	1	2025	246		0.
1	0145	22	98.		*	1	0800	97		1.	*	1	1415	172		0.	*	1	2030	247		0.
1	0150	23	111.		*	1	0805	98		0.	*	1	1420	173		0.	*	1	2035	248		0.
1	0155	24	117.		*	1	0810	99		0.	*	1	1425	174		0.	*	1	2040	249		0.

1	0200	25	114.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	110.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	111.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	127.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	158.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	193.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	214.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	216.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	216.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	235.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	262.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	273.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	268.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	288.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	366.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	521.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	806.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1278.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1938.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2650.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3129.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3309.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3294.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3211.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3088.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	2940.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	2744.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2478.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2188.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	1927.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1730.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1611.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1533.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1452.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1376.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1332.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1285.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1205.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1096.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	986.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	878.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	777.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	683.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	592.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	503.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	425.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	365.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	313.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	265.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	224.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	189.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3309.	3.75	817.	205.	197.	197.
		(INCHES)	1.822	1.826	1.826	1.826
		(AC-FT)	405.	406.	406.	406.
CUMULATIVE AREA =			4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .70

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	112.	*	1	1230	151	0.	*	1	1845	226	0.				0.
1	0005	2	0.	*	1	0620	77	92.	*	1	1235	152	0.	*	1	1850	227	0.				0.
1	0010	3	0.	*	1	0625	78	76.	*	1	1240	153	0.	*	1	1855	228	0.				0.
1	0015	4	0.	*	1	0630	79	62.	*	1	1245	154	0.	*	1	1900	229	0.				0.
1	0020	5	0.	*	1	0635	80	51.	*	1	1250	155	0.	*	1	1905	230	0.				0.
1	0025	6	0.	*	1	0640	81	41.	*	1	1255	156	0.	*	1	1910	231	0.				0.
1	0030	7	0.	*	1	0645	82	32.	*	1	1300	157	0.	*	1	1915	232	0.				0.
1	0035	8	0.	*	1	0650	83	25.	*	1	1305	158	0.	*	1	1920	233	0.				0.
1	0040	9	0.	*	1	0655	84	20.	*	1	1310	159	0.	*	1	1925	234	0.				0.
1	0045	10	0.	*	1	0700	85	15.	*	1	1315	160	0.	*	1	1930	235	0.				0.
1	0050	11	0.	*	1	0705	86	12.	*	1	1320	161	0.	*	1	1935	236	0.				0.
1	0055	12	0.	*	1	0710	87	9.	*	1	1325	162	0.	*	1	1940	237	0.				0.
1	0100	13	0.	*	1	0715	88	7.	*	1	1330	163	0.	*	1	1945	238	0.				0.
1	0105	14	0.	*	1	0720	89	5.	*	1	1335	164	0.	*	1	1950	239	0.				0.
1	0110	15	0.	*	1	0725	90	4.	*	1	1340	165	0.	*	1	1955	240	0.				0.
1	0115	16	0.	*	1	0730	91	3.	*	1	1345	166	0.	*	1	2000	241	0.				0.
1	0120	17	0.	*	1	0735	92	2.	*	1	1350	167	0.	*	1	2005	242	0.				0.
1	0125	18	1.	*	1	0740	93	1.	*	1	1355	168	0.	*	1	2010	243	0.				0.
1	0130	19	4.	*	1	0745	94	1.	*	1	1400	169	0.	*	1	2015	244	0.				0.
1	0135	20	9.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.				0.
1	0140	21	17.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.				0.
1	0145	22	25.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030	247	0.				0.
1	0150	23	32.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.				0.
1	0155	24	36.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.				0.
1	0200	25	37.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.				0.
1	0205	26	37.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.				0.
1	0210	27	39.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.				0.
1	0215	28	47.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.				0.
1	0220	29	64.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.				0.

1	0225	30	83.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	96.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	99.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	101.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	113.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	130.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	137.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	137.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	150.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	197.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	290.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	467.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	769.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1204.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	1689.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	2026.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	2164.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	2171.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	2130.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	2060.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	1972.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	1850.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	1678.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	1488.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	1316.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1187.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1110.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1062.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1009.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	960.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	932.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	903.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	848.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	774.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	697.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	622.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	551.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	486.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	421.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	358.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	303.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	260.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	223.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	189.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	160.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	135.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	2171.	3.83	536.	134.	129.	129.
		(INCHES)	1.197	1.197	1.197	1.197
		(AC-FT)	266.	266.	266.	266.
CUMULATIVE AREA =			4.17 SQ MI			

HYDROGRAPH AT STATION CP3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	78.	*	1	1230	151	0.	*	1	1845	226	0.				0.
1	0005	2	0.	*	1	0620	77	65.	*	1	1235	152	0.	*	1	1850	227	0.				0.
1	0010	3	0.	*	1	0625	78	53.	*	1	1240	153	0.	*	1	1855	228	0.				0.
1	0015	4	0.	*	1	0630	79	44.	*	1	1245	154	0.	*	1	1900	229	0.				0.
1	0020	5	0.	*	1	0635	80	36.	*	1	1250	155	0.	*	1	1905	230	0.				0.
1	0025	6	0.	*	1	0640	81	29.	*	1	1255	156	0.	*	1	1910	231	0.				0.
1	0030	7	0.	*	1	0645	82	23.	*	1	1300	157	0.	*	1	1915	232	0.				0.
1	0035	8	0.	*	1	0650	83	18.	*	1	1305	158	0.	*	1	1920	233	0.				0.
1	0040	9	0.	*	1	0655	84	14.	*	1	1310	159	0.	*	1	1925	234	0.				0.
1	0045	10	0.	*	1	0700	85	11.	*	1	1315	160	0.	*	1	1930	235	0.				0.
1	0050	11	0.	*	1	0705	86	8.	*	1	1320	161	0.	*	1	1935	236	0.				0.
1	0055	12	0.	*	1	0710	87	6.	*	1	1325	162	0.	*	1	1940	237	0.				0.
1	0100	13	0.	*	1	0715	88	5.	*	1	1330	163	0.	*	1	1945	238	0.				0.
1	0105	14	0.	*	1	0720	89	4.	*	1	1335	164	0.	*	1	1950	239	0.				0.
1	0110	15	0.	*	1	0725	90	3.	*	1	1340	165	0.	*	1	1955	240	0.				0.
1	0115	16	0.	*	1	0730	91	2.	*	1	1345	166	0.	*	1	2000	241	0.				0.
1	0120	17	0.	*	1	0735	92	1.	*	1	1350	167	0.	*	1	2005	242	0.				0.
1	0125	18	0.	*	1	0740	93	1.	*	1	1355	168	0.	*	1	2010	243	0.				0.
1	0130	19	0.	*	1	0745	94	1.	*	1	1400	169	0.	*	1	2015	244	0.				0.
1	0135	20	0.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.				0.
1	0140	21	0.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025	246	0.				0.
1	0145	22	1.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030	247	0.				0.
1	0150	23	2.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.				0.
1	0155	24	3.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.				0.
1	0200	25	3.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.				0.
1	0205	26	4.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.				0.
1	0210	27	5.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.				0.
1	0215	28	7.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.				0.
1	0220	29	13.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.				0.
1	0225	30	21.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.				0.
1	0230	31	27.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.				0.
1	0235	32	31.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.				0.
1	0240	33	34.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.				0.
1	0245	34	40.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.				0.

1	0250	35	49.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	54.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	56.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	63.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	89.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	140.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	242.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	423.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	697.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	1013.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	1243.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	1348.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	1365.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	1350.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	1316.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	1268.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	1198.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	1093.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	974.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	867.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	786.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	740.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	712.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	680.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	650.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	634.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	616.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	581.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	531.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	480.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	430.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	381.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	336.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	292.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	249.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	211.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	181.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	155.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	132.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	111.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	94.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW
 + (CFS) (HR) 6-HR 24-HR 72-HR 24.92-HR
 + 1365. 3.83 (CFS) 339. 85. 82. 82.
 (INCHES) .757 .757 .757 .757
 (AC-FT) 168. 168. 168. 168.

CUMULATIVE AREA = 4.17 SQ MI

149 KK

 *
 * CPSB *
 *

151 KO

OUTPUT CONTROL VARIABLES

IPRNT 1 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

152 HC

HYDROGRAPH COMBINATION

ICOMP 6 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION CPSB
 SUM OF 6 HYDROGRAPHS
 PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0615	76	209.	*	1	1230	151	0.	*	1	1845	226	0.	
1	0005	2	0.	*	1	0620	77	173.	*	1	1235	152	0.	*	1	1850	227	0.	
1	0010	3	0.	*	1	0625	78	142.	*	1	1240	153	0.	*	1	1855	228	0.	
1	0015	4	1.	*	1	0630	79	116.	*	1	1245	154	0.	*	1	1900	229	0.	
1	0020	5	2.	*	1	0635	80	95.	*	1	1250	155	0.	*	1	1905	230	0.	
1	0025	6	4.	*	1	0640	81	77.	*	1	1255	156	0.	*	1	1910	231	0.	
1	0030	7	7.	*	1	0645	82	62.	*	1	1300	157	0.	*	1	1915	232	0.	
1	0035	8	10.	*	1	0650	83	49.	*	1	1305	158	0.	*	1	1920	233	0.	
1	0040	9	16.	*	1	0655	84	39.	*	1	1310	159	0.	*	1	1925	234	0.	
1	0045	10	21.	*	1	0700	85	30.	*	1	1315	160	0.	*	1	1930	235	0.	
1	0050	11	24.	*	1	0705	86	23.	*	1	1320	161	0.	*	1	1935	236	0.	
1	0055	12	24.	*	1	0710	87	18.	*	1	1325	162	0.	*	1	1940	237	0.	
1	0100	13	23.	*	1	0715	88	14.	*	1	1330	163	0.	*	1	1945	238	0.	
1	0105	14	22.	*	1	0720	89	10.	*	1	1335	164	0.	*	1	1950	239	0.	
1	0110	15	24.	*	1	0725	90	8.	*	1	1340	165	0.	*	1	1955	240	0.	
1	0115	16	28.	*	1	0730	91	6.	*	1	1345	166	0.	*	1	2000	241	0.	
1	0120	17	33.	*	1	0735	92	4.	*	1	1350	167	0.	*	1	2005	242	0.	
1	0125	18	41.	*	1	0740	93	3.	*	1	1355	168	0.	*	1	2010	243	0.	

1	0130	19	53.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.
1	0135	20	74.	*	1	0750	95	2.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	100.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	127.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	149.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	160.	*	1	0810	99	1.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	162.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	157.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	155.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	165.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	193.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	233.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	267.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	283.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	288.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	298.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	320.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	340.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	348.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	362.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	419.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	555.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	838.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1332.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	2064.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2907.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3573.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3921.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3985.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3891.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3738.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3552.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3327.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	3049.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2730.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2420.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	2165.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1987.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1868.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1771.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1683.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1611.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1546.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1466.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1354.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1226.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	1097.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	976.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	863.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	757.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	655.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	562.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	478.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	409.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	349.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	296.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	249.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW		TIME		MAXIMUM AVERAGE FLOW			
+ (CFS)		(HR)		6-HR	24-HR	72-HR	24.92-HR
		(CPS)					
+ 3985.		3.83		987.	247.	238.	238.
		(INCHES)		2.089	2.095	2.095	2.095
		(AC-FT)		489.	491.	491.	491.
CUMULATIVE AREA =				4.39 SQ MI			

HYDROGRAPH AT STATION CP5B																						
SUM OF 6 HYDROGRAPHS																						
PLAN 1, RATIO = .99																						
.....																						
DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
					*						*						*					*
1	0000	1		0.	*	1	0615	76	206.	*	1	1230	151	0.	*	1	1845	226	0.			*
1	0005	2		0.	*	1	0620	77	171.	*	1	1235	152	0.	*	1	1850	227	0.			*
1	0010	3		0.	*	1	0625	78	140.	*	1	1240	153	0.	*	1	1855	228	0.			*
1	0015	4		1.	*	1	0630	79	115.	*	1	1245	154	0.	*	1	1900	229	0.			*
1	0020	5		2.	*	1	0635	80	94.	*	1	1250	155	0.	*	1	1905	230	0.			*
1	0025	6		4.	*	1	0640	81	77.	*	1	1255	156	0.	*	1	1910	231	0.			*
1	0030	7		6.	*	1	0645	82	61.	*	1	1300	157	0.	*	1	1915	232	0.			*
1	0035	8		10.	*	1	0650	83	49.	*	1	1305	158	0.	*	1	1920	233	0.			*
1	0040	9		15.	*	1	0655	84	38.	*	1	1310	159	0.	*	1	1925	234	0.			*
1	0045	10		20.	*	1	0700	85	30.	*	1	1315	160	0.	*	1	1930	235	0.			*
1	0050	11		23.	*	1	0705	86	23.	*	1	1320	161	0.	*	1	1935	236	0.			*
1	0055	12		22.	*	1	0710	87	18.	*	1	1325	162	0.	*	1	1940	237	0.			*
1	0100	13		21.	*	1	0715	88	13.	*	1	1330	163	0.	*	1	1945	238	0.			*
1	0105	14		21.	*	1	0720	89	10.	*	1	1335	164	0.	*	1	1950	239	0.			*
1	0110	15		23.	*	1	0725	90	8.	*	1	1340	165	0.	*	1	1955	240	0.			*
1	0115	16		26.	*	1	0730	91	6.	*	1	1345	166	0.	*	1	2000	241	0.			*
1	0120	17		32.	*	1	0735	92	4.	*	1	1350	167	0.	*	1	2005	242	0.			*
1	0125	18		39.	*	1	0740	93	3.	*	1	1355	168	0.	*	1	2010	243	0.			*
1	0130	19		51.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.			*
1	0135	20		71.	*	1	0750	95	2.	*	1	1405	170	0.	*	1	2020	245	0.			*
1	0140	21		96.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.			*
1	0145	22	123.	*	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.			*
1	0150	23	144.	*	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.			*

1	0155	24	155.	*	1	0810	99	1.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	157.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	153.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	150.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	160.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	188.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	227.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	260.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	276.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	281.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	291.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	313.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	333.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	341.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	354.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	410.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	544.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	819.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1305.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	2029.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2855.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3524.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3875.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3927.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3832.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3684.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3504.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3282.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	3006.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2693.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2386.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	2134.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1961.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1844.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1749.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1662.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1591.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1527.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1447.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1337.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1210.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	1084.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	964.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	853.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	748.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	648.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	555.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	473.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	404.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	345.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	293.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	246.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW TIME
 + (CFS) (HR)
 (CFS)
 + 3927. 3.83
 (INCHES) 2.058 244. 235. 235.
 (AC-FT) 482. 484. 484. 484.

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION CP5B
 SUM OF 6 HYDROGRAPHS
 PLAN 1, RATIO = .98

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	
1	0000	1		0.	*	1	0615	76	204.	*	1	1230	151	0.	*	1	1845	226	0.				0.	*
1	0005	2		0.	*	1	0620	77	169.	*	1	1235	152	0.	*	1	1850	227	0.				0.	*
1	0010	3		0.	*	1	0625	78	138.	*	1	1240	153	0.	*	1	1855	228	0.				0.	*
1	0015	4		1.	*	1	0630	79	114.	*	1	1245	154	0.	*	1	1900	229	0.				0.	*
1	0020	5		2.	*	1	0635	80	93.	*	1	1250	155	0.	*	1	1905	230	0.				0.	*
1	0025	6		4.	*	1	0640	81	76.	*	1	1255	156	0.	*	1	1910	231	0.				0.	*
1	0030	7		6.	*	1	0645	82	61.	*	1	1300	157	0.	*	1	1915	232	0.				0.	*
1	0035	8		9.	*	1	0650	83	48.	*	1	1305	158	0.	*	1	1920	233	0.				0.	*
1	0040	9		13.	*	1	0655	84	38.	*	1	1310	159	0.	*	1	1925	234	0.				0.	*
1	0045	10		18.	*	1	0700	85	29.	*	1	1315	160	0.	*	1	1930	235	0.				0.	*
1	0050	11		21.	*	1	0705	86	23.	*	1	1320	161	0.	*	1	1935	236	0.				0.	*
1	0055	12		21.	*	1	0710	87	17.	*	1	1325	162	0.	*	1	1940	237	0.				0.	*
1	0100	13		19.	*	1	0715	88	13.	*	1	1330	163	0.	*	1	1945	238	0.				0.	*
1	0105	14		19.	*	1	0720	89	10.	*	1	1335	164	0.	*	1	1950	239	0.				0.	*
1	0110	15		21.	*	1	0725	90	8.	*	1	1340	165	0.	*	1	1955	240	0.				0.	*
1	0115	16		25.	*	1	0730	91	6.	*	1	1345	166	0.	*	1	2000	241	0.				0.	*
1	0120	17		30.	*	1	0735	92	4.	*	1	1350	167	0.	*	1	2005	242	0.				0.	*
1	0125	18		37.	*	1	0740	93	3.	*	1	1355	168	0.	*	1	2010	243	0.				0.	*
1	0130	19		49.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.				0.	*
1	0135	20		68.	*	1	0750	95	2.	*	1	1405	170	0.	*	1	2020	245	0.				0.	*
1	0140	21		93.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.				0.	*
1	0145	22		119.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.				0.	*
1	0150	23		139.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.				0.	*
1	0155	24		150.	*	1	0810	99	1.	*	1	1425	174	0.	*	1	2040	249	0.				0.	*
1	0200	25		152.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.				0.	*
1	0205	26		148.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.				0.	*
1	0210	27		146.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.				0.	*
1	0215	28		156.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.				0.	*

1	0220	29	183.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	221.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	254.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	270.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.
1	0240	33	274.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.
1	0245	34	285.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	306.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	325.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	333.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	347.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	402.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	533.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	804.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1282.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1992.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2812.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3462.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3805.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3870.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3779.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3632.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3453.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3237.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2966.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2657.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2356.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	2107.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1934.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1819.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1726.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1640.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1570.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1508.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1429.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1321.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1196.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	1071.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	952.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	842.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	739.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	640.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	548.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	467.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	399.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	341.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	289.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	243.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	3870.	3.83	(CFS)			
			958.	240.	231.	231.
		(INCHES)	2.027	2.033	2.033	2.033
		(AC-FT)	475.	476.	476.	476.
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .94

DA	MON	HRMN	ORD		FLOW	*		DA	MON	HRMN	ORD		FLOW	*		DA	MON	HRMN	ORD		FLOW	*			
1		0000	1		0.	*	1		0615	76		194.	*	1		1230	151		0.	*	1		1845	226	0.
1		0005	2		0.	*	1		0620	77		160.	*	1		1235	152		0.	*	1		1850	227	0.
1		0010	3		0.	*	1		0625	78		132.	*	1		1240	153		0.	*	1		1855	228	0.
1		0015	4		1.	*	1		0630	79		108.	*	1		1245	154		0.	*	1		1900	229	0.
1		0020	5		2.	*	1		0635	80		89.	*	1		1250	155		0.	*	1		1905	230	0.
1		0025	6		3.	*	1		0640	81		72.	*	1		1255	156		0.	*	1		1910	231	0.
1		0030	7		5.	*	1		0645	82		58.	*	1		1300	157		0.	*	1		1915	232	0.
1		0035	8		7.	*	1		0650	83		46.	*	1		1305	158		0.	*	1		1920	233	0.
1		0040	9		9.	*	1		0655	84		36.	*	1		1310	159		0.	*	1		1925	234	0.
1		0045	10		12.	*	1		0700	85		28.	*	1		1315	160		0.	*	1		1930	235	0.
1		0050	11		15.	*	1		0705	86		22.	*	1		1320	161		0.	*	1		1935	236	0.
1		0055	12		15.	*	1		0710	87		17.	*	1		1325	162		0.	*	1		1940	237	0.
1		0100	13		14.	*	1		0715	88		13.	*	1		1330	163		0.	*	1		1945	238	0.
1		0105	14		14.	*	1		0720	89		10.	*	1		1335	164		0.	*	1		1950	239	0.
1		0110	15		16.	*	1		0725	90		7.	*	1		1340	165		0.	*	1		1955	240	0.
1		0115	16		19.	*	1		0730	91		5.	*	1		1345	166		0.	*	1		2000	241	0.
1		0120	17		23.	*	1		0735	92		4.	*	1		1350	167		0.	*	1		2005	242	0.
1		0125	18		29.	*	1		0740	93		3.	*	1		1355	168		0.	*	1		2010	243	0.
1		0130	19		40.	*	1		0745	94		2.	*	1		1400	169		0.	*	1		2015	244	0.
1		0135	20		56.	*	1		0750	95		2.	*	1		1405	170		0.	*	1		2020	245	0.
1		0140	21		79.	*	1		0755	96		1.	*	1		1410	171		0.	*	1		2025	246	0.
1		0145	22		102.	*	1		0800	97		1.	*	1		1415	172		0.	*	1		2030	247	0.
1		0150	23		121.	*	1		0805	98		1.	*	1		1420	173		0.	*	1		2035	248	0.
1		0155	24		131.	*	1		0810	99		0.	*	1		1425	174		0.	*	1		2040	249	0.
1		0200	25		133.	*	1		0815	100		0.	*	1		1430	175		0.	*	1		2045	250	0.
1		0205	26		130.	*	1		0820	101		0.	*	1		1435	176		0.	*	1		2050	251	0.
1		0210	27		128.	*	1		0825	102		0.	*	1		1440	177		0.	*	1		2055	252	0.
1		0215	28		138.	*	1		0830	103		0.	*	1		1445	178		0.	*	1		2100	253	0.
1		0220	29		163.	*	1		0835	104		0.	*	1		1450	179		0.	*	1		2105	254	0.
1		0225	30		197.	*	1		0840	105		0.	*	1		1455	180		0.	*	1		2110	255	0.
1		0230	31		228.	*	1		0845	106		0.	*	1		1500	181		0.	*	1		2115	256	0.
1		0235	32		243.	*	1		0850	107		0.	*	1		1505	182		0.	*	1		2120	257	0.
1		0240	33		248.	*	1		0855	108		0.	*	1		1510	183		0.	*	1		2125	258	0.

