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Flying Horse East
Master Development Drainage Plan

December 20,2024

HR Green Project No: 2402059.3

Prepared For:

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Table of Contents

Engineer's Statement 1
Developer's Statement 1
El Paso County: 1
I. General Purpose, Location and Description 2
a. Purpose and Scope 2
b. Drainage Basins Investigations 2
c. Stakeholder Process 2
d. Agency Jurisdictions 2
e. General Project Description 2
f. Data Sources 3
g. Applicable Criteria and Standards 3
II. Project Characteristics 4
a. Location in Drainage Basin, Offsite Flows, Size 4
b. Compliance with El Paso County 4
c. Site Characteristics 5
d. Major Drainage Ways and Structures 5
e. Existing and Proposed Land Use 5
III. Hydrologic Analysis 5
a. Methodology 5
b. Major Basins and Subbasins 7
c. Basin Hydrology 24
IV. Hydraulic Analysis 26
a. Major Drainageways 26
V. Environmental Evaluations 26
a. Significant Existing or Potential Wetland and Riparian Areas Impacts 26
b. Stormwater Quality Considerations and Proposed Practices 26
c. Permitting Requirements 27
d. 4-Step Process 27
VI. Alternatives Evaluation 28
VII. Selected Plan 28

a. Plan Hydrology 28
b. System Improvements 28
VIII. Drawings 28
IX. Summary 28
X. References 29

List of Figures

Figure 1 – Proposed Site Development Map 3

List of Tables

Table 1 – Project Site Offsite Subbasins Contributing Area and Flow 4
Table 2 – Residential Land Use Max Estimated Densities 5
Table 3 – Land Use and Associated Impervious Percentage 6
Table 4 – Existing Drainage Subbasins' Locations and Characteristics 8
Table 5 - Proposed Drainage Subbasins' Locations and Characteristics 12
Table 6 – Offsite Subbasin Receiving Detention Pond Parameters 24
Table 7 – Proposed Detention Pond Volumes with Associated Subbasin Drainage Parameters 24

Appendices

A. Maps & Site Photos
B. Hydrology Calculations
C. SWMM Calculations
D. Pond Calculations
E. Proposed Culvert Calculations
F. Site Drainage Maps

Engineer's Statement

This report and plan for the drainage design of the development, Flying Horse East, was prepared by me (or under my direct supervision) and is correct to the best of my knowledge and belief. Said report and plan has been prepared in accordance with the *El Paso County Drainage Criteria* Manual and is in conformity with the master plan of the drainage basin. I understand that El Paso County does not and will not assume liability for drainage facilities designed by others. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

_____

Gregory Panza, PE Date

State of Colorado No. 37081

For and on behalf of HR Green Development, LLC

Developer's Statement

I, the developer, have read and will comply with all of the requirements specified in this drainage report and plan.

Flying Horse Development, LLC

_____

Drew Balsick Date

Vice President / Project Manager

Flying Horse Development, LLC
2138 Flying Horse Club Drive

Colorado Springs, CO 80921

El Paso County:

Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, Volumes 1 and 2 and the Engineering Criteria Manual, as amended.

_____ _____

Jeffrey Rice, P.E. Date

Senior Engineer

Master Development Drainage Plan – Flying Horse East

I. General Purpose, Location and Description

a. Purpose and Scope

The Purpose of this Master Development Drainage Plan (MDDP) is to describe the onsite and offsite drainage patterns, existing and proposed storm infrastructure as it relates to preliminary water quality and stormwater detention, areas tributary to the site and the planned storm water management for the Flying Horse East development. The items discussed in this report are preliminary in nature and final drainage calculations and design will be required as development proceeds. This report provides a general drainage concept and guidance for future development of Flying Horse East.

b. Drainage Basins Investigations

Flying Horse East is a part of the Arkansas River Basin. The site drains into three major drainage basins: Livestock Company, Drennan, and Upper East Chico. The major basin delineated for El Paso County are shown in Appendix A.

The majority of the site drains into the Livestock Company basin, which eventually drains into Book Ranch Creek, a tributary to Black Squirrel Creek. Black Squirrel Creek travels south until its confluence with the Arkansas River.

The southwest corner of the development drains to either the Upper East Chico basin or the Drennan basin. Both basins drain south towards Chico Creek and Lower Black Squirrel Creek, respectively. Both basins eventually drain into the Arkansas River.

A Drainage Basin Planning Study (DBPS) does not currently exist for any of the basins mentioned above. The MDDP will comply with standard El Paso County regulations regarding drainage within this corridor.

c. Stakeholder Process

There are no amendments to the current DBPS.

d. Agency Jurisdictions

Listed below are the jurisdictions that this project will conform to:

El Paso County

Federal Emergency Management Agency

e. General Project Description

Flying Horse East is in El Paso County. The development is bordered by Highway 94 to the north, Enoch Road to the west, Schriever Airforce Base to the south, and Paddock Road to the east. The area contains approximately 1,820 acres within the whole Section 13 and 14, Township 14 South, Range 64 West of the Sixth Principal Meridian, as well as a portion of Section 23 and 24, Township 14 South, and Range 64 West of the Sixth Principal Meridian.

This MDDP will cover approximately 1822.4 acres with a range of 2789 – 4838 residential units, which is shown in the figure below. This development will include estate lots, low through high density residential lots, commercial development, a hotel, open space and parks, and a business park area.

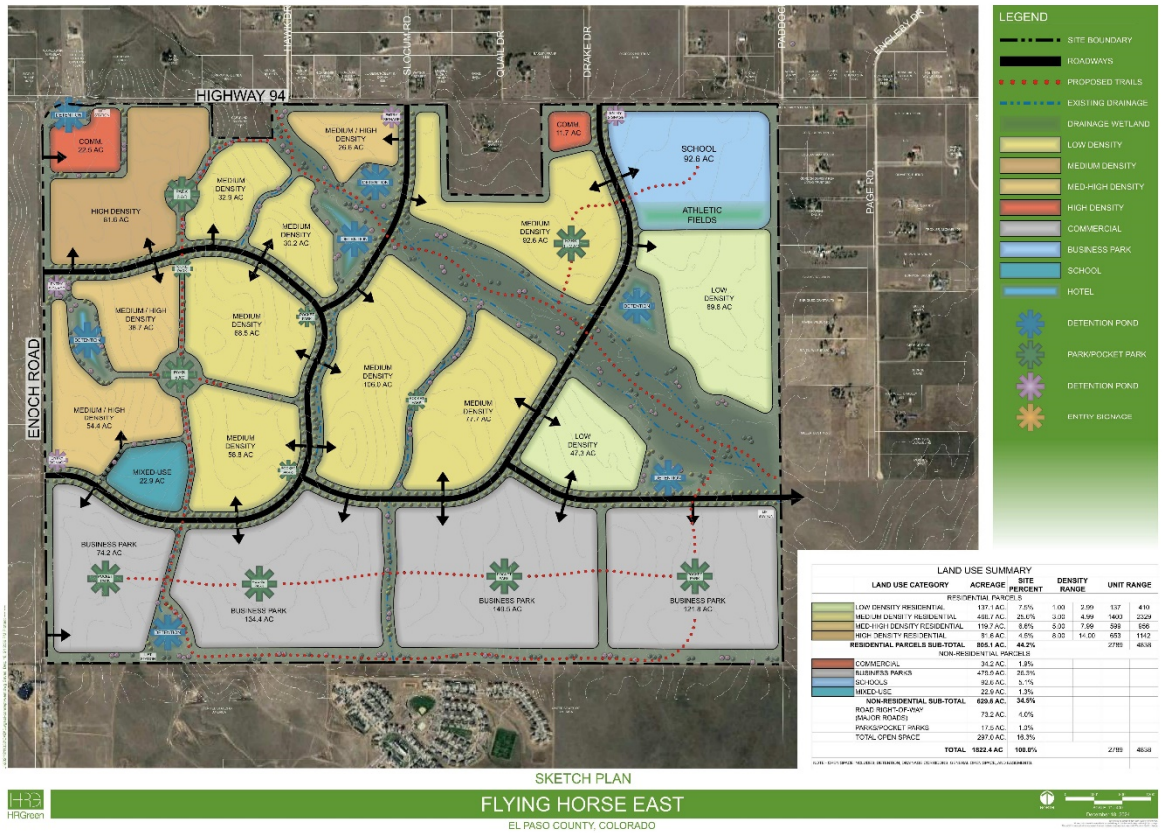


Figure 1 – Proposed Site Development Map

f. Data Sources

Listed Below are the technical resources reviewed in the preparation of this MDDP:

El Paso County Drainage Criteria Manual (DCM)

Mile High Flood District

NOAA Atlas 14

NRCS Soil Survey for El Paso County Area, Colorado

FEMA FIRM Panel 08041C0785G and Panel 08041C0805G (eff. 12/7/2018)

El Paso County Assessor Property Records

g. Applicable Criteria and Standards

Per the El Paso County Criteria Manual, flows from the proposed site will be limited to historic flows to maintain the stability of the existing channels within the drainage basins. The master plan follows the Drainage Criteria Manual for El Paso County which refers to the City of Colorado Springs Drainage Criteria Manuals as amended.

II. Project Characteristics

a. Location in Drainage Basin, Offsite Flows, Size

Flying Horse East is located within both the Black Squirrel Drainage Basin and the Chico Creek Basin. A majority of the development is within the Livestock Company Basin, a subbasin to the Black Squirrel Drainage Basin. This drainage basin encompasses 10.9 square miles of mostly forested area and generally slopes from east to west and outfalls into Monument Creek. Black Squirrel is a subbasin of the Arkansas River. A small section of the development is part of the Upper East Chico Basin, a subbasin to the Chico Creek Basin. The Chico Creek Basin encompasses 16.3 square miles of mostly plains and forest area which generally drains north to south and outfalls into the Arkansas River. This is shown in Appendix A.

As the site generally lies at the top of each of the respective basins, several offsite flows are conveyed onto the site. There are nine offsite subbasins that drain onto the site. Three offsite basins drain north onto another offsite basin which eventually drains onto the site. The remaining six offsite are split, three drain from the north and three from the west. Eight of the offsite subbasins are part of the Livestock Company basin and one is part of the Upper East Chico basin. The basin names, acreage, and respective contributing flows from these basins is shown in the table below:

Table 1 – Project Site Offsite Subbasins Contributing Area and Flow

Basin Name	Major Basin	Acreage	5 Year Flow (cfs)	100 Year Flow (cfs)
OS1	Livestock Company	423.70	9.22	230.99
OS2	Livestock Company	100.46	6.00	55.02
OS3	Livestock Company	3535.15	82.90	1831.23
OS4	Livestock Company	76.90	1.62	59.67
OS5	Livestock Company	7.78	0.15	4.20
OS6	Livestock Company	71.77	0.43	26.86
OS7	Livestock Company	31.27	1.88	25.47
OS8	Livestock Company	53.43	3.86	58.70
OS9	Upper East Chico	215.89	4.20	136.42

These nine basins are generally conveyed through the development via natural drainage ways. The proposed ponds discussed later within this report have been sized to pass through the offsite flows if necessary.

b. Compliance with El Paso County

This MDDP is in general conformance with the guidelines outlined by El Paso County. Flying Horse East will construct multiple full spectrum detention facilities to limit the effects of development and mimic natural and existing flow patterns.

Existing downstream infrastructure is currently limited to the historic drainage channels and minimal downstream improvements exist. As such, the site restricts offsite flow rates to not exceed existing flow rates. The site's ultimate outfalls will generally be along the same historic tributaries. Although outfall rates will be at or below existing, the cumulative volume of runoff will increase and therefore downstream facilities may see an increase in the duration of flows. This may provide a net benefit to the downstream

facilities by providing more water to assist with the sustenance of vegetation. However, it should be noted that increased volume may expedite potential erosion or channel movement.

c. Site Characteristics

Per the NRCS web soil survey, the site is made up entirely of Type A and B soils, approximately 59% and 41%, respectively. The majority of the site is Truckton sandy loam, 3 to 9 percent slopes; however, the other soils are other types of various sandy loams. There is a small portion of type D, Udic Haplusterts, soil in the northwest corner of the site. See Appendix A for the NRCS soil map.

The current ground cover for the site is mainly undeveloped, with mainly short to mid-grass prairie grasslands and former farmland which consists of non-native weeds and grasses. There is one existing residential property on the north side of the site as well. This portion of the site has very few, if any shrubs and no trees were seen on the site. Site photos are shown in Appendix A.

d. Major Drainage Ways and Structures

One FEMA regulated drainageway exists within the development, along with two smaller tributaries that drain south towards the Schriever Airforce Base. The streams are currently unnamed and convey flow towards Black Squirrel Creek and Chico Creek. One small existing natural pond exists in the west side of the property, but no flood control structures are located on the site.

Existing major and minor drainage channels within the site are planned to be maintained to the maximum extent possible within parkways and greenways with the development. These will continue to be used for conveyance of storm drainage flows.

e. Existing and Proposed Land Use

The existing site is open rangeland for a majority of the site with one single family residence (8.5 acres) on the north side of the site. As mentioned above, the current land use is natural undeveloped land.

The proposed land use is shown in Figure 1. The site will be a mixture of low, medium and high-density residential developments along with commercial, a hotel, a school, and several business developments. The site will also have several parks and other green spaces. The current land plan assumes approximately 2789 to 4838 dwelling units will be constructed on the site. The table below details the estimated max density of each residential density.

Table 2 – Residential Land Use Max Estimated Densities

Land Use	MAX DU/AC
Low Density	2.99
Medium Density	4.99
Medium High Density	7.99
High Density	14.00

III. Hydrologic Analysis

a. Methodology

Design rainfall was determined utilizing the NOAA Atlas 14 to determine the 5- and 100-year rainfall values for the 1-hour events at the property. The 1-hour rainfall depths are 1.26 and 2.66 in/hr respectively.

Composite percent impervious calculations were completed for each subbasin for existing and proposed conditions. The El Paso County Drainage Criteria Manual (EPDCM) Table 3-1 and the Urban Storm Drainage Criteria Manual (USDCM) Table 6.2 were used for reference when correlating land use to percent impervious values. The table below shows the land use to impervious correlation.

Table 3 – Land Use and Associated Impervious Percentage

Land Use/Type	Impervious (%)
Commercial	95
High Density Residential (Multi-family)	65
Medium High Density Residential (Single-family – 0.1377 acre lots)	53
Medium Density Residential (Single-family – 0.25 acre lots)	40
Low Density Residential (Single-family – 0.5 acre lots)	25
Business Park (Offices)	65
Schools	55
Mixed-Use (Commercial Low Density)[1]	65
Roads	95
Grass/Undeveloped	2

1- Mixed-use used commercial low density from the USDCM as this most accurately depicts the areas expected use.

For the existing conditions the National Land Cover Database (NLCD) was utilized. The data was categorized by various types of roads, other impervious surfaces (houses), and unclassified (undeveloped). Roads and other impervious surfaces were set to 95% impervious and undeveloped land was set to 2%. The composite percent impervious for each existing and offsite basin were calculated and shown below in Table 4. For proposed conditions, the proposed site development plan was used. Each land use was assigned an impervious value based on the table above. The NLCD data was used to represent land coverage outside of the property boundary. The composite percent impervious for the proposed and offsite basins is shown below in Table 5.

The rainfall, percent impervious values, and hydrologic soil type from NRCS web soil survey (described above in Section II.c.) were then used as inputs into the Colorado Urban Hydrograph Procedure (CUHP) spreadsheets to determine runoff values for both pre-development and post-development site.

CUHP is an evolution of the Snyder unit hydrograph and is calibrated for use along the Colorado Front Range. One hour rainfall amounts are input into the program to produce a storm hyetograph that is then uses to calculate a storm hydrograph for each basin depending on the subbasins properties including flow slope, longest flow path length, centroidal flow path length, impervious area, pervious depression storage area, and various infiltration rates. Tabular hydrographs are then computed and can be used in EPA SWMM. The CUHP results for proposed and existing conditions are included within Appendix B.

EPA SWMM was used to determine flow routing via the kinematic wave method. Subbasins were routed to their respective design points for both the developed and predeveloped condition to determine peak runoff amounts for the 5-year and 100-year storm events. Models were developed with the assumption of conveyance of 100-year storm event; therefore, conveyance paths and geometry (culvert and channel sizes and slopes) were estimated based on site data (terrain surface, site photos, and aerial imagery).

Information from these models along with information and calculations performed in the Mile High Flood District BMP spreadsheets was used to determine pond sizing calculations and release rates.

b. Major Basins and Subbasins

1. MAJOR BASIN DESCRIPTION

Per FEMA FIRM 08041C0785G and 08041C0805G (eff. 12/7/2018), Flying Horse East has the Unnamed Tributary 107 to Black Squirrel Creek run through the site. Currently, FEMA shows a Zone A floodplain for this stream. Per the El Paso County Land Development Code Chapter 8 Section 8.4.2.B.1.e.i, the base flood elevations for Zone A will be determined once the platted lots are solidified and are confirmed within 300-ft of the current floodplain designation. Certification of the flood elevations will be via the FEMA CLOMR/LOMR process or Floodplain Certification Letter. The FIRM panels described above are shown in Appendix A.

The site has been divided into three major drainage basins based on El Paso county's major basin delineations. These basins were then divided into subbasins based on the locations in which flow was anticipated to enter or leave the site. The existing and proposed subbasin delineations are shown in Appendix F.

2. EXISTING SUBBASIN DESCRIPTION

Within the Livestock Company Basin, flow is generally carried east and southeast throughout the site. On the other side, the Upper East Chico and Drennan Basins flow directly south. Subbasin IDs are labeled as LC (Livestock Company), UEC (Upper East Chico), and Dr (Drennan), followed by a letter. Most of the offsite basins labeled OS are part of the Livestock Company Basin, except for OS9 which contributes to the Upper East Chico. Additionally, OS4, OS5, and OS6 all drain north into OS3; the contributing flows from OS4, OS5, and OS6 were considered in the SWMM modeling. Below in Table 4, details the location, drainage pattern, characteristics, and the 5- and 100-year peak flows of each existing basin.

Table 4 – Existing Drainage Subbasins' Locations and Characteristics

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS1	An offsite basin located in the northeast corner, just north of Subbasin LC-B. Mainly undeveloped land with some homes and roadways.	Drains southwest towards Subbasin LC-B	423.70	7.68	9.22	230.99
OS2	An offsite basin directly west of Subbasin OS1, just north of the site. Mainly undeveloped land with some homes and roadways.	Drains south towards Subbasin LC-B	100.46	17.40	6.00	55.02
OS3	The major offsite basin northwest of the site, just north of Subbasin LC-A10. Mainly undeveloped land with some homes and roadways.	Drains southwest towards Subbasin LC-B through the natural drainageway	3535.15	8.72	82.90	1831.23
OS4	An offsite basin located west of the site, just east of N Curtis Rd and south of Hwy 94. This subbasin is directly west of Subbasin OS5. Currently an undeveloped area.	Drains north towards a culvert and discharges onto Subbasin OS3. Which eventually drains into the natural drainageway	76.90	5.06	1.62	59.67

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS5	An offsite basin between Subbasins OS4 and OS6, directly west of the site and south of Hwy 94. Mainly undeveloped land with some homes and roadways.	Drains north towards a low point just south of Hwy 94. No culvert identified but flow anticipated to overtop Hwy 94. This would discharge into Subbasin OS3 and eventually drains into the natural drainageway.	7.78	6.87	0.15	4.20
OS6	An offsite basin between Subbasins OS5 and OS7, directly west of the site and south of Hwy 94. Mainly undeveloped land with some homes and roadways.	Drains north towards a culvert and discharges onto Subbasin OS3. Which eventually drains into the natural drainageway	71.77	3.13	0.43	26.86
OS7	An offsite basin directly west of Subbasin LC-A, just west of Enoch Road. Currently an undeveloped area.	Drains west towards Subbasin LC-A	31.27	12.31	1.88	25.47
OS8	An offsite basin directly west of Subbasin LC-A, just west of Enoch Road, and south of Subbasin OS4. Currently an undeveloped area.	Drains west towards Subbasin LC-A	53.43	11.13	3.86	58.70

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS9	An offsite basin directly northwest of Subbasin UEC-A, just west of Enoch Road, and south of OS5. Currently an undeveloped area.	Drains west towards Subbasin UEC-A	215.89	5.44	4.20	136.42
LC-A10	In the northwest corner of the site, directly north of Subbasin UEC-A. Mainly undeveloped land with some roadways.	Drains north towards Subbasin OS3 and eventually drains into the natural drainageway	135.30	4.31	1.42	62.55
LC-A20	In the northwest corner of the site, directly east of Subbasin LC-A10. Mainly undeveloped land with one major roadway.	Drains north towards Subbasin OS3 and eventually drains into the natural drainageway	23.35	4.43	0.26	11.42
LC-B	Largest onsite basin in the center of the site. Mainly undeveloped land with a few homes.	Drains southeast into the natural drainageway until draining offsite	1135.72	2.44	9.42	698.54

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-C	In the northeast corner of the site, between Subbasins OS1 and LC-D. Mainly undeveloped land with one major roadway.	Drains southeast towards the property line	25.36	2.44	0.39	26.19
LC-D	In the northeast corner just south of Subbasin LC-C. Currently an undeveloped area.	Drains southeast towards the property line	20.81	2.00	1.21	25.11
LC-E	On the eastern side of the site directly south of Subbasin LC-D. Currently an undeveloped area.	Drains east towards the property line	26.67	2.00	1.45	31.60
LC-F	On the eastern side of the site directly north of Subbasin LC-G. Currently an undeveloped area.	Drains east towards the property line	94.23	2.00	1.44	111.12

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-G	In the southeast corner of the site, between Subbasins LC-F and LC-H. Currently an undeveloped area.	Drains east towards the property line	28.37	2.00	0.28	21.94
LC-H	In the southeast corner of the site, directly south of Subbasins LC-G. Currently an undeveloped area.	Drains east towards the property line	14.25	2.00	0.26	18.92
LC-I	In the southeast corner of the site, directly east of Subbasin LC-H. Currently an undeveloped area.	Drains southeast towards Subbasin LC-H and the property line	90.13	2.00	0.77	61.26
UEC-A	In the southeast corner of the site, directly south of Subbasin LC-A. Mainly undeveloped land with one major roadway.	Drains southeast towards Subbasin UEC-B	71.28	3.48	1.04	49.42

Subbasin ID	Location /Characteristics	Drainage Pattern	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
UEC-B	In the southeast corner of the site, between Subbasins UEC-A and UEC-C. Currently an undeveloped area.	Drains south towards the property line	121.88	2.00	0.96	87.55
UEC-C	On the southern edge of the property line, between Subbasins UEC-B and UEC-D. Currently an undeveloped area.	Drains southwest towards the property line	23.23	2.00	0.13	12.30
UEC-D	On the southern edge of the property line, between Subbasins UEC-C and Dr-A. Currently an undeveloped area.	Drains southwest towards the property line	12.69	2.00	0.73	15.19
Dr-A	On the southern edge of the property line, between Subbasins UEC-D and Dr-B. Currently an undeveloped area.	Drains southeast towards the property line	50.27	2.00	0.44	37.13
Dr-B	On the southern edge of the property line, between Subbasins LC-I and Dr-A. Currently an undeveloped area.	Drains southeast towards the property line	18.15	2.00	0.22	17.72

3. PROPOSED SUBBASIN DESCRIPTION

The proposed basins reside within the same three major basins: Livestock Company, Upper East Chico, and Drennan. The proposed basins were delineated based on the site plan shown in Figure 1. Four major factors contributed to the delineation of proposed basins. One was the boundary of the existing major basins, second was the location of proposed roadways and greenways, third was the location of the site boundary, and finally was based on the land type. The proposed basins additionally added three more offsite basins. OS10 was added to the northwest corner of the site, which was required to separate the onsite property flow from the flow contributed by the roadway. OS-B1 and OS-B2 were both initially part of the large onsite basin LC-B, however, the site property did not extend into these areas and therefore could not be considered onsite. Additionally, OS1, OS2, and OS3 were slightly adjusted to account for the drainage of Hwy 94 that was initially part of the existing Subbasin LC-B.

Some assumptions were made during the evaluation of CUHP parameters for the proposed basins. The proposed slope and longest flow length were assumed to follow the existing grade and contours. However, in some cases it was assumed that swales would convey the flow to the expected design point which was assumed to be 2% based on El Paso Engineering Criteria for ditch slope (Section 3.3.4). Assumptions made for the proposed SWMM routing are noted within the model descriptions.

Below in Table 5, details the location, drainage pattern, characteristics, and the 5- and 100-year peak flows of each proposed basin. Basin names followed a similar pattern to the existing basins; major drainage basins first and then followed by the existing basin design point plus numerical values to separate each basin. Proposed detention ponds are detailed within the drainage patterns (*Note: proposed detention ponds and culverts will be sized after the approval of the hydrology)*.

Table 5 - Proposed Drainage Subbasins' Locations and Characteristics

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS1	An offsite basin located in the northeast corner, just north of Subbasin LC-B. Mainly undeveloped land with some homes and roadways.	Drains southwest towards Subbasin LC-B50. The proposed flow path will be channelized until discharging into Pond **B1**.	423.70	7.65	9.17	230.59
OS2	An offsite basin directly west of Subbasin OS1, just north of the site. Mainly undeveloped land with some homes and roadways.	Drains south towards Subbasin LC-B70. The proposed flow path will be channelized until discharging into the natural drainageway.	100.46	17.90	6.27	55.71
OS3	The major offsite basin northwest of the site, just north of Subbasin LC-A10. Mainly undeveloped land with some homes and roadways.	Drains southwest towards Subbasin LC-B100 through the natural drainageway.	3535.15	8.75	83.24	1832.34
OS4	An offsite basin located west of the site, just east of N Curtis Rd and south of Hwy 94. This subbasin is directly west of Subbasin OS5. Currently an undeveloped area.	Drains north towards a culvert and discharges onto Subbasin OS3. Which eventually drains into the natural drainageway.	76.90	5.06	1.62	59.67

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS5	An offsite basin between Subbasins OS4 and OS6, directly west of the site and south of Hwy 94. Mainly undeveloped land with some homes and roadways.	Drains north towards a low point just south of Hwy 94. No culvert identified but flow anticipated to overtop Hwy 94. This would discharge into Subbasin OS3 and eventually drains into the natural drainageway.	7.78	6.87	0.15	4.20
OS6	An offsite basin between Subbasins OS5 and OS7, directly west of the site and south of Hwy 94. Mainly undeveloped land with some homes and roadways.	Drains north towards a culvert and discharges onto Subbasin OS3. Which eventually drains into the natural drainageway.	71.77	3.13	0.43	26.86
OS7	An offsite basin directly west of Subbasin LC-A10, just west of Enoch Road. Currently an undeveloped area.	Drains west towards Subbasin LC-A10. Proposed flow path will be channelized until discharging to culvert under Hwy 94.	31.27	12.09	1.84	25.38
OS8	An offsite basin directly west of Subbasin LC-A30, just west of Enoch Road, and south of Subbasin OS4. Currently an undeveloped area.	Drains west towards Subbasin LC-A30. The proposed flow path will be channelized until discharging into Pond **A3**.	53.43	11.56	4.08	59.07

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
OS9	An offsite basin directly northwest of Subbasin UEC-A10, just west of Enoch Road, and south of OS5. Currently an undeveloped area.	Drains west towards Subbasin UEC-A10. The proposed flow path will be channelized until discharging into Pond **UEC**.	215.89	4.95	3.80	135.58
OS10	An offsite basin directly northwest of Subbasin LC-A10. Subbasin initially connected to existing Subbasin LC-A10 but was separated at the property line. The area is mainly roadways.	Drains east towards the culvert at the end of Subbasin LC-A10. Flow would discharge into the channelized flow from Subbasin OS7.	1.42	75.57	0.95	2.67
OS-B1	An offsite basin that was initially part of the existing Subbasin LC-B. Basin in northern part of site, just east of Subbasin LC-B130. The area is currently undeveloped.	Drains southeast towards Subbasin LC-B100. Flow will discharge into the natural drainageway.	8.80	2	0.08	7.25
OS-B2	An offsite basin that was initially part of the existing Subbasin LC-B. Basin in northern part of site, just south of Subbasin OS2 and OS1. The area is farmland with one residence.	Drains southeast towards Subbasin LC-B70. Flow will be either channelized or pipe directly to the natural drainageway.	38.55	3.26	0.59	32.70

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-A10	In the northwest corner of the site, directly north of LC-A20. Current planning documents anticipate the area to be commercial.	Drains north towards Pond **A1**. Will be discharged north towards a culvert under Hwy 94 to Subbasin OS3.	22.91	67.15	31.12	89.75
LC-A20	In the northwest corner of the site, directly between Subbasin LC-A10 and LC-A30. Current planning documents anticipate the area to be high density residential.	Drains north towards Subbasin LC-A10. Flow will be channelized towards Pond **A1**.	33.65	56.35	22.05	70.78
LC-A25	In the northwest corner of the site, directly east of Subbasin LC-A10. Current planning documents anticipate the area to be mainly high density residential with some commercial.	Drains north towards proposed Pond **A2**. Flow will be discharged towards Subbasin OS3 and eventually drains into the natural drainageway.	23.35	59.09	16.06	48.69
LC-A30	On the western side of the site, directly south of Subbasin LC-A20. Current planning documents anticipate the area to be mainly medium high density residential.	Drains naturally towards the center of the subbasin which will have proposed Pond **A3**. The pond outlet will be piped north toward LC-A10.	76.91	40.55	50.19	202.69
LC-B10	On the eastern side of the site directly south of LC-B20. Subbasin resides within the natural drainageway.	Drains southeast into the natural drainageway until draining offsite at the property boundary.	71.02	3.59	1.17	50.36

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-B20	On the northeastern portion of the site directly north of LC-B10. Current planning documents anticipate the area to low density residential.	Drains southeast towards Subbasin LC-B10 and Pond **B1**. Flow will be discharged from the pond into the natural drainageway.	75.80	19.38	8.45	71.02
LC-B30	Located east of Subbasin LC-F20. Current planning documents anticipate the area to be low density residential.	Drains northeast towards Subbasin LC-B10. The flow will be direct towards Pond **F1** with Subbasin LC-F20. Flow will be discharged from the pond into the natural drainageway.	47.55	25.52	20.33	99.79
LC-B40	Located southeast of Subbasin LC-B30. Current planning documents anticipate the area to be a business park.	Drains northeast towards Subbasin LC-B30. Flow will be channelized through Subbasin LC-B30 and will discharge into Pond **F1**.	79.78	58.97	66.69	210.35
LC-B50	On the northeast side of the site, directly south of Subbasin OS1. Current planning documents anticipate the area to be a school.	Drains southeast towards Subbasin LC-B20. Flow will be conveyed through LC-B20 and discharged into Pond **B1**.	60.13	49.55	40.74	150.29
LC-B60	Located directly northwest of Subbasin LC-B10. Subbasin resides within the natural drainageway.	Drains southeast towards Subbasin LC-B10 within the natural drainageway.	50.06	4.44	2.14	44.51

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-B70	Located directly south of Subbasin OS-B2. Current planning documents anticipate the area to be mostly medium density residential with a small section of commercial.	Drains southeast towards Subbasin LC-B60 and Pond **B2**. The pond will be discharged into the natural drainageway.	115.66	37.31	34.93	154.75
LC-B80	Located directly south of Subbasin LC-B60. Current planning documents anticipate the area to be medium density residential.	Drains northeast towards Subbasin LC-B60 and Pond **B3**. The pond will be discharged into the natural drainageway.	87.58	35.96	24.60	120.82
LC-B90	Located directly south of Subbasin LC-B60. Current planning documents anticipate the area to be medium density residential.	Drains northeast towards Subbasin LC-B60 and Pond **B4**. The pond will be discharged into the natural drainageway.	116.91	36.01	29.93	137.94
LC-B100	Located directly northwest of Subbasin LC-B60. Subbasin resides within the natural drainageway.	Drains southeast towards Subbasin LC-B60 within the natural drainageway.	16.04	3.77	0.25	10.11
LC-B110	On the north side of the site, north of LC-B100. Current planning documents anticipate the area to be medium high density residential.	Drains southeast towards Subbasin LC-B100 and Pond **B5**. The pond will discharge into the natural drainageway.	40.34	35.71	14.08	65.28

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-B120	Located directly south of Subbasin OS-B1. Current planning documents anticipate the area to be medium density residential.	Drains northeast towards Subbasin LC-B100 and Pond **B6**. The pond will be discharged into the natural drainageway.	89.59	29.01	19.04	103.80
LC-B130	In the northeast corner of the site, between Subbasins LC-A25 and LC-B120. Current planning documents anticipate the area to be high density.	Drains east towards Subbasin LC-B120. Flow will be channelized through LC-B120 until discharging in Pond **B6**.	32.88	53.33	12.69	42.94
LC-B140	Located directly south of Subbasin LC-B130. Current planning documents anticipate the area to be medium high density residential.	Drains northeast towards Subbasin LC-B120. Flow will be channelized to Subbasin LC-B150 and discharged into Pond **B6**.	21.40	43.88	11.79	46.69
LC-B150	Located directly south of Subbasin LC-B120. Current planning documents anticipate the area to be medium density residential.	Drains north towards Subbasin LC-B120. Flow will be channelized through Subbasin LC-B120 and discharged into Pond **B6**.	32.77	37	13.18	59.16
LC-B160	Located directly south of Subbasin LC-B120. Current planning documents anticipate the area to be medium density residential.	Drains north towards Subbasin LC-B120. Flow will be channelized through Subbasin LC-B120 and discharged into Pond **B6**.	56.00	37.35	30.50	131.96

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-B170	Located directly south of Subbasin LC-B140. Current planning documents anticipate the area to be medium high density residential.	Drains north towards Subbasin LC-B140. Flow will be channelized through LC-B140. Flow will be conveyed to Pond **B6**.	7.32	32.2	1.71	8.74
LC-B180	Located directly south of Subbasin LC-B160. Current planning documents anticipate the area to be medium density residential.	Drains north towards Subbasin LC-B160. Flow will be channelized through Subbasin LC-B160. Flow will be conveyed to Pond **B6**.	56.49	36.53	31.29	143.01
LC-B190	Located directly south of LC-B90. Current planning documents anticipate the area to be a business park.	Drains north towards Subbasin LC-B90. Flow will be channelized through Subbasin LC-B90 and discharged into Pond **B4**.	42.56	52.26	41.78	142.63
LC-C10	In the northeast corner of the site, north of Subbasin LC-D10. Current planning documents anticipate the area to be a school.	Drains southeast towards the property line. Flow will be conveyed towards Pond **D**.	35.83	45.6	20.27	79.80
LC-D10	In the northeast corner just south of Subbasin LC-C10. Current planning documents anticipate the area to be low density residential.	Drains southeast towards the property line and to Pond **D**.	34.73	22.57	11.34	58.99

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-F10	On the eastern side of the site directly north of Subbasin LC-G10. Current planning documents anticipate the area to be a business park.	Drains east towards the property line and Pond **F1**.	53.87	59.69	48.28	153.24
LC-F20	Located directly south of Subbasin LC-B10. Current planning documents anticipate the area to be a pond and low density residential.	Drains east towards the property line. The flow will be directed towards Pond **F2** and discharged into the natural drainageway.	28.47	13.00	1.65	21.43
LC-G10	In the southeast corner of the site, between Subbasins LC-F10 and LC-H10. Current planning documents anticipate the area to be a business park.	Drains east towards the property line and towards Pond **G**.	27.23	63.28	18.87	58.97
LC-H10	In the southeast corner of the site, directly south of Subbasins LC-G10. Current planning documents anticipate the area to be a business park.	Drains east towards the property line. Flow will be conveyed towards Pond **G**.	12.49	35.96	5.22	25.24
LC-I10	In the southeast corner of the site, directly east of Subbasin LC-G10. Current planning documents anticipate the area to be a business park.	Drains southeast towards Subbasin LC-H10 and the property line. Flow will be directed towards Pond **I**.	36.06	50.23	25.93	87.28

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
LC-I20	On the south edge of the property, just east of Subbasin LC-I10. Current planning documents anticipate the area to be a business park.	Drains southeast towards Subbasin LC-I10 and the property line. Flow will be channelized towards Pond **I**.	53.43	55.82	35.85	121.23
UEC-A10	In the southeast corner of the site, directly south of Subbasin UEC-A20. Current planning documents anticipate the area to be a business park.	Drains southeast towards Subbasin UEC-B10. Flow will be channelized towards Pond **UEC**.	55.99	52.34	32.34	114.80
UEC-A20	Located directly north of Subbasin UEC-A10. Current planning documents anticipate the area to be medium high density residential.	Drains south towards Subbasin UEC-A10. Flow will be channelized through Subbasin UEC-A10 towards Pond **UEC**.	20.21	41.41	8.92	34.76
UEC-B10	In the southeast corner of the site, between Subbasins UEC-A10 and UEC-B20. Current planning documents anticipate the area to be a business park.	Drains south towards the property line and towards Pond **UEC**.	44.52	47.84	24.45	91.59

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
UEC-B20	In the southeast corner of the site, between Subbasins UEC-B10 and UEC-C10. Current planning documents anticipate the area to be a business park.	Drains south towards the property line and towards Pond **UEC**.	43.60	54.84	30.59	100.29
UEC-B30	Located directly north of Subbasin UEC-B10. Current planning documents anticipate the area to be mixed use.	Drains southeast towards Subbasin UEC-B10. Flow will be channelized towards Pond **UEC**.	22.90	56.84	20.75	66.13
UEC-B40	Located directly north of Subbasin UEC-B20. Current planning documents anticipate the area to be medium density residential.	Drains southwest towards Subbasin UEC-B20. Flow will be channelized towards Pond **UEC**.	11.23	33.96	4.99	23.06
UEC-C10	On the southern edge of the property line, between Subbasins UEC-B20 and UEC-D10. Current planning documents anticipate the area to be a business park.	Drains southwest towards the property line. Flow will be channelized towards Pond **UEC**.	23.57	52.16	12.08	42.23
UEC-D10	On the southern edge of the property line, between Subbasins UEC-C10 and Dr-A10. Current planning documents anticipate the area to be a business park.	Drains southwest towards the property line. Flow will be channelized towards Pond **UEC**.	12.41	49.51	9.12	30.73

Subbasin ID	Location	Drainage Path	Acreage	Impervious (%)	5-Year Flowrate (cfs)	100-Year Flowrate (cfs)
Dr-A10	On the southern edge of the property line, between Subbasins UEC-D10 and Dr-B10. Current planning documents anticipate the area to be a business park.	Drains southeast towards the property line and to Pond **Dr**.	51.02	55.85	31.27	106.35
Dr-B10	On the southern edge of the property line, between Subbasins LC-I20 and Dr-A10. Current planning documents anticipate the area to be a business park.	Drains southeast towards the property line. Flow will be conveyed towards Pond **Dr**.	17.74	47.82	11.07	41.35

The above-mentioned basins are large planning area basins and as drainage reports are developed for the individual developed parcels additional drainage reports and calculations will be required. It is expected that storm drainage infrastructure consisting of inlets, storm sewer and open drainage channels will be constructed as the property develops.

- Mentioned above, offsite basins include basins OS1 through OS10 as well as OS-B1 and OS-B2. Flow contributing to the site from these basins will be routed to the natural drainageway. In some cases, the offsite flow will be routed through the proposed detention ponds. These specific basins, receiving proposed pond, and flow rates are shown in the table below.

Table 6 – Offsite Subbasin Receiving Detention Pond Parameters

Offsite Flow Summary				
Basin Description	**Basin Area (ac)**	**Receiving Detention Pond**	**5 Year Peak Runoff (cfs)**	**100 Year Peak Runoff (cfs)**
OS1	423.70	Pond B1	9.17	230.59
OS8	53.43	Pond A3	4.08	59.07
OS9	215.89	Pond UEC	3.80	135.58

c. Basin Hydrology

A summary of the flows for both the predeveloped and developed cases for each basin, subbasin, and proposed ponds are found above in Tables 4 and 5. Below in Table 6 depicts the anticipated subbasins draining to each pond with the expected 5- and 100-year volume for each pond. Full computation found in Appendix B. (*Note: Pond volumes will be determined after the initial review and approval of the hydrology)*

Table 7 – Proposed Detention Pond Volumes with Associated Subbasin Drainage Parameters

Proposed SWMM Basin and Pond Summary						
Basin Description	**Basin Area (ac)**	**% Impervious**	**5 Year Peak Runoff (cfs)**	**100 Year Peak Runoff (cfs)**	**5 Year Pond Volume (ac-ft)**	**100 Year Pond Volume (ac-ft)**
LC-A10	22.91	67.15	31.12	89.75		
LC-A20	33.65	56.35	22.05	70.78		
			Pond A1			
LC-A25	23.35	59.09	16.06	48.69		
			Pond A2			
LC-A30	76.91	40.55	50.19	202.69		
OS8	53.43	11.56	4.08	59.07		
			Pond A3			
OS1	423.70	7.65	9.17	230.59		
LC-B20	75.80	19.38	8.45	71.02		
LC-B50	60.13	49.55	40.74	150.29		
			Pond B1			
LC-B70	115.66	37.31	34.93	154.75		
			Pond B2			

Proposed SWMM Basin and Pond Summary						
Basin Description	**Basin Area (ac)**	**% Impervious**	**5 Year Peak Runoff (cfs)**	**100 Year Peak Runoff (cfs)**	**5 Year Pond Volume (ac-ft)**	**100 Year Pond Volume (ac-ft)**
LC-B80	87.58	35.96	24.60	120.82		
			Pond B3			
LC-B90	116.91	36.01	29.93	137.94		
LC-B190	42.56	52.26	41.78	142.63		
			Pond B4			
LC-B110	40.34	35.71	14.08	65.28		
			Pond B5			
LC-B120	89.59	29.01	19.04	103.80		
LC-B130	32.88	53.33	12.69	42.94		
LC-B140	21.40	43.88	11.79	46.69		
LC-B150	32.77	37	13.18	59.16		
LC-B160	56.00	37.35	30.50	131.96		
LC-B170	7.32	32.2	1.71	8.74		
LC-B180	56.49	36.53	31.29	143.01		
			Pond B6			
LC-C10	35.83	45.6	20.27	79.80		
LC-D10	34.73	22.57	11.34	58.99		
			Pond D			
LC-F10	53.87	59.69	48.28	153.24		
			Pond F1			
LC-B30	47.55	25.52	20.33	99.79		
LC-B40	79.78	58.97	66.69	210.35		
LC-F20	28.47	13.00	1.65	21.43		
			Pond F2			
LC-G10	27.23	63.28	18.87	58.97		
LC-H10	12.49	35.96	5.22	25.24		
			Pond G			
LC-I10	36.06	50.23	25.93	87.28		
LC-I20	53.43	55.82	35.85	121.23		
			Pond I			
OS9	215.89	4.95	3.80	135.58		
UEC-A10	55.99	52.34	32.34	114.80		
UEC-A20	20.21	41.41	8.92	34.76		
UEC-B10	44.52	47.84	24.45	91.59		
UEC-B20	43.60	54.84	30.59	100.29		
UEC-B30	22.90	56.84	20.75	66.13		
UEC-B40	11.23	33.96	4.99	23.06		
UEC-C10	23.57	52.16	12.08	42.23		
UEC-D10	12.41	49.51	9.12	30.73		
			Pond UEC			

Proposed SWMM Basin and Pond Summary						
Basin Description	**Basin Area (ac)**	**% Impervious**	**5 Year Peak Runoff (cfs)**	**100 Year Peak Runoff (cfs)**	**5 Year Pond Volume (ac-ft)**	**100 Year Pond Volume (ac-ft)**
Dr-A10	51.02	55.85	31.27	106.35		
Dr-B10	17.74	47.82	11.07	41.35		
			Pond Dr			
OS2	100.46	17.90	6.27	55.71		
OS3	3535.15	8.75	83.24	1832.34		
OS-B1	8.80	2	0.08	7.25		
OS-B2	38.55	3.26	0.59	32.70		
LC-B10	75.80	19.38	8.45	71.02		
LC-B60	50.06	4.44	2.14	44.51		
LC-B100	16.04	3.77	0.25	10.11		
			Natural Drainage Way			

IV. Hydraulic Analysis

a. Major Drainageways

There is one major drainageways that exists within the development: Unnamed Tributary 107 to Black Squirrel Creek. Additionally, two small tertiary tributaries are within the site currently and function to convey flows to unnamed tributaries of the Chico Creek and Black Squirrel Creek.

V. Environmental Evaluations

a. Significant Existing or Potential Wetland and Riparian Areas Impacts

As part of this work, the developer has engaged Bristlecone Ecology, LLC to perform environmental studies of the site that will be submitted with the planning documents. Major information in the report concerning wetlands concludes that there is a moderate presence of a wetland in the floodplain of the Unnamed Tributary 107 to Black Squirrel Creek. Additionally, there is a natural lake/pond on the west side of the property that corresponds to a wetland, however this pond is considered non-jurisdictional.

At this time, there are no improvements proposed to the Unnamed Tributary 107 of Black Squirrel Creek. The minimal impact to the stream will keep the natural habitat intact and the natural function of the Creek as it is to maintain the wetland habitat. No major improvements are proposed to the existing wetland pond. Additional runoff will be treated and conveyed north.

b. Stormwater Quality Considerations and Proposed Practices

As part of the development, full spectrum detention facilities will be installed to provide water quality for the development. The facilities will be designed using El Paso County criteria and provide stormwater quality by slowing the release of stormwater captured by the ponds and allowing solids to settle out. Additionally, when possible, the existing natural drainage ways will be used to convey stormwater to more closely mimic the natural hydrologic and hydraulic cycle. Some of the drainage ways will be used to

convey water to the ponds and others will receive water from the ponds and in both scenarios will provide additional water quality benefits.

On site practices for the homes, schools, churches, and other buildings should use means such that impervious areas drain across pervious area to allow for infiltration during the minor events. This would include discharge of the gutters onto landscape areas vs. directly connecting to storm sewer and as discussed above as well using natural ditches and swales where it is logical and makes sense to convey stormwater in lieu of storm sewer piping.

c. Permitting Requirements

When work infringes upon the wetlands or floodplain a 404 Permit will be required. If the work within the waterways is minimal, it will likely be covered under a nationwide 404 permit; it is however possible that an individual permit will be required.

The Colorado Department of Public Health and Environment will require permits for any disturbance that exceeds 1 acre of land. Should groundwater be encountered, a dewatering permit will also be required.

El Paso County will require an Erosion and Stormwater Quality Control Permit, and any other construction permits required to complete the construction of the site.

Should development occur which affects the floodplain, FEMA will require a permit for work withing the floodplain prior to the commencement of any construction or development within any special flood hazard area (SFHA). If the infrastructure is to be installed within the channel the designer shall route the design through the proper FEMA channels whether that be with a no rise certification or via the CLOMR/LOMR process should a more major improvement within the floodplain be proposed. At this time the project does not propose any direct development within the floodplain, however storm infrastructure will discharge into the existing FEMA channel.

d. 4-Step Process

In accordance with the Engineering Criteria Manual I.7.2.A and DCM V2, this site has implemented the four-step process to minimize adverse impacts of urbanization. The four-step process includes reducing runoff volumes, stabilizing drainageways, treating the water quality capture volume, and considering the need for Industrial Commercial BMPs.

