

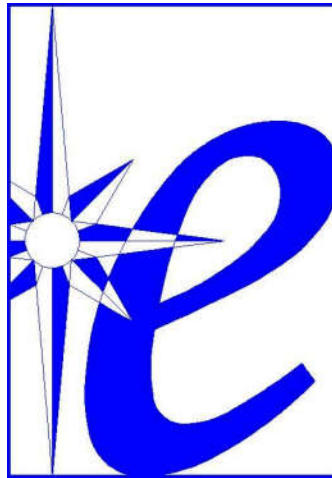
# TRACT 20727

unincorporated Fontana, CA

## PRELIMINARY DRAINAGE STUDY

DRNSTY-2024-\_\_\_\_\_

August 7, 2024



Reference 155-238.014

PREPARED BY:

**Encompass Associates, Inc.**

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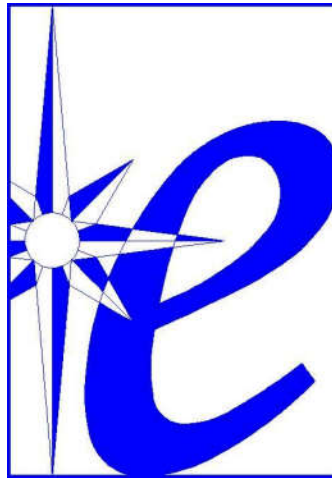
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Aaron T. Skeers  
R.C.E. 62183 Exp. 9/30/25

Date

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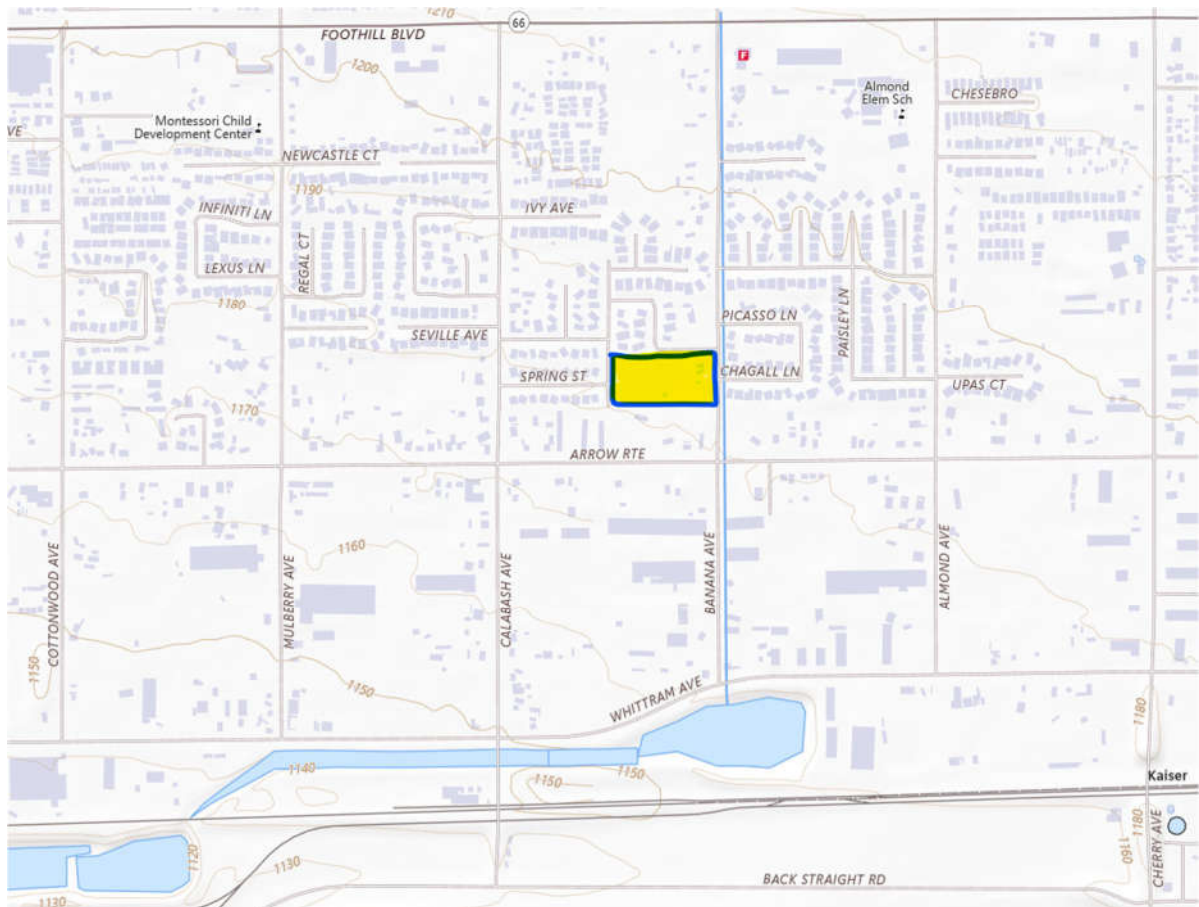
- |            |                                                                                                                                                                                                                                                                    |
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# ***DISCUSSION***

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The purpose of this preliminary drainage study is to determine the drainage facility requirements for Tract 20727 in unincorporated Fontana. Specifically, the subject project is surrounded on all sides by existing residential properties, generally south of Foothill Boulevard, west of Banana Avenue, north of Arrow Route, and east of Buena Vista Drive, in San Bernardino County, California.

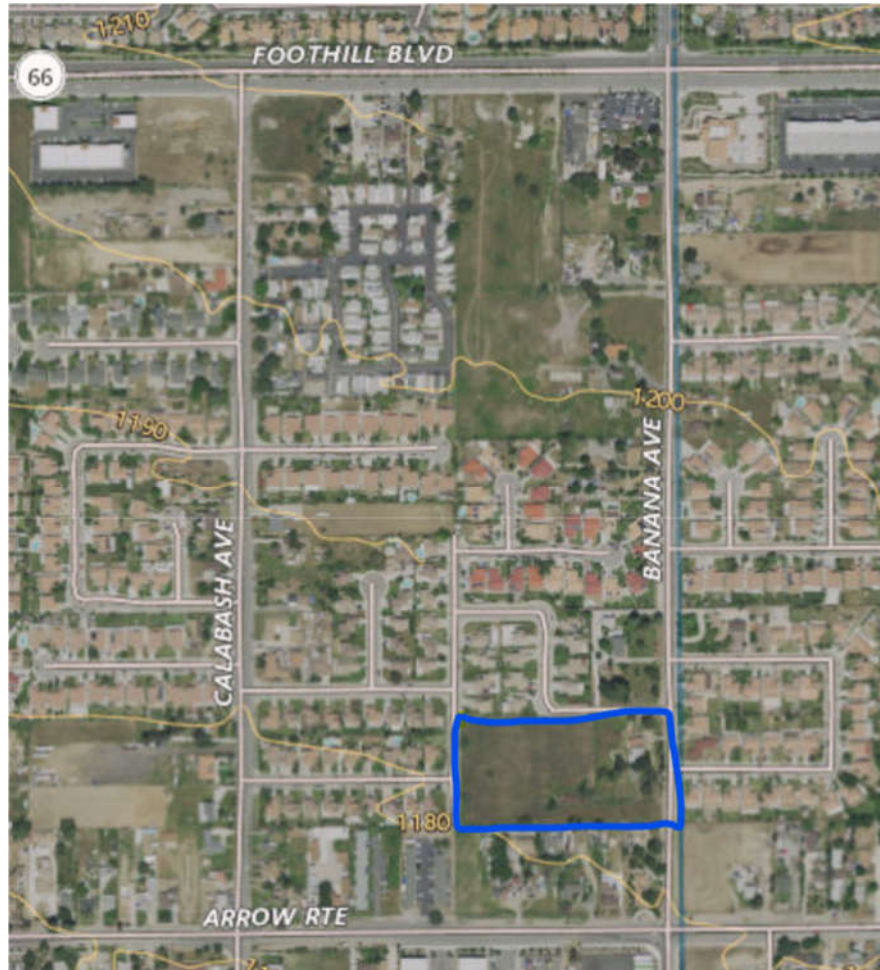
The subject site will consist of 68 condominium unit residences, with an approximate area of 5 acres.



**Vicinity Map**

### **Existing Condition**

The existing condition of the site is mostly undeveloped but there is an existing single-family residence. Most of the site is covered by native grasses and has been periodically cut. Most runoff historically has drained from northeast to southwest.



Soil type is classified as Hydrologic Soil Group A, generally well-draining.

The site is shown in Flood Hazard Zone X, indicating an areas of minimal flooding potential, per FEMA FIRM 06071C8651H (effective date 8/28/2008). See References for a FIRMette map showing the site in question.

### **Off-site Areas**

The site is not subject to off-site runoff.

### **Proposed Condition**

Proposed drainage is overland and by sheet flow generally in a southwesterly direction. Runoff will be via surface flow to area drains around buildings and to inlets to be located throughout paved drives.

As there are no existing regional storm drain facilities serving the immediate area, the project will be required to reduce 100-year developed runoff to 90% of the existing 25-year condition, per county detention basin guidelines.

This required detention is proposed to be incorporated into the project Low Impact Development BMP, which will consist of two underground infiltration systems, situated in the southerly corners of the site, with the westerly system discharging out to Buena Vista Drive, and the easterly system draining out to Banana Avenue. Overflows from this system will be reduced to a level at or below the existing condition, and will flow through proposed parkway drains.

| <b>Hydrologic Summary Table</b> |      |             |                       |          |               |          |               |                   |                   |               |                 |
|---------------------------------|------|-------------|-----------------------|----------|---------------|----------|---------------|-------------------|-------------------|---------------|-----------------|
| Existing Condition              | Area | Peak flow   | Proposed Condition    | Wly Area | Wly Peak flow | Ely Area | Ely Peak Flow | Wly Basin Outflow | Ely Basin Outflow | Total Outflow | Mitigation rate |
|                                 | ac   | cfs         |                       | ac       | cfs           | ac       | cfs           | cfs               | cfs               | cfs           |                 |
| <b>5-year storm</b>             | 4.7  | <b>5.1</b>  | <b>10-year storm</b>  | 2.06     | 3.59          | 2.64     | 4.3           | 2.0               | 2.4               | <b>4.4</b>    | <b>86%</b>      |
| <b>10-year storm</b>            | 4.7  | <b>6.5</b>  | <b>25-year storm</b>  | 2.06     | 4.65          | 2.64     | 5.56          | 2.6               | 3.1               | <b>5.7</b>    | <b>89%</b>      |
| <b>25-year storm</b>            | 4.7  | <b>8.54</b> | <b>100-year storm</b> | 2.06     | 6.4           | 2.64     | 7.7           | 3.5               | 4.3               | <b>7.8</b>    | <b>90%</b>      |

Drawdown calculations are provided at the end of Section U.

### **Methodology**

The existing 5-, 10- and 25-year storms were modeled and compared to the proposed 10-, 25-, and 100-year storm events, respectively, in the rational method hydrology calculations in this study. Antecedent Moisture Condition (AMC) II was used for all storms except for the 100-year, which used AMC III. Note that as the off-site tributary areas are being routed around the site, and because the site needs to demonstrate that developed flows do not exceed the county's policy compared with existing condition flows, the existing condition does not include current (existing) off-site tributary area.

The rational method and small area synthetic unit hydrograph hydrologic models, as defined by Flood Control for San Bernardino County, were followed in the determination of storm runoff. AES software was utilized for hydrology calculations.

# **RATIONAL METHOD**

## **HYDROLOGY**

## 5-year

# EAI Integrated Drainage System Hydrology & Hydraulic Calculations

Per San Bernardino County Hydrology Manual Methodology  
Rainfall Source: NOAA

For Tract 20727  
At Banana at Arrow  
in San Bernardino County

Hydrology and Hydraulic Calculations  
Reference Number: 155-238.014

Prepared By: Aaron T. Skeers

Project Dated: 8/5/2024 12:00:00 AM  
Last Run Dated: 5/22/2021 12:00:00 AM  
Printed: 8/6/2024 4:41:29 PM

## 5-year Rational Method Hydrology Calculations

1 hour storm intensity = 0.72 in/hr.  
Using AMC 2.  
Valley Hydrologic Region - Intensity-Duration Slope set to 0.6.

EXISTING

## Initial Flow through Subarea 1|2

Upstream Elevation at Node 1 is 1183 ft.  
Downstream Elevation at Node 2 is 1177 ft.

Flow length is 742 ft.

| Land Use | CN | Soil Type | Area (AC) |
|----------|----|-----------|-----------|
|----------|----|-----------|-----------|

|        |    |   |      |
|--------|----|---|------|
| barren | 78 | A | 4.31 |
|--------|----|---|------|

|          |    |   |      |
|----------|----|---|------|
| 3-4du/ac | 32 | A | 0.38 |
|----------|----|---|------|

$$\text{Time of Concentration} = K * (\text{length}^3 / \Delta \text{EL})^{0.2}$$
$$T_c = 0.52 * (742^3 / 6)^{0.2} = 15.18 \text{ minutes.}$$
$$\text{Rainfall Intensity} = e^{(-\text{Slope} \cdot \text{Log}(\text{destT}) + \text{Log}(\text{refI}) + \text{Slope} \cdot \text{Log}(\text{refT}))}$$
$$= e^{(-0.6 \cdot \log(15.18) + \log(0.718) + 0.6 \cdot \log(60))} = 1.64 \text{ in/hr.}$$
$$\text{Peak Runoff} = 0.9 * (I - A_p * F_p) * \text{Area} = 0.9 * (1.64 - 0.97 * 0.45) * 4.69 = 5.08 \text{ cfs.}$$

Area-Weighted Yield = 0.44.

>>>>>>>>>>> Peak Flow: 5.08 cfs --- at Tc: 15.18 minutes. <<<<<<<<<<<<<



## 10-year

# EAI Integrated Drainage System Hydrology & Hydraulic Calculations

Per San Bernardino County Hydrology Manual Methodology  
Rainfall Source: NOAA

For Tract 20727  
At Banana at Arrow  
in San Bernardino County

Hydrology and Hydraulic Calculations  
Reference Number: 155-238.014

Prepared By: Aaron T. Skeers

Project Dated: 8/5/2024 12:00:00 AM  
Last Run Dated: 5/22/2021 12:00:00 AM  
Printed: 8/6/2024 4:47:43 PM

## 10-year Rational Method Hydrology Calculations

1 hour storm intensity = 0.87 in/hr.  
Using AMC 2.  
Valley Hydrologic Region - Intensity-Duration Slope set to 0.6.

EXISTING

## Initial Flow through Subarea 1|2

```
Upstream Elevation at Node    1 is 1183 ft.
Downstream Elevation at Node  2 is 1177 ft.
      Flow length is 742 ft.
            Land Use   CN   Soil Type     Area (AC)
            barren    78     A             4.31
            3-4du/ac  32     A             0.38
Time of Concentration = K * (length^3 / Delta_EL)^0.2
      Tc = 0.52 * (742^3 / 6)^0.2 = 15.18 minutes.
Rainfall Intensity = e^(-Slope*Log(desT)+Log(refI)+Slope*Log(refT))
                = e^(-0.6*Log(15.18)+Log(0.867)+0.6*Log(60)) = 1.98 in/hr.
Peak Runoff = 0.9*(I-Ap*Fp)*Area = 0.9*(1.98 - 0.97 * 0.45) * 4.69 = 6.52 cfs.
Area-Weighted Yield = 0.49.
>>>>>>>>>>>>>> Peak Flow:          6.52 cfs --- at Tc:    15.18minutes. <<<<<<<<<<<<<<
```



## 25-year

# EAI Integrated Drainage System Hydrology & Hydraulic Calculations

Per San Bernardino County Hydrology Manual Methodology  
Rainfall Source: NOAA

For Tract 20727  
At Banana at Arrow  
in San Bernardino County

Hydrology and Hydraulic Calculations  
Reference Number: 155-238.014

Prepared By: Aaron T. Skeers

Project Dated: 8/5/2024 12:00:00 AM  
Last Run Dated: 5/22/2021 12:00:00 AM  
Printed: 8/6/2024 4:46:34 PM

## 25-year Rational Method Hydrology Calculations

1 hour storm intensity = 1.08 in/hr.  
Using AMC 2.  
Valley Hydrologic Region - Intensity-Duration Slope set to 0.6.

EXISTING

## Initial Flow through Subarea 1|2

```
Upstream Elevation at Node    1 is 1183 ft.
Downstream Elevation at Node  2 is 1177 ft.
      Flow length is 742 ft.
            Land Use   CN   Soil Type     Area (AC)
            barren    78     A             4.31
            3-4du/ac  32     A             0.38
Time of Concentration = K * (length^3 / Delta_EL)^0.2
      Tc = 0.52 * (742^3 / 6)^0.2 = 15.18 minutes.
Rainfall Intensity = e^(-Slope*Log(desT)+Log(refI)+Slope*Log(refT))
                = e^(-0.6*Log(15.18)+Log(1.08)+0.6*Log(60)) = 2.46 in/hr.
Peak Runoff = 0.9*(I-Ap*Fp)*Area = 0.9*(2.46 - 0.97 * 0.45) * 4.69 = 8.54 cfs.
Area-Weighted Yield = 0.54.
>>>>>>>>>>>>>> Peak Flow:      8.54 cfs --- at Tc:    15.18minutes. <<<<<<<<<<<<<<<
```







**SYNTHETIC UNIT HYDROGRAPH**

**CALCULATIONS**

**AND**

**DETENTION BASIN**

**FLOOD ROUTING**

**ANALYSIS**

**Encompass Associates, Inc.**

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 Rancho Cucamonga, CA 91737  
 909-684-0093

Tr 20727 Banana  
 SB Co

155-238.014  
 8/6/24

AMC Type **II** (I,II or III)

**Maximum Loss Rate**

**Wly Dev** Set # **1**

| Cover                  | Area | %    | Soil type | Area  | %      | CN-II | CN-III | Ap   | %    | S     | Fp (F.C-6) | Fm   | Fm (wt) |
|------------------------|------|------|-----------|-------|--------|-------|--------|------|------|-------|------------|------|---------|
| condo                  | 2.06 | 1.00 | A         | 2.06  | 1.00   | 32    | 52     | 0.35 | 0.35 | 21.25 | 0.975      | 0.34 | 0.34    |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
| (AutoCalc: Impervious) |      |      |           | (1.3) | (0.63) |       | 98     | 0    | 0.65 | 0.2   |            |      |         |
|                        | 2.1  |      |           | 2.06  |        |       |        |      |      |       |            | Fm=  | 0.34    |

**Low Loss Fraction**

| Return Period              | 2    | 2.81 in |        | 10   | 4.34 in |        | 25   | 5.20 in |        | 100  | 6.45 in |        |
|----------------------------|------|---------|--------|------|---------|--------|------|---------|--------|------|---------|--------|
| Cover                      | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) |
| condo                      | 4.25 | 0.04    | 0.01   | 4.25 | 0       | 0.00   | 4.25 | 0.01    | 0.00   | 4.25 | 0.03    | 0.01   |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
| (AutoCalc: Impervious)     | 0.04 | 0.92    | 0.60   | 0.04 | 0.95    | 0.62   | 0.04 | 0.96    | 0.62   | 0.04 | 0.96    | 0.62   |
|                            |      | Y=      | 0.61   |      | Y=      | 0.62   |      | Y=      | 0.63   |      | Y=      | 0.63   |
| Low Loss Fraction, Y-bar = |      |         | 0.39   |      |         | 0.38   |      |         | 0.37   |      |         | 0.37   |
| Est Vol (ac-ft)=           |      |         | 0      |      |         | 0      |      |         | 1      |      |         | 1      |

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909-684-0093

Tr 20727 Banana  
SB Co

155-238.014  
8/6/24

|                                                     |           |             |       |       |       |
|-----------------------------------------------------|-----------|-------------|-------|-------|-------|
| 1 Design Storm                                      | yr        | 2           | 10    | 25    | 100   |
| 2 Catchment Lag time                                | hrs       | 0.00        | 0.16  | 0.16  | 0.16  |
|                                                     | Tc (min)  | 0           | 11.94 | 11.94 | 11.94 |
| 3 Catchment Area                                    | acres     | <u>2.06</u> |       |       |       |
| 4 Base flow                                         | cfs/sq mi | <u>0</u>    |       |       |       |
| 5 S-graph                                           |           | <u>n/a</u>  |       |       |       |
| 6 Maximum loss rate, Fm                             | in/hr     | <u>0.34</u> |       |       |       |
| 7 Low loss fraction, Y-bar                          |           | 0.39        | 0.38  | 0.37  | 0.37  |
| 8 Watershed area-averaged 5-minute point rainfall   | inches    | 0.20        | 0.32  | 0.40  | 0.52  |
| Watershed area-averaged 30-minute point rainfall    | inches    | 0.41        | 0.66  | 0.82  | 1.07  |
| Watershed area-averaged 1-hour point rainfall       | inches    | 0.54        | 0.87  | 1.08  | 1.41  |
| Watershed area-averaged 3-hour point rainfall       | inches    | 1.04        | 1.57  | 1.92  | 2.46  |
| Watershed area-averaged 6-hour point rainfall       | inches    | 1.51        | 2.29  | 2.76  | 3.50  |
| Watershed area-averaged 24-hour point rainfall      | inches    | 2.81        | 4.34  | 5.20  | 6.45  |
| 9 24-hour storm unit interval (use TC for Small UH) | minutes   | 5           |       |       |       |