1	0245	34	258.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	277.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	296.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	304.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	317.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	368.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	490.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	737.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1183.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1850.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2621.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3247.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3571.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3636.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3556.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3421.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3255.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3053.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2801.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2510.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2227.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1993.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1830.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1722.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1634.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1554.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1488.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1430.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1356.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1254.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1136.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	1017.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	905.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	801.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	703.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	609.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	521.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	444.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	379.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	324.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	275.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	232.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3636.	3.83	899.	225.	217.	217.
		(INCHES)	1.904	1.909	1.909	1.909
		(AC-FT)	446.	447.	447.	447.
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	
1	0000	1	0.	*	1	0615	76	191.	*	1	1230	151	0.	*	1	1845	226	0.	*	1	0000	1	0.	*
1	0005	2	0.	*	1	0620	77	158.	*	1	1235	152	0.	*	1	1850	227	0.	*	1	0005	2	0.	*
1	0010	3	0.	*	1	0625	78	130.	*	1	1240	153	0.	*	1	1855	228	0.	*	1	0010	3	0.	*
1	0015	4	1.	*	1	0630	79	107.	*	1	1245	154	0.	*	1	1900	229	0.	*	1	0015	4	1.	*
1	0020	5	2.	*	1	0635	80	88.	*	1	1250	155	0.	*	1	1905	230	0.	*	1	0020	5	2.	*
1	0025	6	3.	*	1	0640	81	71.	*	1	1255	156	0.	*	1	1910	231	0.	*	1	0025	6	3.	*
1	0030	7	5.	*	1	0645	82	57.	*	1	1300	157	0.	*	1	1915	232	0.	*	1	0030	7	5.	*
1	0035	8	7.	*	1	0650	83	45.	*	1	1305	158	0.	*	1	1920	233	0.	*	1	0035	8	7.	*
1	0040	9	9.	*	1	0655	84	36.	*	1	1310	159	0.	*	1	1925	234	0.	*	1	0040	9	9.	*
1	0045	10	11.	*	1	0700	85	28.	*	1	1315	160	0.	*	1	1930	235	0.	*	1	0045	10	11.	*
1	0050	11	13.	*	1	0705	86	21.	*	1	1320	161	0.	*	1	1935	236	0.	*	1	0050	11	13.	*
1	0055	12	13.	*	1	0710	87	16.	*	1	1325	162	0.	*	1	1940	237	0.	*	1	0055	12	13.	*
1	0100	13	13.	*	1	0715	88	13.	*	1	1330	163	0.	*	1	1945	238	0.	*	1	0100	13	13.	*
1	0105	14	13.	*	1	0720	89	10.	*	1	1335	164	0.	*	1	1950	239	0.	*	1	0105	14	13.	*
1	0110	15	14.	*	1	0725	90	7.	*	1	1340	165	0.	*	1	1955	240	0.	*	1	0110	15	14.	*
1	0115	16	17.	*	1	0730	91	5.	*	1	1345	166	0.	*	1	2000	241	0.	*	1	0115	16	17.	*
1	0120	17	21.	*	1	0735	92	4.	*	1	1350	167	0.	*	1	2005	242	0.	*	1	0120	17	21.	*
1	0125	18	27.	*	1	0740	93	3.	*	1	1355	168	0.	*	1	2010	243	0.	*	1	0125	18	27.	*
1	0130	19	38.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.	*	1	0130	19	38.	*
1	0135	20	54.	*	1	0750	95	2.	*	1	1405	170	0.	*	1	2020	245	0.	*	1	0135	20	54.	*
1	0140	21	75.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.	*	1	0140	21	75.	*
1	0145	22	98.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.	*	1	0145	22	98.	*
1	0150	23	116.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.	*	1	0150	23	116.	*
1	0155	24	126.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.	*	1	0155	24	126.	*
1	0200	25	129.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.	*	1	0200	25	129.	*
1	0205	26	126.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.	*	1	0205	26	126.	*
1	0210	27	124.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.	*	1	0210	27	124.	*
1	0215	28	134.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.	*	1	0215	28	134.	*
1	0220	29	158.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.	*	1	0220	29	158.	*
1	0225	30	192.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.	*	1	0225	30	192.	*
1	0230	31	222.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.	*	1	0230	31	222.	*
1	0235	32	236.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.	*	1	0235	32	236.	*
1	0240	33	241.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.	*	1	0240	33	241.	*
1	0245	34	251.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.	*	1	0245	34	251.	*
1	0250	35	271.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.	*	1	0250	35	271.	*
1	0255	36	289.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.	*	1	0255	36	289.	*
1	0300	37	296.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.	*	1	0300	37	296.	*
1	0305	38	309.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.	*	1	0305	38	309.	*

1	0310	39	360.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	479.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	723.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	1159.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	1813.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	2571.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3185.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3518.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3579.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3498.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3367.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3206.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	3006.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2758.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2473.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2194.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1965.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1804.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1698.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1611.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1533.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1468.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1410.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1337.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1237.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1121.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	1004.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	893.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	791.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	694.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	601.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	515.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	438.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	375.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	320.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	272.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	229.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	3579.	3.83	(CFS)	885.	222.	214.
			(INCHES)	1.873	1.877	1.877
			(AC-FT)	439.	440.	440.
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .92

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*
1	0000	1		0.	*	1	0615	76		189.	*	1	1230	151		0.	*	1	1845	226		0.	*
1	0005	2		0.	*	1	0620	77		156.	*	1	1235	152		0.	*	1	1850	227		0.	*
1	0010	3		0.	*	1	0625	78		129.	*	1	1240	153		0.	*	1	1855	228		0.	*
1	0015	4		1.	*	1	0630	79		106.	*	1	1245	154		0.	*	1	1900	229		0.	*
1	0020	5		2.	*	1	0635	80		86.	*	1	1250	155		0.	*	1	1905	230		0.	*
1	0025	6		3.	*	1	0640	81		70.	*	1	1255	156		0.	*	1	1910	231		0.	*
1	0030	7		5.	*	1	0645	82		57.	*	1	1300	157		0.	*	1	1915	232		0.	*
1	0035	8		6.	*	1	0650	83		45.	*	1	1305	158		0.	*	1	1920	233		0.	*
1	0040	9		8.	*	1	0655	84		35.	*	1	1310	159		0.	*	1	1925	234		0.	*
1	0045	10		10.	*	1	0700	85		27.	*	1	1315	160		0.	*	1	1930	235		0.	*
1	0050	11		12.	*	1	0705	86		21.	*	1	1320	161		0.	*	1	1935	236		0.	*
1	0055	12		12.	*	1	0710	87		16.	*	1	1325	162		0.	*	1	1940	237		0.	*
1	0100	13		12.	*	1	0715	88		12.	*	1	1330	163		0.	*	1	1945	238		0.	*
1	0105	14		12.	*	1	0720	89		9.	*	1	1335	164		0.	*	1	1950	239		0.	*
1	0110	15		13.	*	1	0725	90		7.	*	1	1340	165		0.	*	1	1955	240		0.	*
1	0115	16		16.	*	1	0730	91		5.	*	1	1345	166		0.	*	1	2000	241		0.	*
1	0120	17		20.	*	1	0735	92		4.	*	1	1350	167		0.	*	1	2005	242		0.	*
1	0125	18		26.	*	1	0740	93		3.	*	1	1355	168		0.	*	1	2010	243		0.	*
1	0130	19		35.	*	1	0745	94		2.	*	1	1400	169		0.	*	1	2015	244		0.	*
1	0135	20		51.	*	1	0750	95		2.	*	1	1405	170		0.	*	1	2020	245		0.	*
1	0140	21		72.	*	1	0755	96		1.	*	1	1410	171		0.	*	1	2025	246		0.	*
1	0145	22		94.	*	1	0800	97		1.	*	1	1415	172		0.	*	1	2030	247		0.	*
1	0150	23		112.	*	1	0805	98		1.	*	1	1420	173		0.	*	1	2035	248		0.	*
1	0155	24		122.	*	1	0810	99		0.	*	1	1425	174		0.	*	1	2040	249		0.	*
1	0200	25		124.	*	1	0815	100		0.	*	1	1430	175		0.	*	1	2045	250		0.	*
1	0205	26		121.	*	1	0820	101		0.	*	1	1435	176		0.	*	1	2050	251		0.	*
1	0210	27		120.	*	1	0825	102		0.	*	1	1440	177		0.	*	1	2055	252		0.	*
1	0215	28		129.	*	1	0830	103		0.	*	1	1445	178		0.	*	1	2100	253		0.	*
1	0220	29		153.	*	1	0835	104		0.	*	1	1450	179		0.	*	1	2105	254		0.	*
1	0225	30		186.	*	1	0840	105		0.	*	1	1455	180		0.	*	1	2110	255		0.	*
1	0230	31		215.	*	1	0845	106		0.	*	1	1500	181		0.	*	1	2115	256		0.	*
1	0235	32		230.	*	1	0850	107		0.	*	1	1505	182		0.	*	1	2120	257		0.	*
1	0240	33		235.	*	1	0855	108		0.	*	1	1510	183		0.	*	1	2125	258		0.	*
1	0245	34		245.	*	1	0900	109		0.	*	1	1515	184		0.	*	1	2130	259		0.	*
1	0250	35		264.	*	1	0905	110		0.	*	1	1520	185		0.	*	1	2135	260		0.	*
1	0255	36		282.	*	1	0910	111		0.	*	1	1525	186		0.	*	1	2140	261		0.	*
1	0300	37		289.	*	1	0915	112		0.	*	1	1530	187		0.	*	1	2145	262		0.	*
1	0305	38		302.	*	1	0920	113		0.	*	1	1535	188		0.	*	1	2150	263		0.	*
1	0310	39		351.	*	1	0925	114		0.	*	1	1540	189		0.	*	1	2155	264		0.	*
1	0315	40		468.	*	1	0930	115		0.	*	1	1545	190		0.	*	1	2200	265		0.	*
1	0320	41		706.	*	1	0935	116		0.	*	1	1550	191		0.	*	1	2205	266		0.	*
1	0325	42		1135.	*	1	0940	117		0.	*	1	1555	192		0.	*	1	2210	267		0.	*
1	0330	43		1780.	*	1	0945	118		0.	*	1	1600	193		0.	*	1	2215	268		0.	*

1	0335	44	2527.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	3136.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	3455.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	3521.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	3444.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	3315.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3156.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	2961.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2717.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2437.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2163.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1935.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1779.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1674.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1589.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1511.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1447.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1391.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1319.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1220.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1105.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	990.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	881.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	780.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	684.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	593.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	508.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	433.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	370.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	316.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	268.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	226.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	3521.	3.83	870.	218.	210.
		(INCHES)	1.842	1.847	1.847
		(AC-FT)	432.	433.	433.
CUMULATIVE AREA =			4.39 SQ MI		

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	
1	0000	1		0.	*	1	0615	76	186.	*	1	1230	151	0.	*	1	1845	226	0.	*	1	0000	1
1	0005	2		0.	*	1	0620	77	154.	*	1	1235	152	0.	*	1	1850	227	0.	*	1	0005	2
1	0010	3		0.	*	1	0625	78	127.	*	1	1240	153	0.	*	1	1855	228	0.	*	1	0010	3
1	0015	4		1.	*	1	0630	79	104.	*	1	1245	154	0.	*	1	1900	229	0.	*	1	0015	4
1	0020	5		2.	*	1	0635	80	85.	*	1	1250	155	0.	*	1	1905	230	0.	*	1	0020	5
1	0025	6		3.	*	1	0640	81	69.	*	1	1255	156	0.	*	1	1910	231	0.	*	1	0025	6
1	0030	7		5.	*	1	0645	82	56.	*	1	1300	157	0.	*	1	1915	232	0.	*	1	0030	7
1	0035	8		6.	*	1	0650	83	44.	*	1	1305	158	0.	*	1	1920	233	0.	*	1	0035	8
1	0040	9		7.	*	1	0655	84	35.	*	1	1310	159	0.	*	1	1925	234	0.	*	1	0040	9
1	0045	10		9.	*	1	0700	85	27.	*	1	1315	160	0.	*	1	1930	235	0.	*	1	0045	10
1	0050	11		11.	*	1	0705	86	21.	*	1	1320	161	0.	*	1	1935	236	0.	*	1	0050	11
1	0055	12		11.	*	1	0710	87	16.	*	1	1325	162	0.	*	1	1940	237	0.	*	1	0055	12
1	0100	13		11.	*	1	0715	88	12.	*	1	1330	163	0.	*	1	1945	238	0.	*	1	0100	13
1	0105	14		10.	*	1	0720	89	9.	*	1	1335	164	0.	*	1	1950	239	0.	*	1	0105	14
1	0110	15		12.	*	1	0725	90	7.	*	1	1340	165	0.	*	1	1955	240	0.	*	1	0110	15
1	0115	16		15.	*	1	0730	91	5.	*	1	1345	166	0.	*	1	2000	241	0.	*	1	0115	16
1	0120	17		18.	*	1	0735	92	4.	*	1	1350	167	0.	*	1	2005	242	0.	*	1	0120	17
1	0125	18		24.	*	1	0740	93	3.	*	1	1355	168	0.	*	1	2010	243	0.	*	1	0125	18
1	0130	19		33.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.	*	1	0130	19
1	0135	20		48.	*	1	0750	95	2.	*	1	1405	170	0.	*	1	2020	245	0.	*	1	0135	20
1	0140	21		69.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.	*	1	0140	21
1	0145	22		90.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.	*	1	0145	22
1	0150	23		107.	*	1	0805	98	1.	*	1	1420	173	0.	*	1	2035	248	0.	*	1	0150	23
1	0155	24		117.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.	*	1	0155	24
1	0200	25		120.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.	*	1	0200	25
1	0205	26		117.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.	*	1	0205	26
1	0210	27		116.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.	*	1	0210	27
1	0215	28		125.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.	*	1	0215	28
1	0220	29		148.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.	*	1	0220	29
1	0225	30		180.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.	*	1	0225	30
1	0230	31		209.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.	*	1	0230	31
1	0235	32		223.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.	*	1	0235	32
1	0240	33		228.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.	*	1	0240	33
1	0245	34		238.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.	*	1	0245	34
1	0250	35		257.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.	*	1	0250	35
1	0255	36		274.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.	*	1	0255	36
1	0300	37		282.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.	*	1	0300	37
1	0305	38		295.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.	*	1	0305	38
1	0310	39		343.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.	*	1	0310	39
1	0315	40		457.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.	*	1	0315	40
1	0320	41		691.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.	*	1	0320	41
1	0325	42		1111.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.	*	1	0325	42
1	0330	43		1743.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.	*	1	0330	43
1	0335	44		2479.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.	*	1	0335	44
1	0340	45		3075.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.	*	1	0340	45
1	0345	46		3399.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.	*	1	0345	46
1	0350	47		3464.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.	*	1	0350	47
1	0355	48		3388.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.	*	1	0355	48

1	0400	49	3262.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	3107.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	2915.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	2675.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	2400.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	2130.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1908.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1752.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1649.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1566.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1490.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	1427.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	1371.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	1301.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	1204.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	1091.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	977.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	870.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	770.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	675.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	585.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	501.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	427.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	365.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	312.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	264.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	223.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
3464.	3.83	856.	214.	207.	207.
		(INCHES)	1.812	1.816	1.816
		(AC-FT)	424.	425.	425.
CUMULATIVE AREA =		4.39 SQ MI			

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .70

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*
1	0000	1	0.	*	1	0615	76	135.	*	1	1230	151	0.	*	1	1845	226	0.	*				
1	0005	2	0.	*	1	0620	77	112.	*	1	1235	152	0.	*	1	1850	227	0.	*				
1	0010	3	0.	*	1	0625	78	92.	*	1	1240	153	0.	*	1	1855	228	0.	*				
1	0015	4	0.	*	1	0630	79	76.	*	1	1245	154	0.	*	1	1900	229	0.	*				
1	0020	5	1.	*	1	0635	80	62.	*	1	1250	155	0.	*	1	1905	230	0.	*				
1	0025	6	2.	*	1	0640	81	51.	*	1	1255	156	0.	*	1	1910	231	0.	*				
1	0030	7	2.	*	1	0645	82	41.	*	1	1300	157	0.	*	1	1915	232	0.	*				
1	0035	8	3.	*	1	0650	83	32.	*	1	1305	158	0.	*	1	1920	233	0.	*				
1	0040	9	2.	*	1	0655	84	25.	*	1	1310	159	0.	*	1	1925	234	0.	*				
1	0045	10	1.	*	1	0700	85	20.	*	1	1315	160	0.	*	1	1930	235	0.	*				
1	0050	11	0.	*	1	0705	86	15.	*	1	1320	161	0.	*	1	1935	236	0.	*				
1	0055	12	0.	*	1	0710	87	12.	*	1	1325	162	0.	*	1	1940	237	0.	*				
1	0100	13	0.	*	1	0715	88	9.	*	1	1330	163	0.	*	1	1945	238	0.	*				
1	0105	14	0.	*	1	0720	89	7.	*	1	1335	164	0.	*	1	1950	239	0.	*				
1	0110	15	0.	*	1	0725	90	5.	*	1	1340	165	0.	*	1	1955	240	0.	*				
1	0115	16	1.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.	*				
1	0120	17	1.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.	*				
1	0125	18	2.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.	*				
1	0130	19	4.	*	1	0745	94	2.	*	1	1400	169	0.	*	1	2015	244	0.	*				
1	0135	20	8.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.	*				
1	0140	21	13.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.	*				
1	0145	22	21.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.	*				
1	0150	23	29.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.	*				
1	0155	24	34.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.	*				
1	0200	25	37.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.	*				
1	0205	26	38.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.	*				
1	0210	27	39.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.	*				
1	0215	28	45.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.	*				
1	0220	29	57.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.	*				
1	0225	30	74.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.	*				
1	0230	31	90.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.	*				
1	0235	32	100.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.	*				
1	0240	33	105.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.	*				
1	0245	34	112.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.	*				
1	0250	35	124.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.	*				
1	0255	36	136.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.	*				
1	0300	37	142.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.	*				
1	0305	38	152.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.	*				
1	0310	39	181.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.	*				
1	0315	40	249.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.	*				
1	0320	41	383.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.	*				
1	0325	42	634.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.	*				
1	0330	43	1039.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.	*				
1	0335	44	1532.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.	*				
1	0340	45	1955.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.	*				
1	0345	46	2205.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.	*				
1	0350	47	2273.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.	*				
1	0355	48	2243.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.	*				
1	0400	49	2174.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.	*				
1	0405	50	2083.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.	*				
1	0410	51	1966.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.	*				
1	0415	52	1816.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.	*				
1	0420	53	1639.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.	*				

1	0425	54	1462.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	1314.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	1211.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	1143.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	1089.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	1040.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	999.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	963.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	918.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	852.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	775.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	696.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	621.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	551.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	485.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	421.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	360.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	306.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	262.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	224.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	191.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	161.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055	300	0.

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)	(CFS)				
+	2273.	3.83	562.	141.	135.	135.
		(INCHES)	1.190	1.191	1.191	1.191
		(AC-FT)	279.	279.	279.	279.
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION CP5B
SUM OF 6 HYDROGRAPHS
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	
1	0000	1	0.	*	1	0615	76	101.	*	1	1230	151	0.	*	1	1845	226	0.	*	1	2000	241	0.
1	0005	2	0.	*	1	0620	77	85.	*	1	1235	152	0.	*	1	1850	227	0.	*	1	2005	242	0.
1	0010	3	0.	*	1	0625	78	71.	*	1	1240	153	0.	*	1	1855	228	0.	*	1	2010	243	0.
1	0015	4	0.	*	1	0630	79	59.	*	1	1245	154	0.	*	1	1900	229	0.	*	1	2015	244	0.
1	0020	5	0.	*	1	0635	80	49.	*	1	1250	155	0.	*	1	1905	230	0.	*	1	2020	245	0.
1	0025	6	0.	*	1	0640	81	41.	*	1	1255	156	0.	*	1	1910	231	0.	*	1	2025	246	0.
1	0030	7	1.	*	1	0645	82	34.	*	1	1300	157	0.	*	1	1915	232	0.	*	1	2030	247	0.
1	0035	8	1.	*	1	0650	83	27.	*	1	1305	158	0.	*	1	1920	233	0.	*	1	2035	248	0.
1	0040	9	1.	*	1	0655	84	22.	*	1	1310	159	0.	*	1	1925	234	0.	*	1	2040	249	0.
1	0045	10	1.	*	1	0700	85	17.	*	1	1315	160	0.	*	1	1930	235	0.	*	1	2045	250	0.
1	0050	11	0.	*	1	0705	86	13.	*	1	1320	161	0.	*	1	1935	236	0.	*	1	2050	251	0.
1	0055	12	0.	*	1	0710	87	10.	*	1	1325	162	0.	*	1	1940	237	0.	*	1	2055	252	0.
1	0100	13	0.	*	1	0715	88	8.	*	1	1330	163	0.	*	1	1945	238	0.	*	1	2100	253	0.
1	0105	14	0.	*	1	0720	89	6.	*	1	1335	164	0.	*	1	1950	239	0.	*	1	2105	254	0.
1	0110	15	0.	*	1	0725	90	5.	*	1	1340	165	0.	*	1	1955	240	0.	*	1	2110	255	0.
1	0115	16	0.	*	1	0730	91	4.	*	1	1345	166	0.	*	1	2000	241	0.	*	1	2115	256	0.
1	0120	17	1.	*	1	0735	92	3.	*	1	1350	167	0.	*	1	2005	242	0.	*	1	2120	257	0.
1	0125	18	1.	*	1	0740	93	2.	*	1	1355	168	0.	*	1	2010	243	0.	*	1	2125	258	0.
1	0130	19	1.	*	1	0745	94	1.	*	1	1400	169	0.	*	1	2015	244	0.	*	1	2130	259	0.
1	0135	20	2.	*	1	0750	95	1.	*	1	1405	170	0.	*	1	2020	245	0.	*	1	2135	260	0.
1	0140	21	2.	*	1	0755	96	1.	*	1	1410	171	0.	*	1	2025	246	0.	*	1	2140	261	0.
1	0145	22	2.	*	1	0800	97	1.	*	1	1415	172	0.	*	1	2030	247	0.	*	1	2145	262	0.
1	0150	23	2.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	248	0.	*	1	2150	263	0.
1	0155	24	2.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040	249	0.	*	1	2155	264	0.
1	0200	25	2.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045	250	0.	*	1	2200	265	0.
1	0205	26	3.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050	251	0.	*	1	2205	266	0.
1	0210	27	4.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055	252	0.	*	1	2210	267	0.
1	0215	28	5.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100	253	0.	*	1	2215	268	0.
1	0220	29	8.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105	254	0.	*	1	2220	269	0.
1	0225	30	12.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110	255	0.	*	1	2225	270	0.
1	0230	31	18.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115	256	0.	*	1	2230	271	0.
1	0235	32	24.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120	257	0.	*	1	2235	272	0.
1	0240	33	30.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125	258	0.	*	1	2240	273	0.
1	0245	34	35.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130	259	0.	*	1	2245	274	0.
1	0250	35	40.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135	260	0.	*	1	2250	275	0.
1	0255	36	47.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140	261	0.	*	1	2255	276	0.
1	0300	37	54.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145	262	0.	*	1	2300	277	0.
1	0305	38	60.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150	263	0.	*	1	2305	278	0.
1	0310	39	70.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155	264	0.	*	1	2310	279	0.
1	0315	40	99.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200	265	0.	*	1	2315	280	0.
1	0320	41	172.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205	266	0.	*	1	2320	281	0.
1	0325	42	318.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210	267	0.	*	1	2325	282	0.
1	0330	43	563.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215	268	0.	*	1	2330	283	0.
1	0335	44	879.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220	269	0.					
1	0340	45	1171.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225	270	0.					
1	0345	46	1355.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230	271	0.					
1	0350	47	1421.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235	272	0.					
1	0355	48	1417.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240	273	0.					
1	0400	49	1385.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245	274	0.					
1	0405	50	1338.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250	275	0.					
1	0410	51	1274.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255	276	0.					
1	0415	52	1187.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300	277	0.					
1	0420	53	1079.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305	278	0.					
1	0425	54	968.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310	279	0.					
1	0430	55	874.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315	280	0.					
1	0435	56	808.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320	281	0.					
1	0440	57	766.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325	282	0.					
1	0445	58	734.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330	283	0.					