Step 1 – Reducing Runoff Volumes: The development of the project site includes a variety of land uses including open and vegetated areas interspersed to help disconnect imperious areas and reduce runoff volumes.

Step 2 – Stabilize Drainageways: Altered drainage ways will be designed in a manner that provides water quality benefits through infiltration and the removal of pollutants via phytoremediation. Vegetation will also be selected to stabilize the drainage ways by reducing the velocity of flows and decreasing any scour. Should the final drainage ways require, grade control structures may be implemented to further reduce flow velocities and protect against erosion. These improvements will help stabilize drainageways.

Step 3 – Provide WQCV: Runoff from this development is treated through capture and slow release of the WQCV via detention ponds that are designed per current El Paso County DCM V2.

Step 4 – Consider the need for Industrial and Commercial BMP’s: A site-specific storm water quality and erosion control plan and narrative will be prepared with subsequent land use approvals prepared in conjunction with the report prior to any construction. Site specific temporary source control BMPs as well

as permanent BMPs are detailed in this plan and narrative. Guidelines detailed in the El Paso DCM V2 4.2 pertaining to the covering and storage handline and spill containment and control shall be followed as necessary.

VI. Alternatives Evaluation

A DPBS was not developed for any major drainage basins within the project site, therefore, two alternatives were created.

The first alternative is the proposed plan presented above which includes 16 large scale detention ponds. Each pond was properly sized to store runoff and discharge into the natural drainageway at or near the existing conditions before leaving the site.

The second alternative would require smaller scaled detention ponds for each proposed subbasin. In some cases, the subbasins drain to similar areas that would still share a pond, such as Subbasins UEC-B10 and UEC-B20. This alternative could reduce potential issues with routing between subbasins and reduce the size of channels throughout the development. However, adding approximately 20 detention ponds would increase the amount of maintenance required by the county and significantly reduce the amount of developable land. This alternative would not be recommended unless limits to the first alternative are discovered during the preliminary and final drainage reports.

VII. Selected Plan

a. Plan Hydrology

This MDDP schematically addressed on-site and off-site drainage patterns using the existing topography and proposed land use plan for the overall drainage design. Individual preliminary and final drainage reports will better define the planning areas as the site is developed.

The overall site is divided into several separate major basins. Proposed onsite basin sizes range from 7.3 acres to 116.9 acres in size. Basins LC-A10 through LC-I20 drain and eventually discharge into an unnamed tributary Black Squirrel Creek and eventually discharge into the Arkansas River. Basins Dr-A10 and Dr-B10 follow a similar path and eventually drain into the Arkansas River. Basins UEC-A10 through UEC-D10 drain towards Chico Creek which also discharges into the Arkansas River.

The subbasins are described in additional detail above.

b. System Improvements

This section of the report will be completed after the review and acceptance of the hydrology.

VIII. Drawings

Please refer to the appendices for vicinity maps and drainage basin maps.

IX. Summary

This section of the report will be completed in future reports.

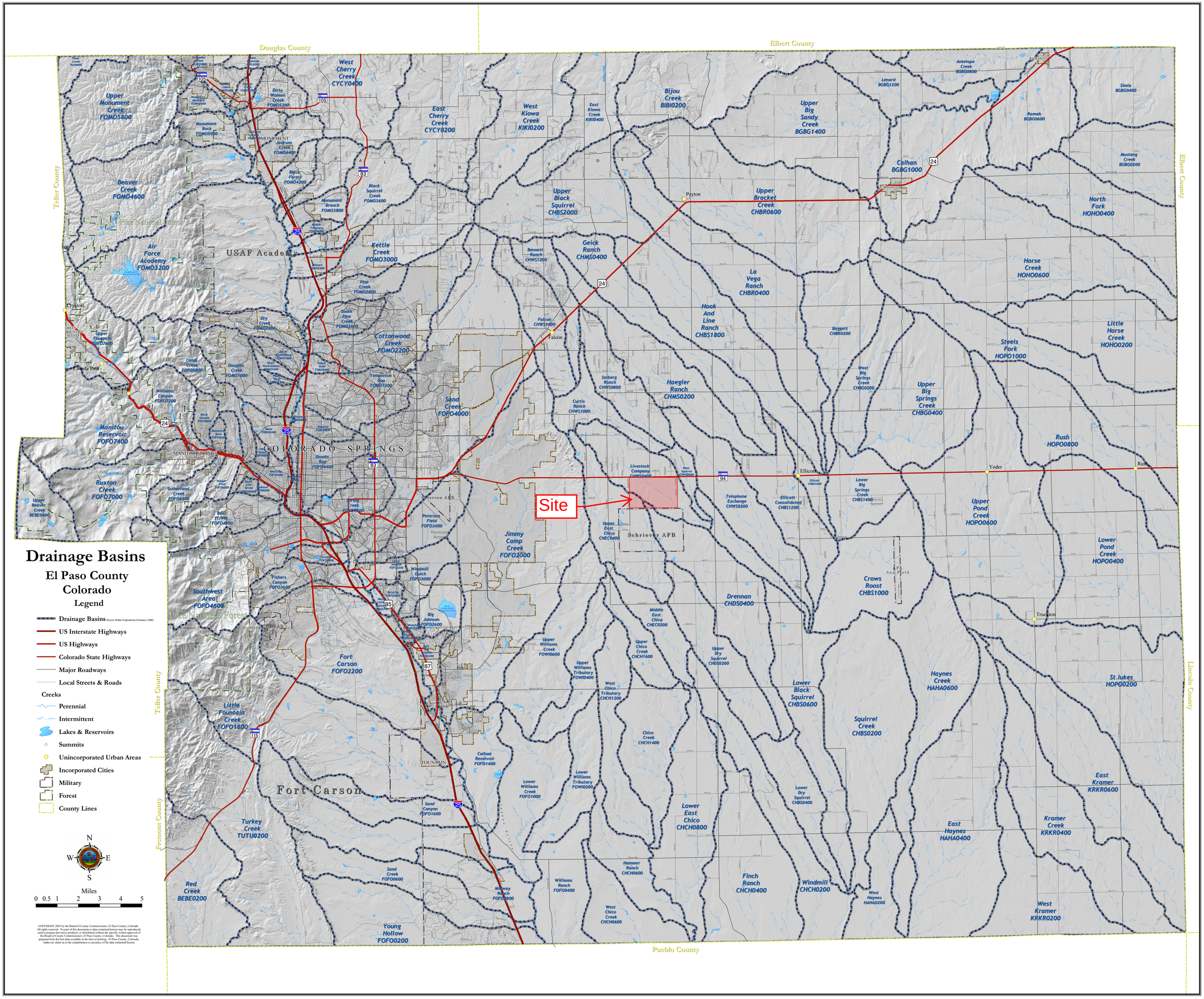
X. References

El Paso County – Drainage Criteria Manual, 2014

City of Colorado Springs – Drainage Criteria Manual, May 2014

Urban Storm Drainage Criteria Manual, Urban Drainage Flood Control District, January 2018

Appendix A
Maps and Site Photos



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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 Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations 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 report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. 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 for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones 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 this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. 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 http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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

Base Map information shown on this FIRM was provided in digital format by El Paso County, Colorado Springs Utilities, and Anderson Consulting Engineers, Inc. These data are current as of 2008.

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Contact **FEMA Map Service Center** (MSC) via the FEMA Map Information eXchange (FMIX) 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The MSC may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

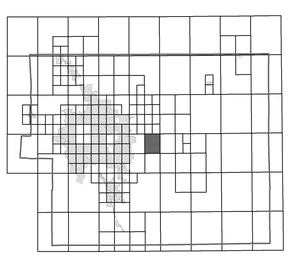
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

El Paso County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)

REFER TO SECTION 3.3 OF THE EL PASO COUNTY FLOOD INSURANCE STUDY FOR STREAM BY STREAM VERTICAL DATUM CONVERSION INFORMATION

Panel Location Map



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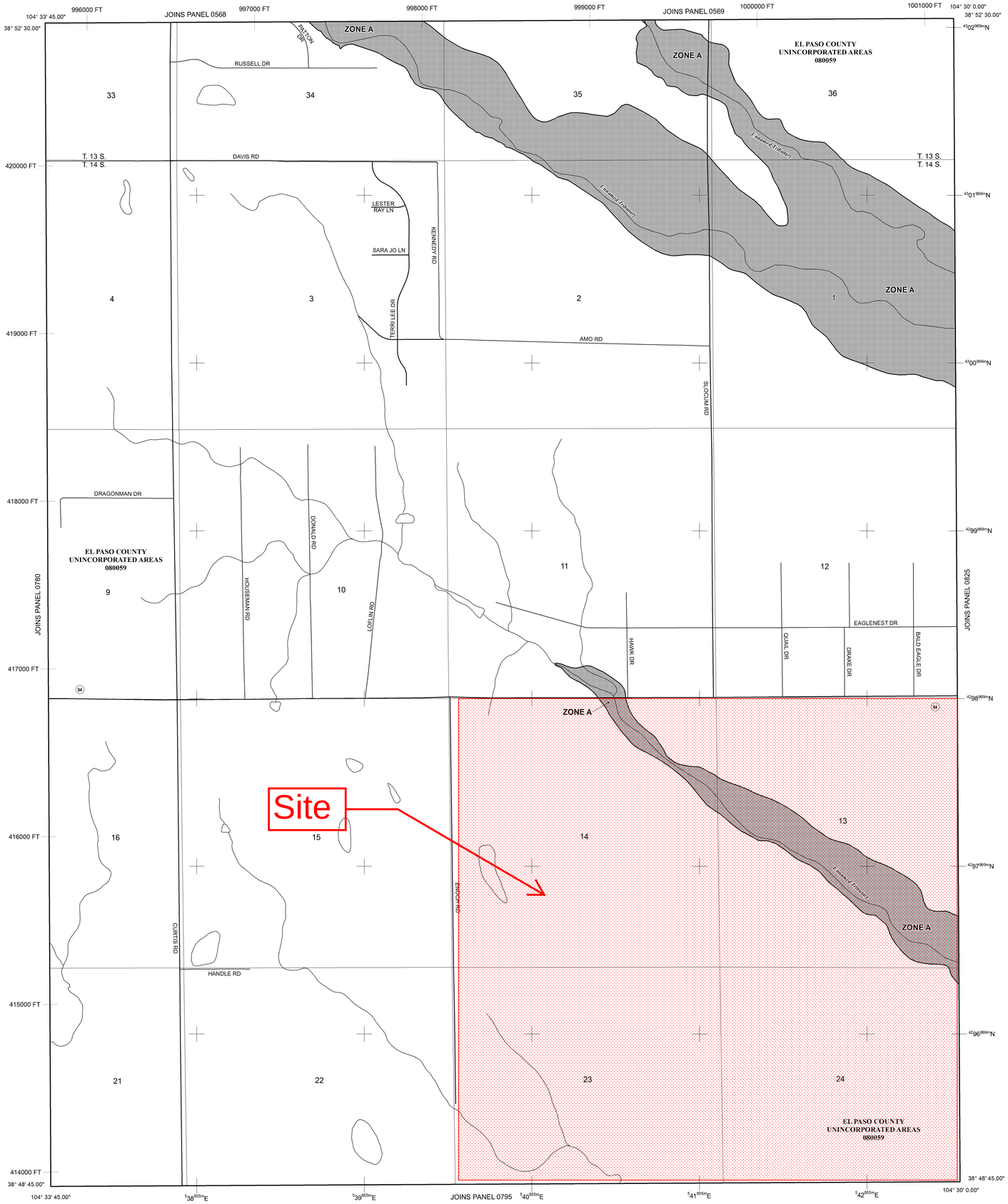

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 13 SOUTH, RANGE 64 WEST, AND TOWNSHIP 14 SOUTH, RANGE 64 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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 Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood 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
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A — Cross section line
23 — 23 — Transect line
97° 07' 30.00" / 32° 22' 30.00" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 13
6000000 FT — 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
DECEMBER 7, 2018 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

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MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

PANEL 0785G

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 785 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0785	G

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

MAP NUMBER
08041C0785G

MAP REVISED
DECEMBER 7, 2018

Federal Emergency Management Agency

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 Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations 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 report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. 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 for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones 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 this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. 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 http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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El Paso County Vertical Datum Offset Table

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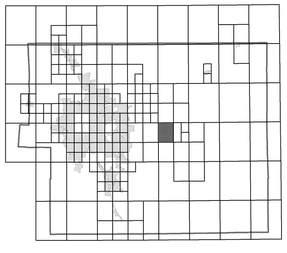

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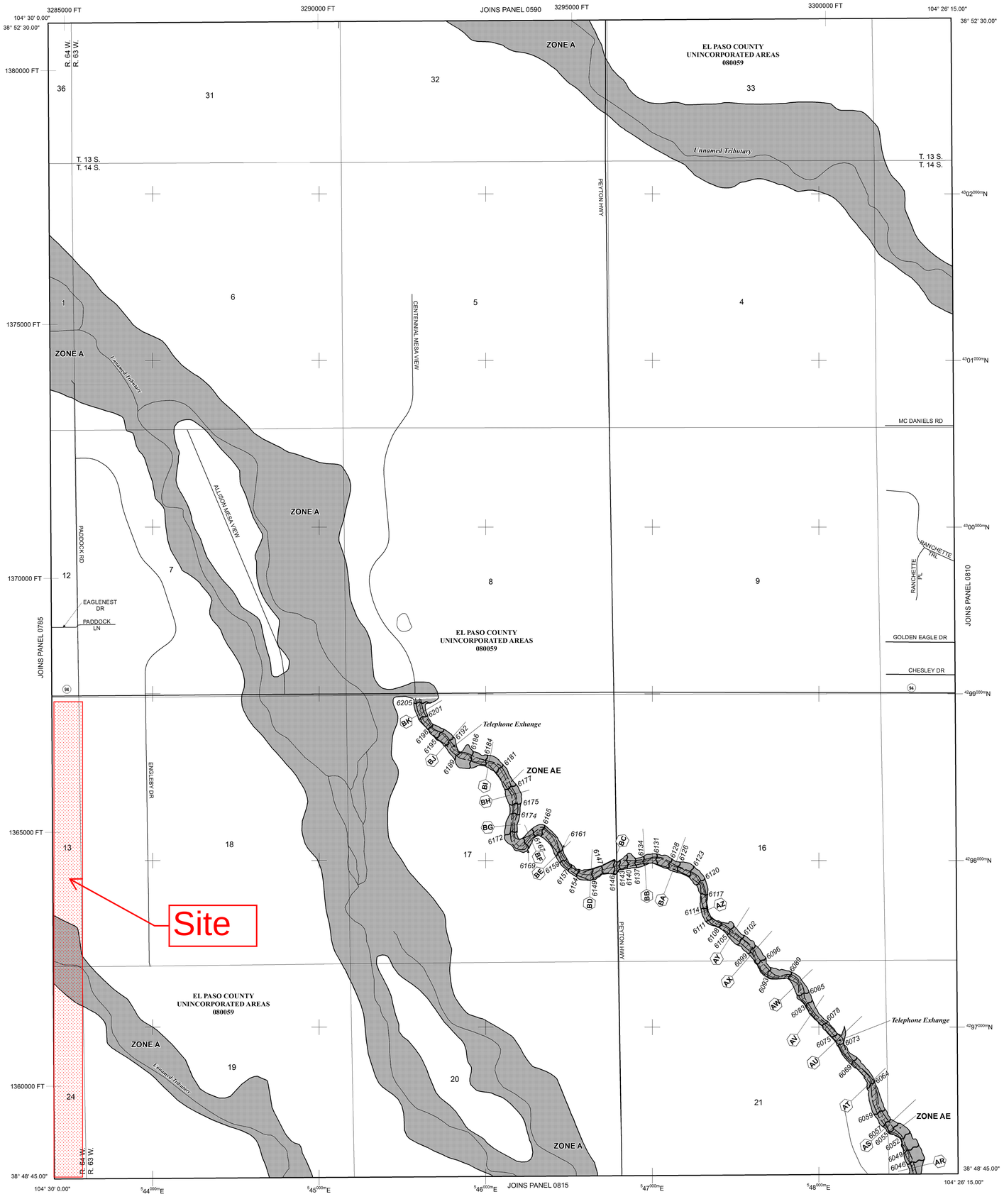

LEGEND

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FLOODWAY AREAS IN ZONE AE

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M1.5	River Mile

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FLOOD INSURANCE RATE MAP
MARCH 17, 1997

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500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP

PANEL 0805G

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO
AND INCORPORATED AREAS

PANEL 805 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0805	G

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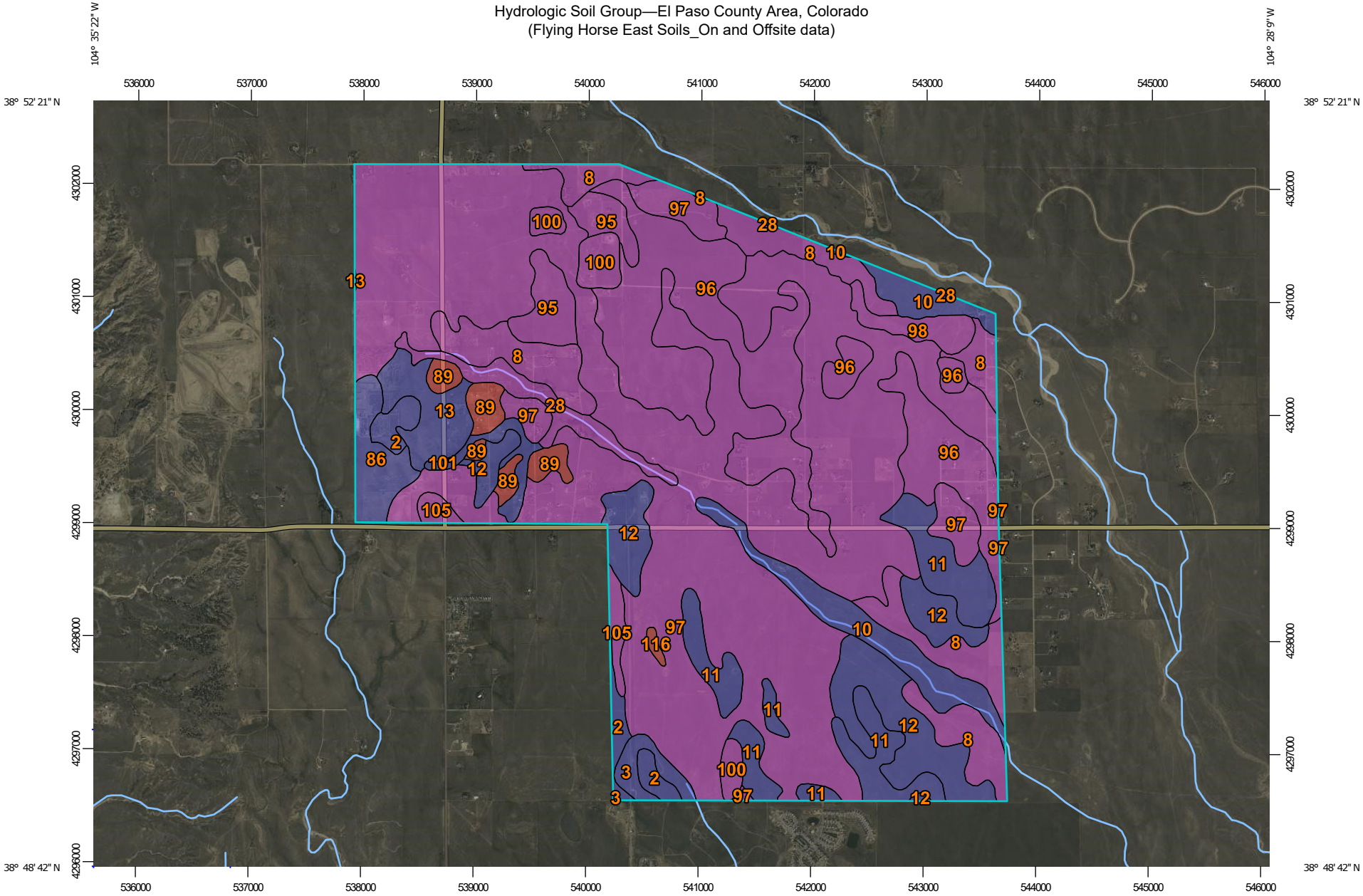
MAP NUMBER
08041C0805G

MAP REVISED
DECEMBER 7, 2018

Federal Emergency Management Agency

Hydrologic Soil Group—El Paso County Area, Colorado
(Flying Horse East Soils_On and Offsite data)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
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: El Paso County Area, Colorado
Survey Area Data: Version 22, Sep 3, 2024

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

Date(s) aerial images were photographed: Sep 11, 2018—Oct 20, 2018

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	B	81.9	1.3%
3	Ascalon sandy loam, 3 to 9 percent slopes	B	45.2	0.7%
8	Blakeland loamy sand, 1 to 9 percent slopes	A	490.9	8.1%
10	Blendon sandy loam, 0 to 3 percent slopes	B	230.1	3.8%
11	Bresser sandy loam, cool, 0 to 3 percent slopes	B	328.4	5.4%
12	Bresser sandy loam, cool, 3 to 5 percent slopes	B	367.2	6.1%
13	Bresser sandy loam, cool, 5 to 9 percent slopes	B	118.0	1.9%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	A	99.1	1.6%
86	Stoneham sandy loam, 3 to 8 percent slopes	B	99.3	1.6%
89	Tassel fine sandy loam, 3 to 18 percent slopes	D	94.1	1.6%
95	Truckton loamy sand, 1 to 9 percent slopes	A	123.5	2.0%
96	Truckton sandy loam, 0 to 3 percent slopes	A	825.4	13.6%
97	Truckton sandy loam, 3 to 9 percent slopes	A	2,921.9	48.2%
98	Truckton-Blakeland complex, 9 to 20 percent slopes	A	61.0	1.0%
100	Truckton-Bresser complex, eroded	A	82.0	1.4%
101	Ustic Torrifluvents, loamy	B	44.8	0.7%
105	Vona sandy loam, warm, 3 to 6 percent slopes	A	47.1	0.8%
116	Udic Haplusterts	D	6.9	0.1%
Totals for Area of Interest			**6,066.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

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.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOAA Atlas 14, Volume 8, Version 2
Location name: Colorado Springs, Colorado, USA*
Latitude: 38.8324°, Longitude: -104.5303°
Elevation: 6396 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.242** (0.197-0.301)	**0.295** (0.239-0.367)	**0.386** (0.313-0.482)	**0.468** (0.377-0.586)	**0.588** (0.460-0.771)	**0.688** (0.524-0.910)	**0.792** (0.582-1.07)	**0.905** (0.636-1.26)	**1.06** (0.717-1.51)	**1.19** (0.778-1.71)
10-min	**0.354** (0.288-0.441)	**0.431** (0.351-0.537)	**0.566** (0.458-0.706)	**0.685** (0.552-0.858)	**0.861** (0.674-1.13)	**1.01** (0.767-1.33)	**1.16** (0.853-1.57)	**1.32** (0.932-1.84)	**1.55** (1.05-2.22)	**1.74** (1.14-2.50)
15-min	**0.432** (0.352-0.538)	**0.526** (0.428-0.655)	**0.690** (0.559-0.861)	**0.835** (0.673-1.05)	**1.05** (0.822-1.38)	**1.23** (0.935-1.62)	**1.42** (1.04-1.92)	**1.62** (1.14-2.24)	**1.90** (1.28-2.70)	**2.12** (1.39-3.05)
30-min	**0.628** (0.511-0.781)	**0.763** (0.620-0.950)	**0.999** (0.809-1.25)	**1.21** (0.974-1.52)	**1.52** (1.19-1.99)	**1.78** (1.35-2.35)	**2.05** (1.50-2.77)	**2.34** (1.64-3.24)	**2.74** (1.85-3.91)	**3.06** (2.01-4.41)
60-min	**0.812** (0.661-1.01)	**0.973** (0.791-1.21)	**1.26** (1.02-1.58)	**1.53** (1.23-1.92)	**1.94** (1.53-2.56)	**2.28** (1.75-3.04)	**2.66** (1.96-3.61)	**3.06** (2.16-4.27)	**3.64** (2.46-5.20)	**4.10** (2.69-5.91)
2-hr	**0.996** (0.816-1.23)	**1.18** (0.969-1.46)	**1.53** (1.25-1.90)	**1.86** (1.50-2.31)	**2.36** (1.88-3.10)	**2.80** (2.16-3.70)	**3.27** (2.43-4.43)	**3.79** (2.69-5.26)	**4.54** (3.10-6.45)	**5.15** (3.40-7.36)
3-hr	**1.09** (0.898-1.34)	**1.28** (1.06-1.58)	**1.65** (1.35-2.04)	**2.00** (1.63-2.48)	**2.56** (2.05-3.37)	**3.05** (2.37-4.04)	**3.59** (2.68-4.86)	**4.19** (3.00-5.80)	**5.06** (3.47-7.18)	**5.77** (3.83-8.22)
6-hr	**1.25** (1.03-1.52)	**1.45** (1.20-1.78)	**1.86** (1.53-2.28)	**2.25** (1.85-2.77)	**2.89** (2.33-3.78)	**3.45** (2.70-4.55)	**4.08** (3.08-5.49)	**4.78** (3.45-6.59)	**5.80** (4.02-8.20)	**6.65** (4.45-9.41)
12-hr	**1.40** (1.17-1.70)	**1.64** (1.36-1.98)	**2.09** (1.73-2.54)	**2.52** (2.08-3.08)	**3.21** (2.61-4.16)	**3.82** (3.01-4.98)	**4.49** (3.40-5.99)	**5.23** (3.80-7.15)	**6.30** (4.40-8.84)	**7.20** (4.85-10.1)
24-hr	**1.58** (1.32-1.90)	**1.85** (1.55-2.22)	**2.34** (1.96-2.83)	**2.82** (2.34-3.42)	**3.54** (2.89-4.54)	**4.17** (3.30-5.39)	**4.86** (3.71-6.42)	**5.61** (4.10-7.60)	**6.69** (4.70-9.30)	**7.58** (5.15-10.6)
2-day	**1.80** (1.53-2.16)	**2.11** (1.78-2.52)	**2.66** (2.24-3.19)	**3.16** (2.65-3.81)	**3.94** (3.22-4.98)	**4.59** (3.66-5.87)	**5.30** (4.07-6.94)	**6.07** (4.47-8.15)	**7.17** (5.07-9.89)	**8.07** (5.53-11.2)
3-day	**1.96** (1.67-2.34)	**2.30** (1.95-2.74)	**2.90** (2.46-3.47)	**3.45** (2.90-4.14)	**4.27** (3.50-5.37)	**4.96** (3.96-6.30)	**5.70** (4.39-7.41)	**6.49** (4.80-8.67)	**7.62** (5.41-10.4)	**8.53** (5.87-11.8)
4-day	**2.11** (1.80-2.50)	**2.47** (2.10-2.93)	**3.10** (2.64-3.70)	**3.68** (3.10-4.40)	**4.54** (3.73-5.68)	**5.25** (4.20-6.64)	**6.01** (4.65-7.79)	**6.83** (5.06-9.09)	**7.99** (5.68-10.9)	**8.92** (6.16-12.3)
7-day	**2.50** (2.14-2.95)	**2.89** (2.48-3.41)	**3.58** (3.06-4.24)	**4.20** (3.56-4.99)	**5.12** (4.23-6.36)	**5.88** (4.74-7.39)	**6.70** (5.21-8.62)	**7.57** (5.64-10.0)	**8.80** (6.30-11.9)	**9.78** (6.80-13.4)
10-day	**2.84** (2.44-3.33)	**3.26** (2.81-3.84)	**4.01** (3.44-4.73)	**4.68** (3.98-5.54)	**5.66** (4.69-6.99)	**6.47** (5.23-8.08)	**7.32** (5.71-9.38)	**8.24** (6.16-10.8)	**9.52** (6.84-12.9)	**10.5** (7.36-14.4)
20-day	**3.74** (3.24-4.36)	**4.33** (3.75-5.06)	**5.32** (4.59-6.23)	**6.16** (5.29-7.25)	**7.36** (6.12-8.96)	**8.31** (6.74-10.3)	**9.28** (7.28-11.7)	**10.3** (7.74-13.4)	**11.7** (8.43-15.6)	**12.7** (8.96-17.3)
30-day	**4.49** (3.91-5.22)	**5.22** (4.54-6.06)	**6.40** (5.55-7.46)	**7.38** (6.36-8.64)	**8.74** (7.27-10.5)	**9.78** (7.96-12.0)	**10.8** (8.51-13.6)	**11.9** (8.97-15.3)	**13.3** (9.65-17.7)	**14.4** (10.2-19.4)
45-day	**5.47** (4.78-6.33)	**6.34** (5.53-7.33)	**7.72** (6.72-8.97)	**8.85** (7.66-10.3)	**10.4** (8.64-12.4)	**11.5** (9.39-14.0)	**12.6** (9.95-15.7)	**13.7** (10.4-17.6)	**15.1** (11.0-20.0)	**16.2** (11.5-21.8)
60-day	**6.33** (5.55-7.30)	**7.29** (6.39-8.42)	**8.82** (7.70-10.2)	**10.0** (8.72-11.7)	**11.7** (9.74-13.9)	**12.9** (10.5-15.6)	**14.0** (11.1-17.4)	**15.1** (11.5-19.3)	**16.6** (12.1-21.7)	**17.6** (12.5-23.6)

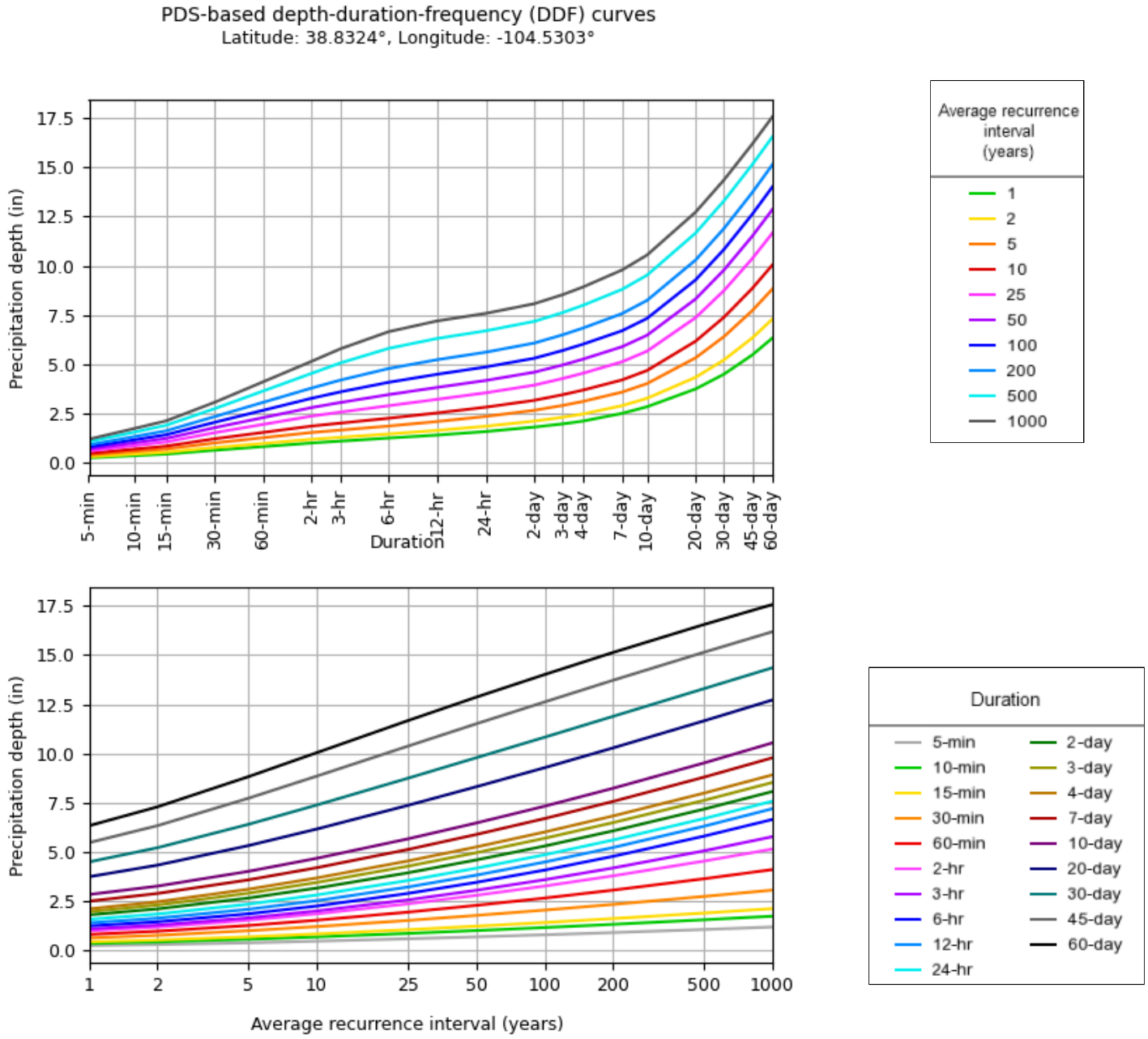
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical



NOAA Atlas 14, Volume 8, Version 2

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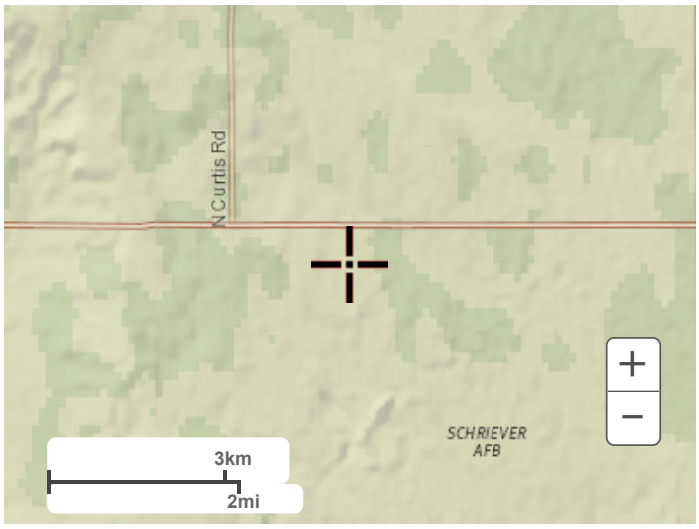
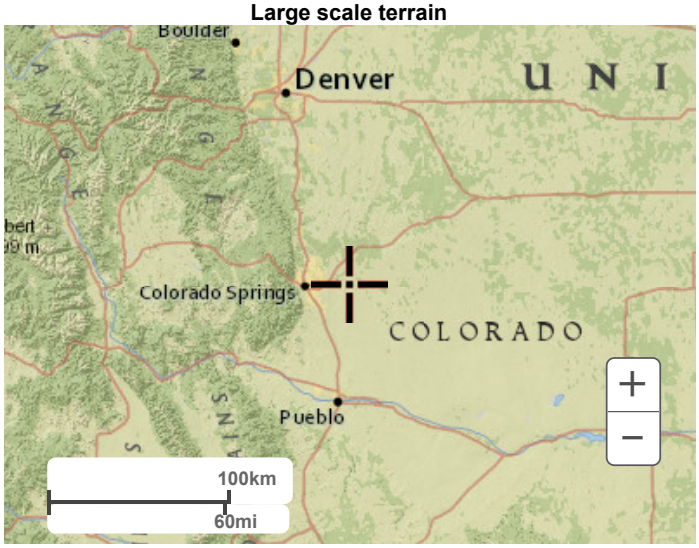
Back to Top

Maps & aerials

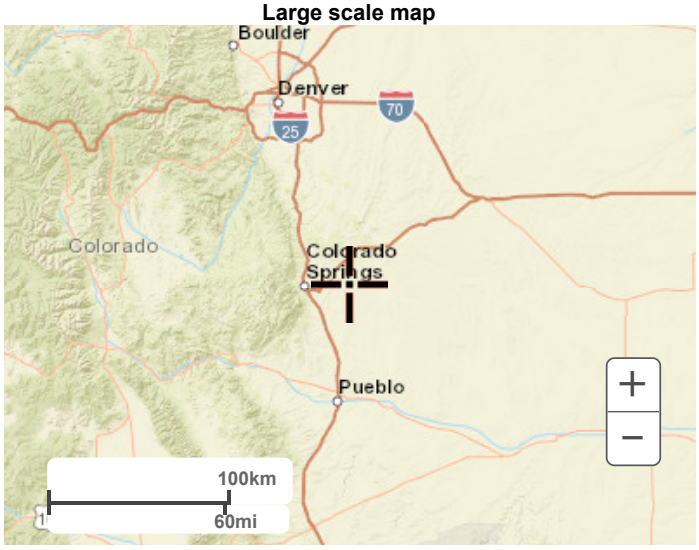
Small scale terrain



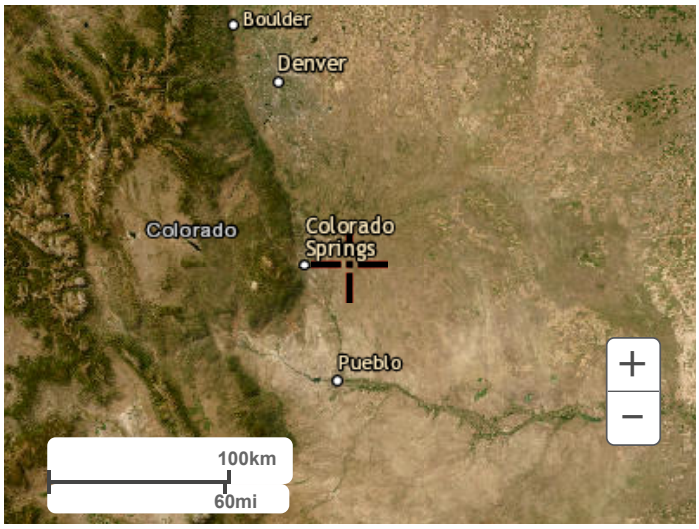
Large scale terrain



Large scale map



Large scale aerial



Back to Top

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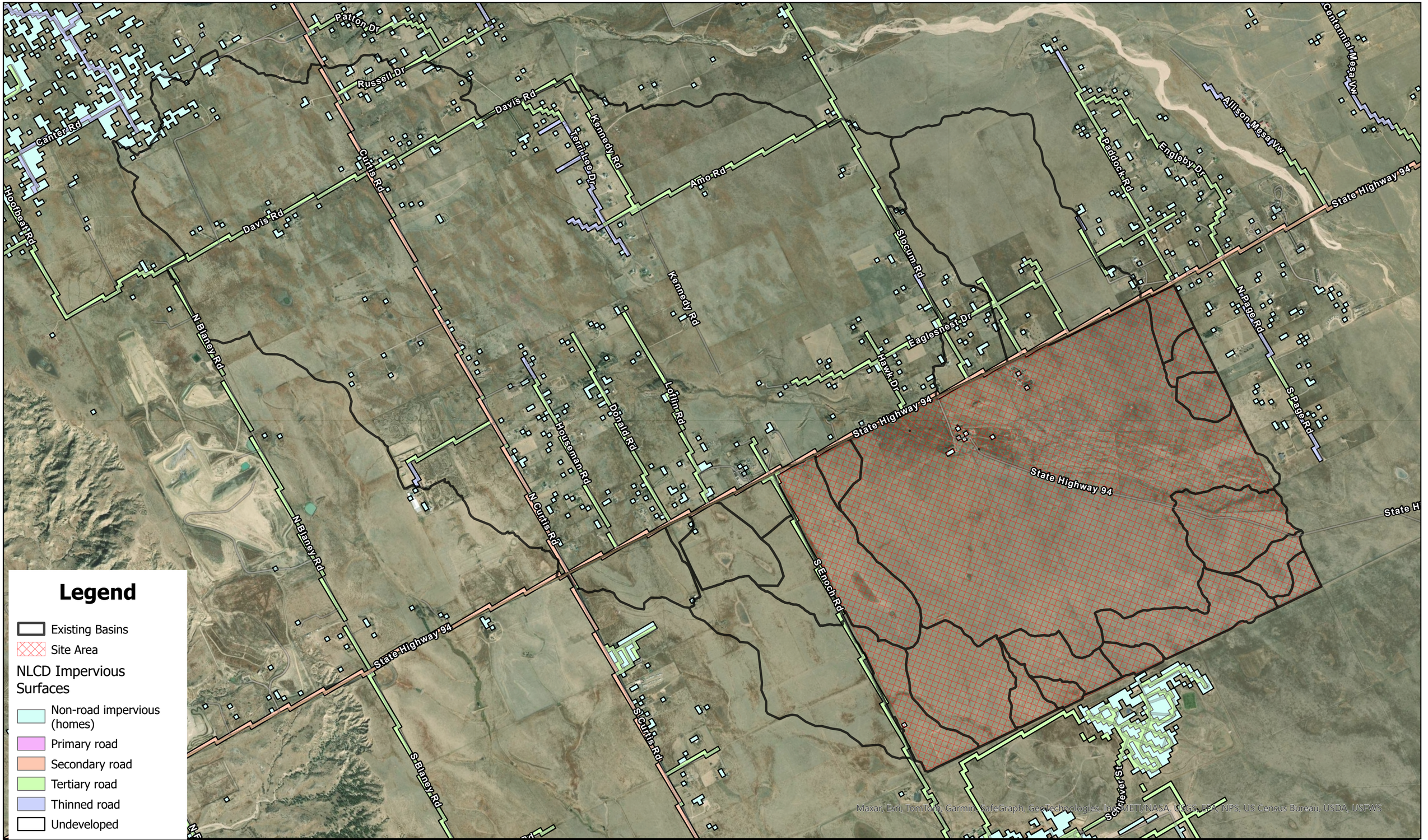

Legend

- Existing Basins
- Site Area

NLCD Impervious Surfaces

- Non-road impervious (homes)
- Primary road
- Secondary road
- Tertiary road
- Thinned road
- Undeveloped

HRGreen

Flying Horse East
Existing NLCD Land Use

N

0 2,000 4,000 Feet

Sheet 1/1

Flying Horse East
Site Photos

Flying Horse East
Site Photos

Flying Horse East
Site Photos

Appendix B
Hydrology Calculations

CUHP Input Parameters for the Existing Subbasins Flying Horse East

Summary of CUHP Input Parameters (Version 2.0.1)

							Depression Storage		Horton's Infiltration Parameters			DCIA Level and Fractions			
Catchment Name/ID	SWMM Node/ID	Area (sq.mi.)	Dist. to Centroid (miles)	Length (miles)	Slope (ft./ft.)	Percent Imperv.	Pervious (inches)	Imperv. (inches)	Initial Rate (in./hr.)	Final Rate (in.hr.)	Decay Coeff. (1/sec.)	DCIA Level	Dir. Con'ct Imperv. Fraction	Receiv. Perv. Fraction	Percent Eff. Imperv.
OS1	OS1	0.662	0.642	1.439	0.017	7.7	0.40	0.10	4.97	0.98	0.0008	0.00	0.15	0.08	5.04
OS2	OS2	0.157	0.596	0.860	0.019	17.4	0.40	0.10	5.00	1.00	0.0007	0.00	0.35	0.12	13.12
OS3	OS3	5.524	1.660	3.442	0.014	8.7	0.40	0.10	4.87	0.93	0.0009	0.00	0.17	0.09	5.78
OS4	OS4	0.120	0.258	0.410	0.029	5.1	0.40	0.10	5.00	1.00	0.0007	0.00	0.10	0.05	3.23
OS5	OS5	0.012	0.123	0.232	0.024	6.9	0.40	0.10	5.00	1.00	0.0007	0.00	0.14	0.07	4.47
OS6	OS6	0.112	0.237	0.654	0.003	3.1	0.40	0.10	5.00	1.00	0.0007	0.00	0.06	0.03	1.96
OS7	OS7	0.049	0.333	0.487	0.019	12.3	0.40	0.10	4.71	0.77	0.0013	0.00	0.25	0.11	9.35
OS8	OS8	0.083	0.176	0.359	0.024	11.1	0.40	0.10	4.90	0.92	0.0009	0.00	0.22	0.10	7.65
OS9	OS9	0.337	0.623	1.214	0.008	5.4	0.40	0.10	4.77	0.82	0.0012	0.00	0.11	0.05	3.74
LC-A10	LC_A10	0.211	0.492	1.057	0.005	4.3	0.40	0.10	4.82	0.91	0.0009	0.00	0.09	0.04	2.73
LC-A20	LC_A20	0.036	0.242	0.407	0.029	4.4	0.40	0.10	5.00	1.00	0.0007	0.00	0.09	0.04	2.81
LC-B	LC_B	1.775	0.984	2.448	0.012	2.4	0.40	0.10	4.80	0.84	0.0011	0.00	0.05	0.02	1.60
LC-C	LC_C	0.040	0.132	0.262	0.021	2.4	0.40	0.10	4.84	0.87	0.0011	0.00	0.05	0.02	1.56
LC-D	LC_D	0.033	0.171	0.263	0.019	2.0	0.40	0.10	4.50	0.60	0.0018	0.00	0.04	0.02	1.51
LC-E	LC_E	0.042	0.143	0.279	0.008	2.0	0.40	0.10	4.50	0.60	0.0018	0.00	0.04	0.02	1.51
LC-F	LC_F	0.147	0.277	0.492	0.029	2.0	0.40	0.10	4.76	0.81	0.0012	0.00	0.04	0.02	1.34
LC-G	LC_G	0.044	0.283	0.493	0.017	2.0	0.40	0.10	4.65	0.72	0.0015	0.00	0.04	0.02	1.42
LC-H	LC_H	0.022	0.058	0.328	0.024	2.0	0.40	0.10	4.66	0.73	0.0014	0.00	0.04	0.02	1.42
LC-I	LC_I	0.141	0.678	0.935	0.018	2.0	0.40	0.10	4.65	0.72	0.0015	0.00	0.04	0.02	1.42
UEC-A	UEC_A	0.111	0.538	0.770	0.019	3.5	0.40	0.10	4.72	0.78	0.0013	0.00	0.07	0.03	2.42
UEC-B	UEC_B	0.190	0.350	0.707	0.030	2.0	0.40	0.10	4.95	0.96	0.0008	0.00	0.04	0.02	1.24
UEC-C	UEC_C	0.036	0.243	0.462	0.026	2.0	0.40	0.10	4.93	0.95	0.0008	0.00	0.04	0.02	1.24
UEC-D	UEC_D	0.020	0.106	0.238	0.015	2.0	0.40	0.10	4.50	0.60	0.0018	0.00	0.04	0.02	1.51
Dr-A	Dr_A	0.079	0.321	0.587	0.017	2.0	0.40	0.10	4.78	0.82	0.0012	0.00	0.04	0.02	1.33
Dr-B	Dr_B	0.028	0.142	0.270	0.027	2.0	0.40	0.10	4.80	0.84	0.0011	0.00	0.04	0.02	1.31

CUHP Existing Subbasins Flying Horse East Results - 5 Year

Summary of Unit Hydrograph Parameters Used By Program and Calculated Results (Version 2.0.1)