**Project: WLY System - Tract 20727 Banana**



Chamber Model -  
Units -

|          |
|----------|
| SC-740   |
| Imperial |

Number of Chambers -  
Voids in the stone (porosity) -  
Base of Stone Elevation -

|       |
|-------|
| 110   |
| 40    |
| 74.83 |

%

ft

Amount of Stone Above Chambers -  
Amount of Stone Below Chambers -

|   |
|---|
| 6 |
| 6 |

in

in

Area of system -

|      |
|------|
| 3718 |
|------|

sf Min. Area - 3718 sf min. area

**StormTech SC-740 Cumulative Storage Volumes**

| Height of System<br>(inches) | Incremental Single Chamber<br>(cubic feet) | Incremental Total Chamber<br>(cubic feet) | Incremental Stone<br>(cubic feet) | Incremental Ch & St<br>(cubic feet) | Cumulative Chamber<br>(cubic feet) | Elevation<br>(feet) |
|------------------------------|--------------------------------------------|-------------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|---------------------|
| 42                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 8237.96                            | 78.33               |
| 41                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 8114.02                            | 78.25               |
| 40                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 7990.09                            | 78.16               |
| 39                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 7866.16                            | 78.08               |
| 38                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 7742.22                            | 78.00               |
| 37                           | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 7618.29                            | 77.91               |
| 36                           | 0.05                                       | 6.05                                      | 121.51                            | 127.56                              | 7494.36                            | 77.83               |
| 35                           | 0.16                                       | 17.92                                     | 116.76                            | 134.69                              | 7366.79                            | 77.75               |
| 34                           | 0.28                                       | 31.01                                     | 111.53                            | 142.54                              | 7232.11                            | 77.66               |
| 33                           | 0.60                                       | 66.44                                     | 97.36                             | 163.79                              | 7089.57                            | 77.58               |
| 32                           | 0.80                                       | 88.19                                     | 88.66                             | 176.85                              | 6925.77                            | 77.50               |
| 31                           | 0.95                                       | 104.57                                    | 82.10                             | 186.68                              | 6748.92                            | 77.41               |
| 30                           | 1.07                                       | 118.20                                    | 76.65                             | 194.85                              | 6562.25                            | 77.33               |
| 29                           | 1.18                                       | 129.85                                    | 71.99                             | 201.85                              | 6367.39                            | 77.25               |
| 28                           | 1.27                                       | 139.22                                    | 68.24                             | 207.47                              | 6165.55                            | 77.16               |
| 27                           | 1.36                                       | 149.05                                    | 64.31                             | 213.36                              | 5958.08                            | 77.08               |
| 26                           | 1.45                                       | 159.95                                    | 59.95                             | 219.90                              | 5744.72                            | 77.00               |
| 25                           | 1.52                                       | 167.72                                    | 56.85                             | 224.57                              | 5524.81                            | 76.91               |
| 24                           | 1.58                                       | 174.06                                    | 54.31                             | 228.37                              | 5300.25                            | 76.83               |
| 23                           | 1.64                                       | 180.65                                    | 51.67                             | 232.32                              | 5071.88                            | 76.75               |
| 22                           | 1.70                                       | 186.95                                    | 49.15                             | 236.10                              | 4839.56                            | 76.66               |
| 21                           | 1.75                                       | 192.82                                    | 46.80                             | 239.63                              | 4603.46                            | 76.58               |
| 20                           | 1.80                                       | 198.31                                    | 44.61                             | 242.92                              | 4363.83                            | 76.50               |
| 19                           | 1.85                                       | 204.05                                    | 42.31                             | 246.36                              | 4120.91                            | 76.41               |
| 18                           | 1.89                                       | 208.24                                    | 40.64                             | 248.88                              | 3874.55                            | 76.33               |
| 17                           | 1.93                                       | 212.74                                    | 38.84                             | 251.58                              | 3625.67                            | 76.25               |
| 16                           | 1.97                                       | 217.25                                    | 37.03                             | 254.28                              | 3374.09                            | 76.16               |
| 15                           | 2.01                                       | 221.09                                    | 35.50                             | 256.59                              | 3119.81                            | 76.08               |
| 14                           | 2.04                                       | 224.95                                    | 33.95                             | 258.90                              | 2863.22                            | 76.00               |
| 13                           | 2.07                                       | 228.25                                    | 32.64                             | 260.88                              | 2604.32                            | 75.91               |
| 12                           | 2.10                                       | 231.54                                    | 31.32                             | 262.86                              | 2343.44                            | 75.83               |
| 11                           | 2.13                                       | 234.50                                    | 30.13                             | 264.63                              | 2080.58                            | 75.75               |
| 10                           | 2.15                                       | 236.92                                    | 29.16                             | 266.09                              | 1815.95                            | 75.66               |
| 9                            | 2.18                                       | 239.48                                    | 28.14                             | 267.62                              | 1549.86                            | 75.58               |
| 8                            | 2.20                                       | 241.82                                    | 27.21                             | 269.02                              | 1282.24                            | 75.50               |
| 7                            | 2.21                                       | 242.81                                    | 26.81                             | 269.62                              | 1013.22                            | 75.41               |
| 6                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 743.60                             | 75.33               |
| 5                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 619.67                             | 75.25               |
| 4                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 495.73                             | 75.16               |
| 3                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 371.80                             | 75.08               |
| 2                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 247.87                             | 75.00               |
| 1                            | 0.00                                       | 0.00                                      | 123.93                            | 123.93                              | 123.93                             | 74.91               |

Overflow elevation  
(DCV contained below)



# Encompass Associates, Inc.

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Job Tr 20727 Banana

155-238.014

|                |       |       |        |
|----------------|-------|-------|--------|
| Sheet No.      | _____ | of    | _____  |
| Calculated by: | ATS   | Date  | 8/6/24 |
| Checked by:    | _____ | Date  | _____  |
|                |       | Scale | nts    |

## Tr 20727 Banana SB Co

**Table 1: Basin Geometries  
Wly Dev**

| Depth<br>ft    | Elevation<br>ft | Area*<br>sq ft | Dvol*<br>cf | Total V<br>cf | ac-ft |                    |
|----------------|-----------------|----------------|-------------|---------------|-------|--------------------|
| <b>Basin 1</b> |                 |                |             |               |       |                    |
| 0              | 74.83           | <u>3,718.0</u> | <u>0.0</u>  | 0.0           | 0.000 | Underground System |
| 1              | 75.83           | <u>3,718.0</u> |             | 2343          | 0.054 | Underground System |
| 2              | 76.83           | <u>3,718.0</u> |             | 5300          | 0.122 | Underground System |
| 3              | 77.83           | <u>3,718.0</u> |             | 7494          | 0.172 | Underground System |
| 3.5            | 78.33           | <u>675.0</u>   |             | 8238          | 0.189 | Underground System |
| 4.5            | 79.33           | <u>1,215.0</u> | 932         | 9170          | 0.211 | Surface Ponding    |



## Detention Basin Outlet Hydraulics

155-238.014  
Tr 20727 Banana  
8/6/2024

| Outlet Structure |      |           |
|------------------|------|-----------|
| C                | 3.3  | weir      |
| C                | 0.62 | (orifice) |
| L (eff)          | 2.3  | ft        |
| H (eff)          | 0.33 | ft        |
| Bottom EL        | 2.17 | ft        |

| Infiltration |      |       |
|--------------|------|-------|
| rate         | 1.2  | in/hr |
| FS           | 2    |       |
| Net rate     | 0.6  | in/hr |
| SA           | 3718 | sf    |
| I            | 0.05 | cfs   |

| Elevation | Outlet Structure |         |       | Summary   |              |                |               |        |
|-----------|------------------|---------|-------|-----------|--------------|----------------|---------------|--------|
|           | Head             | Orifice | Weir  | Elevation | Infiltration | Outlet Outflow | Total Outflow | Volume |
| ft        | ft               | cfs     | cfs   | ft        | cfs          | cfs            |               | ac-ft  |
| 0         | 0                | 0.00    | 0.00  | 0         | 0.05         | 0.00           | 0.05          | 0.00   |
| 1         | 0                | 0.00    | 0.00  | 1         | 0.05         | 0.00           | 0.05          | 0.05   |
| 2         | 0                | 0.00    | 0.00  | 2         | 0.05         | 0.00           | 0.05          | 0.12   |
| 3         | 0.83             | 3.08    | 5.74  | 3         | 0.05         | 3.08           | 3.13          | 0.17   |
| 3.5       | 1.33             | 4.08    | 11.64 | 3.5       | 0.05         | 4.08           | 4.13          | 0.19   |
| 4.5       | 2.33             | 5.56    | 26.99 | 4.5       | 0.05         | 5.56           | 5.61          | 0.21   |



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|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 10      | year   |
| I-60min     | 0.867   |        |
| I-6hr       | 2.29    |        |
| Slope       | 0.6     |        |
| Ac          | 2.06    | ac     |
| TC          | 11.94   | min    |
| Calibration | 1       |        |
| fm          | 0.34    | in/hr  |
|             | 0.00567 | in/min |
| Y-bar       | 0.38    |        |
|             | Peak    | Total  |
|             | 3.54    | 0.4636 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
| 0.2   | 0.09  | 0.0007  |
| 0.4   | 0.09  | 0.0022  |
| 0.6   | 0.19  | 0.0045  |
| 0.8   | 0.09  | 0.0068  |
| 1     | 0.09  | 0.0083  |
| 1.2   | 0.19  | 0.0106  |
| 1.4   | 0.09  | 0.0129  |
| 1.6   | 0.09  | 0.0144  |
| 1.8   | 0.09  | 0.0159  |
| 2     | 0.09  | 0.0174  |
| 2.2   | 0.09  | 0.0189  |
| 2.4   | 0.09  | 0.0204  |
| 2.6   | 0.09  | 0.0219  |
| 2.8   | 0.09  | 0.0234  |
| 3     | 0.09  | 0.0249  |
| 3.2   | 0.19  | 0.0272  |
| 3.4   | 0.09  | 0.0295  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.6   | 0.19  | 0.0318  |
| 3.8   | 0.19  | 0.0349  |
| 4     | 0.09  | 0.0372  |
| 4.2   | 0.09  | 0.0387  |
| 4.4   | 0.19  | 0.041   |
| 4.6   | 0.19  | 0.0441  |
| 4.8   | 0.09  | 0.0464  |
| 5     | 0.19  | 0.0487  |
| 5.2   | 0.09  | 0.051   |
| 5.4   | 0.09  | 0.0525  |
| 5.6   | 0.19  | 0.0548  |
| 5.8   | 0.09  | 0.0571  |
| 6     | 0.19  | 0.0594  |
| 6.2   | 0.09  | 0.0617  |
| 6.4   | 0.19  | 0.064   |
| 6.6   | 0.19  | 0.0671  |
| 6.8   | 0.09  | 0.0694  |
| 7     | 0.19  | 0.0717  |
| 7.2   | 0.19  | 0.0748  |
| 7.4   | 0.19  | 0.0779  |
| 7.6   | 0.19  | 0.081   |
| 7.8   | 0.19  | 0.0841  |
| 8     | 0.09  | 0.0864  |
| 8.2   | 0.19  | 0.0887  |
| 8.4   | 0.19  | 0.0918  |
| 8.6   | 0.19  | 0.0949  |
| 8.8   | 0.19  | 0.098   |
| 9     | 0.19  | 0.1011  |
| 9.2   | 0.19  | 0.1042  |
| 9.4   | 0.19  | 0.1073  |
| 9.6   | 0.19  | 0.1104  |
| 9.8   | 0.19  | 0.1135  |
| 10    | 0.19  | 0.1166  |
| 10.2  | 0.19  | 0.1197  |
| 10.4  | 0.19  | 0.1228  |
| 10.6  | 0.19  | 0.1259  |
| 10.8  | 0.19  | 0.129   |
| 11    | 0.19  | 0.1321  |
| 11.2  | 0.19  | 0.1352  |
| 11.4  | 0.19  | 0.1383  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 11.6  | 0.19  | 0.1414  |
| 11.8  | 0.19  | 0.1445  |
| 12    | 0.28  | 0.1484  |
| 12.2  | 0.19  | 0.1523  |
| 12.4  | 0.19  | 0.1554  |
| 12.6  | 0.28  | 0.1593  |
| 12.8  | 0.19  | 0.1632  |
| 13    | 0.19  | 0.1663  |
| 13.2  | 0.28  | 0.1702  |
| 13.4  | 0.28  | 0.1748  |
| 13.6  | 0.28  | 0.1794  |
| 13.8  | 0.28  | 0.184   |
| 14    | 0.37  | 0.1894  |
| 14.2  | 0.37  | 0.1955  |
| 14.4  | 0.37  | 0.2016  |
| 14.6  | 0.37  | 0.2077  |
| 14.8  | 0.37  | 0.2138  |
| 15    | 0.37  | 0.2199  |
| 15.2  | 0.46  | 0.2268  |
| 15.4  | 0.46  | 0.2344  |
| 15.6  | 0.46  | 0.242   |
| 15.8  | 0.65  | 0.2512  |
| 16    | 0.83  | 0.2634  |
| 16.2  | 3.54  | 0.2995  |
| 16.4  | 0.46  | 0.3326  |
| 16.6  | 0.56  | 0.341   |
| 16.8  | 0.37  | 0.3487  |
| 17    | 0.37  | 0.3548  |
| 17.2  | 0.28  | 0.3602  |
| 17.4  | 0.28  | 0.3648  |
| 17.6  | 0.28  | 0.3694  |
| 17.8  | 0.28  | 0.374   |
| 18    | 0.19  | 0.3779  |
| 18.2  | 0.19  | 0.381   |
| 18.4  | 0.19  | 0.3841  |
| 18.6  | 0.19  | 0.3872  |
| 18.8  | 0.19  | 0.3903  |
| 19    | 0.19  | 0.3934  |
| 19.2  | 0.19  | 0.3965  |
| 19.4  | 0.19  | 0.3996  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 19.6  | 0.19  | 0.4027  |
| 19.8  | 0.19  | 0.4058  |
| 20    | 0.19  | 0.4089  |
| 20.2  | 0.19  | 0.412   |
| 20.4  | 0.19  | 0.4151  |
| 20.6  | 0.19  | 0.4182  |
| 20.8  | 0.19  | 0.4213  |
| 21    | 0.19  | 0.4244  |
| 21.2  | 0.19  | 0.4275  |
| 21.4  | 0.19  | 0.4306  |
| 21.6  | 0.19  | 0.4337  |
| 21.8  | 0.19  | 0.4368  |
| 22    | 0.09  | 0.4391  |
| 22.2  | 0.19  | 0.4414  |
| 22.4  | 0.09  | 0.4437  |
| 22.6  | 0.09  | 0.4452  |
| 22.8  | 0.19  | 0.4475  |
| 23    | 0.19  | 0.4506  |
| 23.2  | 0.19  | 0.4537  |
| 23.4  | 0.19  | 0.4568  |
| 23.6  | 0.09  | 0.4591  |
| 23.8  | 0.09  | 0.4606  |
| 24    | 0.09  | 0.4621  |
| 24.2  | 0.09  | 0.4636  |



Tr 20727 Banana

Basin 1

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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.05 | 0.00 | 0    | 0    |
| 1   | 0.05 | 0.05 | 0.05 | 0.05 |
| 2   | 0.05 | 0.12 | 0.12 | 0.12 |
| 3   | 3.13 | 0.17 | 0.15 | 0.2  |
| 3.5 | 4.13 | 0.19 | 0.16 | 0.22 |
| 4.5 | 5.61 | 0.21 | 0.16 | 0.26 |

| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |

|     |      |      |      |       |
|-----|------|------|------|-------|
| 0   | 0    | 0    | 0    | 0     |
| 0.2 | 0.09 | 0.03 | 0.05 | 0.001 |
| 0.4 | 0.09 | 0.05 | 0.05 | 0.003 |
| 0.6 | 0.19 | 0.11 | 0.05 | 0.006 |
| 0.8 | 0.09 | 0.14 | 0.05 | 0.007 |
| 1   | 0.09 | 0.16 | 0.05 | 0.009 |
| 1.2 | 0.19 | 0.22 | 0.05 | 0.012 |
| 1.4 | 0.09 | 0.24 | 0.05 | 0.013 |
| 1.6 | 0.09 | 0.27 | 0.05 | 0.014 |
| 1.8 | 0.09 | 0.29 | 0.05 | 0.016 |
| 2   | 0.09 | 0.31 | 0.05 | 0.017 |
| 2.2 | 0.09 | 0.33 | 0.05 | 0.018 |
| 2.4 | 0.09 | 0.36 | 0.05 | 0.019 |
| 2.6 | 0.09 | 0.38 | 0.05 | 0.020 |
| 2.8 | 0.09 | 0.40 | 0.05 | 0.022 |
| 3   | 0.09 | 0.42 | 0.05 | 0.023 |
| 3.2 | 0.19 | 0.47 | 0.05 | 0.025 |
| 3.4 | 0.09 | 0.49 | 0.05 | 0.026 |
| 3.6 | 0.19 | 0.54 | 0.05 | 0.029 |
| 3.8 | 0.19 | 0.59 | 0.05 | 0.032 |
| 4   | 0.09 | 0.61 | 0.05 | 0.033 |
| 4.2 | 0.09 | 0.63 | 0.05 | 0.034 |
| 4.4 | 0.19 | 0.68 | 0.05 | 0.036 |
| 4.6 | 0.19 | 0.72 | 0.05 | 0.039 |
| 4.8 | 0.09 | 0.74 | 0.05 | 0.040 |
| 5   | 0.19 | 0.79 | 0.05 | 0.042 |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 5.2         | 0.09          | 0.80    | 0.05        | 0.043      |
| 5.4         | 0.09          | 0.82    | 0.05        | 0.044      |
| 5.6         | 0.19          | 0.86    | 0.05        | 0.046      |
| 5.8         | 0.09          | 0.87    | 0.05        | 0.047      |
| 6           | 0.19          | 0.92    | 0.05        | 0.049      |
| 6.2         | 0.09          | 0.93    | 0.05        | 0.050      |
| 6.4         | 0.19          | 0.98    | 0.05        | 0.052      |
| 6.6         | 0.19          | 1.01    | 0.05        | 0.055      |
| 6.8         | 0.09          | 1.02    | 0.05        | 0.055      |
| 7           | 0.19          | 1.06    | 0.05        | 0.058      |
| 7.2         | 0.19          | 1.09    | 0.05        | 0.060      |
| 7.4         | 0.19          | 1.13    | 0.05        | 0.062      |
| 7.6         | 0.19          | 1.16    | 0.05        | 0.065      |
| 7.8         | 0.19          | 1.19    | 0.05        | 0.067      |
| 8           | 0.09          | 1.20    | 0.05        | 0.068      |
| 8.2         | 0.19          | 1.24    | 0.05        | 0.070      |
| 8.4         | 0.19          | 1.27    | 0.05        | 0.072      |
| 8.6         | 0.19          | 1.30    | 0.05        | 0.074      |
| 8.8         | 0.19          | 1.34    | 0.05        | 0.077      |
| 9           | 0.19          | 1.37    | 0.05        | 0.079      |
| 9.2         | 0.19          | 1.40    | 0.05        | 0.081      |
| 9.4         | 0.19          | 1.44    | 0.05        | 0.084      |
| 9.6         | 0.19          | 1.47    | 0.05        | 0.086      |
| 9.8         | 0.19          | 1.51    | 0.05        | 0.088      |
| 10          | 0.19          | 1.54    | 0.05        | 0.090      |
| 10.2        | 0.19          | 1.57    | 0.05        | 0.093      |
| 10.4        | 0.19          | 1.61    | 0.05        | 0.095      |
| 10.6        | 0.19          | 1.64    | 0.05        | 0.097      |
| 10.8        | 0.19          | 1.67    | 0.05        | 0.100      |
| 11          | 0.19          | 1.71    | 0.05        | 0.102      |
| 11.2        | 0.19          | 1.74    | 0.05        | 0.104      |
| 11.4        | 0.19          | 1.78    | 0.05        | 0.106      |
| 11.6        | 0.19          | 1.81    | 0.05        | 0.109      |
| 11.8        | 0.19          | 1.84    | 0.05        | 0.111      |
| 12          | 0.28          | 1.90    | 0.05        | 0.115      |
| 12.2        | 0.19          | 1.93    | 0.05        | 0.117      |
| 12.4        | 0.19          | 1.97    | 0.05        | 0.119      |
| 12.6        | 0.28          | 2.02    | 0.08        | 0.123      |
| 12.8        | 0.19          | 2.04    | 0.14        | 0.124      |
| 13          | 0.19          | 2.04    | 0.17        | 0.124      |
| 13.2        | 0.28          | 2.06    | 0.22        | 0.125      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 13.4        | 0.28          | 2.07    | 0.26        | 0.125      |
| 13.6        | 0.28          | 2.07    | 0.27        | 0.125      |
| 13.8        | 0.28          | 2.07    | 0.28        | 0.125      |
| 14          | 0.37          | 2.09    | 0.31        | 0.126      |
| 14.2        | 0.37          | 2.10    | 0.35        | 0.127      |
| 14.4        | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.6        | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.8        | 0.37          | 2.10    | 0.37        | 0.127      |
| 15          | 0.37          | 2.10    | 0.37        | 0.127      |
| 15.2        | 0.46          | 2.12    | 0.40        | 0.128      |
| 15.4        | 0.46          | 2.13    | 0.44        | 0.128      |
| 15.6        | 0.46          | 2.13    | 0.46        | 0.128      |
| 15.8        | 0.65          | 2.17    | 0.52        | 0.130      |
| 16          | 0.83          | 2.23    | 0.67        | 0.133      |
| 16.2        | 3.54          | 2.84    | 1.69        | 0.164      |
| 16.4        | 0.46          | 2.37    | 1.90        | 0.140      |
| 16.6        | 0.56          | 2.23    | 0.97        | 0.133      |
| 16.8        | 0.37          | 2.15    | 0.63        | 0.129      |
| 17          | 0.37          | 2.12    | 0.46        | 0.128      |
| 17.2        | 0.28          | 2.09    | 0.37        | 0.126      |
| 17.4        | 0.28          | 2.08    | 0.31        | 0.126      |
| 17.6        | 0.28          | 2.08    | 0.29        | 0.126      |
| 17.8        | 0.28          | 2.08    | 0.28        | 0.125      |
| 18          | 0.19          | 2.06    | 0.25        | 0.124      |
| 18.2        | 0.19          | 2.05    | 0.21        | 0.124      |
| 18.4        | 0.19          | 2.05    | 0.20        | 0.124      |
| 18.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 18.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 19          | 0.19          | 2.05    | 0.19        | 0.124      |
| 19.2        | 0.19          | 2.05    | 0.19        | 0.124      |
| 19.4        | 0.19          | 2.05    | 0.19        | 0.124      |
| 19.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 19.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 20          | 0.19          | 2.05    | 0.19        | 0.124      |
| 20.2        | 0.19          | 2.05    | 0.19        | 0.124      |
| 20.4        | 0.19          | 2.05    | 0.19        | 0.124      |
| 20.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 20.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 21          | 0.19          | 2.05    | 0.19        | 0.124      |
| 21.2        | 0.19          | 2.05    | 0.19        | 0.124      |
| 21.4        | 0.19          | 2.05    | 0.19        | 0.124      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 21.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 21.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 22          | 0.09          | 2.02    | 0.16        | 0.123      |
| 22.2        | 0.19          | 2.04    | 0.15        | 0.124      |
| 22.4        | 0.09          | 2.02    | 0.14        | 0.123      |
| 22.6        | 0.09          | 2.02    | 0.11        | 0.122      |
| 22.8        | 0.19          | 2.04    | 0.13        | 0.123      |
| 23          | 0.19          | 2.04    | 0.17        | 0.124      |
| 23.2        | 0.19          | 2.04    | 0.18        | 0.124      |
| 23.4        | 0.19          | 2.04    | 0.19        | 0.124      |
| 23.6        | 0.09          | 2.02    | 0.16        | 0.123      |
| 23.8        | 0.09          | 2.02    | 0.11        | 0.122      |
| 24          | 0.09          | 2.01    | 0.10        | 0.122      |
| 24.2        | 0.09          | 2.01    | 0.09        | 0.122      |
| 24.4        | 0             | 1.99    | 0.07        | 0.121      |
| 24.6        | 0             | 1.98    | 0.05        | 0.120      |
| 24.8        | 0             | 1.97    | 0.05        | 0.119      |
| 25          | 0             | 1.95    | 0.05        | 0.119      |
| 25.2        | 0             | 1.94    | 0.05        | 0.118      |
| 25.4        | 0             | 1.93    | 0.05        | 0.117      |
| 25.6        | 0             | 1.92    | 0.05        | 0.116      |
| 25.8        | 0             | 1.90    | 0.05        | 0.115      |
| 26          | 0             | 1.89    | 0.05        | 0.114      |
| 26.2        | 0             | 1.88    | 0.05        | 0.114      |
| 26.4        | 0             | 1.87    | 0.05        | 0.113      |
| 26.6        | 0             | 1.85    | 0.05        | 0.112      |
| 26.8        | 0             | 1.84    | 0.05        | 0.111      |
| 27          | 0             | 1.83    | 0.05        | 0.110      |
| 27.2        | 0             | 1.82    | 0.05        | 0.109      |
| 27.4        | 0             | 1.80    | 0.05        | 0.108      |
| 27.6        | 0             | 1.79    | 0.05        | 0.108      |
| 27.8        | 0             | 1.78    | 0.05        | 0.107      |
| 28          | 0             | 1.77    | 0.05        | 0.106      |
| 28.2        | 0             | 1.75    | 0.05        | 0.105      |
| 28.4        | 0             | 1.74    | 0.05        | 0.104      |
| 28.6        | 0             | 1.73    | 0.05        | 0.103      |
| 28.8        | 0             | 1.72    | 0.05        | 0.102      |
| 29          | 0             | 1.70    | 0.05        | 0.102      |
| 29.2        | 0             | 1.69    | 0.05        | 0.101      |
| 29.4        | 0             | 1.68    | 0.05        | 0.100      |
| 29.6        | 0             | 1.67    | 0.05        | 0.099      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 29.8        | 0             | 1.65    | 0.05        | 0.098      |
| 30          | 0             | 1.64    | 0.05        | 0.097      |
| 30.2        | 0             | 1.63    | 0.05        | 0.097      |
| 30.4        | 0             | 1.62    | 0.05        | 0.096      |
| 30.6        | 0             | 1.60    | 0.05        | 0.095      |
| 30.8        | 0             | 1.59    | 0.05        | 0.094      |
| 31          | 0             | 1.58    | 0.05        | 0.093      |
| 31.2        | 0             | 1.57    | 0.05        | 0.092      |
| 31.4        | 0             | 1.55    | 0.05        | 0.091      |
| 31.6        | 0             | 1.54    | 0.05        | 0.091      |
| 31.8        | 0             | 1.53    | 0.05        | 0.090      |
| 32          | 0             | 1.52    | 0.05        | 0.089      |
| 32.2        | 0             | 1.50    | 0.05        | 0.088      |
| 32.4        | 0             | 1.49    | 0.05        | 0.087      |
| 32.6        | 0             | 1.48    | 0.05        | 0.086      |
| 32.8        | 0             | 1.47    | 0.05        | 0.085      |
| 33          | 0             | 1.45    | 0.05        | 0.085      |
| 33.2        | 0             | 1.44    | 0.05        | 0.084      |
| 33.4        | 0             | 1.43    | 0.05        | 0.083      |
| 33.6        | 0             | 1.42    | 0.05        | 0.082      |
| 33.8        | 0             | 1.40    | 0.05        | 0.081      |
| 34          | 0             | 1.39    | 0.05        | 0.080      |
| 34.2        | 0             | 1.38    | 0.05        | 0.080      |
| 34.4        | 0             | 1.37    | 0.05        | 0.079      |
| 34.6        | 0             | 1.35    | 0.05        | 0.078      |
| 34.8        | 0             | 1.34    | 0.05        | 0.077      |
| 35          | 0             | 1.33    | 0.05        | 0.076      |
| 35.2        | 0             | 1.32    | 0.05        | 0.075      |
| 35.4        | 0             | 1.30    | 0.05        | 0.074      |
| 35.6        | 0             | 1.29    | 0.05        | 0.074      |
| 35.8        | 0             | 1.28    | 0.05        | 0.073      |
| 36          | 0             | 1.27    | 0.05        | 0.072      |
| 36.2        | 0             | 1.25    | 0.05        | 0.071      |
| 36.4        | 0             | 1.24    | 0.05        | 0.070      |
| 36.6        | 0             | 1.23    | 0.05        | 0.069      |
| 36.8        | 0             | 1.22    | 0.05        | 0.068      |
| 37          | 0             | 1.20    | 0.05        | 0.068      |
| 37.2        | 0             | 1.19    | 0.05        | 0.067      |
| 37.4        | 0             | 1.18    | 0.05        | 0.066      |
| 37.6        | 0             | 1.17    | 0.05        | 0.065      |
| 37.8        | 0             | 1.15    | 0.05        | 0.064      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 38          | 0             | 1.14    | 0.05        | 0.063      |
| 38.2        | 0             | 1.13    | 0.05        | 0.063      |
| 38.4        | 0             | 1.12    | 0.05        | 0.062      |
| 38.6        | 0             | 1.10    | 0.05        | 0.061      |
| 38.8        | 0             | 1.09    | 0.05        | 0.060      |
| 39          | 0             | 1.08    | 0.05        | 0.059      |
| 39.2        | 0             | 1.07    | 0.05        | 0.058      |
| 39.4        | 0             | 1.05    | 0.05        | 0.057      |
| 39.6        | 0             | 1.04    | 0.05        | 0.057      |
| 39.8        | 0             | 1.03    | 0.05        | 0.056      |
| 40          | 0             | 1.02    | 0.05        | 0.055      |
| 40.2        | 0             | 1.00    | 0.05        | 0.054      |
| 40.4        | 0             | 0.99    | 0.05        | 0.053      |
| 40.6        | 0             | 0.97    | 0.05        | 0.052      |
| 40.8        | 0             | 0.96    | 0.05        | 0.052      |
| 41          | 0             | 0.94    | 0.05        | 0.051      |
| 41.2        | 0             | 0.93    | 0.05        | 0.050      |
| 41.4        | 0             | 0.91    | 0.05        | 0.049      |
| 41.6        | 0             | 0.90    | 0.05        | 0.048      |
| 41.8        | 0             | 0.89    | 0.05        | 0.048      |
| 42          | 0             | 0.87    | 0.05        | 0.047      |
| 42.2        | 0             | 0.86    | 0.05        | 0.046      |
| 42.4        | 0             | 0.84    | 0.05        | 0.045      |
| 42.6        | 0             | 0.83    | 0.05        | 0.045      |
| 42.8        | 0             | 0.82    | 0.05        | 0.044      |
| 43          | 0             | 0.81    | 0.05        | 0.043      |
| 43.2        | 0             | 0.79    | 0.05        | 0.043      |
| 43.4        | 0             | 0.78    | 0.05        | 0.042      |
| 43.6        | 0             | 0.77    | 0.05        | 0.041      |
| 43.8        | 0             | 0.76    | 0.05        | 0.041      |
| 44          | 0             | 0.74    | 0.05        | 0.040      |
| 44.2        | 0             | 0.73    | 0.05        | 0.039      |
| 44.4        | 0             | 0.72    | 0.05        | 0.039      |
| 44.6        | 0             | 0.71    | 0.05        | 0.038      |
| 44.8        | 0             | 0.70    | 0.05        | 0.038      |
| 45          | 0             | 0.69    | 0.05        | 0.037      |
| 45.2        | 0             | 0.68    | 0.05        | 0.036      |
| 45.4        | 0             | 0.67    | 0.05        | 0.036      |
| 45.6        | 0             | 0.66    | 0.05        | 0.035      |
| 45.8        | 0             | 0.65    | 0.05        | 0.035      |
| 46          | 0             | 0.64    | 0.05        | 0.034      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 3.54          | 2.84    | 1.9         | 0.16       |
| 46.2        | 0             | 0.63    | 0.05        | 0.034      |
| 46.4        | 0             | 0.62    | 0.05        | 0.033      |
| 46.6        | 0             | 0.61    | 0.05        | 0.033      |
| 46.8        | 0             | 0.60    | 0.05        | 0.032      |
| 47          | 0             | 0.59    | 0.05        | 0.032      |
| 47.2        | 0             | 0.58    | 0.05        | 0.031      |
| 47.4        | 0             | 0.57    | 0.05        | 0.031      |
| 47.6        | 0             | 0.56    | 0.05        | 0.030      |
| 47.8        | 0             | 0.55    | 0.05        | 0.030      |
| 48          | 0             | 0.54    | 0.05        | 0.029      |
| 48.2        | 0             | 0.53    | 0.05        | 0.029      |
| 48.4        | 0             | 0.53    | 0.05        | 0.028      |
| 48.6        | 0             | 0.52    | 0.05        | 0.028      |
| 48.8        | 0             | 0.51    | 0.05        | 0.027      |
| 49          | 0             | 0.50    | 0.05        | 0.027      |