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
1421.	3.83	355.	89.	86.	86.
		(INCHES)	7.53	7.53	7.53
		(AC-FT)	176.	176.	176.
		CUMULATIVE AREA = 4.39 SQ MI			

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*                                     *
*                                EXDB                                *
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IPRNT      1  PRINT CONTROL
IPLOT      0  PLOT CONTROL
QSCAL      0.  HYDROGRAPH PLOT SCALE
DETENTION BASIN CHEYENNE AND BELTWAY
LOW-FLOW OUTLET IS 66" PIPE

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HYDROGRAPH ROUTING DATA

NSTPS	1	NUMBER OF SUBREACHS
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	.00	INITIAL CONDITION
X	.00	WORKING R AND D COEFFICIENT

.0	.1	.8	12.7	18.8	25.0	85.9	95.0	124.2	135.1
200.3	243.1	258.1	273.4	289.0	305.0				

2990.00	2991.00	2992.00	2995.00	2996.00	2997.00	3005.00	3006.00	3009.00	3010.00
3015.00	3018.00	3019.00	3020.00	3021.00	3022.00				

ELEV	2993.70	ELEVATION AT CENTER OF OUTLET
CAREA	22.31	CROSS-SECTIONAL AREA
COQL	.70	COEFFICIENT
EXPL	.50	EXPONENT OF HEAD

CREL	3021.90	SPILLWAY CREST ELEVATION
SPWID	200.00	SPILLWAY WIDTH
COQW	2.60	WEIR COEFFICIENT
EXPW	1.50	EXPONENT OF HEAD

COMPUTED OUTFLOW-ELEVATION DATA

OUTFLOW	.00	.00	206.52	229.08	257.18	293.14	340.79	406.93	504.93	665.11
ELEVATION	2990.00	2993.70	2996.42	2997.05	2997.92	2999.18	3001.10	3004.26	3009.95	3021.90
OUTFLOW	665.18	665.40	665.87	666.62	667.82	669.47	671.71	674.64	678.30	682.76
ELEVATION	3021.90	3021.91	3021.91	3021.92	3021.93	3021.94	3021.95	3021.97	3021.98	3022.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	.07	.80	7.55	12.71	18.75	21.39	25.05	25.39	32.03
OUTFLOW	.00	.00	.00	.00	142.81	189.95	206.52	227.53	229.08	257.18
ELEVATION	2990.00	2991.00	2992.00	2993.70	2995.00	2996.00	2996.42	2997.00	2997.05	2997.92

STORAGE	41.63	56.29	80.29	85.95	95.04	124.21	134.62	135.14	200.27	243.11
OUTFLOW	293.14	340.79	406.93	421.03	439.26	489.91	504.93	505.67	578.05	617.41
ELEVATION	2999.18	3001.10	3004.26	3005.00	3006.00	3009.00	3009.95	3010.00	3015.00	3018.00

STORAGE	258.06	273.36	289.00	303.39	303.57	303.83	304.00	304.21	304.44	304.70
OUTFLOW	629.99	642.32	654.42	665.11	665.87	667.82	669.47	671.71	674.64	678.30
ELEVATION	3019.00	3020.00	3021.00	3021.90	3021.91	3021.93	3021.94	3021.95	3021.97	3021.98

STORAGE	304.99
OUTFLOW	682.76
ELEVATION	3022.00

WARNING --- ROUTED OUTFLOW (749.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (833.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (901.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (952.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (986.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (1004.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (1007.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (999.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (979.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (952.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (917.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (877.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (833.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (787.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (740.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (693.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB
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	2990.0 *	1		0820	101	579.	201.8	3015.1 *	1		1640	201	0.	7.6	2993.7
1		0005	2	0.	.0	2990.0 *	1		0825	102	575.	197.8	3014.8 *	1		1645	202	0.	7.6	2993.7
1		0010	3	0.	.0	2990.0 *	1		0830	103	571.	193.9	3014.5 *	1		1650	203	0.	7.6	2993.7
1		0015	4	0.	.0	2990.1 *	1		0835	104	567.	189.9	3014.2 *	1		1655	204	0.	7.6	2993.7
1		0020	5	0.	.0	2990.3 *	1		0840	105	562.	186.1	3013.9 *	1		1700	205	0.	7.6	2993.7
1		0025	6	0.	.0	2990.6 *	1		0845	106	558.	182.2	3013.6 *	1		1705	206	0.	7.6	2993.7
1		0030	7	0.	.1	2991.0 *	1		0850	107	554.	178.4	3013.3 *	1		1710	207	0.	7.6	2993.7
1		0035	8	0.	.1	2991.1 *	1		0855	108	549.	174.6	3013.0 *	1		1715	208	0.	7.6	2993.7
1		0040	9	0.	.2	2991.2 *	1		0900	109	545.	170.8	3012.7 *	1		1720	209	0.	7.6	2993.7
1		0045	10	0.	.4	2991.4 *	1		0905	110	541.	167.1	3012.5 *	1		1725	210	0.	7.6	2993.7
1		0050	11	0.	.5	2991.6 *	1		0910	111	537.	163.3	3012.2 *	1		1730	211	0.	7.6	2993.7
1		0055	12	0.	.7	2991.8 *	1		0915	112	533.	159.7	3011.9 *	1		1735	212	0.	7.6	2993.7
1		0100	13	0.	.8	2992.0 *	1		0920	113	529.	156.0	3011.6 *	1		1740	213	0.	7.6	2993.7
1		0105	14	0.	1.0	2992.0 *	1		0925	114	525.	152.4	3011.3 *	1		1745	214	0.	7.6	2993.7
1		0110	15	0.	1.2	2992.1 *	1		0930	115	521.	148.8	3011.0 *	1		1750	215	0.	7.6	2993.7
1		0115	16	0.	1.3	2992.1 *	1		0935	116	517.	145.2	3010.8 *	1		1755	216	0.	7.5	2993.7
1		0120	17	0.	1.5	2992.2 *	1		0940	117	513.	141.7	3010.5 *	1		1800	217	0.	7.5	2993.7
1		0125	18	0.	1.8	2992.3 *	1		0945	118	509.	138.1	3010.2 *	1		1805	218	0.	7.5	2993.7
1		0130	19	0.	2.1	2992.3 *	1		0950	119	505.	134.6	3010.0 *	1		1810	219	0.	7.5	2993.7
1		0135	20	0.	2.6	2992.4 *	1		0955	120	500.	131.2	3009.6 *	1		1815	220	0.	7.5	2993.7
1		0140	21	0.	3.2	2992.6 *	1		1000	121	495.	127.8	3009.3 *	1		1820	221	0.	7.5	2993.7
1		0145	22	0.	3.9	2992.8 *	1		1005	122	490.	124.4	3009.0 *	1		1825	222	0.	7.5	2993.7
1		0150	23	0.	4.9	2993.0 *	1		1010	123	484.	121.0	3008.7 *	1		1830	223	0.	7.5	2993.7
1		0155	24	0.	6.0	2993.3 *	1		1015	124	479.	117.7	3008.3 *	1		1835	224	0.	7.5	2993.7
1		0200	25	0.	7.1	2993.6 *	1		1020	125	473.	114.4	3008.0 *	1		1840	225	0.	7.5	2993.7
1		0205	26	16.	8.1	2993.8 *	1		1025	126	467.	111.2	3007.7 *	1		1845	226	0.	7.5	2993.7
1		0210	27	40.	9.0	2994.1 *	1		1030	127	462.	108.0	3007.3 *	1		1850	227	0.	7.5	2993.7
1		0215	28	61.	9.7	2994.3 *	1		1035	128	456.	104.8	3007.0 *	1		1855	228	0.	7.5	2993.7
1		0220	29	81.	10.5	2994.4 *	1		1040	129	451.	101.7	3006.7 *	1		1900	229	0.	7.5	2993.7
1		0225	30	104.	11.3	2994.6 *	1		1045	130	445.	98.6	3006.4 *	1		1905	230	0.	7.5	2993.7
1		0230	31	130.	12.2	2994.9 *	1		1050	131	440.	95.6	3006.1 *	1		1910	231	0.	7.5	2993.7
1		0235	32	146.	13.2	2995.1 *	1		1055	132	434.	92.5	3005.7 *	1		1915	232	0.	7.5	2993.7
1		0240	33	154.	14.1	2995.2 *	1		1100	133	428.	89.6	3005.4 *	1		1920	233	0.	7.5	2993.7
1		0245	34	161.	15.0	2995.4 *	1		1105	134	422.	86.6	3005.1 *	1		1925	234	0.	7.5	2993.7
1		0250	35	169.	16.0	2995.6 *	1		1110	135	416.	83.8	3004.7 *	1		1930	235	0.	7.5	2993.7
1		0255	36	177.	17.1	2995.7 *	1		1115	136	409.	80.9	3004.3 *	1		1935	236	0.	7.5	2993.7
1		0300	37	186.	18.2	2995.9 *	1		1120	137	401.	78.1	3004.0 *	1		1940	237	0.	7.5	2993.7
1		0305	38	194.	19.4	2996.1 *	1		1125	138	393.	75.4	3003.6 *	1		1945	238	0.	7.5	2993.7
1		0310	39	202.	20.7	2996.3 *	1		1130	139	386.	72.7	3003.3 *	1		1950	239	0.	7.5	2993.7
1		0315	40	214.	22.6	2996.6 *	1		1135	140	379.	70.1	3002.9 *	1		1955	240	0.	7.5	2993.7
1		0320	41	231.	25.9	2997.1 *	1		1140	141	372.	67.5	3002.6 *	1		2000	241	0.	7.5	2993.7
1		0325	42	256.	31.7	2997.9 *	1		1145	142	365.	65.0	3002.2 *	1		2005	242	0.	7.5	2993.7
1		0330	43	293.	41.5	2999.2 *	1		1150	143	358.	62.5	3001.9 *	1		2010	243	0.	7.5	2993.7
1		0335	44	341.	56.4	3001.1 *	1		1155	144	351.	60.0	3001.6 *	1		2015	244	0.	7.5	2993.7
1		0340	45	396.	76.2	3003.7 *	1		1200	145	345.	57.6	3001.3 *	1		2020	245	0.	7.5	2993.7
1		0345	46	446.	99.1	3006.4 *	1		1205	146	338.	55.3	3001.0 *	1		2025	246	0.	7.5	2993.7
1		0350	47	488.	123.1	3008.9 *	1		1210	147	330.	53.0	3000.7 *	1		2030	247	0.	7.5	2993.7
1		0355	48	519.	146.8	3010.9 *	1		1215	148	323.	50.7	3000.4 *	1		2035	248	0.	7.5	2993.7
1		0400	49	544.	169.4	3012.6 *	1		1220	149	316.	48.5	3000.1 *	1		2040	249	0.	7.5	2993.7
1		0405	50	567.	190.7	3014.3 *	1		1225	150	309.	46.4	2999.8 *	1		2045	250	0.	7.5	2993.7
1		0410	51	587.	210.4	3015.7 *	1		1230	151	302.	44.3	2999.5 *	1		2050	251	0.	7.5	2993.7
1		0415	52	604.	228.2	3017.0 *	1		1235	152	295.	42.2	2999.3 *	1		2055	252	0.	7.5	2993.7
1		0420	53	618.	243.9	3018.1 *	1		1240	153	288.	40.2	2999.0 *	1		2100	253	0.	7.5	2993.7
1		0425	54	629.	257.4	3019.0 *	1		1245	154	281.	38.3	2998.7 *	1		2105	254	0.	7.5	2993.7
1		0430	55	639.	268.8	3019.7 *	1		1250	155	273.	36.4	2998.5 *	1		2110	255	0.	7.5	2993.7
1		0435	56	646.	278.7	3020.3 *	1		1255	156	266.	34.5	2998.2 *	1		2115	256	0.	7.5	2993.7
1		0440	57	653.	287.5	3020.9 *	1		1300	157	260.	32.7	2998.0 *	1		2120	257	0.	7.5	2993.7
1		0445	58	659.	295.5	3021.4 *	1		1305	158	253.	30.9	2997.8 *	1		2125	258	0.	7.5	2993.7
1		0450	59	665.	302.8	3021.9 *	1		1310	159	245.	29.2	2997.5 *	1		2130	259	0.	7.5	2993.7
1		0455	60	749.	309.3	3022.3 *	1		1315	160	238.	27.6	2997.3 *	1		2135	260	0.	7.5	2993.7
1		0500	61	833.	314.7	3022.6 *	1		1320	161	231.	25.9	2997.1 *	1		2140	261	0.	7.5	2993.7
1		0505	62	901.	319.1	3022.9 *	1		1325	162	224.	24.4	2996.9 *	1		2145	262	0.	7.5	2993.7
1		0510	63	952.	322.4	3023.1 *	1		1330	163	215.	22.9	2996.7 *	1		2150	263	0.	7.5	2993.7

1	0515	64	986.	324.6	3023.2	*	1	1335	164	207.	21.4	2996.4	*	1	2155	264	0.	7.5	2993.7
1	0520	65	1004.	325.8	3023.3	*	1	1340	165	198.	20.0	2996.2	*	1	2200	265	0.	7.5	2993.7
1	0525	66	1007.	326.0	3023.3	*	1	1345	166	189.	18.7	2996.0	*	1	2205	266	0.	7.5	2993.7
1	0530	67	999.	325.4	3023.3	*	1	1350	167	179.	17.4	2995.8	*	1	2210	267	0.	7.5	2993.7
1	0535	68	979.	324.2	3023.2	*	1	1355	168	170.	16.2	2995.6	*	1	2215	268	0.	7.5	2993.7
1	0540	69	952.	322.4	3023.1	*	1	1400	169	161.	15.1	2995.4	*	1	2220	269	0.	7.5	2993.7
1	0545	70	917.	320.2	3022.9	*	1	1405	170	153.	14.0	2995.2	*	1	2225	270	0.	7.5	2993.7
1	0550	71	877.	317.6	3022.8	*	1	1410	171	145.	13.0	2995.0	*	1	2230	271	0.	7.5	2993.7
1	0555	72	833.	314.7	3022.6	*	1	1415	172	124.	12.0	2994.8	*	1	2235	272	0.	7.5	2993.7
1	0600	73	787.	311.8	3022.4	*	1	1420	173	102.	11.3	2994.6	*	1	2240	273	0.	7.5	2993.7
1	0605	74	740.	308.7	3022.2	*	1	1425	174	85.	10.6	2994.5	*	1	2245	274	0.	7.5	2993.7
1	0610	75	693.	305.7	3022.0	*	1	1430	175	70.	10.1	2994.3	*	1	2250	275	0.	7.5	2993.7
1	0615	76	664.	302.6	3021.8	*	1	1435	176	58.	9.6	2994.2	*	1	2255	276	0.	7.5	2993.7
1	0620	77	662.	299.3	3021.6	*	1	1440	177	48.	9.3	2994.1	*	1	2300	277	0.	7.5	2993.7
1	0625	78	659.	295.8	3021.4	*	1	1445	178	39.	9.0	2994.1	*	1	2305	278	0.	7.5	2993.7
1	0630	79	657.	292.2	3021.2	*	1	1450	179	33.	8.7	2994.0	*	1	2310	279	0.	7.5	2993.7
1	0635	80	654.	288.4	3021.0	*	1	1455	180	27.	8.5	2993.9	*	1	2315	280	0.	7.5	2993.7
1	0640	81	651.	284.5	3020.7	*	1	1500	181	22.	8.4	2993.9	*	1	2320	281	0.	7.5	2993.7
1	0645	82	648.	280.5	3020.5	*	1	1505	182	18.	8.2	2993.9	*	1	2325	282	0.	7.5	2993.7
1	0650	83	645.	276.4	3020.2	*	1	1510	183	15.	8.1	2993.8	*	1	2330	283	0.	7.5	2993.7
1	0655	84	641.	272.3	3019.9	*	1	1515	184	13.	8.0	2993.8	*	1	2335	284	0.	7.5	2993.7
1	0700	85	638.	268.2	3019.7	*	1	1520	185	10.	7.9	2993.8	*	1	2340	285	0.	7.5	2993.7
1	0705	86	635.	264.0	3019.4	*	1	1525	186	9.	7.9	2993.8	*	1	2345	286	0.	7.5	2993.7
1	0710	87	631.	259.7	3019.1	*	1	1530	187	7.	7.8	2993.8	*	1	2350	287	0.	7.5	2993.7
1	0715	88	628.	255.5	3018.8	*	1	1535	188	6.	7.8	2993.8	*	1	2355	288	0.	7.5	2993.7
1	0720	89	624.	251.3	3018.5	*	1	1540	189	5.	7.7	2993.7	*	2	0000	289	0.	7.5	2993.7
1	0725	90	621.	247.1	3018.3	*	1	1545	190	4.	7.7	2993.7	*	2	0005	290	0.	7.5	2993.7
1	0730	91	617.	242.8	3018.0	*	1	1550	191	3.	7.7	2993.7	*	2	0010	291	0.	7.5	2993.7
1	0735	92	613.	238.6	3017.7	*	1	1555	192	3.	7.6	2993.7	*	2	0015	292	0.	7.5	2993.7
1	0740	93	609.	234.5	3017.4	*	1	1600	193	2.	7.6	2993.7	*	2	0020	293	0.	7.5	2993.7
1	0745	94	606.	230.3	3017.1	*	1	1605	194	2.	7.6	2993.7	*	2	0025	294	0.	7.5	2993.7
1	0750	95	602.	226.1	3016.8	*	1	1610	195	2.	7.6	2993.7	*	2	0030	295	0.	7.5	2993.7
1	0755	96	598.	222.0	3016.5	*	1	1615	196	1.	7.6	2993.7	*	2	0035	296	0.	7.5	2993.7
1	0800	97	594.	217.9	3016.2	*	1	1620	197	1.	7.6	2993.7	*	2	0040	297	0.	7.5	2993.7
1	0805	98	591.	213.9	3016.0	*	1	1625	198	1.	7.6	2993.7	*	2	0045	298	0.	7.5	2993.7
1	0810	99	587.	209.8	3015.7	*	1	1630	199	1.	7.6	2993.7	*	2	0050	299	0.	7.5	2993.7
1	0815	100	583.	205.8	3015.4	*	1	1635	200	1.	7.6	2993.7	*	2	0055	300	0.	7.5	2993.7

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW
(CFS)	(HR)		6-HR 24-HR 72-HR 24.92-HR
1007.	5.42	(CFS)	659. 244. 235. 235.
		(INCHES)	1.396 2.063 2.063 2.063
		(AC-FT)	327. 483. 483. 483.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE
(AC-FT)	(HR)		6-HR 24-HR 72-HR 24.92-HR
326.	5.42		243. 78. 75. 75.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE
(FEET)	(HR)		6-HR 24-HR 72-HR 24.92-HR
3023.31	5.42		3017.81 3001.40 3001.01 3001.01

CUMULATIVE AREA = 4.39 SQ MI

WARNING --- ROUTED OUTFLOW (762.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (836.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (892.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (930.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (952.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (960.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (954.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (939.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (914.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (883.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (845.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (804.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (761.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (716.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .99

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.	2990.0	*	1	0820	101	578.	200.5	3015.0	*	1	1640	201	0.	7.6	2993.7			
1	0005	2	0.	0.	2990.0	*	1	0825	102	574.	196.6	3014.7	*	1	1645	202	0.	7.6	2993.7			
1	0010	3	0.	0.	2990.0	*	1	0830	103	570.	192.6	3014.4	*	1	1650	203	0.	7.6	2993.7			
1	0015	4	0.	0.	2990.1	*	1	0835	104	565.	188.7	3014.1	*	1	1655	204	0.	7.6	2993.7			
1	0020	5	0.	0.	2990.3	*	1	0840	105	561.	184.8	3013.8	*	1	1700	205	0.	7.6	2993.7			
1	0025	6	0.	0.	2990.6	*	1	0845	106	557.	181.0	3013.5	*	1	1705	206	0.	7.6	2993.7			

1	0030	7	0.	.1	2991.0	*	1	0850	107	552.	177.2	3013.2	*	1	1710	207	0.	7.6	2993.7
1	0035	8	0.	.1	2991.1	*	1	0855	108	548.	173.4	3012.9	*	1	1715	208	0.	7.6	2993.7
1	0040	9	0.	.2	2991.2	*	1	0900	109	544.	169.6	3012.6	*	1	1720	209	0.	7.6	2993.7
1	0045	10	0.	.3	2991.4	*	1	0905	110	540.	165.9	3012.4	*	1	1725	210	0.	7.6	2993.7
1	0050	11	0.	.5	2991.6	*	1	0910	111	536.	162.2	3012.1	*	1	1730	211	0.	7.6	2993.7
1	0055	12	0.	.6	2991.8	*	1	0915	112	532.	158.5	3011.8	*	1	1735	212	0.	7.6	2993.7
1	0100	13	0.	.8	2992.0	*	1	0920	113	528.	154.9	3011.5	*	1	1740	213	0.	7.6	2993.7
1	0105	14	0.	.9	2992.0	*	1	0925	114	524.	151.2	3011.2	*	1	1745	214	0.	7.6	2993.7
1	0110	15	0.	1.1	2992.1	*	1	0930	115	520.	147.6	3011.0	*	1	1750	215	0.	7.5	2993.7
1	0115	16	0.	1.2	2992.1	*	1	0935	116	516.	144.1	3010.7	*	1	1755	216	0.	7.5	2993.7
1	0120	17	0.	1.4	2992.2	*	1	0940	117	512.	140.5	3010.4	*	1	1800	217	0.	7.5	2993.7
1	0125	18	0.	1.7	2992.2	*	1	0945	118	508.	137.0	3010.1	*	1	1805	218	0.	7.5	2993.7
1	0130	19	0.	2.0	2992.3	*	1	0950	119	503.	133.6	3009.9	*	1	1810	219	0.	7.5	2993.7
1	0135	20	0.	2.4	2992.4	*	1	0955	120	498.	130.1	3009.5	*	1	1815	220	0.	7.5	2993.7
1	0140	21	0.	3.0	2992.6	*	1	1000	121	493.	126.7	3009.2	*	1	1820	221	0.	7.5	2993.7
1	0145	22	0.	3.7	2992.7	*	1	1005	122	488.	123.3	3008.9	*	1	1825	222	0.	7.5	2993.7
1	0150	23	0.	4.7	2993.0	*	1	1010	123	483.	120.0	3008.6	*	1	1830	223	0.	7.5	2993.7
1	0155	24	0.	5.7	2993.2	*	1	1015	124	477.	116.7	3008.2	*	1	1835	224	0.	7.5	2993.7
1	0200	25	0.	6.8	2993.5	*	1	1020	125	471.	113.4	3007.9	*	1	1840	225	0.	7.5	2993.7
1	0205	26	7.	7.8	2993.8	*	1	1025	126	466.	110.2	3007.6	*	1	1845	226	0.	7.5	2993.7
1	0210	27	32.	8.7	2994.0	*	1	1030	127	460.	107.0	3007.2	*	1	1850	227	0.	7.5	2993.7
1	0215	28	54.	9.5	2994.2	*	1	1035	128	455.	103.8	3006.9	*	1	1855	228	0.	7.5	2993.7
1	0220	29	75.	10.2	2994.4	*	1	1040	129	449.	100.7	3006.6	*	1	1900	229	0.	7.5	2993.7
1	0225	30	98.	11.1	2994.6	*	1	1045	130	444.	97.6	3006.3	*	1	1905	230	0.	7.5	2993.7
1	0230	31	123.	12.0	2994.8	*	1	1050	131	438.	94.6	3006.0	*	1	1910	231	0.	7.5	2993.7
1	0235	32	144.	12.9	2995.0	*	1	1055	132	432.	91.6	3005.6	*	1	1915	232	0.	7.5	2993.7
1	0240	33	152.	13.8	2995.2	*	1	1100	133	426.	88.7	3005.3	*	1	1920	233	0.	7.5	2993.7
1	0245	34	159.	14.7	2995.3	*	1	1105	134	420.	85.7	3005.0	*	1	1925	234	0.	7.5	2993.7
1	0250	35	166.	15.7	2995.5	*	1	1110	135	413.	82.9	3004.6	*	1	1930	235	0.	7.5	2993.7
1	0255	36	174.	16.7	2995.7	*	1	1115	136	406.	80.0	3004.2	*	1	1935	236	0.	7.5	2993.7
1	0300	37	183.	17.8	2995.8	*	1	1120	137	399.	77.3	3003.9	*	1	1940	237	0.	7.5	2993.7
1	0305	38	191.	18.9	2996.0	*	1	1125	138	391.	74.6	3003.5	*	1	1945	238	0.	7.5	2993.7
1	0310	39	199.	20.2	2996.2	*	1	1130	139	384.	71.9	3003.2	*	1	1950	239	0.	7.5	2993.7
1	0315	40	211.	22.1	2996.5	*	1	1135	140	377.	69.3	3002.8	*	1	1955	240	0.	7.5	2993.7
1	0320	41	229.	25.3	2997.0	*	1	1140	141	369.	66.7	3002.5	*	1	2000	241	0.	7.5	2993.7
1	0325	42	253.	30.9	2997.8	*	1	1145	142	363.	64.2	3002.1	*	1	2005	242	0.	7.5	2993.7
1	0330	43	289.	40.6	2999.0	*	1	1150	143	356.	61.7	3001.8	*	1	2010	243	0.	7.5	2993.7
1	0335	44	337.	55.2	3001.0	*	1	1155	144	349.	59.3	3001.5	*	1	2015	244	0.	7.5	2993.7
1	0340	45	391.	74.7	3003.5	*	1	1200	145	342.	56.9	3001.2	*	1	2020	245	0.	7.5	2993.7
1	0345	46	443.	97.3	3006.2	*	1	1205	146	335.	54.6	3000.9	*	1	2025	246	0.	7.5	2993.7
1	0350	47	484.	120.9	3008.7	*	1	1210	147	328.	52.3	3000.6	*	1	2030	247	0.	7.5	2993.7
1	0355	48	516.	144.2	3010.7	*	1	1215	148	321.	50.0	3000.3	*	1	2035	248	0.	7.5	2993.7
1	0400	49	540.	166.5	3012.4	*	1	1220	149	313.	47.9	3000.0	*	1	2040	249	0.	7.5	2993.7
1	0405	50	564.	187.4	3014.0	*	1	1225	150	306.	45.7	2999.7	*	1	2045	250	0.	7.5	2993.7
1	0410	51	584.	206.8	3015.5	*	1	1230	151	300.	43.6	2999.4	*	1	2050	251	0.	7.5	2993.7
1	0415	52	600.	224.4	3016.7	*	1	1235	152	293.	41.6	2999.2	*	1	2055	252	0.	7.5	2993.7
1	0420	53	614.	239.9	3017.8	*	1	1240	153	286.	39.6	2998.9	*	1	2100	253	0.	7.5	2993.7
1	0425	54	626.	253.1	3018.7	*	1	1245	154	278.	37.7	2998.7	*	1	2105	254	0.	7.5	2993.7
1	0430	55	635.	264.3	3019.4	*	1	1250	155	271.	35.8	2998.4	*	1	2110	255	0.	7.5	2993.7
1	0435	56	643.	274.0	3020.0	*	1	1255	156	264.	33.9	2998.2	*	1	2115	256	0.	7.5	2993.7
1	0440	57	650.	282.7	3020.6	*	1	1300	157	258.	32.1	2997.9	*	1	2120	257	0.	7.5	2993.7
1	0445	58	656.	290.5	3021.1	*	1	1305	158	250.	30.4	2997.7	*	1	2125	258	0.	7.5	2993.7
1	0450	59	661.	297.7	3021.5	*	1	1310	159	243.	28.7	2997.5	*	1	2130	259	0.	7.5	2993.7
1	0455	60	674.	304.4	3022.0	*	1	1315	160	236.	27.0	2997.3	*	1	2135	260	0.	7.5	2993.7
1	0500	61	762.	310.1	3022.3	*	1	1320	161	229.	25.4	2997.1	*	1	2140	261	0.	7.5	2993.7
1	0505	62	836.	314.9	3022.6	*	1	1325	162	221.	23.9	2996.8	*	1	2145	262	0.	7.5	2993.7
1	0510	63	892.	318.5	3022.8	*	1	1330	163	212.	22.4	2996.6	*	1	2150	263	0.	7.5	2993.7
1	0515	64	930.	321.0	3023.0	*	1	1335	164	204.	21.0	2996.4	*	1	2155	264	0.	7.5	2993.7
1	0520	65	952.	322.4	3023.1	*	1	1340	165	195.	19.6	2996.1	*	1	2200	265	0.	7.5	2993.7
1	0525	66	960.	322.9	3023.1	*	1	1345	166	186.	18.3	2995.9	*	1	2205	266	0.	7.5	2993.7
1	0530	67	954.	322.6	3023.1	*	1	1350	167	176.	17.0	2995.7	*	1	2210	267	0.	7.5	2993.7
1	0535	68	939.	321.6	3023.0	*	1	1355	168	167.	15.8	2995.5	*	1	2215	268	0.	7.5	2993.7
1	0540	69	914.	320.0	3022.9	*	1	1400	169	158.	14.7	2995.3	*	1	2220	269	0.	7.5	2993.7
1	0545	70	883.	317.9	3022.8	*	1	1405	170	150.	13.7	2995.2	*	1	2225	270	0.	7.5	2993.7
1	0550	71	845.	315.5	3022.7	*	1	1410	171	141.	12.7	2995.0	*	1	2230	271	0.	7.5	2993.7
1	0555	72	804.	312.9	3022.5	*	1	1415	172	117.	11.8	2994.8	*	1	2235	272	0.	7.5	2993.7
1	0600	73	761.	310.0	3022.3	*	1	1420	173	96.	11.0	2994.6	*	1	2240	273	0.	7.5	2993.7
1	0605	74	716.	307.2	3022.1	*	1	1425	174	80.	10.4	2994.4	*	1	2245	274	0.	7.5	2993.7
1	0610	75	672.	304.2	3022.0	*	1	1430	175	66.	9.9	2994.3	*	1	2250	275	0.	7.5	2993.7
1	0615	76	663.	301.2	3021.8	*	1	1435	176	54.	9.5	2994.2	*	1	2255	276	0.	7.5	2993.7
1	0620	77	661.	297.9	3021.6	*	1	1440	177	45.	9.2	2994.1	*	1	2300	277	0.	7.5	2993.7
1	0625	78	658.	294.5	3021.3	*	1	1445	178	37.	8.9	2994.0	*	1	2305	278	0.	7.5	2993.7
1	0630	79	656.	290.8	3021.1	*	1	1450	179	31.	8.7	2994.0	*	1	2310	279	0.	7.5	2993.7
1	0635	80	653.	287.0	3020.9	*	1	1455	180	25.	8.5	2993.9	*	1	2315	280	0.	7.5	2993.7
1	0640	81	650.	283.1	3020.6	*	1	1500	181	21.	8.3	2993.9	*	1	2320	281	0.	7.5	2993.7
1	0645	82	647.	279.1	3020.4	*	1	1505	182	17.	8.2	2993.9	*	1	2325	282	0.	7.5	2993.7
1	0650	83	644.	275.1	3020.1	*	1	1510	183	14.									