		Unit Hydrograph Parameters and Results									Excess Precip.		Storm Hydrograph			
Catchment Name/ID	User Comment for Catchment	CT	Cp	W50 (min.)	W50 Before Peak	W75 (min.)	W75 Before Peak	Time to Peak (min.)	Peak (cfs)	Volume (c.f)	Excess (inches)	Excess (c.f.)	Time to Peak (min.)	Peak Flow (cfs)	Total Volume (c.f.)	Runoff per Unit Area (cfs/acre)
OS1		0.144	0.295	59.0	13.67	30.7	9.66	22.8	337	1,538,031	0.03	50,834	51.0	9	50,834	0.02
OS2		0.121	0.164	65.2	8.49	33.9	6.00	14.2	72	364,670	0.11	41,126	48.0	6	41,125	0.06
OS3		0.142	0.548	78.2	27.37	40.7	18.30	55.4	2,119	12,832,595	0.04	573,175	82.0	83	573,174	0.02
OS4		0.151	0.174	32.3	4.62	16.8	3.27	7.7	112	279,147	0.02	4,959	36.0	2	4,959	0.02
OS5		0.146	0.060	50.5	2.65	26.2	1.87	4.4	7	28,241	0.03	737	36.0	0	737	0.02
OS6		0.156	0.174	70.0	9.66	36.4	6.83	16.1	48	260,525	0.01	2,584	45.0	0	2,584	0.01
OS7		0.128	0.101	64.7	5.31	33.6	3.75	8.8	23	113,510	0.11	11,927	45.0	2	11,927	0.06
OS8		0.135	0.134	30.9	3.47	16.0	2.45	5.8	81	193,951	0.06	12,405	34.0	4	12,404	0.07
OS9		0.149	0.248	77.3	15.04	40.2	10.63	25.1	131	783,681	0.04	27,637	56.0	4	27,637	0.02
LC-A10		0.153	0.221	84.3	14.61	43.8	10.32	24.3	75	491,139	0.02	10,083	54.0	1	10,083	0.01
LC-A20		0.153	0.103	53.5	4.53	27.8	3.20	7.6	20	84,776	0.02	1,272	37.0	0	1,272	0.01
LC-B		0.157	0.429	74.9	25.01	39.0	17.67	41.7	710	4,122,649	0.01	57,152	68.0	9	57,152	0.01
LC-C		0.157	0.110	33.6	3.14	17.5	2.22	5.2	35	92,057	0.01	1,152	35.0	0	1,152	0.02
LC-D		0.157	0.101	42.8	3.61	22.3	2.55	6.0	23	75,540	0.06	4,459	40.0	1	4,459	0.06
LC-E		0.157	0.113	43.9	4.10	22.8	2.90	6.8	28	96,812	0.06	5,489	40.0	1	5,489	0.05
LC-F		0.158	0.200	33.3	5.40	17.3	3.82	9.0	133	342,055	0.01	4,283	38.0	1	4,283	0.02
LC-G		0.158	0.116	66.0	6.19	34.3	4.37	10.3	20	102,983	0.02	1,690	47.0	0	1,690	0.01
LC-H		0.158	0.085	31.7	2.37	16.5	1.68	4.0	21	51,728	0.02	835	36.0	0	835	0.02
LC-I		0.158	0.195	79.7	12.25	41.4	8.66	20.4	53	327,172	0.02	5,370	57.0	1	5,370	0.01
UEC-A		0.154	0.172	71.4	9.71	37.1	6.86	16.2	47	258,746	0.03	6,479	51.0	1	6,479	0.01
UEC-B		0.158	0.222	39.9	7.08	20.7	5.01	11.8	143	442,424	0.01	3,207	39.0	1	3,207	0.01
UEC-C		0.158	0.107	58.8	5.11	30.6	3.61	8.5	19	84,325	0.01	644	37.0	0	644	0.01
UEC-D		0.157	0.081	43.0	2.97	22.4	2.10	4.9	14	46,065	0.06	2,719	39.0	1	2,719	0.06
Dr-A		0.158	0.150	59.0	7.12	30.7	5.03	11.9	40	182,480	0.01	2,215	44.0	0	2,215	0.01
Dr-B		0.158	0.095	38.6	3.12	20.1	2.20	5.2	22	65,885	0.01	734	36.0	0	734	0.01

CUHP Existing Subbasins Flying Horse East Results - 100 Year

Summary of Unit Hydrograph Parameters Used By Program and Calculated Results (Version 2.0.1)

		Unit Hydrograph Parameters and Results									Excess Precip.		Storm Hydrograph			
Catchment Name/ID	User Comment for Catchment	CT	Cp	W50 (min.)	W50 Before Peak	W75 (min.)	W75 Before Peak	Time to Peak (min.)	Peak (cfs)	Volume (c.f)	Excess (inches)	Excess (c.f.)	Time to Peak (min.)	Peak Flow (cfs)	Total Volume (c.f.)	Runoff per Unit Area (cfs/acre)
OS1		0.140	0.288	58.8	13.29	30.6	9.39	22.1	338	1,538,031	0.75	1,149,730	58.0	231	1,149,729	0.55
OS2		0.118	0.162	64.4	8.31	33.5	5.88	13.9	73	364,670	0.87	317,087	54.0	55	317,081	0.55
OS3		0.136	0.531	77.8	27.24	40.5	18.21	53.4	2,129	12,832,595	0.91	11,722,956	87.0	1,831	11,722,899	0.52
OS4		0.148	0.172	32.2	4.55	16.8	3.21	7.6	112	279,147	0.62	174,315	44.0	60	174,311	0.78
OS5		0.143	0.059	50.4	2.59	26.2	1.83	4.3	7	28,241	0.65	18,492	46.0	4	18,493	0.54
OS6		0.154	0.172	70.0	9.56	36.4	6.75	15.9	48	260,525	0.59	152,552	54.0	27	152,552	0.37
OS7		0.125	0.099	64.2	5.16	33.4	3.65	8.6	23	113,510	1.35	152,780	55.0	25	152,777	0.81
OS8		0.129	0.129	30.6	3.33	15.9	2.35	5.5	82	193,951	0.97	188,640	43.0	59	188,633	1.10
OS9		0.146	0.244	77.1	14.74	40.1	10.42	24.6	131	783,681	1.15	898,547	68.0	136	898,541	0.63
LC-A10		0.150	0.217	84.2	14.34	43.8	10.13	23.9	75	491,139	0.90	440,383	68.0	63	440,381	0.46
LC-A20		0.150	0.102	53.4	4.47	27.8	3.16	7.4	20	84,776	0.61	51,654	47.0	11	51,654	0.49
LC-B		0.156	0.425	74.9	24.77	38.9	17.50	41.3	711	4,122,649	1.05	4,335,372	77.0	699	4,335,367	0.62
LC-C		0.156	0.109	33.6	3.11	17.5	2.20	5.2	35	92,057	0.98	90,142	44.0	26	90,138	1.03
LC-D		0.157	0.100	42.8	3.60	22.3	2.54	6.0	23	75,540	1.46	110,658	48.0	25	110,658	1.21
LC-E		0.157	0.112	43.9	4.08	22.8	2.88	6.8	28	96,812	1.46	141,376	49.0	32	141,369	1.18
LC-F		0.157	0.198	33.3	5.36	17.3	3.79	8.9	133	342,055	1.11	379,656	46.0	111	379,650	1.18
LC-G		0.157	0.115	66.0	6.15	34.3	4.34	10.2	20	102,983	1.28	131,799	57.0	22	131,797	0.77
LC-H		0.157	0.085	31.7	2.36	16.5	1.67	3.9	21	51,728	1.27	65,644	43.0	19	65,643	1.33
LC-I		0.157	0.194	79.7	12.17	41.4	8.60	20.3	53	327,172	1.28	418,784	68.0	61	418,781	0.68
UEC-A		0.152	0.170	71.3	9.60	37.1	6.78	16.0	47	258,746	1.20	310,988	62.0	49	310,987	0.69
UEC-B		0.157	0.220	39.8	7.03	20.7	4.97	11.7	143	442,424	0.70	309,985	49.0	88	309,980	0.72
UEC-C		0.157	0.106	58.8	5.07	30.6	3.58	8.5	19	84,325	0.74	62,738	51.0	12	62,737	0.53
UEC-D		0.157	0.080	43.0	2.95	22.4	2.08	4.9	14	46,065	1.46	67,479	48.0	15	67,475	1.20
Dr-A		0.157	0.149	59.0	7.07	30.7	4.99	11.8	40	182,480	1.09	199,207	55.0	37	199,205	0.74
Dr-B		0.157	0.094	38.6	3.10	20.0	2.19	5.2	22	65,885	1.04	68,431	46.0	18	68,425	0.98

CUHP Input Parameters for the Proposed Subbasins Flying Horse East

Summary of CUHP Input Parameters (Version 2.0.1)

							Depression Storage		Horton's Infiltration Parameters			DCIA Level and Fractions			
Catchment Name/ID	SWMM Node/ID	Area (sq.mi.)	Dist. to Centroid (miles)	Length (miles)	Slope (ft./ft.)	Percent Imperv.	Pervious (inches)	Imperv. (inches)	Initial Rate (in./hr.)	Final Rate (in.hr.)	Decay Coeff. (1/sec.)	DCIA Level	Dir. Con'ct Imperv. Fraction	Receiv. Perv. Fraction	Percent Eff. Imperv.
OS1	OS1	0.662	0.642	1.439	0.017	7.7	0.40	0.10	4.97	0.98	0.0008	0.00	0.15	0.08	5.02
OS2	OS2	0.157	0.596	0.860	0.019	17.9	0.40	0.10	5.00	1.00	0.0007	0.00	0.36	0.12	13.57
OS3	OS3	5.524	1.660	3.442	0.014	8.8	0.40	0.10	4.87	0.93	0.0009	0.00	0.18	0.09	5.80
OS4	OS4	0.120	0.258	0.410	0.029	5.1	0.40	0.10	5.00	1.00	0.0007	0.00	0.10	0.05	3.23
OS5	OS5	0.012	0.123	0.232	0.024	6.9	0.40	0.10	5.00	1.00	0.0007	0.00	0.14	0.07	4.47
OS6	OS6	0.112	0.237	0.654	0.003	3.1	0.40	0.10	5.00	1.00	0.0007	0.00	0.06	0.03	1.96
OS7	OS7	0.049	0.333	0.487	0.019	12.1	0.40	0.10	4.71	0.77	0.0013	0.00	0.24	0.11	9.15
OS8	OS8	0.083	0.176	0.359	0.024	11.6	0.40	0.10	4.90	0.92	0.0009	0.00	0.23	0.10	8.01
OS9	OS9	0.337	0.623	1.214	0.008	5.0	0.40	0.10	4.77	0.82	0.0012	0.00	0.10	0.05	3.39
OS10	OS10	0.002	0.148	0.181	0.032	75.6	0.40	0.10	4.53	0.62	0.0017	0.00	0.93	0.32	74.05
OS-B1	OS_B1	0.014	0.089	0.168	0.045	2.0	0.40	0.10	4.97	0.98	0.0008	0.00	0.04	0.02	1.24
OS-B2	OS_B2	0.060	0.134	0.249	0.022	3.3	0.40	0.10	5.00	1.00	0.0007	0.00	0.07	0.03	2.04
LC-A10	LC_A10	0.036	0.091	0.252	0.033	67.2	0.35	0.10	4.70	0.76	0.0014	0.00	0.91	0.29	65.03
LC-A20	LC_A20	0.053	0.116	0.509	0.005	56.4	0.35	0.05	4.89	0.91	0.0009	0.00	0.88	0.26	53.25
LC-A25	LC_A25	0.036	0.242	0.407	0.029	59.1	0.35	0.05	5.00	1.00	0.0007	0.00	0.90	0.27	56.17
LC-A30	LC_A30	0.120	0.082	0.395	0.012	40.6	0.35	0.05	4.82	0.96	0.0008	0.00	0.80	0.20	36.94
LC-B10	LC_B10	0.111	0.430	0.778	0.007	3.6	0.40	0.10	4.58	0.67	0.0016	0.00	0.07	0.04	2.66
LC-B20	LC_B20	0.118	0.375	0.740	0.013	19.4	0.35	0.05	4.75	0.80	0.0013	0.00	0.39	0.13	15.60
LC-B30	LC_B30	0.074	0.124	0.394	0.030	25.5	0.35	0.05	4.52	0.62	0.0018	0.00	0.51	0.15	22.38
LC-B40	LC_B40	0.125	0.362	0.619	0.023	59.0	0.35	0.10	4.58	0.66	0.0016	0.00	0.89	0.27	56.97
LC-B50	LC_B50	0.094	0.201	0.446	0.012	49.6	0.35	0.10	4.67	0.73	0.0014	0.00	0.85	0.23	46.95
LC-B60	LC_B60	0.078	0.267	0.601	0.008	4.4	0.40	0.10	4.52	0.62	0.0017	0.00	0.09	0.04	3.37
LC-B70	LC_B70	0.181	0.415	0.786	0.014	37.3	0.35	0.05	4.96	0.97	0.0008	0.00	0.75	0.19	33.26
LC-B80	LC_B80	0.137	0.474	0.867	0.019	36.0	0.35	0.05	4.72	0.78	0.0013	0.00	0.72	0.19	32.49
LC-B90	LC_B90	0.183	0.578	0.889	0.022	36.0	0.35	0.05	4.96	0.97	0.0008	0.00	0.72	0.19	31.79
LC-B100	LC_B100	0.025	0.251	0.461	0.007	3.8	0.40	0.10	4.57	0.66	0.0016	0.00	0.08	0.04	2.80
LC-B110	LC_B110	0.063	0.172	0.407	0.016	35.7	0.35	0.05	4.91	0.93	0.0009	0.00	0.71	0.19	31.45
LC-B120	LC_B120	0.140	0.324	0.564	0.023	29.0	0.35	0.05	5.00	1.00	0.0007	0.00	0.58	0.17	24.27
LC-B130	LC_B130	0.051	0.536	0.743	0.023	53.3	0.35	0.05	4.95	0.96	0.0008	0.00	0.87	0.24	50.06
LC-B140	LC_B140	0.033	0.143	0.286	0.015	43.9	0.35	0.05	4.69	0.75	0.0014	0.00	0.82	0.21	41.09
LC-B150	LC_B150	0.051	0.156	0.393	0.025	37.0	0.35	0.05	4.88	0.91	0.0010	0.00	0.74	0.19	32.90
LC-B160	LC_B160	0.088	0.094	0.469	0.031	37.4	0.35	0.05	4.94	0.95	0.0008	0.00	0.75	0.19	33.30
LC-B170	LC_B170	0.011	0.087	0.295	0.026	32.2	0.35	0.05	4.96	0.97	0.0008	0.00	0.64	0.18	27.61
LC-B180	LC_B180	0.088	0.141	0.327	0.023	36.5	0.35	0.05	4.74	0.79	0.0013	0.00	0.73	0.19	33.07
LC-B190	LC_B190	0.066	0.067	0.346	0.022	52.3	0.35	0.10	4.91	0.93	0.0009	0.00	0.86	0.24	48.94
LC-C10	LC_C10	0.056	0.168	0.380	0.015	45.6	0.35	0.10	4.74	0.79	0.0013	0.00	0.83	0.22	42.67
LC-D10	LC_D10	0.054	0.107	0.244	0.005	22.6	0.35	0.05	4.50	0.60	0.0018	0.00	0.45	0.14	19.56
LC-F10	LC_F10	0.084	0.240	0.492	0.029	59.7	0.35	0.10	4.75	0.80	0.0013	0.00	0.90	0.27	57.28
LC-F20	LC_F20	0.044	0.247	0.446	0.011	13.0	0.40	0.05	4.80	0.84	0.0011	0.00	0.26	0.11	9.57
LC-G10	LC_G10	0.043	0.284	0.494	0.017	63.3	0.35	0.10	4.64	0.71	0.0015	0.00	0.91	0.28	61.24
LC-H10	LC_H10	0.020	0.088	0.274	0.024	36.0	0.35	0.10	4.67	0.73	0.0014	0.00	0.72	0.19	32.72

LC-I10	LC_I10	0.056	0.211	0.357	0.013	50.2	0.35	0.10	4.50	0.60	0.0018	0.00	0.85	0.23	48.09
LC-I20	LC_I20	0.083	0.321	0.576	0.024	55.8	0.35	0.10	4.76	0.80	0.0012	0.00	0.88	0.25	53.17
UEC-A10	UEC_A10	0.087	0.327	0.635	0.015	52.3	0.35	0.10	4.61	0.69	0.0016	0.00	0.86	0.24	49.98
UEC-A20	UEC_A20	0.032	0.128	0.300	0.018	41.4	0.35	0.05	5.00	1.00	0.0007	0.00	0.81	0.20	37.81
UEC-B10	UEC_B10	0.070	0.250	0.521	0.030	47.8	0.35	0.10	4.86	0.89	0.0010	0.00	0.84	0.22	44.40
UEC-B20	UEC_B20	0.068	0.213	0.455	0.025	54.8	0.35	0.10	4.99	0.99	0.0007	0.00	0.87	0.25	51.65
UEC-B30	UEC_B30	0.036	0.143	0.235	0.042	56.8	0.35	0.10	5.00	1.00	0.0007	0.00	0.88	0.26	53.77
UEC-B40	UEC_B40	0.018	0.037	0.214	0.024	34.0	0.35	0.05	5.00	1.00	0.0007	0.00	0.68	0.18	29.52
UEC-C10	UEC_C10	0.037	0.243	0.462	0.026	52.2	0.35	0.10	4.93	0.95	0.0008	0.00	0.86	0.24	48.84
UEC-D10	UEC_D10	0.019	0.106	0.238	0.015	49.5	0.35	0.10	4.50	0.60	0.0018	0.00	0.85	0.23	47.36
Dr-A10	Dr_A10	0.080	0.321	0.587	0.017	55.9	0.35	0.10	4.78	0.82	0.0012	0.00	0.88	0.25	53.13
Dr-B10	Dr_B10	0.028	0.142	0.270	0.027	47.8	0.35	0.10	4.81	0.85	0.0011	0.00	0.84	0.22	44.65

CUHP Proposed Subbasins Flying Horse East Results - 5 Year

Summary of Unit Hydrograph Parameters Used By Program and Calculated Results (Version 2.0.1)

		Unit Hydrograph Parameters and Results									Excess Precip.		Storm Hydrograph			
Catchment Name/ID	User Comment for Catchment	CT	Cp	W50 (min.)	W50 Before Peak	W75 (min.)	W75 Before Peak	Time to Peak (min.)	Peak (cfs)	Volume (c.f)	Excess (inches)	Excess (c.f.)	Time to Peak (min.)	Peak Flow (cfs)	Total Volume (c.f.)	Runoff per Unit Area (cfs/acre)
OS1		0.144	0.295	59.0	13.68	30.7	9.66	22.8	337	1,538,031	0.03	50,524	51.0	9	50,523	0.02
OS2		0.120	0.163	65.0	8.44	33.8	5.97	14.1	72	364,670	0.12	43,044	48.0	6	43,043	0.06
OS3		0.141	0.548	78.2	27.36	40.7	18.29	55.4	2,120	12,832,595	0.04	575,659	82.0	83	575,658	0.02
OS4		0.151	0.174	32.3	4.62	16.8	3.27	7.7	112	279,147	0.02	4,959	36.0	2	4,959	0.02
OS5		0.146	0.060	50.5	2.65	26.2	1.87	4.4	7	28,241	0.03	737	36.0	0	737	0.02
OS6		0.156	0.174	70.0	9.66	36.4	6.83	16.1	48	260,525	0.01	2,584	45.0	0	2,584	0.01
OS7		0.129	0.101	64.7	5.34	33.7	3.77	8.9	23	113,510	0.10	11,635	45.0	2	11,635	0.06
OS8		0.133	0.133	30.8	3.44	16.0	2.43	5.7	81	193,951	0.07	13,164	34.0	4	13,163	0.08
OS9		0.150	0.250	77.3	15.17	40.2	10.72	25.3	131	783,681	0.03	24,923	56.0	4	24,923	0.02
OS10		0.079	0.040	36.9	1.44	19.2	1.02	2.4	2	5,143	0.96	4,941	36.0	1	4,941	0.67
OS-B1		0.158	0.069	30.1	1.89	15.7	1.34	3.2	14	31,939	0.01	215	32.0	0	215	0.01
OS-B2		0.155	0.131	27.2	3.05	14.2	2.15	5.1	66	139,924	0.01	1,455	33.0	1	1,455	0.02
LC-A10		0.082	0.135	10.5	1.39	5.5	0.98	2.3	102	83,170	0.83	68,926	30.0	31	68,928	1.36
LC-A20		0.087	0.149	25.2	3.18	13.1	2.25	5.3	63	122,144	0.69	83,746	33.0	22	83,738	0.66
LC-A25		0.085	0.129	23.9	2.67	12.4	1.89	4.4	46	84,776	0.71	60,344	32.0	16	60,340	0.69
LC-A30		0.095	0.178	13.9	2.20	7.2	1.55	3.7	260	279,201	0.46	127,326	31.0	50	127,309	0.65
LC-B10		0.153	0.171	82.4	11.09	42.8	7.84	18.5	40	257,805	0.03	8,664	58.0	1	8,664	0.02
LC-B20		0.117	0.142	59.2	6.76	30.8	4.78	11.3	60	275,150	0.19	51,956	45.0	8	51,956	0.11
LC-B30		0.107	0.113	24.2	2.40	12.6	1.69	4.0	92	172,614	0.36	62,045	33.0	20	62,041	0.43
LC-B40		0.085	0.226	21.3	3.99	11.1	2.82	6.7	176	289,609	0.75	216,956	34.0	67	216,917	0.84
LC-B50		0.090	0.182	20.8	3.21	10.8	2.27	5.3	136	218,284	0.60	130,262	33.0	41	130,244	0.68
LC-B60		0.150	0.143	64.9	7.44	33.7	5.26	12.4	36	181,718	0.07	12,411	48.0	2	12,411	0.04
LC-B70		0.097	0.201	36.6	5.93	19.0	4.19	9.9	148	419,855	0.40	168,156	38.0	35	168,154	0.30
LC-B80		0.097	0.175	44.2	6.22	23.0	4.40	10.4	93	317,932	0.41	131,695	41.0	25	131,689	0.28
LC-B90		0.098	0.196	42.5	6.70	22.1	4.74	11.2	129	424,366	0.38	160,633	41.0	30	160,631	0.26
LC-B100		0.153	0.087	94.8	6.64	49.3	4.69	11.1	8	58,224	0.04	2,094	57.0	0	2,094	0.02
LC-B110		0.098	0.121	28.7	2.96	14.9	2.09	4.9	66	146,446	0.38	55,665	33.0	14	55,660	0.35
LC-B120		0.105	0.150	35.8	4.42	18.6	3.13	7.4	117	325,211	0.26	86,126	36.0	19	86,124	0.21
LC-B130		0.088	0.143	45.7	5.33	23.7	3.76	8.9	34	119,350	0.63	75,639	41.0	13	75,637	0.39
LC-B140		0.093	0.107	23.9	2.26	12.4	1.60	3.8	42	77,672	0.53	41,554	32.0	12	41,552	0.55
LC-B150		0.097	0.113	25.7	2.53	13.3	1.79	4.2	60	118,960	0.41	48,218	32.0	13	48,220	0.40
LC-B160		0.097	0.145	16.2	2.10	8.4	1.49	3.5	162	203,284	0.40	82,145	31.0	31	82,132	0.54
LC-B170		0.102	0.052	38.2	1.82	19.8	1.29	3.0	9	26,576	0.32	8,448	35.0	2	8,448	0.23
LC-B180		0.097	0.145	17.8	2.28	9.3	1.61	3.8	149	205,046	0.42	86,174	31.0	31	86,172	0.55
LC-B190		0.089	0.159	10.7	1.61	5.6	1.14	2.7	187	154,479	0.60	93,045	30.0	42	92,981	0.98
LC-C10		0.092	0.137	22.9	2.71	11.9	1.92	4.5	73	130,056	0.53	69,437	33.0	20	69,436	0.57
LC-D10		0.111	0.098	32.5	2.76	16.9	1.95	4.6	50	126,082	0.33	42,148	36.0	11	42,147	0.33
LC-F10		0.085	0.190	17.6	2.86	9.1	2.02	4.8	144	195,539	0.72	141,700	32.0	48	141,669	0.90
LC-F20		0.128	0.096	63.0	4.95	32.7	3.50	8.3	21	103,341	0.10	10,043	42.0	2	10,042	0.06
LC-G10		0.083	0.143	28.3	3.42	14.7	2.41	5.7	45	98,833	0.79	77,716	35.0	19	77,711	0.69
LC-H10		0.097	0.073	25.5	1.73	13.2	1.22	2.9	23	45,346	0.41	18,741	32.0	5	18,737	0.42
LC-I10		0.089	0.147	23.2	2.91	12.1	2.06	4.8	73	130,899	0.67	87,224	33.0	26	87,207	0.72
LC-I20		0.087	0.183	24.2	3.70	12.6	2.62	6.2	104	193,959	0.67	129,911	34.0	36	129,907	0.67
UEC-A10		0.088	0.182	29.3	4.40	15.2	3.11	7.3	90	203,233	0.65	132,014	36.0	32	132,016	0.58
UEC-A20		0.094	0.099	24.6	2.17	12.8	1.53	3.6	38	73,359	0.46	33,688	32.0	9	33,683	0.44
UEC-B10		0.091	0.155	24.1	3.16	12.5	2.23	5.3	87	161,592	0.55	88,450	33.0	24	88,444	0.55
UEC-B20		0.087	0.165	19.6	2.78	10.2	1.96	4.6	105	158,286	0.63	99,285	32.0	31	99,267	0.70
UEC-B30		0.086	0.126	13.6	1.61	7.1	1.14	2.7	79	83,138	0.65	54,400	30.0	21	54,380	0.91

UEC-B40		0.100	0.065	17.2	1.16	8.9	0.82	1.9	31	40,774	0.34	13,849	30.0	5	13,845	0.44
UEC-C10		0.089	0.122	28.8	3.00	15.0	2.12	5.0	38	85,547	0.60	51,168	34.0	12	51,162	0.51
UEC-D10		0.089	0.090	21.9	1.81	11.4	1.28	3.0	27	45,057	0.66	29,626	32.0	9	29,620	0.73
Dr-A10		0.087	0.179	27.2	4.04	14.1	2.86	6.7	88	185,188	0.67	123,695	35.0	31	123,676	0.61
Dr-B10		0.091	0.103	20.6	1.92	10.7	1.36	3.2	40	64,389	0.55	35,690	31.0	11	35,686	0.62

CUHP Proposed Subbasins Flying Horse East Results - 100 Year

Summary of Unit Hydrograph Parameters Used By Program and Calculated Results (Version 2.0.1)

		Unit Hydrograph Parameters and Results									Excess Precip.		Storm Hydrograph			
Catchment Name/ID	User Comment for Catchment	CT	Cp	W50 (min.)	W50 Before Peak	W75 (min.)	W75 Before Peak	Time to Peak (min.)	Peak (cfs)	Volume (c.f)	Excess (inches)	Excess (c.f.)	Time to Peak (min.)	Peak Flow (cfs)	Total Volume (c.f.)	Runoff per Unit Area (cfs/acre)
OS1		0.140	0.288	58.8	13.29	30.6	9.39	22.2	338	1,538,031	0.75	1,147,327	58.0	231	1,147,327	0.54
OS2		0.117	0.162	64.2	8.26	33.4	5.84	13.8	73	364,670	0.88	321,029	54.0	56	321,025	0.55
OS3		0.136	0.531	77.8	27.24	40.5	18.21	53.4	2,129	12,832,595	0.91	11,729,682	87.0	1,832	11,729,637	0.52
OS4		0.148	0.172	32.2	4.55	16.8	3.21	7.6	112	279,147	0.62	174,315	44.0	60	174,311	0.78
OS5		0.143	0.059	50.4	2.59	26.2	1.83	4.3	7	28,241	0.65	18,492	46.0	4	18,493	0.54
OS6		0.154	0.172	70.0	9.56	36.4	6.75	15.9	48	260,525	0.59	152,552	54.0	27	152,552	0.37
OS7		0.125	0.099	64.3	5.18	33.4	3.66	8.6	23	113,510	1.34	152,291	55.0	25	152,287	0.81
OS8		0.127	0.127	30.6	3.29	15.9	2.33	5.5	82	193,951	0.98	190,071	43.0	59	190,061	1.11
OS9		0.148	0.246	77.2	14.90	40.1	10.53	24.8	131	783,681	1.14	892,444	68.0	136	892,444	0.63
OS10		0.079	0.040	36.7	1.44	19.1	1.01	2.4	2	5,143	2.46	12,670	44.0	3	12,671	1.88
OS-B1		0.157	0.068	30.1	1.88	15.7	1.33	3.1	14	31,939	0.64	20,539	41.0	7	20,538	0.82
OS-B2		0.154	0.130	27.2	3.02	14.1	2.13	5.0	66	139,924	0.59	82,263	41.0	33	82,251	0.85
LC-A10		0.081	0.136	10.4	1.38	5.4	0.98	2.3	103	83,170	2.28	189,532	35.0	90	189,568	3.92
LC-A20		0.086	0.151	24.7	3.16	12.8	2.23	5.3	64	122,144	1.96	240,003	40.0	71	239,975	2.10
LC-A25		0.085	0.130	23.5	2.66	12.2	1.88	4.4	47	84,776	1.90	160,729	39.0	49	160,725	2.08
LC-A30		0.094	0.183	13.4	2.18	7.0	1.54	3.6	269	279,201	1.55	432,312	36.0	203	432,109	2.64
LC-B10		0.151	0.169	82.3	10.97	42.8	7.75	18.3	40	257,805	1.39	357,114	68.0	50	357,114	0.71
LC-B20		0.114	0.141	58.4	6.61	30.3	4.67	11.0	61	275,150	1.45	397,711	54.0	71	397,713	0.94
LC-B30		0.106	0.113	23.8	2.36	12.4	1.67	3.9	93	172,614	1.79	309,833	40.0	100	309,831	2.10
LC-B40		0.085	0.227	21.0	3.97	10.9	2.81	6.6	178	289,609	2.22	642,777	39.0	210	642,729	2.64
LC-B50		0.089	0.185	20.4	3.19	10.6	2.25	5.3	138	218,284	2.02	440,898	38.0	150	440,881	2.50
LC-B60		0.149	0.142	64.8	7.35	33.7	5.20	12.3	36	181,718	1.46	266,162	59.0	45	266,159	0.89
LC-B70		0.096	0.207	35.0	5.86	18.2	4.14	9.8	155	419,855	1.45	610,476	46.0	155	610,452	1.34
LC-B80		0.096	0.180	42.4	6.15	22.0	4.35	10.3	97	317,932	1.76	558,953	49.0	121	558,934	1.38
LC-B90		0.097	0.203	40.5	6.61	21.1	4.67	11.0	135	424,366	1.42	601,913	48.0	138	601,910	1.18
LC-B100		0.151	0.086	94.7	6.57	49.3	4.64	10.9	8	58,224	1.40	81,586	67.0	10	81,585	0.63
LC-B110		0.097	0.125	27.2	2.92	14.2	2.06	4.9	69	146,446	1.50	219,019	41.0	65	218,983	1.62
LC-B120		0.103	0.155	34.0	4.34	17.7	3.07	7.2	123	325,211	1.18	382,433	44.0	104	382,420	1.16
LC-B130		0.087	0.145	44.7	5.29	23.3	3.74	8.8	34	119,350	1.82	217,528	48.0	43	217,523	1.31
LC-B140		0.092	0.109	23.3	2.24	12.1	1.59	3.7	43	77,672	1.93	149,705	39.0	47	149,692	2.18
LC-B150		0.096	0.117	24.4	2.50	12.7	1.76	4.2	63	118,960	1.57	186,950	40.0	59	186,948	1.81
LC-B160		0.096	0.150	15.5	2.08	8.1	1.47	3.5	169	203,284	1.49	303,225	36.0	132	303,085	2.36
LC-B170		0.100	0.054	36.0	1.79	18.7	1.27	3.0	10	26,576	1.33	35,273	42.0	9	35,269	1.19
LC-B180		0.096	0.149	17.1	2.26	8.9	1.60	3.8	155	205,046	1.75	359,609	37.0	143	359,513	2.53
LC-B190		0.088	0.162	10.4	1.60	5.4	1.13	2.7	191	154,479	1.83	282,945	35.0	143	282,704	3.35
LC-C10		0.091	0.140	22.3	2.69	11.6	1.90	4.5	75	130,056	1.90	246,832	39.0	80	246,812	2.23
LC-D10		0.109	0.098	32.1	2.71	16.7	1.92	4.5	51	126,082	1.77	223,676	43.0	59	223,667	1.70
LC-F10		0.084	0.191	17.3	2.85	9.0	2.01	4.7	146	195,539	2.13	415,968	37.0	153	415,902	2.84
LC-F20		0.124	0.094	62.4	4.82	32.5	3.40	8.0	21	103,341	1.21	124,968	54.0	21	124,967	0.75
LC-G10		0.083	0.144	28.1	3.40	14.6	2.40	5.7	45	98,833	2.25	222,594	42.0	59	222,587	2.17
LC-H10		0.096	0.075	24.5	1.71	12.7	1.21	2.9	24	45,346	1.80	81,730	40.0	25	81,712	2.02
LC-I10		0.089	0.148	22.8	2.89	11.9	2.05	4.8	74	130,899	2.14	280,227	39.0	87	280,200	2.42
LC-I20		0.086	0.185	23.8	3.68	12.4	2.60	6.1	105	193,959	2.06	398,613	40.0	121	398,594	2.27
UEC-A10		0.088	0.184	28.8	4.37	15.0	3.09	7.3	91	203,233	2.10	426,855	43.0	115	426,850	2.05
UEC-A20		0.094	0.101	23.9	2.15	12.4	1.52	3.6	40	73,359	1.48	108,567	39.0	35	108,556	1.72
UEC-B10		0.090	0.158	23.4	3.14	12.2	2.22	5.2	89	161,592	1.80	291,066	40.0	92	291,039	2.06
UEC-B20		0.087	0.167	19.2	2.76	10.0	1.95	4.6	106	158,286	1.78	282,148	38.0	100	282,115	2.30

UEC-B30		0.086	0.127	13.4	1.60	6.9	1.13	2.7	80	83,138	1.82	151,156	36.0	66	151,117	2.89
UEC-B40		0.098	0.068	16.3	1.15	8.5	0.81	1.9	32	40,774	1.30	52,978	36.0	23	52,963	2.05
UEC-C10		0.088	0.124	28.1	2.97	14.6	2.10	5.0	39	85,547	1.80	154,055	41.0	42	154,041	1.79
UEC-D10		0.089	0.091	21.6	1.81	11.2	1.28	3.0	27	45,057	2.13	96,021	37.0	31	95,996	2.48
Dr-A10		0.086	0.181	26.7	4.02	13.9	2.84	6.7	90	185,188	2.04	377,724	42.0	106	377,700	2.08
Dr-B10		0.090	0.104	20.0	1.91	10.4	1.35	3.2	42	64,389	1.87	120,097	37.0	41	120,080	2.33

Appendix C
SWMM Calculations

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  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
  ------------------------------------------------------------


  *************
  Element Count
  *************
  Number of rain gages ...... 0
  Number of subcatchments ... 0
  Number of nodes ........... 70
  Number of links ........... 64
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ************
  Node Summary
  ************
                                          Invert      Max.    Ponded
External
  Name                 Type                Elev.     Depth      Area
Inflow
  ---------------------------------------------------------------------------
--------
  DP_OS1               JUNCTION          6282.45      3.00       0.0
  DP_OS2               JUNCTION          6313.76      2.50       0.0
  DP_OS3               JUNCTION          6290.51      6.00       0.0
  DP_OS4               JUNCTION          6420.09      3.50       0.0
  DP_OS5               JUNCTION          6440.72      5.00       0.0
  DP_OS6               JUNCTION          6428.06      3.00       0.0
  DP_OS7               JUNCTION          6392.28      2.00       0.0
  DP_OS8               JUNCTION          6393.20      2.50       0.0
  DP_OS9               JUNCTION          6359.19      3.00       0.0
  Dr_A                 JUNCTION          6347.11      0.00       0.0
  Dr_B                 JUNCTION          6329.34      0.00       0.0
  J.UEC.1              JUNCTION          6281.05      5.00       0.0
  J_LC_A10             JUNCTION          6346.58     10.00       0.0
  J_LC_A20             JUNCTION          6320.63      3.00       0.0
  J_OS1                JUNCTION          6277.94      3.00       0.0
  J_OS2                JUNCTION          6310.41      5.00       0.0
  J_OS4                JUNCTION          6420.00      5.00       0.0
  J_OS6                JUNCTION          6425.61      5.00       0.0
  J_OS7                JUNCTION          6388.69      3.00       0.0
  J_OS8                JUNCTION          6391.98      2.50       0.0
  J_OS9                JUNCTION          6357.73      3.00       0.0
  J1                   JUNCTION          6355.74      5.00       0.0
  J2                   JUNCTION          6323.35      5.00       0.0
  J2_OS2               JUNCTION          6250.19      5.00       0.0
  J3                   JUNCTION          6305.72     10.00       0.0
  J4                   JUNCTION          6298.21      5.00       0.0
  LC_A10               JUNCTION          6393.58      0.00       0.0
  LC_A20               JUNCTION          6358.75      0.00       0.0
  LC_B                 JUNCTION          6284.81      0.00       0.0
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LC_C	JUNCTION	6267.21	0.00	0.0
LC_D	JUNCTION	6254.31	0.00	0.0
LC_E	JUNCTION	6248.16	0.00	0.0
LC_F	JUNCTION	6246.12	0.00	0.0
LC_G	JUNCTION	6234.42	0.00	0.0
LC_H	JUNCTION	6237.87	0.00	0.0
LC_I	JUNCTION	6282.51	0.00	0.0
OS1	JUNCTION	6349.15	0.00	0.0
OS2	JUNCTION	6342.30	0.00	0.0
OS3	JUNCTION	6453.31	0.00	0.0
OS4	JUNCTION	6462.88	0.00	0.0
OS5	JUNCTION	6448.20	0.00	0.0
OS6	JUNCTION	6428.17	0.00	0.0
OS7	JUNCTION	6416.17	0.00	0.0
OS8	JUNCTION	6415.01	0.00	0.0
OS9	JUNCTION	6429.66	0.00	0.0
Out_Dr_A	JUNCTION	6327.48	4.50	0.0
Out_Dr_B	JUNCTION	6315.27	2.00	0.0
Out_LC_A10	JUNCTION	6349.20	8.00	0.0
Out_LC_A20	JUNCTION	6322.30	3.00	0.0
Out_LC_B	JUNCTION	6211.12	6.00	0.0
Out_LC_C	JUNCTION	6255.23	2.00	0.0
Out_LC_D	JUNCTION	6244.47	2.00	0.0
Out_LC_E	JUNCTION	6244.40	2.00	0.0
Out_LC_F	JUNCTION	6207.25	2.00	0.0
Out_LC_G	JUNCTION	6211.83	2.00	0.0
Out_LC_H	JUNCTION	6211.23	2.00	0.0
Out_UEC_A	JUNCTION	6318.87	2.00	0.0
Out_UEC_B	JUNCTION	6302.81	5.00	0.0
Out_UEC_C	JUNCTION	6327.09	2.00	0.0
Out_UEC_D	JUNCTION	6344.99	2.00	0.0
UEC_A	JUNCTION	6349.56	0.00	0.0
UEC_B	JUNCTION	6354.84	0.00	0.0
UEC_C	JUNCTION	6357.45	0.00	0.0
UEC_D	JUNCTION	6349.03	0.00	0.0
Out.Dr	OUTFALL	6301.67	4.50	0.0
Out_C.D.E	OUTFALL	6244.35	2.00	0.0
Out_LC.B.F	OUTFALL	6201.53	2.00	0.0
Out_LC.G.H	OUTFALL	6202.07	2.00	0.0
Out_LC_I	OUTFALL	6254.02	0.00	0.0
UEC_Out	OUTFALL	6278.45	5.00	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
Ch.Dr_A	Out_Dr_A	Out.Dr	CONDUIT	1135.0	2.2744	0.0320
Ch.UEC_B	Out_UEC_B	J.UEC.1	CONDUIT	1351.3	1.6111	0.0320

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  CH_1              J1                J2                CONDUIT
2593.7    1.2488    0.0320
  Ch_2              J2                J3                CONDUIT
1678.2    1.0507    0.0320
  Ch_3              J3                J4                CONDUIT
973.6     0.7710    0.0320
  Ch_4              J4                DP_OS3            CONDUIT
998.0     0.7716    0.0320
  Ch_5              J2_OS2            Out_LC_B          CONDUIT
4798.2    0.8143    0.0320
  Ch_LC_A10         J_LC_A10          J3                CONDUIT
1414.2    2.8909    0.0320
  Ch_Main           DP_OS3            Out_LC_B          CONDUIT
9436.1    0.8414    0.0320
  Ch_OS6            J_OS6             J2                CONDUIT
2634.9    3.8840    0.0350
  Ch_OS7            J_OS7             Out_LC_A10        CONDUIT
1441.9    2.7395    0.0350
  Ch_UEC            J.UEC.1           UEC_Out           CONDUIT
737.2     0.3521    0.0320
  Culv_LC_A10       Out_LC_A10        J_LC_A10          CONDUIT
120.5     2.1763    0.0130
  Culv_LC_A20       Out_LC_A20        J_LC_A20          CONDUIT
61.7      2.7100    0.0130
  Culv_OS1          DP_OS1            J_OS1             CONDUIT
67.5      6.6934    0.0240
  Culv_OS2          DP_OS2            J_OS2             CONDUIT
79.1      4.2307    0.0240
  Culv_OS4          DP_OS4            J_OS4             CONDUIT
87.0      0.1068    0.0130
  Culv_OS6          DP_OS6            J_OS6             CONDUIT
82.4      2.9775    0.0130
  Culv_OS7          DP_OS7            J_OS7             CONDUIT
99.0      3.6291    0.0240
  Culv_OS8          DP_OS8            J_OS8             CONDUIT
114.8     1.0631    0.0240
  Culv_OS9          DP_OS9            J_OS9             CONDUIT
93.8      1.5617    0.0210
  Dummy_Dr_A        Dr_A              Out_Dr_A          CONDUIT
1154.7    1.7000    0.0100
  Dummy_Dr_B        Dr_B              Out_Dr_B          CONDUIT
662.0     2.1265    0.0100
  Dummy_LC_A10      LC_A10            Out_LC_A10        CONDUIT
2079.4    2.1348    0.0100
  dummy_LC_A20      LC_A20            Out_LC_A20        CONDUIT
613.0     5.9554    0.0100
  Dummy_LC_B        LC_B              Out_LC_B          CONDUIT
5629.3    1.3093    0.0100
  Dummy_LC_C        LC_C              Out_LC_C          CONDUIT
708.8     1.6912    0.0100
  Dummy_LC_D        LC_D              Out_LC_D          CONDUIT
691.2     1.4232    0.0100
  Dummy_LC_E        LC_E              Out_LC_E          CONDUIT
646.2     0.5819    0.0100
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  Dummy_LC_F       LC_F             Out_LC_F         CONDUIT
1332.0    2.9192    0.0100
  Dummy_LC_G       LC_G             Out_LC_G         CONDUIT
842.5     2.6821    0.0100
  Dummy_LC_H       LC_H             Out_LC_H         CONDUIT
579.9     4.5972    0.0100
  Dummy_LC_I       LC_I             Out_LC_I         CONDUIT
1517.8    1.8774    0.0100
  Dummy_OS1        OS1              DP_OS1           CONDUIT
3482.0    1.9161    0.0100
  Dummy_OS2        OS2              DP_OS2           CONDUIT
1242.8    2.2974    0.0100
  Dummy_OS3        OS3              DP_OS3           CONDUIT
9018.4    1.8056    0.0100
  Dummy_OS4        OS4              DP_OS4           CONDUIT
811.6     5.2783    0.0100
  Dummy_OS5        OS5              DP_OS5           CONDUIT
395.2     1.8938    0.0100
  Dummy_OS6        OS6              DP_OS6           CONDUIT
1040.0    0.0101    0.0100
  Dummy_OS7        OS7              DP_OS7           CONDUIT
657.7     3.6352    0.0100
  Dummy_Os8        OS8              DP_OS8           CONDUIT
393.2     5.5555    0.0100
  Dummy_OS9        OS9              DP_OS9           CONDUIT
2515.8    2.8023    0.0100
  Dummy_UEC_A      UEC_A            Out_UEC_A        CONDUIT
1521.5    2.0172    0.0100
  Dummy_UEC_B      UEC_B            Out_UEC_B        CONDUIT
1679.8    3.0990    0.0100
  Dummy_UEC_C      UEC_C            Out_UEC_C        CONDUIT
695.7     4.3682    0.0100
  Dummy_UEC_D      UEC_D            Out_UEC_D        CONDUIT
352.4     1.1481    0.0100
  Over.Dr_B        Out_Dr_B         Out.Dr           CONDUIT
359.0     3.7902    0.0350
  Over.LC_B        Out_LC_B         Out_LC.B.F       CONDUIT
944.5     1.0146    0.0350
  Over.LC_C        Out_LC_C         Out_C.D.E        CONDUIT
1183.0    0.9194    0.0350
  Over.LC_D        Out_LC_D         Out_C.D.E        CONDUIT
93.9     0.1289    0.0350
  Over.LC_E        Out_LC_E         Out_C.D.E        CONDUIT
86.0     0.0605    0.0350
  Over.LC_F        Out_LC_F         Out_LC.B.F       CONDUIT
531.3     1.0764    0.0350
  Over.LC_G        Out_LC_G         Out_LC.G.H       CONDUIT
447.1     2.1828    0.0350
  Over.LC_H        Out_LC_H         Out_LC.G.H       CONDUIT
442.2     2.0720    0.0350
  Over.UEC_A       Out_UEC_A        J.UEC.1          CONDUIT
1781.8    2.1235    0.0350
  Over.UEC_C       Out_UEC_C        UEC_Out          CONDUIT
1664.0    2.9246    0.0350
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  Over.UEC_D       Out_UEC_D        UEC_Out          CONDUIT
1915.6    3.4756    0.0350
  Over_LC_A20      J_LC_A20         J4               CONDUIT
707.8     3.1696    0.0350
  Over_OS1         J_OS1            Out_LC_B         CONDUIT
5800.5    1.1521    0.0350
  Over_OS2         J_OS2            J2_OS2           CONDUIT
2743.3    2.1958    0.0350
  Over_OS4         J_OS4            J1               CONDUIT
3674.0    1.7494    0.0350
  Over_OS5         DP_OS5           J1               CONDUIT
3464.9    2.4535    0.0300
  Over_OS8         J_OS8            Out_LC_A10       CONDUIT
3170.1    1.3495    0.0350
  Over_OS9         J_OS9            Out_UEC_A        CONDUIT
2802.5    1.3865    0.0350