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|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 25      | year   |
| I-60min     | 1.08    |        |
| I-6hr       | 2.76    |        |
| Slope       | 0.6     |        |
| Ac          | 2.06    | ac     |
| TC          | 11.94   | min    |
| Calibration | 1       |        |
| fm          | 0.34    | in/hr  |
|             | 0.00567 | in/min |
| Y-bar       | 0.37    |        |
|             | Peak    | Total  |
|             | 4.65    | 0.5955 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
| 0     | 0.19  | 0       |
| 0.4   | 0.09  | 0.0046  |
| 0.6   | 0.09  | 0.0061  |
| 0.8   | 0.19  | 0.0084  |
| 1     | 0.19  | 0.0115  |
| 1.2   | 0.09  | 0.0138  |
| 1.4   | 0.09  | 0.0153  |
| 1.6   | 0.19  | 0.0176  |
| 1.8   | 0.09  | 0.0199  |
| 2     | 0.19  | 0.0222  |
| 2.2   | 0.09  | 0.0245  |
| 2.4   | 0.19  | 0.0268  |
| 2.6   | 0.09  | 0.0291  |
| 2.8   | 0.19  | 0.0314  |
| 3     | 0.09  | 0.0337  |
| 3.2   | 0.19  | 0.036   |
| 3.4   | 0.19  | 0.0391  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.6   | 0.09  | 0.0414  |
| 3.8   | 0.19  | 0.0437  |
| 4     | 0.19  | 0.0468  |
| 4.2   | 0.19  | 0.0499  |
| 4.4   | 0.09  | 0.0522  |
| 4.6   | 0.19  | 0.0545  |
| 4.8   | 0.19  | 0.0576  |
| 5     | 0.19  | 0.0607  |
| 5.2   | 0.19  | 0.0638  |
| 5.4   | 0.19  | 0.0669  |
| 5.6   | 0.19  | 0.07    |
| 5.8   | 0.19  | 0.0731  |
| 6     | 0.19  | 0.0762  |
| 6.2   | 0.19  | 0.0793  |
| 6.4   | 0.19  | 0.0824  |
| 6.6   | 0.19  | 0.0855  |
| 6.8   | 0.19  | 0.0886  |
| 7     | 0.19  | 0.0917  |
| 7.2   | 0.28  | 0.0956  |
| 7.4   | 0.19  | 0.0995  |
| 7.6   | 0.28  | 0.1034  |
| 7.8   | 0.19  | 0.1073  |
| 8     | 0.28  | 0.1112  |
| 8.2   | 0.28  | 0.1158  |
| 8.4   | 0.19  | 0.1197  |
| 8.6   | 0.19  | 0.1228  |
| 8.8   | 0.28  | 0.1267  |
| 9     | 0.19  | 0.1306  |
| 9.2   | 0.28  | 0.1345  |
| 9.4   | 0.19  | 0.1384  |
| 9.6   | 0.28  | 0.1423  |
| 9.8   | 0.28  | 0.1469  |
| 10    | 0.28  | 0.1515  |
| 10.2  | 0.28  | 0.1561  |
| 10.4  | 0.28  | 0.1607  |
| 10.6  | 0.28  | 0.1653  |
| 10.8  | 0.28  | 0.1699  |
| 11    | 0.28  | 0.1745  |
| 11.2  | 0.28  | 0.1791  |
| 11.4  | 0.28  | 0.1837  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 11.6  | 0.28  | 0.1883  |
| 11.8  | 0.28  | 0.1929  |
| 12    | 0.28  | 0.1975  |
| 12.2  | 0.28  | 0.2021  |
| 12.4  | 0.28  | 0.2067  |
| 12.6  | 0.37  | 0.2121  |
| 12.8  | 0.28  | 0.2175  |
| 13    | 0.28  | 0.2221  |
| 13.2  | 0.37  | 0.2275  |
| 13.4  | 0.28  | 0.2329  |
| 13.6  | 0.37  | 0.2383  |
| 13.8  | 0.37  | 0.2444  |
| 14    | 0.37  | 0.2505  |
| 14.2  | 0.37  | 0.2566  |
| 14.4  | 0.37  | 0.2627  |
| 14.6  | 0.37  | 0.2688  |
| 14.8  | 0.46  | 0.2757  |
| 15    | 0.56  | 0.2841  |
| 15.2  | 0.56  | 0.2934  |
| 15.4  | 0.65  | 0.3034  |
| 15.6  | 0.56  | 0.3134  |
| 15.8  | 0.74  | 0.3241  |
| 16    | 1.02  | 0.3386  |
| 16.2  | 4.65  | 0.3855  |
| 16.4  | 0.65  | 0.4293  |
| 16.6  | 0.56  | 0.4393  |
| 16.8  | 0.46  | 0.4477  |
| 17    | 0.46  | 0.4553  |
| 17.2  | 0.37  | 0.4622  |
| 17.4  | 0.37  | 0.4683  |
| 17.6  | 0.37  | 0.4744  |
| 17.8  | 0.28  | 0.4798  |
| 18    | 0.28  | 0.4844  |
| 18.2  | 0.28  | 0.489   |
| 18.4  | 0.28  | 0.4936  |
| 18.6  | 0.28  | 0.4982  |
| 18.8  | 0.28  | 0.5028  |
| 19    | 0.28  | 0.5074  |
| 19.2  | 0.28  | 0.512   |
| 19.4  | 0.28  | 0.5166  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 19.6  | 0.28  | 0.5212  |
| 19.8  | 0.28  | 0.5258  |
| 20    | 0.28  | 0.5304  |
| 20.2  | 0.19  | 0.5343  |
| 20.4  | 0.19  | 0.5374  |
| 20.6  | 0.19  | 0.5405  |
| 20.8  | 0.19  | 0.5436  |
| 21    | 0.28  | 0.5475  |
| 21.2  | 0.19  | 0.5514  |
| 21.4  | 0.19  | 0.5545  |
| 21.6  | 0.19  | 0.5576  |
| 21.8  | 0.19  | 0.5607  |
| 22    | 0.19  | 0.5638  |
| 22.2  | 0.19  | 0.5669  |
| 22.4  | 0.19  | 0.57    |
| 22.6  | 0.19  | 0.5731  |
| 22.8  | 0.19  | 0.5762  |
| 23    | 0.19  | 0.5793  |
| 23.2  | 0.19  | 0.5824  |
| 23.4  | 0.19  | 0.5855  |
| 23.6  | 0.19  | 0.5886  |
| 23.8  | 0.09  | 0.5909  |
| 24    | 0.19  | 0.5932  |
| 24.2  | 0.09  | 0.5955  |



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Basin 1

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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.05 | 0.00 | 0    | 0    |
| 1   | 0.05 | 0.05 | 0.05 | 0.05 |
| 2   | 0.05 | 0.12 | 0.12 | 0.12 |
| 3   | 3.13 | 0.17 | 0.15 | 0.2  |
| 3.5 | 4.13 | 0.19 | 0.16 | 0.22 |
| 4.5 | 5.61 | 0.21 | 0.16 | 0.26 |

| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |

|     |      |      |      |       |
|-----|------|------|------|-------|
| 0   | 0    | 0    | 0    | 0     |
| 0   | 0.19 | 0.06 | 0.05 | 0.003 |
| 0.4 | 0.09 | 0.11 | 0.05 | 0.006 |
| 0.6 | 0.09 | 0.14 | 0.05 | 0.007 |
| 0.8 | 0.19 | 0.19 | 0.05 | 0.010 |
| 1   | 0.19 | 0.25 | 0.05 | 0.013 |
| 1.2 | 0.09 | 0.27 | 0.05 | 0.015 |
| 1.4 | 0.09 | 0.29 | 0.05 | 0.016 |
| 1.6 | 0.19 | 0.35 | 0.05 | 0.019 |
| 1.8 | 0.09 | 0.37 | 0.05 | 0.020 |
| 2   | 0.19 | 0.42 | 0.05 | 0.023 |
| 2.2 | 0.09 | 0.44 | 0.05 | 0.024 |
| 2.4 | 0.19 | 0.49 | 0.05 | 0.027 |
| 2.6 | 0.09 | 0.51 | 0.05 | 0.028 |
| 2.8 | 0.19 | 0.56 | 0.05 | 0.030 |
| 3   | 0.09 | 0.58 | 0.05 | 0.031 |
| 3.2 | 0.19 | 0.63 | 0.05 | 0.034 |
| 3.4 | 0.19 | 0.68 | 0.05 | 0.037 |
| 3.6 | 0.09 | 0.70 | 0.05 | 0.037 |
| 3.8 | 0.19 | 0.74 | 0.05 | 0.040 |
| 4   | 0.19 | 0.79 | 0.05 | 0.042 |
| 4.2 | 0.19 | 0.83 | 0.05 | 0.045 |
| 4.4 | 0.09 | 0.85 | 0.05 | 0.046 |
| 4.6 | 0.19 | 0.89 | 0.05 | 0.048 |
| 4.8 | 0.19 | 0.94 | 0.05 | 0.050 |
| 5   | 0.19 | 0.98 | 0.05 | 0.053 |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 5.2         | 0.19          | 1.02    | 0.05        | 0.055      |
| 5.4         | 0.19          | 1.05    | 0.05        | 0.057      |
| 5.6         | 0.19          | 1.09    | 0.05        | 0.060      |
| 5.8         | 0.19          | 1.12    | 0.05        | 0.062      |
| 6           | 0.19          | 1.15    | 0.05        | 0.064      |
| 6.2         | 0.19          | 1.19    | 0.05        | 0.067      |
| 6.4         | 0.19          | 1.22    | 0.05        | 0.069      |
| 6.6         | 0.19          | 1.25    | 0.05        | 0.071      |
| 6.8         | 0.19          | 1.29    | 0.05        | 0.073      |
| 7           | 0.19          | 1.32    | 0.05        | 0.076      |
| 7.2         | 0.28          | 1.38    | 0.05        | 0.079      |
| 7.4         | 0.19          | 1.41    | 0.05        | 0.082      |
| 7.6         | 0.28          | 1.47    | 0.05        | 0.086      |
| 7.8         | 0.19          | 1.50    | 0.05        | 0.088      |
| 8           | 0.28          | 1.56    | 0.05        | 0.092      |
| 8.2         | 0.28          | 1.61    | 0.05        | 0.095      |
| 8.4         | 0.19          | 1.65    | 0.05        | 0.098      |
| 8.6         | 0.19          | 1.68    | 0.05        | 0.100      |
| 8.8         | 0.28          | 1.74    | 0.05        | 0.104      |
| 9           | 0.19          | 1.77    | 0.05        | 0.106      |
| 9.2         | 0.28          | 1.83    | 0.05        | 0.110      |
| 9.4         | 0.19          | 1.86    | 0.05        | 0.112      |
| 9.6         | 0.28          | 1.91    | 0.05        | 0.116      |
| 9.8         | 0.28          | 1.97    | 0.05        | 0.120      |
| 10          | 0.28          | 2.02    | 0.09        | 0.123      |
| 10.2        | 0.28          | 2.06    | 0.18        | 0.125      |
| 10.4        | 0.28          | 2.07    | 0.25        | 0.125      |
| 10.6        | 0.28          | 2.07    | 0.27        | 0.125      |
| 10.8        | 0.28          | 2.07    | 0.28        | 0.125      |
| 11          | 0.28          | 2.07    | 0.28        | 0.125      |
| 11.2        | 0.28          | 2.07    | 0.28        | 0.125      |
| 11.4        | 0.28          | 2.07    | 0.28        | 0.125      |
| 11.6        | 0.28          | 2.07    | 0.28        | 0.125      |
| 11.8        | 0.28          | 2.07    | 0.28        | 0.125      |
| 12          | 0.28          | 2.07    | 0.28        | 0.125      |
| 12.2        | 0.28          | 2.07    | 0.28        | 0.125      |
| 12.4        | 0.28          | 2.07    | 0.28        | 0.125      |
| 12.6        | 0.37          | 2.09    | 0.31        | 0.126      |
| 12.8        | 0.28          | 2.08    | 0.32        | 0.126      |
| 13          | 0.28          | 2.08    | 0.29        | 0.126      |
| 13.2        | 0.37          | 2.09    | 0.32        | 0.126      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 13.4        | 0.28          | 2.08    | 0.32        | 0.126      |
| 13.6        | 0.37          | 2.10    | 0.33        | 0.127      |
| 13.8        | 0.37          | 2.10    | 0.36        | 0.127      |
| 14          | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.2        | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.4        | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.6        | 0.37          | 2.10    | 0.37        | 0.127      |
| 14.8        | 0.46          | 2.12    | 0.40        | 0.128      |
| 15          | 0.56          | 2.15    | 0.48        | 0.129      |
| 15.2        | 0.56          | 2.16    | 0.53        | 0.130      |
| 15.4        | 0.65          | 2.18    | 0.58        | 0.131      |
| 15.6        | 0.56          | 2.17    | 0.60        | 0.130      |
| 15.8        | 0.74          | 2.21    | 0.64        | 0.132      |
| 16          | 1.02          | 2.28    | 0.80        | 0.136      |
| 16.2        | 4.65          | 3.15    | 2.17        | 0.177      |
| 16.4        | 0.65          | 2.50    | 2.50        | 0.147      |
| 16.6        | 0.56          | 2.28    | 1.24        | 0.136      |
| 16.8        | 0.46          | 2.18    | 0.75        | 0.131      |
| 17          | 0.46          | 2.15    | 0.56        | 0.129      |
| 17.2        | 0.37          | 2.12    | 0.46        | 0.128      |
| 17.4        | 0.37          | 2.11    | 0.40        | 0.127      |
| 17.6        | 0.37          | 2.11    | 0.38        | 0.127      |
| 17.8        | 0.28          | 2.08    | 0.34        | 0.126      |
| 18          | 0.28          | 2.08    | 0.30        | 0.126      |
| 18.2        | 0.28          | 2.08    | 0.29        | 0.125      |
| 18.4        | 0.28          | 2.07    | 0.28        | 0.125      |
| 18.6        | 0.28          | 2.07    | 0.28        | 0.125      |
| 18.8        | 0.28          | 2.07    | 0.28        | 0.125      |
| 19          | 0.28          | 2.07    | 0.28        | 0.125      |
| 19.2        | 0.28          | 2.07    | 0.28        | 0.125      |
| 19.4        | 0.28          | 2.07    | 0.28        | 0.125      |
| 19.6        | 0.28          | 2.07    | 0.28        | 0.125      |
| 19.8        | 0.28          | 2.07    | 0.28        | 0.125      |
| 20          | 0.28          | 2.07    | 0.28        | 0.125      |
| 20.2        | 0.19          | 2.05    | 0.25        | 0.124      |
| 20.4        | 0.19          | 2.05    | 0.21        | 0.124      |
| 20.6        | 0.19          | 2.05    | 0.20        | 0.124      |
| 20.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 21          | 0.28          | 2.07    | 0.22        | 0.125      |
| 21.2        | 0.19          | 2.05    | 0.23        | 0.124      |
| 21.4        | 0.19          | 2.05    | 0.20        | 0.124      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 21.6        | 0.19          | 2.05    | 0.20        | 0.124      |
| 21.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 22          | 0.19          | 2.05    | 0.19        | 0.124      |
| 22.2        | 0.19          | 2.05    | 0.19        | 0.124      |
| 22.4        | 0.19          | 2.05    | 0.19        | 0.124      |
| 22.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 22.8        | 0.19          | 2.05    | 0.19        | 0.124      |
| 23          | 0.19          | 2.05    | 0.19        | 0.124      |
| 23.2        | 0.19          | 2.05    | 0.19        | 0.124      |
| 23.4        | 0.19          | 2.05    | 0.19        | 0.124      |
| 23.6        | 0.19          | 2.05    | 0.19        | 0.124      |
| 23.8        | 0.09          | 2.02    | 0.16        | 0.123      |
| 24          | 0.19          | 2.04    | 0.15        | 0.124      |
| 24.2        | 0.09          | 2.02    | 0.14        | 0.123      |
| 24.4        | 0             | 2.00    | 0.08        | 0.121      |
| 24.6        | 0             | 1.98    | 0.05        | 0.120      |
| 24.8        | 0             | 1.97    | 0.05        | 0.120      |
| 25          | 0             | 1.96    | 0.05        | 0.119      |
| 25.2        | 0             | 1.95    | 0.05        | 0.118      |
| 25.4        | 0             | 1.93    | 0.05        | 0.117      |
| 25.6        | 0             | 1.92    | 0.05        | 0.116      |
| 25.8        | 0             | 1.91    | 0.05        | 0.115      |
| 26          | 0             | 1.90    | 0.05        | 0.115      |
| 26.2        | 0             | 1.88    | 0.05        | 0.114      |
| 26.4        | 0             | 1.87    | 0.05        | 0.113      |
| 26.6        | 0             | 1.86    | 0.05        | 0.112      |
| 26.8        | 0             | 1.85    | 0.05        | 0.111      |
| 27          | 0             | 1.83    | 0.05        | 0.110      |
| 27.2        | 0             | 1.82    | 0.05        | 0.109      |
| 27.4        | 0             | 1.81    | 0.05        | 0.109      |
| 27.6        | 0             | 1.80    | 0.05        | 0.108      |
| 27.8        | 0             | 1.78    | 0.05        | 0.107      |
| 28          | 0             | 1.77    | 0.05        | 0.106      |
| 28.2        | 0             | 1.76    | 0.05        | 0.105      |
| 28.4        | 0             | 1.74    | 0.05        | 0.104      |
| 28.6        | 0             | 1.73    | 0.05        | 0.104      |
| 28.8        | 0             | 1.72    | 0.05        | 0.103      |
| 29          | 0             | 1.71    | 0.05        | 0.102      |
| 29.2        | 0             | 1.69    | 0.05        | 0.101      |
| 29.4        | 0             | 1.68    | 0.05        | 0.100      |
| 29.6        | 0             | 1.67    | 0.05        | 0.099      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 29.8        | 0             | 1.66    | 0.05        | 0.098      |
| 30          | 0             | 1.64    | 0.05        | 0.098      |
| 30.2        | 0             | 1.63    | 0.05        | 0.097      |
| 30.4        | 0             | 1.62    | 0.05        | 0.096      |
| 30.6        | 0             | 1.61    | 0.05        | 0.095      |
| 30.8        | 0             | 1.59    | 0.05        | 0.094      |
| 31          | 0             | 1.58    | 0.05        | 0.093      |
| 31.2        | 0             | 1.57    | 0.05        | 0.092      |
| 31.4        | 0             | 1.56    | 0.05        | 0.092      |
| 31.6        | 0             | 1.54    | 0.05        | 0.091      |
| 31.8        | 0             | 1.53    | 0.05        | 0.090      |
| 32          | 0             | 1.52    | 0.05        | 0.089      |
| 32.2        | 0             | 1.51    | 0.05        | 0.088      |
| 32.4        | 0             | 1.49    | 0.05        | 0.087      |
| 32.6        | 0             | 1.48    | 0.05        | 0.087      |
| 32.8        | 0             | 1.47    | 0.05        | 0.086      |
| 33          | 0             | 1.46    | 0.05        | 0.085      |
| 33.2        | 0             | 1.44    | 0.05        | 0.084      |
| 33.4        | 0             | 1.43    | 0.05        | 0.083      |
| 33.6        | 0             | 1.42    | 0.05        | 0.082      |
| 33.8        | 0             | 1.41    | 0.05        | 0.081      |
| 34          | 0             | 1.39    | 0.05        | 0.081      |
| 34.2        | 0             | 1.38    | 0.05        | 0.080      |
| 34.4        | 0             | 1.37    | 0.05        | 0.079      |
| 34.6        | 0             | 1.36    | 0.05        | 0.078      |
| 34.8        | 0             | 1.34    | 0.05        | 0.077      |
| 35          | 0             | 1.33    | 0.05        | 0.076      |
| 35.2        | 0             | 1.32    | 0.05        | 0.075      |
| 35.4        | 0             | 1.31    | 0.05        | 0.075      |
| 35.6        | 0             | 1.29    | 0.05        | 0.074      |
| 35.8        | 0             | 1.28    | 0.05        | 0.073      |
| 36          | 0             | 1.27    | 0.05        | 0.072      |
| 36.2        | 0             | 1.26    | 0.05        | 0.071      |
| 36.4        | 0             | 1.24    | 0.05        | 0.070      |
| 36.6        | 0             | 1.23    | 0.05        | 0.070      |
| 36.8        | 0             | 1.22    | 0.05        | 0.069      |
| 37          | 0             | 1.21    | 0.05        | 0.068      |
| 37.2        | 0             | 1.19    | 0.05        | 0.067      |
| 37.4        | 0             | 1.18    | 0.05        | 0.066      |
| 37.6        | 0             | 1.17    | 0.05        | 0.065      |
| 37.8        | 0             | 1.16    | 0.05        | 0.064      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 38          | 0             | 1.14    | 0.05        | 0.064      |
| 38.2        | 0             | 1.13    | 0.05        | 0.063      |
| 38.4        | 0             | 1.12    | 0.05        | 0.062      |
| 38.6        | 0             | 1.11    | 0.05        | 0.061      |
| 38.8        | 0             | 1.09    | 0.05        | 0.060      |
| 39          | 0             | 1.08    | 0.05        | 0.059      |
| 39.2        | 0             | 1.07    | 0.05        | 0.058      |
| 39.4        | 0             | 1.06    | 0.05        | 0.058      |
| 39.6        | 0             | 1.04    | 0.05        | 0.057      |
| 39.8        | 0             | 1.03    | 0.05        | 0.056      |
| 40          | 0             | 1.02    | 0.05        | 0.055      |
| 40.2        | 0             | 1.01    | 0.05        | 0.054      |
| 40.4        | 0             | 0.99    | 0.05        | 0.053      |
| 40.6        | 0             | 0.98    | 0.05        | 0.053      |
| 40.8        | 0             | 0.96    | 0.05        | 0.052      |
| 41          | 0             | 0.95    | 0.05        | 0.051      |
| 41.2        | 0             | 0.93    | 0.05        | 0.050      |
| 41.4        | 0             | 0.92    | 0.05        | 0.049      |
| 41.6        | 0             | 0.90    | 0.05        | 0.049      |
| 41.8        | 0             | 0.89    | 0.05        | 0.048      |
| 42          | 0             | 0.87    | 0.05        | 0.047      |
| 42.2        | 0             | 0.86    | 0.05        | 0.046      |
| 42.4        | 0             | 0.85    | 0.05        | 0.046      |
| 42.6        | 0             | 0.83    | 0.05        | 0.045      |
| 42.8        | 0             | 0.82    | 0.05        | 0.044      |
| 43          | 0             | 0.81    | 0.05        | 0.043      |
| 43.2        | 0             | 0.80    | 0.05        | 0.043      |
| 43.4        | 0             | 0.78    | 0.05        | 0.042      |
| 43.6        | 0             | 0.77    | 0.05        | 0.041      |
| 43.8        | 0             | 0.76    | 0.05        | 0.041      |
| 44          | 0             | 0.75    | 0.05        | 0.040      |
| 44.2        | 0             | 0.74    | 0.05        | 0.040      |
| 44.4        | 0             | 0.72    | 0.05        | 0.039      |
| 44.6        | 0             | 0.71    | 0.05        | 0.038      |
| 44.8        | 0             | 0.70    | 0.05        | 0.038      |
| 45          | 0             | 0.69    | 0.05        | 0.037      |
| 45.2        | 0             | 0.68    | 0.05        | 0.037      |
| 45.4        | 0             | 0.67    | 0.05        | 0.036      |
| 45.6        | 0             | 0.66    | 0.05        | 0.035      |
| 45.8        | 0             | 0.65    | 0.05        | 0.035      |
| 46          | 0             | 0.64    | 0.05        | 0.034      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 36.2        | 4.65          | 3.15    | 2.5         | 0.18       |
| 46.2        | 0             | 0.63    | 0.05        | 0.034      |
| 46.4        | 0             | 0.62    | 0.05        | 0.033      |
| 46.6        | 0             | 0.61    | 0.05        | 0.033      |
| 46.8        | 0             | 0.60    | 0.05        | 0.032      |
| 47          | 0             | 0.59    | 0.05        | 0.032      |
| 47.2        | 0             | 0.58    | 0.05        | 0.031      |
| 47.4        | 0             | 0.57    | 0.05        | 0.031      |
| 47.6        | 0             | 0.56    | 0.05        | 0.030      |
| 47.8        | 0             | 0.55    | 0.05        | 0.030      |
| 48          | 0             | 0.54    | 0.05        | 0.029      |
| 48.2        | 0             | 0.54    | 0.05        | 0.029      |
| 48.4        | 0             | 0.53    | 0.05        | 0.028      |
| 48.6        | 0             | 0.52    | 0.05        | 0.028      |
| 48.8        | 0             | 0.51    | 0.05        | 0.028      |
| 49          | 0             | 0.50    | 0.05        | 0.027      |



# Encompass Associates, Inc.

5699 Cousins Place  
Rancho Cucamonga, CA 91737  
909-684-0093

Tr 20727 Banana  
SB Co

155-238.014  
8/6/24

AMC Type **III** (I,II or III)

Maximum Loss Rate

Wly Dev Set # **1**

| Cover                  | Area | %    | Soil type | Area  | %      | CN-II | CN-III | Ap   | %    | S    | Fp (F.C-6) | Fm   | Fm (wt) |
|------------------------|------|------|-----------|-------|--------|-------|--------|------|------|------|------------|------|---------|
| condo                  | 2.06 | 1.00 | A         | 2.06  | 1.00   | 32    | 52     | 0.35 | 0.35 | 9.23 | 0.74       | 0.26 | 0.26    |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
| (AutoCalc: Impervious) |      |      |           | (1.3) | (0.63) |       | 98     | 0    | 0.65 | 0.2  |            |      |         |
|                        | 2.1  |      |           | 2.06  |        |       |        |      |      |      |            | Fm=  | 0.26    |

## Low Loss Fraction

| Return Period              | 2    | 2.81 in |        | 10   | 4.34 in |        | 25   | 5.20 in |        | 100  | 6.45 in |        |
|----------------------------|------|---------|--------|------|---------|--------|------|---------|--------|------|---------|--------|
| Cover                      | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) |
| condo                      | 1.85 | 0.03    | 0.01   | 1.85 | 0.12    | 0.04   | 1.85 | 0.17    | 0.06   | 1.85 | 0.24    | 0.08   |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
| (AutoCalc: Impervious)     | 0.04 | 0.92    | 0.60   | 0.04 | 0.95    | 0.62   | 0.04 | 0.96    | 0.62   | 0.04 | 0.96    | 0.62   |
|                            |      | Y=      | 0.61   |      | Y=      | 0.66   |      | Y=      | 0.68   |      | Y=      | 0.71   |
| Low Loss Fraction, Y-bar = |      |         | 0.39   |      |         | 0.34   |      |         | 0.32   |      |         | 0.29   |
| Est Vol (ac-ft)=           |      |         | 0      |      |         | 0      |      |         | 1      |      |         | 1      |

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 Rancho Cucamonga, CA 91737  
 909-684-0093

Tr 20727 Banana  
 SB Co

155-238.014  
 8/6/24

|                                                     |           |             |       |       |       |
|-----------------------------------------------------|-----------|-------------|-------|-------|-------|
| 1 Design Storm                                      | yr        | 2           | 10    | 25    | 100   |
| 2 Catchment Lag time                                | hrs       | 0.00        | 0.16  | 0.16  | 0.16  |
|                                                     | Tc (min)  | 0           | 11.94 | 11.94 | 11.94 |
| 3 Catchment Area                                    | acres     | <u>2.06</u> |       |       |       |
| 4 Base flow                                         | cfs/sq mi | <u>0</u>    |       |       |       |
| 5 S-graph                                           |           | <u>n/a</u>  |       |       |       |
| 6 Maximum loss rate, Fm                             | in/hr     | <u>0.26</u> |       |       |       |
| 7 Low loss fraction, Y-bar                          |           | 0.39        | 0.34  | 0.32  | 0.29  |
| 8 Watershed area-averaged 5-minute point rainfall   | inches    | 0.20        | 0.32  | 0.40  | 0.52  |
| Watershed area-averaged 30-minute point rainfall    | inches    | 0.41        | 0.66  | 0.82  | 1.07  |
| Watershed area-averaged 1-hour point rainfall       | inches    | 0.54        | 0.87  | 1.08  | 1.41  |
| Watershed area-averaged 3-hour point rainfall       | inches    | 1.04        | 1.57  | 1.92  | 2.46  |
| Watershed area-averaged 6-hour point rainfall       | inches    | 1.51        | 2.29  | 2.76  | 3.50  |
| Watershed area-averaged 24-hour point rainfall      | inches    | 2.81        | 4.34  | 5.20  | 6.45  |
| 9 24-hour storm unit interval (use TC for Small UH) | minutes   | 5           |       |       |       |



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|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 100     | year   |
| I-60min     | 1.41    |        |
| I-6hr       | 3.5     |        |
| Slope       | 0.6     |        |
| Ac          | 2.06    | ac     |
| TC          | 11.94   | min    |
| Calibration | 1       |        |
| fm          | 0.34    | in/hr  |
|             | 0.00567 | in/min |
| Y-bar       | 0.37    |        |
|             | Peak    | Total  |
|             | 6.25    | 0.7493 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
|       | 0.19  | 0       |
| 0.4   | 0.19  | 0.0063  |
| 0.6   | 0.19  | 0.0094  |
| 0.8   | 0.19  | 0.0125  |
| 1     | 0.19  | 0.0156  |
| 1.2   | 0.19  | 0.0187  |
| 1.4   | 0.19  | 0.0218  |
| 1.6   | 0.19  | 0.0249  |
| 1.8   | 0.19  | 0.028   |
| 2     | 0.28  | 0.0319  |
| 2.2   | 0.19  | 0.0358  |
| 2.4   | 0.19  | 0.0389  |
| 2.6   | 0.28  | 0.0428  |
| 2.8   | 0.19  | 0.0467  |
| 3     | 0.19  | 0.0498  |
| 3.2   | 0.28  | 0.0537  |
| 3.4   | 0.19  | 0.0576  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.6   | 0.28  | 0.0615  |
| 3.8   | 0.28  | 0.0661  |
| 4     | 0.19  | 0.07    |
| 4.2   | 0.28  | 0.0739  |
| 4.4   | 0.19  | 0.0778  |
| 4.6   | 0.19  | 0.0809  |
| 4.8   | 0.28  | 0.0848  |
| 5     | 0.28  | 0.0894  |
| 5.2   | 0.28  | 0.094   |
| 5.4   | 0.28  | 0.0986  |
| 5.6   | 0.19  | 0.1025  |
| 5.8   | 0.28  | 0.1064  |
| 6     | 0.19  | 0.1103  |
| 6.2   | 0.28  | 0.1142  |
| 6.4   | 0.28  | 0.1188  |
| 6.6   | 0.19  | 0.1227  |
| 6.8   | 0.28  | 0.1266  |
| 7     | 0.28  | 0.1312  |
| 7.2   | 0.28  | 0.1358  |
| 7.4   | 0.28  | 0.1404  |
| 7.6   | 0.28  | 0.145   |
| 7.8   | 0.28  | 0.1496  |
| 8     | 0.28  | 0.1542  |
| 8.2   | 0.28  | 0.1588  |
| 8.4   | 0.28  | 0.1634  |
| 8.6   | 0.28  | 0.168   |
| 8.8   | 0.28  | 0.1726  |
| 9     | 0.28  | 0.1772  |
| 9.2   | 0.28  | 0.1818  |
| 9.4   | 0.28  | 0.1864  |
| 9.6   | 0.28  | 0.191   |
| 9.8   | 0.28  | 0.1956  |
| 10    | 0.28  | 0.2002  |
| 10.2  | 0.28  | 0.2048  |
| 10.4  | 0.28  | 0.2094  |
| 10.6  | 0.28  | 0.214   |
| 10.8  | 0.28  | 0.2186  |
| 11    | 0.28  | 0.2232  |
| 11.2  | 0.37  | 0.2286  |
| 11.4  | 0.28  | 0.234   |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 11.6  | 0.37  | 0.2394  |
| 11.8  | 0.28  | 0.2448  |
| 12    | 0.37  | 0.2502  |
| 12.2  | 0.37  | 0.2563  |
| 12.4  | 0.37  | 0.2624  |
| 12.6  | 0.37  | 0.2685  |
| 12.8  | 0.37  | 0.2746  |
| 13    | 0.37  | 0.2807  |
| 13.2  | 0.37  | 0.2868  |
| 13.4  | 0.37  | 0.2929  |
| 13.6  | 0.37  | 0.299   |
| 13.8  | 0.37  | 0.3051  |
| 14    | 0.46  | 0.312   |
| 14.2  | 0.56  | 0.3204  |
| 14.4  | 0.56  | 0.3297  |
| 14.6  | 0.56  | 0.339   |
| 14.8  | 0.56  | 0.3483  |
| 15    | 0.65  | 0.3583  |
| 15.2  | 0.74  | 0.3698  |
| 15.4  | 0.74  | 0.382   |
| 15.6  | 0.74  | 0.3942  |
| 15.8  | 1.02  | 0.4087  |
| 16    | 1.58  | 0.4302  |
| 16.2  | 6.25  | 0.4949  |
| 16.4  | 0.83  | 0.5534  |
| 16.6  | 0.74  | 0.5664  |
| 16.8  | 0.56  | 0.5771  |
| 17    | 0.56  | 0.5864  |
| 17.2  | 0.46  | 0.5948  |
| 17.4  | 0.46  | 0.6024  |
| 17.6  | 0.37  | 0.6093  |
| 17.8  | 0.37  | 0.6154  |
| 18    | 0.37  | 0.6215  |
| 18.2  | 0.37  | 0.6276  |
| 18.4  | 0.37  | 0.6337  |
| 18.6  | 0.28  | 0.6391  |
| 18.8  | 0.28  | 0.6437  |
| 19    | 0.28  | 0.6483  |
| 19.2  | 0.28  | 0.6529  |
| 19.4  | 0.28  | 0.6575  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 19.6  | 0.28  | 0.6621  |
| 19.8  | 0.28  | 0.6667  |
| 20    | 0.28  | 0.6713  |
| 20.2  | 0.28  | 0.6759  |
| 20.4  | 0.28  | 0.6805  |
| 20.6  | 0.28  | 0.6851  |
| 20.8  | 0.28  | 0.6897  |
| 21    | 0.28  | 0.6943  |
| 21.2  | 0.28  | 0.6989  |
| 21.4  | 0.28  | 0.7035  |
| 21.6  | 0.19  | 0.7074  |
| 21.8  | 0.19  | 0.7105  |
| 22    | 0.28  | 0.7144  |
| 22.2  | 0.19  | 0.7183  |
| 22.4  | 0.19  | 0.7214  |
| 22.6  | 0.19  | 0.7245  |
| 22.8  | 0.19  | 0.7276  |
| 23    | 0.19  | 0.7307  |
| 23.2  | 0.19  | 0.7338  |
| 23.4  | 0.19  | 0.7369  |
| 23.6  | 0.19  | 0.74    |
| 23.8  | 0.19  | 0.7431  |
| 24    | 0.19  | 0.7462  |
| 24.2  | 0.19  | 0.7493  |