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
323.	5.42	241.	77.	74.	74.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
3023.12	5.42	3017.67	3001.34	3000.95	3000.95

CUMULATIVE AREA = 4.39 SQ MI

WARNING --- ROUTED OUTFLOW (685.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (764.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (826.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (869.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (896.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (908.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (907.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (895.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (874.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (846.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (812.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (773.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (733.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (690.) IS GREATER THAN MAXIMUM OUTFLOW (683.) IN STORAGE-OUTFLOW TABLE

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .98

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	2990.0	1		0820	101	577.	199.1	3014.9	1		1640	201	0.	7.6	2993.7
1		0005	2	0.	.0	2990.0	1		0825	102	572.	195.1	3014.6	1		1645	202	0.	7.6	2993.7
1		0010	3	0.	.0	2990.0	1		0830	103	568.	191.2	3014.3	1		1650	203	0.	7.6	2993.7
1		0015	4	0.	.0	2990.1	1		0835	104	564.	187.3	3014.0	1		1655	204	0.	7.6	2993.7
1		0020	5	0.	.0	2990.3	1		0840	105	559.	183.5	3013.7	1		1700	205	0.	7.6	2993.7
1		0025	6	0.	.0	2990.6	1		0845	106	555.	179.6	3013.4	1		1705	206	0.	7.6	2993.7
1		0030	7	0.	.1	2991.0	1		0850	107	551.	175.8	3013.1	1		1710	207	0.	7.6	2993.7
1		0035	8	0.	.1	2991.1	1		0855	108	547.	172.0	3012.8	1		1715	208	0.	7.6	2993.7
1		0040	9	0.	.2	2991.2	1		0900	109	542.	168.3	3012.5	1		1720	209	0.	7.6	2993.7
1		0045	10	0.	.3	2991.3	1		0905	110	538.	164.6	3012.3	1		1725	210	0.	7.6	2993.7
1		0050	11	0.	.4	2991.5	1		0910	111	534.	160.9	3012.0	1		1730	211	0.	7.6	2993.7
1		0055	12	0.	.6	2991.7	1		0915	112	530.	157.2	3011.7	1		1735	212	0.	7.6	2993.7
1		0100	13	0.	.7	2991.9	1		0920	113	526.	153.6	3011.4	1		1740	213	0.	7.6	2993.7
1		0105	14	0.	.9	2992.0	1		0925	114	522.	149.9	3011.1	1		1745	214	0.	7.6	2993.7
1		0110	15	0.	1.0	2992.1	1		0930	115	518.	146.4	3010.9	1		1750	215	0.	7.5	2993.7
1		0115	16	0.	1.2	2992.1	1		0935	116	514.	142.8	3010.6	1		1755	216	0.	7.5	2993.7
1		0120	17	0.	1.3	2992.1	1		0940	117	510.	139.3	3010.3	1		1800	217	0.	7.5	2993.7
1		0125	18	0.	1.6	2992.2	1		0945	118	506.	135.8	3010.0	1		1805	218	0.	7.5	2993.7
1		0130	19	0.	1.9	2992.3	1		0950	119	502.	132.3	3009.7	1		1810	219	0.	7.5	2993.7
1		0135	20	0.	2.3	2992.4	1		0955	120	497.	128.9	3009.4	1		1815	220	0.	7.5	2993.7
1		0140	21	0.	2.8	2992.5	1		1000	121	492.	125.5	3009.1	1		1820	221	0.	7.5	2993.7
1		0145	22	0.	3.5	2992.7	1		1005	122	486.	122.1	3008.8	1		1825	222	0.	7.5	2993.7
1		0150	23	0.	4.4	2992.9	1		1010	123	480.	118.8	3008.4	1		1830	223	0.	7.5	2993.7
1		0155	24	0.	5.4	2993.2	1		1015	124	475.	115.5	3008.1	1		1835	224	0.	7.5	2993.7
1		0200	25	0.	6.5	2993.4	1		1020	125	469.	112.2	3007.8	1		1840	225	0.	7.5	2993.7
1		0205	26	0.	7.5	2993.7	1		1025	126	464.	109.0	3007.4	1		1845	226	0.	7.5	2993.7
1		0210	27	25.	8.4	2993.9	1		1030	127	458.	105.8	3007.1	1		1850	227	0.	7.5	2993.7
1		0215	28	47.	9.2	2994.1	1		1035	128	453.	102.7	3006.8	1		1855	228	0.	7.5	2993.7
1		0220	29	68.	10.0	2994.3	1		1040	129	447.	99.6	3006.5	1		1900	229	0.	7.5	2993.7
1		0225	30	91.	10.8	2994.5	1		1045	130	442.	96.6	3006.2	1		1905	230	0.	7.5	2993.7
1		0230	31	117.	11.8	2994.8	1		1050	131	436.	93.5	3005.8	1		1910	231	0.	7.5	2993.7
1		0235	32	142.	12.7	2995.0	1		1055	132	430.	90.5	3005.5	1		1915	232	0.	7.5	2993.7
1		0240	33	149.	13.5	2995.1	1		1100	133	424.	87.6	3005.2	1		1920	233	0.	7.5	2993.7
1		0245	34	156.	14.4	2995.3	1		1105	134	418.	84.7	3004.8	1		1925	234	0.	7.5	2993.7
1		0250	35	163.	15.4	2995.4	1		1110	135	411.	81.8	3004.5	1		1930	235	0.	7.5	2993.7
1		0255	36	171.	16.4	2995.6	1		1115	136	404.	79.0	3004.1	1		1935	236	0.	7.5	2993.7
1		0300	37	180.	17.4	2995.8	1		1120	137	396.	76.3	3003.7	1		1940	237	0.	7.5	2993.7
1		0305	38	188.	18.5	2996.0	1		1125	138	388.	73.6	3003.4	1		1945	238	0.	7.5	2993.7
1		0310	39	196.	19.8	2996.2	1		1130	139	381.	70.9	3003.0	1		1950	239	0.	7.5	2993.7
1		0315	40	208.	21.6	2996.5	1		1135	140	374.	68.3	3002.7	1		1955	240	0.	7.5	2993.7
1		0320	41	226.	24.7	2996.9	1		1140	141	367.	65.8	3002.4	1		2000	241	0.	7.5	2993.7
1		0325	42	250.	30.2	2997.7	1		1145	142	360.	63.3	3002.0	1		2005	242	0.	7.5	2993.7
1		0330	43	286.	39.7	2998.9	1		1150	143	353.	60.8	3001.7	1		2010	243	0.	7.5	2993.7
1		0335	44	334.	54.1	3000.8	1		1155	144	347.	58.4	3001.4	1		2015	244	0.	7.5	2993.7
1		0340	45	387.	73.2	3003.3	1		1200	145	340.	56.1	3001.1	1		2020	245	0.	7.5	2993.7
1		0345	46	440.	95.4	3006.0	1		1205	146	333.	53.7	3000.8	1		2025	246	0.	7.5	2993.7
1		0350	47	480.	118.7	3008.4	1		1210	147	325.	51.5	3000.5	1		2030	247	0.	7.5	2993.7
1		0355	48	513.	141.6	3010.5	1		1215	148	318.	49.3	3000.2	1		2035	248	0.	7.5	2993.7
1		0400	49	537.	163.5	3012.2	1		1220	149	311.	47.1	2999.9	1		2040	249	0.	7.5	2993.7
1		0405	50	560.	184.1	3013.8	1		1225	150	304.	45.0	2999.6	1		2045	250	0.	7.5	2993.7
1		0410	51	581.	203.2	3015.2	1		1230	151	297.	42.9	2999.3	1		2050	251	0.	7.5	2993.7
1		0415	52	597.	220.5	3016.4	1		1235	152	290.	40.9	2999.1	1		2055	252	0.	7.5	2993.7
1		0420	53	611.	235.7	3017.5	1		1240	153	283.	38.9	2998.8	1		2100	253	0.	7.5	2993.7

1	0425	54	622.	248.7	3018.4	*	1	1245	154	276.	37.0	2998.6	*	1	2105	254	0.	7.5	2993.7
1	0430	55	631.	259.8	3019.1	*	1	1250	155	269.	35.1	2998.3	*	1	2110	255	0.	7.5	2993.7
1	0435	56	639.	269.3	3019.7	*	1	1255	156	262.	33.3	2998.1	*	1	2115	256	0.	7.5	2993.7
1	0440	57	646.	277.8	3020.3	*	1	1300	157	255.	31.5	2997.8	*	1	2120	257	0.	7.5	2993.7
1	0445	58	652.	285.6	3020.8	*	1	1305	158	248.	29.8	2997.6	*	1	2125	258	0.	7.5	2993.7
1	0450	59	657.	292.6	3021.2	*	1	1310	159	241.	28.1	2997.4	*	1	2130	259	0.	7.5	2993.7
1	0455	60	662.	299.2	3021.6	*	1	1315	160	234.	26.5	2997.2	*	1	2135	260	0.	7.5	2993.7
1	0500	61	685.	305.1	3022.0	*	1	1320	161	227.	24.9	2997.0	*	1	2140	261	0.	7.5	2993.7
1	0505	62	764.	310.2	3022.3	*	1	1325	162	218.	23.3	2996.7	*	1	2145	262	0.	7.5	2993.7
1	0510	63	826.	314.2	3022.6	*	1	1330	163	209.	21.9	2996.5	*	1	2150	263	0.	7.5	2993.7
1	0515	64	869.	317.1	3022.8	*	1	1335	164	201.	20.5	2996.3	*	1	2155	264	0.	7.5	2993.7
1	0520	65	896.	318.8	3022.9	*	1	1340	165	192.	19.1	2996.1	*	1	2200	265	0.	7.5	2993.7
1	0525	66	908.	319.5	3022.9	*	1	1345	166	183.	17.8	2995.8	*	1	2205	266	0.	7.5	2993.7
1	0530	67	907.	319.5	3022.9	*	1	1350	167	173.	16.6	2995.6	*	1	2210	267	0.	7.5	2993.7
1	0535	68	895.	318.7	3022.9	*	1	1355	168	164.	15.4	2995.5	*	1	2215	268	0.	7.5	2993.7
1	0540	69	874.	317.4	3022.8	*	1	1400	169	155.	14.3	2995.3	*	1	2220	269	0.	7.5	2993.7
1	0545	70	846.	315.5	3022.7	*	1	1405	170	147.	13.3	2995.1	*	1	2225	270	0.	7.5	2993.7
1	0550	71	812.	313.3	3022.5	*	1	1410	171	132.	12.3	2994.9	*	1	2230	271	0.	7.5	2993.7
1	0555	72	773.	310.9	3022.4	*	1	1415	172	109.	11.5	2994.7	*	1	2235	272	0.	7.5	2993.7
1	0600	73	733.	308.2	3022.2	*	1	1420	173	90.	10.8	2994.5	*	1	2240	273	0.	7.5	2993.7
1	0605	74	690.	305.5	3022.0	*	1	1425	174	74.	10.2	2994.4	*	1	2245	274	0.	7.5	2993.7
1	0610	75	665.	302.7	3021.9	*	1	1430	175	62.	9.8	2994.3	*	1	2250	275	0.	7.5	2993.7
1	0615	76	662.	299.6	3021.7	*	1	1435	176	51.	9.4	2994.2	*	1	2255	276	0.	7.5	2993.7
1	0620	77	660.	296.3	3021.5	*	1	1440	177	42.	9.1	2994.1	*	1	2300	277	0.	7.5	2993.7
1	0625	78	657.	292.9	3021.2	*	1	1445	178	35.	8.8	2994.0	*	1	2305	278	0.	7.5	2993.7
1	0630	79	655.	289.2	3021.0	*	1	1450	179	29.	8.6	2994.0	*	1	2310	279	0.	7.5	2993.7
1	0635	80	652.	285.4	3020.8	*	1	1455	180	24.	8.4	2993.9	*	1	2315	280	0.	7.5	2993.7
1	0640	81	649.	281.5	3020.5	*	1	1500	181	20.	8.3	2993.9	*	1	2320	281	0.	7.5	2993.7
1	0645	82	646.	277.6	3020.3	*	1	1505	182	16.	8.1	2993.8	*	1	2325	282	0.	7.5	2993.7
1	0650	83	642.	273.5	3020.0	*	1	1510	183	13.	8.0	2993.8	*	1	2330	283	0.	7.5	2993.7
1	0655	84	639.	269.4	3019.7	*	1	1515	184	11.	7.9	2993.8	*	1	2335	284	0.	7.5	2993.7
1	0700	85	636.	265.2	3019.5	*	1	1520	185	9.	7.9	2993.8	*	1	2340	285	0.	7.5	2993.7
1	0705	86	632.	261.0	3019.2	*	1	1525	186	8.	7.8	2993.8	*	1	2345	286	0.	7.5	2993.7
1	0710	87	629.	256.8	3018.9	*	1	1530	187	6.	7.8	2993.8	*	1	2350	287	0.	7.5	2993.7
1	0715	88	625.	252.6	3018.6	*	1	1535	188	5.	7.7	2993.7	*	1	2355	288	0.	7.5	2993.7
1	0720	89	622.	248.4	3018.4	*	1	1540	189	4.	7.7	2993.7	*	2	0000	289	0.	7.5	2993.7
1	0725	90	618.	244.2	3018.1	*	1	1545	190	3.	7.7	2993.7	*	2	0005	290	0.	7.5	2993.7
1	0730	91	615.	240.0	3017.8	*	1	1550	191	3.	7.6	2993.7	*	2	0010	291	0.	7.5	2993.7
1	0735	92	611.	235.8	3017.5	*	1	1555	192	2.	7.6	2993.7	*	2	0015	292	0.	7.5	2993.7
1	0740	93	607.	231.6	3017.2	*	1	1600	193	2.	7.6	2993.7	*	2	0020	293	0.	7.5	2993.7
1	0745	94	603.	227.5	3016.9	*	1	1605	194	2.	7.6	2993.7	*	2	0025	294	0.	7.5	2993.7
1	0750	95	599.	223.4	3016.6	*	1	1610	195	1.	7.6	2993.7	*	2	0030	295	0.	7.5	2993.7
1	0755	96	595.	219.3	3016.3	*	1	1615	196	1.	7.6	2993.7	*	2	0035	296	0.	7.5	2993.7
1	0800	97	592.	215.2	3016.0	*	1	1620	197	1.	7.6	2993.7	*	2	0040	297	0.	7.5	2993.7
1	0805	98	588.	211.1	3015.8	*	1	1625	198	1.	7.6	2993.7	*	2	0045	298	0.	7.5	2993.7
1	0810	99	584.	207.1	3015.5	*	1	1630	199	1.	7.6	2993.7	*	2	0050	299	0.	7.5	2993.7
1	0815	100	581.	203.1	3015.2	*	1	1635	200	1.	7.6	2993.7	*	2	0055	300	0.	7.5	2993.7

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	908.	5.42	637.	236.	228.	228.
		(INCHES)	1.349	2.001	2.001	2.001
		(AC-FT)	316.	469.	469.	469.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	320.	5.42	239.	76.	74.	74.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3022.91	5.42	3017.52	3001.28	3000.89	3000.89
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION												EXDB											
PLAN 1, RATIO = .94																							
DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	2990.0	*	1	0820	101	567.	190.4	3014.2	*	1	1640	201	0.	7.6	2993.7				
1	0005	2	0.	0.	2990.0	*	1	0825	102	563.	186.5	3013.9	*	1	1645	202	0.	7.6	2993.7				
1	0010	3	0.	0.	2990.0	*	1	0830	103	559.	182.7	3013.7	*	1	1650	203	0.	7.6	2993.7				
1	0015	4	0.	0.	2990.1	*	1	0835	104	554.	178.9	3013.4	*	1	1655	204	0.	7.6	2993.7				
1	0020	5	0.	0.	2990.2	*	1	0840	105	550.	175.1	3013.1	*	1	1700	205	0.	7.6	2993.7				
1	0025	6	0.	0.	2990.5	*	1	0845	106	546.	171.3	3012.8	*	1	1705	206	0.	7.6	2993.7				
1	0030	7	0.	1.	2990.9	*	1	0850	107	542.	167.5	3012.5	*	1	1710	207	0.	7.6	2993.7				
1	0035	8	0.	1.	2991.1	*	1	0855	108	538.	163.8	3012.2	*	1	1715	208	0.	7.6	2993.7				
1	0040	9	0.	2.	2991.1	*	1	0900	109	533.	160.1	3011.9	*	1	1720	209	0.	7.6	2993.7				
1	0045	10	0.	2.	2991.2	*	1	0905	110	529.	156.5	3011.6	*	1	1725	210	0.	7.6	2993.7				
1	0050	11	0.	3.	2991.4	*	1	0910	111	525.	152.8	3011.4	*	1	1730	211	0.	7.6	2993.7				
1	0055	12	0.	4.	2991.5	*	1	0915	112	521.	149.2	3011.1	*	1	1735	212	0.	7.6	2993.7				
1	0100	13	0.	5.	2991.6	*	1	0920	113	517.	145.7	3010.8	*	1	1740	213	0.	7.5	2993.7				
1	0105	14	0.	6.	2991.8	*	1	0925	114	513.	142.1	3010.5	*	1	1745	214	0.	7.5	2993.7				
1	0110	15	0.	7.	2991.9	*	1	0930	115	510.	138.6	3010.3	*	1	1750	215	0.	7.5	2993.7				
1	0115	16	0.	8.	2992.0	*	1	0935	116	506.	135.1	3010.0	*	1	1755	216	0.	7.5	2993.7				
1	0120	17	0.	1.0	2992.0	*	1	0940	117	501.	131.6	3009.7	*	1	1800	217	0.	7.5	2993.7				
1	0125	18	0.	1.2	2992.1	*	1	0945	118	496.	128.2	3009.4	*	1	1805	218	0.	7.5	2993.7				
1	0130	19	0.	1.4	2992.2	*	1	0950	119	491.	124.8	3009.1	*	1	1810	219	0.	7.5	2993.7				
1	0135	20	0.	1.7	2992.2	*	1	0955	120	485.	121.4	3008.7	*	1	1815	220	0.	7.5	2993.7				
1	0140	21	0.	2.2	2992.4	*	1	1000	121	479.	118.1	3008.4	*	1	1820	221	0.	7.5	2993.7				
1	0145	22	0.	2.8	2992.5	*	1	1005	122	474.	114.8	3008.0	*	1	1825	222	0.	7.5	2993.7				
1	0150	23	0.	3.6	2992.7	*	1	1010	123	468.	111.6	3007.7	*	1	1830	223	0.	7.5	2993.7				
1	0155	24	0.	4.5	2992.9	*	1	1015	124	462.	108.4	3007.4	*	1	1835	224	0.	7.5	2993.7				