  **********
  Cross Section Summary
  **********
                                        Full     Full     Hyd.     Max.
No. of     Full
  Conduit          Shape                Depth     Area     Rad.    Width
Barrels     Flow
  ---------------------------------------------------------------------
----------------
  Ch.Dr_A          TRIANGULAR            4.50   123.75     2.22    55.00
1  1475.06
  Ch.UEC_B         TRAPEZOIDAL           5.00   350.00     3.84    90.00
1  5055.78
  CH_1             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  4666.46
  Ch_2             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  4280.31
  Ch_3             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  3666.59
  Ch_4             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  3668.12
  Ch_5             TRIANGULAR            5.00   125.00     2.45    50.00
1   952.35
  Ch_LC_A10        TRAPEZOIDAL          10.00   900.00     6.34   140.00
1 24339.02
  Ch_Main          TRIANGULAR            6.00   300.00     2.98   100.00
1  2645.44
  Ch_OS6           TRIANGULAR            5.00   500.00     2.50   200.00
1  7700.00
  Ch_OS7           TRAPEZOIDAL           3.00    66.00     1.90    34.00
1   711.46
  Ch_UEC           TRAPEZOIDAL           5.00   350.00     3.84    90.00
1  2363.59
  Culv_LC_A10      RECT_CLOSED           8.00    48.00     1.71     6.00
1  1159.39
```

```
  Culv_LC_A20      RECT_CLOSED          3.00     9.00     0.75     3.00
1   139.80
  Culv_OS1         CIRCULAR             3.00     7.07     0.75     3.00
3    93.47
  Culv_OS2         CIRCULAR             2.50     4.91     0.62     2.50
2    45.70
  Culv_OS4         CIRCULAR             3.50     9.62     0.88     3.50
2    32.88
  Culv_OS6         CIRCULAR             3.00     7.07     0.75     3.00
2   115.09
  Culv_OS7         CIRCULAR             2.00     3.14     0.50     2.00
3    23.34
  Culv_OS8         CIRCULAR             2.50     4.91     0.62     2.50
3    22.91
  Culv_OS9         CIRCULAR             3.00     7.07     0.75     3.00
3    51.60
  Dummy_Dr_A       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_Dr_B       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  dummy_LC_A20     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_C       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_D       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_E       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_G       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_H       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS1        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS2        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS3        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS4        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS5        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS6        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS7        DUMMY                0.00     0.00     0.00     0.00
1     0.00
```

```
  Dummy_Os8         DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Dummy_OS9         DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_A       DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_B       DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_C       DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_D       DUMMY              0.00     0.00      0.00     0.00
1     0.00
  Over.Dr_B         RECT_OPEN          2.00   200.00      1.92   100.00
1  2556.48
  Over.LC_B         RECT_OPEN          1.50   675.00      1.49   450.00
1  3765.95
  Over.LC_C         RECT_OPEN          2.00   200.00      1.92   100.00
1  1259.11
  Over.LC_D         RECT_OPEN          2.00   200.00      1.92   100.00
1   471.43
  Over.LC_E         RECT_OPEN          2.00   200.00      1.92   100.00
1   322.88
  Over.LC_F         RECT_OPEN          2.00   200.00      1.92   100.00
1  1362.36
  Over.LC_G         RECT_OPEN          2.00   200.00      1.92   100.00
1  1940.07
  Over.LC_H         RECT_OPEN          2.00   200.00      1.92   100.00
1  1890.20
  Over.UEC_A        RECT_OPEN          2.00   200.00      1.92   100.00
1  1913.55
  Over.UEC_C        RECT_OPEN          2.00   200.00      1.92   100.00
1  2245.67
  Over.UEC_D        RECT_OPEN          2.00   200.00      1.92   100.00
1  2448.08
  Over_LC_A20       TRIANGULAR         0.50    12.50      0.25    50.00
1    37.49
  Over_OS1          RECT_OPEN          2.00   400.00      1.96   200.00
1  2855.66
  Over_OS2          RECT_OPEN          5.00  1000.00      4.76   200.00
1 17807.57
  Over_OS4          TRAPEZOIDAL        5.00   600.00      4.25   140.00
1  8838.21
  Over_OS5          RECT_OPEN          5.00   500.00      4.55   100.00
1 10645.06
  Over_OS8          RECT_OPEN          2.00   400.00      1.96   200.00
1  3090.62
  Over_OS9          RECT_OPEN          2.00   400.00      1.96   200.00
1  3132.77


  ****************
  Analysis Options
  ****************
  Flow Units ..............  CFS
```

```
Process Models:
  Rainfall/Runoff ........ NO
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Flow Routing Method ...... KINWAVE
Starting Date ............ 01/01/2024 00:00:00
Ending Date .............. 01/02/2024 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:01:00
Routing Time Step ........ 5.00 sec


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.000         0.000
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........        19.126         6.233
External Outflow .........        20.848         6.794
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.069         0.023
Continuity Error (%) .....        -9.366


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     5.00 sec
Average Time Step           :     5.00 sec
Maximum Time Step           :     5.00 sec
% of Time in Steady State   :     0.00
Average Iterations per Step :     1.00
% of Steps Not Converging   :     0.00


******************
Node Depth Summary
******************
```

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	Time of Max Occurrence hr:min	Reported Max Depth Feet
DP_OS1	JUNCTION	0.04	0.37	6282.82	0	00:51	0.37
DP_OS2	JUNCTION	0.05	0.43	6314.19	0	00:48	0.43
DP_OS3	JUNCTION	0.33	1.65	6292.16	0	01:25	1.65
DP_OS4	JUNCTION	0.02	0.38	6420.47	0	00:36	0.38
DP_OS5	JUNCTION	0.00	0.01	6440.73	0	00:36	0.01
DP_OS6	JUNCTION	0.01	0.10	6428.16	0	00:45	0.10
DP_OS7	JUNCTION	0.03	0.23	6392.51	0	00:45	0.23
DP_OS8	JUNCTION	0.02	0.40	6393.60	0	00:34	0.40
DP_OS9	JUNCTION	0.04	0.34	6359.53	0	00:56	0.34
Dr_A	JUNCTION	0.00	0.00	6347.11	0	00:00	0.00
Dr_B	JUNCTION	0.00	0.00	6329.34	0	00:00	0.00
J.UEC.1	JUNCTION	0.02	0.11	6281.16	0	02:18	0.11
J_LC_A10	JUNCTION	0.03	0.16	6346.74	0	01:17	0.16
J_LC_A20	JUNCTION	0.01	0.08	6320.71	0	00:37	0.08
J_OS1	JUNCTION	0.04	0.37	6278.31	0	00:51	0.37
J_OS2	JUNCTION	0.05	0.43	6310.85	0	00:48	0.43
J_OS4	JUNCTION	0.02	0.38	6420.38	0	00:36	0.38
J_OS6	JUNCTION	0.02	0.13	6425.74	0	00:45	0.13
J_OS7	JUNCTION	0.03	0.23	6388.91	0	00:46	0.23
J_OS8	JUNCTION	0.02	0.40	6392.38	0	00:34	0.40
J_OS9	JUNCTION	0.04	0.34	6358.07	0	00:56	0.34
J1	JUNCTION	0.01	0.03	6355.77	0	01:34	0.03

J2	JUNCTION	0.02	0.12	6323.47	0	01:16
0.12						
J2_OS2	JUNCTION	0.15	0.67	6250.86	0	01:46
0.67						
J3	JUNCTION	0.02	0.10	6305.82	0	01:31
0.10						
J4	JUNCTION	0.02	0.10	6298.31	0	01:41
0.10						
LC_A10	JUNCTION	0.00	0.00	6393.58	0	00:00
0.00						
LC_A20	JUNCTION	0.00	0.00	6358.75	0	00:00
0.00						
LC_B	JUNCTION	0.00	0.00	6284.81	0	00:00
0.00						
LC_C	JUNCTION	0.00	0.00	6267.21	0	00:00
0.00						
LC_D	JUNCTION	0.00	0.00	6254.31	0	00:00
0.00						
LC_E	JUNCTION	0.00	0.00	6248.16	0	00:00
0.00						
LC_F	JUNCTION	0.00	0.00	6246.12	0	00:00
0.00						
LC_G	JUNCTION	0.00	0.00	6234.42	0	00:00
0.00						
LC_H	JUNCTION	0.00	0.00	6237.87	0	00:00
0.00						
LC_I	JUNCTION	0.00	0.00	6282.51	0	00:00
0.00						
OS1	JUNCTION	0.00	0.00	6349.15	0	00:00
0.00						
OS2	JUNCTION	0.00	0.00	6342.30	0	00:00
0.00						
OS3	JUNCTION	0.00	0.00	6453.31	0	00:00
0.00						
OS4	JUNCTION	0.00	0.00	6462.88	0	00:00
0.00						
OS5	JUNCTION	0.00	0.00	6448.20	0	00:00
0.00						
OS6	JUNCTION	0.00	0.00	6428.17	0	00:00
0.00						
OS7	JUNCTION	0.00	0.00	6416.17	0	00:00
0.00						
OS8	JUNCTION	0.00	0.00	6415.01	0	00:00
0.00						
OS9	JUNCTION	0.00	0.00	6429.66	0	00:00
0.00						
Out_Dr_A	JUNCTION	0.02	0.22	6327.69	0	00:44
0.22						
Out_Dr_B	JUNCTION	0.00	0.01	6315.28	0	00:36
0.01						
Out_LC_A10	JUNCTION	0.03	0.16	6349.36	0	01:17
0.16						
Out_LC_A20	JUNCTION	0.00	0.04	6322.34	0	00:37
0.04						

```
  Out_LC_B             JUNCTION     0.37     1.55  6212.67     0  01:58
1.55
  Out_LC_C             JUNCTION     0.00     0.02  6255.24     0  00:35
0.02
  Out_LC_D             JUNCTION     0.00     0.05  6244.53     0  00:40
0.05
  Out_LC_E             JUNCTION     0.00     0.08  6244.48     0  00:40
0.08
  Out_LC_F             JUNCTION     0.00     0.03  6207.28     0  00:38
0.03
  Out_LC_G             JUNCTION     0.00     0.01  6211.84     0  00:47
0.01
  Out_LC_H             JUNCTION     0.00     0.01  6211.24     0  00:36
0.01
  Out_UEC_A            JUNCTION     0.01     0.04  6318.92     0  01:53
0.04
  Out_UEC_B            JUNCTION     0.00     0.03  6302.85     0  00:39
0.03
  Out_UEC_C            JUNCTION     0.00     0.01  6327.10     0  00:37
0.01
  Out_UEC_D            JUNCTION     0.00     0.02  6345.00     0  00:39
0.02
  UEC_A                JUNCTION     0.00     0.00  6349.56     0  00:00
0.00
  UEC_B                JUNCTION     0.00     0.00  6354.84     0  00:00
0.00
  UEC_C                JUNCTION     0.00     0.00  6357.45     0  00:00
0.00
  UEC_D                JUNCTION     0.00     0.00  6349.03     0  00:00
0.00
  Out.Dr               OUTFALL      0.02     0.21  6301.88     0  00:56
0.21
  Out_C.D.E            OUTFALL      0.01     0.08  6244.43     0  00:47
0.08
  Out_LC.B.F           OUTFALL      0.03     0.15  6201.69     0  02:07
0.15
  Out_LC.G.H           OUTFALL      0.00     0.01  6202.08     0  01:08
0.01
  Out_LC_I             OUTFALL      0.00     0.00  6254.02     0  00:00
0.00
  UEC_Out              OUTFALL      0.03     0.11  6278.56     0  02:30
0.11


  ********************
  Node Inflow Summary
  ********************

  ------------------------------------------------------------------------
--------------------------
                                  Maximum  Maximum
Lateral       Total        Flow
                                  Lateral    Total  Time of Max
Inflow      Inflow     Balance
```

Node	Type	Inflow CFS	Inflow CFS	Occurrence days	hr:min	Volume 10^6 gal	Volume 10^6 gal	Error Percent
DP_OS1	JUNCTION	0.00	9.22	0	00:51	0	0.38	0.000
DP_OS2	JUNCTION	0.00	6.00	0	00:48	0	0.308	0.000
DP_OS3	JUNCTION	0.00	84.62	0	01:25	0	4.72	0.000
DP_OS4	JUNCTION	0.00	1.62	0	00:36	0	0.0371	0.000
DP_OS5	JUNCTION	0.00	0.15	0	00:36	0	0.00551	0.000
DP_OS6	JUNCTION	0.00	0.43	0	00:45	0	0.0193	0.000
DP_OS7	JUNCTION	0.00	1.88	0	00:45	0	0.0892	0.000
DP_OS8	JUNCTION	0.00	3.86	0	00:34	0	0.0928	0.000
DP_OS9	JUNCTION	0.00	4.20	0	00:56	0	0.207	0.000
Dr_A	JUNCTION	0.44	0.44	0	00:44	0.0166	0.0166	0.000
Dr_B	JUNCTION	0.22	0.22	0	00:36	0.00549	0.00549	0.000
J.UEC.1	JUNCTION	0.00	3.49	0	02:18	0	0.33	0.000
J_LC_A10	JUNCTION	0.00	4.60	0	01:17	0	0.314	0.000
J_LC_A20	JUNCTION	0.00	0.26	0	00:37	0	0.00951	0.000
J_OS1	JUNCTION	0.00	9.22	0	00:51	0	0.38	0.000
J_OS2	JUNCTION	0.00	6.00	0	00:48	0	0.308	0.000
J_OS4	JUNCTION	0.00	1.62	0	00:36	0	0.0371	0.000
J_OS6	JUNCTION	0.00	0.43	0	00:45	0	0.0193	0.000
J_OS7	JUNCTION	0.00	1.88	0	00:46	0	0.0892	0.000
J_OS8	JUNCTION	0.00	3.86	0	00:34	0	0.0927	0.000
J_OS9	JUNCTION	0.00	4.20	0	00:56	0	0.207	0.000
J1	JUNCTION	0.00	0.81	0	01:34	0	0.0723	0.000
J2	JUNCTION	0.00	0.90	0	02:46	0	0.0981	0.000
J2_OS2	JUNCTION	0.00	4.57	0	01:46	0	0.348	0.000

```
  J3                    JUNCTION      0.00     4.67     0  01:31
0       0.415       0.000
  J4                    JUNCTION      0.00     4.76     0  01:41
0       0.429       0.000
  LC_A10                JUNCTION      1.42     1.42     0  00:54
0.0754      0.0754        0.000
  LC_A20                JUNCTION      0.26     0.26     0  00:37
0.00951     0.00951       0.000
  LC_B                  JUNCTION      9.42     9.42     0  01:08
0.427       0.427         0.000
  LC_C                  JUNCTION      0.39     0.39     0  00:35
0.00861     0.00861       0.000
  LC_D                  JUNCTION      1.21     1.21     0  00:40
0.0333      0.0333        0.000
  LC_E                  JUNCTION      1.45     1.45     0  00:40
0.0411      0.0411        0.000
  LC_F                  JUNCTION      1.44     1.44     0  00:38
0.032       0.032         0.000
  LC_G                  JUNCTION      0.28     0.28     0  00:47
0.0126      0.0126        0.000
  LC_H                  JUNCTION      0.26     0.26     0  00:36
0.00625     0.00625       0.000
  LC_I                  JUNCTION      0.77     0.77     0  00:57
0.0402      0.0402        0.000
  OS1                   JUNCTION      9.22     9.22     0  00:51
0.38        0.38        0.000
  OS2                   JUNCTION      6.00     6.00     0  00:48
0.308       0.308         0.000
  OS3                   JUNCTION     82.90    82.90     0  01:22
4.29        4.29        0.000
  OS4                   JUNCTION      1.62     1.62     0  00:36
0.0371      0.0371        0.000
  OS5                   JUNCTION      0.15     0.15     0  00:36
0.00551     0.00551       0.000
  OS6                   JUNCTION      0.43     0.43     0  00:45
0.0193      0.0193        0.000
  OS7                   JUNCTION      1.88     1.88     0  00:45
0.0892      0.0892        0.000
  OS8                   JUNCTION      3.86     3.86     0  00:34
0.0928      0.0928        0.000
  OS9                   JUNCTION      4.20     4.20     0  00:56
0.207       0.207         0.000
  Out_Dr_A              JUNCTION      0.00     0.44     0  00:44
0      0.0166       0.000
  Out_Dr_B              JUNCTION      0.00     0.22     0  00:36
0     0.00549       0.000
  Out_LC_A10            JUNCTION      0.00     4.60     0  01:17
0       0.314       0.000
  Out_LC_A20            JUNCTION      0.00     0.26     0  00:37
0     0.00951       0.000
  Out_LC_B              JUNCTION      0.00    85.62     0  01:59
0        6.21       0.000
  Out_LC_C              JUNCTION      0.00     0.39     0  00:35
0     0.00861       0.000
```

```
  Out_LC_D            JUNCTION      0.00     1.21      0  00:40
0      0.0333       0.000
  Out_LC_E            JUNCTION      0.00     1.45      0  00:40
0      0.0411       0.000
  Out_LC_F            JUNCTION      0.00     1.44      0  00:38
0       0.032       0.000
  Out_LC_G            JUNCTION      0.00     0.28      0  00:47
0      0.0126       0.000
  Out_LC_H            JUNCTION      0.00     0.26      0  00:36
0     0.00625       0.000
  Out_UEC_A           JUNCTION      0.00     3.35      0  01:53
0       0.296       0.000
  Out_UEC_B           JUNCTION      0.00     0.96      0  00:39
0       0.024       0.000
  Out_UEC_C           JUNCTION      0.00     0.13      0  00:37
0     0.00482       0.000
  Out_UEC_D           JUNCTION      0.00     0.73      0  00:39
0      0.0203       0.000
  UEC_A               JUNCTION      1.04     1.04      0  00:51
0.0485      0.0485       0.000
  UEC_B               JUNCTION      0.96     0.96      0  00:39
0.024       0.024        0.000
  UEC_C               JUNCTION      0.13     0.13      0  00:37
0.00482     0.00482      0.000
  UEC_D               JUNCTION      0.73     0.73      0  00:39
0.0203      0.0203       0.000
  Out.Dr              OUTFALL       0.00     0.61      0  00:55
0      0.0226       0.000
  Out_C.D.E           OUTFALL       0.00     2.65      0  00:47
0      0.0879       0.000
  Out_LC.B.F          OUTFALL       0.00    85.67      0  02:07
0        6.26       0.000
  Out_LC.G.H          OUTFALL       0.00     0.45      0  01:04
0      0.0202       0.000
  Out_LC_I            OUTFALL       0.00     0.77      0  00:57
0      0.0402       0.000
  UEC_Out             OUTFALL       0.00     3.81      0  02:27
0       0.366       0.000


  **********
  Node Flooding Summary
  **********

  No nodes were flooded.


  **********
  Outfall Loading Summary
  **********

  ------------------------------------------------------------
                        Flow       Avg       Max       Total
                        Freq      Flow      Flow      Volume
```

Outfall Node	Pcnt	CFS	CFS	10^6 gal
Out.Dr	19.06	0.18	0.61	0.023
Out_C.D.E	50.65	0.27	2.65	0.088
Out_LC.B.F	97.89	9.89	85.67	6.257
Out_LC.G.H	26.20	0.12	0.45	0.020
Out_LC_I	23.48	0.26	0.77	0.040
UEC_Out	97.44	0.58	3.81	0.366
System	52.45	11.31	90.81	6.793

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
Ch.Dr_A	CONDUIT	0.43	0 00:56	1.61	0.00	0.05
Ch.UEC_B	CONDUIT	0.66	0 01:09	0.55	0.00	0.00
CH_1	CONDUIT	0.74	0 02:56	0.54	0.00	0.01
Ch_2	CONDUIT	0.86	0 03:21	0.52	0.00	0.01
Ch_3	CONDUIT	4.62	0 01:42	0.89	0.00	0.02
Ch_4	CONDUIT	4.68	0 01:55	0.90	0.00	0.02
Ch_5	CONDUIT	4.35	0 02:28	2.60	0.00	0.13
Ch_LC_A10	CONDUIT	4.58	0 01:29	1.45	0.00	0.01
Ch_Main	CONDUIT	72.06	0 01:58	3.86	0.03	0.26
Ch_OS6	CONDUIT	0.36	0 01:16	1.36	0.00	0.02
Ch_OS7	CONDUIT	1.83	0 00:59	1.60	0.00	0.04
Ch_UEC	CONDUIT	3.47	0 02:30	0.63	0.00	0.02
Culv_LC_A10	CONDUIT	4.60	0 01:17	4.80	0.00	0.02
Culv_LC_A20	CONDUIT	0.26	0 00:37	2.17	0.00	0.01

Culv_OS1	CONDUIT	9.22	0	00:51	6.11	0.03
0.12						
Culv_OS2	CONDUIT	6.00	0	00:48	5.27	0.07
0.17						
Culv_OS4	CONDUIT	1.62	0	00:36	1.44	0.02
0.11						
Culv_OS6	CONDUIT	0.43	0	00:45	3.13	0.00
0.03						
Culv_OS7	CONDUIT	1.88	0	00:46	3.21	0.03
0.11						
Culv_OS8	CONDUIT	3.86	0	00:34	2.52	0.06
0.16						
Culv_OS9	CONDUIT	4.20	0	00:56	3.17	0.03
0.11						
Dummy_Dr_A	DUMMY	0.44	0	00:44		
Dummy_Dr_B	DUMMY	0.22	0	00:36		
Dummy_LC_A10	DUMMY	1.42	0	00:54		
dummy_LC_A20	DUMMY	0.26	0	00:37		
Dummy_LC_B	DUMMY	9.42	0	01:08		
Dummy_LC_C	DUMMY	0.39	0	00:35		
Dummy_LC_D	DUMMY	1.21	0	00:40		
Dummy_LC_E	DUMMY	1.45	0	00:40		
Dummy_LC_F	DUMMY	1.44	0	00:38		
Dummy_LC_G	DUMMY	0.28	0	00:47		
Dummy_LC_H	DUMMY	0.26	0	00:36		
Dummy_LC_I	DUMMY	0.77	0	00:57		
Dummy_OS1	DUMMY	9.22	0	00:51		
Dummy_OS2	DUMMY	6.00	0	00:48		
Dummy_OS3	DUMMY	82.90	0	01:22		
Dummy_OS4	DUMMY	1.62	0	00:36		
Dummy_OS5	DUMMY	0.15	0	00:36		
Dummy_OS6	DUMMY	0.43	0	00:45		
Dummy_OS7	DUMMY	1.88	0	00:45		
Dummy_Os8	DUMMY	3.86	0	00:34		
Dummy_OS9	DUMMY	4.20	0	00:56		
Dummy_UEC_A	DUMMY	1.04	0	00:51		
Dummy_UEC_B	DUMMY	0.96	0	00:39		
Dummy_UEC_C	DUMMY	0.13	0	00:37		
Dummy_UEC_D	DUMMY	0.73	0	00:39		
Over.Dr_B	CONDUIT	0.18	0	00:53	0.00	0.00
0.00						
Over.LC_B	CONDUIT	85.37	0	02:07	1.24	0.02
0.10						
Over.LC_C	CONDUIT	0.21	0	01:29	0.00	0.00
0.00						
Over.LC_D	CONDUIT	1.17	0	00:46	0.22	0.00
0.03						
Over.LC_E	CONDUIT	1.40	0	00:47	0.19	0.00
0.04						
Over.LC_F	CONDUIT	1.17	0	00:55	0.44	0.00
0.01						
Over.LC_G	CONDUIT	0.26	0	01:08	0.00	0.00
0.00						

Over.LC_H	CONDUIT	0.20	0	00:58	0.00	0.00
0.00						
Over.UEC_A	CONDUIT	3.22	0	02:22	0.77	0.00
0.02						
Over.UEC_C	CONDUIT	0.07	0	02:14	0.00	0.00
0.00						
Over.UEC_D	CONDUIT	0.44	0	01:32	0.44	0.00
0.01						
Over_LC_A20	CONDUIT	0.24	0	00:54	0.88	0.01
0.15						
Over_OS1	CONDUIT	5.29	0	02:25	0.84	0.00
0.02						
Over_OS2	CONDUIT	4.57	0	01:46	0.73	0.00
0.01						
Over_OS4	CONDUIT	0.77	0	01:33	0.64	0.00
0.00						
Over_OS5	CONDUIT	0.08	0	03:35	0.00	0.00
0.00						
Over_OS8	CONDUIT	1.93	0	01:30	0.61	0.00
0.01						
Over_OS9	CONDUIT	2.81	0	01:57	0.54	0.00
0.01						

```
  ************************
  Conduit Surcharge Summary
  ************************

  No conduits were surcharged.


  Analysis begun on:  Mon Dec 16 14:42:50 2024
  Analysis ended on:  Mon Dec 16 14:42:50 2024
  Total elapsed time: < 1 sec
```

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
  ------------------------------------------------------------


  *************
  Element Count
  *************
  Number of rain gages ...... 0
  Number of subcatchments ... 0
  Number of nodes ........... 70
  Number of links ........... 64
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ************
  Node Summary
  ************
                                          Invert      Max.    Ponded
External
  Name                 Type                Elev.     Depth      Area
Inflow
  ---------------------------------------------------------------------------
--------
  DP_OS1               JUNCTION          6282.45      3.00       0.0
  DP_OS2               JUNCTION          6313.76      2.50       0.0
  DP_OS3               JUNCTION          6290.51      6.00       0.0
  DP_OS4               JUNCTION          6420.09      3.50       0.0
  DP_OS5               JUNCTION          6440.72      5.00       0.0
  DP_OS6               JUNCTION          6428.06      3.00       0.0
  DP_OS7               JUNCTION          6392.28      2.00       0.0
  DP_OS8               JUNCTION          6393.20      2.50       0.0
  DP_OS9               JUNCTION          6359.19      3.00       0.0
  Dr_A                 JUNCTION          6347.11      0.00       0.0
  Dr_B                 JUNCTION          6329.34      0.00       0.0
  J.UEC.1              JUNCTION          6281.05      5.00       0.0
  J_LC_A10             JUNCTION          6346.58     10.00       0.0
  J_LC_A20             JUNCTION          6320.63      3.00       0.0
  J_OS1                JUNCTION          6277.94      3.00       0.0
  J_OS2                JUNCTION          6310.41      5.00       0.0
  J_OS4                JUNCTION          6420.00      5.00       0.0
  J_OS6                JUNCTION          6425.61      5.00       0.0
  J_OS7                JUNCTION          6388.69      3.00       0.0
  J_OS8                JUNCTION          6391.98      2.50       0.0
  J_OS9                JUNCTION          6357.73      3.00       0.0
  J1                   JUNCTION          6355.74      5.00       0.0
  J2                   JUNCTION          6323.35      5.00       0.0
  J2_OS2               JUNCTION          6250.19      5.00       0.0
  J3                   JUNCTION          6305.72     10.00       0.0
  J4                   JUNCTION          6298.21      5.00       0.0
  LC_A10               JUNCTION          6393.58      0.00       0.0
  LC_A20               JUNCTION          6358.75      0.00       0.0
  LC_B                 JUNCTION          6284.81      0.00       0.0
```

LC_C	JUNCTION	6267.21	0.00	0.0
LC_D	JUNCTION	6254.31	0.00	0.0
LC_E	JUNCTION	6248.16	0.00	0.0
LC_F	JUNCTION	6246.12	0.00	0.0
LC_G	JUNCTION	6234.42	0.00	0.0
LC_H	JUNCTION	6237.87	0.00	0.0
LC_I	JUNCTION	6282.51	0.00	0.0
OS1	JUNCTION	6349.15	0.00	0.0
OS2	JUNCTION	6342.30	0.00	0.0
OS3	JUNCTION	6453.31	0.00	0.0
OS4	JUNCTION	6462.88	0.00	0.0
OS5	JUNCTION	6448.20	0.00	0.0
OS6	JUNCTION	6428.17	0.00	0.0
OS7	JUNCTION	6416.17	0.00	0.0
OS8	JUNCTION	6415.01	0.00	0.0
OS9	JUNCTION	6429.66	0.00	0.0
Out_Dr_A	JUNCTION	6327.48	4.50	0.0
Out_Dr_B	JUNCTION	6315.27	2.00	0.0
Out_LC_A10	JUNCTION	6349.20	8.00	0.0
Out_LC_A20	JUNCTION	6322.30	3.00	0.0
Out_LC_B	JUNCTION	6211.12	6.00	0.0
Out_LC_C	JUNCTION	6255.23	2.00	0.0
Out_LC_D	JUNCTION	6244.47	2.00	0.0
Out_LC_E	JUNCTION	6244.40	2.00	0.0
Out_LC_F	JUNCTION	6207.25	2.00	0.0
Out_LC_G	JUNCTION	6211.83	2.00	0.0
Out_LC_H	JUNCTION	6211.23	2.00	0.0
Out_UEC_A	JUNCTION	6318.87	2.00	0.0
Out_UEC_B	JUNCTION	6302.81	5.00	0.0
Out_UEC_C	JUNCTION	6327.09	2.00	0.0
Out_UEC_D	JUNCTION	6344.99	2.00	0.0
UEC_A	JUNCTION	6349.56	0.00	0.0
UEC_B	JUNCTION	6354.84	0.00	0.0
UEC_C	JUNCTION	6357.45	0.00	0.0
UEC_D	JUNCTION	6349.03	0.00	0.0
Out.Dr	OUTFALL	6301.67	4.50	0.0
Out_C.D.E	OUTFALL	6244.35	2.00	0.0
Out_LC.B.F	OUTFALL	6201.53	2.00	0.0
Out_LC.G.H	OUTFALL	6202.07	2.00	0.0
Out_LC_I	OUTFALL	6254.02	0.00	0.0
UEC_Out	OUTFALL	6278.45	5.00	0.0

****
Link Summary
****

Name	From Node	To Node	Type	Length	%Slope	Roughness
Ch.Dr_A	Out_Dr_A	Out.Dr	CONDUIT	1135.0	2.2744	0.0320
Ch.UEC_B	Out_UEC_B	J.UEC.1	CONDUIT	1351.3	1.6111	0.0320

```
  CH_1              J1                J2                CONDUIT
2593.7    1.2488    0.0320
  Ch_2              J2                J3                CONDUIT
1678.2    1.0507    0.0320
  Ch_3              J3                J4                CONDUIT
973.6     0.7710    0.0320
  Ch_4              J4                DP_OS3            CONDUIT
998.0     0.7716    0.0320
  Ch_5              J2_OS2            Out_LC_B          CONDUIT
4798.2    0.8143    0.0320
  Ch_LC_A10         J_LC_A10          J3                CONDUIT
1414.2    2.8909    0.0320
  Ch_Main           DP_OS3            Out_LC_B          CONDUIT
9436.1    0.8414    0.0320
  Ch_OS6            J_OS6             J2                CONDUIT
2634.9    3.8840    0.0350
  Ch_OS7            J_OS7             Out_LC_A10        CONDUIT
1441.9    2.7395    0.0350
  Ch_UEC            J.UEC.1           UEC_Out           CONDUIT
737.2     0.3521    0.0320
  Culv_LC_A10       Out_LC_A10        J_LC_A10          CONDUIT
120.5     2.1763    0.0130
  Culv_LC_A20       Out_LC_A20        J_LC_A20          CONDUIT
61.7      2.7100    0.0130
  Culv_OS1          DP_OS1            J_OS1             CONDUIT
67.5      6.6934    0.0240
  Culv_OS2          DP_OS2            J_OS2             CONDUIT
79.1      4.2307    0.0240
  Culv_OS4          DP_OS4            J_OS4             CONDUIT
87.0      0.1068    0.0130
  Culv_OS6          DP_OS6            J_OS6             CONDUIT
82.4      2.9775    0.0130
  Culv_OS7          DP_OS7            J_OS7             CONDUIT
99.0      3.6291    0.0240
  Culv_OS8          DP_OS8            J_OS8             CONDUIT
114.8     1.0631    0.0240
  Culv_OS9          DP_OS9            J_OS9             CONDUIT
93.8      1.5617    0.0210
  Dummy_Dr_A        Dr_A              Out_Dr_A          CONDUIT
1154.7    1.7000    0.0100
  Dummy_Dr_B        Dr_B              Out_Dr_B          CONDUIT
662.0     2.1265    0.0100
  Dummy_LC_A10      LC_A10            Out_LC_A10        CONDUIT
2079.4    2.1348    0.0100
  dummy_LC_A20      LC_A20            Out_LC_A20        CONDUIT
613.0     5.9554    0.0100
  Dummy_LC_B        LC_B              Out_LC_B          CONDUIT
5629.3    1.3093    0.0100
  Dummy_LC_C        LC_C              Out_LC_C          CONDUIT
708.8     1.6912    0.0100
  Dummy_LC_D        LC_D              Out_LC_D          CONDUIT
691.2     1.4232    0.0100
  Dummy_LC_E        LC_E              Out_LC_E          CONDUIT
646.2     0.5819    0.0100
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  Dummy_LC_F       LC_F             Out_LC_F         CONDUIT
1332.0    2.9192    0.0100
  Dummy_LC_G       LC_G             Out_LC_G         CONDUIT
842.5     2.6821    0.0100
  Dummy_LC_H       LC_H             Out_LC_H         CONDUIT
579.9     4.5972    0.0100
  Dummy_LC_I       LC_I             Out_LC_I         CONDUIT
1517.8    1.8774    0.0100
  Dummy_OS1        OS1              DP_OS1           CONDUIT
3482.0    1.9161    0.0100
  Dummy_OS2        OS2              DP_OS2           CONDUIT
1242.8    2.2974    0.0100
  Dummy_OS3        OS3              DP_OS3           CONDUIT
9018.4    1.8056    0.0100
  Dummy_OS4        OS4              DP_OS4           CONDUIT
811.6     5.2783    0.0100
  Dummy_OS5        OS5              DP_OS5           CONDUIT
395.2     1.8938    0.0100
  Dummy_OS6        OS6              DP_OS6           CONDUIT
1040.0    0.0101    0.0100
  Dummy_OS7        OS7              DP_OS7           CONDUIT
657.7     3.6352    0.0100
  Dummy_Os8        OS8              DP_OS8           CONDUIT
393.2     5.5555    0.0100
  Dummy_OS9        OS9              DP_OS9           CONDUIT
2515.8    2.8023    0.0100
  Dummy_UEC_A      UEC_A            Out_UEC_A        CONDUIT
1521.5    2.0172    0.0100
  Dummy_UEC_B      UEC_B            Out_UEC_B        CONDUIT
1679.8    3.0990    0.0100
  Dummy_UEC_C      UEC_C            Out_UEC_C        CONDUIT
695.7     4.3682    0.0100
  Dummy_UEC_D      UEC_D            Out_UEC_D        CONDUIT
352.4     1.1481    0.0100
  Over.Dr_B        Out_Dr_B         Out.Dr           CONDUIT
359.0     3.7902    0.0350
  Over.LC_B        Out_LC_B         Out_LC.B.F       CONDUIT
944.5     1.0146    0.0350
  Over.LC_C        Out_LC_C         Out_C.D.E        CONDUIT
1183.0    0.9194    0.0350
  Over.LC_D        Out_LC_D         Out_C.D.E        CONDUIT
93.9     0.1289    0.0350
  Over.LC_E        Out_LC_E         Out_C.D.E        CONDUIT
86.0     0.0605    0.0350
  Over.LC_F        Out_LC_F         Out_LC.B.F       CONDUIT
531.3     1.0764    0.0350
  Over.LC_G        Out_LC_G         Out_LC.G.H       CONDUIT
447.1     2.1828    0.0350
  Over.LC_H        Out_LC_H         Out_LC.G.H       CONDUIT
442.2     2.0720    0.0350
  Over.UEC_A       Out_UEC_A        J.UEC.1          CONDUIT
1781.8    2.1235    0.0350
  Over.UEC_C       Out_UEC_C        UEC_Out          CONDUIT
1664.0    2.9246    0.0350
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  Over.UEC_D       Out_UEC_D        UEC_Out          CONDUIT
1915.6    3.4756    0.0350
  Over_LC_A20      J_LC_A20         J4               CONDUIT
707.8     3.1696    0.0350
  Over_OS1         J_OS1            Out_LC_B         CONDUIT
5800.5    1.1521    0.0350
  Over_OS2         J_OS2            J2_OS2           CONDUIT
2743.3    2.1958    0.0350
  Over_OS4         J_OS4            J1               CONDUIT
3674.0    1.7494    0.0350
  Over_OS5         DP_OS5           J1               CONDUIT
3464.9    2.4535    0.0300
  Over_OS8         J_OS8            Out_LC_A10       CONDUIT
3170.1    1.3495    0.0350
  Over_OS9         J_OS9            Out_UEC_A        CONDUIT
2802.5    1.3865    0.0350


  **********
  Cross Section Summary
  **********
                                        Full     Full     Hyd.     Max.
No. of     Full
  Conduit          Shape                Depth     Area     Rad.    Width
Barrels     Flow
  ---------------------------------------------------------------------
----------------
  Ch.Dr_A          TRIANGULAR            4.50   123.75     2.22    55.00
1  1475.06
  Ch.UEC_B         TRAPEZOIDAL           5.00   350.00     3.84    90.00
1  5055.78
  CH_1             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  4666.46
  Ch_2             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  4280.31
  Ch_3             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  3666.59
  Ch_4             TRAPEZOIDAL           5.00   375.00     3.71   100.00
1  3668.12
  Ch_5             TRIANGULAR            5.00   125.00     2.45    50.00
1   952.35
  Ch_LC_A10        TRAPEZOIDAL          10.00   900.00     6.34   140.00
1 24339.02
  Ch_Main          TRIANGULAR            6.00   300.00     2.98   100.00
1  2645.44
  Ch_OS6           TRIANGULAR            5.00   500.00     2.50   200.00
1  7700.00
  Ch_OS7           TRAPEZOIDAL           3.00    66.00     1.90    34.00
1   711.46
  Ch_UEC           TRAPEZOIDAL           5.00   350.00     3.84    90.00
1  2363.59
  Culv_LC_A10      RECT_CLOSED           8.00    48.00     1.71     6.00
1  1159.39
```

```
  Culv_LC_A20      RECT_CLOSED          3.00     9.00     0.75     3.00
1   139.80
  Culv_OS1         CIRCULAR             3.00     7.07     0.75     3.00
3    93.47
  Culv_OS2         CIRCULAR             2.50     4.91     0.62     2.50
2    45.70
  Culv_OS4         CIRCULAR             3.50     9.62     0.88     3.50
2    32.88
  Culv_OS6         CIRCULAR             3.00     7.07     0.75     3.00
2   115.09
  Culv_OS7         CIRCULAR             2.00     3.14     0.50     2.00
3    23.34
  Culv_OS8         CIRCULAR             2.50     4.91     0.62     2.50
3    22.91
  Culv_OS9         CIRCULAR             3.00     7.07     0.75     3.00
3    51.60
  Dummy_Dr_A       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_Dr_B       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  dummy_LC_A20     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_C       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_D       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_E       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_G       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_H       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS1        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS2        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS3        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS4        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS5        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS6        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS7        DUMMY                0.00     0.00     0.00     0.00
1     0.00
```

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  Dummy_Os8         DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Dummy_OS9         DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_A       DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_B       DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_C       DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Dummy_UEC_D       DUMMY                0.00     0.00      0.00     0.00
1     0.00
  Over.Dr_B         RECT_OPEN            2.00   200.00      1.92   100.00
1  2556.48
  Over.LC_B         RECT_OPEN            1.50   675.00      1.49   450.00
1  3765.95
  Over.LC_C         RECT_OPEN            2.00   200.00      1.92   100.00
1  1259.11
  Over.LC_D         RECT_OPEN            2.00   200.00      1.92   100.00
1   471.43
  Over.LC_E         RECT_OPEN            2.00   200.00      1.92   100.00
1   322.88
  Over.LC_F         RECT_OPEN            2.00   200.00      1.92   100.00
1  1362.36
  Over.LC_G         RECT_OPEN            2.00   200.00      1.92   100.00
1  1940.07
  Over.LC_H         RECT_OPEN            2.00   200.00      1.92   100.00
1  1890.20
  Over.UEC_A        RECT_OPEN            2.00   200.00      1.92   100.00
1  1913.55
  Over.UEC_C        RECT_OPEN            2.00   200.00      1.92   100.00
1  2245.67
  Over.UEC_D        RECT_OPEN            2.00   200.00      1.92   100.00
1  2448.08
  Over_LC_A20       TRIANGULAR           0.50    12.50      0.25    50.00
1    37.49
  Over_OS1          RECT_OPEN            2.00   400.00      1.96   200.00
1  2855.66
  Over_OS2          RECT_OPEN            5.00  1000.00      4.76   200.00
1 17807.57
  Over_OS4          TRAPEZOIDAL          5.00   600.00      4.25   140.00
1  8838.21
  Over_OS5          RECT_OPEN            5.00   500.00      4.55   100.00
1 10645.06
  Over_OS8          RECT_OPEN            2.00   400.00      1.96   200.00
1  3090.62
  Over_OS9          RECT_OPEN            2.00   400.00      1.96   200.00
1  3132.77


  ****************
  Analysis Options
  ****************
  Flow Units ..............  CFS
```

```
Process Models:
  Rainfall/Runoff ........ NO
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Flow Routing Method ...... KINWAVE
Starting Date ............ 01/01/2024 00:00:00
Ending Date .............. 01/02/2024 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:01:00
Routing Time Step ........ 5.00 sec


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.000         0.000
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........       504.097       164.267
External Outflow .........       512.481       167.000
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.081         0.026
Continuity Error (%) .....        -1.679


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     5.00 sec
Average Time Step           :     5.00 sec
Maximum Time Step           :     5.00 sec
% of Time in Steady State   :     0.00
Average Iterations per Step :     1.00
% of Steps Not Converging   :     0.00


******************
Node Depth Summary
******************
```

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	Time of Max Occurrence hr:min	Reported Max Depth Feet
DP_OS1	JUNCTION	0.17	2.08	6284.52	0	00:58	2.08
DP_OS2	JUNCTION	0.14	1.40	6315.15	0	00:54	1.40
DP_OS3	JUNCTION	0.83	5.43	6295.94	0	01:27	5.43
DP_OS4	JUNCTION	0.12	2.62	6422.71	0	00:44	2.62
DP_OS5	JUNCTION	0.00	0.04	6440.77	0	00:46	0.04
DP_OS6	JUNCTION	0.07	0.69	6428.75	0	00:54	0.69
DP_OS7	JUNCTION	0.08	0.83	6393.11	0	00:55	0.83
DP_OS8	JUNCTION	0.09	1.78	6394.98	0	00:43	1.78
DP_OS9	JUNCTION	0.23	2.19	6361.38	0	01:08	2.19
Dr_A	JUNCTION	0.00	0.00	6347.11	0	00:00	0.00
Dr_B	JUNCTION	0.00	0.00	6329.34	0	00:00	0.00
J.UEC.1	JUNCTION	0.16	1.32	6282.36	0	01:20	1.32
J_LC_A10	JUNCTION	0.13	1.36	6347.94	0	01:10	1.36
J_LC_A20	JUNCTION	0.03	0.42	6321.06	0	00:47	0.42
J_OS1	JUNCTION	0.17	2.08	6280.01	0	00:58	2.07
J_OS2	JUNCTION	0.14	1.40	6311.81	0	00:54	1.40
J_OS4	JUNCTION	0.12	2.62	6422.62	0	00:44	2.62
J_OS6	JUNCTION	0.07	0.69	6426.30	0	00:54	0.69
J_OS7	JUNCTION	0.08	0.83	6389.52	0	00:55	0.83
J_OS8	JUNCTION	0.09	1.78	6393.75	0	00:43	1.78
J_OS9	JUNCTION	0.23	2.19	6359.92	0	01:08	2.19
J1	JUNCTION	0.03	0.36	6356.09	0	01:05	0.36

```
  J2                JUNCTION     0.08      0.59   6323.94      0  01:05
0.59
  J2_OS2            JUNCTION     0.27      1.65   6251.84      0  01:15
1.65
  J3                JUNCTION     0.10      0.95   6306.67      0  01:18
0.95
  J4                JUNCTION     0.11      0.97   6299.18      0  01:21
0.97
  LC_A10            JUNCTION     0.00      0.00   6393.58      0  00:00
0.00
  LC_A20            JUNCTION     0.00      0.00   6358.75      0  00:00
0.00
  LC_B              JUNCTION     0.00      0.00   6284.81      0  00:00
0.00
  LC_C              JUNCTION     0.00      0.00   6267.21      0  00:00
0.00
  LC_D              JUNCTION     0.00      0.00   6254.31      0  00:00
0.00
  LC_E              JUNCTION     0.00      0.00   6248.16      0  00:00
0.00
  LC_F              JUNCTION     0.00      0.00   6246.12      0  00:00
0.00
  LC_G              JUNCTION     0.00      0.00   6234.42      0  00:00
0.00
  LC_H              JUNCTION     0.00      0.00   6237.87      0  00:00
0.00
  LC_I              JUNCTION     0.00      0.00   6282.51      0  00:00
0.00
  OS1               JUNCTION     0.00      0.00   6349.15      0  00:00
0.00
  OS2               JUNCTION     0.00      0.00   6342.30      0  00:00
0.00
  OS3               JUNCTION     0.00      0.00   6453.31      0  00:00
0.00
  OS4               JUNCTION     0.00      0.00   6462.88      0  00:00
0.00
  OS5               JUNCTION     0.00      0.00   6448.20      0  00:00
0.00
  OS6               JUNCTION     0.00      0.00   6428.17      0  00:00
0.00
  OS7               JUNCTION     0.00      0.00   6416.17      0  00:00
0.00
  OS8               JUNCTION     0.00      0.00   6415.01      0  00:00
0.00
  OS9               JUNCTION     0.00      0.00   6429.66      0  00:00
0.00
  Out_Dr_A          JUNCTION     0.12      1.13   6328.61      0  00:55
1.13
  Out_Dr_B          JUNCTION     0.01      0.10   6315.37      0  00:46
0.10
  Out_LC_A10        JUNCTION     0.13      1.36   6350.56      0  01:09
1.36
  Out_LC_A20        JUNCTION     0.03      0.42   6322.73      0  00:47
0.42
```

Out_LC_B	JUNCTION	0.89	5.36	6216.48	0	01:42
5.36						
Out_LC_C	JUNCTION	0.01	0.19	6255.42	0	00:44
0.19						
Out_LC_D	JUNCTION	0.02	0.34	6244.81	0	00:48
0.34						
Out_LC_E	JUNCTION	0.03	0.49	6244.89	0	00:49
0.49						
Out_LC_F	JUNCTION	0.02	0.44	6207.69	0	00:46
0.44						
Out_LC_G	JUNCTION	0.01	0.13	6211.97	0	00:57
0.13						
Out_LC_H	JUNCTION	0.01	0.12	6211.36	0	00:43
0.12						
Out_UEC_A	JUNCTION	0.06	0.47	6319.34	0	01:20
0.47						
Out_UEC_B	JUNCTION	0.03	0.48	6303.29	0	00:49
0.48						
Out_UEC_C	JUNCTION	0.01	0.09	6327.18	0	00:51
0.09						
Out_UEC_D	JUNCTION	0.01	0.09	6345.08	0	00:48
0.09						
UEC_A	JUNCTION	0.00	0.00	6349.56	0	00:00
0.00						
UEC_B	JUNCTION	0.00	0.00	6354.84	0	00:00
0.00						
UEC_C	JUNCTION	0.00	0.00	6357.45	0	00:00
0.00						
UEC_D	JUNCTION	0.00	0.00	6349.03	0	00:00
0.00						
Out.Dr	OUTFALL	0.12	1.13	6302.80	0	00:58
1.13						
Out_C.D.E	OUTFALL	0.03	0.49	6244.84	0	00:50
0.49						
Out_LC.B.F	OUTFALL	0.15	1.24	6202.77	0	01:40
1.24						
Out_LC.G.H	OUTFALL	0.01	0.13	6202.21	0	00:59
0.13						
Out_LC_I	OUTFALL	0.00	0.00	6254.02	0	00:00
0.00						
UEC_Out	OUTFALL	0.16	1.32	6279.76	0	01:22
1.32						

****
Node Inflow Summary
****

		Maximum Lateral	Maximum Total	Time of Max	Lateral Inflow	Total Inflow	Flow Balance

Node	Type	Inflow CFS	Inflow CFS	Occurrence days	hr:min	Volume 10^6 gal	Volume 10^6 gal	Error Percent
DP_OS1	JUNCTION	0.00	230.99	0	00:58	0	8.6	0.000
DP_OS2	JUNCTION	0.00	55.02	0	00:54	0	2.37	0.000
DP_OS3	JUNCTION	0.00	2031.29	0	01:27	0	97	0.000
DP_OS4	JUNCTION	0.00	59.67	0	00:44	0	1.3	0.000
DP_OS5	JUNCTION	0.00	4.20	0	00:46	0	0.138	0.000
DP_OS6	JUNCTION	0.00	26.86	0	00:54	0	1.14	0.000
DP_OS7	JUNCTION	0.00	25.47	0	00:55	0	1.14	0.000
DP_OS8	JUNCTION	0.00	58.70	0	00:43	0	1.41	0.000
DP_OS9	JUNCTION	0.00	136.42	0	01:08	0	6.72	0.000
Dr_A	JUNCTION	37.13	37.13	0	00:55	1.49	1.49	0.000
Dr_B	JUNCTION	17.72	17.72	0	00:46	0.512	0.512	0.000
J.UEC.1	JUNCTION	0.00	225.69	0	01:20	0	11.6	0.000
J_LC_A10	JUNCTION	0.00	131.30	0	01:10	0	6.06	0.000
J_LC_A20	JUNCTION	0.00	11.42	0	00:47	0	0.386	0.000
J_OS1	JUNCTION	0.00	230.99	0	00:58	0	8.6	0.000
J_OS2	JUNCTION	0.00	55.02	0	00:54	0	2.37	0.000
J_OS4	JUNCTION	0.00	59.67	0	00:44	0	1.3	0.000
J_OS6	JUNCTION	0.00	26.86	0	00:54	0	1.14	0.000
J_OS7	JUNCTION	0.00	25.47	0	00:55	0	1.14	0.000
J_OS8	JUNCTION	0.00	58.69	0	00:43	0	1.41	0.000
J_OS9	JUNCTION	0.00	136.42	0	01:08	0	6.72	-0.000
J1	JUNCTION	0.00	47.34	0	01:05	0	1.64	0.000
J2	JUNCTION	0.00	68.34	0	01:16	0	2.84	0.000
J2_OS2	JUNCTION	0.00	49.69	0	01:15	0	2.48	0.000