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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.05 | 0.00 | 0    | 0    |
| 1   | 0.05 | 0.05 | 0.05 | 0.05 |
| 2   | 0.05 | 0.12 | 0.12 | 0.12 |
| 3   | 3.13 | 0.17 | 0.15 | 0.2  |
| 3.5 | 4.13 | 0.19 | 0.16 | 0.22 |
| 4.5 | 5.61 | 0.21 | 0.16 | 0.26 |

| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 36.2 | 6.25   | 3.9 | 3.4  | 0.20  | 0.54  |

|     |      |     |      |       |      |
|-----|------|-----|------|-------|------|
| 0   | 0    | 0   | 0    | 0     | 0    |
| 0.2 | 0.19 | 0.1 | 0.05 | 0.003 | 0.00 |
| 0.4 | 0.19 | 0.1 | 0.05 | 0.006 | 0.00 |
| 0.6 | 0.19 | 0.2 | 0.05 | 0.009 | 0.00 |
| 0.8 | 0.19 | 0.2 | 0.05 | 0.012 | 0.00 |
| 1   | 0.19 | 0.3 | 0.05 | 0.015 | 0.00 |
| 1.2 | 0.19 | 0.3 | 0.05 | 0.018 | 0.00 |
| 1.4 | 0.19 | 0.4 | 0.05 | 0.021 | 0.00 |
| 1.6 | 0.19 | 0.4 | 0.05 | 0.024 | 0.00 |
| 1.8 | 0.19 | 0.5 | 0.05 | 0.026 | 0.00 |
| 2   | 0.28 | 0.6 | 0.05 | 0.031 | 0.00 |
| 2.2 | 0.19 | 0.6 | 0.05 | 0.033 | 0.00 |
| 2.4 | 0.19 | 0.7 | 0.05 | 0.036 | 0.00 |
| 2.6 | 0.28 | 0.7 | 0.05 | 0.040 | 0.00 |
| 2.8 | 0.19 | 0.8 | 0.05 | 0.042 | 0.00 |
| 3   | 0.19 | 0.8 | 0.05 | 0.045 | 0.00 |
| 3.2 | 0.28 | 0.9 | 0.05 | 0.049 | 0.00 |
| 3.4 | 0.19 | 0.9 | 0.05 | 0.051 | 0.00 |
| 3.6 | 0.28 | 1.0 | 0.05 | 0.055 | 0.00 |
| 3.8 | 0.28 | 1.1 | 0.05 | 0.059 | 0.00 |



| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 4    | 0.19   | 1.1 | 0.05 | 0.061 | 0.00  |
| 4.2  | 0.28   | 1.2 | 0.05 | 0.065 | 0.00  |
| 4.4  | 0.19   | 1.2 | 0.05 | 0.067 | 0.00  |
| 4.6  | 0.19   | 1.2 | 0.05 | 0.069 | 0.00  |
| 4.8  | 0.28   | 1.3 | 0.05 | 0.073 | 0.00  |
| 5    | 0.28   | 1.3 | 0.05 | 0.077 | 0.00  |
| 5.2  | 0.28   | 1.4 | 0.05 | 0.081 | 0.00  |
| 5.4  | 0.28   | 1.4 | 0.05 | 0.084 | 0.00  |
| 5.6  | 0.19   | 1.5 | 0.05 | 0.087 | 0.00  |
| 5.8  | 0.28   | 1.5 | 0.05 | 0.090 | 0.00  |
| 6    | 0.19   | 1.6 | 0.05 | 0.093 | 0.00  |
| 6.2  | 0.28   | 1.6 | 0.05 | 0.096 | 0.00  |
| 6.4  | 0.28   | 1.7 | 0.05 | 0.100 | 0.00  |
| 6.6  | 0.19   | 1.7 | 0.05 | 0.103 | 0.00  |
| 6.8  | 0.28   | 1.8 | 0.05 | 0.106 | 0.00  |
| 7    | 0.28   | 1.8 | 0.05 | 0.110 | 0.00  |
| 7.2  | 0.28   | 1.9 | 0.05 | 0.114 | 0.00  |
| 7.4  | 0.28   | 1.9 | 0.05 | 0.118 | 0.00  |
| 7.6  | 0.28   | 2.0 | 0.05 | 0.121 | 0.00  |
| 7.8  | 0.28   | 2.0 | 0.12 | 0.124 | 0.00  |
| 8    | 0.28   | 2.1 | 0.22 | 0.125 | 0.00  |
| 8.2  | 0.28   | 2.1 | 0.26 | 0.125 | 0.00  |
| 8.4  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 8.6  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 8.8  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 9    | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 9.2  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 9.4  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 9.6  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 9.8  | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 10   | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 10.2 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 10.4 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 10.6 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 10.8 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 11   | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 11.2 | 0.37   | 2.1 | 0.31 | 0.126 | 0.00  |
| 11.4 | 0.28   | 2.1 | 0.32 | 0.126 | 0.00  |
| 11.6 | 0.37   | 2.1 | 0.32 | 0.127 | 0.00  |
| 11.8 | 0.28   | 2.1 | 0.33 | 0.126 | 0.00  |
| 12   | 0.37   | 2.1 | 0.33 | 0.127 | 0.00  |
| 12.2 | 0.37   | 2.1 | 0.36 | 0.127 | 0.01  |



| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 12.4 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 12.6 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 12.8 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 13   | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 13.2 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 13.4 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 13.6 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 13.8 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 14   | 0.46   | 2.1 | 0.40 | 0.128 | 0.01  |
| 14.2 | 0.56   | 2.2 | 0.48 | 0.129 | 0.01  |
| 14.4 | 0.56   | 2.2 | 0.53 | 0.130 | 0.01  |
| 14.6 | 0.56   | 2.2 | 0.55 | 0.130 | 0.01  |
| 14.8 | 0.56   | 2.2 | 0.56 | 0.130 | 0.01  |
| 15   | 0.65   | 2.2 | 0.59 | 0.131 | 0.01  |
| 15.2 | 0.74   | 2.2 | 0.66 | 0.132 | 0.01  |
| 15.4 | 0.74   | 2.2 | 0.72 | 0.133 | 0.01  |
| 15.6 | 0.74   | 2.2 | 0.73 | 0.133 | 0.01  |
| 15.8 | 1.02   | 2.3 | 0.83 | 0.136 | 0.01  |
| 16   | 1.58   | 2.4 | 1.15 | 0.143 | 0.02  |
| 16.2 | 6.25   | 3.9 | 3.02 | 0.197 | 0.05  |
| 16.4 | 0.83   | 2.7 | 3.38 | 0.155 | 0.06  |
| 16.6 | 0.74   | 2.4 | 1.64 | 0.140 | 0.03  |
| 16.8 | 0.56   | 2.2 | 0.98 | 0.133 | 0.02  |
| 17   | 0.56   | 2.2 | 0.70 | 0.131 | 0.01  |
| 17.2 | 0.46   | 2.2 | 0.57 | 0.129 | 0.01  |
| 17.4 | 0.46   | 2.1 | 0.50 | 0.129 | 0.01  |
| 17.6 | 0.37   | 2.1 | 0.44 | 0.127 | 0.01  |
| 17.8 | 0.37   | 2.1 | 0.40 | 0.127 | 0.01  |
| 18   | 0.37   | 2.1 | 0.38 | 0.127 | 0.01  |
| 18.2 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 18.4 | 0.37   | 2.1 | 0.37 | 0.127 | 0.01  |
| 18.6 | 0.28   | 2.1 | 0.34 | 0.126 | 0.00  |
| 18.8 | 0.28   | 2.1 | 0.30 | 0.126 | 0.00  |
| 19   | 0.28   | 2.1 | 0.29 | 0.125 | 0.00  |
| 19.2 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 19.4 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 19.6 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 19.8 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 20   | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 20.2 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 20.4 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 20.6 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |



| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 20.8 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 21   | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 21.2 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 21.4 | 0.28   | 2.1 | 0.28 | 0.125 | 0.00  |
| 21.6 | 0.19   | 2.1 | 0.25 | 0.124 | 0.00  |
| 21.8 | 0.19   | 2.0 | 0.21 | 0.124 | 0.00  |
| 22   | 0.28   | 2.1 | 0.23 | 0.125 | 0.00  |
| 22.2 | 0.19   | 2.1 | 0.23 | 0.124 | 0.00  |
| 22.4 | 0.19   | 2.0 | 0.20 | 0.124 | 0.00  |
| 22.6 | 0.19   | 2.0 | 0.20 | 0.124 | 0.00  |
| 22.8 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 23   | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 23.2 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 23.4 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 23.6 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 23.8 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 24   | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 24.2 | 0.19   | 2.0 | 0.19 | 0.124 | 0.00  |
| 24.4 | 0      | 2.0 | 0.13 | 0.122 | 0.00  |
| 24.6 | 0      | 2.0 | 0.06 | 0.121 | 0.00  |
| 24.8 | 0      | 2.0 | 0.05 | 0.120 | 0.00  |
| 25   | 0      | 2.0 | 0.05 | 0.119 | 0.00  |
| 25.2 | 0      | 2.0 | 0.05 | 0.118 | 0.00  |
| 25.4 | 0      | 1.9 | 0.05 | 0.118 | 0.00  |
| 25.6 | 0      | 1.9 | 0.05 | 0.117 | 0.00  |
| 25.8 | 0      | 1.9 | 0.05 | 0.116 | 0.00  |
| 26   | 0      | 1.9 | 0.05 | 0.115 | 0.00  |
| 26.2 | 0      | 1.9 | 0.05 | 0.114 | 0.00  |
| 26.4 | 0      | 1.9 | 0.05 | 0.113 | 0.00  |
| 26.6 | 0      | 1.9 | 0.05 | 0.112 | 0.00  |
| 26.8 | 0      | 1.9 | 0.05 | 0.112 | 0.00  |
| 27   | 0      | 1.8 | 0.05 | 0.111 | 0.00  |
| 27.2 | 0      | 1.8 | 0.05 | 0.110 | 0.00  |
| 27.4 | 0      | 1.8 | 0.05 | 0.109 | 0.00  |
| 27.6 | 0      | 1.8 | 0.05 | 0.108 | 0.00  |
| 27.8 | 0      | 1.8 | 0.05 | 0.107 | 0.00  |
| 28   | 0      | 1.8 | 0.05 | 0.106 | 0.00  |
| 28.2 | 0      | 1.8 | 0.05 | 0.106 | 0.00  |
| 28.4 | 0      | 1.8 | 0.05 | 0.105 | 0.00  |
| 28.6 | 0      | 1.7 | 0.05 | 0.104 | 0.00  |
| 28.8 | 0      | 1.7 | 0.05 | 0.103 | 0.00  |
| 29   | 0      | 1.7 | 0.05 | 0.102 | 0.00  |



| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 29.2 | 0      | 1.7 | 0.05 | 0.101 | 0.00  |
| 29.4 | 0      | 1.7 | 0.05 | 0.101 | 0.00  |
| 29.6 | 0      | 1.7 | 0.05 | 0.100 | 0.00  |
| 29.8 | 0      | 1.7 | 0.05 | 0.099 | 0.00  |
| 30   | 0      | 1.7 | 0.05 | 0.098 | 0.00  |
| 30.2 | 0      | 1.6 | 0.05 | 0.097 | 0.00  |
| 30.4 | 0      | 1.6 | 0.05 | 0.096 | 0.00  |
| 30.6 | 0      | 1.6 | 0.05 | 0.095 | 0.00  |
| 30.8 | 0      | 1.6 | 0.05 | 0.095 | 0.00  |
| 31   | 0      | 1.6 | 0.05 | 0.094 | 0.00  |
| 31.2 | 0      | 1.6 | 0.05 | 0.093 | 0.00  |
| 31.4 | 0      | 1.6 | 0.05 | 0.092 | 0.00  |
| 31.6 | 0      | 1.6 | 0.05 | 0.091 | 0.00  |
| 31.8 | 0      | 1.5 | 0.05 | 0.090 | 0.00  |
| 32   | 0      | 1.5 | 0.05 | 0.089 | 0.00  |
| 32.2 | 0      | 1.5 | 0.05 | 0.089 | 0.00  |
| 32.4 | 0      | 1.5 | 0.05 | 0.088 | 0.00  |
| 32.6 | 0      | 1.5 | 0.05 | 0.087 | 0.00  |
| 32.8 | 0      | 1.5 | 0.05 | 0.086 | 0.00  |
| 33   | 0      | 1.5 | 0.05 | 0.085 | 0.00  |
| 33.2 | 0      | 1.5 | 0.05 | 0.084 | 0.00  |
| 33.4 | 0      | 1.4 | 0.05 | 0.084 | 0.00  |
| 33.6 | 0      | 1.4 | 0.05 | 0.083 | 0.00  |
| 33.8 | 0      | 1.4 | 0.05 | 0.082 | 0.00  |
| 34   | 0      | 1.4 | 0.05 | 0.081 | 0.00  |
| 34.2 | 0      | 1.4 | 0.05 | 0.080 | 0.00  |
| 34.4 | 0      | 1.4 | 0.05 | 0.079 | 0.00  |
| 34.6 | 0      | 1.4 | 0.05 | 0.078 | 0.00  |
| 34.8 | 0      | 1.4 | 0.05 | 0.078 | 0.00  |
| 35   | 0      | 1.3 | 0.05 | 0.077 | 0.00  |
| 35.2 | 0      | 1.3 | 0.05 | 0.076 | 0.00  |
| 35.4 | 0      | 1.3 | 0.05 | 0.075 | 0.00  |
| 35.6 | 0      | 1.3 | 0.05 | 0.074 | 0.00  |
| 35.8 | 0      | 1.3 | 0.05 | 0.073 | 0.00  |
| 36   | 0      | 1.3 | 0.05 | 0.072 | 0.00  |
| 36.2 | 0      | 1.3 | 0.05 | 0.072 | 0.00  |
| 36.4 | 0      | 1.3 | 0.05 | 0.071 | 0.00  |
| 36.6 | 0      | 1.2 | 0.05 | 0.070 | 0.00  |
| 36.8 | 0      | 1.2 | 0.05 | 0.069 | 0.00  |
| 37   | 0      | 1.2 | 0.05 | 0.068 | 0.00  |
| 37.2 | 0      | 1.2 | 0.05 | 0.067 | 0.00  |
| 37.4 | 0      | 1.2 | 0.05 | 0.067 | 0.00  |



| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 37.6 | 0      | 1.2 | 0.05 | 0.066 | 0.00  |
| 37.8 | 0      | 1.2 | 0.05 | 0.065 | 0.00  |
| 38   | 0      | 1.2 | 0.05 | 0.064 | 0.00  |
| 38.2 | 0      | 1.1 | 0.05 | 0.063 | 0.00  |
| 38.4 | 0      | 1.1 | 0.05 | 0.062 | 0.00  |
| 38.6 | 0      | 1.1 | 0.05 | 0.061 | 0.00  |
| 38.8 | 0      | 1.1 | 0.05 | 0.061 | 0.00  |
| 39   | 0      | 1.1 | 0.05 | 0.060 | 0.00  |
| 39.2 | 0      | 1.1 | 0.05 | 0.059 | 0.00  |
| 39.4 | 0      | 1.1 | 0.05 | 0.058 | 0.00  |
| 39.6 | 0      | 1.1 | 0.05 | 0.057 | 0.00  |
| 39.8 | 0      | 1.0 | 0.05 | 0.056 | 0.00  |
| 40   | 0      | 1.0 | 0.05 | 0.056 | 0.00  |
| 40.2 | 0      | 1.0 | 0.05 | 0.055 | 0.00  |
| 40.4 | 0      | 1.0 | 0.05 | 0.054 | 0.00  |
| 40.6 | 0      | 1.0 | 0.05 | 0.053 | 0.00  |
| 40.8 | 0      | 1.0 | 0.05 | 0.052 | 0.00  |
| 41   | 0      | 1.0 | 0.05 | 0.051 | 0.00  |
| 41.2 | 0      | 0.9 | 0.05 | 0.051 | 0.00  |
| 41.4 | 0      | 0.9 | 0.05 | 0.050 | 0.00  |
| 41.6 | 0      | 0.9 | 0.05 | 0.049 | 0.00  |
| 41.8 | 0      | 0.9 | 0.05 | 0.048 | 0.00  |
| 42   | 0      | 0.9 | 0.05 | 0.047 | 0.00  |
| 42.2 | 0      | 0.9 | 0.05 | 0.047 | 0.00  |
| 42.4 | 0      | 0.9 | 0.05 | 0.046 | 0.00  |
| 42.6 | 0      | 0.8 | 0.05 | 0.045 | 0.00  |
| 42.8 | 0      | 0.8 | 0.05 | 0.045 | 0.00  |
| 43   | 0      | 0.8 | 0.05 | 0.044 | 0.00  |
| 43.2 | 0      | 0.8 | 0.05 | 0.043 | 0.00  |
| 43.4 | 0      | 0.8 | 0.05 | 0.042 | 0.00  |
| 43.6 | 0      | 0.8 | 0.05 | 0.042 | 0.00  |
| 43.8 | 0      | 0.8 | 0.05 | 0.041 | 0.00  |
| 44   | 0      | 0.8 | 0.05 | 0.040 | 0.00  |
| 44.2 | 0      | 0.7 | 0.05 | 0.040 | 0.00  |
| 44.4 | 0      | 0.7 | 0.05 | 0.039 | 0.00  |
| 44.6 | 0      | 0.7 | 0.05 | 0.039 | 0.00  |
| 44.8 | 0      | 0.7 | 0.05 | 0.038 | 0.00  |
| 45   | 0      | 0.7 | 0.05 | 0.037 | 0.00  |
| 45.2 | 0      | 0.7 | 0.05 | 0.037 | 0.00  |
| 45.4 | 0      | 0.7 | 0.05 | 0.036 | 0.00  |
| 45.6 | 0      | 0.7 | 0.05 | 0.036 | 0.00  |
| 45.8 | 0      | 0.7 | 0.05 | 0.035 | 0.00  |

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| Time | Inflow | d   | Qout | S     | S-out |
|------|--------|-----|------|-------|-------|
| Hrs  | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 46   | 0      | 0.6 | 0.05 | 0.035 | 0.00  |
| 46.2 | 0      | 0.6 | 0.05 | 0.034 | 0.00  |
| 46.4 | 0      | 0.6 | 0.05 | 0.034 | 0.00  |
| 46.6 | 0      | 0.6 | 0.05 | 0.033 | 0.00  |
| 46.8 | 0      | 0.6 | 0.05 | 0.032 | 0.00  |
| 47   | 0      | 0.6 | 0.05 | 0.032 | 0.00  |
| 47.2 | 0      | 0.6 | 0.05 | 0.031 | 0.00  |
| 47.4 | 0      | 0.6 | 0.05 | 0.031 | 0.00  |
| 47.6 | 0      | 0.6 | 0.05 | 0.030 | 0.00  |
| 47.8 | 0      | 0.6 | 0.05 | 0.030 | 0.00  |
| 48   | 0      | 0.5 | 0.05 | 0.030 | 0.00  |
| 48.2 | 0      | 0.5 | 0.05 | 0.029 | 0.00  |
| 48.4 | 0      | 0.5 | 0.05 | 0.029 | 0.00  |
| 48.6 | 0      | 0.5 | 0.05 | 0.028 | 0.00  |
| 48.8 | 0      | 0.5 | 0.05 | 0.028 | 0.00  |
| 49   | 0      | 0.5 | 0.05 | 0.027 | 0.00  |
| 49.2 | 0      | 0.5 | 0.05 | 0.027 | 0.00  |
| 49.4 | 0      | 0.5 | 0.05 | 0.026 | 0.00  |
| 49.6 | 0      | 0.5 | 0.05 | 0.026 | 0.00  |
| 49.8 | 0      | 0.5 | 0.05 | 0.026 | 0.00  |
| 50   | 0      | 0.5 | 0.05 | 0.025 | 0.00  |
| 50.2 | 0      | 0.5 | 0.05 | 0.025 | 0.00  |
| 50.4 | 0      | 0.5 | 0.05 | 0.024 | 0.00  |

**Encompass Associates, Inc.**

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AMC Type **II** (I,II or III)

**Maximum Loss Rate**

**Ely Dev** Set # **2**

| Cover                  | Area | %    | Soil type | Area  | %      | CN-II | CN-III | Ap   | %    | S     | Fp (F.C-6) | Fm   | Fm (wt) |
|------------------------|------|------|-----------|-------|--------|-------|--------|------|------|-------|------------|------|---------|
| condo                  | 2.64 | 1.00 | A         | 2.64  | 1.00   | 32    | 52     | 0.35 | 0.35 | 21.25 | 0.975      | 0.34 | 0.34    |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |       |            |      |         |
| (AutoCalc: Impervious) |      |      |           | (1.7) | (0.64) |       | 98     | 0    | 0.65 | 0.2   |            |      |         |
|                        | 2.6  |      |           | 2.64  |        |       |        |      |      |       |            | Fm=  | 0.34    |

**Low Loss Fraction**

| Return Period              | 2    | 2.81 in |        | 10   | 4.34 in |        | 25   | 5.20 in |        | 100  | 6.45 in |        |
|----------------------------|------|---------|--------|------|---------|--------|------|---------|--------|------|---------|--------|
| Cover                      | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) |
| condo                      | 4.25 | 0.04    | 0.01   | 4.25 | 0       | 0.00   | 4.25 | 0.01    | 0.00   | 4.25 | 0.03    | 0.01   |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
| (AutoCalc: Impervious)     | 0.04 | 0.92    | 0.60   | 0.04 | 0.95    | 0.62   | 0.04 | 0.96    | 0.62   | 0.04 | 0.96    | 0.62   |
|                            |      | Y=      | 0.61   |      | Y=      | 0.62   |      | Y=      | 0.63   |      | Y=      | 0.63   |
| Low Loss Fraction, Y-bar = |      |         | 0.39   |      |         | 0.38   |      |         | 0.37   |      |         | 0.37   |
| Est Vol (ac-ft)=           |      |         | 0      |      |         | 1      |      |         | 1      |      |         | 1      |

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|                                                     |           |             |       |       |       |
|-----------------------------------------------------|-----------|-------------|-------|-------|-------|
| 1 Design Storm                                      | yr        | 2           | 10    | 25    | 100   |
| 2 Catchment Lag time                                | hrs       | 0.00        | 0.18  | 0.18  | 0.18  |
|                                                     | Tc (min)  | 0           | 13.19 | 13.19 | 13.19 |
| 3 Catchment Area                                    | acres     | <u>2.64</u> |       |       |       |
| 4 Base flow                                         | cfs/sq mi | <u>0</u>    |       |       |       |
| 5 S-graph                                           |           | <u>n/a</u>  |       |       |       |
| 6 Maximum loss rate, Fm                             | in/hr     | <u>0.34</u> |       |       |       |
| 7 Low loss fraction, Y-bar                          |           | 0.39        | 0.38  | 0.37  | 0.37  |
| 8 Watershed area-averaged 5-minute point rainfall   | inches    | 0.20        | 0.32  | 0.40  | 0.52  |
| Watershed area-averaged 30-minute point rainfall    | inches    | 0.41        | 0.66  | 0.82  | 1.07  |
| Watershed area-averaged 1-hour point rainfall       | inches    | 0.54        | 0.87  | 1.08  | 1.41  |
| Watershed area-averaged 3-hour point rainfall       | inches    | 1.04        | 1.57  | 1.92  | 2.46  |
| Watershed area-averaged 6-hour point rainfall       | inches    | 1.51        | 2.29  | 2.76  | 3.50  |
| Watershed area-averaged 24-hour point rainfall      | inches    | 2.81        | 4.34  | 5.20  | 6.45  |
| 9 24-hour storm unit interval (use TC for Small UH) | minutes   | 5           |       |       |       |