1	0200	25	0.	5.4	2993.2 *	1	1020	125	457.	105.2	3007.0 *	1	1840	225	0.	7.5	2993.7
1	0205	26	0.	6.3	2993.4 *	1	1025	126	452.	102.1	3006.7 *	1	1845	226	0.	7.5	2993.7
1	0210	27	0.	7.2	2993.6 *	1	1030	127	446.	99.0	3006.4 *	1	1850	227	0.	7.5	2993.7
1	0215	28	13.	8.0	2993.8 *	1	1035	128	441.	96.0	3006.1 *	1	1855	228	0.	7.5	2993.7
1	0220	29	37.	8.9	2994.0 *	1	1040	129	435.	92.9	3005.8 *	1	1900	229	0.	7.5	2993.7
1	0225	30	62.	9.8	2994.3 *	1	1045	130	429.	90.0	3005.4 *	1	1905	230	0.	7.5	2993.7
1	0230	31	88.	10.7	2994.5 *	1	1050	131	423.	87.0	3005.1 *	1	1910	231	0.	7.5	2993.7
1	0235	32	114.	11.7	2994.7 *	1	1055	132	417.	84.1	3004.8 *	1	1915	232	0.	7.5	2993.7
1	0240	33	137.	12.5	2994.9 *	1	1100	133	409.	81.3	3004.4 *	1	1920	233	0.	7.5	2993.7
1	0245	34	147.	13.3	2995.1 *	1	1105	134	402.	78.5	3004.0 *	1	1925	234	0.	7.5	2993.7
1	0250	35	153.	14.1	2995.2 *	1	1110	135	394.	75.8	3003.7 *	1	1930	235	0.	7.5	2993.7
1	0255	36	160.	15.0	2995.4 *	1	1115	136	387.	73.1	3003.3 *	1	1935	236	0.	7.5	2993.7
1	0300	37	168.	15.9	2995.5 *	1	1120	137	380.	70.4	3003.0 *	1	1940	237	0.	7.5	2993.7
1	0305	38	175.	16.8	2995.7 *	1	1125	138	373.	67.8	3002.6 *	1	1945	238	0.	7.5	2993.7
1	0310	39	184.	18.0	2995.9 *	1	1130	139	366.	65.3	3002.3 *	1	1950	239	0.	7.5	2993.7
1	0315	40	195.	19.6	2996.1 *	1	1135	140	359.	62.8	3002.0 *	1	1955	240	0.	7.5	2993.7
1	0320	41	213.	22.4	2996.6 *	1	1140	141	352.	60.3	3001.6 *	1	2000	241	0.	7.5	2993.7
1	0325	42	238.	27.5	2997.3 *	1	1145	142	345.	57.9	3001.3 *	1	2005	242	0.	7.5	2993.7
1	0330	43	273.	36.2	2998.5 *	1	1150	143	339.	55.6	3001.0 *	1	2010	243	0.	7.5	2993.7
1	0335	44	319.	49.5	3000.2 *	1	1155	144	331.	53.3	3000.7 *	1	2015	244	0.	7.5	2993.7
1	0340	45	371.	67.4	3002.6 *	1	1200	145	324.	51.0	3000.4 *	1	2020	245	0.	7.5	2993.7
1	0345	46	425.	88.1	3005.2 *	1	1205	146	317.	48.8	3000.1 *	1	2025	246	0.	7.5	2993.7
1	0350	47	465.	109.9	3007.5 *	1	1210	147	310.	46.7	2999.8 *	1	2030	247	0.	7.5	2993.7
1	0355	48	500.	131.3	3009.6 *	1	1215	148	303.	44.6	2999.6 *	1	2035	248	0.	7.5	2993.7
1	0400	49	524.	151.8	3011.3 *	1	1220	149	296.	42.5	2999.3 *	1	2040	249	0.	7.5	2993.7
1	0405	50	546.	171.1	3012.8 *	1	1225	150	289.	40.5	2999.0 *	1	2045	250	0.	7.5	2993.7
1	0410	51	566.	189.0	3014.1 *	1	1230	151	282.	38.5	2998.8 *	1	2050	251	0.	7.5	2993.7
1	0415	52	583.	205.2	3015.3 *	1	1235	152	274.	36.6	2998.5 *	1	2055	252	0.	7.5	2993.7
1	0420	53	596.	219.4	3016.3 *	1	1240	153	267.	34.7	2998.3 *	1	2100	253	0.	7.5	2993.7
1	0425	54	607.	231.6	3017.2 *	1	1245	154	261.	32.9	2998.0 *	1	2105	254	0.	7.5	2993.7
1	0430	55	616.	241.9	3017.9 *	1	1250	155	253.	31.2	2997.8 *	1	2110	255	0.	7.5	2993.7
1	0435	56	624.	250.8	3018.5 *	1	1255	156	246.	29.4	2997.6 *	1	2115	256	0.	7.5	2993.7
1	0440	57	631.	258.7	3019.0 *	1	1300	157	239.	27.8	2997.4 *	1	2120	257	0.	7.5	2993.7
1	0445	58	636.	265.9	3019.5 *	1	1305	158	232.	26.1	2997.1 *	1	2125	258	0.	7.5	2993.7
1	0450	59	642.	272.5	3019.9 *	1	1310	159	225.	24.6	2996.9 *	1	2130	259	0.	7.5	2993.7
1	0455	60	646.	278.5	3020.3 *	1	1315	160	216.	23.0	2996.7 *	1	2135	260	0.	7.5	2993.7
1	0500	61	651.	284.1	3020.7 *	1	1320	161	208.	21.6	2996.5 *	1	2140	261	0.	7.5	2993.7
1	0505	62	655.	289.2	3021.0 *	1	1325	162	199.	20.2	2996.2 *	1	2145	262	0.	7.5	2993.7
1	0510	63	658.	293.7	3021.3 *	1	1330	163	191.	18.8	2996.0 *	1	2150	263	0.	7.5	2993.7
1	0515	64	661.	297.4	3021.5 *	1	1335	164	181.	17.6	2995.8 *	1	2155	264	0.	7.5	2993.7
1	0520	65	663.	300.2	3021.7 *	1	1340	165	171.	16.4	2995.6 *	1	2200	265	0.	7.5	2993.7
1	0525	66	664.	302.3	3021.8 *	1	1345	166	162.	15.2	2995.4 *	1	2205	266	0.	7.5	2993.7
1	0530	67	666.	303.6	3021.9 *	1	1350	167	154.	14.1	2995.2 *	1	2210	267	0.	7.5	2993.7
1	0535	68	671.	304.1	3021.9 *	1	1355	168	146.	13.1	2995.1 *	1	2215	268	0.	7.5	2993.7
1	0540	69	670.	304.0	3021.9 *	1	1400	169	127.	12.1	2994.9 *	1	2220	269	0.	7.5	2993.7
1	0545	70	665.	303.3	3021.9 *	1	1405	170	105.	11.3	2994.7 *	1	2225	270	0.	7.5	2993.7
1	0550	71	664.	302.1	3021.8 *	1	1410	171	87.	10.7	2994.5 *	1	2230	271	0.	7.5	2993.7
1	0555	72	663.	300.4	3021.7 *	1	1415	172	72.	10.1	2994.4 *	1	2235	272	0.	7.5	2993.7
1	0600	73	661.	298.2	3021.6 *	1	1420	173	59.	9.7	2994.2 *	1	2240	273	0.	7.5	2993.7
1	0605	74	659.	295.7	3021.4 *	1	1425	174	49.	9.3	2994.1 *	1	2245	274	0.	7.5	2993.7
1	0610	75	657.	292.9	3021.2 *	1	1430	175	40.	9.0	2994.1 *	1	2250	275	0.	7.5	2993.7
1	0615	76	655.	289.9	3021.1 *	1	1435	176	33.	8.8	2994.0 *	1	2255	276	0.	7.5	2993.7
1	0620	77	653.	286.6	3020.8 *	1	1440	177	28.	8.5	2994.0 *	1	2300	277	0.	7.5	2993.7
1	0625	78	650.	283.1	3020.6 *	1	1445	178	23.	8.4	2993.9 *	1	2305	278	0.	7.5	2993.7
1	0630	79	647.	279.5	3020.4 *	1	1450	179	19.	8.2	2993.9 *	1	2310	279	0.	7.5	2993.7
1	0635	80	644.	275.7	3020.2 *	1	1455	180	16.	8.1	2993.8 *	1	2315	280	0.	7.5	2993.7
1	0640	81	641.	271.8	3019.9 *	1	1500	181	13.	8.0	2993.8 *	1	2320	281	0.	7.5	2993.7
1	0645	82	638.	267.9	3019.6 *	1	1505	182	11.	7.9	2993.8 *	1	2325	282	0.	7.5	2993.7
1	0650	83	635.	263.9	3019.4 *	1	1510	183	9.	7.9	2993.8 *	1	2330	283	0.	7.5	2993.7
1	0655	84	631.	259.8	3019.1 *	1	1515	184	7.	7.8	2993.8 *	1	2335	284	0.	7.5	2993.7
1	0700	85	628.	255.7	3018.8 *	1	1520	185	6.	7.8	2993.8 *	1	2340	285	0.	7.5	2993.7
1	0705	86	624.	251.5	3018.6 *	1	1525	186	5.	7.7	2993.7 *	1	2345	286	0.	7.5	2993.7
1	0710	87	621.	247.4	3018.3 *	1	1530	187	4.	7.7	2993.7 *	1	2350	287	0.	7.5	2993.7
1	0715	88	618.	243.2	3018.0 *	1	1535	188	3.	7.7	2993.7 *	1	2355	288	0.	7.5	2993.7
1	0720	89	614.	239.1	3017.7 *	1	1540	189	3.	7.6	2993.7 *	2	0000	289	0.	7.5	2993.7
1	0725	90	610.	234.9	3017.4 *	1	1545	190	2.	7.6	2993.7 *	2	0005	290	0.	7.5	2993.7
1	0730	91	606.	230.8	3017.1 *	1	1550	191	2.	7.6	2993.7 *	2	0010	291	0.	7.5	2993.7
1	0735	92	602.	226.6	3016.8 *	1	1555	192	2.	7.6	2993.7 *	2	0015	292	0.	7.5	2993.7
1	0740	93	598.	222.5	3016.6 *	1	1600	193	1.	7.6	2993.7 *	2	0020	293	0.	7.5	2993.7
1	0745	94	595.	218.4	3016.3 *	1	1605	194	1.	7.6	2993.7 *	2	0025	294	0.	7.5	2993.7
1	0750	95	591.	214.4	3016.0 *	1	1610	195	1.	7.6	2993.7 *	2	0030	295	0.	7.5	2993.7
1	0755	96	587.	210.3	3015.7 *	1	1615	196	1.	7.6	2993.7 *	2	0035	296	0.	7.5	2993.7
1	0800	97	584.	206.3	3015.4 *	1	1620	197	1.	7.6	2993.7 *	2	0040	297	0.	7.5	2993.7
1	0805	98	580.	202.3	3015.1 *	1	1625	198	0.	7.6	2993.7 *	2	0045	298	0.	7.5	2993.7
1	0810	99	576.	198.3	3014.8 *	1	1630	199	0.	7.6	2993.7 *	2	0050	299	0.	7.5	2993.7
1	0815	100	571.	194.4	3014.5 *	1	1635	200	0.	7.6	2993.7 *	2	0055	300	0.	7.5	2993.7

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(CFS)			
+	671.	5.58	599.	222.	213.
		(INCHES)	1.267	1.876	1.876
		(AC-FT)	297.	440.	440.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	304.	5.58	228.	72.	70.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	3021.95	5.58	3016.73	3000.92	3000.55
CUMULATIVE AREA =		4.39 SQ MI			

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	2990.0 *	1		0820	101	562.	185.4	3013.9 *	1		1640	201	0.	7.6	2993.7
1		0005	2	0.	.0	2990.0 *	1		0825	102	557.	181.6	3013.6 *	1		1645	202	0.	7.6	2993.7
1		0010	3	0.	.0	2990.0 *	1		0830	103	553.	177.8	3013.3 *	1		1650	203	0.	7.6	2993.7
1		0015	4	0.	.0	2990.1 *	1		0835	104	549.	174.0	3013.0 *	1		1655	204	0.	7.6	2993.7
1		0020	5	0.	.0	2990.2 *	1		0840	105	545.	170.2	3012.7 *	1		1700	205	0.	7.6	2993.7
1		0025	6	0.	.0	2990.5 *	1		0845	106	540.	166.5	3012.4 *	1		1705	206	0.	7.6	2993.7
1		0030	7	0.	.1	2990.9 *	1		0850	107	536.	162.8	3012.1 *	1		1710	207	0.	7.6	2993.7
1		0035	8	0.	.1	2991.0 *	1		0855	108	532.	159.1	3011.8 *	1		1715	208	0.	7.6	2993.7
1		0040	9	0.	.2	2991.1 *	1		0900	109	528.	155.4	3011.6 *	1		1720	209	0.	7.6	2993.7
1		0045	10	0.	.2	2991.2 *	1		0905	110	524.	151.8	3011.3 *	1		1725	210	0.	7.6	2993.7
1		0050	11	0.	.3	2991.3 *	1		0910	111	520.	148.2	3011.0 *	1		1730	211	0.	7.5	2993.7
1		0055	12	0.	.4	2991.5 *	1		0915	112	516.	144.7	3010.7 *	1		1735	212	0.	7.5	2993.7
1		0100	13	0.	.5	2991.6 *	1		0920	113	512.	141.1	3010.5 *	1		1740	213	0.	7.5	2993.7
1		0105	14	0.	.6	2991.7 *	1		0925	114	508.	137.6	3010.2 *	1		1745	214	0.	7.5	2993.7
1		0110	15	0.	.7	2991.8 *	1		0930	115	504.	134.1	3009.9 *	1		1750	215	0.	7.5	2993.7
1		0115	16	0.	.8	2992.0 *	1		0935	116	499.	130.7	3009.6 *	1		1755	216	0.	7.5	2993.7
1		0120	17	0.	.9	2992.0 *	1		0940	117	494.	127.2	3009.3 *	1		1800	217	0.	7.5	2993.7
1		0125	18	0.	1.1	2992.1 *	1		0945	118	489.	123.8	3009.0 *	1		1805	218	0.	7.5	2993.7
1		0130	19	0.	1.3	2992.1 *	1		0950	119	483.	120.5	3008.6 *	1		1810	219	0.	7.5	2993.7
1		0135	20	0.	1.6	2992.2 *	1		0955	120	478.	117.2	3008.3 *	1		1815	220	0.	7.5	2993.7
1		0140	21	0.	2.1	2992.3 *	1		1000	121	472.	113.9	3007.9 *	1		1820	221	0.	7.5	2993.7
1		0145	22	0.	2.7	2992.5 *	1		1005	122	466.	110.7	3007.6 *	1		1825	222	0.	7.5	2993.7
1		0150	23	0.	3.4	2992.7 *	1		1010	123	461.	107.5	3007.3 *	1		1830	223	0.	7.5	2993.7
1		0155	24	0.	4.2	2992.9 *	1		1015	124	455.	104.3	3007.0 *	1		1835	224	0.	7.5	2993.7
1		0200	25	0.	5.1	2993.1 *	1		1020	125	450.	101.2	3006.6 *	1		1840	225	0.	7.5	2993.7
1		0205	26	0.	6.0	2993.3 *	1		1025	126	445.	98.1	3006.3 *	1		1845	226	0.	7.5	2993.7
1		0210	27	0.	6.8	2993.5 *	1		1030	127	439.	95.1	3006.0 *	1		1850	227	0.	7.5	2993.7
1		0215	28	5.	7.7	2993.7 *	1		1035	128	433.	92.1	3005.7 *	1		1855	228	0.	7.5	2993.7
1		0220	29	29.	8.6	2994.0 *	1		1040	129	427.	89.1	3005.3 *	1		1900	229	0.	7.5	2993.7
1		0225	30	54.	9.5	2994.2 *	1		1045	130	422.	86.2	3005.0 *	1		1905	230	0.	7.5	2993.7
1		0230	31	81.	10.5	2994.4 *	1		1050	131	414.	83.3	3004.7 *	1		1910	231	0.	7.5	2993.7
1		0235	32	107.	11.4	2994.7 *	1		1055	132	407.	80.5	3004.3 *	1		1915	232	0.	7.5	2993.7
1		0240	33	130.	12.2	2994.9 *	1		1100	133	400.	77.7	3003.9 *	1		1920	233	0.	7.5	2993.7
1		0245	34	145.	13.0	2995.0 *	1		1105	134	392.	75.0	3003.6 *	1		1925	234	0.	7.5	2993.7
1		0250	35	151.	13.8	2995.2 *	1		1110	135	385.	72.3	3003.2 *	1		1930	235	0.	7.5	2993.7
1		0255	36	158.	14.6	2995.3 *	1		1115	136	378.	69.7	3002.9 *	1		1935	236	0.	7.5	2993.7
1		0300	37	165.	15.5	2995.5 *	1		1120	137	371.	67.1	3002.5 *	1		1940	237	0.	7.5	2993.7
1		0305	38	172.	16.5	2995.6 *	1		1125	138	364.	64.6	3002.2 *	1		1945	238	0.	7.5	2993.7
1		0310	39	181.	17.5	2995.8 *	1		1130	139	357.	62.1	3001.9 *	1		1950	239	0.	7.5	2993.7
1		0315	40	192.	19.1	2996.1 *	1		1135	140	350.	59.7	3001.5 *	1		1955	240	0.	7.5	2993.7
1		0320	41	209.	21.9	2996.5 *	1		1140	141	344.	57.3	3001.2 *	1		2000	241	0.	7.5	2993.7
1		0325	42	235.	26.9	2997.2 *	1		1145	142	336.	54.9	3000.9 *	1		2005	242	0.	7.5	2993.7
1		0330	43	270.	35.3	2998.4 *	1		1150	143	329.	52.6	3000.6 *	1		2010	243	0.	7.5	2993.7
1		0335	44	315.	48.4	3000.1 *	1		1155	144	322.	50.4	3000.3 *	1		2015	244	0.	7.5	2993.7
1		0340	45	367.	65.9	3002.4 *	1		1200	145	315.	48.2	3000.0 *	1		2020	245	0.	7.5	2993.7
1		0345	46	422.	86.3	3005.0 *	1		1205	146	308.	46.1	2999.9 *	1		2025	246	0.	7.5	2993.7
1		0350	47	461.	107.7	3007.3 *	1		1210	147	301.	44.0	2999.5 *	1		2030	247	0.	7.5	2993.7
1		0355	48	496.	128.7	3009.4 *	1		1215	148	294.	41.9	2999.2 *	1		2035	248	0.	7.5	2993.7
1		0400	49	521.	148.9	3011.1 *	1		1220	149	287.	39.9	2999.0 *	1		2040	249	0.	7.5	2993.7
1		0405	50	542.	167.8	3012.5 *	1		1225	150	279.	38.0	2998.7 *	1		2045	250	0.	7.5	2993.7
1		0410	51	562.	185.4	3013.9 *	1		1230	151	272.	36.1	2998.4 *	1		2050	251	0.	7.5	2993.7
1		0415	52	579.	201.4	3015.1 *	1		1235	152	265.	34.2	2998.2 *	1		2055	252	0.	7.5	2993.7
1		0420	53	592.	215.3	3016.1 *	1		1240	153	259.	32.4	2998.0 *	1		2100	253	0.	7.5	2993.7
1		0425	54	603.	227.3	3016.9 *	1		1245	154	251.	30.7	2997.7 *	1		2105	254	0.	7.5	2993.7
1		0430	55	612.	237.4	3017.6 *	1		1250	155	244.	29.0	2997.5 *	1		2110	255	0.	7.5	2993.7
1		0435	56	620.	246.2	3018.2 *	1		1255	156	237.	27.3	2997.3 *	1		2115	256	0.	7.5	2993.7
1		0440	57	627.	253.9	3018.7 *	1		1300	157	230.	25.7	2997.1 *	1		2120	257	0.	7.5	2993.7
1		0445	58	632.	261.0	3019.2 *	1		1305	158	222.	24.1	2996.9 *	1		2125	258	0.	7.5	2993.7
1		0450	59	638.	267.5	3019.6 *	1		1310	159	214.	22.6	2996.6 *	1		2130	259	0.	7.5	2993.7
1		0455	60	642.	273.4	3020.0 *	1		1315	160	205.	21.2	2996.4 *	1		2135	260	0.	7.5	2993.7
1		0500	61	647.	278.8	3020.4 *	1		1320	161	197.	19.8	2996.2 *	1		2140	261	0.	7.5	2993.7
1		0505	62	650.	283.8	3020.7 *	1		1325	162	188.	18.5	2996.0 *	1		2145	262	0.	7.5	2993.7
1		0510	63	654.	288.2	3021.0 *	1		1330	163	178.	17.2	2995.7 *	1		2150	263	0.	7.5	2993.7
1		0515	64	657.	291.8	3021.2 *	1		1335	164	169.	16.0	2995.5 *	1		2155	264	0.	7.5	2993.7
1		0520	65	659.	294.6	3021.4 *	1		1340	165	160.	14.9	2995.4 *	1		2200	265	0.	7.5	2993.7
1		0525	66	660.	296.6	3021.5 *	1		1345	166	151.	13.8	2995.2 *	1		2205	266	0.	7.5	2993.7
1		0530	67	661.	297.9	3021.6 *	1		1350	167	144.	12.8	2995.0 *	1		2210	267	0.	7.5	2993.7
1		0535	68	661.	298.4	3021.6 *	1		1355	168	120.	11.9	2994.8 *	1		2215	268	0.	7.5	2993.7
1		0540	69	661.	298.3	3021.6 *	1		1400	169	99.	11.1	2994.6 *	1		2220	269	0.	7.5	2993.7
1		0545	70	661.	297.6	3021.5 *	1		1405	170	82.	10.5	2994.4 *	1		2225	270	0.	7.5	2993.7
1		0550	71	660.	296.3	3021.5 *	1		1410	171	68.	10.0	2994.3 *	1		2230	271	0.	7.5	2993.7
1		0555	72	659.	294.6	3021.3 *	1		1415	172	56.	9.6	2994.2 *	1		2235	272	0.	7.5	2993.7
1		0600	73	657.	292.5	3021.2 *	1		1420	173	46.	9.2	2994.1 *	1		2240	273	0.	7.5	2993.7
1		0605	74	655.	290.0	3021.1 *	1		1425	174	38.	8.9	2994.0 *	1		2245	274	0.	7.5	2993.7
1																				

1 0815 100 566. 189.3 3014.2 * 1 1635 200 0. 7.6 2993.7 * 2 0055 300 0. 7.5 2993.7

PEAK FLOW TIME MAXIMUM AVERAGE FLOW
+ (CFS) (HR) 6-HR 24-HR 72-HR 24.92-HR
+ 661. 5.58 (CFS) 594. 218. 210. 210.
(INCHES) 1.257 1.845 1.845 1.845
(AC-FT) 294. 432. 432. 432.
PEAK STORAGE TIME MAXIMUM AVERAGE STORAGE
+ (AC-FT) (HR) 6-HR 24-HR 72-HR 24.92-HR
+ 298. 5.58 223. 71. 68. 68.
PEAK STAGE TIME MAXIMUM AVERAGE STAGE
+ (FEET) (HR) 6-HR 24-HR 72-HR 24.92-HR
+ 3021.59 5.58 3016.38 3000.76 3000.39 3000.39
CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .92