```
  J3                JUNCTION      0.00   194.11     0  01:18
0        8.94       0.000
  J4                JUNCTION      0.00   201.51     0  01:21
0        9.34       0.000
  LC_A10            JUNCTION     62.55    62.55     0  01:08
3.29        3.29       0.000
  LC_A20            JUNCTION     11.42    11.42     0  00:47
0.386       0.386       0.000
  LC_B              JUNCTION    698.54   698.54     0  01:17
32.4        32.4       0.000
  LC_C              JUNCTION     26.19    26.19     0  00:44
0.674       0.674       0.000
  LC_D              JUNCTION     25.11    25.11     0  00:48
0.828       0.828       0.000
  LC_E              JUNCTION     31.60    31.60     0  00:49
1.06        1.06       0.000
  LC_F              JUNCTION    111.12   111.12     0  00:46
2.84        2.84       0.000
  LC_G              JUNCTION     21.94    21.94     0  00:57
0.986       0.986       0.000
  LC_H              JUNCTION     18.92    18.92     0  00:43
0.491       0.491       0.000
  LC_I              JUNCTION     61.26    61.26     0  01:08
3.13        3.13       0.000
  OS1               JUNCTION    230.99   230.99     0  00:58
8.6         8.6       0.000
  OS2               JUNCTION     55.02    55.02     0  00:54
2.37        2.37       0.000
  OS3               JUNCTION   1831.23  1831.23     0  01:27
87.7        87.7       0.000
  OS4               JUNCTION     59.67    59.67     0  00:44
1.3         1.3       0.000
  OS5               JUNCTION      4.20     4.20     0  00:46
0.138       0.138       0.000
  OS6               JUNCTION     26.86    26.86     0  00:54
1.14        1.14       0.000
  OS7               JUNCTION     25.47    25.47     0  00:55
1.14        1.14       0.000
  OS8               JUNCTION     58.70    58.70     0  00:43
1.41        1.41       0.000
  OS9               JUNCTION    136.42   136.42     0  01:08
6.72        6.72       0.000
  Out_Dr_A          JUNCTION      0.00    37.13     0  00:55
0        1.49       0.000
  Out_Dr_B          JUNCTION      0.00    17.72     0  00:46
0       0.512       0.000
  Out_LC_A10        JUNCTION      0.00   131.30     0  01:09
0        6.06       0.000
  Out_LC_A20        JUNCTION      0.00    11.42     0  00:47
0       0.386       0.000
  Out_LC_B          JUNCTION      0.00  2731.71     0  01:38
0         142       0.000
  Out_LC_C          JUNCTION      0.00    26.19     0  00:44
0       0.674       0.000
```

```
  Out_LC_D            JUNCTION      0.00    25.11     0  00:48
0       0.828       0.000
  Out_LC_E            JUNCTION      0.00    31.60     0  00:49
0        1.06       0.000
  Out_LC_F            JUNCTION      0.00   111.12     0  00:46
0        2.84       0.000
  Out_LC_G            JUNCTION      0.00    21.94     0  00:57
0       0.986       0.000
  Out_LC_H            JUNCTION      0.00    18.92     0  00:43
0       0.491       0.000
  Out_UEC_A           JUNCTION      0.00   174.55     0  01:20
0        9.22       0.000
  Out_UEC_B           JUNCTION      0.00    87.55     0  00:49
0        2.32       0.000
  Out_UEC_C           JUNCTION      0.00    12.30     0  00:51
0       0.469       0.000
  Out_UEC_D           JUNCTION      0.00    15.19     0  00:48
0       0.505       0.000
  UEC_A               JUNCTION     49.42    49.42     0  01:02
2.33        2.33       0.000
  UEC_B               JUNCTION     87.55    87.55     0  00:49
2.32        2.32       0.000
  UEC_C               JUNCTION     12.30    12.30     0  00:51
0.469       0.469       0.000
  UEC_D               JUNCTION     15.19    15.19     0  00:48
0.505       0.505       0.000
  Out.Dr              OUTFALL       0.00    53.62     0  00:54
0        2.01       0.000
  Out_C.D.E           OUTFALL       0.00    79.93     0  00:53
0        2.59       0.000
  Out_LC.B.F          OUTFALL       0.00  2767.50     0  01:40
0         145       0.000
  Out_LC.G.H          OUTFALL       0.00    39.53     0  00:53
0        1.48       0.000
  Out_LC_I            OUTFALL       0.00    61.26     0  01:08
0        3.13       0.000
  UEC_Out             OUTFALL       0.00   248.30     0  01:21
0        12.6       0.000


  **********************
  Node Flooding Summary
  **********************

  No nodes were flooded.


  ************************
  Outfall Loading Summary
  ************************

  -------------------------------------------------------------
                          Flow       Avg       Max       Total
                          Freq      Flow      Flow      Volume
```

Outfall Node	Pcnt	CFS	CFS	10^6 gal
Out.Dr	22.61	13.73	53.62	2.006
Out_C.D.E	56.24	7.13	79.93	2.593
Out_LC.B.F	97.93	229.30	2767.50	145.128
Out_LC.G.H	29.64	7.75	39.53	1.484
Out_LC_I	24.80	19.54	61.26	3.132
UEC_Out	97.78	20.01	248.30	12.642
System	54.83	297.46	3124.43	166.987

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
Ch.Dr_A	CONDUIT	37.06	0 00:58	4.76	0.03	0.25
Ch.UEC_B	CONDUIT	86.74	0 00:53	3.55	0.02	0.10
CH_1	CONDUIT	44.49	0 01:20	2.56	0.01	0.07
Ch_2	CONDUIT	67.44	0 01:24	2.80	0.02	0.09
Ch_3	CONDUIT	193.81	0 01:21	3.73	0.05	0.19
Ch_4	CONDUIT	201.20	0 01:24	3.78	0.05	0.19
Ch_5	CONDUIT	46.42	0 01:36	3.75	0.05	0.32
Ch_LC_A10	CONDUIT	131.22	0 01:12	5.27	0.01	0.06
Ch_Main	CONDUIT	1961.00	0 01:42	8.56	0.74	0.89
Ch_OS6	CONDUIT	26.09	0 01:05	3.83	0.00	0.12
Ch_OS7	CONDUIT	25.40	0 00:59	4.07	0.04	0.17
Ch_UEC	CONDUIT	225.54	0 01:22	3.11	0.10	0.26
Culv_LC_A10	CONDUIT	131.30	0 01:10	16.12	0.11	0.17
Culv_LC_A20	CONDUIT	11.42	0 00:47	8.99	0.08	0.14

Culv_OS1	CONDUIT	230.99	0	00:58	14.76	0.82
0.69						
Culv_OS2	CONDUIT	55.02	0	00:54	9.73	0.60
0.56						
Culv_OS4	CONDUIT	59.67	0	00:44	3.87	0.91
0.75						
Culv_OS6	CONDUIT	26.86	0	00:54	10.90	0.12
0.23						
Culv_OS7	CONDUIT	25.47	0	00:55	6.84	0.36
0.42						
Culv_OS8	CONDUIT	58.69	0	00:43	5.24	0.85
0.71						
Culv_OS9	CONDUIT	136.42	0	01:08	8.23	0.88
0.73						
Dummy_Dr_A	DUMMY	37.13	0	00:55		
Dummy_Dr_B	DUMMY	17.72	0	00:46		
Dummy_LC_A10	DUMMY	62.55	0	01:08		
dummy_LC_A20	DUMMY	11.42	0	00:47		
Dummy_LC_B	DUMMY	698.54	0	01:17		
Dummy_LC_C	DUMMY	26.19	0	00:44		
Dummy_LC_D	DUMMY	25.11	0	00:48		
Dummy_LC_E	DUMMY	31.60	0	00:49		
Dummy_LC_F	DUMMY	111.12	0	00:46		
Dummy_LC_G	DUMMY	21.94	0	00:57		
Dummy_LC_H	DUMMY	18.92	0	00:43		
Dummy_LC_I	DUMMY	61.26	0	01:08		
Dummy_OS1	DUMMY	230.99	0	00:58		
Dummy_OS2	DUMMY	55.02	0	00:54		
Dummy_OS3	DUMMY	1831.23	0	01:27		
Dummy_OS4	DUMMY	59.67	0	00:44		
Dummy_OS5	DUMMY	4.20	0	00:46		
Dummy_OS6	DUMMY	26.86	0	00:54		
Dummy_OS7	DUMMY	25.47	0	00:55		
Dummy_Os8	DUMMY	58.70	0	00:43		
Dummy_OS9	DUMMY	136.42	0	01:08		
Dummy_UEC_A	DUMMY	49.42	0	01:02		
Dummy_UEC_B	DUMMY	87.55	0	00:49		
Dummy_UEC_C	DUMMY	12.30	0	00:51		
Dummy_UEC_D	DUMMY	15.19	0	00:48		
Over.Dr_B	CONDUIT	17.69	0	00:48	1.78	0.01
0.05						
Over.LC_B	CONDUIT	2730.59	0	01:40	4.91	0.73
0.82						
Over.LC_C	CONDUIT	24.24	0	00:56	1.35	0.02
0.09						
Over.LC_D	CONDUIT	25.10	0	00:49	0.74	0.05
0.17						
Over.LC_E	CONDUIT	31.58	0	00:50	0.65	0.10
0.24						
Over.LC_F	CONDUIT	110.84	0	00:48	2.54	0.08
0.22						
Over.LC_G	CONDUIT	21.92	0	00:59	1.64	0.01
0.07						

```
  Over.LC_H            CONDUIT      18.83     0  00:46      1.52    0.01
0.06
  Over.UEC_A           CONDUIT     173.94     0  01:24      3.73    0.09
0.23
  Over.UEC_C           CONDUIT      11.27     0  01:06      1.41    0.01
0.04
  Over.UEC_D           CONDUIT      14.16     0  01:09      1.64    0.01
0.04
  Over_LC_A20          CONDUIT      11.35     0  00:51      2.25    0.30
0.64
  Over_OS1             CONDUIT     186.17     0  01:27      2.58    0.07
0.19
  Over_OS2             CONDUIT      49.69     0  01:15      1.78    0.00
0.03
  Over_OS4             CONDUIT      45.43     0  01:04      2.19    0.01
0.04
  Over_OS5             CONDUIT       2.80     0  01:30      0.93    0.00
0.01
  Over_OS8             CONDUIT      44.58     0  01:13      1.60    0.01
0.08
  Over_OS9             CONDUIT     131.62     0  01:22      2.27    0.04
0.15


  *************************
  Conduit Surcharge Summary
  *************************

  No conduits were surcharged.


  Analysis begun on:  Mon Dec 16 16:50:51 2024
  Analysis ended on:  Mon Dec 16 16:50:51 2024
  Total elapsed time: < 1 sec
```

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
  ------------------------------------------------------------

  WARNING 02: maximum depth increased for Node J.B_Main.2

  *************
  Element Count
  *************
  Number of rain gages ...... 0
  Number of subcatchments ... 0
  Number of nodes ........... 136
  Number of links ........... 130
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ************
  Node Summary
  ************
                                          Invert      Max.    Ponded
External
  Name                 Type                Elev.     Depth      Area
Inflow
  ---------------------------------------------------------------------------
--------
  DP.LC_I              JUNCTION          6254.57      6.00       0.0
  DP_LC_A20            JUNCTION          6370.00      6.00       0.0
  DP_LC_A30            JUNCTION          6377.95      6.00       0.0
  DP_LC_B110           JUNCTION          6284.29      3.00       0.0
  DP_LC_B120           JUNCTION          6286.76      6.00       0.0
  DP_LC_B130           JUNCTION          6336.08      3.00       0.0
  DP_LC_B140           JUNCTION          6376.76      2.00       0.0
  DP_LC_B150           JUNCTION          6338.57      2.00       0.0
  DP_LC_B160           JUNCTION          6318.55      2.00       0.0
  DP_LC_B170           JUNCTION          6403.16      2.00       0.0
  DP_LC_B180           JUNCTION          6350.67      2.00       0.0
  DP_LC_B190           JUNCTION          6339.17      2.00       0.0
  DP_LC_B20            JUNCTION          6221.82      5.00       0.0
  DP_LC_B30            JUNCTION          6241.12      5.00       0.0
  DP_LC_B40            JUNCTION          6268.03      5.00       0.0
  DP_LC_B50            JUNCTION          6271.98      5.00       0.0
  DP_LC_B70            JUNCTION          6249.24      4.00       0.0
  DP_LC_B80            JUNCTION          6249.80      3.00       0.0
  DP_LC_B90            JUNCTION          6270.44      2.00       0.0
  DP_LC_C.D            JUNCTION          6244.97      2.00       0.0
  DP_LC_F20            JUNCTION          6229.95      3.00       0.0
  DP_LC_I20            JUNCTION          6276.74      2.00       0.0
  DP_OS_B1             JUNCTION          6293.06      2.00       0.0
  DP_OS_B2             JUNCTION          6289.70      2.00       0.0
  DP_OS1               JUNCTION          6282.45      3.00       0.0
  DP_OS10              JUNCTION          6373.07      3.00       0.0
  DP_OS2               JUNCTION          6313.76      2.50       0.0
  DP_OS3               JUNCTION          6290.51      5.00       0.0
```

DP_OS4	JUNCTION	6420.09	3.50	0.0
DP_OS5	JUNCTION	6440.72	5.00	0.0
DP_OS6	JUNCTION	6428.06	3.00	0.0
DP_OS7	JUNCTION	6392.28	2.00	0.0
DP_OS8	JUNCTION	6393.20	2.50	0.0
DP_OS9	JUNCTION	6359.19	3.00	0.0
DP_UEC_A20	JUNCTION	6377.69	2.00	0.0
DP_UEC_B10	JUNCTION	6307.98	2.00	0.0
DP_UEC_B20	JUNCTION	6314.12	2.00	0.0
DP_UEC_B30	JUNCTION	6367.93	3.00	0.0
DP_UEC_B40	JUNCTION	6362.77	3.00	0.0
Dr_A10	JUNCTION	6347.11	0.00	0.0
Dr_B10	JUNCTION	6329.34	0.00	0.0
J.B_Main.1	JUNCTION	6219.15	5.50	0.0
J.B_Main.2	JUNCTION	6238.37	6.00	0.0
J.B_Main.3	JUNCTION	6258.52	6.00	0.0
J.B_Main.4	JUNCTION	6274.10	6.00	0.0
J.B_Main.5	JUNCTION	6287.43	6.00	0.0
J.B_Side.120	JUNCTION	6287.54	22.07	0.0
J.B_Upper.Main_.2	JUNCTION	6250.19	5.00	0.0
J.B_Upper.Main_1	JUNCTION	6246.00	5.00	0.0
J.UEC_B.1	JUNCTION	6361.65	5.00	0.0
J_LC.G.H	JUNCTION	6212.79	2.00	0.0
J_LC_A10	JUNCTION	6346.58	10.00	0.0
J_LC_A25	JUNCTION	6320.63	3.00	0.0
J_OS1	JUNCTION	6277.94	5.00	0.0
J_OS2	JUNCTION	6310.41	3.00	0.0
J_OS4	JUNCTION	6420.00	5.00	0.0
J_OS6	JUNCTION	6425.61	5.00	0.0
J_OS7	JUNCTION	6388.69	3.00	0.0
J_OS8	JUNCTION	6391.98	2.50	0.0
J_OS9	JUNCTION	6357.73	3.00	0.0
J1	JUNCTION	6355.74	5.00	0.0
J2	JUNCTION	6323.35	5.00	0.0
J3	JUNCTION	6305.72	10.00	0.0
J4	JUNCTION	6298.21	5.00	0.0
LC_A10	JUNCTION	6373.50	0.00	0.0
LC_A20	JUNCTION	6394.79	0.00	0.0
LC_A25	JUNCTION	6358.75	0.00	0.0
LC_A30	JUNCTION	6377.99	0.00	0.0
LC_B10	JUNCTION	6227.60	0.00	0.0
LC_B100	JUNCTION	6278.59	0.00	0.0
LC_B110	JUNCTION	6305.11	0.00	0.0
LC_B120	JUNCTION	6328.08	0.00	0.0
LC_B130	JUNCTION	6376.10	0.00	0.0
LC_B140	JUNCTION	6390.52	0.00	0.0
LC_B150	JUNCTION	6364.46	0.00	0.0
LC_B160	JUNCTION	6354.39	0.00	0.0
LC_B170	JUNCTION	6416.30	0.00	0.0
LC_B180	JUNCTION	6366.21	0.00	0.0
LC_B190	JUNCTION	6345.00	0.00	0.0
LC_B20	JUNCTION	6256.91	0.00	0.0
LC_B30	JUNCTION	6277.65	0.00	0.0
LC_B40	JUNCTION	6309.88	0.00	0.0

LC_B50	JUNCTION	6278.66	0.00	0.0
LC_B60	JUNCTION	6259.78	0.00	0.0
LC_B70	JUNCTION	6284.81	0.00	0.0
LC_B80	JUNCTION	6318.25	0.00	0.0
LC_B90	JUNCTION	6343.74	0.00	0.0
LC_C10	JUNCTION	6267.21	0.00	0.0
LC_D10	JUNCTION	6248.16	0.00	0.0
LC_F10	JUNCTION	6246.12	0.00	0.0
LC_F20	JUNCTION	6250.36	0.00	0.0
LC_G10	JUNCTION	6234.42	0.00	0.0
LC_H10	JUNCTION	6237.87	0.00	0.0
LC_I10	JUNCTION	6269.94	12.56	0.0
LC_I20	JUNCTION	6313.14	0.00	0.0
OS_B1	JUNCTION	6309.16	0.00	0.0
OS_B2	JUNCTION	6309.56	0.00	0.0
OS1	JUNCTION	6349.15	0.00	0.0
OS10	JUNCTION	6392.72	0.00	0.0
OS10_In	JUNCTION	6372.34	3.00	0.0
OS2	JUNCTION	6342.30	0.00	0.0
OS3	JUNCTION	6453.31	0.00	0.0
OS4	JUNCTION	6462.88	0.00	0.0
OS5	JUNCTION	6448.20	0.00	0.0
OS6	JUNCTION	6428.17	0.00	0.0
OS7	JUNCTION	6416.17	0.00	0.0
OS8	JUNCTION	6415.01	0.00	0.0
OS9	JUNCTION	6429.66	0.00	0.0
Out_Dr_A10	JUNCTION	6327.48	2.00	0.0
Out_Dr_B10	JUNCTION	6315.89	2.00	0.0
Out_LC_A10	JUNCTION	6349.20	8.00	0.0
Out_LC_A25	JUNCTION	6322.30	3.00	0.0
Out_LC_B	JUNCTION	6214.77	5.00	0.0
Out_LC_C	JUNCTION	6249.92	5.30	0.0
Out_LC_E	JUNCTION	6245.81	2.00	0.0
Out_LC_F	JUNCTION	6208.99	2.00	0.0
Out_LC_G10	JUNCTION	6212.98	2.00	0.0
Out_LC_H10	JUNCTION	6213.78	2.00	0.0
Out_UEC_A	JUNCTION	6318.87	2.00	0.0
Out_UEC_B	JUNCTION	6302.81	5.00	0.0
Out_UEC_C10	JUNCTION	6327.09	2.00	0.0
Out_UEC_D10	JUNCTION	6344.99	2.00	0.0
UEC_A10	JUNCTION	6349.56	0.00	0.0
UEC_A20	JUNCTION	6402.62	0.00	0.0
UEC_B10	JUNCTION	6351.73	3.12	0.0
UEC_B20	JUNCTION	6362.49	0.00	0.0
UEC_B30	JUNCTION	6398.18	0.00	0.0
UEC_B40	JUNCTION	6375.31	0.00	0.0
UEC_C10	JUNCTION	6357.45	0.00	0.0
UEC_D10	JUNCTION	6349.03	0.00	0.0
Out.Dr	OUTFALL	6303.54	2.00	0.0
Out_C.D	OUTFALL	6244.40	2.00	0.0
Out_LC.B.F	OUTFALL	6201.46	2.00	0.0
Out_LC.G.H	OUTFALL	6202.14	2.00	0.0
Out_LC_I	OUTFALL	6254.31	6.00	0.0
UEC_Out	OUTFALL	6278.95	5.00	0.0

```
  ************
  Link Summary
  ************
  Name              From Node        To Node          Type
Length    %Slope Roughness
  ----------------------------------------------------------------------------
----------------------
  Ch.Dr_A.Main10   Out_Dr_A10       Out_Dr_B10       CONDUIT
927.5    1.2497    0.0320
  Ch.LC_A.Main10   DP_LC_A20        Out_LC_A10       CONDUIT
987.0    2.1077    0.0320
  Ch.LC_A.Side10   J_OS7            OS10_In          CONDUIT
1200.9    1.3615    0.0350
  Ch.LC_A.Side11   OS10_In          Out_LC_A10       CONDUIT
231.0   10.0662    0.0350
  Ch.LC_B.30       DP_LC_B30        DP_LC_F20        CONDUIT
1089.3    1.0255    0.0320
  Ch.LC_B.Side.120 DP_LC_B150       J.B_Side.120     CONDUIT
1404.9    3.6348    0.0320
  Ch.LC_B.Side.121 J.B_Side.120     DP_LC_B120       CONDUIT
1109.0    0.0710    0.0320
  Ch.LC_B.Side.140 DP_LC_B170       DP_LC_B140       CONDUIT
1649.8    1.6009    0.0320
  Ch.Lc_B.Side.150 DP_LC_B140       DP_LC_B150       CONDUIT
947.2    4.0342    0.0320
  Ch.LC_B.Side.160 DP_LC_B180       DP_LC_B160       CONDUIT
1415.2    2.2698    0.0320
  Ch.LC_B.Side.90  DP_LC_B190       DP_LC_B90        CONDUIT
2996.6    2.2943    0.0320
  Ch.LC_B.Side.91  DP_LC_B90        J.B_Main.3       CONDUIT
274.4    4.3486    0.0320
  Ch.LC_B.Side122  DP_LC_B160       DP_LC_B120       CONDUIT
1382.5    2.3006    0.0320
  Ch.LC_B.Side130  DP_LC_B130       J.B_Side.120     CONDUIT
1544.9    3.1432    0.0320
  Ch.LC_B.Side20   DP_LC_B50        DP_LC_B20        CONDUIT
3203.8    1.5660    0.0320
  Ch.LC_B.Side50   J_OS1            DP_LC_B50        CONDUIT
1722.7    0.3457    0.0320
  Ch.LC_B_Side10   DP_LC_B20        Out_LC_B         CONDUIT
1017.1    0.6925    0.0320
  Ch.LC_D.Main10   Out_LC_C         DP_LC_C.D        CONDUIT
502.8    0.9843    0.0320
  Ch.LC_D.Main11   Out_LC_E         DP_LC_C.D        CONDUIT
57.0    1.4747    0.0320
  Ch.LC_G.Main10   Out_LC_G10       J_LC.G.H         CONDUIT
53.8    0.3477    0.0320
  Ch.LC_H.Main10   Out_LC_H10       J_LC.G.H         CONDUIT
144.6    0.6821    0.0320
  Ch.LC_I.Main1    DP_LC_I20        DP.LC_I          CONDUIT
1436.5    1.5439    0.0350
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  Ch.OS_B1          DP_OS_B1          J.B_Main.5        CONDUIT
278.4    2.0240    0.0320
  Ch.OS_B2          DP_OS_B2          J.B_Upper.Main_.2 CONDUIT
1186.2    3.3324    0.0320
  Ch.OS2            J_OS2             J.B_Upper.Main_.2 CONDUIT
2743.3    2.1958    0.0320
  Ch.UEC_A.Main10   J_OS9             Out_UEC_A         CONDUIT
2802.5    1.3865    0.0350
  Ch.UEC_A.Main11   Out_UEC_A         DP_UEC_B10        CONDUIT
503.3    2.1648    0.0320
  Ch.UEC_A.Main20   DP_UEC_A20        J_OS9             CONDUIT
669.7    2.9830    0.0320
  Ch.UEC_B          Out_UEC_B         UEC_Out           CONDUIT
2023.0    1.1797    0.0320
  Ch.UEC_B.Main10   J.UEC_B.1         Out_UEC_B         CONDUIT
1999.1    2.9446    0.0320
  Ch.UEC_B.Side10   DP_UEC_B10       Out_UEC_B         CONDUIT
106.0    4.8828    0.0320
  Ch.UEC_B.Side20   DP_UEC_B20       Out_UEC_B         CONDUIT
185.5    6.1092    0.0320
  Ch.UEC_C.Main10   Out_UEC_C10      DP_UEC_B20        CONDUIT
776.8    1.6701    0.0320
  Ch.UEC_D.Main10   Out_UEC_D10      Out_UEC_C10       CONDUIT
996.7    1.7957    0.0320
  CH_1              J1                J2                CONDUIT
2593.7    1.2488    0.0320
  Ch_2              J2                J3                CONDUIT
1678.2    1.0507    0.0320
  Ch_3              J3                J4                CONDUIT
973.6    0.7710    0.0320
  Ch_4              J4                DP_OS3            CONDUIT
998.0    0.7716    0.0320
  Ch_LC_A10         J_LC_A10          J3                CONDUIT
1414.2    2.8909    0.0320
  Ch_Main_1         J.B_Main.1        Out_LC_B          CONDUIT
338.2    1.2946    0.0320
  Ch_Main_2         J.B_Main.2        J.B_Main.1        CONDUIT
3347.0    0.5741    0.0320
  Ch_Main_3         J.B_Main.3        J.B_Main.2        CONDUIT
1567.9    1.2853    0.0320
  Ch_Main_4         J.B_Main.4        J.B_Main.3        CONDUIT
1664.6    0.9360    0.0320
  Ch_Main_5         J.B_Main.5        J.B_Main.4        CONDUIT
1845.4    0.7223    0.0320
  Ch_Main_6         DP_OS3            J.B_Main.5        CONDUIT
608.4    0.5064    0.0320
  Ch_OS10           DP_OS10           OS10_In           CONDUIT
19.2    3.7992    0.0350
  Ch_OS6            J_OS6             J2                CONDUIT
2634.9    3.8840    0.0350
  Ch_Upper.Main_1   J.B_Upper.Main_1  Out_LC_B          CONDUIT
3730.9    0.8371    0.0320
  Ch_Upper.Main_2   J.B_Upper.Main_.2 J.B_Upper.Main_1  CONDUIT
1106.1    0.3784    0.0320
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  Culv_LC_A10      Out_LC_A10       J_LC_A10         CONDUIT
120.5    2.1763    0.0130
  Culv_LC_A20      Out_LC_A25       J_LC_A25         CONDUIT
61.7     2.7100    0.0130
  Culv_OS1         DP_OS1           J_OS1            CONDUIT
67.5     6.6934    0.0240
  Culv_OS2         DP_OS2           J_OS2            CONDUIT
79.1     4.2307    0.0240
  Culv_OS4         DP_OS4           J_OS4            CONDUIT
87.0     0.1068    0.0130
  Culv_OS6         DP_OS6           J_OS6            CONDUIT
82.4     2.9775    0.0130
  Culv_OS7         DP_OS7           J_OS7            CONDUIT
99.0     3.6291    0.0240
  Culv_OS8         DP_OS8           J_OS8            CONDUIT
114.8    1.0631    0.0240
  Culv_OS9         DP_OS9           J_OS9            CONDUIT
93.8     1.5617    0.0210
  Dummy_Dr_A10     Dr_A10           Out_Dr_A10       CONDUIT
1154.7    1.7000    0.0100
  Dummy_Dr_B10     Dr_B10           Out_Dr_B10       CONDUIT
641.3    2.0983    0.0100
  Dummy_LC_A10     LC_A10           Out_LC_A10       CONDUIT
577.6    4.2097    0.0100
  Dummy_LC_A20     LC_A20           DP_LC_A20        CONDUIT
621.2    3.9942    0.0100
  Dummy_LC_A25     LC_A25           Out_LC_A25       CONDUIT
613.0    5.9554    0.0100
  Dummy_LC_A30     LC_A30           DP_LC_A30        CONDUIT
340.9    0.0135    0.0100
  Dummy_LC_B10     LC_B10           Out_LC_B         CONDUIT
1888.7    0.6793    0.0100
  Dummy_LC_B100    LC_B100          J.B_Main.4       CONDUIT
637.0    0.7044    0.0100
  Dummy_LC_B110    LC_B110          DP_LC_B110       CONDUIT
685.6    3.0385    0.0100
  Dummy_LC_B120    LC_B120          DP_LC_B120       CONDUIT
1132.3    3.6524    0.0100
  Dummy_LC_B130    LC_B130          DP_LC_B130       CONDUIT
1211.0    3.3062    0.0100
  Dummy_LC_B140    LC_B140          DP_LC_B140       CONDUIT
685.1    2.0096    0.0100
  Dummy_LC_B150    LC_B150          DP_LC_B150       CONDUIT
770.6    3.3608    0.0100
  Dummy_LC_B160    LC_B160          DP_LC_B160       CONDUIT
826.2    4.3415    0.0100
  Dummy_LC_B170    LC_B170          DP_LC_B170       CONDUIT
500.4    2.6261    0.0100
  Dummy_LC_B180    LC_B180          DP_LC_B180       CONDUIT
945.1    1.6444    0.0100
  Dummy_LC_B190    LC_B190          DP_LC_B190       CONDUIT
560.4    1.0402    0.0100
  Dummy_LC_B20     LC_B20           DP_LC_B20        CONDUIT
2209.8    1.5882    0.0100
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  Dummy_LC_B30     LC_B30           DP_LC_B30        CONDUIT
886.1    4.1255    0.0100
  Dummy_LC_B40     LC_B40           DP_LC_B40        CONDUIT
1126.6    3.7169    0.0100
  Dummy_LC_B50     LC_B50           DP_LC_B50        CONDUIT
1140.0    0.5861    0.0100
  Dummy_LC_B60     LC_B60           J.B_Main.2       CONDUIT
1522.6    1.4066    0.0100
  Dummy_LC_B70     LC_B70           DP_LC_B70        CONDUIT
1947.8    1.8267    0.0100
  Dummy_LC_B80     LC_B80           DP_LC_B80        CONDUIT
1370.6    5.0007    0.0100
  Dummy_LC_B90     LC_B90           DP_LC_B90        CONDUIT
1477.3    4.9680    0.0100
  Dummy_LC_C10     LC_C10           Out_LC_C         CONDUIT
1192.4    1.4501    0.0100
  Dummy_LC_D10     LC_D10           Out_LC_E         CONDUIT
608.2    0.3861    0.0100
  Dummy_LC_F10     LC_F10           Out_LC_F         CONDUIT
1188.1    3.1263    0.0100
  Dummy_LC_F20     LC_F20           DP_LC_F20        CONDUIT
309.1    6.6180    0.0100
  Dummy_LC_G10     LC_G10           Out_LC_G10       CONDUIT
797.2    2.6904    0.0100
  Dummy_LC_H10     LC_H10           Out_LC_H10       CONDUIT
546.2    4.4143    0.0100
  Dummy_LC_I10     LC_I10           DP.LC_I          CONDUIT
1196.0    1.2855    0.0100
  Dummy_LC_I20     LC_I20           DP_LC_I20        CONDUIT
1520.7    2.3941    0.0100
  Dummy_OS_B1      OS_B1            DP_OS_B1         CONDUIT
388.8    4.1459    0.0100
  Dummy_OS_B2      OS_B2            DP_OS_B2         CONDUIT
836.3    2.3765    0.0100
  Dummy_OS1        OS1              DP_OS1           CONDUIT
3482.0    1.9161    0.0100
  Dummy_OS10       OS10             DP_OS10          CONDUIT
460.8    4.2688    0.0100
  Dummy_OS2        OS2              DP_OS2           CONDUIT
1242.8    2.2974    0.0100
  Dummy_OS3        OS3              DP_OS3           CONDUIT
9018.4    1.8056    0.0100
  Dummy_OS4        OS4              DP_OS4           CONDUIT
811.6    5.2783    0.0100
  Dummy_OS5        OS5              DP_OS5           CONDUIT
395.2    1.8938    0.0100
  Dummy_OS6        OS6              DP_OS6           CONDUIT
1040.0    0.0101    0.0100
  Dummy_OS7        OS7              DP_OS7           CONDUIT
657.7    3.6352    0.0100
  Dummy_Os8        OS8              DP_OS8           CONDUIT
393.2    5.5555    0.0100
  Dummy_OS9        OS9              DP_OS9           CONDUIT
2515.8    2.8023    0.0100
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  Dummy_UEC_A10    UEC_A10          Out_UEC_A        CONDUIT
1521.5    2.0172    0.0100
  Dummy_UEC_A20    UEC_A20          DP_UEC_A20       CONDUIT
440.2     5.6715    0.0100
  Dummy_UEC_B      UEC_B10          DP_UEC_B10       CONDUIT
1883.2    2.3236    0.0100
  Dummy_UEC_B20    UEC_B20          DP_UEC_B20       CONDUIT
1490.5    3.2471    0.0100
  Dummy_UEC_B30    UEC_B30          DP_UEC_B30       CONDUIT
640.4     4.7294    0.0100
  Dummy_UEC_B40    UEC_B40          DP_UEC_B40       CONDUIT
380.6     3.2948    0.0100
  Dummy_UEC_C10    UEC_C10          Out_UEC_C10      CONDUIT
695.7     4.3682    0.0100
  Dummy_UEC_D10    UEC_D10          Out_UEC_D10      CONDUIT
352.4     1.1481    0.0100
  Over.Dr_B        Out_Dr_B10       Out.Dr           CONDUIT
369.4     3.3442    0.0350
  Over.LC.G        J_LC.G.H         Out_LC.G.H       CONDUIT
480.7     2.2179    0.0350
  Over.LC_B        Out_LC_B         Out_LC.B.F       CONDUIT
886.1     1.5033    0.0350
  Over.LC_D        DP_LC_C.D        Out_C.D          CONDUIT
131.0     0.4351    0.0350
  Over.LC_F        Out_LC_F         Out_LC.B.F       CONDUIT
684.7     1.1008    0.0350
  Over_LC_A25      J_LC_A25         J4               CONDUIT
707.8     3.1696    0.0350
  Over_OS4         J_OS4            J1               CONDUIT
3674.0    1.7494    0.0350
  Over_OS5         DP_OS5           J1               CONDUIT
3464.9    2.4535    0.0300
  Over_OS8_1       J_OS8            DP_LC_A30        CONDUIT
1266.5    1.1078    0.0350
  Pipe.LC_A.20     DP_LC_A30        DP_LC_A20        CONDUIT
2307.6    0.3444    0.0130
  Pipe.LC_B.110    DP_LC_B110       J.B_Main.4       CONDUIT
586.5     1.7379    0.0130
  Pipe.LC_B.120    DP_LC_B120       J.B_Main.4       CONDUIT
524.8     2.4125    0.0130
  Pipe.LC_B.40     DP_LC_B40        DP_LC_B30        CONDUIT
1334.5    2.0169    0.0130
  Pipe.LC_B.70     DP_LC_B70        J.B_Upper.Main_1 CONDUIT
256.9     1.2598    0.0130
  Pipe.LC_B.80     DP_LC_B80        J.B_Main.2       CONDUIT
242.8     4.7145    0.0130
  Pipe.LC_F.10     DP_LC_F20        J.B_Main.1       CONDUIT
1284.8    0.8406    0.0320
  Pipe.LC_I        DP.LC_I          Out_LC_I         CONDUIT
53.1    0.4805    0.0130
  Pipe.UEC_B.30    DP_UEC_B30       J.UEC_B.1        CONDUIT
126.5     4.9680    0.0130
  Pipe.UEC_B40     DP_UEC_B40       J.UEC_B.1        CONDUIT
141.4     0.7923    0.0130
```

```
  **********
  Cross Section Summary
  **********
                                        Full     Full     Hyd.     Max.
No. of     Full
  Conduit          Shape               Depth     Area     Rad.    Width
Barrels     Flow
  ---------------------------------------------------------------------
---------------
  Ch.Dr_A.Main10   TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   229.28
  Ch.LC_A.Main10   TRAPEZOIDAL         5.00   225.00     3.40    65.00
1  3427.98
  Ch.LC_A.Side10   TRAPEZOIDAL         3.00    66.00     1.90    34.00
1   501.56
  Ch.LC_A.Side11   TRAPEZOIDAL         3.00    66.00     1.90    34.00
1  1363.79
  Ch.LC_B.30       TRAPEZOIDAL         3.00    81.00     2.04    39.00
1   612.34
  Ch.LC_B.Side.120 TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   391.02
  Ch.LC_B.Side.121 TRAPEZOIDAL         3.00    81.00     2.04    39.00
1   161.09
  Ch.LC_B.Side.140 TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   259.50
  Ch.Lc_B.Side.150 TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   411.94
  Ch.LC_B.Side.160 TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   309.00
  Ch.LC_B.Side.90  TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   310.66
  Ch.LC_B.Side.91  TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   427.70
  Ch.LC_B.Side122  TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   311.09
  Ch.LC_B.Side130  TRAPEZOIDAL         3.00    66.00     1.90    34.00
1   833.53
  Ch.LC_B.Side20   RECT_OPEN           2.00   400.00     1.96   200.00
1  3641.46
  Ch.LC_B.Side50   TRAPEZOIDAL         5.00   225.00     3.40    65.00
1  1388.25
  Ch.LC_B_Side10   TRAPEZOIDAL         5.00   225.00     3.40    65.00
1  1964.97
  Ch.LC_D.Main10   TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   203.48
  Ch.LC_D.Main11   TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   249.06
  Ch.LC_G.Main10   TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   120.93
  Ch.LC_H.Main10   TRAPEZOIDAL         2.00    36.00     1.36    26.00
1   169.38
```

Ch.LC_I.Main1	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 232.99
Ch.OS_B1	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 291.78
Ch.OS_B2	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 374.40
Ch.OS2	TRAPEZOIDAL	3.00	66.00	1.90	34.00	1 696.68
Ch.UEC_A.Main10	RECT_OPEN	2.00	400.00	1.96	200.00	1 3132.77
Ch.UEC_A.Main11	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 301.76
Ch.UEC_A.Main20	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 354.23
Ch.UEC_B	TRAPEZOIDAL	5.00	350.00	3.84	90.00	1 4326.21
Ch.UEC_B.Main10	TRAPEZOIDAL	5.00	225.00	3.40	65.00	1 4051.76
Ch.UEC_B.Side10	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 453.20
Ch.UEC_B.Side20	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 506.94
Ch.UEC_C.Main10	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 265.05
Ch.UEC_D.Main10	TRAPEZOIDAL	2.00	36.00	1.36	26.00	1 274.84
CH_1	TRAPEZOIDAL	5.00	375.00	3.71	100.00	1 4666.46
Ch_2	TRAPEZOIDAL	5.00	375.00	3.71	100.00	1 4280.31
Ch_3	TRAPEZOIDAL	5.00	375.00	3.71	100.00	1 3666.59
Ch_4	TRAPEZOIDAL	5.00	375.00	3.71	100.00	1 3668.12
Ch_LC_A10	TRAPEZOIDAL	10.00	900.00	6.34	140.00	1 24339.02
Ch_Main_1	TRIANGULAR	5.00	375.00	2.49	150.00	1 3644.29
Ch_Main_2	TRIANGULAR	5.50	412.50	2.74	150.00	1 2843.80
Ch_Main_3	TRIANGULAR	6.00	300.00	2.98	100.00	1 3269.68
Ch_Main_4	TRIANGULAR	6.00	300.00	2.98	100.00	1 2790.18
Ch_Main_5	TRIANGULAR	6.00	300.00	2.98	100.00	1 2451.08
Ch_Main_6	TRAPEZOIDAL	5.00	400.00	3.95	100.00	1 3303.73
Ch_OS10	TRAPEZOIDAL	3.00	66.00	1.90	34.00	1 837.84
Ch_OS6	TRIANGULAR	5.00	500.00	2.50	200.00	1 7700.00
Ch_Upper.Main_1	TRIANGULAR	5.00	125.00	2.45	50.00	1 965.54

```
  Ch_Upper.Main_2  TRIANGULAR          5.00   125.00     2.45    50.00
1   649.23
  Culv_LC_A10      RECT_CLOSED         8.00    48.00     1.71     6.00
1  1159.39
  Culv_LC_A20      RECT_CLOSED         3.00     9.00     0.75     3.00
1   139.80
  Culv_OS1         CIRCULAR            3.00     7.07     0.75     3.00
3    93.47
  Culv_OS2         CIRCULAR            2.50     4.91     0.62     2.50
2    45.70
  Culv_OS4         CIRCULAR            3.50     9.62     0.88     3.50
2    32.88
  Culv_OS6         CIRCULAR            3.00     7.07     0.75     3.00
2   115.09
  Culv_OS7         CIRCULAR            2.00     3.14     0.50     2.00
3    23.34
  Culv_OS8         CIRCULAR            2.50     4.91     0.62     2.50
3    22.91
  Culv_OS9         CIRCULAR            3.00     7.07     0.75     3.00
3    51.60
  Dummy_Dr_A10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_Dr_B10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A20     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A25     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A30     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B100    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B110    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B120    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B130    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B140    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B150    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B160    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B170    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B180    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B190    DUMMY               0.00     0.00     0.00     0.00
1     0.00
```

```
  Dummy_LC_B20     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B30     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B40     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B50     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B60     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B70     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B80     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B90     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_C10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_D10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F20     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_G10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_H10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I10     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I20     DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS_B1      DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS_B2      DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS1        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS10       DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS2        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS3        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS4        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS5        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS6        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS7        DUMMY                0.00     0.00     0.00     0.00
1     0.00
  Dummy_Os8        DUMMY                0.00     0.00     0.00     0.00
1     0.00
```

```
  Dummy_OS9        DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_A10    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_A20    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B      DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B20    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B30    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B40    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_C10    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_D10    DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Over.Dr_B        RECT_OPEN          2.00   200.00     1.92   100.00
1  2401.37
  Over.LC.G        RECT_OPEN          2.00   200.00     1.92   100.00
1  1955.60
  Over.LC_B        RECT_OPEN          1.50   675.00     1.49   450.00
1  4584.09
  Over.LC_D        RECT_OPEN          2.00   200.00     1.92   100.00
1   866.20
  Over.LC_F        RECT_OPEN          2.00   200.00     1.92   100.00
1  1377.75
  Over_LC_A25      TRAPEZOIDAL        0.50    23.50     0.48    49.00
1   108.65
  Over_OS4         TRAPEZOIDAL        5.00   600.00     4.25   140.00
1  8838.21
  Over_OS5         RECT_OPEN          5.00   500.00     4.55   100.00
1 10645.06
  Over_OS8_1       RECT_OPEN          2.00   400.00     1.96   200.00
1  2800.25
  Pipe.LC_A.20     CIRCULAR           6.00    28.27     1.50     6.00
1   248.55
  Pipe.LC_B.110    CIRCULAR           3.00     7.07     0.75     3.00
1    87.93
  Pipe.LC_B.120    CIRCULAR           6.00    28.27     1.50     6.00
1   657.81
  Pipe.LC_B.40     CIRCULAR           5.00    19.63     1.25     5.00
1   369.87
  Pipe.LC_B.70     CIRCULAR           4.00    12.57     1.00     4.00
1   161.22
  Pipe.LC_B.80     CIRCULAR           3.00     7.07     0.75     3.00
1   144.82
  Pipe.LC_F.10     TRAPEZOIDAL        3.00    81.00     2.04    39.00
1   554.40
  Pipe.LC_I        CIRCULAR           6.00    28.27     1.50     6.00
1   293.56
  Pipe.UEC_B.30    CIRCULAR           3.00     7.07     0.75     3.00
1   148.66
```

```
  Pipe.UEC_B40     CIRCULAR             3.00     7.07     0.75     3.00
1    59.37


  ****************
  Analysis Options
  ****************
  Flow Units ............... CFS
  Process Models:
    Rainfall/Runoff ........ NO
    RDII ................... NO
    Snowmelt ............... NO
    Groundwater ............ NO
    Flow Routing ........... YES
    Ponding Allowed ........ NO
    Water Quality .......... NO
  Flow Routing Method ...... KINWAVE
  Starting Date ............ 01/01/2024 00:00:00
  Ending Date .............. 01/02/2024 00:00:00
  Antecedent Dry Days ...... 0.0
  Report Time Step ......... 00:01:00
  Routing Time Step ........ 5.00 sec


  **************************        Volume        Volume
  Flow Routing Continuity        acre-feet      10^6 gal
  **************************     ---------     ---------
  Dry Weather Inflow .......         0.000         0.000
  Wet Weather Inflow .......         0.000         0.000
  Groundwater Inflow .......         0.000         0.000
  RDII Inflow ..............         0.000         0.000
  External Inflow ..........        88.025        28.684
  External Outflow .........        90.411        29.462
  Flooding Loss ............         0.000         0.000
  Evaporation Loss .........         0.000         0.000
  Exfiltration Loss ........         0.000         0.000
  Initial Stored Volume ....         0.000         0.000
  Final Stored Volume ......         0.045         0.015
  Continuity Error (%) .....        -2.762


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  ************************
  Routing Time Step Summary
  ************************
  Minimum Time Step           :     5.00 sec
  Average Time Step           :     5.00 sec
  Maximum Time Step           :     5.00 sec
  % of Time in Steady State   :     0.00
```

```
  Average Iterations per Step :     1.00
  % of Steps Not Converging   :     0.00


  ******************
  Node Depth Summary
  ******************

  ---------------------------------------------------------------------------
----------
                                 Average  Maximum  Maximum  Time of Max
Reported
                                   Depth    Depth      HGL   Occurrence
Max Depth
  Node                 Type         Feet     Feet     Feet  days hr:min
Feet
  ---------------------------------------------------------------------------
----------
  DP.LC_I              JUNCTION     0.13     1.84  6256.40     0  00:37
1.83
  DP_LC_A20            JUNCTION     0.13     1.77  6371.77     0  00:35
1.77
  DP_LC_A30            JUNCTION     0.12     1.83  6379.78     0  00:31
1.83
  DP_LC_B110           JUNCTION     0.06     0.81  6285.10     0  00:33
0.81
  DP_LC_B120           JUNCTION     0.15     1.54  6288.30     0  00:44
1.54
  DP_LC_B130           JUNCTION     0.03     0.32  6336.40     0  00:41
0.32
  DP_LC_B140           JUNCTION     0.02     0.29  6377.04     0  00:34
0.29
  DP_LC_B150           JUNCTION     0.03     0.45  6339.02     0  00:35
0.45
  DP_LC_B160           JUNCTION     0.04     0.83  6319.38     0  00:33
0.83
  DP_LC_B170           JUNCTION     0.01     0.12  6403.28     0  00:35
0.12
  DP_LC_B180           JUNCTION     0.03     0.59  6351.25     0  00:31
0.58
  DP_LC_B190           JUNCTION     0.03     0.69  6339.86     0  00:30
0.69
  DP_LC_B20            JUNCTION     0.07     0.55  6222.37     0  01:06
0.55
  DP_LC_B30            JUNCTION     0.09     1.44  6242.56     0  00:35
1.44
  DP_LC_B40            JUNCTION     0.08     1.44  6269.47     0  00:34
1.44
  DP_LC_B50            JUNCTION     0.03     0.28  6272.26     0  01:10
0.28
  DP_LC_B70            JUNCTION     0.10     1.26  6250.50     0  00:38
1.26
  DP_LC_B80            JUNCTION     0.08     0.84  6250.64     0  00:41
0.84
```