**Project:** ELY System - Tr20727 Banana



Chamber Model -  
Units -

|          |
|----------|
| SC-740   |
| Imperial |

Number of Chambers -  
Voids in the stone (porosity) -  
Base of Stone Elevation -

|       |
|-------|
| 144   |
| 40    |
| 75.80 |

%

ft

Amount of Stone Above Chambers -  
Amount of Stone Below Chambers -

|   |
|---|
| 6 |
| 6 |

in

in

Area of system -

|      |
|------|
| 4868 |
|------|

sf Min. Area - 4868 sf min. area

### StormTech SC-740 Cumulative Storage Volumes

| Height of System<br>(inches) | Incremental Single Chamber<br>(cubic feet) | Incremental Total Chamber<br>(cubic feet) | Incremental Stone<br>(cubic feet) | Incremental Ch & St<br>(cubic feet) | Cumulative Chamber<br>(cubic feet) | Elevation<br>(feet) |
|------------------------------|--------------------------------------------|-------------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|---------------------|
| 42                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 10785.35                           | 79.30               |
| 41                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 10623.09                           | 79.22               |
| 40                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 10460.82                           | 79.13               |
| 39                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 10298.55                           | 79.05               |
| 38                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 10136.29                           | 78.97               |
| 37                           | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 9974.02                            | 78.88               |
| 36                           | 0.05                                       | 7.92                                      | 159.10                            | 167.02                              | 9811.75                            | 78.80               |
| 35                           | 0.16                                       | 23.46                                     | 152.88                            | 176.34                              | 9644.73                            | 78.72               |
| 34                           | 0.28                                       | 40.60                                     | 146.03                            | 186.63                              | 9468.39                            | 78.63               |
| 33                           | 0.60                                       | 86.97                                     | 127.48                            | 214.45                              | 9281.77                            | 78.55               |
| 32                           | 0.80                                       | 115.45                                    | 116.09                            | 231.53                              | 9067.32                            | 78.47               |
| 31                           | 0.95                                       | 136.90                                    | 107.51                            | 244.40                              | 8835.78                            | 78.38               |
| 30                           | 1.07                                       | 154.73                                    | 100.37                            | 255.10                              | 8591.38                            | 78.30               |
| 29                           | 1.18                                       | 169.99                                    | 94.27                             | 264.26                              | 8336.27                            | 78.22               |
| 28                           | 1.27                                       | 182.26                                    | 89.36                             | 271.62                              | 8072.01                            | 78.13               |
| 27                           | 1.36                                       | 195.12                                    | 84.22                             | 279.34                              | 7800.39                            | 78.05               |
| 26                           | 1.45                                       | 209.39                                    | 78.51                             | 287.90                              | 7521.05                            | 77.97               |
| 25                           | 1.52                                       | 219.56                                    | 74.44                             | 294.00                              | 7233.15                            | 77.88               |
| 24                           | 1.58                                       | 227.86                                    | 71.12                             | 298.98                              | 6939.15                            | 77.80               |
| 23                           | 1.64                                       | 236.49                                    | 67.67                             | 304.16                              | 6640.17                            | 77.72               |
| 22                           | 1.70                                       | 244.73                                    | 64.37                             | 309.10                              | 6336.01                            | 77.63               |
| 21                           | 1.75                                       | 252.42                                    | 61.30                             | 313.72                              | 6026.90                            | 77.55               |
| 20                           | 1.80                                       | 259.61                                    | 58.42                             | 318.03                              | 5713.18                            | 77.47               |
| 19                           | 1.85                                       | 267.12                                    | 55.42                             | 322.54                              | 5395.15                            | 77.38               |
| 18                           | 1.89                                       | 272.61                                    | 53.22                             | 325.83                              | 5072.62                            | 77.30               |
| 17                           | 1.93                                       | 278.50                                    | 50.87                             | 329.36                              | 4746.79                            | 77.22               |
| 16                           | 1.97                                       | 284.40                                    | 48.51                             | 332.91                              | 4417.42                            | 77.13               |
| 15                           | 2.01                                       | 289.43                                    | 46.50                             | 335.92                              | 4084.51                            | 77.05               |
| 14                           | 2.04                                       | 294.48                                    | 44.48                             | 338.95                              | 3748.59                            | 76.97               |
| 13                           | 2.07                                       | 298.79                                    | 42.75                             | 341.54                              | 3409.64                            | 76.88               |
| 12                           | 2.10                                       | 303.11                                    | 41.02                             | 344.13                              | 3068.09                            | 76.80               |
| 11                           | 2.13                                       | 306.98                                    | 39.48                             | 346.45                              | 2723.96                            | 76.72               |
| 10                           | 2.15                                       | 310.16                                    | 38.20                             | 348.36                              | 2377.51                            | 76.63               |
| 9                            | 2.18                                       | 313.50                                    | 36.87                             | 350.36                              | 2029.15                            | 76.55               |
| 8                            | 2.20                                       | 316.56                                    | 35.64                             | 352.20                              | 1678.78                            | 76.47               |
| 7                            | 2.21                                       | 317.86                                    | 35.12                             | 352.98                              | 1326.58                            | 76.38               |
| 6                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 973.60                             | 76.30               |
| 5                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 811.33                             | 76.22               |
| 4                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 649.07                             | 76.13               |
| 3                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 486.80                             | 76.05               |
| 2                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 324.53                             | 75.97               |
| 1                            | 0.00                                       | 0.00                                      | 162.27                            | 162.27                              | 162.27                             | 75.88               |

Overflow  
Elevation (DCV  
contained  
below)



# Encompass Associates, Inc.

*Civil Engineers*

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Job Tr 20727 Banana

155-238.014

Sheet No.

of

Calculated by:

ATS

Date

8/6/24

Checked by:

Date

Scale

nts

## Tr 20727 Banana

### SB Co

## Table 1: Basin Geometries

### Ely Dev

| Depth<br>ft    | Elevation<br>ft | Area*<br>sq ft | Dvol*<br>cf | Total V<br>cf | ac-ft |
|----------------|-----------------|----------------|-------------|---------------|-------|
| <b>Basin 1</b> |                 |                |             |               |       |
| 0              | 74.83           | <u>4,868.0</u> | <u>0.0</u>  | 0.0           | 0.000 |
| 1              | 75.83           | <u>4,868.0</u> |             | 3068          | 0.070 |
| 2              | 76.83           | <u>4,868.0</u> |             | 6939          | 0.159 |
| 3              | 77.83           | <u>4,868.0</u> |             | 9812          | 0.225 |
| 3.5            | 78.33           | <u>675.0</u>   |             | 10785         | 0.248 |
| 4.5            | 79.33           | <u>1,215.0</u> | 932         | 11717         | 0.269 |

Underground System

Underground System

Underground System

Underground System

Surface Ponding

Surface Ponding



## Detention Basin Outlet Hydraulics

155-238.014  
Tr 20727 Banana  
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| Outlet Structure |      |           |
|------------------|------|-----------|
| C                | 3    | weir      |
| C                | 0.6  | (orifice) |
| L (eff)          | 2.7  | ft        |
| H (eff)          | 0.33 | ft        |
| Bottom EL        | 2.17 | ft        |

| Infiltration |      |       |
|--------------|------|-------|
| rate         | 1.2  | in/hr |
| FS           | 2    |       |
| Net rate     | 0.6  | in/hr |
| SA           | 4868 | sf    |
| I            | 0.07 | cfs   |

| Elevation | Outlet Structure |         |       | Summary   |              |                |               |        |
|-----------|------------------|---------|-------|-----------|--------------|----------------|---------------|--------|
|           | Head             | Orifice | Weir  | Elevation | Infiltration | Outlet Outflow | Total Outflow | Volume |
| ft        | ft               | cfs     | cfs   | ft        | cfs          | cfs            |               | ac-ft  |
| 0         | 0                | 0.00    | 0.00  | 0         | 0.07         | 0.00           | 0.07          | 0.00   |
| 1         | 0                | 0.00    | 0.00  | 1         | 0.07         | 0.00           | 0.07          | 0.07   |
| 2         | 0                | 0.00    | 0.00  | 2         | 0.07         | 0.00           | 0.07          | 0.16   |
| 3         | 0.83             | 3.50    | 6.12  | 3         | 0.07         | 3.50           | 3.57          | 0.23   |
| 3.5       | 1.33             | 4.63    | 12.42 | 3.5       | 0.07         | 4.63           | 4.70          | 0.25   |
| 4.5       | 2.33             | 6.31    | 28.81 | 4.5       | 0.07         | 6.31           | 6.38          | 0.27   |



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|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 10      | year   |
| I-60min     | 0.867   |        |
| I-6hr       | 2.29    |        |
| Slope       | 0.6     |        |
| Ac          | 2.64    | ac     |
| TC          | 13.19   | min    |
| Calibration | 1       |        |
| fm          | 0.34    | in/hr  |
|             | 0.00567 | in/min |
| Y-bar       | 0.38    |        |
|             | Peak    | Total  |
|             | 4.32    | 0.5928 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
| 0.16  | 0.12  | 0.0008  |
| 0.38  | 0.21  | 0.0038  |
| 0.6   | 0.12  | 0.0068  |
| 0.82  | 0.12  | 0.009   |
| 1.04  | 0.21  | 0.012   |
| 1.26  | 0.21  | 0.0158  |
| 1.48  | 0.12  | 0.0188  |
| 1.7   | 0.12  | 0.021   |
| 1.92  | 0.21  | 0.024   |
| 2.14  | 0.21  | 0.0278  |
| 2.36  | 0.12  | 0.0308  |
| 2.58  | 0.21  | 0.0338  |
| 2.8   | 0.12  | 0.0368  |
| 3.02  | 0.12  | 0.039   |
| 3.24  | 0.21  | 0.042   |
| 3.46  | 0.12  | 0.045   |
| 3.68  | 0.21  | 0.048   |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.9   | 0.21  | 0.0518  |
| 4.12  | 0.12  | 0.0548  |
| 4.34  | 0.21  | 0.0578  |
| 4.56  | 0.21  | 0.0616  |
| 4.78  | 0.21  | 0.0654  |
| 5     | 0.21  | 0.0692  |
| 5.22  | 0.21  | 0.073   |
| 5.44  | 0.21  | 0.0768  |
| 5.66  | 0.12  | 0.0798  |
| 5.88  | 0.21  | 0.0828  |
| 6.1   | 0.21  | 0.0866  |
| 6.32  | 0.21  | 0.0904  |
| 6.54  | 0.21  | 0.0942  |
| 6.76  | 0.21  | 0.098   |
| 6.98  | 0.21  | 0.1018  |
| 7.2   | 0.21  | 0.1056  |
| 7.42  | 0.21  | 0.1094  |
| 7.64  | 0.21  | 0.1132  |
| 7.86  | 0.21  | 0.117   |
| 8.08  | 0.21  | 0.1208  |
| 8.3   | 0.21  | 0.1246  |
| 8.52  | 0.21  | 0.1284  |
| 8.74  | 0.21  | 0.1322  |
| 8.96  | 0.21  | 0.136   |
| 9.18  | 0.21  | 0.1398  |
| 9.4   | 0.21  | 0.1436  |
| 9.62  | 0.21  | 0.1474  |
| 9.84  | 0.21  | 0.1512  |
| 10.06 | 0.21  | 0.155   |
| 10.28 | 0.21  | 0.1588  |
| 10.5  | 0.21  | 0.1626  |
| 10.72 | 0.21  | 0.1664  |
| 10.94 | 0.21  | 0.1702  |
| 11.16 | 0.21  | 0.174   |
| 11.38 | 0.21  | 0.1778  |
| 11.6  | 0.33  | 0.1827  |
| 11.82 | 0.21  | 0.1876  |
| 12.04 | 0.33  | 0.1925  |
| 12.26 | 0.33  | 0.1985  |
| 12.48 | 0.33  | 0.2045  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 12.7  | 0.33  | 0.2105  |
| 12.92 | 0.33  | 0.2165  |
| 13.14 | 0.43  | 0.2234  |
| 13.36 | 0.33  | 0.2303  |
| 13.58 | 0.43  | 0.2372  |
| 13.8  | 0.43  | 0.245   |
| 14.02 | 0.43  | 0.2528  |
| 14.24 | 0.43  | 0.2606  |
| 14.46 | 0.43  | 0.2684  |
| 14.68 | 0.43  | 0.2762  |
| 14.9  | 0.55  | 0.2851  |
| 15.12 | 0.55  | 0.2951  |
| 15.34 | 0.64  | 0.3059  |
| 15.56 | 0.64  | 0.3175  |
| 15.78 | 0.76  | 0.3302  |
| 16    | 0.97  | 0.3459  |
| 16.22 | 4.32  | 0.394   |
| 16.44 | 0.64  | 0.4391  |
| 16.66 | 0.64  | 0.4507  |
| 16.88 | 0.43  | 0.4604  |
| 17.1  | 0.43  | 0.4682  |
| 17.32 | 0.33  | 0.4751  |
| 17.54 | 0.33  | 0.4811  |
| 17.76 | 0.33  | 0.4871  |
| 17.98 | 0.21  | 0.492   |
| 18.2  | 0.21  | 0.4958  |
| 18.42 | 0.21  | 0.4996  |
| 18.64 | 0.21  | 0.5034  |
| 18.86 | 0.21  | 0.5072  |
| 19.08 | 0.21  | 0.511   |
| 19.3  | 0.21  | 0.5148  |
| 19.52 | 0.21  | 0.5186  |
| 19.74 | 0.21  | 0.5224  |
| 19.96 | 0.21  | 0.5262  |
| 20.18 | 0.21  | 0.53    |
| 20.4  | 0.21  | 0.5338  |
| 20.62 | 0.21  | 0.5376  |
| 20.84 | 0.21  | 0.5414  |
| 21.06 | 0.21  | 0.5452  |
| 21.28 | 0.21  | 0.549   |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 21.5  | 0.21  | 0.5528  |
| 21.72 | 0.21  | 0.5566  |
| 21.94 | 0.12  | 0.5596  |
| 22.16 | 0.21  | 0.5626  |
| 22.38 | 0.21  | 0.5664  |
| 22.6  | 0.21  | 0.5702  |
| 22.82 | 0.21  | 0.574   |
| 23.04 | 0.21  | 0.5778  |
| 23.26 | 0.12  | 0.5808  |
| 23.48 | 0.21  | 0.5838  |
| 23.7  | 0.12  | 0.5868  |
| 23.92 | 0.21  | 0.5898  |
| 24.14 | 0.12  | 0.5928  |



Tr 20727 Banana

Basin 1

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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.07 | 0.00 | 0    | 0    |
| 1   | 0.07 | 0.07 | 0.07 | 0.07 |
| 2   | 0.07 | 0.16 | 0.16 | 0.16 |
| 3   | 3.57 | 0.23 | 0.19 | 0.26 |
| 3.5 | 4.70 | 0.25 | 0.2  | 0.29 |
| 4.5 | 6.38 | 0.27 | 0.21 | 0.33 |

| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |

|      |      |      |      |       |
|------|------|------|------|-------|
| 0    | 0    | 0    | 0    | 0     |
| 0.16 | 0.12 | 0.03 | 0.07 | 0.002 |
| 0.38 | 0.21 | 0.08 | 0.07 | 0.006 |
| 0.6  | 0.12 | 0.11 | 0.07 | 0.008 |
| 0.82 | 0.12 | 0.14 | 0.07 | 0.010 |
| 1.04 | 0.21 | 0.19 | 0.07 | 0.014 |
| 1.26 | 0.21 | 0.24 | 0.07 | 0.017 |
| 1.48 | 0.12 | 0.27 | 0.07 | 0.019 |
| 1.7  | 0.12 | 0.30 | 0.07 | 0.021 |
| 1.92 | 0.21 | 0.34 | 0.07 | 0.024 |
| 2.14 | 0.21 | 0.39 | 0.07 | 0.028 |
| 2.36 | 0.12 | 0.42 | 0.07 | 0.029 |
| 2.58 | 0.21 | 0.46 | 0.07 | 0.033 |
| 2.8  | 0.12 | 0.49 | 0.07 | 0.034 |
| 3.02 | 0.12 | 0.51 | 0.07 | 0.036 |
| 3.24 | 0.21 | 0.55 | 0.07 | 0.039 |
| 3.46 | 0.12 | 0.57 | 0.07 | 0.040 |
| 3.68 | 0.21 | 0.62 | 0.07 | 0.044 |
| 3.9  | 0.21 | 0.66 | 0.07 | 0.047 |
| 4.12 | 0.12 | 0.68 | 0.07 | 0.048 |
| 4.34 | 0.21 | 0.72 | 0.07 | 0.051 |
| 4.56 | 0.21 | 0.76 | 0.07 | 0.054 |
| 4.78 | 0.21 | 0.80 | 0.07 | 0.057 |
| 5    | 0.21 | 0.84 | 0.07 | 0.059 |
| 5.22 | 0.21 | 0.88 | 0.07 | 0.062 |
| 5.44 | 0.21 | 0.92 | 0.07 | 0.065 |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |
| 5.66        | 0.12          | 0.94    | 0.07        | 0.066      |
| 5.88        | 0.21          | 0.97    | 0.07        | 0.069      |
| 6.1         | 0.21          | 1.01    | 0.07        | 0.071      |
| 6.32        | 0.21          | 1.04    | 0.07        | 0.074      |
| 6.54        | 0.21          | 1.07    | 0.07        | 0.076      |
| 6.76        | 0.21          | 1.10    | 0.07        | 0.079      |
| 6.98        | 0.21          | 1.13    | 0.07        | 0.082      |
| 7.2         | 0.21          | 1.15    | 0.07        | 0.084      |
| 7.42        | 0.21          | 1.18    | 0.07        | 0.087      |
| 7.64        | 0.21          | 1.21    | 0.07        | 0.089      |
| 7.86        | 0.21          | 1.24    | 0.07        | 0.092      |
| 8.08        | 0.21          | 1.27    | 0.07        | 0.095      |
| 8.3         | 0.21          | 1.30    | 0.07        | 0.097      |
| 8.52        | 0.21          | 1.33    | 0.07        | 0.100      |
| 8.74        | 0.21          | 1.36    | 0.07        | 0.102      |
| 8.96        | 0.21          | 1.39    | 0.07        | 0.105      |
| 9.18        | 0.21          | 1.42    | 0.07        | 0.107      |
| 9.4         | 0.21          | 1.45    | 0.07        | 0.110      |
| 9.62        | 0.21          | 1.47    | 0.07        | 0.113      |
| 9.84        | 0.21          | 1.50    | 0.07        | 0.115      |
| 10.06       | 0.21          | 1.53    | 0.07        | 0.118      |
| 10.28       | 0.21          | 1.56    | 0.07        | 0.120      |
| 10.5        | 0.21          | 1.59    | 0.07        | 0.123      |
| 10.72       | 0.21          | 1.62    | 0.07        | 0.126      |
| 10.94       | 0.21          | 1.65    | 0.07        | 0.128      |
| 11.16       | 0.21          | 1.68    | 0.07        | 0.131      |
| 11.38       | 0.21          | 1.71    | 0.07        | 0.133      |
| 11.6        | 0.33          | 1.76    | 0.07        | 0.138      |
| 11.82       | 0.21          | 1.79    | 0.07        | 0.141      |
| 12.04       | 0.33          | 1.84    | 0.07        | 0.145      |
| 12.26       | 0.33          | 1.90    | 0.07        | 0.150      |
| 12.48       | 0.33          | 1.95    | 0.07        | 0.155      |
| 12.7        | 0.33          | 2.01    | 0.08        | 0.160      |
| 12.92       | 0.33          | 2.05    | 0.17        | 0.163      |
| 13.14       | 0.43          | 2.09    | 0.31        | 0.165      |
| 13.36       | 0.33          | 2.08    | 0.35        | 0.164      |
| 13.58       | 0.43          | 2.09    | 0.37        | 0.166      |
| 13.8        | 0.43          | 2.10    | 0.41        | 0.166      |
| 14.02       | 0.43          | 2.10    | 0.42        | 0.166      |
| 14.24       | 0.43          | 2.10    | 0.43        | 0.166      |
| 14.46       | 0.43          | 2.10    | 0.43        | 0.166      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |
| 14.68       | 0.43          | 2.10    | 0.43        | 0.166      |
| 14.9        | 0.55          | 2.13    | 0.47        | 0.168      |
| 15.12       | 0.55          | 2.13    | 0.52        | 0.168      |
| 15.34       | 0.64          | 2.15    | 0.57        | 0.169      |
| 15.56       | 0.64          | 2.16    | 0.62        | 0.170      |
| 15.78       | 0.76          | 2.18    | 0.67        | 0.171      |
| 16          | 0.97          | 2.23    | 0.80        | 0.175      |
| 16.22       | 4.32          | 2.87    | 2.00        | 0.217      |
| 16.44       | 0.64          | 2.41    | 2.31        | 0.186      |
| 16.66       | 0.64          | 2.25    | 1.23        | 0.176      |
| 16.88       | 0.43          | 2.15    | 0.78        | 0.170      |
| 17.1        | 0.43          | 2.12    | 0.55        | 0.167      |
| 17.32       | 0.33          | 2.09    | 0.44        | 0.165      |
| 17.54       | 0.33          | 2.08    | 0.37        | 0.165      |
| 17.76       | 0.33          | 2.08    | 0.34        | 0.164      |
| 17.98       | 0.21          | 2.05    | 0.30        | 0.163      |
| 18.2        | 0.21          | 2.05    | 0.24        | 0.162      |
| 18.42       | 0.21          | 2.04    | 0.22        | 0.162      |
| 18.64       | 0.21          | 2.04    | 0.21        | 0.162      |
| 18.86       | 0.21          | 2.04    | 0.21        | 0.162      |
| 19.08       | 0.21          | 2.04    | 0.21        | 0.162      |
| 19.3        | 0.21          | 2.04    | 0.21        | 0.162      |
| 19.52       | 0.21          | 2.04    | 0.21        | 0.162      |
| 19.74       | 0.21          | 2.04    | 0.21        | 0.162      |
| 19.96       | 0.21          | 2.04    | 0.21        | 0.162      |
| 20.18       | 0.21          | 2.04    | 0.21        | 0.162      |
| 20.4        | 0.21          | 2.04    | 0.21        | 0.162      |
| 20.62       | 0.21          | 2.04    | 0.21        | 0.162      |
| 20.84       | 0.21          | 2.04    | 0.21        | 0.162      |
| 21.06       | 0.21          | 2.04    | 0.21        | 0.162      |
| 21.28       | 0.21          | 2.04    | 0.21        | 0.162      |
| 21.5        | 0.21          | 2.04    | 0.21        | 0.162      |
| 21.72       | 0.21          | 2.04    | 0.21        | 0.162      |
| 21.94       | 0.12          | 2.02    | 0.18        | 0.161      |
| 22.16       | 0.21          | 2.03    | 0.17        | 0.162      |
| 22.38       | 0.21          | 2.04    | 0.20        | 0.162      |
| 22.6        | 0.21          | 2.04    | 0.21        | 0.162      |
| 22.82       | 0.21          | 2.04    | 0.21        | 0.162      |
| 23.04       | 0.21          | 2.04    | 0.21        | 0.162      |
| 23.26       | 0.12          | 2.02    | 0.18        | 0.161      |
| 23.48       | 0.21          | 2.03    | 0.17        | 0.162      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |
| 23.7        | 0.12          | 2.02    | 0.17        | 0.161      |
| 23.92       | 0.21          | 2.03    | 0.17        | 0.162      |
| 24.14       | 0.12          | 2.02    | 0.17        | 0.161      |
| 24.36       | 0             | 1.99    | 0.11        | 0.159      |
| 24.58       | 0             | 1.98    | 0.07        | 0.158      |
| 24.8        | 0             | 1.97    | 0.07        | 0.156      |
| 25.02       | 0             | 1.95    | 0.07        | 0.155      |
| 25.24       | 0             | 1.94    | 0.07        | 0.154      |
| 25.46       | 0             | 1.93    | 0.07        | 0.153      |
| 25.68       | 0             | 1.91    | 0.07        | 0.151      |
| 25.9        | 0             | 1.90    | 0.07        | 0.150      |
| 26.12       | 0             | 1.88    | 0.07        | 0.149      |
| 26.34       | 0             | 1.87    | 0.07        | 0.148      |
| 26.56       | 0             | 1.86    | 0.07        | 0.147      |
| 26.78       | 0             | 1.84    | 0.07        | 0.145      |
| 27          | 0             | 1.83    | 0.07        | 0.144      |
| 27.22       | 0             | 1.81    | 0.07        | 0.143      |
| 27.44       | 0             | 1.80    | 0.07        | 0.142      |
| 27.66       | 0             | 1.79    | 0.07        | 0.140      |
| 27.88       | 0             | 1.77    | 0.07        | 0.139      |
| 28.1        | 0             | 1.76    | 0.07        | 0.138      |
| 28.32       | 0             | 1.75    | 0.07        | 0.137      |
| 28.54       | 0             | 1.73    | 0.07        | 0.135      |
| 28.76       | 0             | 1.72    | 0.07        | 0.134      |
| 28.98       | 0             | 1.70    | 0.07        | 0.133      |
| 29.2        | 0             | 1.69    | 0.07        | 0.132      |
| 29.42       | 0             | 1.68    | 0.07        | 0.131      |
| 29.64       | 0             | 1.66    | 0.07        | 0.129      |
| 29.86       | 0             | 1.65    | 0.07        | 0.128      |
| 30.08       | 0             | 1.64    | 0.07        | 0.127      |
| 30.3        | 0             | 1.62    | 0.07        | 0.126      |
| 30.52       | 0             | 1.61    | 0.07        | 0.124      |
| 30.74       | 0             | 1.59    | 0.07        | 0.123      |
| 30.96       | 0             | 1.58    | 0.07        | 0.122      |
| 31.18       | 0             | 1.57    | 0.07        | 0.121      |
| 31.4        | 0             | 1.55    | 0.07        | 0.120      |
| 31.62       | 0             | 1.54    | 0.07        | 0.118      |
| 31.84       | 0             | 1.52    | 0.07        | 0.117      |
| 32.06       | 0             | 1.51    | 0.07        | 0.116      |
| 32.28       | 0             | 1.50    | 0.07        | 0.115      |
| 32.5        | 0             | 1.48    | 0.07        | 0.113      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |
| 32.72       | 0             | 1.47    | 0.07        | 0.112      |
| 32.94       | 0             | 1.46    | 0.07        | 0.111      |
| 33.16       | 0             | 1.44    | 0.07        | 0.110      |
| 33.38       | 0             | 1.43    | 0.07        | 0.108      |
| 33.6        | 0             | 1.41    | 0.07        | 0.107      |
| 33.82       | 0             | 1.40    | 0.07        | 0.106      |
| 34.04       | 0             | 1.39    | 0.07        | 0.105      |
| 34.26       | 0             | 1.37    | 0.07        | 0.104      |
| 34.48       | 0             | 1.36    | 0.07        | 0.102      |
| 34.7        | 0             | 1.34    | 0.07        | 0.101      |
| 34.92       | 0             | 1.33    | 0.07        | 0.100      |
| 35.14       | 0             | 1.32    | 0.07        | 0.099      |
| 35.36       | 0             | 1.30    | 0.07        | 0.097      |
| 35.58       | 0             | 1.29    | 0.07        | 0.096      |
| 35.8        | 0             | 1.28    | 0.07        | 0.095      |
| 36.02       | 0             | 1.26    | 0.07        | 0.094      |
| 36.24       | 0             | 1.25    | 0.07        | 0.092      |
| 36.46       | 0             | 1.23    | 0.07        | 0.091      |
| 36.68       | 0             | 1.22    | 0.07        | 0.090      |
| 36.9        | 0             | 1.21    | 0.07        | 0.089      |
| 37.12       | 0             | 1.19    | 0.07        | 0.088      |
| 37.34       | 0             | 1.18    | 0.07        | 0.086      |
| 37.56       | 0             | 1.17    | 0.07        | 0.085      |
| 37.78       | 0             | 1.15    | 0.07        | 0.084      |
| 38          | 0             | 1.14    | 0.07        | 0.083      |
| 38.22       | 0             | 1.12    | 0.07        | 0.081      |
| 38.44       | 0             | 1.11    | 0.07        | 0.080      |
| 38.66       | 0             | 1.10    | 0.07        | 0.079      |
| 38.88       | 0             | 1.08    | 0.07        | 0.078      |
| 39.1        | 0             | 1.07    | 0.07        | 0.077      |
| 39.32       | 0             | 1.05    | 0.07        | 0.075      |
| 39.54       | 0             | 1.04    | 0.07        | 0.074      |
| 39.76       | 0             | 1.03    | 0.07        | 0.073      |
| 39.98       | 0             | 1.01    | 0.07        | 0.072      |
| 40.2        | 0             | 1.00    | 0.07        | 0.070      |
| 40.42       | 0             | 0.98    | 0.07        | 0.069      |
| 40.64       | 0             | 0.97    | 0.07        | 0.068      |
| 40.86       | 0             | 0.95    | 0.07        | 0.067      |
| 41.08       | 0             | 0.93    | 0.07        | 0.066      |
| 41.3        | 0             | 0.92    | 0.07        | 0.065      |
| 41.52       | 0             | 0.90    | 0.07        | 0.063      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 4.32          | 2.87    | 2.3         | 0.22       |
| 41.74       | 0             | 0.88    | 0.07        | 0.062      |
| 41.96       | 0             | 0.87    | 0.07        | 0.061      |
| 42.18       | 0             | 0.85    | 0.07        | 0.060      |
| 42.4        | 0             | 0.84    | 0.07        | 0.059      |
| 42.62       | 0             | 0.82    | 0.07        | 0.058      |
| 42.84       | 0             | 0.81    | 0.07        | 0.057      |
| 43.06       | 0             | 0.80    | 0.07        | 0.056      |
| 43.28       | 0             | 0.78    | 0.07        | 0.055      |
| 43.5        | 0             | 0.77    | 0.07        | 0.054      |
| 43.72       | 0             | 0.76    | 0.07        | 0.053      |
| 43.94       | 0             | 0.74    | 0.07        | 0.052      |
| 44.16       | 0             | 0.73    | 0.07        | 0.051      |
| 44.38       | 0             | 0.72    | 0.07        | 0.051      |
| 44.6        | 0             | 0.71    | 0.07        | 0.050      |
| 44.82       | 0             | 0.69    | 0.07        | 0.049      |
| 45.04       | 0             | 0.68    | 0.07        | 0.048      |
| 45.26       | 0             | 0.67    | 0.07        | 0.047      |
| 45.48       | 0             | 0.66    | 0.07        | 0.046      |
| 45.7        | 0             | 0.65    | 0.07        | 0.046      |
| 45.92       | 0             | 0.64    | 0.07        | 0.045      |
| 46.14       | 0             | 0.62    | 0.07        | 0.044      |
| 46.36       | 0             | 0.61    | 0.07        | 0.043      |
| 46.58       | 0             | 0.60    | 0.07        | 0.042      |
| 46.8        | 0             | 0.59    | 0.07        | 0.042      |
| 47.02       | 0             | 0.58    | 0.07        | 0.041      |
| 47.24       | 0             | 0.57    | 0.07        | 0.040      |
| 47.46       | 0             | 0.56    | 0.07        | 0.040      |
| 47.68       | 0             | 0.55    | 0.07        | 0.039      |
| 47.9        | 0             | 0.54    | 0.07        | 0.038      |
| 48.12       | 0             | 0.53    | 0.07        | 0.038      |
| 48.34       | 0             | 0.52    | 0.07        | 0.037      |
| 48.56       | 0             | 0.52    | 0.07        | 0.036      |
| 48.78       | 0             | 0.51    | 0.07        | 0.036      |
| 49          | 0             | 0.50    | 0.07        | 0.035      |