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	2990.0	*	1	0820	101	556.	180.5	3013.5	*	1	1640	201	0.	7.6	2993.7	
1	0005	2	0.	0	2990.0	*	1	0825	102	552.	176.7	3013.2	*	1	1645	202	0.	7.6	2993.7	
1	0010	3	0.	0	2990.0	*	1	0830	103	548.	172.9	3012.9	*	1	1650	203	0.	7.6	2993.7	
1	0015	4	0.	0	2990.1	*	1	0835	104	543.	169.1	3012.6	*	1	1655	204	0.	7.6	2993.7	
1	0020	5	0.	0	2990.2	*	1	0840	105	539.	165.4	3012.3	*	1	1700	205	0.	7.6	2993.7	
1	0025	6	0.	0	2990.5	*	1	0845	106	535.	161.7	3012.0	*	1	1705	206	0.	7.6	2993.7	
1	0030	7	0.	0.	2990.9	*	1	0850	107	531.	158.0	3011.8	*	1	1710	207	0.	7.6	2993.7	
1	0035	8	0.	0.	2991.0	*	1	0855	108	527.	154.4	3011.5	*	1	1715	208	0.	7.6	2993.7	
1	0040	9	0.	0.	2991.1	*	1	0900	109	523.	150.8	3011.2	*	1	1720	209	0.	7.6	2993.7	
1	0045	10	0.	0.	2991.2	*	1	0905	110	519.	147.2	3010.9	*	1	1725	210	0.	7.5	2993.7	
1	0050	11	0.	0.	2991.3	*	1	0910	111	515.	143.6	3010.7	*	1	1730	211	0.	7.5	2993.7	
1	0055	12	0.	0.	2991.4	*	1	0915	112	511.	140.1	3010.4	*	1	1735	212	0.	7.5	2993.7	
1	0100	13	0.	0.	2991.5	*	1	0920	113	507.	136.6	3010.1	*	1	1740	213	0.	7.5	2993.7	
1	0105	14	0.	0.	2991.6	*	1	0925	114	503.	133.1	3009.8	*	1	1745	214	0.	7.5	2993.7	
1	0110	15	0.	0.	2991.7	*	1	0930	115	498.	129.7	3009.5	*	1	1750	215	0.	7.5	2993.7	
1	0115	16	0.	0.	2991.9	*	1	0935	116	493.	126.3	3009.2	*	1	1755	216	0.	7.5	2993.7	
1	0120	17	0.	0.	2992.0	*	1	0940	117	488.	122.9	3008.9	*	1	1800	217	0.	7.5	2993.7	
1	0125	18	0.	0.	2992.0	*	1	0945	118	482.	119.5	3008.5	*	1	1805	218	0.	7.5	2993.7	
1	0130	19	0.	0.	2992.1	*	1	0950	119	476.	116.2	3008.2	*	1	1810	219	0.	7.5	2993.7	
1	0135	20	0.	0.	2992.2	*	1	0955	120	470.	113.0	3007.8	*	1	1815	220	0.	7.5	2993.7	
1	0140	21	0.	0.	2992.3	*	1	1000	121	465.	109.8	3007.5	*	1	1820	221	0.	7.5	2993.7	
1	0145	22	0.	0.	2992.4	*	1	1005	122	459.	106.6	3007.2	*	1	1825	222	0.	7.5	2993.7	
1	0150	23	0.	0.	2992.6	*	1	1010	123	454.	103.4	3006.9	*	1	1830	223	0.	7.5	2993.7	
1	0155	24	0.	0.	2992.8	*	1	1015	124	448.	100.3	3006.5	*	1	1835	224	0.	7.5	2993.7	
1	0200	25	0.	0.	2993.0	*	1	1020	125	443.	97.3	3006.2	*	1	1840	225	0.	7.5	2993.7	
1	0205	26	0.	0.	2993.2	*	1	1025	126	438.	94.2	3005.9	*	1	1845	226	0.	7.5	2993.7	
1	0210	27	0.	0.	2993.4	*	1	1030	127	432.	91.2	3005.6	*	1	1850	227	0.	7.5	2993.7	
1	0215	28	0.	0.	2993.7	*	1	1035	128	426.	88.3	3005.3	*	1	1855	228	0.	7.5	2993.7	
1	0220	29	20.	0.	2993.9	*	1	1040	129	420.	85.4	3004.9	*	1	1900	229	0.	7.5	2993.7	
1	0225	30	46.	0.	2994.1	*	1	1045	130	412.	82.5	3004.5	*	1	1905	230	0.	7.5	2993.7	
1	0230	31	73.	0.	2994.4	*	1	1050	131	405.	79.7	3004.2	*	1	1910	231	0.	7.5	2993.7	
1	0235	32	99.	0.	2994.6	*	1	1055	132	398.	76.9	3003.8	*	1	1915	232	0.	7.5	2993.7	
1	0240	33	122.	0.	2994.8	*	1	1100	133	390.	74.2	3003.5	*	1	1920	233	0.	7.5	2993.7	
1	0245	34	143.	0.	2995.0	*	1	1105	134	383.	71.6	3003.1	*	1	1925	234	0.	7.5	2993.7	
1	0250	35	149.	0.	2995.1	*	1	1110	135	376.	68.9	3002.8	*	1	1930	235	0.	7.5	2993.7	
1	0255	36	155.	0.	2995.3	*	1	1115	136	369.	66.4	3002.4	*	1	1935	236	0.	7.5	2993.7	
1	0300	37	162.	0.	2995.4	*	1	1120	137	362.	63.9	3002.1	*	1	1940	237	0.	7.5	2993.7	
1	0305	38	169.	0.	2995.6	*	1	1125	138	355.	61.4	3001.8	*	1	1945	238	0.	7.5	2993.7	
1	0310	39	177.	0.	2995.7	*	1	1130	139	348.	59.0	3001.5	*	1	1950	239	0.	7.5	2993.7	
1	0315	40	189.	0.	2996.0	*	1	1135	140	342.	56.6	3001.1	*	1	1955	240	0.	7.5	2993.7	
1	0320	41	206.	0.	2996.4	*	1	1140	141	334.	54.3	3000.8	*	1	2000	241	0.	7.5	2993.7	
1	0325	42	232.	0.	2997.1	*	1	1145	142	327.	52.0	3000.5	*	1	2005	242	0.	7.5	2993.7	
1	0330	43	266.	0.	2998.2	*	1	1150	143	320.	49.8	3000.2	*	1	2010	243	0.	7.5	2993.7	
1	0335	44	312.	0.	2999.9	*	1	1155	144	313.	47.6	3000.0	*	1	2015	244	0.	7.5	2993.7	
1	0340	45	363.	0.	3002.2	*	1	1200	145	306.	45.5	2999.7	*	1	2020	245	0.	7.5	2993.7	
1	0345	46	417.	0.	3004.8	*	1	1205	146	299.	43.4	2999.4	*	1	2025	246	0.	7.5	2993.7	
1	0350	47	457.	0.	3007.1	*	1	1210	147	292.	41.3	2999.1	*	1	2030	247	0.	7.5	2993.7	
1	0355	48	493.	0.	3009.2	*	1	1215	148	285.	39.4	2998.9	*	1	2035	248	0.	7.5	2993.7	
1	0400	49	518.	0.	3010.8	*	1	1220	149	277.	37.4	2998.6	*	1	2040	249	0.	7.5	2993.7	
1	0405	50	538.	0.	3012.3	*	1	1225	150	270.	35.5	2998.4	*	1	2045	250	0.	7.5	2993.7	
1	0410	51	558.	0.	3013.6	*	1	1230	151	263.	33.7	2998.1	*	1	2050	251	0.	7.5	2993.7	
1	0415	52	575.	0.	3014.8	*	1	1235	152	257.	31.9	2997.9	*	1	2055	252	0.	7.5	2993.7	
1	0420	53	588.	0.	3015.8	*	1	1240	153	249.	30.2	2997.7	*	1	2100	253	0.	7.5	2993.7	
1	0425	54	599.	0.	3016.6	*	1	1245	154	242.	28.5	2997.4	*	1	2105	254	0.	7.5	2993.7	
1	0430	55	608.	0.	3017.3	*	1	1250	155	235.	26.8	2997.2	*	1	2110	255	0.	7.5	2993.7	
1	0435	56	616.	0.	3017.9	*	1	1255	156	228.	25.2	2997.0	*	1	2115	256	0.	7.5	2993.7	
1	0440	57	623.	0.	3018.4	*	1	1300	157	220.	23.7	2996.8	*	1	2120	257	0.	7.5	2993.7	
1	0445	58	628.	0.	3018.9	*	1	1305	158	211.	22.2	2996.5	*	1	2125	258	0.	7.5	2993.7	
1	0450	59	634.	0.	3019.3	*	1	1310	159	203.	20.8	2996.3	*	1	2130	259	0.	7.5	2993.7	
1	0455	60	638.	0.	3019.7	*	1	1315	160	194.	19.4	2996.1	*	1	2135	260	0.	7.5	2993.7	
1	0500	61	643.	0.	3020.0	*	1	1320	161	185.	18.1	2995.9	*	1	2140	261	0.	7.5	2993.7	
1	0505	62	646.	0.	3020.3	*	1	1325	162	175.	16.9	2995.7	*	1	2145	262	0.	7.5	2993.7	
1	0510	63	650.	0.	3020.6	*	1	1330	163	166.	15.7	2995.5	*	1	2150	263	0.	7.5	2993.7	
1	0515	64	652.	0.	3020.8	*	1	1335	164	157.	14.6	2995.3	*	1	2155	264	0.	7.5	2993.7	
1	0520	65	654.	0.	3021.0	*	1	1340	165	149.	13.5	2995.1	*	1	2200	265	0.	7.5	2993.7	
1	0525	66	656.	0.	3021.1	*	1	1345	166	138.	12.5	2995.0	*	1	2205	266	0.	7.5	2993.7	
1	0530	67	657.	0.	3021.2	*	1	1350	167	114.	11.7	2994.7	*	1	2210	267	0.	7.5	2993.7	
1	0535	68	657.	0.	3021.2	*	1	1355	168	94.	11.0	2994.6	*	1	2215	268	0.	7.5	2993.7	
1	0540	69	657.	0.	3021.2	*	1	1400	169	78.	10.4	2994.4	*	1	2220	269	0.	7.5	2993.7	
1	0545	70	657.	0.	3021.2	*	1	1405	170	64.	9.9	2994.3	*	1	2225	270	0.	7.5	2993.7	

1	0550	71	656.	290.6	3021.1 *	1	1410	171	53.	9.5	2994.2 *	1	2230	271	0.	7.5	2993.7
1	0555	72	654.	288.9	3021.0 *	1	1415	172	44.	9.1	2994.1 *	1	2235	272	0.	7.5	2993.7
1	0600	73	653.	286.7	3020.9 *	1	1420	173	36.	8.9	2994.0 *	1	2240	273	0.	7.5	2993.7
1	0605	74	651.	284.2	3020.7 *	1	1425	174	30.	8.6	2994.0 *	1	2245	274	0.	7.5	2993.7
1	0610	75	649.	281.5	3020.5 *	1	1430	175	25.	8.4	2993.9 *	1	2250	275	0.	7.5	2993.7
1	0615	76	646.	278.4	3020.3 *	1	1435	176	20.	8.3	2993.9 *	1	2255	276	0.	7.5	2993.7
1	0620	77	644.	275.2	3020.1 *	1	1440	177	17.	8.2	2993.9 *	1	2300	277	0.	7.5	2993.7
1	0625	78	641.	271.7	3019.9 *	1	1445	178	14.	8.1	2993.8 *	1	2305	278	0.	7.5	2993.7
1	0630	79	638.	268.1	3019.7 *	1	1450	179	12.	8.0	2993.8 *	1	2310	279	0.	7.5	2993.7
1	0635	80	635.	264.4	3019.4 *	1	1455	180	9.	7.9	2993.8 *	1	2315	280	0.	7.5	2993.7
1	0640	81	632.	260.6	3019.2 *	1	1500	181	8.	7.8	2993.8 *	1	2320	281	0.	7.5	2993.7
1	0645	82	629.	256.7	3018.9 *	1	1505	182	6.	7.8	2993.8 *	1	2325	282	0.	7.5	2993.7
1	0650	83	626.	252.7	3018.6 *	1	1510	183	5.	7.7	2993.7 *	1	2330	283	0.	7.5	2993.7
1	0655	84	622.	248.7	3018.4 *	1	1515	184	4.	7.7	2993.7 *	1	2335	284	0.	7.5	2993.7
1	0700	85	619.	244.7	3018.1 *	1	1520	185	4.	7.7	2993.7 *	1	2340	285	0.	7.5	2993.7
1	0705	86	615.	240.6	3017.8 *	1	1525	186	3.	7.7	2993.7 *	1	2345	286	0.	7.5	2993.7
1	0710	87	611.	236.5	3017.5 *	1	1530	187	2.	7.6	2993.7 *	1	2350	287	0.	7.5	2993.7
1	0715	88	608.	232.4	3017.2 *	1	1535	188	2.	7.6	2993.7 *	1	2355	288	0.	7.5	2993.7
1	0720	89	604.	228.3	3017.0 *	1	1540	189	2.	7.6	2993.7 *	2	0000	289	0.	7.5	2993.7
1	0725	90	600.	224.2	3016.7 *	1	1545	190	1.	7.6	2993.7 *	2	0005	290	0.	7.5	2993.7
1	0730	91	596.	220.1	3016.4 *	1	1550	191	1.	7.6	2993.7 *	2	0010	291	0.	7.5	2993.7
1	0735	92	593.	216.1	3016.1 *	1	1555	192	1.	7.6	2993.7 *	2	0015	292	0.	7.5	2993.7
1	0740	93	589.	212.0	3015.8 *	1	1600	193	1.	7.6	2993.7 *	2	0020	293	0.	7.5	2993.7
1	0745	94	585.	208.0	3015.5 *	1	1605	194	1.	7.6	2993.7 *	2	0025	294	0.	7.5	2993.7
1	0750	95	581.	204.0	3015.3 *	1	1610	195	1.	7.6	2993.7 *	2	0030	295	0.	7.5	2993.7
1	0755	96	578.	200.0	3015.0 *	1	1615	196	0.	7.6	2993.7 *	2	0035	296	0.	7.5	2993.7
1	0800	97	573.	196.0	3014.7 *	1	1620	197	0.	7.6	2993.7 *	2	0040	297	0.	7.5	2993.7
1	0805	98	569.	192.1	3014.4 *	1	1625	198	0.	7.6	2993.7 *	2	0045	298	0.	7.5	2993.7
1	0810	99	565.	188.2	3014.1 *	1	1630	199	0.	7.6	2993.7 *	2	0050	299	0.	7.5	2993.7
1	0815	100	560.	184.3	3013.8 *	1	1635	200	0.	7.6	2993.7 *	2	0055	300	0.	7.5	2993.7

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	657.	5.58	(CFS)	589.	214.	206.
			(INCHES)	1.247	1.815	1.815
			(AC-FT)	292.	425.	425.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	293.	5.58	218.	69.	66.	66.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3021.23	5.58	3016.03	3000.60	3000.23	3000.23

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .91

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.	2990.0 *	1	0820	101	551.	175.6	3013.1 *	1	1640	201	0.	7.6	2993.7			
1	0005	2	0.	0.	2990.0 *	1	0825	102	546.	171.8	3012.8 *	1	1645	202	0.	7.6	2993.7			
1	0010	3	0.	0.	2990.0 *	1	0830	103	542.	168.0	3012.5 *	1	1650	203	0.	7.6	2993.7			
1	0015	4	0.	0.	2990.1 *	1	0835	104	538.	164.3	3012.2 *	1	1655	204	0.	7.6	2993.7			
1	0020	5	0.	0.	2990.2 *	1	0840	105	534.	160.6	3012.0 *	1	1700	205	0.	7.6	2993.7			
1	0025	6	0.	0.	2990.5 *	1	0845	106	530.	157.0	3011.7 *	1	1705	206	0.	7.6	2993.7			
1	0030	7	0.	0.	2990.8 *	1	0850	107	526.	153.3	3011.4 *	1	1710	207	0.	7.6	2993.7			
1	0035	8	0.	0.	2991.0 *	1	0855	108	522.	149.7	3011.1 *	1	1715	208	0.	7.6	2993.7			
1	0040	9	0.	0.	2991.1 *	1	0900	109	518.	146.1	3010.8 *	1	1720	209	0.	7.5	2993.7			
1	0045	10	0.	0.	2991.2 *	1	0905	110	514.	142.6	3010.6 *	1	1725	210	0.	7.5	2993.7			
1	0050	11	0.	0.	2991.3 *	1	0910	111	510.	139.1	3010.3 *	1	1730	211	0.	7.5	2993.7			
1	0055	12	0.	0.	2991.4 *	1	0915	112	506.	135.6	3010.0 *	1	1735	212	0.	7.5	2993.7			
1	0100	13	0.	0.	2991.5 *	1	0920	113	501.	132.1	3009.7 *	1	1740	213	0.	7.5	2993.7			
1	0105	14	0.	0.	2991.6 *	1	0925	114	496.	128.7	3009.4 *	1	1745	214	0.	7.5	2993.7			
1	0110	15	0.	0.	2991.7 *	1	0930	115	491.	125.2	3009.1 *	1	1750	215	0.	7.5	2993.7			
1	0115	16	0.	0.	2991.8 *	1	0935	116	486.	121.9	3008.8 *	1	1755	216	0.	7.5	2993.7			
1	0120	17	0.	0.	2992.0 *	1	0940	117	480.	118.6	3008.4 *	1	1800	217	0.	7.5	2993.7			
1	0125	18	0.	0.	2992.0 *	1	0945	118	474.	115.3	3008.1 *	1	1805	218	0.	7.5	2993.7			
1	0130	19	0.	0.	2992.1 *	1	0950	119	469.	112.0	3007.7 *	1	1810	219	0.	7.5	2993.7			
1	0135	20	0.	0.	2992.1 *	1	0955	120	463.	108.8	3007.4 *	1	1815	220	0.	7.5	2993.7			
1	0140	21	0.	0.	2992.3 *	1	1000	121	458.	105.6	3007.1 *	1	1820	221	0.	7.5	2993.7			
1	0145	22	0.	0.	2992.4 *	1	1005	122	452.	102.5	3006.8 *	1	1825	222	0.	7.5	2993.7			
1	0150	23	0.	0.	2992.6 *	1	1010	123	447.	99.4	3006.4 *	1	1830	223	0.	7.5	2993.7			
1	0155	24	0.	0.	2992.8 *	1	1015	124	442.	96.4	3006.1 *	1	1835	224	0.	7.5	2993.7			
1	0200	25	0.	0.	2993.0 *	1	1020	125	436.	93.3	3005.8 *	1	1840	225	0.	7.5	2993.7			
1	0205	26	0.	0.	2993.2 *	1	1025	126	430.	90.4	3005.5 *	1	1845	226	0.	7.5	2993.7			
1	0210	27	0.	0.	2993.4 *	1	1030	127	424.	87.4	3005.2 *	1	1850	227	0.	7.5	2993.7			
1	0215	28	0.	0.	2993.6 *	1	1035	128	417.	84.5	3004.8 *	1	1855	228	0.	7.5	2993.7			
1	0220	29	11.	8.0	2993.8 *	1	1040	129	410.	81.7	3004.4 *	1	1900	229	0.	7.5	2993.7			
1	0225	30	38.	8.9	2994.0 *	1	1045	130	403.	78.9	3004.1 *	1	1905	230	0.	7.5	2993.7			
1	0230	31	65.	9.9	2994.3 *	1	1050	131	395.	76.1	3003.7 *	1	1910	231	0.	7.5	2993.7			
1	0235	32	91.	10.8	2994.5 *	1	1055	132	388.	73.4	3003.4 *	1	1915	232	0.	7.5	2993.7			
1	0240	33	115.	11.7	2994.7 *	1	1100	133	381.	70.8	3003.0 *	1	1920	233	0.	7.5	2993.7			
1	0245	34	135.	12.4	2994.9 *	1	1105	134	374.	68.2	3002.7 *	1	1925	234	0.	7.5	2993.7			
1	0250	35	146.	13.2	2995.1 *	1	1110	135	367.	65.6	3002.3 *	1	1930	235	0.	7.5	2993.7			
1	0255	36	153.	14.0	2995.2 *	1	1115	136	360.	63.1	3002.0 *	1	1935	236	0.	7.5	2993.7			
1	0300	37	159.	14.8	2995.3 *	1	1120	137	353.	60.7	3001.7 *	1	1940	237	0.	7.5	2993.7			
1	0305	38	166.	15.7	2995.5 *	1	1125	138	346.	58.3	3001.4 *	1	1945	238	0.	7.5	2993.7			
1	0310	39	174.	16.7	2995.7 *	1	1130	139	340.	55.9	3001.1 *	1	1950	239	0.	7.5	2993.7			
1	0315	40	186.	18.2	2995.9 *	1	1135	140	332.	53.6	3000.7 *	1	1955	240	0.	7.5	2993.7			
1	0320	41	203.	20.8	2996.3 *	1	1140	141	325.	51.3	3000.5 *	1	2000	241	0.	7.5	2993.7			

1	0325	42	230.	25.6	2997.1 *	1	1145	142	317.	49.1	3000.2 *	1	2005	242	0.	7.5	2993.7
1	0330	43	263.	33.7	2998.1 *	1	1150	143	310.	47.0	2999.9 *	1	2010	243	0.	7.5	2993.7
1	0335	44	308.	46.3	2999.8 *	1	1155	144	304.	44.8	2999.6 *	1	2015	244	0.	7.5	2993.7
1	0340	45	360.	63.1	3002.0 *	1	1200	145	297.	42.8	2999.3 *	1	2020	245	0.	7.5	2993.7
1	0345	46	413.	82.7	3004.6 *	1	1205	146	290.	40.8	2999.1 *	1	2025	246	0.	7.5	2993.7
1	0350	47	454.	103.4	3006.9 *	1	1210	147	282.	38.8	2998.8 *	1	2030	247	0.	7.5	2993.7
1	0355	48	489.	123.7	3008.9 *	1	1215	148	275.	36.9	2998.6 *	1	2035	248	0.	7.5	2993.7
1	0400	49	515.	143.2	3010.6 *	1	1220	149	268.	35.0	2998.3 *	1	2040	249	0.	7.5	2993.7
1	0405	50	535.	161.5	3012.0 *	1	1225	150	261.	33.2	2998.1 *	1	2045	250	0.	7.5	2993.7
1	0410	51	554.	178.5	3013.3 *	1	1230	151	254.	31.4	2997.8 *	1	2050	251	0.	7.5	2993.7
1	0415	52	571.	193.8	3014.5 *	1	1235	152	247.	29.7	2997.6 *	1	2055	252	0.	7.5	2993.7
1	0420	53	585.	207.3	3015.5 *	1	1240	153	240.	28.0	2997.4 *	1	2100	253	0.	7.5	2993.7
1	0425	54	595.	218.9	3016.3 *	1	1245	154	233.	26.4	2997.2 *	1	2105	254	0.	7.5	2993.7
1	0430	55	604.	228.7	3017.0 *	1	1250	155	226.	24.8	2997.0 *	1	2110	255	0.	7.5	2993.7
1	0435	56	612.	237.1	3017.6 *	1	1255	156	217.	23.2	2996.7 *	1	2115	256	0.	7.5	2993.7
1	0440	57	619.	244.5	3018.1 *	1	1300	157	209.	21.8	2996.5 *	1	2120	257	0.	7.5	2993.7
1	0445	58	624.	251.3	3018.6 *	1	1305	158	200.	20.4	2996.3 *	1	2125	258	0.	7.5	2993.7
1	0450	59	630.	257.5	3019.0 *	1	1310	159	192.	19.0	2996.0 *	1	2130	259	0.	7.5	2993.7
1	0455	60	634.	263.2	3019.3 *	1	1315	160	182.	17.7	2995.8 *	1	2135	260	0.	7.5	2993.7
1	0500	61	638.	268.5	3019.7 *	1	1320	161	173.	16.5	2995.6 *	1	2140	261	0.	7.5	2993.7
1	0505	62	642.	273.3	3020.0 *	1	1325	162	163.	15.4	2995.4 *	1	2145	262	0.	7.5	2993.7
1	0510	63	645.	277.5	3020.3 *	1	1330	163	155.	14.3	2995.3 *	1	2150	263	0.	7.5	2993.7
1	0515	64	648.	280.9	3020.5 *	1	1335	164	147.	13.2	2995.1 *	1	2155	264	0.	7.5	2993.7
1	0520	65	650.	283.6	3020.7 *	1	1340	165	131.	12.3	2994.9 *	1	2200	265	0.	7.5	2993.7
1	0525	66	652.	285.4	3020.8 *	1	1345	166	108.	11.4	2994.7 *	1	2205	266	0.	7.5	2993.7
1	0530	67	653.	286.6	3020.8 *	1	1350	167	89.	10.8	2994.5 *	1	2210	267	0.	7.5	2993.7
1	0535	68	653.	287.1	3020.9 *	1	1355	168	74.	10.2	2994.4 *	1	2215	268	0.	7.5	2993.7
1	0540	69	653.	286.9	3020.9 *	1	1400	169	61.	9.7	2994.3 *	1	2220	269	0.	7.5	2993.7
1	0545	70	652.	286.2	3020.8 *	1	1405	170	50.	9.4	2994.2 *	1	2225	270	0.	7.5	2993.7
1	0550	71	651.	284.9	3020.7 *	1	1410	171	41.	9.0	2994.1 *	1	2230	271	0.	7.5	2993.7
1	0555	72	650.	283.1	3020.6 *	1	1415	172	34.	8.8	2994.0 *	1	2235	272	0.	7.5	2993.7
1	0600	73	648.	281.0	3020.5 *	1	1420	173	28.	8.6	2994.0 *	1	2240	273	0.	7.5	2993.7
1	0605	74	646.	278.5	3020.3 *	1	1425	174	23.	8.4	2993.9 *	1	2245	274	0.	7.5	2993.7
1	0610	75	644.	275.7	3020.2 *	1	1430	175	19.	8.2	2993.9 *	1	2250	275	0.	7.5	2993.7
1	0615	76	642.	272.7	3020.0 *	1	1435	176	16.	8.1	2993.8 *	1	2255	276	0.	7.5	2993.7
1	0620	77	639.	269.5	3019.7 *	1	1440	177	13.	8.0	2993.8 *	1	2300	277	0.	7.5	2993.7
1	0625	78	636.	266.1	3019.5 *	1	1445	178	11.	7.9	2993.8 *	1	2305	278	0.	7.5	2993.7
1	0630	79	634.	262.5	3019.3 *	1	1450	179	9.	7.9	2993.8 *	1	2310	279	0.	7.5	2993.7
1	0635	80	631.	258.8	3019.0 *	1	1455	180	7.	7.8	2993.8 *	1	2315	280	0.	7.5	2993.7
1	0640	81	627.	255.0	3018.8 *	1	1500	181	6.	7.8	2993.8 *	1	2320	281	0.	7.5	2993.7
1	0645	82	624.	251.1	3018.5 *	1	1505	182	5.	7.7	2993.7 *	1	2325	282	0.	7.5	2993.7
1	0650	83	621.	247.2	3018.3 *	1	1510	183	4.	7.7	2993.7 *	1	2330	283	0.	7.5	2993.7
1	0655	84	617.	243.2	3018.0 *	1	1515	184	3.	7.7	2993.7 *	1	2335	284	0.	7.5	2993.7
1	0700	85	614.	239.1	3017.7 *	1	1520	185	3.	7.7	2993.7 *	1	2340	285	0.	7.5	2993.7
1	0705	86	610.	235.1	3017.4 *	1	1525	186	2.	7.6	2993.7 *	1	2345	286	0.	7.5	2993.7
1	0710	87	606.	231.0	3017.2 *	1	1530	187	2.	7.6	2993.7 *	1	2350	287	0.	7.5	2993.7
1	0715	88	603.	227.0	3016.9 *	1	1535	188	2.	7.6	2993.7 *	1	2355	288	0.	7.5	2993.7
1	0720	89	599.	222.9	3016.6 *	1	1540	189	1.	7.6	2993.7 *	2	0000	289	0.	7.5	2993.7
1	0725	90	595.	218.9	3016.3 *	1	1545	190	1.	7.6	2993.7 *	2	0005	290	0.	7.5	2993.7
1	0730	91	591.	214.8	3016.0 *	1	1550	191	1.	7.6	2993.7 *	2	0010	291	0.	7.5	2993.7
1	0735	92	588.	210.8	3015.7 *	1	1555	192	1.	7.6	2993.7 *	2	0015	292	0.	7.5	2993.7
1	0740	93	584.	206.8	3015.5 *	1	1600	193	1.	7.6	2993.7 *	2	0020	293	0.	7.5	2993.7
1	0745	94	580.	202.8	3015.2 *	1	1605	194	1.	7.6	2993.7 *	2	0025	294	0.	7.5	2993.7
1	0750	95	576.	198.8	3014.9 *	1	1610	195	0.	7.6	2993.7 *	2	0030	295	0.	7.5	2993.7
1	0755	96	572.	194.9	3014.6 *	1	1615	196	0.	7.6	2993.7 *	2	0035	296	0.	7.5	2993.7
1	0800	97	568.	190.9	3014.3 *	1	1620	197	0.	7.6	2993.7 *	2	0040	297	0.	7.5	2993.7
1	0805	98	563.	187.1	3014.0 *	1	1625	198	0.	7.6	2993.7 *	2	0045	298	0.	7.5	2993.7
1	0810	99	559.	183.2	3013.7 *	1	1630	199	0.	7.6	2993.7 *	2	0050	299	0.	7.5	2993.7
1	0815	100	555.	179.4	3013.4 *	1	1635	200	0.	7.6	2993.7 *	2	0055	300	0.	7.5	2993.7