DP_LC_B90	JUNCTION	0.05	0.74	6271.18	0	00:37
0.74						
DP_LC_C.D	JUNCTION	0.03	0.58	6245.55	0	00:34
0.58						
DP_LC_F20	JUNCTION	0.06	1.13	6231.08	0	00:38
1.13						
DP_LC_I20	JUNCTION	0.04	0.74	6277.48	0	00:34
0.74						
DP_OS_B1	JUNCTION	0.00	0.02	6293.08	0	00:32
0.02						
DP_OS_B2	JUNCTION	0.00	0.05	6289.75	0	00:33
0.05						
DP_OS1	JUNCTION	0.04	0.37	6282.82	0	00:51
0.37						
DP_OS10	JUNCTION	0.01	0.07	6373.14	0	00:36
0.07						
DP_OS2	JUNCTION	0.05	0.44	6314.20	0	00:48
0.44						
DP_OS3	JUNCTION	0.09	0.81	6291.31	0	01:08
0.81						
DP_OS4	JUNCTION	0.02	0.38	6420.47	0	00:36
0.38						
DP_OS5	JUNCTION	0.00	0.01	6440.73	0	00:36
0.01						
DP_OS6	JUNCTION	0.01	0.10	6428.16	0	00:45
0.10						
DP_OS7	JUNCTION	0.02	0.22	6392.50	0	00:45
0.22						
DP_OS8	JUNCTION	0.03	0.41	6393.61	0	00:34
0.41						
DP_OS9	JUNCTION	0.04	0.32	6359.52	0	00:56
0.32						
DP_UEC_A20	JUNCTION	0.02	0.26	6377.96	0	00:32
0.26						
DP_UEC_B10	JUNCTION	0.07	0.66	6308.64	0	00:36
0.66						
DP_UEC_B20	JUNCTION	0.04	0.57	6314.69	0	00:35
0.57						
DP_UEC_B30	JUNCTION	0.04	0.76	6368.69	0	00:30
0.76						
DP_UEC_B40	JUNCTION	0.03	0.59	6363.36	0	00:30
0.59						
Dr_A10	JUNCTION	0.00	0.00	6347.11	0	00:00
0.00						
Dr_B10	JUNCTION	0.00	0.00	6329.34	0	00:00
0.00						
J.B_Main.1	JUNCTION	0.43	2.28	6221.44	0	01:19
2.28						
J.B_Main.2	JUNCTION	0.42	2.33	6240.69	0	01:06
2.33						
J.B_Main.3	JUNCTION	0.43	2.33	6260.85	0	01:02
2.33						
J.B_Main.4	JUNCTION	0.42	2.33	6276.43	0	00:59
2.33						

J.B_Main.5	JUNCTION	0.37	2.06	6289.48	0	01:09
2.06						
J.B_Side.120	JUNCTION	0.11	1.38	6288.92	0	00:40
1.38						
J.B_Upper.Main_.2	JUNCTION	0.14	0.88	6251.07	0	01:03
0.88						
J.B_Upper.Main_1	JUNCTION	0.21	1.44	6247.44	0	00:38
1.44						
J.UEC_B.1	JUNCTION	0.04	0.76	6362.41	0	00:30
0.76						
J_LC.G.H	JUNCTION	0.05	0.75	6213.54	0	00:35
0.75						
J_LC_A10	JUNCTION	0.06	1.08	6347.66	0	00:36
1.08						
J_LC_A25	JUNCTION	0.03	0.53	6321.16	0	00:32
0.53						
J_OS1	JUNCTION	0.04	0.37	6278.31	0	00:51
0.37						
J_OS2	JUNCTION	0.05	0.44	6310.86	0	00:48
0.44						
J_OS4	JUNCTION	0.02	0.38	6420.38	0	00:36
0.38						
J_OS6	JUNCTION	0.02	0.13	6425.74	0	00:45
0.13						
J_OS7	JUNCTION	0.02	0.22	6388.91	0	00:46
0.22						
J_OS8	JUNCTION	0.03	0.41	6392.39	0	00:34
0.41						
J_OS9	JUNCTION	0.04	0.32	6358.05	0	00:56
0.32						
J1	JUNCTION	0.01	0.03	6355.77	0	01:34
0.03						
J2	JUNCTION	0.02	0.12	6323.47	0	01:16
0.12						
J3	JUNCTION	0.05	0.61	6306.33	0	00:39
0.61						
J4	JUNCTION	0.05	0.66	6298.87	0	00:43
0.66						
LC_A10	JUNCTION	0.00	0.00	6373.50	0	00:00
0.00						
LC_A20	JUNCTION	0.00	0.00	6394.79	0	00:00
0.00						
LC_A25	JUNCTION	0.00	0.00	6358.75	0	00:00
0.00						
LC_A30	JUNCTION	0.00	0.00	6377.99	0	00:00
0.00						
LC_B10	JUNCTION	0.00	0.00	6227.60	0	00:00
0.00						
LC_B100	JUNCTION	0.00	0.00	6278.59	0	00:00
0.00						
LC_B110	JUNCTION	0.00	0.00	6305.11	0	00:00
0.00						
LC_B120	JUNCTION	0.00	0.00	6328.08	0	00:00
0.00						

LC_B130	JUNCTION	0.00	0.00	6376.10	0	00:00
0.00						
LC_B140	JUNCTION	0.00	0.00	6390.52	0	00:00
0.00						
LC_B150	JUNCTION	0.00	0.00	6364.46	0	00:00
0.00						
LC_B160	JUNCTION	0.00	0.00	6354.39	0	00:00
0.00						
LC_B170	JUNCTION	0.00	0.00	6416.30	0	00:00
0.00						
LC_B180	JUNCTION	0.00	0.00	6366.21	0	00:00
0.00						
LC_B190	JUNCTION	0.00	0.00	6345.00	0	00:00
0.00						
LC_B20	JUNCTION	0.00	0.00	6256.91	0	00:00
0.00						
LC_B30	JUNCTION	0.00	0.00	6277.65	0	00:00
0.00						
LC_B40	JUNCTION	0.00	0.00	6309.88	0	00:00
0.00						
LC_B50	JUNCTION	0.00	0.00	6278.66	0	00:00
0.00						
LC_B60	JUNCTION	0.00	0.00	6259.78	0	00:00
0.00						
LC_B70	JUNCTION	0.00	0.00	6284.81	0	00:00
0.00						
LC_B80	JUNCTION	0.00	0.00	6318.25	0	00:00
0.00						
LC_B90	JUNCTION	0.00	0.00	6343.74	0	00:00
0.00						
LC_C10	JUNCTION	0.00	0.00	6267.21	0	00:00
0.00						
LC_D10	JUNCTION	0.00	0.00	6248.16	0	00:00
0.00						
LC_F10	JUNCTION	0.00	0.00	6246.12	0	00:00
0.00						
LC_F20	JUNCTION	0.00	0.00	6250.36	0	00:00
0.00						
LC_G10	JUNCTION	0.00	0.00	6234.42	0	00:00
0.00						
LC_H10	JUNCTION	0.00	0.00	6237.87	0	00:00
0.00						
LC_I10	JUNCTION	0.00	0.00	6269.94	0	00:00
0.00						
LC_I20	JUNCTION	0.00	0.00	6313.14	0	00:00
0.00						
OS_B1	JUNCTION	0.00	0.00	6309.16	0	00:00
0.00						
OS_B2	JUNCTION	0.00	0.00	6309.56	0	00:00
0.00						
OS1	JUNCTION	0.00	0.00	6349.15	0	00:00
0.00						
OS10	JUNCTION	0.00	0.00	6392.72	0	00:00
0.00						

OS10_In	JUNCTION	0.02	0.13	6372.47	0	01:00
0.13						
OS2	JUNCTION	0.00	0.00	6342.30	0	00:00
0.00						
OS3	JUNCTION	0.00	0.00	6453.31	0	00:00
0.00						
OS4	JUNCTION	0.00	0.00	6462.88	0	00:00
0.00						
OS5	JUNCTION	0.00	0.00	6448.20	0	00:00
0.00						
OS6	JUNCTION	0.00	0.00	6428.17	0	00:00
0.00						
OS7	JUNCTION	0.00	0.00	6416.17	0	00:00
0.00						
OS8	JUNCTION	0.00	0.00	6415.01	0	00:00
0.00						
OS9	JUNCTION	0.00	0.00	6429.66	0	00:00
0.00						
Out_Dr_A10	JUNCTION	0.04	0.69	6328.17	0	00:35
0.69						
Out_Dr_B10	JUNCTION	0.05	0.69	6316.58	0	00:38
0.69						
Out_LC_A10	JUNCTION	0.06	1.08	6350.28	0	00:36
1.08						
Out_LC_A25	JUNCTION	0.03	0.53	6322.83	0	00:32
0.53						
Out_LC_B	JUNCTION	0.37	2.00	6216.77	0	01:17
2.00						
Out_LC_C	JUNCTION	0.03	0.58	6250.50	0	00:33
0.58						
Out_LC_E	JUNCTION	0.02	0.37	6246.18	0	00:36
0.37						
Out_LC_F	JUNCTION	0.01	0.26	6209.26	0	00:32
0.26						
Out_LC_G10	JUNCTION	0.05	0.75	6213.73	0	00:35
0.75						
Out_LC_H10	JUNCTION	0.02	0.29	6214.07	0	00:32
0.29						
Out_UEC_A	JUNCTION	0.07	0.61	6319.48	0	00:37
0.61						
Out_UEC_B	JUNCTION	0.06	0.66	6303.47	0	00:36
0.66						
Out_UEC_C10	JUNCTION	0.03	0.51	6327.60	0	00:36
0.51						
Out_UEC_D10	JUNCTION	0.02	0.31	6345.29	0	00:32
0.31						
UEC_A10	JUNCTION	0.00	0.00	6349.56	0	00:00
0.00						
UEC_A20	JUNCTION	0.00	0.00	6402.62	0	00:00
0.00						
UEC_B10	JUNCTION	0.00	0.00	6351.73	0	00:00
0.00						
UEC_B20	JUNCTION	0.00	0.00	6362.49	0	00:00
0.00						

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  UEC_B30              JUNCTION     0.00     0.00  6398.18     0  00:00
0.00
  UEC_B40              JUNCTION     0.00     0.00  6375.31     0  00:00
0.00
  UEC_C10              JUNCTION     0.00     0.00  6357.45     0  00:00
0.00
  UEC_D10              JUNCTION     0.00     0.00  6349.03     0  00:00
0.00
  Out.Dr               OUTFALL      0.01     0.17  6303.71     0  00:38
0.17
  Out_C.D              OUTFALL      0.02     0.27  6244.67     0  00:36
0.27
  Out_LC.B.F           OUTFALL      0.04     0.34  6201.79     0  01:20
0.34
  Out_LC.G.H           OUTFALL      0.01     0.14  6202.28     0  00:38
0.14
  Out_LC_I             OUTFALL      0.13     1.84  6256.15     0  00:37
1.83
  UEC_Out              OUTFALL      0.05     0.64  6279.59     0  00:43
0.64


  ********************
  Node Inflow Summary
  ********************

  ------------------------------------------------------------------------
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                                  Maximum  Maximum
Lateral       Total        Flow
                                  Lateral    Total  Time of Max
Inflow      Inflow     Balance
                                   Inflow   Inflow   Occurrence
Volume      Volume       Error
  Node                Type           CFS      CFS  days hr:min    10^6
gal    10^6 gal     Percent
  ------------------------------------------------------------------------
--------------------------
  DP.LC_I              JUNCTION      0.00    59.67     0  00:37
0        1.63       0.000
  DP_LC_A20            JUNCTION      0.00    69.17     0  00:34
0        1.69       0.000
  DP_LC_A30            JUNCTION      0.00    50.19     0  00:31
0        1.07       0.000
  DP_LC_B110           JUNCTION      0.00    14.08     0  00:33
0       0.416      -0.000
  DP_LC_B120           JUNCTION      0.00    95.10     0  00:44
0        3.25      -0.000
  DP_LC_B130           JUNCTION      0.00    12.69     0  00:41
0       0.566       0.000
  DP_LC_B140           JUNCTION      0.00    12.16     0  00:34
0       0.376       0.000
  DP_LC_B150           JUNCTION      0.00    24.94     0  00:35
0       0.738       0.000
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  DP_LC_B160          JUNCTION      0.00    58.85     0  00:33
0        1.26       0.000
  DP_LC_B170          JUNCTION      0.00     1.71     0  00:35
0      0.0632       0.000
  DP_LC_B180          JUNCTION      0.00    31.29     0  00:31
0       0.645       0.000
  DP_LC_B190          JUNCTION      0.00    41.78     0  00:30
0       0.696       0.000
  DP_LC_B20           JUNCTION      0.00    36.77     0  01:06
0         1.9       0.000
  DP_LC_B30           JUNCTION      0.00    86.82     0  00:34
0        2.08       0.000
  DP_LC_B40           JUNCTION      0.00    66.69     0  00:34
0        1.62       0.000
  DP_LC_B50           JUNCTION      0.00    40.74     0  00:33
0        1.37       0.000
  DP_LC_B70           JUNCTION      0.00    34.93     0  00:38
0        1.26       0.000
  DP_LC_B80           JUNCTION      0.00    24.60     0  00:41
0       0.985       0.000
  DP_LC_B90           JUNCTION      0.00    66.24     0  00:37
0        1.92       0.000
  DP_LC_C.D           JUNCTION      0.00    31.41     0  00:35
0       0.836       0.000
  DP_LC_F20           JUNCTION      0.00    87.38     0  00:38
0        2.16       0.000
  DP_LC_I20           JUNCTION      0.00    35.85     0  00:34
0       0.972       0.000
  DP_OS_B1            JUNCTION      0.00     0.08     0  00:32
0     0.00161       0.000
  DP_OS_B2            JUNCTION      0.00     0.59     0  00:33
0      0.0109       0.000
  DP_OS1              JUNCTION      0.00     9.17     0  00:51
0       0.378       0.000
  DP_OS10             JUNCTION      0.00     0.95     0  00:36
0       0.037       0.000
  DP_OS2              JUNCTION      0.00     6.27     0  00:48
0       0.322       0.000
  DP_OS3              JUNCTION      0.00   140.83     0  01:08
0        7.23       0.000
  DP_OS4              JUNCTION      0.00     1.62     0  00:36
0      0.0371       0.000
  DP_OS5              JUNCTION      0.00     0.15     0  00:36
0     0.00551       0.000
  DP_OS6              JUNCTION      0.00     0.43     0  00:45
0      0.0193       0.000
  DP_OS7              JUNCTION      0.00     1.84     0  00:45
0       0.087       0.000
  DP_OS8              JUNCTION      0.00     4.08     0  00:34
0      0.0985       0.000
  DP_OS9              JUNCTION      0.00     3.80     0  00:56
0       0.186       0.000
  DP_UEC_A20          JUNCTION      0.00     8.92     0  00:32
0       0.252       0.000
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  DP_UEC_B10           JUNCTION      0.00    56.08     0  00:36
0        2.16       0.000
  DP_UEC_B20           JUNCTION      0.00    49.02     0  00:35
0        1.35       0.000
  DP_UEC_B30           JUNCTION      0.00    20.75     0  00:30
0       0.407       0.000
  DP_UEC_B40           JUNCTION      0.00     4.99     0  00:30
0       0.104       0.000
  Dr_A10               JUNCTION     31.27    31.27     0  00:35
0.925       0.925       0.000
  Dr_B10               JUNCTION     11.07    11.07     0  00:31
0.267       0.267       0.000
  J.B_Main.1           JUNCTION      0.00   315.92     0  01:16
0        16.3       0.000
  J.B_Main.2           JUNCTION      0.00   283.19     0  01:05
0          14       0.000
  J.B_Main.3           JUNCTION      0.00   262.49     0  01:02
0        12.9       0.000
  J.B_Main.4           JUNCTION      0.00   224.01     0  00:59
0          11       0.000
  J.B_Main.5           JUNCTION      0.00   140.82     0  01:09
0        7.23       0.000
  J.B_Side.120         JUNCTION      0.00    36.62     0  00:40
0        1.31      -0.000
  J.B_Upper.Main_.2    JUNCTION      0.00     6.32     0  01:03
0       0.341       0.000
  J.B_Upper.Main_1     JUNCTION      0.00    34.92     0  00:38
0         1.6       0.000
  J.UEC_B.1            JUNCTION      0.00    25.71     0  00:30
0        0.51       0.000
  J_LC.G.H             JUNCTION      0.00    24.05     0  00:34
0       0.722       0.000
  J_LC_A10             JUNCTION      0.00    93.44     0  00:36
0        2.33       0.000
  J_LC_A25             JUNCTION      0.00    16.06     0  00:32
0       0.451       0.000
  J_OS1                JUNCTION      0.00     9.17     0  00:51
0       0.378       0.000
  J_OS2                JUNCTION      0.00     6.27     0  00:48
0       0.322       0.000
  J_OS4                JUNCTION      0.00     1.62     0  00:36
0      0.0371       0.000
  J_OS6                JUNCTION      0.00     0.43     0  00:45
0      0.0193       0.000
  J_OS7                JUNCTION      0.00     1.84     0  00:46
0       0.087       0.000
  J_OS8                JUNCTION      0.00     4.07     0  00:34
0      0.0984       0.000
  J_OS9                JUNCTION      0.00    11.20     0  00:42
0       0.439       0.000
  J1                   JUNCTION      0.00     0.81     0  01:34
0      0.0723       0.000
  J2                   JUNCTION      0.00     0.90     0  02:46
0      0.0981       0.000
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  J3                JUNCTION      0.00    92.15     0  00:39
0        2.44       0.000
  J4                JUNCTION      0.00   104.91     0  00:43
0        2.91       0.000
  LC_A10            JUNCTION     31.12    31.12     0  00:30
0.516       0.516       0.000
  LC_A20            JUNCTION     22.05    22.05     0  00:33
0.626       0.626       0.000
  LC_A25            JUNCTION     16.06    16.06     0  00:32
0.451       0.451       0.000
  LC_A30            JUNCTION     50.19    50.19     0  00:31
0.952       0.952       0.000
  LC_B10            JUNCTION      1.17     1.17     0  00:58
0.0648      0.0648      0.000
  LC_B100           JUNCTION      0.25     0.25     0  00:57
0.0157      0.0157      0.000
  LC_B110           JUNCTION     14.08    14.08     0  00:33
0.416       0.416       0.000
  LC_B120           JUNCTION     19.04    19.04     0  00:36
0.644       0.644       0.000
  LC_B130           JUNCTION     12.69    12.69     0  00:41
0.566       0.566       0.000
  LC_B140           JUNCTION     11.79    11.79     0  00:32
0.311       0.311       0.000
  LC_B150           JUNCTION     13.18    13.18     0  00:32
0.361       0.361       0.000
  LC_B160           JUNCTION     30.50    30.50     0  00:31
0.614       0.614       0.000
  LC_B170           JUNCTION      1.71     1.71     0  00:35
0.0632      0.0632      0.000
  LC_B180           JUNCTION     31.29    31.29     0  00:31
0.645       0.645       0.000
  LC_B190           JUNCTION     41.78    41.78     0  00:30
0.696       0.696       0.000
  LC_B20            JUNCTION      8.45     8.45     0  00:45
0.389       0.389       0.000
  LC_B30            JUNCTION     20.33    20.33     0  00:33
0.464       0.464       0.000
  LC_B40            JUNCTION     66.69    66.69     0  00:34
1.62        1.62        0.000
  LC_B50            JUNCTION     40.74    40.74     0  00:33
0.974       0.974       0.000
  LC_B60            JUNCTION      2.14     2.14     0  00:48
0.0928      0.0928      0.000
  LC_B70            JUNCTION     34.93    34.93     0  00:38
1.26        1.26        0.000
  LC_B80            JUNCTION     24.60    24.60     0  00:41
0.985       0.985       0.000
  LC_B90            JUNCTION     29.93    29.93     0  00:41
1.2         1.2         0.000
  LC_C10            JUNCTION     20.27    20.27     0  00:33
0.519       0.519       0.000
  LC_D10            JUNCTION     11.34    11.34     0  00:36
0.315       0.315       0.000
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  LC_F10               JUNCTION     48.28    48.28     0  00:32
1.06        1.06       0.000
  LC_F20               JUNCTION      1.65     1.65     0  00:42
0.0751      0.0751       0.000
  LC_G10               JUNCTION     18.87    18.87     0  00:35
0.581       0.581       0.000
  LC_H10               JUNCTION      5.22     5.22     0  00:32
0.14        0.14       0.000
  LC_I10               JUNCTION     25.93    25.93     0  00:33
0.652       0.652       0.000
  LC_I20               JUNCTION     35.85    35.85     0  00:34
0.972       0.972       0.000
  OS_B1                JUNCTION      0.08     0.08     0  00:32
0.00161     0.00161       0.000
  OS_B2                JUNCTION      0.59     0.59     0  00:33
0.0109      0.0109       0.000
  OS1                  JUNCTION      9.17     9.17     0  00:51
0.378       0.378       0.000
  OS10                 JUNCTION      0.95     0.95     0  00:36
0.037       0.037       0.000
  OS10_In              JUNCTION      0.00     2.58     0  00:57
0       0.126       0.000
  OS2                  JUNCTION      6.27     6.27     0  00:48
0.322       0.322       0.000
  OS3                  JUNCTION     83.24    83.24     0  01:22
4.31        4.31       0.000
  OS4                  JUNCTION      1.62     1.62     0  00:36
0.0371      0.0371       0.000
  OS5                  JUNCTION      0.15     0.15     0  00:36
0.00551     0.00551       0.000
  OS6                  JUNCTION      0.43     0.43     0  00:45
0.0193      0.0193       0.000
  OS7                  JUNCTION      1.84     1.84     0  00:45
0.087       0.087       0.000
  OS8                  JUNCTION      4.08     4.08     0  00:34
0.0985      0.0985       0.000
  OS9                  JUNCTION      3.80     3.80     0  00:56
0.186       0.186       0.000
  Out_Dr_A10           JUNCTION      0.00    31.27     0  00:35
0       0.925       0.000
  Out_Dr_B10           JUNCTION      0.00    41.08     0  00:37
0        1.19       0.000
  Out_LC_A10           JUNCTION      0.00    93.44     0  00:36
0        2.33       0.000
  Out_LC_A25           JUNCTION      0.00    16.06     0  00:32
0       0.451       0.000
  Out_LC_B             JUNCTION      0.00   385.82     0  01:16
0        19.9       0.000
  Out_LC_C             JUNCTION      0.00    20.27     0  00:33
0       0.519      -0.000
  Out_LC_E             JUNCTION      0.00    11.34     0  00:36
0       0.315       0.000
  Out_LC_F             JUNCTION      0.00    48.28     0  00:32
0        1.06       0.000
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  Out_LC_G10           JUNCTION      0.00    18.87     0  00:35
0       0.581       0.000
  Out_LC_H10           JUNCTION      0.00     5.22     0  00:32
0        0.14       0.000
  Out_UEC_A            JUNCTION      0.00    32.48     0  00:37
0         1.5       0.000
  Out_UEC_B            JUNCTION      0.00   128.36     0  00:36
0        4.03       0.000
  Out_UEC_C10          JUNCTION      0.00    20.77     0  00:36
0       0.606       0.000
  Out_UEC_D10          JUNCTION      0.00     9.12     0  00:32
0       0.222       0.000
  UEC_A10              JUNCTION     32.34    32.34     0  00:36
0.987       0.987       0.000
  UEC_A20              JUNCTION      8.92     8.92     0  00:32
0.252       0.252       0.000
  UEC_B10              JUNCTION     24.45    24.45     0  00:33
0.662       0.662       0.000
  UEC_B20              JUNCTION     30.59    30.59     0  00:32
0.743       0.743       0.000
  UEC_B30              JUNCTION     20.75    20.75     0  00:30
0.407       0.407       0.000
  UEC_B40              JUNCTION      4.99     4.99     0  00:30
0.104       0.104       0.000
  UEC_C10              JUNCTION     12.08    12.08     0  00:34
0.383       0.383       0.000
  UEC_D10              JUNCTION      9.12     9.12     0  00:32
0.222       0.222       0.000
  Out.Dr               OUTFALL       0.00    41.01     0  00:38
0         1.2       0.000
  Out_C.D              OUTFALL       0.00    31.38     0  00:36
0       0.836       0.000
  Out_LC.B.F           OUTFALL       0.00   402.74     0  01:19
0          21       0.000
  Out_LC.G.H           OUTFALL       0.00    23.89     0  00:38
0       0.725       0.000
  Out_LC_I             OUTFALL       0.00    59.67     0  00:37
0        1.63       0.000
  UEC_Out              OUTFALL       0.00   122.64     0  00:43
0        4.07       0.000


  **********************
  Node Flooding Summary
  **********************

  No nodes were flooded.


  ************************
  Outfall Loading Summary
  ************************

  -----------------------------------------------------------
```

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
Out.Dr	28.07	6.59	41.01	1.196
Out_C.D	25.35	5.10	31.38	0.836
Out_LC.B.F	98.78	32.89	402.74	20.998
Out_LC.G.H	25.36	4.42	23.89	0.725
Out_LC_I	33.67	7.49	59.67	1.630
UEC_Out	98.50	6.40	122.64	4.075
System	51.62	62.90	563.17	29.460

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
Ch.Dr_A.Main10	CONDUIT	31.00	0 00:38	3.56	0.14	0.34
Ch.LC_A.Main10	CONDUIT	68.55	0 00:37	4.43	0.02	0.11
Ch.LC_A.Side10	CONDUIT	1.78	0 01:00	1.28	0.00	0.04
Ch.LC_A.Side11	CONDUIT	2.58	0 00:58	2.69	0.00	0.03
Ch.LC_B.30	CONDUIT	85.76	0 00:38	4.28	0.14	0.35
Ch.LC_B.Side.120	CONDUIT	24.67	0 00:38	4.72	0.06	0.22
Ch.LC_B.Side.121	CONDUIT	33.82	0 00:55	1.30	0.21	0.44
Ch.LC_B.Side.140	CONDUIT	1.51	0 00:55	1.34	0.01	0.05
Ch.Lc_B.Side.150	CONDUIT	12.11	0 00:37	3.80	0.03	0.14
Ch.LC_B.Side.160	CONDUIT	30.26	0 00:35	4.37	0.10	0.29
Ch.LC_B.Side.90	CONDUIT	36.84	0 00:36	4.91	0.12	0.31
Ch.LC_B.Side.91	CONDUIT	66.23	0 00:37	6.87	0.15	0.37
Ch.LC_B.Side122	CONDUIT	57.95	0 00:36	5.37	0.19	0.41

Ch.LC_B.Side130	CONDUIT	12.59	0	00:46	3.56	0.02
0.11						
Ch.LC_B.Side20	CONDUIT	29.52	0	01:09	1.42	0.01
0.05						
Ch.LC_B.Side50	CONDUIT	8.15	0	01:10	1.16	0.01
0.05						
Ch.LC_B_Side10	CONDUIT	36.69	0	01:11	2.46	0.02
0.11						
Ch.LC_D.Main10	CONDUIT	20.15	0	00:34	2.85	0.10
0.29						
Ch.LC_D.Main11	CONDUIT	11.34	0	00:36	2.67	0.05
0.19						
Ch.LC_G.Main10	CONDUIT	18.87	0	00:35	1.95	0.16
0.37						
Ch.LC_H.Main10	CONDUIT	5.21	0	00:33	1.58	0.03
0.15						
Ch.LC_I.Main1	CONDUIT	34.91	0	00:39	3.76	0.15
0.36						
Ch.OS_B1	CONDUIT	0.07	0	00:41	0.45	0.00
0.01						
Ch.OS_B2	CONDUIT	0.45	0	00:48	1.09	0.00
0.02						
Ch.OS2	CONDUIT	5.97	0	01:04	2.46	0.01
0.08						
Ch.UEC_A.Main10	CONDUIT	8.16	0	01:27	0.81	0.00
0.03						
Ch.UEC_A.Main11	CONDUIT	32.46	0	00:38	4.32	0.11
0.30						
Ch.UEC_A.Main20	CONDUIT	8.84	0	00:34	3.09	0.02
0.13						
Ch.UEC_B	CONDUIT	122.64	0	00:43	3.70	0.03
0.13						
Ch.UEC_B.Main10	CONDUIT	23.37	0	00:37	3.39	0.01
0.05						
Ch.UEC_B.Side10	CONDUIT	56.08	0	00:36	6.78	0.12
0.33						
Ch.UEC_B.Side20	CONDUIT	49.02	0	00:36	7.00	0.10
0.29						
Ch.UEC_C.Main10	CONDUIT	20.65	0	00:39	3.43	0.08
0.25						
Ch.UEC_D.Main10	CONDUIT	8.84	0	00:37	2.65	0.03
0.15						
CH_1	CONDUIT	0.74	0	02:56	0.54	0.00
0.01						
Ch_2	CONDUIT	0.86	0	03:21	0.52	0.00
0.01						
Ch_3	CONDUIT	90.25	0	00:43	2.85	0.02
0.12						
Ch_4	CONDUIT	102.82	0	00:47	2.99	0.03
0.13						
Ch_LC_A10	CONDUIT	92.15	0	00:39	4.67	0.00
0.05						
Ch_Main_1	CONDUIT	315.90	0	01:17	5.27	0.09
0.40						

Ch_Main_2	CONDUIT	272.95	0	01:19	3.91	0.10
0.41						
Ch_Main_3	CONDUIT	261.44	0	01:06	5.82	0.08
0.39						
Ch_Main_4	CONDUIT	222.61	0	01:04	4.96	0.08
0.39						
Ch_Main_5	CONDUIT	140.64	0	01:15	4.03	0.06
0.34						
Ch_Main_6	CONDUIT	140.78	0	01:09	2.76	0.04
0.16						
Ch_OS10	CONDUIT	0.95	0	00:36	1.36	0.00
0.02						
Ch_OS6	CONDUIT	0.36	0	01:16	1.36	0.00
0.02						
Ch_Upper.Main_1	CONDUIT	32.97	0	01:07	3.44	0.03
0.28						
Ch_Upper.Main_2	CONDUIT	6.19	0	01:13	1.64	0.01
0.17						
Culv_LC_A10	CONDUIT	93.44	0	00:36	14.45	0.08
0.13						
Culv_LC_A20	CONDUIT	16.06	0	00:32	10.08	0.11
0.18						
Culv_OS1	CONDUIT	9.17	0	00:51	6.10	0.03
0.12						
Culv_OS2	CONDUIT	6.27	0	00:48	5.33	0.07
0.18						
Culv_OS4	CONDUIT	1.62	0	00:36	1.44	0.02
0.11						
Culv_OS6	CONDUIT	0.43	0	00:45	3.13	0.00
0.03						
Culv_OS7	CONDUIT	1.84	0	00:46	3.19	0.03
0.11						
Culv_OS8	CONDUIT	4.07	0	00:34	2.57	0.06
0.16						
Culv_OS9	CONDUIT	3.80	0	00:56	3.08	0.02
0.11						
Dummy_Dr_A10	DUMMY	31.27	0	00:35		
Dummy_Dr_B10	DUMMY	11.07	0	00:31		
Dummy_LC_A10	DUMMY	31.12	0	00:30		
Dummy_LC_A20	DUMMY	22.05	0	00:33		
Dummy_LC_A25	DUMMY	16.06	0	00:32		
Dummy_LC_A30	DUMMY	50.19	0	00:31		
Dummy_LC_B10	DUMMY	1.17	0	00:58		
Dummy_LC_B100	DUMMY	0.25	0	00:57		
Dummy_LC_B110	DUMMY	14.08	0	00:33		
Dummy_LC_B120	DUMMY	19.04	0	00:36		
Dummy_LC_B130	DUMMY	12.69	0	00:41		
Dummy_LC_B140	DUMMY	11.79	0	00:32		
Dummy_LC_B150	DUMMY	13.18	0	00:32		
Dummy_LC_B160	DUMMY	30.50	0	00:31		
Dummy_LC_B170	DUMMY	1.71	0	00:35		
Dummy_LC_B180	DUMMY	31.29	0	00:31		
Dummy_LC_B190	DUMMY	41.78	0	00:30		
Dummy_LC_B20	DUMMY	8.45	0	00:45		

Dummy_LC_B30	DUMMY	20.33	0	00:33		
Dummy_LC_B40	DUMMY	66.69	0	00:34		
Dummy_LC_B50	DUMMY	40.74	0	00:33		
Dummy_LC_B60	DUMMY	2.14	0	00:48		
Dummy_LC_B70	DUMMY	34.93	0	00:38		
Dummy_LC_B80	DUMMY	24.60	0	00:41		
Dummy_LC_B90	DUMMY	29.93	0	00:41		
Dummy_LC_C10	DUMMY	20.27	0	00:33		
Dummy_LC_D10	DUMMY	11.34	0	00:36		
Dummy_LC_F10	DUMMY	48.28	0	00:32		
Dummy_LC_F20	DUMMY	1.65	0	00:42		
Dummy_LC_G10	DUMMY	18.87	0	00:35		
Dummy_LC_H10	DUMMY	5.22	0	00:32		
Dummy_LC_I10	DUMMY	25.93	0	00:33		
Dummy_LC_I20	DUMMY	35.85	0	00:34		
Dummy_OS_B1	DUMMY	0.08	0	00:32		
Dummy_OS_B2	DUMMY	0.59	0	00:33		
Dummy_OS1	DUMMY	9.17	0	00:51		
Dummy_OS10	DUMMY	0.95	0	00:36		
Dummy_OS2	DUMMY	6.27	0	00:48		
Dummy_OS3	DUMMY	83.24	0	01:22		
Dummy_OS4	DUMMY	1.62	0	00:36		
Dummy_OS5	DUMMY	0.15	0	00:36		
Dummy_OS6	DUMMY	0.43	0	00:45		
Dummy_OS7	DUMMY	1.84	0	00:45		
Dummy_Os8	DUMMY	4.08	0	00:34		
Dummy_OS9	DUMMY	3.80	0	00:56		
Dummy_UEC_A10	DUMMY	32.34	0	00:36		
Dummy_UEC_A20	DUMMY	8.92	0	00:32		
Dummy_UEC_B	DUMMY	24.45	0	00:33		
Dummy_UEC_B20	DUMMY	30.59	0	00:32		
Dummy_UEC_B30	DUMMY	20.75	0	00:30		
Dummy_UEC_B40	DUMMY	4.99	0	00:30		
Dummy_UEC_C10	DUMMY	12.08	0	00:34		
Dummy_UEC_D10	DUMMY	9.12	0	00:32		
Over.Dr_B	CONDUIT	41.01	0	00:38	2.40	0.02
0.09						
Over.LC.G	CONDUIT	23.89	0	00:38	1.71	0.01
0.07						
Over.LC_B	CONDUIT	385.17	0	01:20	2.53	0.08
0.23						
Over.LC_D	CONDUIT	31.38	0	00:36	1.17	0.04
0.13						
Over.LC_F	CONDUIT	46.72	0	00:35	1.83	0.03
0.13						
Over_LC_A25	CONDUIT	15.82	0	00:36	2.21	0.15
0.32						
Over_OS4	CONDUIT	0.77	0	01:33	0.64	0.00
0.00						
Over_OS5	CONDUIT	0.08	0	03:35	0.00	0.00
0.00						
Over_OS8_1	CONDUIT	2.61	0	01:09	0.49	0.00
0.01						

Pipe.LC_A.20	CONDUIT	47.34	0	00:35	6.98	0.19
0.29						
Pipe.LC_B.110	CONDUIT	14.07	0	00:34	9.12	0.16
0.27						
Pipe.LC_B.120	CONDUIT	95.10	0	00:44	16.55	0.14
0.26						
Pipe.LC_B.40	CONDUIT	66.54	0	00:35	14.30	0.18
0.29						
Pipe.LC_B.70	CONDUIT	34.92	0	00:38	10.25	0.22
0.32						
Pipe.LC_B.80	CONDUIT	24.60	0	00:41	15.27	0.17
0.28						
Pipe.LC_F.10	CONDUIT	85.47	0	00:42	4.01	0.15
0.37						
Pipe.LC_I	CONDUIT	59.67	0	00:37	8.14	0.20
0.31						
Pipe.UEC_B.30	CONDUIT	20.74	0	00:30	14.81	0.14
0.25						
Pipe.UEC_B40	CONDUIT	4.98	0	00:30	5.11	0.08
0.20						

****
Conduit Surcharge Summary
****

No conduits were surcharged.

Analysis begun on: Mon Dec 16 18:39:15 2024
Analysis ended on: Mon Dec 16 18:39:16 2024
Total elapsed time: 00:00:01

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
  ------------------------------------------------------------

  WARNING 02: maximum depth increased for Node J.B_Main.2

  *************
  Element Count
  *************
  Number of rain gages ...... 0
  Number of subcatchments ... 0
  Number of nodes ........... 136
  Number of links ........... 130
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ************
  Node Summary
  ************
                                        Invert      Max.    Ponded
External
  Name                 Type              Elev.     Depth      Area
Inflow
  ---------------------------------------------------------------------------
--------
  DP.LC_I              JUNCTION        6254.57      6.00       0.0
  DP_LC_A20            JUNCTION        6370.00      6.00       0.0
  DP_LC_A30            JUNCTION        6377.95      6.00       0.0
  DP_LC_B110           JUNCTION        6284.29      3.00       0.0
  DP_LC_B120           JUNCTION        6286.76      6.00       0.0
  DP_LC_B130           JUNCTION        6336.08      3.00       0.0
  DP_LC_B140           JUNCTION        6376.76      2.00       0.0
  DP_LC_B150           JUNCTION        6338.57      2.00       0.0
  DP_LC_B160           JUNCTION        6318.55      2.00       0.0
  DP_LC_B170           JUNCTION        6403.16      2.00       0.0
  DP_LC_B180           JUNCTION        6350.67      2.00       0.0
  DP_LC_B190           JUNCTION        6339.17      2.00       0.0
  DP_LC_B20            JUNCTION        6221.82      5.00       0.0
  DP_LC_B30            JUNCTION        6241.12      5.00       0.0
  DP_LC_B40            JUNCTION        6268.03      5.00       0.0
  DP_LC_B50            JUNCTION        6271.98      5.00       0.0
  DP_LC_B70            JUNCTION        6249.24      4.00       0.0
  DP_LC_B80            JUNCTION        6249.80      3.00       0.0
  DP_LC_B90            JUNCTION        6270.44      2.00       0.0
  DP_LC_C.D            JUNCTION        6244.97      2.00       0.0
  DP_LC_F20            JUNCTION        6229.95      3.00       0.0
  DP_LC_I20            JUNCTION        6276.74      2.00       0.0
  DP_OS_B1             JUNCTION        6293.06      2.00       0.0
  DP_OS_B2             JUNCTION        6289.70      2.00       0.0
  DP_OS1               JUNCTION        6282.45      3.00       0.0
  DP_OS10              JUNCTION        6373.07      3.00       0.0
  DP_OS2               JUNCTION        6313.76      2.50       0.0
  DP_OS3               JUNCTION        6290.51      5.00       0.0
```

DP_OS4	JUNCTION	6420.09	3.50	0.0
DP_OS5	JUNCTION	6440.72	5.00	0.0
DP_OS6	JUNCTION	6428.06	3.00	0.0
DP_OS7	JUNCTION	6392.28	2.00	0.0
DP_OS8	JUNCTION	6393.20	2.50	0.0
DP_OS9	JUNCTION	6359.19	3.00	0.0
DP_UEC_A20	JUNCTION	6377.69	2.00	0.0
DP_UEC_B10	JUNCTION	6307.98	2.00	0.0
DP_UEC_B20	JUNCTION	6314.12	2.00	0.0
DP_UEC_B30	JUNCTION	6367.93	3.00	0.0
DP_UEC_B40	JUNCTION	6362.77	3.00	0.0
Dr_A10	JUNCTION	6347.11	0.00	0.0
Dr_B10	JUNCTION	6329.34	0.00	0.0
J.B_Main.1	JUNCTION	6219.15	5.50	0.0
J.B_Main.2	JUNCTION	6238.37	6.00	0.0
J.B_Main.3	JUNCTION	6258.52	6.00	0.0
J.B_Main.4	JUNCTION	6274.10	6.00	0.0
J.B_Main.5	JUNCTION	6287.43	6.00	0.0
J.B_Side.120	JUNCTION	6287.54	22.07	0.0
J.B_Upper.Main_.2	JUNCTION	6250.19	5.00	0.0
J.B_Upper.Main_1	JUNCTION	6246.00	5.00	0.0
J.UEC_B.1	JUNCTION	6361.65	5.00	0.0
J_LC.G.H	JUNCTION	6212.79	2.00	0.0
J_LC_A10	JUNCTION	6346.58	10.00	0.0
J_LC_A25	JUNCTION	6320.63	3.00	0.0
J_OS1	JUNCTION	6277.94	5.00	0.0
J_OS2	JUNCTION	6310.41	3.00	0.0
J_OS4	JUNCTION	6420.00	5.00	0.0
J_OS6	JUNCTION	6425.61	5.00	0.0
J_OS7	JUNCTION	6388.69	3.00	0.0
J_OS8	JUNCTION	6391.98	2.50	0.0
J_OS9	JUNCTION	6357.73	3.00	0.0
J1	JUNCTION	6355.74	5.00	0.0
J2	JUNCTION	6323.35	5.00	0.0
J3	JUNCTION	6305.72	10.00	0.0
J4	JUNCTION	6298.21	5.00	0.0
LC_A10	JUNCTION	6373.50	0.00	0.0
LC_A20	JUNCTION	6394.79	0.00	0.0
LC_A25	JUNCTION	6358.75	0.00	0.0
LC_A30	JUNCTION	6377.99	0.00	0.0
LC_B10	JUNCTION	6227.60	0.00	0.0
LC_B100	JUNCTION	6278.59	0.00	0.0
LC_B110	JUNCTION	6305.11	0.00	0.0
LC_B120	JUNCTION	6328.08	0.00	0.0
LC_B130	JUNCTION	6376.10	0.00	0.0
LC_B140	JUNCTION	6390.52	0.00	0.0
LC_B150	JUNCTION	6364.46	0.00	0.0
LC_B160	JUNCTION	6354.39	0.00	0.0
LC_B170	JUNCTION	6416.30	0.00	0.0
LC_B180	JUNCTION	6366.21	0.00	0.0
LC_B190	JUNCTION	6345.00	0.00	0.0
LC_B20	JUNCTION	6256.91	0.00	0.0
LC_B30	JUNCTION	6277.65	0.00	0.0
LC_B40	JUNCTION	6309.88	0.00	0.0