Tr 20727 Banana  
155-238.014  
45510

|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 25      | year   |
| I-60min     | 1.08    |        |
| I-6hr       | 2.76    |        |
| Slope       | 0.6     |        |
| Ac          | 2.64    | ac     |
| TC          | 13.19   | min    |
| Calibration | 1       |        |
| fm          | 0.34    | in/hr  |
|             | 0.00567 | in/min |
| Y-bar       | 0.37    |        |
|             | Peak    | Total  |
|             | 5.63    | 0.7664 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
| 0     | 0.21  | 0       |
| 0.38  | 0.21  | 0.0066  |
| 0.6   | 0.12  | 0.0096  |
| 0.82  | 0.21  | 0.0126  |
| 1.04  | 0.21  | 0.0164  |
| 1.26  | 0.12  | 0.0194  |
| 1.48  | 0.21  | 0.0224  |
| 1.7   | 0.21  | 0.0262  |
| 1.92  | 0.21  | 0.03    |
| 2.14  | 0.21  | 0.0338  |
| 2.36  | 0.21  | 0.0376  |
| 2.58  | 0.12  | 0.0406  |
| 2.8   | 0.21  | 0.0436  |
| 3.02  | 0.21  | 0.0474  |
| 3.24  | 0.21  | 0.0512  |
| 3.46  | 0.21  | 0.055   |
| 3.68  | 0.21  | 0.0588  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.9   | 0.21  | 0.0626  |
| 4.12  | 0.21  | 0.0664  |
| 4.34  | 0.21  | 0.0702  |
| 4.56  | 0.21  | 0.074   |
| 4.78  | 0.21  | 0.0778  |
| 5     | 0.21  | 0.0816  |
| 5.22  | 0.33  | 0.0865  |
| 5.44  | 0.21  | 0.0914  |
| 5.66  | 0.33  | 0.0963  |
| 5.88  | 0.21  | 0.1012  |
| 6.1   | 0.33  | 0.1061  |
| 6.32  | 0.21  | 0.111   |
| 6.54  | 0.21  | 0.1148  |
| 6.76  | 0.33  | 0.1197  |
| 6.98  | 0.33  | 0.1257  |
| 7.2   | 0.21  | 0.1306  |
| 7.42  | 0.33  | 0.1355  |
| 7.64  | 0.21  | 0.1404  |
| 7.86  | 0.33  | 0.1453  |
| 8.08  | 0.33  | 0.1513  |
| 8.3   | 0.33  | 0.1573  |
| 8.52  | 0.33  | 0.1633  |
| 8.74  | 0.33  | 0.1693  |
| 8.96  | 0.33  | 0.1753  |
| 9.18  | 0.33  | 0.1813  |
| 9.4   | 0.33  | 0.1873  |
| 9.62  | 0.33  | 0.1933  |
| 9.84  | 0.33  | 0.1993  |
| 10.06 | 0.33  | 0.2053  |
| 10.28 | 0.33  | 0.2113  |
| 10.5  | 0.33  | 0.2173  |
| 10.72 | 0.33  | 0.2233  |
| 10.94 | 0.33  | 0.2293  |
| 11.16 | 0.33  | 0.2353  |
| 11.38 | 0.33  | 0.2413  |
| 11.6  | 0.33  | 0.2473  |
| 11.82 | 0.33  | 0.2533  |
| 12.04 | 0.33  | 0.2593  |
| 12.26 | 0.33  | 0.2653  |
| 12.48 | 0.33  | 0.2713  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 12.7  | 0.43  | 0.2782  |
| 12.92 | 0.33  | 0.2851  |
| 13.14 | 0.43  | 0.292   |
| 13.36 | 0.43  | 0.2998  |
| 13.58 | 0.43  | 0.3076  |
| 13.8  | 0.43  | 0.3154  |
| 14.02 | 0.43  | 0.3232  |
| 14.24 | 0.55  | 0.3321  |
| 14.46 | 0.55  | 0.3421  |
| 14.68 | 0.55  | 0.3521  |
| 14.9  | 0.64  | 0.3629  |
| 15.12 | 0.64  | 0.3745  |
| 15.34 | 0.86  | 0.3881  |
| 15.56 | 0.64  | 0.4017  |
| 15.78 | 0.86  | 0.4153  |
| 16    | 1.31  | 0.435   |
| 16.22 | 5.63  | 0.4981  |
| 16.44 | 0.86  | 0.5571  |
| 16.66 | 0.64  | 0.5707  |
| 16.88 | 0.64  | 0.5823  |
| 17.1  | 0.55  | 0.5931  |
| 17.32 | 0.43  | 0.602   |
| 17.54 | 0.43  | 0.6098  |
| 17.76 | 0.43  | 0.6176  |
| 17.98 | 0.43  | 0.6254  |
| 18.2  | 0.43  | 0.6332  |
| 18.42 | 0.33  | 0.6401  |
| 18.64 | 0.33  | 0.6461  |
| 18.86 | 0.33  | 0.6521  |
| 19.08 | 0.33  | 0.6581  |
| 19.3  | 0.33  | 0.6641  |
| 19.52 | 0.33  | 0.6701  |
| 19.74 | 0.33  | 0.6761  |
| 19.96 | 0.33  | 0.6821  |
| 20.18 | 0.21  | 0.687   |
| 20.4  | 0.33  | 0.6919  |
| 20.62 | 0.33  | 0.6979  |
| 20.84 | 0.21  | 0.7028  |
| 21.06 | 0.33  | 0.7077  |
| 21.28 | 0.21  | 0.7126  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 21.5  | 0.21  | 0.7164  |
| 21.72 | 0.21  | 0.7202  |
| 21.94 | 0.33  | 0.7251  |
| 22.16 | 0.21  | 0.73    |
| 22.38 | 0.21  | 0.7338  |
| 22.6  | 0.33  | 0.7387  |
| 22.82 | 0.21  | 0.7436  |
| 23.04 | 0.21  | 0.7474  |
| 23.26 | 0.21  | 0.7512  |
| 23.48 | 0.21  | 0.755   |
| 23.7  | 0.21  | 0.7588  |
| 23.92 | 0.21  | 0.7626  |
| 24.14 | 0.21  | 0.7664  |



Basin  Tr 20727 Banana  
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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.07 | 0.00 | 0    | 0    |
| 1   | 0.07 | 0.07 | 0.07 | 0.07 |
| 2   | 0.07 | 0.16 | 0.16 | 0.16 |
| 3   | 3.57 | 0.23 | 0.19 | 0.26 |
| 3.5 | 4.70 | 0.25 | 0.2  | 0.29 |
| 4.5 | 6.38 | 0.27 | 0.21 | 0.33 |

| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |

|      |      |      |      |       |
|------|------|------|------|-------|
| 0    | 0    | 0    | 0    | 0     |
| 0    | 0.21 | 0.05 | 0.07 | 0.004 |
| 0.38 | 0.21 | 0.15 | 0.07 | 0.010 |
| 0.6  | 0.12 | 0.17 | 0.07 | 0.012 |
| 0.82 | 0.21 | 0.22 | 0.07 | 0.016 |
| 1.04 | 0.21 | 0.27 | 0.07 | 0.019 |
| 1.26 | 0.12 | 0.30 | 0.07 | 0.021 |
| 1.48 | 0.21 | 0.35 | 0.07 | 0.025 |
| 1.7  | 0.21 | 0.40 | 0.07 | 0.028 |
| 1.92 | 0.21 | 0.44 | 0.07 | 0.031 |
| 2.14 | 0.21 | 0.49 | 0.07 | 0.034 |
| 2.36 | 0.21 | 0.53 | 0.07 | 0.038 |
| 2.58 | 0.12 | 0.56 | 0.07 | 0.039 |
| 2.8  | 0.21 | 0.60 | 0.07 | 0.042 |
| 3.02 | 0.21 | 0.64 | 0.07 | 0.045 |
| 3.24 | 0.21 | 0.69 | 0.07 | 0.048 |
| 3.46 | 0.21 | 0.73 | 0.07 | 0.051 |
| 3.68 | 0.21 | 0.77 | 0.07 | 0.054 |
| 3.9  | 0.21 | 0.81 | 0.07 | 0.057 |
| 4.12 | 0.21 | 0.85 | 0.07 | 0.060 |
| 4.34 | 0.21 | 0.89 | 0.07 | 0.063 |
| 4.56 | 0.21 | 0.93 | 0.07 | 0.065 |
| 4.78 | 0.21 | 0.96 | 0.07 | 0.068 |
| 5    | 0.21 | 1.00 | 0.07 | 0.071 |
| 5.22 | 0.33 | 1.06 | 0.07 | 0.075 |
| 5.44 | 0.21 | 1.08 | 0.07 | 0.078 |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |
| 5.66        | 0.33          | 1.14    | 0.07        | 0.083      |
| 5.88        | 0.21          | 1.17    | 0.07        | 0.085      |
| 6.1         | 0.33          | 1.22    | 0.07        | 0.090      |
| 6.32        | 0.21          | 1.25    | 0.07        | 0.093      |
| 6.54        | 0.21          | 1.28    | 0.07        | 0.095      |
| 6.76        | 0.33          | 1.33    | 0.07        | 0.100      |
| 6.98        | 0.33          | 1.39    | 0.07        | 0.105      |
| 7.2         | 0.21          | 1.42    | 0.07        | 0.107      |
| 7.42        | 0.33          | 1.47    | 0.07        | 0.112      |
| 7.64        | 0.21          | 1.50    | 0.07        | 0.115      |
| 7.86        | 0.33          | 1.55    | 0.07        | 0.120      |
| 8.08        | 0.33          | 1.61    | 0.07        | 0.124      |
| 8.3         | 0.33          | 1.66    | 0.07        | 0.129      |
| 8.52        | 0.33          | 1.71    | 0.07        | 0.134      |
| 8.74        | 0.33          | 1.77    | 0.07        | 0.139      |
| 8.96        | 0.33          | 1.82    | 0.07        | 0.143      |
| 9.18        | 0.33          | 1.87    | 0.07        | 0.148      |
| 9.4         | 0.33          | 1.93    | 0.07        | 0.153      |
| 9.62        | 0.33          | 1.98    | 0.07        | 0.158      |
| 9.84        | 0.33          | 2.03    | 0.12        | 0.161      |
| 10.06       | 0.33          | 2.06    | 0.23        | 0.163      |
| 10.28       | 0.33          | 2.07    | 0.29        | 0.164      |
| 10.5        | 0.33          | 2.07    | 0.32        | 0.164      |
| 10.72       | 0.33          | 2.07    | 0.33        | 0.164      |
| 10.94       | 0.33          | 2.07    | 0.33        | 0.164      |
| 11.16       | 0.33          | 2.07    | 0.33        | 0.164      |
| 11.38       | 0.33          | 2.08    | 0.33        | 0.164      |
| 11.6        | 0.33          | 2.08    | 0.33        | 0.164      |
| 11.82       | 0.33          | 2.08    | 0.33        | 0.164      |
| 12.04       | 0.33          | 2.08    | 0.33        | 0.164      |
| 12.26       | 0.33          | 2.08    | 0.33        | 0.164      |
| 12.48       | 0.33          | 2.08    | 0.33        | 0.164      |
| 12.7        | 0.43          | 2.09    | 0.36        | 0.165      |
| 12.92       | 0.33          | 2.08    | 0.37        | 0.165      |
| 13.14       | 0.43          | 2.10    | 0.38        | 0.166      |
| 13.36       | 0.43          | 2.10    | 0.41        | 0.166      |
| 13.58       | 0.43          | 2.10    | 0.42        | 0.166      |
| 13.8        | 0.43          | 2.10    | 0.43        | 0.166      |
| 14.02       | 0.43          | 2.10    | 0.43        | 0.166      |
| 14.24       | 0.55          | 2.13    | 0.47        | 0.168      |
| 14.46       | 0.55          | 2.13    | 0.52        | 0.168      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |
| 14.68       | 0.55          | 2.14    | 0.54        | 0.168      |
| 14.9        | 0.64          | 2.15    | 0.58        | 0.169      |
| 15.12       | 0.64          | 2.16    | 0.62        | 0.170      |
| 15.34       | 0.86          | 2.20    | 0.70        | 0.173      |
| 15.56       | 0.64          | 2.18    | 0.73        | 0.171      |
| 15.78       | 0.86          | 2.21    | 0.74        | 0.173      |
| 16          | 1.31          | 2.30    | 0.97        | 0.179      |
| 16.22       | 5.63          | 3.21    | 2.59        | 0.235      |
| 16.44       | 0.86          | 2.55    | 3.02        | 0.196      |
| 16.66       | 0.64          | 2.30    | 1.55        | 0.179      |
| 16.88       | 0.64          | 2.21    | 0.96        | 0.173      |
| 17.1        | 0.55          | 2.16    | 0.72        | 0.170      |
| 17.32       | 0.43          | 2.12    | 0.57        | 0.168      |
| 17.54       | 0.43          | 2.11    | 0.48        | 0.167      |
| 17.76       | 0.43          | 2.11    | 0.45        | 0.166      |
| 17.98       | 0.43          | 2.10    | 0.44        | 0.166      |
| 18.2        | 0.43          | 2.10    | 0.43        | 0.166      |
| 18.42       | 0.33          | 2.09    | 0.40        | 0.165      |
| 18.64       | 0.33          | 2.08    | 0.35        | 0.164      |
| 18.86       | 0.33          | 2.08    | 0.34        | 0.164      |
| 19.08       | 0.33          | 2.08    | 0.33        | 0.164      |
| 19.3        | 0.33          | 2.08    | 0.33        | 0.164      |
| 19.52       | 0.33          | 2.08    | 0.33        | 0.164      |
| 19.74       | 0.33          | 2.08    | 0.33        | 0.164      |
| 19.96       | 0.33          | 2.08    | 0.33        | 0.164      |
| 20.18       | 0.21          | 2.05    | 0.29        | 0.163      |
| 20.4        | 0.33          | 2.07    | 0.28        | 0.164      |
| 20.62       | 0.33          | 2.07    | 0.31        | 0.164      |
| 20.84       | 0.21          | 2.05    | 0.28        | 0.163      |
| 21.06       | 0.33          | 2.07    | 0.28        | 0.164      |
| 21.28       | 0.21          | 2.05    | 0.27        | 0.163      |
| 21.5        | 0.21          | 2.04    | 0.23        | 0.162      |
| 21.72       | 0.21          | 2.04    | 0.22        | 0.162      |
| 21.94       | 0.33          | 2.06    | 0.25        | 0.163      |
| 22.16       | 0.21          | 2.05    | 0.26        | 0.163      |
| 22.38       | 0.21          | 2.04    | 0.23        | 0.162      |
| 22.6        | 0.33          | 2.06    | 0.26        | 0.164      |
| 22.82       | 0.21          | 2.05    | 0.27        | 0.163      |
| 23.04       | 0.21          | 2.04    | 0.23        | 0.162      |
| 23.26       | 0.21          | 2.04    | 0.22        | 0.162      |
| 23.48       | 0.21          | 2.04    | 0.21        | 0.162      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |
| 23.7        | 0.21          | 2.04    | 0.21        | 0.162      |
| 23.92       | 0.21          | 2.04    | 0.21        | 0.162      |
| 24.14       | 0.21          | 2.04    | 0.21        | 0.162      |
| 24.36       | 0             | 2.00    | 0.14        | 0.159      |
| 24.58       | 0             | 1.99    | 0.07        | 0.158      |
| 24.8        | 0             | 1.97    | 0.07        | 0.157      |
| 25.02       | 0             | 1.96    | 0.07        | 0.156      |
| 25.24       | 0             | 1.95    | 0.07        | 0.154      |
| 25.46       | 0             | 1.93    | 0.07        | 0.153      |
| 25.68       | 0             | 1.92    | 0.07        | 0.152      |
| 25.9        | 0             | 1.90    | 0.07        | 0.151      |
| 26.12       | 0             | 1.89    | 0.07        | 0.150      |
| 26.34       | 0             | 1.88    | 0.07        | 0.148      |
| 26.56       | 0             | 1.86    | 0.07        | 0.147      |
| 26.78       | 0             | 1.85    | 0.07        | 0.146      |
| 27          | 0             | 1.83    | 0.07        | 0.145      |
| 27.22       | 0             | 1.82    | 0.07        | 0.143      |
| 27.44       | 0             | 1.81    | 0.07        | 0.142      |
| 27.66       | 0             | 1.79    | 0.07        | 0.141      |
| 27.88       | 0             | 1.78    | 0.07        | 0.140      |
| 28.1        | 0             | 1.77    | 0.07        | 0.138      |
| 28.32       | 0             | 1.75    | 0.07        | 0.137      |
| 28.54       | 0             | 1.74    | 0.07        | 0.136      |
| 28.76       | 0             | 1.72    | 0.07        | 0.135      |
| 28.98       | 0             | 1.71    | 0.07        | 0.134      |
| 29.2        | 0             | 1.70    | 0.07        | 0.132      |
| 29.42       | 0             | 1.68    | 0.07        | 0.131      |
| 29.64       | 0             | 1.67    | 0.07        | 0.130      |
| 29.86       | 0             | 1.66    | 0.07        | 0.129      |
| 30.08       | 0             | 1.64    | 0.07        | 0.127      |
| 30.3        | 0             | 1.63    | 0.07        | 0.126      |
| 30.52       | 0             | 1.61    | 0.07        | 0.125      |
| 30.74       | 0             | 1.60    | 0.07        | 0.124      |
| 30.96       | 0             | 1.59    | 0.07        | 0.123      |
| 31.18       | 0             | 1.57    | 0.07        | 0.121      |
| 31.4        | 0             | 1.56    | 0.07        | 0.120      |
| 31.62       | 0             | 1.54    | 0.07        | 0.119      |
| 31.84       | 0             | 1.53    | 0.07        | 0.118      |
| 32.06       | 0             | 1.52    | 0.07        | 0.116      |
| 32.28       | 0             | 1.50    | 0.07        | 0.115      |
| 32.5        | 0             | 1.49    | 0.07        | 0.114      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |
| 32.72       | 0             | 1.48    | 0.07        | 0.113      |
| 32.94       | 0             | 1.46    | 0.07        | 0.111      |
| 33.16       | 0             | 1.45    | 0.07        | 0.110      |
| 33.38       | 0             | 1.43    | 0.07        | 0.109      |
| 33.6        | 0             | 1.42    | 0.07        | 0.108      |
| 33.82       | 0             | 1.41    | 0.07        | 0.107      |
| 34.04       | 0             | 1.39    | 0.07        | 0.105      |
| 34.26       | 0             | 1.38    | 0.07        | 0.104      |
| 34.48       | 0             | 1.36    | 0.07        | 0.103      |
| 34.7        | 0             | 1.35    | 0.07        | 0.102      |
| 34.92       | 0             | 1.34    | 0.07        | 0.100      |
| 35.14       | 0             | 1.32    | 0.07        | 0.099      |
| 35.36       | 0             | 1.31    | 0.07        | 0.098      |
| 35.58       | 0             | 1.30    | 0.07        | 0.097      |
| 35.8        | 0             | 1.28    | 0.07        | 0.095      |
| 36.02       | 0             | 1.27    | 0.07        | 0.094      |
| 36.24       | 0             | 1.25    | 0.07        | 0.093      |
| 36.46       | 0             | 1.24    | 0.07        | 0.092      |
| 36.68       | 0             | 1.23    | 0.07        | 0.091      |
| 36.9        | 0             | 1.21    | 0.07        | 0.089      |
| 37.12       | 0             | 1.20    | 0.07        | 0.088      |
| 37.34       | 0             | 1.19    | 0.07        | 0.087      |
| 37.56       | 0             | 1.17    | 0.07        | 0.086      |
| 37.78       | 0             | 1.16    | 0.07        | 0.084      |
| 38          | 0             | 1.14    | 0.07        | 0.083      |
| 38.22       | 0             | 1.13    | 0.07        | 0.082      |
| 38.44       | 0             | 1.12    | 0.07        | 0.081      |
| 38.66       | 0             | 1.10    | 0.07        | 0.080      |
| 38.88       | 0             | 1.09    | 0.07        | 0.078      |
| 39.1        | 0             | 1.07    | 0.07        | 0.077      |
| 39.32       | 0             | 1.06    | 0.07        | 0.076      |
| 39.54       | 0             | 1.05    | 0.07        | 0.075      |
| 39.76       | 0             | 1.03    | 0.07        | 0.073      |
| 39.98       | 0             | 1.02    | 0.07        | 0.072      |
| 40.2        | 0             | 1.01    | 0.07        | 0.071      |
| 40.42       | 0             | 0.99    | 0.07        | 0.070      |
| 40.64       | 0             | 0.97    | 0.07        | 0.068      |
| 40.86       | 0             | 0.96    | 0.07        | 0.067      |
| 41.08       | 0             | 0.94    | 0.07        | 0.066      |
| 41.3        | 0             | 0.92    | 0.07        | 0.065      |
| 41.52       | 0             | 0.91    | 0.07        | 0.064      |