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	653.	5.58	584.	211.	203.	203.
		(INCHES)	1.236	1.784	1.784	1.784
		(AC-FT)	290.	418.	418.	418.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	287.	5.58	213.	67.	65.	65.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3020.88	5.58	3015.67	3000.43	3000.07	3000.07
CUMULATIVE AREA =			4.39 SQ MI			

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .70

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	2990.0	*	1		0820	101	411.	81.8	3004.4	*	1		1640	201	0.	7.5	2993.7
1		0005	2	0.	.0	2990.0	*	1		0825	102	403.	79.0	3004.1	*	1		1645	202	0.	7.5	2993.7
1		0010	3	0.	.0	2990.0	*	1		0830	103	396.	76.2	3003.7	*	1		1650	203	0.	7.5	2993.7
1		0015	4	0.	.0	2990.0	*	1		0835	104	388.	73.5	3003.4	*	1		1655	204	0.	7.5	2993.7
1		0020	5	0.	.0	2990.1	*	1		0840	105	381.	70.9	3003.0	*	1		1700	205	0.	7.5	2993.7
1		0025	6	0.	.0	2990.2	*	1		0845	106	374.	68.3	3002.7	*	1		1705	206	0.	7.5	2993.7
1		0030	7	0.	.0	2990.4	*	1		0850	107	367.	65.7	3002.3	*	1		1710	207	0.	7.5	2993.7
1		0035	8	0.	.0	2990.6	*	1		0855	108	360.	63.2	3002.0	*	1		1715	208	0.	7.5	2993.7
1		0040	9	0.	.1	2990.8	*	1		0900	109	353.	60.8	3001.7	*	1		1720	209	0.	7.5	2993.7
1		0045	10	0.	.1	2991.0	*	1		0905	110	346.	58.3	3001.4	*	1		1725	210	0.	7.5	2993.7
1		0050	11	0.	.1	2991.0	*	1		0910	111	340.	56.0	3001.1	*	1		1730	211	0.	7.5	2993.7
1		0055	12	0.	.1	2991.0	*	1		0915	112	332.	53.7	3000.8	*	1		1735	212	0.	7.5	2993.7

1	0100	13	0.	.1	2991.0	*	1	0920	113	325.	51.4	3000.5	*	1	1740	213	0.	7.5	2993.7
1	0105	14	0.	.1	2991.0	*	1	0925	114	318.	49.2	3000.2	*	1	1745	214	0.	7.5	2993.7
1	0110	15	0.	.1	2991.0	*	1	0930	115	311.	47.0	2999.9	*	1	1750	215	0.	7.5	2993.7
1	0115	16	0.	.1	2991.0	*	1	0935	116	304.	44.9	2999.6	*	1	1755	216	0.	7.5	2993.7
1	0120	17	0.	.1	2991.0	*	1	0940	117	297.	42.8	2999.3	*	1	1800	217	0.	7.5	2993.7
1	0125	18	0.	.1	2991.0	*	1	0945	118	290.	40.8	2999.1	*	1	1805	218	0.	7.5	2993.7
1	0130	19	0.	.1	2991.1	*	1	0950	119	283.	38.8	2998.8	*	1	1810	219	0.	7.5	2993.7
1	0135	20	0.	.2	2991.1	*	1	0955	120	276.	36.9	2998.6	*	1	1815	220	0.	7.5	2993.7
1	0140	21	0.	.2	2991.2	*	1	1000	121	269.	35.1	2998.3	*	1	1820	221	0.	7.5	2993.7
1	0145	22	0.	.3	2991.4	*	1	1005	122	262.	33.2	2998.1	*	1	1825	222	0.	7.5	2993.7
1	0150	23	0.	.5	2991.6	*	1	1010	123	255.	31.4	2997.8	*	1	1830	223	0.	7.5	2993.7
1	0155	24	0.	.7	2991.9	*	1	1015	124	247.	29.7	2997.6	*	1	1835	224	0.	7.5	2993.7
1	0200	25	0.	1.0	2992.0	*	1	1020	125	240.	28.0	2997.4	*	1	1840	225	0.	7.5	2993.7
1	0205	26	0.	1.2	2992.1	*	1	1025	126	233.	26.4	2997.2	*	1	1845	226	0.	7.5	2993.7
1	0210	27	0.	1.5	2992.2	*	1	1030	127	226.	24.8	2997.0	*	1	1850	227	0.	7.5	2993.7
1	0215	28	0.	1.8	2992.3	*	1	1035	128	217.	23.3	2996.7	*	1	1855	228	0.	7.5	2993.7
1	0220	29	0.	2.1	2992.3	*	1	1040	129	209.	21.8	2996.5	*	1	1900	229	0.	7.5	2993.7
1	0225	30	0.	2.6	2992.5	*	1	1045	130	200.	20.4	2996.3	*	1	1905	230	0.	7.5	2993.7
1	0230	31	0.	3.2	2992.6	*	1	1050	131	192.	19.1	2996.1	*	1	1910	231	0.	7.5	2993.7
1	0235	32	0.	3.8	2992.8	*	1	1055	132	182.	17.8	2995.8	*	1	1915	232	0.	7.5	2993.7
1	0240	33	0.	4.5	2992.9	*	1	1100	133	173.	16.6	2995.6	*	1	1920	233	0.	7.5	2993.7
1	0245	34	0.	5.3	2993.1	*	1	1105	134	164.	15.4	2995.4	*	1	1925	234	0.	7.5	2993.7
1	0250	35	0.	6.1	2993.3	*	1	1110	135	155.	14.3	2995.3	*	1	1930	235	0.	7.5	2993.7
1	0255	36	0.	7.0	2993.6	*	1	1115	136	147.	13.3	2995.1	*	1	1935	236	0.	7.5	2993.7
1	0300	37	10.	7.9	2993.8	*	1	1120	137	131.	12.3	2994.9	*	1	1940	237	0.	7.5	2993.7
1	0305	38	34.	8.8	2994.0	*	1	1125	138	109.	11.5	2994.7	*	1	1945	238	0.	7.5	2993.7
1	0310	39	57.	9.6	2994.2	*	1	1130	139	90.	10.8	2994.5	*	1	1950	239	0.	7.5	2993.7
1	0315	40	84.	10.6	2994.5	*	1	1135	140	74.	10.2	2994.4	*	1	1955	240	0.	7.5	2993.7
1	0320	41	125.	12.1	2994.8	*	1	1140	141	61.	9.8	2994.3	*	1	2000	241	0.	7.5	2993.7
1	0325	42	157.	14.6	2995.3	*	1	1145	142	51.	9.4	2994.2	*	1	2005	242	0.	7.5	2993.7
1	0330	43	192.	19.1	2996.1	*	1	1150	143	42.	9.1	2994.1	*	1	2010	243	0.	7.5	2993.7
1	0335	44	234.	26.5	2997.2	*	1	1155	144	34.	8.8	2994.0	*	1	2015	244	0.	7.5	2993.7
1	0340	45	275.	36.8	2998.5	*	1	1200	145	28.	8.6	2994.0	*	1	2020	245	0.	7.5	2993.7
1	0345	46	317.	49.1	3000.2	*	1	1205	146	24.	8.4	2993.9	*	1	2025	246	0.	7.5	2993.7
1	0350	47	357.	62.2	3001.9	*	1	1210	147	19.	8.3	2993.9	*	1	2030	247	0.	7.5	2993.7
1	0355	48	393.	75.1	3003.6	*	1	1215	148	16.	8.1	2993.8	*	1	2035	248	0.	7.5	2993.7
1	0400	49	424.	87.5	3005.2	*	1	1220	149	13.	8.0	2993.8	*	1	2040	249	0.	7.5	2993.7
1	0405	50	446.	99.2	3006.4	*	1	1225	150	11.	7.9	2993.8	*	1	2045	250	0.	7.5	2993.7
1	0410	51	465.	110.0	3007.5	*	1	1230	151	9.	7.9	2993.8	*	1	2050	251	0.	7.5	2993.7
1	0415	52	482.	119.8	3008.5	*	1	1235	152	7.	7.8	2993.8	*	1	2055	252	0.	7.5	2993.7
1	0420	53	496.	128.3	3009.4	*	1	1240	153	6.	7.8	2993.8	*	1	2100	253	0.	7.5	2993.7
1	0425	54	506.	135.5	3010.0	*	1	1245	154	5.	7.7	2993.7	*	1	2105	254	0.	7.5	2993.7
1	0430	55	513.	141.6	3010.5	*	1	1250	155	4.	7.7	2993.7	*	1	2110	255	0.	7.5	2993.7
1	0435	56	519.	146.7	3010.9	*	1	1255	156	3.	7.7	2993.7	*	1	2115	256	0.	7.5	2993.7
1	0440	57	524.	151.2	3011.2	*	1	1300	157	3.	7.7	2993.7	*	1	2120	257	0.	7.5	2993.7
1	0445	58	528.	155.3	3011.5	*	1	1305	158	2.	7.6	2993.7	*	1	2125	258	0.	7.5	2993.7
1	0450	59	532.	159.0	3011.8	*	1	1310	159	2.	7.6	2993.7	*	1	2130	259	0.	7.5	2993.7
1	0455	60	536.	162.3	3012.1	*	1	1315	160	2.	7.6	2993.7	*	1	2135	260	0.	7.5	2993.7
1	0500	61	539.	165.4	3012.3	*	1	1320	161	1.	7.6	2993.7	*	1	2140	261	0.	7.5	2993.7
1	0505	62	542.	168.1	3012.5	*	1	1325	162	1.	7.6	2993.7	*	1	2145	262	0.	7.5	2993.7
1	0510	63	545.	170.5	3012.7	*	1	1330	163	1.	7.6	2993.7	*	1	2150	263	0.	7.5	2993.7
1	0515	64	547.	172.3	3012.9	*	1	1335	164	1.	7.6	2993.7	*	1	2155	264	0.	7.5	2993.7
1	0520	65	548.	173.6	3013.0	*	1	1340	165	1.	7.6	2993.7	*	1	2200	265	0.	7.5	2993.7
1	0525	66	549.	174.4	3013.0	*	1	1345	166	1.	7.6	2993.7	*	1	2205	266	0.	7.5	2993.7
1	0530	67	550.	174.6	3013.0	*	1	1350	167	0.	7.6	2993.7	*	1	2210	267	0.	7.5	2993.7
1	0535	68	549.	174.4	3013.0	*	1	1355	168	0.	7.6	2993.7	*	1	2215	268	0.	7.5	2993.7
1	0540	69	549.	173.7	3013.0	*	1	1400	169	0.	7.6	2993.7	*	1	2220	269	0.	7.5	2993.7
1	0545	70	547.	172.7	3012.9	*	1	1405	170	0.	7.6	2993.7	*	1	2225	270	0.	7.5	2993.7
1	0550	71	546.	171.2	3012.8	*	1	1410	171	0.	7.6	2993.7	*	1	2230	271	0.	7.5	2993.7
1	0555	72	544.	169.4	3012.6	*	1	1415	172	0.	7.6	2993.7	*	1	2235	272	0.	7.5	2993.7
1	0600	73	541.	167.3	3012.5	*	1	1420	173	0.	7.6	2993.7	*	1	2240	273	0.	7.5	2993.7
1	0605	74	539.	165.0	3012.3	*	1	1425	174	0.	7.6	2993.7	*	1	2245	274	0.	7.5	2993.7
1	0610	75	536.	162.5	3012.1	*	1	1430	175	0.	7.6	2993.7	*	1	2250	275	0.	7.5	2993.7
1	0615	76	533.	159.9	3011.9	*	1	1435	176	0.	7.6	2993.7	*	1	2255	276	0.	7.5	2993.7
1	0620	77	530.	157.1	3011.7	*	1	1440	177	0.	7.6	2993.7	*	1	2300	277	0.	7.5	2993.7
1	0625	78	527.	154.1	3011.5	*	1	1445	178	0.	7.6	2993.7	*	1	2305	278	0.	7.5	2993.7
1	0630	79	523.	151.1	3011.2	*	1	1450	179	0.	7.6	2993.7	*	1	2310	279	0.	7.5	2993.7
1	0635	80	520.	148.0	3011.0	*	1	1455	180	0.	7.6	2993.7	*	1	2315	280	0.	7.5	2993.7
1	0640	81	516.	144.8	3010.7	*	1	1500	181	0.	7.5	2993.7	*	1	2320	281	0.	7.5	2993.7
1	0645	82	513.	141.6	3010.5	*	1	1505	182	0.	7.5	2993.7	*	1	2325	282	0.	7.5	2993.7
1	0650	83	509.	138.3	3010.2	*	1	1510	183	0.	7.5	2993.7	*	1	2330	283	0.	7.5	2993.7
1	0655	84	505.	135.0	3010.0	*	1	1515	184	0.	7.5	2993.7	*	1	2335	284	0.	7.5	2993.7
1	0700	85	501.	131.7	3009.7	*	1	1520	185	0.	7.5	2993.7	*	1	2340	285	0.	7.5	2993.7
1	0705	86	496.	128.4	3009.4	*	1	1525	186	0.	7.5	2993.7	*	1	2345	286	0.	7.5	2993.7
1	0710	87	491.	125.1	3009.1	*	1	1530	187	0.	7.5	2993.7	*	1	2350	287	0.	7.5	2993.7
1	0715	88	486.	121.8	3008.8	*	1	1535	188	0.	7.5	2993.7	*	1	2355	288	0.	7.5	2993.7
1	0720	89	480.	118.5	3008.4	*	1	1540	189	0.	7.5	2993.7	*	2	0000	289	0.	7.5	2993.7
1	0725	90	474.	115.3	3008.1	*	1	1545	190	0.</									

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)			
	3013.03	5.50	3007.72	2997.34	2997.09

CUMULATIVE AREA = 4.39 SQ MI

HYDROGRAPH AT STATION EXDB
PLAN 1, RATIO = .54

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.	2990.0	*	1		0820	101	251.	30.7	2997.7	*	1		1640	201	0.	7.5	2993.7	
1		0005	2	0.	0.	2990.0	*	1		0825	102	244.	29.0	2997.5	*	1		1645	202	0.	7.5	2993.7	
1		0010	3	0.	0.	2990.0	*	1		0830	103	237.	27.3	2997.3	*	1		1650	203	0.	7.5	2993.7	
1		0015	4	0.	0.	2990.0	*	1		0835	104	230.	25.7	2997.1	*	1		1655	204	0.	7.5	2993.7	
1		0020	5	0.	0.	2990.0	*	1		0840	105	222.	24.1	2996.9	*	1		1700	205	0.	7.5	2993.7	
1		0025	6	0.	0.	2990.0	*	1		0845	106	214.	22.6	2996.6	*	1		1705	206	0.	7.5	2993.7	
1		0030	7	0.	0.	2990.1	*	1		0850	107	205.	21.2	2996.4	*	1		1710	207	0.	7.5	2993.7	
1		0035	8	0.	0.	2990.2	*	1		0855	108	197.	19.8	2996.2	*	1		1715	208	0.	7.5	2993.7	
1		0040	9	0.	0.	2990.3	*	1		0900	109	188.	18.5	2996.0	*	1		1720	209	0.	7.5	2993.7	
1		0045	10	0.	0.	2990.4	*	1		0905	110	178.	17.2	2995.7	*	1		1725	210	0.	7.5	2993.7	
1		0050	11	0.	0.	2990.5	*	1		0910	111	169.	16.0	2995.5	*	1		1730	211	0.	7.5	2993.7	
1		0055	12	0.	0.	2990.5	*	1		0915	112	160.	14.9	2995.4	*	1		1735	212	0.	7.5	2993.7	
1		0100	13	0.	0.	2990.5	*	1		0920	113	151.	13.8	2995.2	*	1		1740	213	0.	7.5	2993.7	
1		0105	14	0.	0.	2990.5	*	1		0925	114	144.	12.8	2995.0	*	1		1745	214	0.	7.5	2993.7	
1		0110	15	0.	0.	2990.5	*	1		0930	115	120.	11.9	2994.8	*	1		1750	215	0.	7.5	2993.7	
1		0115	16	0.	0.	2990.5	*	1		0935	116	99.	11.1	2994.6	*	1		1755	216	0.	7.5	2993.7	
1		0120	17	0.	0.	2990.6	*	1		0940	117	82.	10.5	2994.4	*	1		1800	217	0.	7.5	2993.7	
1		0125	18	0.	0.	2990.6	*	1		0945	118	68.	10.0	2994.3	*	1		1805	218	0.	7.5	2993.7	
1		0130	19	0.	0.	2990.7	*	1		0950	119	56.	9.6	2994.2	*	1		1810	219	0.	7.5	2993.7	
1		0135	20	0.	1.	2990.8	*	1		0955	120	46.	9.2	2994.1	*	1		1815	220	0.	7.5	2993.7	
1		0140	21	0.	1.	2991.0	*	1		1000	121	38.	8.9	2994.0	*	1		1820	221	0.	7.5	2993.7	
1		0145	22	0.	1.	2991.0	*	1		1005	122	32.	8.7	2994.0	*	1		1825	222	0.	7.5	2993.7	
1		0150	23	0.	1.	2991.0	*	1		1010	123	26.	8.5	2993.9	*	1		1830	223	0.	7.5	2993.7	
1		0155	24	0.	1.	2991.1	*	1		1015	124	22.	8.3	2993.9	*	1		1835	224	0.	7.5	2993.7	
1		0200	25	0.	1.	2991.1	*	1		1020	125	18.	8.2	2993.9	*	1		1840	225	0.	7.5	2993.7	
1		0205	26	0.	1.	2991.1	*	1		1025	126	15.	8.1	2993.8	*	1		1845	226	0.	7.5	2993.7	
1		0210	27	0.	2.	2991.1	*	1		1030	127	12.	8.0	2993.8	*	1		1850	227	0.	7.5	2993.7	
1		0215	28	0.	2.	2991.2	*	1		1035	128	10.	7.9	2993.8	*	1		1855	228	0.	7.5	2993.7	
1		0220	29	0.	2.	2991.2	*	1		1040	129	8.	7.8	2993.8	*	1		1900	229	0.	7.5	2993.7	
1		0225	30	0.	3.	2991.3	*	1		1045	130	7.	7.8	2993.8	*	1		1905	230	0.	7.5	2993.7	
1		0230	31	0.	4.	2991.5	*	1		1050	131	6.	7.8	2993.8	*	1		1910	231	0.	7.5	2993.7	
1		0235	32	0.	6.	2991.7	*	1		1055	132	5.	7.7	2993.7	*	1		1915	232	0.	7.5	2993.7	
1		0240	33	0.	7.	2991.9	*	1		1100	133	4.	7.7	2993.7	*	1		1920	233	0.	7.5	2993.7	
1		0245	34	0.	1.0	2992.0	*	1		1105	134	3.	7.7	2993.7	*	1		1925	234	0.	7.5	2993.7	
1		0250	35	0.	1.2	2992.1	*	1		1110	135	3.	7.6	2993.7	*	1		1930	235	0.	7.5	2993.7	
1		0255	36	0.	1.5	2992.2	*	1		1115	136	2.	7.6	2993.7	*	1		1935	236	0.	7.5	2993.7	
1		0300	37	0.	1.9	2992.3	*	1		1120	137	2.	7.6	2993.7	*	1		1940	237	0.	7.5	2993.7	
1		0305	38	0.	2.3	2992.4	*	1		1125	138	1.	7.6	2993.7	*	1		1945	238	0.	7.5	2993.7	
1		0310	39	0.	2.7	2992.5	*	1		1130	139	1.	7.6	2993.7	*	1		1950	239	0.	7.5	2993.7	
1		0315	40	0.	3.3	2992.6	*	1		1135	140	1.	7.6	2993.7	*	1		1955	240	0.	7.5	2993.7	
1		0320	41	0.	4.2	2992.9	*	1		1140	141	1.	7.6	2993.7	*	1		2000	241	0.	7.5	2993.7	
1		0325	42	0.	5.9	2993.3	*	1		1145	142	1.	7.6	2993.7	*	1		2005	242	0.	7.5	2993.7	
1		0330	43	36.	8.8	2994.0	*	1		1150	143	1.	7.6	2993.7	*	1		2010	243	0.	7.5	2993.7	
1		0335	44	146.	13.2	2995.1	*	1		1155	144	0.	7.6	2993.7	*	1		2015	244	0.	7.5	2993.7	
1		0340	45	192.	19.1	2996.1	*	1		1200	145	0.	7.6	2993.7	*	1		2020	245	0.	7.5	2993.7	
1		0345	46	233.	26.3	2997.2	*	1		1205	146	0.	7.6	2993.7	*	1		2025	246	0.	7.5	2993.7	
1		0350	47	265.	34.1	2998.2	*	1		1210	147	0.	7.6	2993.7	*	1		2030	247	0.	7.5	2993.7	
1		0355	48	294.	42.0	2999.2	*	1		1215	148	0.	7.6	2993.7	*	1		2035	248	0.	7.5	2993.7	
1		0400	49	319.	49.5	3000.2	*	1		1220	149	0.	7.6	2993.7	*	1		2040	249	0.	7.5	2993.7	
1		0405	50	342.	56.6	3001.1	*	1		1225	150	0.	7.6	2993.7	*	1		2045	250	0.	7.5	2993.7	
1		0410	51	360.	63.2	3002.0	*	1		1230	151	0.	7.6	2993.7	*	1		2050	251	0.	7.5	2993.7	
1		0415	52	376.	69.1	3002.8	*	1		1235	152	0.	7.6	2993.7	*	1		2055	252	0.	7.5	2993.7	
1		0420	53	390.	74.3	3003.5	*	1		1240	153	0.	7.6	2993.7	*	1		2100	253	0.	7.5	2993.7	
1		0425	54	402.	78.6	3004.0	*	1		1245	154	0.	7.6	2993.7	*	1		2105	254	0.	7.5	2993.7	
1		0430	55	412.	82.2	3004.5	*	1		1250	155	0.	7.6	2993.7	*	1		2110	255	0.	7.5	2993.7	
1		0435	56	419.	85.1	3004.9	*	1		1255	156	0.	7.6	2993.7	*	1		2115	256	0.	7.5	2993.7	
1		0440	57	424.	87.6	3005.2	*	1		1300	157	0.	7.6	2993.7	*	1		2120	257	0.	7.5	2993.7	
1		0445	58	429.	89.8	3005.4	*	1		1305	158	0.	7.5	2993.7	*	1		2125	258	0.	7.5	2993.7	
1		0450	59	433.	91.8	3005.6	*	1		1310	159	0.	7.5	2993.7	*	1		2130	259	0.	7.5	2993.7	
1		0455	60	436.	93.6	3005.8	*	1		1315	160	0.	7.5	2993.7	*	1		2135	260	0.	7.5	2993.7	
1		0500	61	440.	95.2	3006.0	*	1		1320	161	0.	7.5	2993.7	*	1		2140	261	0.	7.5	2993.7	
1		0505	62	442.	96.6	3006.2	*	1		1325	162	0.	7.5	2993.7	*	1							