LC_B50	JUNCTION	6278.66	0.00	0.0
LC_B60	JUNCTION	6259.78	0.00	0.0
LC_B70	JUNCTION	6284.81	0.00	0.0
LC_B80	JUNCTION	6318.25	0.00	0.0
LC_B90	JUNCTION	6343.74	0.00	0.0
LC_C10	JUNCTION	6267.21	0.00	0.0
LC_D10	JUNCTION	6248.16	0.00	0.0
LC_F10	JUNCTION	6246.12	0.00	0.0
LC_F20	JUNCTION	6250.36	0.00	0.0
LC_G10	JUNCTION	6234.42	0.00	0.0
LC_H10	JUNCTION	6237.87	0.00	0.0
LC_I10	JUNCTION	6269.94	12.56	0.0
LC_I20	JUNCTION	6313.14	0.00	0.0
OS_B1	JUNCTION	6309.16	0.00	0.0
OS_B2	JUNCTION	6309.56	0.00	0.0
OS1	JUNCTION	6349.15	0.00	0.0
OS10	JUNCTION	6392.72	0.00	0.0
OS10_In	JUNCTION	6372.34	3.00	0.0
OS2	JUNCTION	6342.30	0.00	0.0
OS3	JUNCTION	6453.31	0.00	0.0
OS4	JUNCTION	6462.88	0.00	0.0
OS5	JUNCTION	6448.20	0.00	0.0
OS6	JUNCTION	6428.17	0.00	0.0
OS7	JUNCTION	6416.17	0.00	0.0
OS8	JUNCTION	6415.01	0.00	0.0
OS9	JUNCTION	6429.66	0.00	0.0
Out_Dr_A10	JUNCTION	6327.48	2.00	0.0
Out_Dr_B10	JUNCTION	6315.89	2.00	0.0
Out_LC_A10	JUNCTION	6349.20	8.00	0.0
Out_LC_A25	JUNCTION	6322.30	3.00	0.0
Out_LC_B	JUNCTION	6214.77	5.00	0.0
Out_LC_C	JUNCTION	6249.92	5.30	0.0
Out_LC_E	JUNCTION	6245.81	2.00	0.0
Out_LC_F	JUNCTION	6208.99	2.00	0.0
Out_LC_G10	JUNCTION	6212.98	2.00	0.0
Out_LC_H10	JUNCTION	6213.78	2.00	0.0
Out_UEC_A	JUNCTION	6318.87	2.00	0.0
Out_UEC_B	JUNCTION	6302.81	5.00	0.0
Out_UEC_C10	JUNCTION	6327.09	2.00	0.0
Out_UEC_D10	JUNCTION	6344.99	2.00	0.0
UEC_A10	JUNCTION	6349.56	0.00	0.0
UEC_A20	JUNCTION	6402.62	0.00	0.0
UEC_B10	JUNCTION	6351.73	3.12	0.0
UEC_B20	JUNCTION	6362.49	0.00	0.0
UEC_B30	JUNCTION	6398.18	0.00	0.0
UEC_B40	JUNCTION	6375.31	0.00	0.0
UEC_C10	JUNCTION	6357.45	0.00	0.0
UEC_D10	JUNCTION	6349.03	0.00	0.0
Out.Dr	OUTFALL	6303.54	2.00	0.0
Out_C.D	OUTFALL	6244.40	2.00	0.0
Out_LC.B.F	OUTFALL	6201.46	2.00	0.0
Out_LC.G.H	OUTFALL	6202.14	2.00	0.0
Out_LC_I	OUTFALL	6254.31	6.00	0.0
UEC_Out	OUTFALL	6278.95	5.00	0.0

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  ************
  Link Summary
  ************
  Name              From Node        To Node          Type
Length    %Slope Roughness
  ----------------------------------------------------------------------------
----------------------
  Ch.Dr_A.Main10   Out_Dr_A10       Out_Dr_B10       CONDUIT
927.5    1.2497    0.0320
  Ch.LC_A.Main10   DP_LC_A20        Out_LC_A10       CONDUIT
987.0    2.1077    0.0320
  Ch.LC_A.Side10   J_OS7            OS10_In          CONDUIT
1200.9    1.3615    0.0350
  Ch.LC_A.Side11   OS10_In          Out_LC_A10       CONDUIT
231.0   10.0662    0.0350
  Ch.LC_B.30       DP_LC_B30        DP_LC_F20        CONDUIT
1089.3    1.0255    0.0320
  Ch.LC_B.Side.120 DP_LC_B150       J.B_Side.120     CONDUIT
1404.9    3.6348    0.0320
  Ch.LC_B.Side.121 J.B_Side.120     DP_LC_B120       CONDUIT
1109.0    0.0710    0.0320
  Ch.LC_B.Side.140 DP_LC_B170       DP_LC_B140       CONDUIT
1649.8    1.6009    0.0320
  Ch.Lc_B.Side.150 DP_LC_B140       DP_LC_B150       CONDUIT
947.2    4.0342    0.0320
  Ch.LC_B.Side.160 DP_LC_B180       DP_LC_B160       CONDUIT
1415.2    2.2698    0.0320
  Ch.LC_B.Side.90  DP_LC_B190       DP_LC_B90        CONDUIT
2996.6    2.2943    0.0320
  Ch.LC_B.Side.91  DP_LC_B90        J.B_Main.3       CONDUIT
274.4    4.3486    0.0320
  Ch.LC_B.Side122  DP_LC_B160       DP_LC_B120       CONDUIT
1382.5    2.3006    0.0320
  Ch.LC_B.Side130  DP_LC_B130       J.B_Side.120     CONDUIT
1544.9    3.1432    0.0320
  Ch.LC_B.Side20   DP_LC_B50        DP_LC_B20        CONDUIT
3203.8    1.5660    0.0320
  Ch.LC_B.Side50   J_OS1            DP_LC_B50        CONDUIT
1722.7    0.3457    0.0320
  Ch.LC_B_Side10   DP_LC_B20        Out_LC_B         CONDUIT
1017.1    0.6925    0.0320
  Ch.LC_D.Main10   Out_LC_C         DP_LC_C.D        CONDUIT
502.8    0.9843    0.0320
  Ch.LC_D.Main11   Out_LC_E         DP_LC_C.D        CONDUIT
57.0    1.4747    0.0320
  Ch.LC_G.Main10   Out_LC_G10       J_LC.G.H         CONDUIT
53.8    0.3477    0.0320
  Ch.LC_H.Main10   Out_LC_H10       J_LC.G.H         CONDUIT
144.6    0.6821    0.0320
  Ch.LC_I.Main1    DP_LC_I20        DP.LC_I          CONDUIT
1436.5    1.5439    0.0350
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  Ch.OS_B1          DP_OS_B1          J.B_Main.5        CONDUIT
278.4    2.0240    0.0320
  Ch.OS_B2          DP_OS_B2          J.B_Upper.Main_.2 CONDUIT
1186.2    3.3324    0.0320
  Ch.OS2            J_OS2             J.B_Upper.Main_.2 CONDUIT
2743.3    2.1958    0.0320
  Ch.UEC_A.Main10   J_OS9             Out_UEC_A         CONDUIT
2802.5    1.3865    0.0350
  Ch.UEC_A.Main11   Out_UEC_A         DP_UEC_B10        CONDUIT
503.3    2.1648    0.0320
  Ch.UEC_A.Main20   DP_UEC_A20        J_OS9             CONDUIT
669.7    2.9830    0.0320
  Ch.UEC_B          Out_UEC_B         UEC_Out           CONDUIT
2023.0    1.1797    0.0320
  Ch.UEC_B.Main10   J.UEC_B.1         Out_UEC_B         CONDUIT
1999.1    2.9446    0.0320
  Ch.UEC_B.Side10   DP_UEC_B10       Out_UEC_B         CONDUIT
106.0    4.8828    0.0320
  Ch.UEC_B.Side20   DP_UEC_B20       Out_UEC_B         CONDUIT
185.5    6.1092    0.0320
  Ch.UEC_C.Main10   Out_UEC_C10       DP_UEC_B20        CONDUIT
776.8    1.6701    0.0320
  Ch.UEC_D.Main10   Out_UEC_D10       Out_UEC_C10       CONDUIT
996.7    1.7957    0.0320
  CH_1              J1                J2                CONDUIT
2593.7    1.2488    0.0320
  Ch_2              J2                J3                CONDUIT
1678.2    1.0507    0.0320
  Ch_3              J3                J4                CONDUIT
973.6    0.7710    0.0320
  Ch_4              J4                DP_OS3            CONDUIT
998.0    0.7716    0.0320
  Ch_LC_A10         J_LC_A10          J3                CONDUIT
1414.2    2.8909    0.0320
  Ch_Main_1         J.B_Main.1        Out_LC_B          CONDUIT
338.2    1.2946    0.0320
  Ch_Main_2         J.B_Main.2        J.B_Main.1        CONDUIT
3347.0    0.5741    0.0320
  Ch_Main_3         J.B_Main.3        J.B_Main.2        CONDUIT
1567.9    1.2853    0.0320
  Ch_Main_4         J.B_Main.4        J.B_Main.3        CONDUIT
1664.6    0.9360    0.0320
  Ch_Main_5         J.B_Main.5        J.B_Main.4        CONDUIT
1845.4    0.7223    0.0320
  Ch_Main_6         DP_OS3            J.B_Main.5        CONDUIT
608.4    0.5064    0.0320
  Ch_OS10           DP_OS10           OS10_In           CONDUIT
19.2    3.7992    0.0350
  Ch_OS6            J_OS6             J2                CONDUIT
2634.9    3.8840    0.0350
  Ch_Upper.Main_1   J.B_Upper.Main_1  Out_LC_B          CONDUIT
3730.9    0.8371    0.0320
  Ch_Upper.Main_2   J.B_Upper.Main_.2 J.B_Upper.Main_1  CONDUIT
1106.1    0.3784    0.0320
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  Culv_LC_A10      Out_LC_A10       J_LC_A10         CONDUIT
120.5    2.1763    0.0130
  Culv_LC_A20      Out_LC_A25       J_LC_A25         CONDUIT
61.7     2.7100    0.0130
  Culv_OS1         DP_OS1           J_OS1            CONDUIT
67.5     6.6934    0.0240
  Culv_OS2         DP_OS2           J_OS2            CONDUIT
79.1     4.2307    0.0240
  Culv_OS4         DP_OS4           J_OS4            CONDUIT
87.0     0.1068    0.0130
  Culv_OS6         DP_OS6           J_OS6            CONDUIT
82.4     2.9775    0.0130
  Culv_OS7         DP_OS7           J_OS7            CONDUIT
99.0     3.6291    0.0240
  Culv_OS8         DP_OS8           J_OS8            CONDUIT
114.8    1.0631    0.0240
  Culv_OS9         DP_OS9           J_OS9            CONDUIT
93.8     1.5617    0.0210
  Dummy_Dr_A10     Dr_A10           Out_Dr_A10       CONDUIT
1154.7    1.7000    0.0100
  Dummy_Dr_B10     Dr_B10           Out_Dr_B10       CONDUIT
641.3    2.0983    0.0100
  Dummy_LC_A10     LC_A10           Out_LC_A10       CONDUIT
577.6    4.2097    0.0100
  Dummy_LC_A20     LC_A20           DP_LC_A20        CONDUIT
621.2    3.9942    0.0100
  Dummy_LC_A25     LC_A25           Out_LC_A25       CONDUIT
613.0    5.9554    0.0100
  Dummy_LC_A30     LC_A30           DP_LC_A30        CONDUIT
340.9    0.0135    0.0100
  Dummy_LC_B10     LC_B10           Out_LC_B         CONDUIT
1888.7    0.6793    0.0100
  Dummy_LC_B100    LC_B100          J.B_Main.4       CONDUIT
637.0    0.7044    0.0100
  Dummy_LC_B110    LC_B110          DP_LC_B110       CONDUIT
685.6    3.0385    0.0100
  Dummy_LC_B120    LC_B120          DP_LC_B120       CONDUIT
1132.3    3.6524    0.0100
  Dummy_LC_B130    LC_B130          DP_LC_B130       CONDUIT
1211.0    3.3062    0.0100
  Dummy_LC_B140    LC_B140          DP_LC_B140       CONDUIT
685.1    2.0096    0.0100
  Dummy_LC_B150    LC_B150          DP_LC_B150       CONDUIT
770.6    3.3608    0.0100
  Dummy_LC_B160    LC_B160          DP_LC_B160       CONDUIT
826.2    4.3415    0.0100
  Dummy_LC_B170    LC_B170          DP_LC_B170       CONDUIT
500.4    2.6261    0.0100
  Dummy_LC_B180    LC_B180          DP_LC_B180       CONDUIT
945.1    1.6444    0.0100
  Dummy_LC_B190    LC_B190          DP_LC_B190       CONDUIT
560.4    1.0402    0.0100
  Dummy_LC_B20     LC_B20           DP_LC_B20        CONDUIT
2209.8    1.5882    0.0100
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  Dummy_LC_B30     LC_B30           DP_LC_B30        CONDUIT
886.1    4.1255    0.0100
  Dummy_LC_B40     LC_B40           DP_LC_B40        CONDUIT
1126.6    3.7169    0.0100
  Dummy_LC_B50     LC_B50           DP_LC_B50        CONDUIT
1140.0    0.5861    0.0100
  Dummy_LC_B60     LC_B60           J.B_Main.2       CONDUIT
1522.6    1.4066    0.0100
  Dummy_LC_B70     LC_B70           DP_LC_B70        CONDUIT
1947.8    1.8267    0.0100
  Dummy_LC_B80     LC_B80           DP_LC_B80        CONDUIT
1370.6    5.0007    0.0100
  Dummy_LC_B90     LC_B90           DP_LC_B90        CONDUIT
1477.3    4.9680    0.0100
  Dummy_LC_C10     LC_C10           Out_LC_C         CONDUIT
1192.4    1.4501    0.0100
  Dummy_LC_D10     LC_D10           Out_LC_E         CONDUIT
608.2    0.3861    0.0100
  Dummy_LC_F10     LC_F10           Out_LC_F         CONDUIT
1188.1    3.1263    0.0100
  Dummy_LC_F20     LC_F20           DP_LC_F20        CONDUIT
309.1    6.6180    0.0100
  Dummy_LC_G10     LC_G10           Out_LC_G10       CONDUIT
797.2    2.6904    0.0100
  Dummy_LC_H10     LC_H10           Out_LC_H10       CONDUIT
546.2    4.4143    0.0100
  Dummy_LC_I10     LC_I10           DP.LC_I          CONDUIT
1196.0    1.2855    0.0100
  Dummy_LC_I20     LC_I20           DP_LC_I20        CONDUIT
1520.7    2.3941    0.0100
  Dummy_OS_B1      OS_B1            DP_OS_B1         CONDUIT
388.8    4.1459    0.0100
  Dummy_OS_B2      OS_B2            DP_OS_B2         CONDUIT
836.3    2.3765    0.0100
  Dummy_OS1        OS1              DP_OS1           CONDUIT
3482.0    1.9161    0.0100
  Dummy_OS10       OS10             DP_OS10          CONDUIT
460.8    4.2688    0.0100
  Dummy_OS2        OS2              DP_OS2           CONDUIT
1242.8    2.2974    0.0100
  Dummy_OS3        OS3              DP_OS3           CONDUIT
9018.4    1.8056    0.0100
  Dummy_OS4        OS4              DP_OS4           CONDUIT
811.6    5.2783    0.0100
  Dummy_OS5        OS5              DP_OS5           CONDUIT
395.2    1.8938    0.0100
  Dummy_OS6        OS6              DP_OS6           CONDUIT
1040.0    0.0101    0.0100
  Dummy_OS7        OS7              DP_OS7           CONDUIT
657.7    3.6352    0.0100
  Dummy_Os8        OS8              DP_OS8           CONDUIT
393.2    5.5555    0.0100
  Dummy_OS9        OS9              DP_OS9           CONDUIT
2515.8    2.8023    0.0100
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  Dummy_UEC_A10    UEC_A10          Out_UEC_A        CONDUIT
1521.5    2.0172    0.0100
  Dummy_UEC_A20    UEC_A20          DP_UEC_A20       CONDUIT
440.2     5.6715    0.0100
  Dummy_UEC_B      UEC_B10          DP_UEC_B10       CONDUIT
1883.2    2.3236    0.0100
  Dummy_UEC_B20    UEC_B20          DP_UEC_B20       CONDUIT
1490.5    3.2471    0.0100
  Dummy_UEC_B30    UEC_B30          DP_UEC_B30       CONDUIT
640.4     4.7294    0.0100
  Dummy_UEC_B40    UEC_B40          DP_UEC_B40       CONDUIT
380.6     3.2948    0.0100
  Dummy_UEC_C10    UEC_C10          Out_UEC_C10      CONDUIT
695.7     4.3682    0.0100
  Dummy_UEC_D10    UEC_D10          Out_UEC_D10      CONDUIT
352.4     1.1481    0.0100
  Over.Dr_B        Out_Dr_B10       Out.Dr           CONDUIT
369.4     3.3442    0.0350
  Over.LC.G        J_LC.G.H         Out_LC.G.H       CONDUIT
480.7     2.2179    0.0350
  Over.LC_B        Out_LC_B         Out_LC.B.F       CONDUIT
886.1     1.5033    0.0350
  Over.LC_D        DP_LC_C.D        Out_C.D          CONDUIT
131.0     0.4351    0.0350
  Over.LC_F        Out_LC_F         Out_LC.B.F       CONDUIT
684.7     1.1008    0.0350
  Over_LC_A25      J_LC_A25         J4               CONDUIT
707.8     3.1696    0.0350
  Over_OS4         J_OS4            J1               CONDUIT
3674.0    1.7494    0.0350
  Over_OS5         DP_OS5           J1               CONDUIT
3464.9    2.4535    0.0300
  Over_OS8_1       J_OS8            DP_LC_A30        CONDUIT
1266.5    1.1078    0.0350
  Pipe.LC_A.20     DP_LC_A30        DP_LC_A20        CONDUIT
2307.6    0.3444    0.0130
  Pipe.LC_B.110    DP_LC_B110       J.B_Main.4       CONDUIT
586.5     1.7379    0.0130
  Pipe.LC_B.120    DP_LC_B120       J.B_Main.4       CONDUIT
524.8     2.4125    0.0130
  Pipe.LC_B.40     DP_LC_B40        DP_LC_B30        CONDUIT
1334.5    2.0169    0.0130
  Pipe.LC_B.70     DP_LC_B70        J.B_Upper.Main_1 CONDUIT
256.9     1.2598    0.0130
  Pipe.LC_B.80     DP_LC_B80        J.B_Main.2       CONDUIT
242.8     4.7145    0.0130
  Pipe.LC_F.10     DP_LC_F20        J.B_Main.1       CONDUIT
1284.8    0.8406    0.0320
  Pipe.LC_I        DP.LC_I          Out_LC_I         CONDUIT
53.1    0.4805    0.0130
  Pipe.UEC_B.30    DP_UEC_B30       J.UEC_B.1        CONDUIT
126.5     4.9680    0.0130
  Pipe.UEC_B40     DP_UEC_B40       J.UEC_B.1        CONDUIT
141.4     0.7923    0.0130
```

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  **********
  Cross Section Summary
  **********
                                        Full     Full     Hyd.     Max.
No. of     Full
  Conduit          Shape               Depth     Area     Rad.    Width
Barrels     Flow
  ---------------------------------------------------------------------
---------------
  Ch.Dr_A.Main10   TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   229.28
  Ch.LC_A.Main10   TRAPEZOIDAL          5.00   225.00     3.40    65.00
1  3427.98
  Ch.LC_A.Side10   TRAPEZOIDAL          3.00    66.00     1.90    34.00
1   501.56
  Ch.LC_A.Side11   TRAPEZOIDAL          3.00    66.00     1.90    34.00
1  1363.79
  Ch.LC_B.30       TRAPEZOIDAL          3.00    81.00     2.04    39.00
1   612.34
  Ch.LC_B.Side.120 TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   391.02
  Ch.LC_B.Side.121 TRAPEZOIDAL          3.00    81.00     2.04    39.00
1   161.09
  Ch.LC_B.Side.140 TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   259.50
  Ch.Lc_B.Side.150 TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   411.94
  Ch.LC_B.Side.160 TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   309.00
  Ch.LC_B.Side.90  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   310.66
  Ch.LC_B.Side.91  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   427.70
  Ch.LC_B.Side122  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   311.09
  Ch.LC_B.Side130  TRAPEZOIDAL          3.00    66.00     1.90    34.00
1   833.53
  Ch.LC_B.Side20   RECT_OPEN            2.00   400.00     1.96   200.00
1  3641.46
  Ch.LC_B.Side50   TRAPEZOIDAL          5.00   225.00     3.40    65.00
1  1388.25
  Ch.LC_B_Side10   TRAPEZOIDAL          5.00   225.00     3.40    65.00
1  1964.97
  Ch.LC_D.Main10   TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   203.48
  Ch.LC_D.Main11   TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   249.06
  Ch.LC_G.Main10   TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   120.93
  Ch.LC_H.Main10   TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   169.38
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  Ch.LC_I.Main1    TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   232.99
  Ch.OS_B1         TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   291.78
  Ch.OS_B2         TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   374.40
  Ch.OS2           TRAPEZOIDAL          3.00    66.00     1.90    34.00
1   696.68
  Ch.UEC_A.Main10  RECT_OPEN            2.00   400.00     1.96   200.00
1  3132.77
  Ch.UEC_A.Main11  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   301.76
  Ch.UEC_A.Main20  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   354.23
  Ch.UEC_B         TRAPEZOIDAL          5.00   350.00     3.84    90.00
1  4326.21
  Ch.UEC_B.Main10  TRAPEZOIDAL          5.00   225.00     3.40    65.00
1  4051.76
  Ch.UEC_B.Side10  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   453.20
  Ch.UEC_B.Side20  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   506.94
  Ch.UEC_C.Main10  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   265.05
  Ch.UEC_D.Main10  TRAPEZOIDAL          2.00    36.00     1.36    26.00
1   274.84
  CH_1             TRAPEZOIDAL          5.00   375.00     3.71   100.00
1  4666.46
  Ch_2             TRAPEZOIDAL          5.00   375.00     3.71   100.00
1  4280.31
  Ch_3             TRAPEZOIDAL          5.00   375.00     3.71   100.00
1  3666.59
  Ch_4             TRAPEZOIDAL          5.00   375.00     3.71   100.00
1  3668.12
  Ch_LC_A10        TRAPEZOIDAL         10.00   900.00     6.34   140.00
1 24339.02
  Ch_Main_1        TRIANGULAR           5.00   375.00     2.49   150.00
1  3644.29
  Ch_Main_2        TRIANGULAR           5.50   412.50     2.74   150.00
1  2843.80
  Ch_Main_3        TRIANGULAR           6.00   300.00     2.98   100.00
1  3269.68
  Ch_Main_4        TRIANGULAR           6.00   300.00     2.98   100.00
1  2790.18
  Ch_Main_5        TRIANGULAR           6.00   300.00     2.98   100.00
1  2451.08
  Ch_Main_6        TRAPEZOIDAL          5.00   400.00     3.95   100.00
1  3303.73
  Ch_OS10          TRAPEZOIDAL          3.00    66.00     1.90    34.00
1   837.84
  Ch_OS6           TRIANGULAR           5.00   500.00     2.50   200.00
1  7700.00
  Ch_Upper.Main_1  TRIANGULAR           5.00   125.00     2.45    50.00
1   965.54
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  Ch_Upper.Main_2  TRIANGULAR          5.00   125.00     2.45    50.00
1   649.23
  Culv_LC_A10      RECT_CLOSED         8.00    48.00     1.71     6.00
1  1159.39
  Culv_LC_A20      RECT_CLOSED         3.00     9.00     0.75     3.00
1   139.80
  Culv_OS1         CIRCULAR            3.00     7.07     0.75     3.00
3    93.47
  Culv_OS2         CIRCULAR            2.50     4.91     0.62     2.50
2    45.70
  Culv_OS4         CIRCULAR            3.50     9.62     0.88     3.50
2    32.88
  Culv_OS6         CIRCULAR            3.00     7.07     0.75     3.00
2   115.09
  Culv_OS7         CIRCULAR            2.00     3.14     0.50     2.00
3    23.34
  Culv_OS8         CIRCULAR            2.50     4.91     0.62     2.50
3    22.91
  Culv_OS9         CIRCULAR            3.00     7.07     0.75     3.00
3    51.60
  Dummy_Dr_A10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_Dr_B10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A20     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A25     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_A30     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B10     DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B100    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B110    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B120    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B130    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B140    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B150    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B160    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B170    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B180    DUMMY               0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B190    DUMMY               0.00     0.00     0.00     0.00
1     0.00
```

```
  Dummy_LC_B20     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B30     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B40     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B50     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B60     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B70     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B80     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_B90     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_C10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_D10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_F20     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_G10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_H10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I10     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_LC_I20     DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS_B1      DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS_B2      DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS1        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS10       DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS2        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS3        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS4        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS5        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS6        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_OS7        DUMMY            0.00     0.00     0.00     0.00
1     0.00
  Dummy_Os8        DUMMY            0.00     0.00     0.00     0.00
1     0.00
```

```
  Dummy_OS9         DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_A10     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_A20     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B       DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B20     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B30     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_B40     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_C10     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Dummy_UEC_D10     DUMMY              0.00     0.00     0.00     0.00
1     0.00
  Over.Dr_B         RECT_OPEN          2.00   200.00     1.92   100.00
1  2401.37
  Over.LC.G         RECT_OPEN          2.00   200.00     1.92   100.00
1  1955.60
  Over.LC_B         RECT_OPEN          1.50   675.00     1.49   450.00
1  4584.09
  Over.LC_D         RECT_OPEN          2.00   200.00     1.92   100.00
1   866.20
  Over.LC_F         RECT_OPEN          2.00   200.00     1.92   100.00
1  1377.75
  Over_LC_A25       TRAPEZOIDAL        0.50    23.50     0.48    49.00
1   108.65
  Over_OS4          TRAPEZOIDAL        5.00   600.00     4.25   140.00
1  8838.21
  Over_OS5          RECT_OPEN          5.00   500.00     4.55   100.00
1 10645.06
  Over_OS8_1        RECT_OPEN          2.00   400.00     1.96   200.00
1  2800.25
  Pipe.LC_A.20      CIRCULAR           6.00    28.27     1.50     6.00
1   248.55
  Pipe.LC_B.110     CIRCULAR           3.00     7.07     0.75     3.00
1    87.93
  Pipe.LC_B.120     CIRCULAR           6.00    28.27     1.50     6.00
1   657.81
  Pipe.LC_B.40      CIRCULAR           5.00    19.63     1.25     5.00
1   369.87
  Pipe.LC_B.70      CIRCULAR           4.00    12.57     1.00     4.00
1   161.22
  Pipe.LC_B.80      CIRCULAR           3.00     7.07     0.75     3.00
1   144.82
  Pipe.LC_F.10      TRAPEZOIDAL        3.00    81.00     2.04    39.00
1   554.40
  Pipe.LC_I         CIRCULAR           6.00    28.27     1.50     6.00
1   293.56
  Pipe.UEC_B.30     CIRCULAR           3.00     7.07     0.75     3.00
1   148.66
```

```
  Pipe.UEC_B40     CIRCULAR             3.00     7.07     0.75     3.00
1    59.37


  ****************
  Analysis Options
  ****************
  Flow Units ............... CFS
  Process Models:
    Rainfall/Runoff ........ NO
    RDII ................... NO
    Snowmelt ............... NO
    Groundwater ............ NO
    Flow Routing ........... YES
    Ponding Allowed ........ NO
    Water Quality .......... NO
  Flow Routing Method ...... KINWAVE
  Starting Date ............ 01/01/2024 00:00:00
  Ending Date .............. 01/02/2024 00:00:00
  Antecedent Dry Days ...... 0.0
  Report Time Step ......... 00:01:00
  Routing Time Step ........ 5.00 sec


  **************************        Volume        Volume
  Flow Routing Continuity        acre-feet      10^6 gal
  **************************     ---------     ---------
  Dry Weather Inflow .......         0.000         0.000
  Wet Weather Inflow .......         0.000         0.000
  Groundwater Inflow .......         0.000         0.000
  RDII Inflow ..............         0.000         0.000
  External Inflow ..........       605.449       197.295
  External Outflow .........       610.000       198.778
  Flooding Loss ............         0.000         0.000
  Evaporation Loss .........         0.000         0.000
  Exfiltration Loss ........         0.000         0.000
  Initial Stored Volume ....         0.000         0.000
  Final Stored Volume ......         0.054         0.017
  Continuity Error (%) .....        -0.761


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  ************************
  Routing Time Step Summary
  ************************
  Minimum Time Step           :     5.00 sec
  Average Time Step           :     5.00 sec
  Maximum Time Step           :     5.00 sec
  % of Time in Steady State   :     0.00
```

```
  Average Iterations per Step :     1.01
  % of Steps Not Converging   :     0.00


  ******************
  Node Depth Summary
  ******************

  ---------------------------------------------------------------------------
----------
                                Average  Maximum  Maximum  Time of Max
Reported
                                  Depth    Depth      HGL   Occurrence
Max Depth
  Node                 Type         Feet     Feet     Feet  days hr:min
Feet
  ---------------------------------------------------------------------------
----------
  DP.LC_I              JUNCTION     0.21     3.70  6258.27     0  00:42
3.70
  DP_LC_A20            JUNCTION     0.25     4.17  6374.17     0  00:42
4.17
  DP_LC_A30            JUNCTION     0.24     4.18  6382.13     0  00:37
4.18
  DP_LC_B110           JUNCTION     0.11     1.92  6286.21     0  00:41
1.92
  DP_LC_B120           JUNCTION     0.26     3.78  6290.54     0  00:46
3.78
  DP_LC_B130           JUNCTION     0.05     0.64  6336.72     0  00:48
0.64
  DP_LC_B140           JUNCTION     0.04     0.67  6377.42     0  00:42
0.67
  DP_LC_B150           JUNCTION     0.06     1.04  6339.61     0  00:42
1.04
  DP_LC_B160           JUNCTION     0.08     1.86  6320.41     0  00:38
1.86
  DP_LC_B170           JUNCTION     0.02     0.31  6403.47     0  00:42
0.31
  DP_LC_B180           JUNCTION     0.06     1.35  6352.01     0  00:37
1.35
  DP_LC_B190           JUNCTION     0.05     1.34  6340.51     0  00:35
1.34
  DP_LC_B20            JUNCTION     0.20     2.11  6223.93     0  01:09
2.11
  DP_LC_B30            JUNCTION     0.14     2.70  6243.82     0  00:40
2.70
  DP_LC_B40            JUNCTION     0.14     2.70  6270.73     0  00:39
2.70
  DP_LC_B50            JUNCTION     0.17     1.92  6273.91     0  01:04
1.92
  DP_LC_B70            JUNCTION     0.19     3.15  6252.38     0  00:46
3.14
  DP_LC_B80            JUNCTION     0.15     2.10  6251.90     0  00:49
2.10
```

DP_LC_B90	JUNCTION	0.10	1.56	6272.00	0	00:42
1.56						
DP_LC_C.D	JUNCTION	0.07	1.23	6246.21	0	00:40
1.23						
DP_LC_F20	JUNCTION	0.13	2.30	6232.25	0	00:42
2.30						
DP_LC_I20	JUNCTION	0.08	1.43	6278.17	0	00:40
1.43						
DP_OS_B1	JUNCTION	0.01	0.26	6293.32	0	00:41
0.26						
DP_OS_B2	JUNCTION	0.02	0.54	6290.23	0	00:41
0.54						
DP_OS1	JUNCTION	0.17	2.07	6284.52	0	00:58
2.07						
DP_OS10	JUNCTION	0.01	0.13	6373.19	0	00:44
0.13						
DP_OS2	JUNCTION	0.14	1.41	6315.17	0	00:54
1.41						
DP_OS3	JUNCTION	0.42	3.87	6294.38	0	01:25
3.87						
DP_OS4	JUNCTION	0.12	2.62	6422.71	0	00:44
2.62						
DP_OS5	JUNCTION	0.00	0.04	6440.77	0	00:46
0.04						
DP_OS6	JUNCTION	0.07	0.69	6428.75	0	00:54
0.69						
DP_OS7	JUNCTION	0.08	0.83	6393.11	0	00:55
0.83						
DP_OS8	JUNCTION	0.09	1.79	6394.98	0	00:43
1.79						
DP_OS9	JUNCTION	0.23	2.18	6361.37	0	01:08
2.18						
DP_UEC_A20	JUNCTION	0.03	0.57	6378.27	0	00:39
0.57						
DP_UEC_B10	JUNCTION	0.21	1.74	6309.72	0	01:11
1.74						
DP_UEC_B20	JUNCTION	0.06	1.13	6315.25	0	00:40
1.13						
DP_UEC_B30	JUNCTION	0.06	1.40	6369.33	0	00:36
1.40						
DP_UEC_B40	JUNCTION	0.06	1.30	6364.07	0	00:36
1.30						
Dr_A10	JUNCTION	0.00	0.00	6347.11	0	00:00
0.00						
Dr_B10	JUNCTION	0.00	0.00	6329.34	0	00:00
0.00						
J.B_Main.1	JUNCTION	0.87	5.25	6224.41	0	01:34
5.25						
J.B_Main.2	JUNCTION	0.86	5.36	6243.72	0	01:28
5.36						
J.B_Main.3	JUNCTION	0.89	5.60	6264.12	0	01:28
5.60						
J.B_Main.4	JUNCTION	0.91	5.65	6279.75	0	01:29
5.65						

J.B_Main.5	JUNCTION	0.85	5.65	6293.08	0	01:25
5.65						
J.B_Side.120	JUNCTION	0.20	2.91	6290.45	0	00:46
2.91						
J.B_Upper.Main_.2	JUNCTION	0.28	2.27	6252.46	0	00:54
2.27						
J.B_Upper.Main_1	JUNCTION	0.35	3.14	6249.15	0	00:46
3.14						
J.UEC_B.1	JUNCTION	0.06	1.40	6363.05	0	00:36
1.40						
J_LC.G.H	JUNCTION	0.08	1.38	6214.18	0	00:42
1.38						
J_LC_A10	JUNCTION	0.15	2.82	6349.40	0	00:42
2.82						
J_LC_A25	JUNCTION	0.06	1.15	6321.78	0	00:39
1.15						
J_OS1	JUNCTION	0.17	2.07	6280.01	0	00:58
2.07						
J_OS2	JUNCTION	0.14	1.41	6311.82	0	00:54
1.41						
J_OS4	JUNCTION	0.12	2.62	6422.62	0	00:44
2.62						
J_OS6	JUNCTION	0.07	0.69	6426.30	0	00:54
0.69						
J_OS7	JUNCTION	0.08	0.83	6389.52	0	00:55
0.83						
J_OS8	JUNCTION	0.09	1.79	6393.76	0	00:43
1.79						
J_OS9	JUNCTION	0.23	2.18	6359.91	0	01:08
2.18						
J1	JUNCTION	0.03	0.36	6356.09	0	01:05
0.36						
J2	JUNCTION	0.08	0.59	6323.94	0	01:05
0.59						
J3	JUNCTION	0.11	1.38	6307.09	0	00:44
1.38						
J4	JUNCTION	0.12	1.47	6299.68	0	00:46
1.47						
LC_A10	JUNCTION	0.00	0.00	6373.50	0	00:00
0.00						
LC_A20	JUNCTION	0.00	0.00	6394.79	0	00:00
0.00						
LC_A25	JUNCTION	0.00	0.00	6358.75	0	00:00
0.00						
LC_A30	JUNCTION	0.00	0.00	6377.99	0	00:00
0.00						
LC_B10	JUNCTION	0.00	0.00	6227.60	0	00:00
0.00						
LC_B100	JUNCTION	0.00	0.00	6278.59	0	00:00
0.00						
LC_B110	JUNCTION	0.00	0.00	6305.11	0	00:00
0.00						
LC_B120	JUNCTION	0.00	0.00	6328.08	0	00:00
0.00						

LC_B130	JUNCTION	0.00	0.00	6376.10	0	00:00
0.00						
LC_B140	JUNCTION	0.00	0.00	6390.52	0	00:00
0.00						
LC_B150	JUNCTION	0.00	0.00	6364.46	0	00:00
0.00						
LC_B160	JUNCTION	0.00	0.00	6354.39	0	00:00
0.00						
LC_B170	JUNCTION	0.00	0.00	6416.30	0	00:00
0.00						
LC_B180	JUNCTION	0.00	0.00	6366.21	0	00:00
0.00						
LC_B190	JUNCTION	0.00	0.00	6345.00	0	00:00
0.00						
LC_B20	JUNCTION	0.00	0.00	6256.91	0	00:00
0.00						
LC_B30	JUNCTION	0.00	0.00	6277.65	0	00:00
0.00						
LC_B40	JUNCTION	0.00	0.00	6309.88	0	00:00
0.00						
LC_B50	JUNCTION	0.00	0.00	6278.66	0	00:00
0.00						
LC_B60	JUNCTION	0.00	0.00	6259.78	0	00:00
0.00						
LC_B70	JUNCTION	0.00	0.00	6284.81	0	00:00
0.00						
LC_B80	JUNCTION	0.00	0.00	6318.25	0	00:00
0.00						
LC_B90	JUNCTION	0.00	0.00	6343.74	0	00:00
0.00						
LC_C10	JUNCTION	0.00	0.00	6267.21	0	00:00
0.00						
LC_D10	JUNCTION	0.00	0.00	6248.16	0	00:00
0.00						
LC_F10	JUNCTION	0.00	0.00	6246.12	0	00:00
0.00						
LC_F20	JUNCTION	0.00	0.00	6250.36	0	00:00
0.00						
LC_G10	JUNCTION	0.00	0.00	6234.42	0	00:00
0.00						
LC_H10	JUNCTION	0.00	0.00	6237.87	0	00:00
0.00						
LC_I10	JUNCTION	0.00	0.00	6269.94	0	00:00
0.00						
LC_I20	JUNCTION	0.00	0.00	6313.14	0	00:00
0.00						
OS_B1	JUNCTION	0.00	0.00	6309.16	0	00:00
0.00						
OS_B2	JUNCTION	0.00	0.00	6309.56	0	00:00
0.00						
OS1	JUNCTION	0.00	0.00	6349.15	0	00:00
0.00						
OS10	JUNCTION	0.00	0.00	6392.72	0	00:00
0.00						

OS10_In	JUNCTION	0.06	0.63	6372.97	0	00:59
0.63						
OS2	JUNCTION	0.00	0.00	6342.30	0	00:00
0.00						
OS3	JUNCTION	0.00	0.00	6453.31	0	00:00
0.00						
OS4	JUNCTION	0.00	0.00	6462.88	0	00:00
0.00						
OS5	JUNCTION	0.00	0.00	6448.20	0	00:00
0.00						
OS6	JUNCTION	0.00	0.00	6428.17	0	00:00
0.00						
OS7	JUNCTION	0.00	0.00	6416.17	0	00:00
0.00						
OS8	JUNCTION	0.00	0.00	6415.01	0	00:00
0.00						
OS9	JUNCTION	0.00	0.00	6429.66	0	00:00
0.00						
Out_Dr_A10	JUNCTION	0.08	1.35	6328.83	0	00:42
1.35						
Out_Dr_B10	JUNCTION	0.08	1.35	6317.23	0	00:43
1.35						
Out_LC_A10	JUNCTION	0.15	2.82	6352.02	0	00:42
2.82						
Out_LC_A25	JUNCTION	0.06	1.15	6323.45	0	00:39
1.15						
Out_LC_B	JUNCTION	0.73	4.43	6219.20	0	01:33
4.43						
Out_LC_C	JUNCTION	0.06	1.23	6251.15	0	00:39
1.23						
Out_LC_E	JUNCTION	0.06	0.94	6246.75	0	00:43
0.94						
Out_LC_F	JUNCTION	0.02	0.53	6209.52	0	00:37
0.53						
Out_LC_G10	JUNCTION	0.08	1.38	6214.36	0	00:42
1.38						
Out_LC_H10	JUNCTION	0.04	0.73	6214.51	0	00:40
0.73						
Out_UEC_A	JUNCTION	0.21	1.74	6320.61	0	01:10
1.74						
Out_UEC_B	JUNCTION	0.18	1.58	6304.39	0	01:07
1.58						
Out_UEC_C10	JUNCTION	0.06	1.02	6328.11	0	00:41
1.02						
Out_UEC_D10	JUNCTION	0.03	0.62	6345.61	0	00:37
0.62						
UEC_A10	JUNCTION	0.00	0.00	6349.56	0	00:00
0.00						
UEC_A20	JUNCTION	0.00	0.00	6402.62	0	00:00
0.00						
UEC_B10	JUNCTION	0.00	0.00	6351.73	0	00:00
0.00						
UEC_B20	JUNCTION	0.00	0.00	6362.49	0	00:00
0.00						

```
  UEC_B30              JUNCTION      0.00      0.00   6398.18      0  00:00
0.00
  UEC_B40              JUNCTION      0.00      0.00   6375.31      0  00:00
0.00
  UEC_C10              JUNCTION      0.00      0.00   6357.45      0  00:00
0.00
  UEC_D10              JUNCTION      0.00      0.00   6349.03      0  00:00
0.00
  Out.Dr               OUTFALL       0.02      0.37   6303.91      0  00:43
0.37
  Out_C.D              OUTFALL       0.04      0.66   6245.06      0  00:42
0.66
  Out_LC.B.F           OUTFALL       0.14      1.19   6202.65      0  01:31
1.19
  Out_LC.G.H           OUTFALL       0.02      0.30   6202.43      0  00:43
0.30
  Out_LC_I             OUTFALL       0.21      3.70   6258.02      0  00:42
3.70
  UEC_Out              OUTFALL       0.14      1.40   6280.35      0  00:47
1.40


  ********************
  Node Inflow Summary
  ********************

  -------------------------------------------------------------------------
--------------------------
                                  Maximum  Maximum
Lateral       Total        Flow
                                  Lateral    Total  Time of Max
Inflow      Inflow     Balance
                                   Inflow   Inflow   Occurrence
Volume      Volume       Error
  Node                Type           CFS      CFS  days hr:min    10^6
gal    10^6 gal     Percent
  -------------------------------------------------------------------------
--------------------------
  DP.LC_I              JUNCTION      0.00   205.82     0  00:42
0        5.08       0.000
  DP_LC_A20            JUNCTION      0.00   275.95     0  00:42
0         6.5       0.000
  DP_LC_A30            JUNCTION      0.00   206.93     0  00:37
0        4.72       0.000
  DP_LC_B110           JUNCTION      0.00    65.28     0  00:41
0        1.64       0.000
  DP_LC_B120           JUNCTION      0.00   476.26     0  00:46
0        12.3       0.000
  DP_LC_B130           JUNCTION      0.00    42.94     0  00:48
0        1.63       0.000
  DP_LC_B140           JUNCTION      0.00    52.77     0  00:42
0        1.39       0.000
  DP_LC_B150           JUNCTION      0.00   110.83     0  00:42
0        2.79       0.000
```

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  DP_LC_B160           JUNCTION      0.00   269.31     0  00:38
0        4.96       0.000
  DP_LC_B170           JUNCTION      0.00     8.74     0  00:42
0       0.264       0.000
  DP_LC_B180           JUNCTION      0.00   143.01     0  00:37
0        2.69       0.000
  DP_LC_B190           JUNCTION      0.00   142.63     0  00:35
0        2.11       0.000
  DP_LC_B20            JUNCTION      0.00   383.92     0  01:09
0        15.1       0.000
  DP_LC_B30            JUNCTION      0.00   309.99     0  00:40
0        7.12       0.000
  DP_LC_B40            JUNCTION      0.00   210.35     0  00:39
0        4.81       0.000
  DP_LC_B50            JUNCTION      0.00   328.60     0  00:59
0        11.9      -0.000
  DP_LC_B70            JUNCTION      0.00   154.75     0  00:46
0        4.57       0.000
  DP_LC_B80            JUNCTION      0.00   120.82     0  00:49
0        4.18       0.000
  DP_LC_B90            JUNCTION      0.00   262.68     0  00:42
0        6.64      -0.000
  DP_LC_C.D            JUNCTION      0.00   138.36     0  00:41
0        3.52       0.000
  DP_LC_F20            JUNCTION      0.00   328.28     0  00:42
0        8.06       0.000
  DP_LC_I20            JUNCTION      0.00   121.23     0  00:40
0        2.98       0.000
  DP_OS_B1             JUNCTION      0.00     7.25     0  00:41
0       0.154       0.000
  DP_OS_B2             JUNCTION      0.00    32.70     0  00:41
0       0.615       0.000
  DP_OS1               JUNCTION      0.00   230.59     0  00:58
0        8.58       0.000
  DP_OS10              JUNCTION      0.00     2.67     0  00:44
0      0.0948       0.000
  DP_OS2               JUNCTION      0.00    55.71     0  00:54
0         2.4       0.000
  DP_OS3               JUNCTION      0.00  2085.98     0  01:25
0         101       0.000
  DP_OS4               JUNCTION      0.00    59.67     0  00:44
0         1.3       0.000
  DP_OS5               JUNCTION      0.00     4.20     0  00:46
0       0.138       0.000
  DP_OS6               JUNCTION      0.00    26.86     0  00:54
0        1.14       0.000
  DP_OS7               JUNCTION      0.00    25.38     0  00:55
0        1.14       0.000
  DP_OS8               JUNCTION      0.00    59.07     0  00:43
0        1.42       0.000
  DP_OS9               JUNCTION      0.00   135.58     0  01:08
0        6.68       0.000
  DP_UEC_A20           JUNCTION      0.00    34.76     0  00:39
0       0.812       0.000
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  DP_UEC_B10           JUNCTION      0.00   283.88     0  01:07
0          13       0.000
  DP_UEC_B20           JUNCTION      0.00   169.58     0  00:40
0        3.98       0.000
  DP_UEC_B30           JUNCTION      0.00    66.13     0  00:36
0        1.13       0.000
  DP_UEC_B40           JUNCTION      0.00    23.06     0  00:36
0       0.396       0.000
  Dr_A10               JUNCTION    106.35   106.35     0  00:42
2.83        2.83       0.000
  Dr_B10               JUNCTION     41.35    41.35     0  00:37
0.898       0.898       0.000
  J.B_Main.1           JUNCTION      0.00  2633.62     0  01:32
0         137       0.000
  J.B_Main.2           JUNCTION      0.00  2525.61     0  01:28
0         129       0.000
  J.B_Main.3           JUNCTION      0.00  2416.89     0  01:27
0         122       0.000
  J.B_Main.4           JUNCTION      0.00  2318.98     0  01:25
0         116       0.000
  J.B_Main.5           JUNCTION      0.00  2087.98     0  01:25
0         101       0.000
  J.B_Side.120         JUNCTION      0.00   151.53     0  00:46
0        4.42       0.000
  J.B_Upper.Main_.2    JUNCTION      0.00    79.28     0  00:54
0        3.03       0.000
  J.B_Upper.Main_1     JUNCTION      0.00   219.24     0  00:53
0        7.61       0.000
  J.UEC_B.1            JUNCTION      0.00    89.18     0  00:36
0        1.53       0.000
  J_LC.G.H             JUNCTION      0.00    84.15     0  00:41
0        2.28       0.000
  J_LC_A10             JUNCTION      0.00   366.35     0  00:42
0        9.16       0.000
  J_LC_A25             JUNCTION      0.00    48.69     0  00:39
0         1.2       0.000
  J_OS1                JUNCTION      0.00   230.58     0  00:58
0        8.58       0.000
  J_OS2                JUNCTION      0.00    55.71     0  00:54
0         2.4       0.000
  J_OS4                JUNCTION      0.00    59.67     0  00:44
0         1.3       0.000
  J_OS6                JUNCTION      0.00    26.86     0  00:54
0        1.14       0.000
  J_OS7                JUNCTION      0.00    25.38     0  00:55
0        1.14       0.000
  J_OS8                JUNCTION      0.00    59.06     0  00:43
0        1.42       0.000
  J_OS9                JUNCTION      0.00   157.50     0  01:05
0        7.49       0.000
  J1                   JUNCTION      0.00    47.34     0  01:05
0        1.64       0.000
  J2                   JUNCTION      0.00    68.34     0  01:16
0        2.84       0.000
```

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  J3                JUNCTION      0.00   365.48     0  00:44
0          12       0.000
  J4                JUNCTION      0.00   410.63     0  00:46
0        13.3       0.000
  LC_A10            JUNCTION     89.75    89.75     0  00:35
1.42        1.42       0.000
  LC_A20            JUNCTION     70.78    70.78     0  00:40
1.8         1.8       0.000
  LC_A25            JUNCTION     48.69    48.69     0  00:39
1.2         1.2       0.000
  LC_A30            JUNCTION    202.69   202.69     0  00:36
3.23        3.23       0.000
  LC_B10            JUNCTION     50.36    50.36     0  01:08
2.67        2.67       0.000
  LC_B100           JUNCTION     10.11    10.11     0  01:07
0.61        0.61       0.000
  LC_B110           JUNCTION     65.28    65.28     0  00:41
1.64        1.64       0.000
  LC_B120           JUNCTION    103.80   103.80     0  00:44
2.86        2.86       0.000
  LC_B130           JUNCTION     42.94    42.94     0  00:48
1.63        1.63       0.000
  LC_B140           JUNCTION     46.69    46.69     0  00:39
1.12        1.12       0.000
  LC_B150           JUNCTION     59.16    59.16     0  00:40
1.4         1.4       0.000
  LC_B160           JUNCTION    131.96   131.96     0  00:36
2.27        2.27       0.000
  LC_B170           JUNCTION      8.74     8.74     0  00:42
0.264       0.264      0.000
  LC_B180           JUNCTION    143.01   143.01     0  00:37
2.69        2.69       0.000
  LC_B190           JUNCTION    142.63   142.63     0  00:35
2.11        2.11       0.000
  LC_B20            JUNCTION     71.02    71.02     0  00:54
2.97        2.97       0.000
  LC_B30            JUNCTION     99.79    99.79     0  00:40
2.32        2.32       0.000
  LC_B40            JUNCTION    210.35   210.35     0  00:39
4.81        4.81       0.000
  LC_B50            JUNCTION    150.29   150.29     0  00:38
3.3         3.3       0.000
  LC_B60            JUNCTION     44.51    44.51     0  00:59
1.99        1.99       0.000
  LC_B70            JUNCTION    154.75   154.75     0  00:46
4.57        4.57       0.000
  LC_B80            JUNCTION    120.82   120.82     0  00:49
4.18        4.18       0.000
  LC_B90            JUNCTION    137.94   137.94     0  00:48
4.5         4.5       0.000
  LC_C10            JUNCTION     79.80    79.80     0  00:39
1.85        1.85       0.000
  LC_D10            JUNCTION     58.99    58.99     0  00:43
1.67        1.67       0.000
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  LC_F10                JUNCTION    153.24   153.24     0  00:37
3.11        3.11        0.000
  LC_F20                JUNCTION     21.43    21.43     0  00:54
0.935       0.935        0.000
  LC_G10                JUNCTION     58.97    58.97     0  00:42
1.66        1.66        0.000
  LC_H10                JUNCTION     25.24    25.24     0  00:40
0.611       0.611        0.000
  LC_I10                JUNCTION     87.28    87.28     0  00:39
2.1         2.1        0.000
  LC_I20                JUNCTION    121.23   121.23     0  00:40
2.98        2.98        0.000
  OS_B1                 JUNCTION      7.25     7.25     0  00:41
0.154       0.154        0.000
  OS_B2                 JUNCTION     32.70    32.70     0  00:41
0.615       0.615        0.000
  OS1                   JUNCTION    230.59   230.59     0  00:58
8.58        8.58        0.000
  OS10                  JUNCTION      2.67     2.67     0  00:44
0.0948      0.0948         0.000
  OS10_In               JUNCTION      0.00    27.74     0  00:59
0         1.24        0.000
  OS2                   JUNCTION     55.71    55.71     0  00:54
2.4         2.4        0.000
  OS3                   JUNCTION   1832.34  1832.34     0  01:27
87.7        87.7        0.000
  OS4                   JUNCTION     59.67    59.67     0  00:44
1.3         1.3        0.000
  OS5                   JUNCTION      4.20     4.20     0  00:46
0.138       0.138        0.000
  OS6                   JUNCTION     26.86    26.86     0  00:54
1.14        1.14        0.000
  OS7                   JUNCTION     25.38    25.38     0  00:55
1.14        1.14        0.000
  OS8                   JUNCTION     59.07    59.07     0  00:43
1.42        1.42        0.000
  OS9                   JUNCTION    135.58   135.58     0  01:08
6.68        6.68        0.000
  Out_Dr_A10            JUNCTION      0.00   106.35     0  00:42
0         2.83        0.000
  Out_Dr_B10            JUNCTION      0.00   145.46     0  00:42
0         3.73        0.000
  Out_LC_A10            JUNCTION      0.00   366.35     0  00:42
0         9.16        0.000
  Out_LC_A25            JUNCTION      0.00    48.69     0  00:39
0          1.2        0.000
  Out_LC_B              JUNCTION      0.00  3134.90     0  01:29
0          162        0.000
  Out_LC_C              JUNCTION      0.00    79.80     0  00:39
0         1.85        0.000
  Out_LC_E              JUNCTION      0.00    58.99     0  00:43
0         1.67        0.000
  Out_LC_F              JUNCTION      0.00   153.24     0  00:37
0         3.11        0.000
```

```
  Out_LC_G10           JUNCTION      0.00    58.97     0  00:42
0        1.66       0.000
  Out_LC_H10           JUNCTION      0.00    25.24     0  00:40
0       0.611       0.000
  Out_UEC_A            JUNCTION      0.00   228.30     0  01:10
0        10.9       0.000
  Out_UEC_B            JUNCTION      0.00   461.89     0  00:42
0        18.6       0.000
  Out_UEC_C10          JUNCTION      0.00    72.76     0  00:41
0        1.87       0.000
  Out_UEC_D10          JUNCTION      0.00    30.73     0  00:37
0       0.718      -0.000
  UEC_A10              JUNCTION    114.80   114.80     0  00:43
3.19        3.19       0.000
  UEC_A20              JUNCTION     34.76    34.76     0  00:39
0.812       0.812       0.000
  UEC_B10              JUNCTION     91.59    91.59     0  00:40
2.18        2.18       0.000
  UEC_B20              JUNCTION    100.29   100.29     0  00:38
2.11        2.11       0.000
  UEC_B30              JUNCTION     66.13    66.13     0  00:36
1.13        1.13       0.000
  UEC_B40              JUNCTION     23.06    23.06     0  00:36
0.396       0.396       0.000
  UEC_C10              JUNCTION     42.23    42.23     0  00:41
1.15        1.15       0.000
  UEC_D10              JUNCTION     30.73    30.73     0  00:37
0.718       0.718       0.000
  Out.Dr               OUTFALL       0.00   145.39     0  00:43
0        3.73       0.000
  Out_C.D              OUTFALL       0.00   138.35     0  00:42
0        3.52       0.000
  Out_LC.B.F           OUTFALL       0.00  3168.16     0  01:30
0         166       0.000
  Out_LC.G.H           OUTFALL       0.00    84.02     0  00:43
0        2.28       0.000
  Out_LC_I             OUTFALL       0.00   205.82     0  00:42
0        5.08       0.000
  UEC_Out              OUTFALL       0.00   457.16     0  00:47
0        18.6       0.000


  **********************
  Node Flooding Summary
  **********************

  No nodes were flooded.


  ************************
  Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
Out.Dr	28.37	20.33	145.39	3.727
Out_C.D	25.57	21.30	138.35	3.521
Out_LC.B.F	98.94	258.92	3168.16	165.559
Out_LC.G.H	25.65	13.75	84.02	2.280
Out_LC_I	34.00	23.13	205.82	5.083
UEC_Out	98.62	29.17	457.16	18.593
System	51.86	366.61	3737.45	198.763

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
Ch.Dr_A.Main10	CONDUIT	106.06	0 00:43	5.14	0.46	0.67
Ch.LC_A.Main10	CONDUIT	275.66	0 00:43	7.14	0.08	0.26
Ch.LC_A.Side10	CONDUIT	25.30	0 00:59	3.21	0.05	0.21
Ch.LC_A.Side11	CONDUIT	27.74	0 00:59	6.43	0.02	0.13
Ch.LC_B.30	CONDUIT	308.91	0 00:42	6.26	0.50	0.70
Ch.LC_B.Side.120	CONDUIT	110.52	0 00:44	7.58	0.28	0.52
Ch.LC_B.Side.121	CONDUIT	147.14	0 00:55	1.98	0.91	0.95
Ch.LC_B.Side.140	CONDUIT	8.40	0 00:52	2.51	0.03	0.15
Ch.Lc_B.Side.150	CONDUIT	52.72	0 00:44	6.24	0.13	0.33
Ch.LC_B.Side.160	CONDUIT	141.27	0 00:39	6.94	0.46	0.67
Ch.LC_B.Side.90	CONDUIT	133.27	0 00:40	7.10	0.43	0.64
Ch.LC_B.Side.91	CONDUIT	262.69	0 00:43	10.37	0.61	0.78
Ch.LC_B.Side122	CONDUIT	267.83	0 00:40	8.35	0.86	0.93

Ch.LC_B.Side130	CONDUIT	42.84	0	00:51	5.38	0.05
0.21						
Ch.LC_B.Side20	CONDUIT	318.59	0	01:10	3.55	0.09
0.23						
Ch.LC_B.Side50	CONDUIT	228.55	0	01:04	3.69	0.16
0.38						
Ch.LC_B_Side10	CONDUIT	383.48	0	01:12	5.44	0.20
0.42						
Ch.LC_D.Main10	CONDUIT	79.71	0	00:40	4.34	0.39
0.62						
Ch.LC_D.Main11	CONDUIT	58.99	0	00:43	4.56	0.24
0.47						
Ch.LC_G.Main10	CONDUIT	58.97	0	00:42	2.75	0.49
0.69						
Ch.LC_H.Main10	CONDUIT	25.23	0	00:40	2.69	0.15
0.36						
Ch.LC_I.Main1	CONDUIT	120.16	0	00:43	5.41	0.52
0.71						
Ch.OS_B1	CONDUIT	7.24	0	00:42	2.53	0.02
0.13						
Ch.OS_B2	CONDUIT	32.41	0	00:43	5.03	0.09
0.27						
Ch.OS2	CONDUIT	55.14	0	01:01	5.19	0.08
0.27						
Ch.UEC_A.Main10	CONDUIT	152.94	0	01:18	2.42	0.05
0.16						
Ch.UEC_A.Main11	CONDUIT	228.28	0	01:11	7.76	0.76
0.87						
Ch.UEC_A.Main20	CONDUIT	34.72	0	00:40	4.93	0.10
0.29						
Ch.UEC_B	CONDUIT	457.16	0	00:47	5.90	0.11
0.28						
Ch.UEC_B.Main10	CONDUIT	85.45	0	00:40	5.40	0.02
0.12						
Ch.UEC_B.Side10	CONDUIT	283.88	0	01:07	11.05	0.63
0.79						
Ch.UEC_B.Side20	CONDUIT	169.58	0	00:40	10.31	0.33
0.57						
Ch.UEC_C.Main10	CONDUIT	72.64	0	00:43	5.09	0.27
0.51						
Ch.UEC_D.Main10	CONDUIT	30.57	0	00:41	4.00	0.11
0.31						
CH_1	CONDUIT	44.49	0	01:20	2.56	0.01
0.07						
Ch_2	CONDUIT	67.44	0	01:24	2.80	0.02
0.09						
Ch_3	CONDUIT	364.19	0	00:47	4.67	0.10
0.27						
Ch_4	CONDUIT	409.09	0	00:49	4.87	0.11
0.29						
Ch_LC_A10	CONDUIT	365.48	0	00:44	7.63	0.02
0.11						
Ch_Main_1	CONDUIT	2633.57	0	01:33	8.96	0.72
0.89						

Ch_Main_2	CONDUIT	2515.30	0	01:34	6.77	0.88
0.95						
Ch_Main_3	CONDUIT	2415.99	0	01:28	10.12	0.74
0.89						
Ch_Main_4	CONDUIT	2317.57	0	01:28	8.90	0.83
0.93						
Ch_Main_5	CONDUIT	2085.84	0	01:29	7.88	0.85
0.94						
Ch_Main_6	CONDUIT	2085.51	0	01:26	7.14	0.63
0.77						
Ch_OS10	CONDUIT	2.67	0	00:44	2.01	0.00
0.04						
Ch_OS6	CONDUIT	26.09	0	01:05	3.83	0.00
0.12						
Ch_Upper.Main_1	CONDUIT	211.84	0	01:03	5.43	0.22
0.56						
Ch_Upper.Main_2	CONDUIT	78.62	0	00:59	3.09	0.12
0.45						
Culv_LC_A10	CONDUIT	366.35	0	00:42	21.64	0.32
0.35						
Culv_LC_A20	CONDUIT	48.69	0	00:39	14.13	0.35
0.38						
Culv_OS1	CONDUIT	230.58	0	00:58	14.76	0.82
0.69						
Culv_OS2	CONDUIT	55.71	0	00:54	9.76	0.61
0.56						
Culv_OS4	CONDUIT	59.67	0	00:44	3.87	0.91
0.75						
Culv_OS6	CONDUIT	26.86	0	00:54	10.90	0.12
0.23						
Culv_OS7	CONDUIT	25.38	0	00:55	6.83	0.36
0.42						
Culv_OS8	CONDUIT	59.06	0	00:43	5.25	0.86
0.71						
Culv_OS9	CONDUIT	135.57	0	01:08	8.23	0.88
0.73						
Dummy_Dr_A10	DUMMY	106.35	0	00:42		
Dummy_Dr_B10	DUMMY	41.35	0	00:37		
Dummy_LC_A10	DUMMY	89.75	0	00:35		
Dummy_LC_A20	DUMMY	70.78	0	00:40		
Dummy_LC_A25	DUMMY	48.69	0	00:39		
Dummy_LC_A30	DUMMY	202.69	0	00:36		
Dummy_LC_B10	DUMMY	50.36	0	01:08		
Dummy_LC_B100	DUMMY	10.11	0	01:07		
Dummy_LC_B110	DUMMY	65.28	0	00:41		
Dummy_LC_B120	DUMMY	103.80	0	00:44		
Dummy_LC_B130	DUMMY	42.94	0	00:48		
Dummy_LC_B140	DUMMY	46.69	0	00:39		
Dummy_LC_B150	DUMMY	59.16	0	00:40		
Dummy_LC_B160	DUMMY	131.96	0	00:36		
Dummy_LC_B170	DUMMY	8.74	0	00:42		
Dummy_LC_B180	DUMMY	143.01	0	00:37		
Dummy_LC_B190	DUMMY	142.63	0	00:35		
Dummy_LC_B20	DUMMY	71.02	0	00:54		

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  Dummy_LC_B30         DUMMY       99.79     0  00:40
  Dummy_LC_B40         DUMMY      210.35     0  00:39
  Dummy_LC_B50         DUMMY      150.29     0  00:38
  Dummy_LC_B60         DUMMY       44.51     0  00:59
  Dummy_LC_B70         DUMMY      154.75     0  00:46
  Dummy_LC_B80         DUMMY      120.82     0  00:49
  Dummy_LC_B90         DUMMY      137.94     0  00:48
  Dummy_LC_C10         DUMMY       79.80     0  00:39
  Dummy_LC_D10         DUMMY       58.99     0  00:43
  Dummy_LC_F10         DUMMY      153.24     0  00:37
  Dummy_LC_F20         DUMMY       21.43     0  00:54
  Dummy_LC_G10         DUMMY       58.97     0  00:42
  Dummy_LC_H10         DUMMY       25.24     0  00:40
  Dummy_LC_I10         DUMMY       87.28     0  00:39
  Dummy_LC_I20         DUMMY      121.23     0  00:40
  Dummy_OS_B1          DUMMY        7.25     0  00:41
  Dummy_OS_B2          DUMMY       32.70     0  00:41
  Dummy_OS1            DUMMY      230.59     0  00:58
  Dummy_OS10           DUMMY        2.67     0  00:44
  Dummy_OS2            DUMMY       55.71     0  00:54
  Dummy_OS3            DUMMY     1832.34     0  01:27
  Dummy_OS4            DUMMY       59.67     0  00:44
  Dummy_OS5            DUMMY        4.20     0  00:46
  Dummy_OS6            DUMMY       26.86     0  00:54
  Dummy_OS7            DUMMY       25.38     0  00:55
  Dummy_Os8            DUMMY       59.07     0  00:43
  Dummy_OS9            DUMMY      135.58     0  01:08
  Dummy_UEC_A10        DUMMY      114.80     0  00:43
  Dummy_UEC_A20        DUMMY       34.76     0  00:39
  Dummy_UEC_B          DUMMY       91.59     0  00:40
  Dummy_UEC_B20        DUMMY      100.29     0  00:38
  Dummy_UEC_B30        DUMMY       66.13     0  00:36
  Dummy_UEC_B40        DUMMY       23.06     0  00:36
  Dummy_UEC_C10        DUMMY       42.23     0  00:41
  Dummy_UEC_D10        DUMMY       30.73     0  00:37
  Over.Dr_B            CONDUIT    145.39     0  00:43      3.96    0.06
0.18
  Over.LC.G            CONDUIT     84.02     0  00:43      2.82    0.04
0.15
  Over.LC_B            CONDUIT   3134.31     0  01:31      5.84    0.68
0.80
  Over.LC_D            CONDUIT    138.35     0  00:42      2.10    0.16
0.33
  Over.LC_F            CONDUIT    151.72     0  00:39      2.90    0.11
0.26
  Over_LC_A25          CONDUIT     48.53     0  00:41      3.41    0.45
0.62
  Over_OS4             CONDUIT     45.43     0  01:04      2.19    0.01
0.04
  Over_OS5             CONDUIT      2.80     0  01:30      0.93    0.00
0.01
  Over_OS8_1           CONDUIT     54.34     0  00:55      1.50    0.02
0.09
```

```
  Pipe.LC_A.20          CONDUIT    205.85     0  00:42      9.97    0.83
0.69
  Pipe.LC_B.110         CONDUIT     65.24     0  00:41     13.63    0.74
0.64
  Pipe.LC_B.120         CONDUIT    476.24     0  00:46     25.35    0.72
0.63
  Pipe.LC_B.40          CONDUIT    210.23     0  00:40     19.46    0.57
0.54
  Pipe.LC_B.70          CONDUIT    154.74     0  00:46     14.61    0.96
0.79
  Pipe.LC_B.80          CONDUIT    120.81     0  00:49     22.92    0.83
0.70
  Pipe.LC_F.10          CONDUIT    326.45     0  00:45      5.93    0.59
0.76
  Pipe.LC_I             CONDUIT    205.82     0  00:42     11.23    0.70
0.62
  Pipe.UEC_B.30         CONDUIT     66.13     0  00:36     20.42    0.44
0.47
  Pipe.UEC_B40          CONDUIT     23.06     0  00:36      7.87    0.39
0.43


  *************************
  Conduit Surcharge Summary
  *************************

  No conduits were surcharged.


  Analysis begun on:  Mon Dec 16 16:33:51 2024
  Analysis ended on:  Mon Dec 16 16:33:52 2024
  Total elapsed time: 00:00:01
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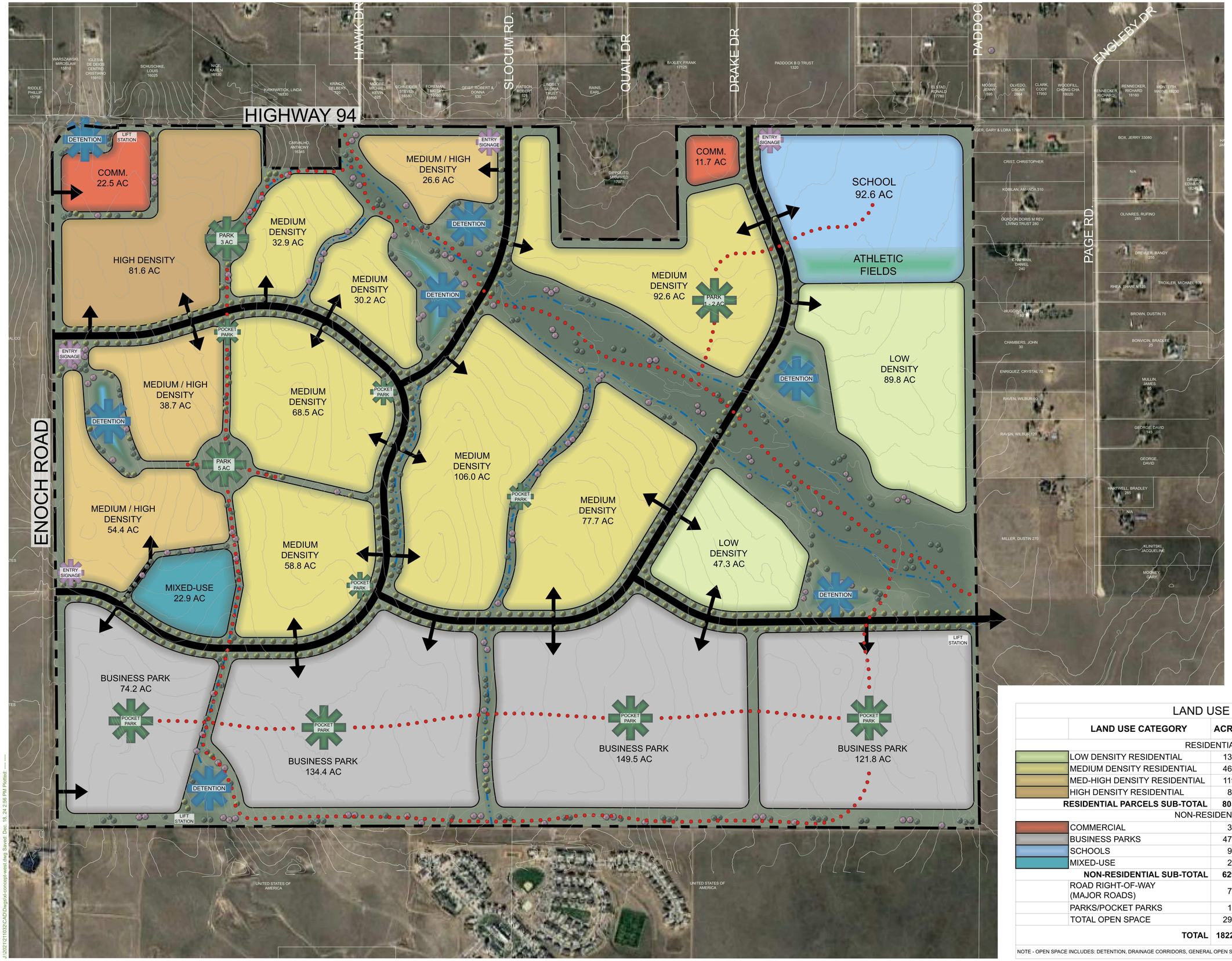
Appendix D
Pond Calculations

Appendix E
Culvert Calculations

Appendix F
Site Drainage Maps



LEGEND

- SITE BOUNDARY
- ROADWAYS
- PROPOSED TRAILS
- EXISTING DRAINAGE
- DRAINAGE WETLAND
- LOW DENSITY
- MEDIUM DENSITY
- MED-HIGH DENSITY
- HIGH DENSITY
- COMMERCIAL
- BUSINESS PARK
- SCHOOL
- HOTEL
- DETENTION POND
- PARK/POCKET PARK
- DETENTION POND
- ENTRY SIGNAGE

LAND USE SUMMARY

LAND USE CATEGORY	ACREAGE	SITE PERCENT	DENSITY RANGE		UNIT RANGE	
RESIDENTIAL PARCELS						
LOW DENSITY RESIDENTIAL	137.1 AC.	7.5%	1.00	2.99	137	410
MEDIUM DENSITY RESIDENTIAL	466.7 AC.	25.6%	3.00	4.99	1400	2329
MED-HIGH DENSITY RESIDENTIAL	119.7 AC.	6.6%	5.00	7.99	599	956
HIGH DENSITY RESIDENTIAL	81.6 AC.	4.5%	8.00	14.00	653	1142
RESIDENTIAL PARCELS SUB-TOTAL	**805.1 AC.**	**44.2%**			2789	4838
NON-RESIDENTIAL PARCELS						
COMMERCIAL	34.2 AC.	1.9%				
BUSINESS PARKS	479.9 AC.	26.3%				
SCHOOLS	92.6 AC.	5.1%				
MIXED-USE	22.9 AC.	1.3%				
NON-RESIDENTIAL SUB-TOTAL	**629.6 AC.**	**34.5%**				
ROAD RIGHT-OF-WAY (MAJOR ROADS)	73.2 AC.	4.0%				
PARKS/POCKET PARKS	17.5 AC.	1.0%				
TOTAL OPEN SPACE	297.0 AC.	16.3%				
TOTAL	**1822.4 AC**	**100.0%**			2789	4838

NOTE - OPEN SPACE INCLUDES: DETENTION, DRAINAGE CORRIDORS, GENERAL OPEN SPACE, AND EASEMENTS.

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SKETCH PLAN

HRGreen

FLYING HORSE EAST

EL PASO COUNTY, COLORADO

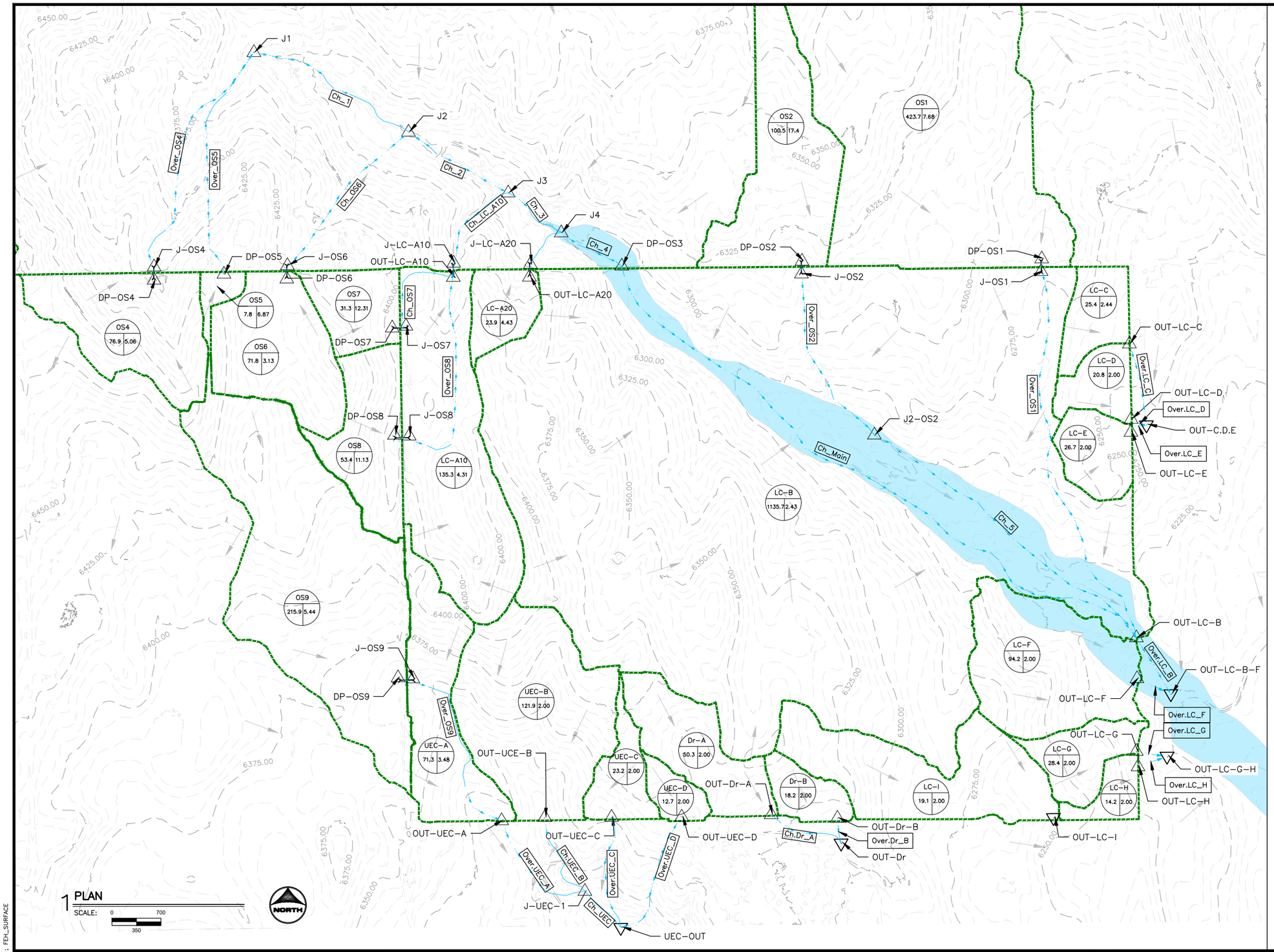
NORTH

0 400' 800' 1200'

SCALE: 1" = 400'

December 18, 2024

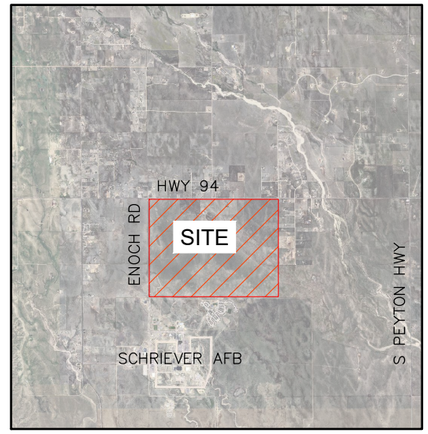
Base mapping compiled from best available information.
All map data should be considered as preliminary, in need of verification, and subject to change.
This exhibit is conceptual in nature and does not represent any regulatory approval. Plan is subject to change.



1 PLAN

SCALE: 0 700 350

NORTH



VICINITY MAP

LEGEND:

- EXISTING MAJOR CONTOUR — 5250
- EXISTING MINOR CONTOUR
- EXISTING CULVERT
- DIRECTIONAL FLOW ARROW
- EMERGENCY OVERFLOW ARROW
- MAJOR BASIN LINE
- 100YR ZONE A FLOODPLAIN
- SWMM CONVEYANCE ELEMENT
- OUTFALL
- DESIGN POINT
- PROPOSED BASIN LABEL (XX = BASIN DESIGNATION; AREA (AC.) XX | XX = IMPERVIOUSNESS)

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NO.	DATE	BY	REVISION DESCRIPTION

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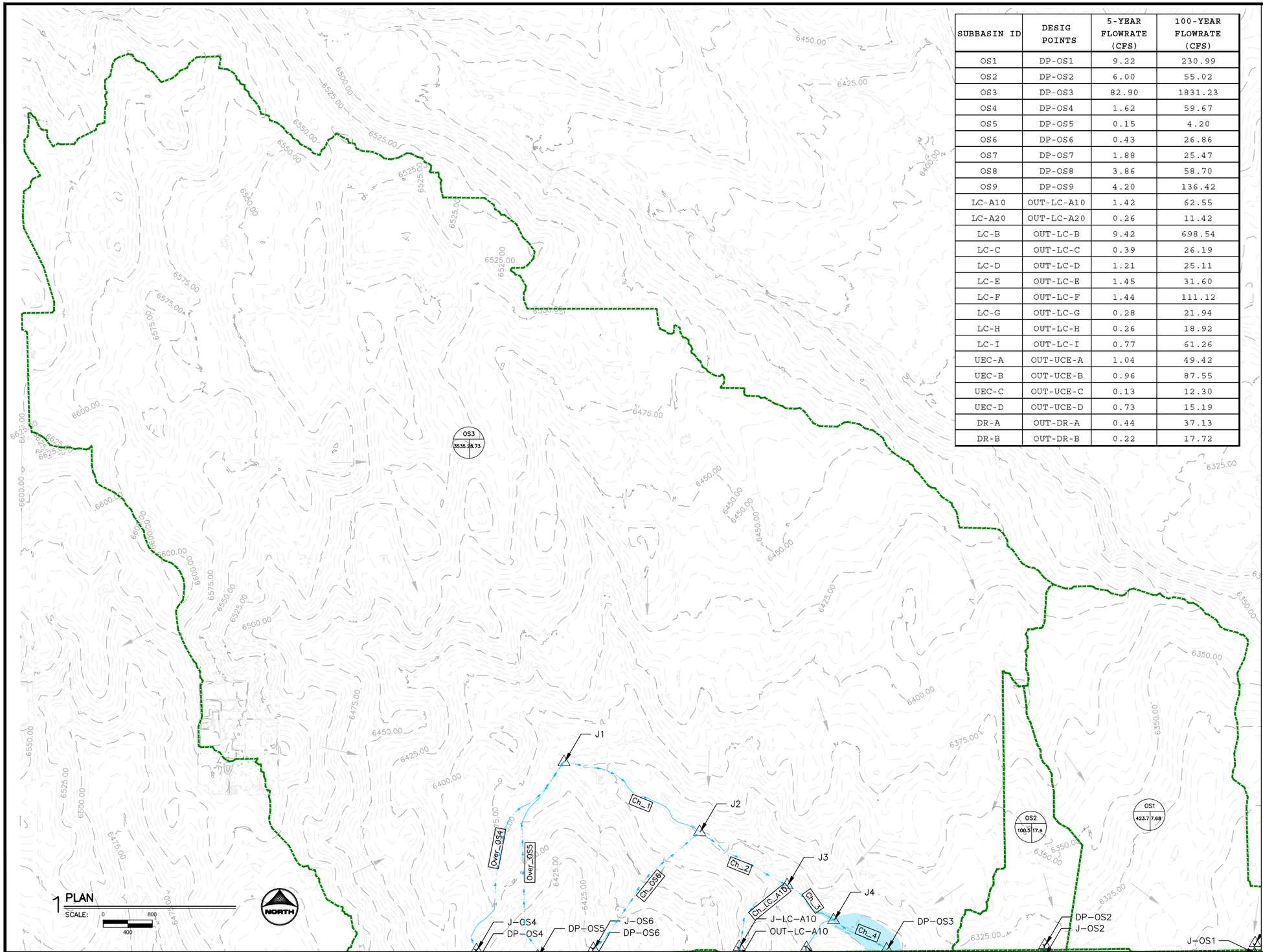
FLYING HORSE EAST MDDP
FLYING HORSE DEVELOPMENT, LLC
COLORADO SPRINGS, CO

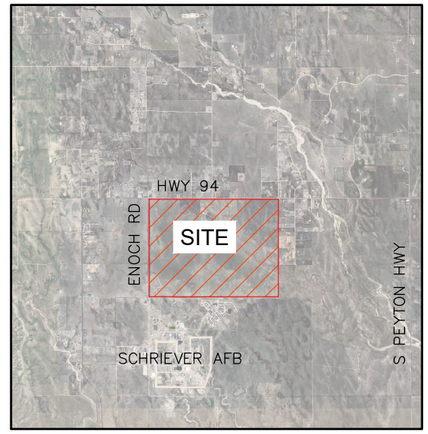
EXISTING DRAINAGE MAP

SHEET NO. EX1

Xrefs: xgl-1-dh01; FFH_SURFACE

SUBBASIN ID	DESIG POINTS	5-YEAR FLOWRATE (CFS)	100-YEAR FLOWRATE (CFS)
OS1	DP-OS1	9.22	230.99
OS2	DP-OS2	6.00	55.02
OS3	DP-OS3	82.90	1831.23
OS4	DP-OS4	1.62	59.67
OS5	DP-OS5	0.15	4.20
OS6	DP-OS6	0.43	26.86
OS7	DP-OS7	1.88	25.47
OS8	DP-OS8	3.86	58.70
OS9	DP-OS9	4.20	136.42
LC-A10	OUT-LC-A10	1.42	62.55
LC-A20	OUT-LC-A20	0.26	11.42
LC-B	OUT-LC-B	9.42	698.54
LC-C	OUT-LC-C	0.39	26.19
LC-D	OUT-LC-D	1.21	25.11
LC-E	OUT-LC-E	1.45	31.60
LC-F	OUT-LC-F	1.44	111.12
LC-G	OUT-LC-G	0.28	21.94
LC-H	OUT-LC-H	0.26	18.92
LC-I	OUT-LC-I	0.77	61.26
UEC-A	OUT-UCE-A	1.04	49.42
UEC-B	OUT-UCE-B	0.96	87.55
UEC-C	OUT-UCE-C	0.13	12.30
UEC-D	OUT-UCE-D	0.73	15.19
DR-A	OUT-DR-A	0.44	37.13
DR-B	OUT-DR-B	0.22	17.72





VICINITY MAP

LEGEND:

EXISTING MAJOR CONTOUR 5250

EXISTING MINOR CONTOUR

EXISTING CULVERT

DIRECTIONAL FLOW ARROW

EMERGENCY OVERFLOW ARROW

MAJOR BASIN LINE

100YR ZONE A FLOODPLAIN

SWMM CONVEYANCE ELEMENT

OUTFALL

DESIGN POINT

PROPOSED BASIN LABEL (XX: BASIN DESIGNATION; AREA (AC.) XX; XX IMPERVIOUSNESS)

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NO.	DATE	BY	REVISION DESCRIPTION

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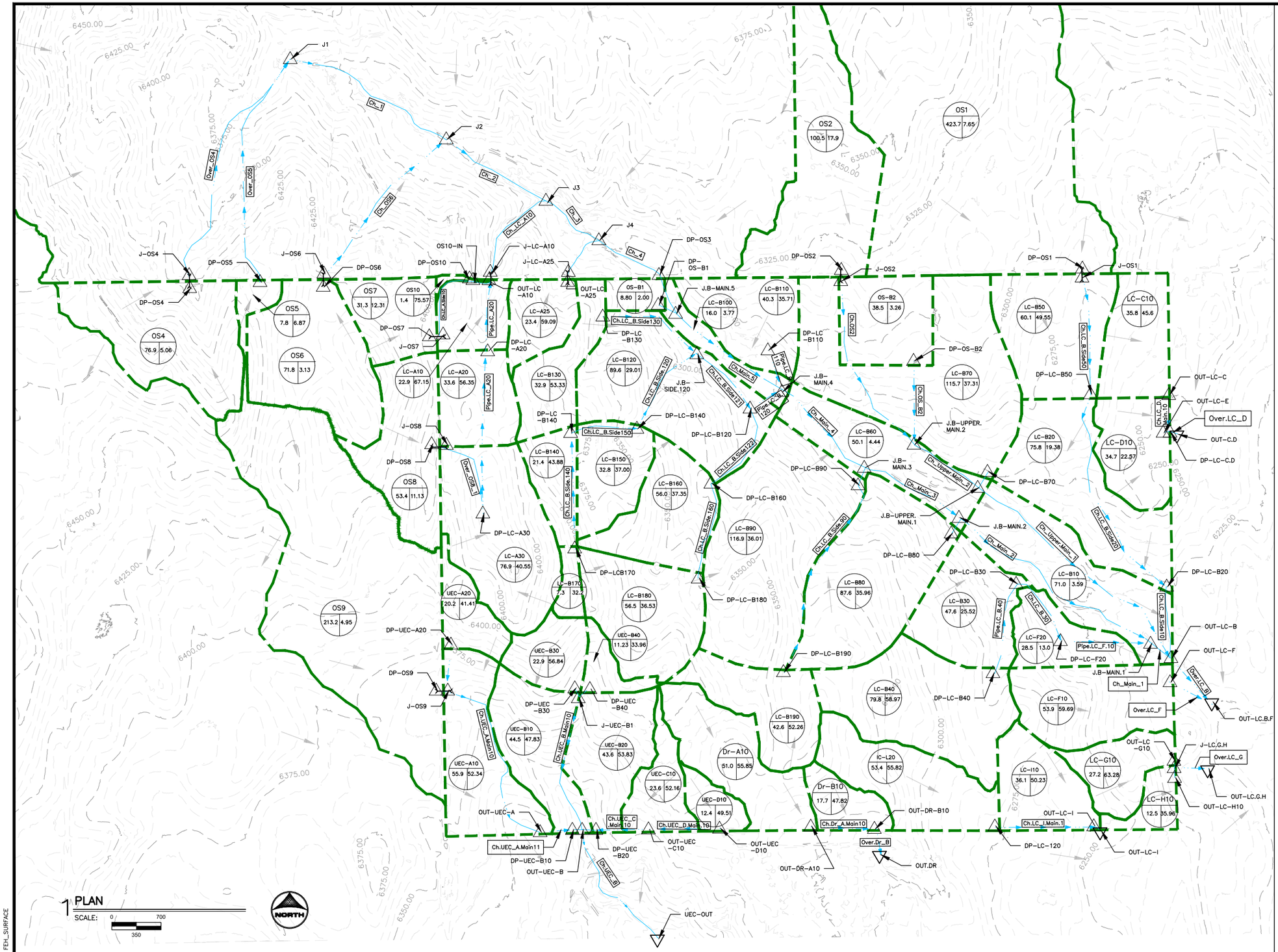
FLYING HORSE EAST MDDP
FLYING HORSE DEVELOPMENT, LLC
COLORADO SPRINGS, CO

EXISTING DRAINAGE MAP

SHEET NO.
EX2

Xrefs: xgt-1-db01; FEH_SURFACE



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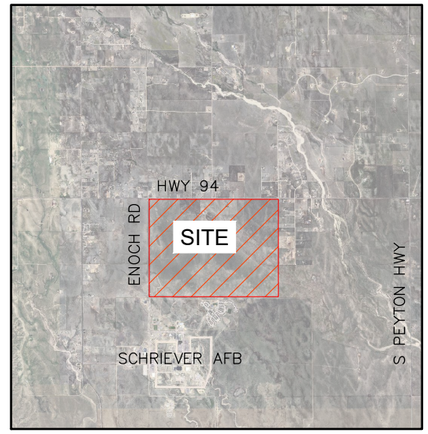
NORTH



VICINITY MAP

LEGEND:

- EXISTING MAJOR CONTOUR — 5250
- EXISTING MINOR CONTOUR
- EXISTING CULVERT
- DIRECTIONAL FLOW ARROW
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- MAJOR BASIN LINE
- 100YR ZONE A FLOODPLAIN
- SWMM CONVEYANCE ELEMENT
- OUTFALL
- DESIGN POINT
- PROPOSED BASIN LABEL — XX BASIN DESIGNATION; AREA (AC.) XX IMPERVIOUSNESS

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NO.	DATE	BY	REVISION DESCRIPTION

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FLYING HORSE EAST MDDP
FLYING HORSE DEVELOPMENT, LLC
COLORADO SPRINGS, CO

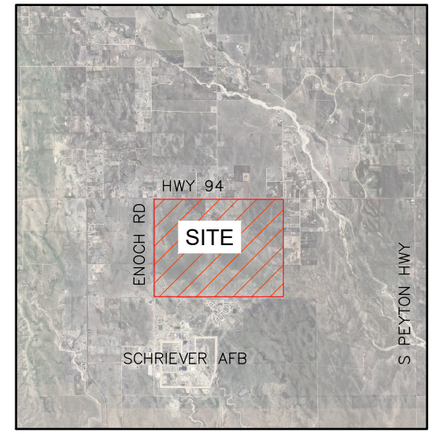
PROPOSED DRAINAGE MAP

SHEET NO. PR1

Xrefs: xg1-1-dh01; FEH_SURFACE

SUBBASIN ID	DESIG POINTS	5-YEAR FLOWRATE (CFS)	100-YEAR FLOWRATE (CFS)
OS1	DP-OS1	9.17	230.59
OS2	DP-OS2	6.27	55.71
OS3	DP-OS3	83.24	1832.34
OS4	DP-OS4	1.62	59.67
OS5	DP-OS5	0.15	4.20
OS6	DP-OS6	0.43	26.86
OS7	DP-OS7	1.84	25.38
OS8	DP-OS8	4.08	59.07
OS9	DP-OS9	3.80	135.58
OS10	DP-OS10	0.95	2.67
OS-B1	DP-OS-B1	0.08	7.25
OS-B2	DP-OS-B2	0.59	32.70

SUBBASIN ID	DESIG POINTS	5-YEAR FLOWRATE (CFS)	100-YEAR FLOWRATE (CFS)
LC-A10	OUT-LC-A10	31.12	89.75
LC-A20	DP-LC-A20	22.05	70.78
LC-A25	OUT-LC-A25	16.06	48.69
LC-A30	DP-LC-A30	50.19	202.69
LC-B10	OUT-LC-B	1.17	50.36
LC-B20	DP-LC-B20	8.45	71.02
LC-B30	DP-LC-B30	20.33	99.79
LC-B40	DP-LC-B40	66.69	210.35
LC-B50	DP-LC-B50	40.74	150.29
LC-B60	DP-LC-B60	2.14	44.51
LC-B70	DP-LC-B70	34.93	154.75
LC-B80	DP-LC-B80	24.60	120.82
LC-B90	DP-LC-B90	29.93	137.94
LC-B100	DP-LC-B100	0.25	10.11
LC-B110	DP-LC-B110	14.08	65.28
LC-B120	DP-LC-B120	19.04	103.80
LC-B130	DP-LC-B130	12.69	42.94
LC-B140	DP-LC-B140	11.79	46.69
LC-B150	DP-LC-B150	13.18	59.16
LC-B160	DP-LC-B160	30.50	131.96
LC-B170	DP-LC-B170	1.71	8.74
LC-B180	DP-LC-B180	31.29	143.01
LC-B190	DP-LC-B190	41.78	142.63
LC-C10	OUT-LC-C	20.27	79.80
LC-D10	OUT-LC-E	11.34	58.99
LC-F10	OUT-LC-F	48.28	153.24
LC-F20	DP-LC-F20	1.65	21.43
LC-G10	OUT-LC-G10	18.87	58.97
LC-H10	OUT-LC-H10	5.22	25.24
LC-I10	DP-LC-I	25.93	87.28
LC-I20	DP-LC-I20	35.85	121.23
UEC-A10	DP-UEC-A10	32.34	114.80
UEC-A20	OUT-UEC-A	8.92	34.76
UEC-B10	DP-UEC-B10	24.45	91.59
UEC-B20	DP-UEC-B20	30.59	100.29
UEC-B30	DP-UEC-B30	20.75	66.13
UEC-B40	DP-UEC-B40	4.99	23.06
UEC-C10	DP-UEC-C10	12.08	42.23
UEC-D10	DP-UEC-D10	9.12	30.73
Dr-A10	OUT-Dr-A10	31.27	106.35
Dr-B10	OUT-Dr-B10	11.07	41.35



VICINITY MAP

LEGEND:

EXISTING MAJOR CONTOUR 5250

EXISTING MINOR CONTOUR

EXISTING CULVERT

DIRECTIONAL FLOW ARROW

EMERGENCY OVERFLOW ARROW

MAJOR BASIN LINE

100YR ZONE A FLOODPLAIN

SWMM CONVEYANCE ELEMENT

OUTFALL

DESIGN POINT

PROPOSED BASIN LABEL — XX BASIN DESIGNATION; AREA (AC.) XX | XX IMPERVIOUSNESS

OS3 3535.28.73

OS2 100.5 17.9

OS1 423.7 7.65

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COLORADO SPRINGS, CO

PROPOSED DRAINAGE MAP

SHEET NO. PR2

Xrefs: xg|-1-dh01; FEH_SURFACE