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
(CFS)	(HR)	(CFS)	6-HR	24-HR	72-HR
+	446.		332.	85.	82.
		(INCHES)	.702	.721	.721
		(AC-FT)	165.	169.	169.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
(AC-FT)	(HR)		6-HR	24-HR	72-HR
+	99.		59.	20.	19.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
(FEET)	(HR)		6-HR	24-HR	72-HR
+	3006.41		3001.35	2995.38	2995.19
CUMULATIVE AREA =			4.39 SQ MI		

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

2 COMBINED AT

+		CP4	4.19	1	FLOW TIME	3806. 3.83	3750. 3.83	3697. 3.83	3475. 3.83	3419. 3.83	3366. 3.83	3311. 3.83	2179. 3.83	1368. 3.83
ROUTED TO +		R7	4.19	1	FLOW TIME	3795. 3.83	3740. 3.83	3685. 3.83	3462. 3.83	3408. 3.83	3353. 3.83	3298. 3.83	2163. 3.83	1362. 3.92
HYDROGRAPH AT +		1-12P	.18	1	FLOW TIME	230. 3.67	227. 3.67	223. 3.67	209. 3.67	206. 3.67	202. 3.67	199. 3.67	128. 3.67	78. 3.67
2 COMBINED AT +		CP5	4.37	1	FLOW TIME	3974. 3.83	3917. 3.83	3859. 3.83	3626. 3.83	3569. 3.83	3511. 3.83	3454. 3.83	2266. 3.83	1416. 3.83
HYDROGRAPH AT +		1-14	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	2. 3.50	2. 3.50	2. 3.50	1. 3.50
HYDROGRAPH AT +		1-15	.01	1	FLOW TIME	10. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	6. 3.50	4. 3.50
HYDROGRAPH AT +		1-16	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	3. 3.50	2. 3.50
HYDROGRAPH AT +		1-17	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	2. 3.50
HYDROGRAPH AT +		1-18	.00	1	FLOW TIME	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	2. 3.50
6 COMBINED AT +		CP5B	4.39	1	FLOW TIME	3985. 3.83	3927. 3.83	3870. 3.83	3636. 3.83	3579. 3.83	3521. 3.83	3464. 3.83	2273. 3.83	1421. 3.83
ROUTED TO +		EXDB	4.39	1	FLOW TIME	1007. 5.42	960. 5.42	908. 5.42	671. 5.58	661. 5.58	657. 5.58	653. 5.58	550. 5.50	446. 5.42
				1	** PEAK STAGES IN FEET ** STAGE TIME	3023.31 5.42	3023.12 5.42	3022.91 5.42	3021.95 5.58	3021.59 5.58	3021.23 5.58	3020.88 5.58	3013.03 5.50	3006.41 5.42
HYDROGRAPH AT +		1-4R	.05	1	FLOW TIME	100. 3.50	98. 3.50	97. 3.50	91. 3.50	90. 3.50	89. 3.50	87. 3.50	58. 3.50	37. 3.50
HYDROGRAPH AT +		1-5R	.03	1	FLOW TIME	63. 3.50	62. 3.50	61. 3.50	58. 3.50	57. 3.50	56. 3.50	55. 3.50	37. 3.50	24. 3.50
2 COMBINED AT +		CP6	.09	1	FLOW TIME	163. 3.50	161. 3.50	158. 3.50	149. 3.50	147. 3.50	145. 3.50	142. 3.50	95. 3.50	61. 3.50
ROUTED TO +		R8	.09	1	FLOW TIME	156. 3.50	154. 3.50	152. 3.50	143. 3.50	141. 3.50	138. 3.50	136. 3.50	92. 3.58	60. 3.58
HYDROGRAPH AT +		1-6R	.02	1	FLOW TIME	28. 3.50	28. 3.50	27. 3.50	26. 3.50	25. 3.50	25. 3.50	25. 3.50	16. 3.50	11. 3.50
HYDROGRAPH AT +		1-7R	.03	1	FLOW TIME	50. 3.50	50. 3.50	49. 3.50	46. 3.50	45. 3.50	45. 3.50	44. 3.50	30. 3.50	19. 3.50
2 COMBINED AT +		CP7	.04	1	FLOW TIME	79. 3.50	77. 3.50	76. 3.50	72. 3.50	71. 3.50	70. 3.50	69. 3.50	46. 3.50	29. 3.50
ROUTED TO +		R9	.04	1	FLOW TIME	76. 3.58	75. 3.58	74. 3.58	70. 3.58	69. 3.58	68. 3.58	67. 3.58	45. 3.58	30. 3.58
HYDROGRAPH AT +		1-8R	.00	1	FLOW TIME	5. 3.50	5. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
HYDROGRAPH AT +		1-10R	.06	1	FLOW TIME	101. 3.50	100. 3.50	99. 3.50	93. 3.50	91. 3.50	90. 3.50	89. 3.50	59. 3.50	38. 3.50
2 COMBINED AT +		CP8	.06	1	FLOW TIME	106. 3.50	105. 3.50	103. 3.50	97. 3.50	96. 3.50	94. 3.50	93. 3.50	62. 3.50	39. 3.50
ROUTED TO +		R10	.06	1	FLOW TIME	102. 3.58	101. 3.58	99. 3.58	94. 3.58	92. 3.58	90. 3.58	89. 3.58	61. 3.58	39. 3.58
HYDROGRAPH AT +		1-11P	.18	1	FLOW TIME	219. 3.67	215. 3.67	212. 3.67	198. 3.67	194. 3.67	191. 3.67	188. 3.67	118. 3.67	69. 3.67
4 COMBINED AT +		CP9	.37	1	FLOW TIME	543. 3.58	536. 3.58	528. 3.58	495. 3.58	487. 3.58	480. 3.58	472. 3.58	308. 3.58	192. 3.58
HYDROGRAPH AT														

	1-13	.00	1	FLOW TIME	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50
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HYDROGRAPH AT

	LMT1R	1.96	1	FLOW TIME	2144. 3.92	2114. 3.92	2085. 3.92	1966. 3.92	1937. 3.92	1907. 3.92	1878. 3.92	1267. 3.92	821. 3.92
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3 COMBINED AT

	CP10	2.33	1	FLOW TIME	2429. 3.83	2395. 3.83	2361. 3.83	2224. 3.83	2190. 3.83	2156. 3.83	2123. 3.83	1422. 3.83	913. 3.83
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1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL			
						DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.62	221.26	220.72	1.60	5.00	220.26	220.00	1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1495E+02 EXCESS= .0000E+00 OUTFLOW= .1496E+02 BASIN STORAGE= .1444E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.64	219.12	218.16	1.57	5.00	217.69	220.00	1.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1469E+02 EXCESS= .0000E+00 OUTFLOW= .1470E+02 BASIN STORAGE= .1118E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.65	216.76	219.24	1.55	5.00	215.22	220.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1444E+02 EXCESS= .0000E+00 OUTFLOW= .1444E+02 BASIN STORAGE= .1367E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.73	200.37	220.08	1.44	5.00	200.09	220.00	1.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1341E+02 EXCESS= .0000E+00 OUTFLOW= .1341E+02 BASIN STORAGE= .1137E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.75	194.48	221.26	1.41	5.00	193.59	220.00	1.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1315E+02 EXCESS= .0000E+00 OUTFLOW= .1315E+02 BASIN STORAGE= .1366E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.77	194.78	218.70	1.38	5.00	193.14	220.00	1.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1291E+02 EXCESS= .0000E+00 OUTFLOW= .1292E+02 BASIN STORAGE= .1037E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.79	189.65	219.91	1.36	5.00	189.47	220.00	1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1265E+02 EXCESS= .0000E+00 OUTFLOW= .1265E+02 BASIN STORAGE= .1202E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R2	MANE	3.75	114.28	221.25	.82	5.00	112.11	220.00	.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7650E+01 EXCESS= .0000E+00 OUTFLOW= .7654E+01 BASIN STORAGE= .1004E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R2	MANE	2.25	64.30	222.75	.47	5.00	61.71	220.00	.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4359E+01 EXCESS= .0000E+00 OUTFLOW= .4361E+01 BASIN STORAGE= .1019E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
R6	MANE	1.32	3798.53	227.06	2.11	5.00	3790.18	230.00	2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4682E+03 EXCESS= .0000E+00 OUTFLOW= .4681E+03 BASIN STORAGE= .5398E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R6	MANE	1.33	3743.79	227.90	2.07	5.00	3734.37	230.00	2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4612E+03 EXCESS= .0000E+00 OUTFLOW= .4611E+03 BASIN STORAGE= .5897E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R6	MANE	1.33	3688.44	227.43	2.04	5.00	3681.22	230.00	2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4542E+03 EXCESS= .0000E+00 OUTFLOW= .4541E+03 BASIN STORAGE= .5356E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
R6	MANE	1.35	3465.50	228.32	1.92	5.00	3459.93	230.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4264E+03 EXCESS= .0000E+00 OUTFLOW= .4263E+03 BASIN STORAGE= .6080E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R6	MANE	1.36	3410.14	227.90	1.89	5.00	3403.62	230.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4195E+03 EXCESS= .0000E+00 OUTFLOW= .4194E+03 BASIN STORAGE= .5400E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R6	MANE	1.36	3355.30	227.45	1.86	5.00	3350.78	230.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4126E+03 EXCESS= .0000E+00 OUTFLOW= .4125E+03 BASIN STORAGE= .5832E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R6	MANE	1.37	3299.90	228.42	1.83	5.00	3295.94	230.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4057E+03 EXCESS= .0000E+00 OUTFLOW= .4056E+03 BASIN STORAGE= .5145E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R6	MANE	1.52	2168.16	229.48	1.20	5.00	2167.85	230.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2660E+03 EXCESS= .0000E+00 OUTFLOW= .2660E+03 BASIN STORAGE= .5661E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R6	MANE	1.71	1362.06	232.09	.76	5.00	1359.64	230.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1682E+03 EXCESS= .0000E+00 OUTFLOW= .1682E+03 BASIN STORAGE= .5203E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.79	3795.45	229.59	2.11	5.00	3794.91	230.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4720E+03 EXCESS= .0000E+00 OUTFLOW= .4718E+03 BASIN STORAGE= .7223E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.80	3741.61	230.44	2.08	5.00	3739.99	230.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4650E+03 EXCESS= .0000E+00 OUTFLOW= .4648E+03 BASIN STORAGE= .6922E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.81	3685.33	229.46	2.05	5.00	3685.10	230.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4579E+03 EXCESS= .0000E+00 OUTFLOW= .4577E+03 BASIN STORAGE= .8797E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.83	3463.28	231.21	1.92	5.00	3461.86	230.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4300E+03 EXCESS= .0000E+00 OUTFLOW= .4298E+03 BASIN STORAGE= .7379E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.84	3409.50	230.31	1.89	5.00	3407.75	230.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4230E+03 EXCESS= .0000E+00 OUTFLOW= .4228E+03 BASIN STORAGE= .7225E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.85	3354.16	231.21	1.86	5.00	3352.63	230.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4161E+03 EXCESS= .0000E+00 OUTFLOW= .4159E+03 BASIN STORAGE= .8684E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	1.86	3300.08	230.31	1.83	5.00	3298.02	230.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4091E+03 EXCESS= .0000E+00 OUTFLOW= .4090E+03 BASIN STORAGE= .8486E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	2.06	2169.12	230.96	1.20	5.00	2163.45	230.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2685E+03 EXCESS= .0000E+00 OUTFLOW= .2684E+03 BASIN STORAGE= .8290E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R7	MANE	2.32	1364.06	233.98	.76	5.00	1361.92	235.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1700E+03 EXCESS= .0000E+00 OUTFLOW= .1700E+03 BASIN STORAGE= .7714E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
R8	MANE	.93	162.44	211.19	2.06	5.00	156.28	210.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9673E+01 EXCESS= .0000E+00 OUTFLOW= .9673E+01 BASIN STORAGE= .1111E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.94	160.11	211.79	2.03	5.00	154.20	210.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9530E+01 EXCESS= .0000E+00 OUTFLOW= .9530E+01 BASIN STORAGE= .1067E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.94	157.86	211.45	2.00	5.00	151.74	210.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9386E+01 EXCESS= .0000E+00 OUTFLOW= .9386E+01 BASIN STORAGE= .1011E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.95	148.79	211.13	1.88	5.00	142.96	210.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8822E+01 EXCESS= .0000E+00 OUTFLOW= .8822E+01 BASIN STORAGE= .9884E-04 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.95	146.53	211.78	1.85	5.00	140.79	210.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8682E+01 EXCESS= .0000E+00 OUTFLOW= .8682E+01 BASIN STORAGE= .1118E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.96	144.27	211.49	1.82	5.00	138.40	210.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8540E+01 EXCESS= .0000E+00 OUTFLOW= .8540E+01 BASIN STORAGE= .1059E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	.96	141.99	211.20	1.79	5.00	136.26	210.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8401E+01 EXCESS= .0000E+00 OUTFLOW= .8401E+01 BASIN STORAGE= .9888E-04 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	1.04	95.18	212.20	1.18	5.00	92.29	215.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5549E+01 EXCESS= .0000E+00 OUTFLOW= .5549E+01 BASIN STORAGE= .1036E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R8	MANE	1.14	61.18	212.58	.76	5.00	60.41	215.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3541E+01 EXCESS= .0000E+00 OUTFLOW= .3541E+01 BASIN STORAGE= .1150E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.21	77.94	213.91	2.07	5.00	75.83	215.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4663E+01 EXCESS= .0000E+00 OUTFLOW= .4663E+01 BASIN STORAGE= .2195E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.21	76.93	212.31	2.04	5.00	75.47	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4596E+01 EXCESS= .0000E+00 OUTFLOW= .4596E+01 BASIN STORAGE= .2595E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.22	75.81	212.92	2.01	5.00	74.35	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4526E+01 EXCESS= .0000E+00 OUTFLOW= .4526E+01 BASIN STORAGE= .2157E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.24	71.46	213.22	1.88	5.00	69.79	215.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4250E+01 EXCESS= .0000E+00 OUTFLOW= .4250E+01 BASIN STORAGE= .2037E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.25	70.38	213.87	1.86	5.00	68.57	215.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4185E+01 EXCESS= .0000E+00 OUTFLOW= .4185E+01 BASIN STORAGE= .2368E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R9	MANE	2.26	69.30	212.28	1.83	5.00	68.25	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4120E+01 EXCESS= .0000E+00 OUTFLOW= .4121E+01 BASIN STORAGE= .2804E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.27	68.22	212.96	1.80	5.00	67.01	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4050E+01 EXCESS= .0000E+00 OUTFLOW= .4050E+01 BASIN STORAGE= .2266E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.45	45.90	213.56	1.19	5.00	45.08	215.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2676E+01 EXCESS= .0000E+00 OUTFLOW= .2676E+01 BASIN STORAGE= .2443E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R9	MANE	2.68	29.81	214.60	.76	5.00	29.57	215.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1707E+01 EXCESS= .0000E+00 OUTFLOW= .1708E+01 BASIN STORAGE= .2506E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.91	105.41	212.23	2.03	5.00	102.04	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6281E+01 EXCESS= .0000E+00 OUTFLOW= .6282E+01 BASIN STORAGE= .1837E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.92	103.90	212.84	2.00	5.00	100.78	215.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6191E+01 EXCESS= .0000E+00 OUTFLOW= .6192E+01 BASIN STORAGE= .2091E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.92	102.41	213.46	1.97	5.00	98.79	215.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6100E+01 EXCESS= .0000E+00 OUTFLOW= .6100E+01 BASIN STORAGE= .2350E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.95	96.48	212.14	1.85	5.00	93.59	215.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5728E+01 EXCESS= .0000E+00 OUTFLOW= .5728E+01 BASIN STORAGE= .1973E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.95	95.02	212.79	1.82	5.00	92.45	215.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5636E+01 EXCESS= .0000E+00 OUTFLOW= .5637E+01 BASIN STORAGE= .2226E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.96	93.59	213.47	1.79	5.00	90.47	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5545E+01 EXCESS= .0000E+00 OUTFLOW= .5545E+01 BASIN STORAGE= .2464E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	1.96	92.04	212.18	1.76	5.00	89.47	215.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5453E+01 EXCESS= .0000E+00 OUTFLOW= .5453E+01 BASIN STORAGE= .1980E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.13	61.63	213.03	1.16	5.00	60.64	215.00	1.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3593E+01 EXCESS= .0000E+00 OUTFLOW= .3593E+01 BASIN STORAGE= .1886E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R10	MANE	2.33	39.86	214.40	.74	5.00	39.34	215.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2284E+01 EXCESS= .0000E+00 OUTFLOW= .2284E+01 BASIN STORAGE= .2420E-03 PERCENT ERROR= .0									

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

D.3 CROSSBRIDGE UNIT 3

D.4 DB5 LOMR



Federal Emergency Management Agency

Washington, D.C. 20472

September 22, 2017

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Carolyn B. Goodman
Mayor, City of Las Vegas
400 Stewart Avenue
Las Vegas, NV 89101

IN REPLY REFER TO:

Case No.: 17-09-1166P
Community Name: City of Las Vegas, NV
Community No.: 325276
Effective Date of
This Revision: **February 5, 2018**

Dear Mayor Goodman:

The Flood Insurance Rate Map for your community has been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals issued in your community.

Additional documents are enclosed which provide information regarding this LOMR. Please see the List of Enclosures below to determine which documents are included. Other attachments specific to this request may be included as referenced in the Determination Document. If you have any questions regarding floodplain management regulations for your community or the National Flood Insurance Program (NFIP) in general, please contact the Consultation Coordination Officer for your community. If you have any technical questions regarding this LOMR, please contact the Director, Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Oakland, California, at (510) 627-7175, or the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <http://www.fema.gov/business/nfip>.

Sincerely,

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

List of Enclosures:

Letter of Map Revision Determination Document
Annotated Flood Insurance Rate Map
Annotated Flood Insurance Study Report

cc: Mr. Peter Jackson, CFM
Senior Engineer Associate
City of Las Vegas

Mr. Said A. Mohammed, P.E., CFM
Project Manager
Collins Engineers

Mr. Randy Fultz, P.E., CFM
Assistant City Engineer
City of Las Vegas

Mr. Kevin Orrock
President
The Howard Hughes Company, LLC

Mr. Andrew R. Trelease, P.E., CFM
Clark County Regional Flood Control District



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of Las Vegas Clark County Nevada	DETENTION BASIN	BASE MAP CHANGES HYDROLOGIC ANALYSIS
	COMMUNITY NO.: 325276		
IDENTIFIER	Mapping Correction to adjust Flood Zone "A" for Detention Basin No. 5	APPROXIMATE LATITUDE & LONGITUDE: 36.175, -115.374 SOURCE: Other DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM* NO.: 32003C2125E DATE: September 27, 2002 TYPE: FIRM* NO.: 32003C2150E DATE: September 27, 2002		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: November 16, 2011 SUMMARY OF STILLWATER ELEVATION TABLE	

Enclosures reflect changes to flooding sources affected by this revision.
* FIRM - Flood Insurance Rate Map

FLOODING SOURCE(S) & REVISED REACH(ES)

Detention Basin No. 5 – located approximately 19,000 feet north west of intersection of Sky Vista and Alta Drives

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Detention Basin No. 5	Zone A	Zone AE	YES	YES
	Zone A	Zone X (unshaded)	NONE	YES

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

17-09-1166P

102-I-A-C



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance discharges computed in the submitted hydrologic model. Future development of projects upstream could cause increased discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on discharges and could, therefore, indicate that greater flood hazards exist in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

A handwritten signature in black ink, appearing to read "Rick F. Sacbibit".

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

17-09-1166P

102-I-A-C



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Mr. Jeffrey D. Lusk
Director, Mitigation Division
Federal Emergency Management Agency, Region IX
1111 Broadway Street, Suite 1200
Oakland, CA 94607-4052
(510) 627-7175

STATUS OF THE COMMUNITY NFIP MAPS

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *Las Vegas Review-Journal*

Dates: September 29, 2017 and October 6, 2017

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

17-09-1166P

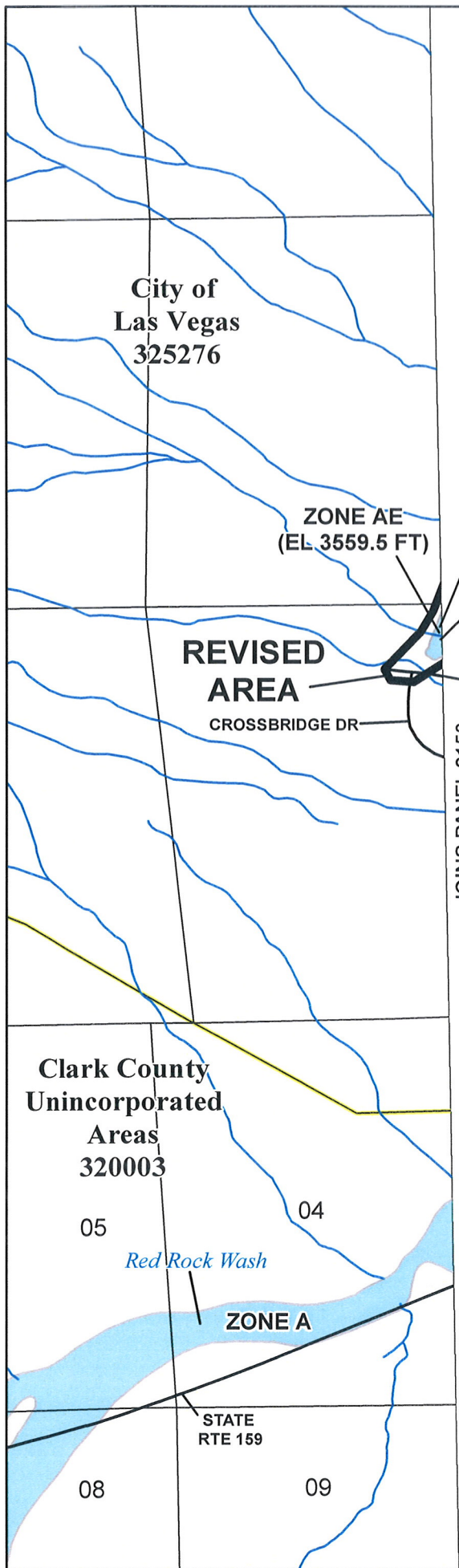
102-I-A-C

Table - Summary of Stillwater Elevations

FLOODING SOURCE AND LOCATION	ELEVATIONS (Feet NAVD)			
	10-PERCENT ANNUAL CHANCE	2-PERCENT ANNUAL CHANCE	1-PERCENT ANNUAL CHANCE	0.2-PERCENT ANNUAL CHANCE
Detention Basin No. 5	-- ¹	-- ¹	3,559.5	-- ¹
Approximately 19,000 feet northwest of intersection of Sky Vista and Alta Drive				

REVISED TO
REFLECT LOMR
EFFECTIVE: February 5, 2018

--¹ Data Not Available

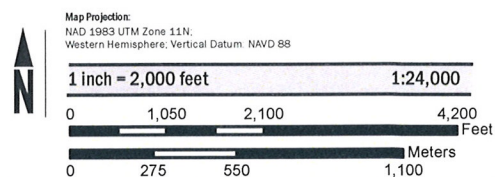


SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A59
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

OTHER AREAS OF FLOOD HAZARD

SCALE



FEMA
National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP

CLARK COUNTY, NEVADA
And Incorporated Areas

PANEL **2125** OF **4090**

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAS VEGAS, CITY OF	325276	2125	E
UNINCORPORATED AREAS CLARK COUNTY	320003	2125	E

**REVISED TO
REFLECT LOMR
EFFECTIVE: February 5, 2018**

VERSION NUMBER
1.1.1.0

MAP NUMBER
32003C2125E

EFFECTIVE DATE
SEPTEMBER 27, 2002