| Time<br>Hrs | Inflow<br>cfs | d<br>ft | Qout<br>cfs | S<br>ac-ft |
|-------------|---------------|---------|-------------|------------|
| 39.76       | 5.63          | 3.21    | 3.0         | 0.23       |
| 41.74       | 0             | 0.89    | 0.07        | 0.063      |
| 41.96       | 0             | 0.88    | 0.07        | 0.062      |
| 42.18       | 0             | 0.86    | 0.07        | 0.061      |
| 42.4        | 0             | 0.85    | 0.07        | 0.060      |
| 42.62       | 0             | 0.83    | 0.07        | 0.059      |
| 42.84       | 0             | 0.82    | 0.07        | 0.058      |
| 43.06       | 0             | 0.80    | 0.07        | 0.057      |
| 43.28       | 0             | 0.79    | 0.07        | 0.056      |
| 43.5        | 0             | 0.78    | 0.07        | 0.055      |
| 43.72       | 0             | 0.76    | 0.07        | 0.054      |
| 43.94       | 0             | 0.75    | 0.07        | 0.053      |
| 44.16       | 0             | 0.74    | 0.07        | 0.052      |
| 44.38       | 0             | 0.72    | 0.07        | 0.051      |
| 44.6        | 0             | 0.71    | 0.07        | 0.050      |
| 44.82       | 0             | 0.70    | 0.07        | 0.049      |
| 45.04       | 0             | 0.69    | 0.07        | 0.048      |
| 45.26       | 0             | 0.67    | 0.07        | 0.047      |
| 45.48       | 0             | 0.66    | 0.07        | 0.047      |
| 45.7        | 0             | 0.65    | 0.07        | 0.046      |
| 45.92       | 0             | 0.64    | 0.07        | 0.045      |
| 46.14       | 0             | 0.63    | 0.07        | 0.044      |
| 46.36       | 0             | 0.62    | 0.07        | 0.044      |
| 46.58       | 0             | 0.61    | 0.07        | 0.043      |
| 46.8        | 0             | 0.60    | 0.07        | 0.042      |
| 47.02       | 0             | 0.59    | 0.07        | 0.041      |
| 47.24       | 0             | 0.58    | 0.07        | 0.041      |
| 47.46       | 0             | 0.57    | 0.07        | 0.040      |
| 47.68       | 0             | 0.56    | 0.07        | 0.039      |
| 47.9        | 0             | 0.55    | 0.07        | 0.039      |
| 48.12       | 0             | 0.54    | 0.07        | 0.038      |
| 48.34       | 0             | 0.53    | 0.07        | 0.037      |
| 48.56       | 0             | 0.52    | 0.07        | 0.037      |
| 48.78       | 0             | 0.51    | 0.07        | 0.036      |
| 49          | 0             | 0.50    | 0.07        | 0.035      |



# Encompass Associates, Inc.

5699 Cousins Place  
Rancho Cucamonga, CA 91737  
909-684-0093

Tr 20727 Banana  
SB Co

155-238.014  
8/6/24

AMC Type **III** (I,II or III)

Maximum Loss Rate

Ely Dev

Set #

2

| Cover                  | Area | %    | Soil type | Area  | %      | CN-II | CN-III | Ap   | %    | S    | Fp (F.C-6) | Fm   | Fm (wt) |
|------------------------|------|------|-----------|-------|--------|-------|--------|------|------|------|------------|------|---------|
| condo                  | 2.64 | 1.00 | A         | 2.64  | 1.00   | 32    | 52     | 0.35 | 0.35 | 9.23 | 0.74       | 0.26 | 0.26    |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
|                        |      |      |           |       |        |       |        |      |      |      |            |      |         |
| (AutoCalc: Impervious) |      |      |           | (1.7) | (0.64) |       | 98     | 0    | 0.65 | 0.2  |            |      |         |
|                        | 2.6  |      |           | 2.64  |        |       |        |      |      |      |            | Fm=  | 0.26    |

## Low Loss Fraction

| Return Period              | 2    | 2.81 in |        | 10   | 4.34 in |        | 25   | 5.20 in |        | 100  | 6.45 in |        |
|----------------------------|------|---------|--------|------|---------|--------|------|---------|--------|------|---------|--------|
| Cover                      | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) | la   | Y       | Y (wt) |
| condo                      | 1.85 | 0.03    | 0.01   | 1.85 | 0.12    | 0.04   | 1.85 | 0.17    | 0.06   | 1.85 | 0.24    | 0.08   |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
|                            |      |         |        |      |         |        |      |         |        |      |         |        |
| (AutoCalc: Impervious)     | 0.04 | 0.92    | 0.60   | 0.04 | 0.95    | 0.62   | 0.04 | 0.96    | 0.62   | 0.04 | 0.96    | 0.62   |
|                            |      | Y=      | 0.61   |      | Y=      | 0.66   |      | Y=      | 0.68   |      | Y=      | 0.71   |
| Low Loss Fraction, Y-bar = |      |         | 0.39   |      |         | 0.34   |      |         | 0.32   |      |         | 0.29   |
| Est Vol (ac-ft)=           |      |         | 0      |      |         | 1      |      |         | 1      |      |         | 1      |

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|                                                     |           |             |       |       |       |
|-----------------------------------------------------|-----------|-------------|-------|-------|-------|
| 1 Design Storm                                      | yr        | 2           | 10    | 25    | 100   |
| 2 Catchment Lag time                                | hrs       | 0.00        | 0.18  | 0.18  | 0.18  |
|                                                     | Tc (min)  | 0           | 13.19 | 13.19 | 13.19 |
| 3 Catchment Area                                    | acres     | <u>2.64</u> |       |       |       |
| 4 Base flow                                         | cfs/sq mi | <u>0</u>    |       |       |       |
| 5 S-graph                                           |           | <u>n/a</u>  |       |       |       |
| 6 Maximum loss rate, Fm                             | in/hr     | <u>0.26</u> |       |       |       |
| 7 Low loss fraction, Y-bar                          |           | 0.39        | 0.34  | 0.32  | 0.29  |
| 8 Watershed area-averaged 5-minute point rainfall   | inches    | 0.20        | 0.32  | 0.40  | 0.52  |
| Watershed area-averaged 30-minute point rainfall    | inches    | 0.41        | 0.66  | 0.82  | 1.07  |
| Watershed area-averaged 1-hour point rainfall       | inches    | 0.54        | 0.87  | 1.08  | 1.41  |
| Watershed area-averaged 3-hour point rainfall       | inches    | 1.04        | 1.57  | 1.92  | 2.46  |
| Watershed area-averaged 6-hour point rainfall       | inches    | 1.51        | 2.29  | 2.76  | 3.50  |
| Watershed area-averaged 24-hour point rainfall      | inches    | 2.81        | 4.34  | 5.20  | 6.45  |
| 9 24-hour storm unit interval (use TC for Small UH) | minutes   | 5           |       |       |       |



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|             |         |        |
|-------------|---------|--------|
| Subarea     | 1       |        |
| (sheet)     | Losses1 |        |
| Storm       | 100     | year   |
| I-60min     | 1.41    |        |
| I-6hr       | 3.5     |        |
| Slope       | 0.6     |        |
| Ac          | 2.64    | ac     |
| TC          | 13.19   | min    |
| Calibration | 1       |        |
| fm          | 0.26    | in/hr  |
|             | 0.00433 | in/min |
| Y-bar       | 0.29    |        |
|             | Peak    | Total  |
|             | 7.67    | 1.0416 |

| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 0     | 0     | 0       |
|       | 0.21  | 0       |
| 0.38  | 0.21  | 0.0066  |
| 0.6   | 0.21  | 0.0104  |
| 0.82  | 0.21  | 0.0142  |
| 1.04  | 0.21  | 0.018   |
| 1.26  | 0.21  | 0.0218  |
| 1.48  | 0.33  | 0.0267  |
| 1.7   | 0.21  | 0.0316  |
| 1.92  | 0.33  | 0.0365  |
| 2.14  | 0.33  | 0.0425  |
| 2.36  | 0.21  | 0.0474  |
| 2.58  | 0.33  | 0.0523  |
| 2.8   | 0.21  | 0.0572  |
| 3.02  | 0.21  | 0.061   |
| 3.24  | 0.33  | 0.0659  |
| 3.46  | 0.21  | 0.0708  |
| 3.68  | 0.33  | 0.0757  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 3.9   | 0.33  | 0.0817  |
| 4.12  | 0.21  | 0.0866  |
| 4.34  | 0.33  | 0.0915  |
| 4.56  | 0.33  | 0.0975  |
| 4.78  | 0.33  | 0.1035  |
| 5     | 0.33  | 0.1095  |
| 5.22  | 0.33  | 0.1155  |
| 5.44  | 0.33  | 0.1215  |
| 5.66  | 0.33  | 0.1275  |
| 5.88  | 0.43  | 0.1344  |
| 6.1   | 0.33  | 0.1413  |
| 6.32  | 0.33  | 0.1473  |
| 6.54  | 0.33  | 0.1533  |
| 6.76  | 0.43  | 0.1602  |
| 6.98  | 0.33  | 0.1671  |
| 7.2   | 0.43  | 0.174   |
| 7.42  | 0.33  | 0.1809  |
| 7.64  | 0.43  | 0.1878  |
| 7.86  | 0.43  | 0.1956  |
| 8.08  | 0.43  | 0.2034  |
| 8.3   | 0.43  | 0.2112  |
| 8.52  | 0.43  | 0.219   |
| 8.74  | 0.43  | 0.2268  |
| 8.96  | 0.43  | 0.2346  |
| 9.18  | 0.43  | 0.2424  |
| 9.4   | 0.43  | 0.2502  |
| 9.62  | 0.43  | 0.258   |
| 9.84  | 0.43  | 0.2658  |
| 10.06 | 0.43  | 0.2736  |
| 10.28 | 0.43  | 0.2814  |
| 10.5  | 0.43  | 0.2892  |
| 10.72 | 0.43  | 0.297   |
| 10.94 | 0.43  | 0.3048  |
| 11.16 | 0.43  | 0.3126  |
| 11.38 | 0.43  | 0.3204  |
| 11.6  | 0.43  | 0.3282  |
| 11.82 | 0.43  | 0.336   |
| 12.04 | 0.43  | 0.3438  |
| 12.26 | 0.55  | 0.3527  |
| 12.48 | 0.43  | 0.3616  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 12.7  | 0.55  | 0.3705  |
| 12.92 | 0.55  | 0.3805  |
| 13.14 | 0.55  | 0.3905  |
| 13.36 | 0.64  | 0.4013  |
| 13.58 | 0.64  | 0.4129  |
| 13.8  | 0.64  | 0.4245  |
| 14.02 | 0.64  | 0.4361  |
| 14.24 | 0.64  | 0.4477  |
| 14.46 | 0.76  | 0.4604  |
| 14.68 | 0.86  | 0.4751  |
| 14.9  | 0.86  | 0.4907  |
| 15.12 | 0.97  | 0.5073  |
| 15.34 | 1.07  | 0.5258  |
| 15.56 | 1.07  | 0.5453  |
| 15.78 | 1.31  | 0.5669  |
| 16    | 2.04  | 0.5974  |
| 16.22 | 7.67  | 0.6857  |
| 16.44 | 1.19  | 0.7662  |
| 16.66 | 0.97  | 0.7858  |
| 16.88 | 0.86  | 0.8024  |
| 17.1  | 0.64  | 0.816   |
| 17.32 | 0.64  | 0.8276  |
| 17.54 | 0.64  | 0.8392  |
| 17.76 | 0.64  | 0.8508  |
| 17.98 | 0.55  | 0.8616  |
| 18.2  | 0.55  | 0.8716  |
| 18.42 | 0.43  | 0.8805  |
| 18.64 | 0.43  | 0.8883  |
| 18.86 | 0.43  | 0.8961  |
| 19.08 | 0.43  | 0.9039  |
| 19.3  | 0.43  | 0.9117  |
| 19.52 | 0.43  | 0.9195  |
| 19.74 | 0.43  | 0.9273  |
| 19.96 | 0.33  | 0.9342  |
| 20.18 | 0.33  | 0.9402  |
| 20.4  | 0.33  | 0.9462  |
| 20.62 | 0.33  | 0.9522  |
| 20.84 | 0.33  | 0.9582  |
| 21.06 | 0.33  | 0.9642  |
| 21.28 | 0.33  | 0.9702  |



| T     | Q     | V       |
|-------|-------|---------|
| (hrs) | (cfs) | (ac-ft) |
| 21.5  | 0.33  | 0.9762  |
| 21.72 | 0.21  | 0.9811  |
| 21.94 | 0.33  | 0.986   |
| 22.16 | 0.33  | 0.992   |
| 22.38 | 0.33  | 0.998   |
| 22.6  | 0.33  | 1.004   |
| 22.82 | 0.33  | 1.01    |
| 23.04 | 0.33  | 1.016   |
| 23.26 | 0.21  | 1.0209  |
| 23.48 | 0.21  | 1.0247  |
| 23.7  | 0.33  | 1.0296  |
| 23.92 | 0.33  | 1.0356  |
| 24.14 | 0.33  | 1.0416  |



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| d   | Q    | S    | S-O  | S+O  |
|-----|------|------|------|------|
| 0   | 0.07 | 0.00 | 0    | 0    |
| 1   | 0.07 | 0.07 | 0.07 | 0.07 |
| 2   | 0.07 | 0.16 | 0.16 | 0.16 |
| 3   | 3.57 | 0.23 | 0.19 | 0.26 |
| 3.5 | 4.70 | 0.25 | 0.2  | 0.29 |
| 4.5 | 6.38 | 0.27 | 0.21 | 0.33 |

| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 39.76 | 7.67   | 4.2 | 4.2  | 0.26  | 0.76  |

|      |      |     |      |       |      |
|------|------|-----|------|-------|------|
| 0    | 0    | 0   | 0    | 0     | 0    |
| 0.22 | 0.21 | 0.1 | 0.07 | 0.004 | 0.00 |
| 0.38 | 0.21 | 0.1 | 0.07 | 0.006 | 0.00 |
| 0.6  | 0.21 | 0.1 | 0.07 | 0.010 | 0.00 |
| 0.82 | 0.21 | 0.2 | 0.07 | 0.014 | 0.00 |
| 1.04 | 0.21 | 0.2 | 0.07 | 0.017 | 0.00 |
| 1.26 | 0.21 | 0.3 | 0.07 | 0.021 | 0.00 |
| 1.48 | 0.33 | 0.4 | 0.07 | 0.026 | 0.00 |
| 1.7  | 0.21 | 0.4 | 0.07 | 0.030 | 0.00 |
| 1.92 | 0.33 | 0.5 | 0.07 | 0.035 | 0.00 |
| 2.14 | 0.33 | 0.6 | 0.07 | 0.040 | 0.00 |
| 2.36 | 0.21 | 0.6 | 0.07 | 0.044 | 0.00 |
| 2.58 | 0.33 | 0.7 | 0.07 | 0.049 | 0.00 |
| 2.8  | 0.21 | 0.7 | 0.07 | 0.052 | 0.00 |
| 3.02 | 0.21 | 0.8 | 0.07 | 0.055 | 0.00 |
| 3.24 | 0.33 | 0.8 | 0.07 | 0.060 | 0.00 |
| 3.46 | 0.21 | 0.9 | 0.07 | 0.062 | 0.00 |
| 3.68 | 0.33 | 1.0 | 0.07 | 0.067 | 0.00 |
| 3.9  | 0.33 | 1.0 | 0.07 | 0.072 | 0.00 |
| 4.12 | 0.21 | 1.0 | 0.07 | 0.075 | 0.00 |



| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 4.34  | 0.33   | 1.1 | 0.07 | 0.079 | 0.00  |
| 4.56  | 0.33   | 1.2 | 0.07 | 0.084 | 0.00  |
| 4.78  | 0.33   | 1.2 | 0.07 | 0.089 | 0.00  |
| 5     | 0.33   | 1.3 | 0.07 | 0.094 | 0.00  |
| 5.22  | 0.33   | 1.3 | 0.07 | 0.098 | 0.00  |
| 5.44  | 0.33   | 1.4 | 0.07 | 0.103 | 0.00  |
| 5.66  | 0.33   | 1.4 | 0.07 | 0.108 | 0.00  |
| 5.88  | 0.43   | 1.5 | 0.07 | 0.115 | 0.00  |
| 6.1   | 0.33   | 1.6 | 0.07 | 0.119 | 0.00  |
| 6.32  | 0.33   | 1.6 | 0.07 | 0.124 | 0.00  |
| 6.54  | 0.33   | 1.7 | 0.07 | 0.129 | 0.00  |
| 6.76  | 0.43   | 1.7 | 0.07 | 0.136 | 0.00  |
| 6.98  | 0.33   | 1.8 | 0.07 | 0.140 | 0.00  |
| 7.2   | 0.43   | 1.9 | 0.07 | 0.147 | 0.00  |
| 7.42  | 0.33   | 1.9 | 0.07 | 0.152 | 0.00  |
| 7.64  | 0.43   | 2.0 | 0.07 | 0.158 | 0.00  |
| 7.86  | 0.43   | 2.1 | 0.17 | 0.163 | 0.00  |
| 8.08  | 0.43   | 2.1 | 0.32 | 0.165 | 0.00  |
| 8.3   | 0.43   | 2.1 | 0.39 | 0.166 | 0.01  |
| 8.52  | 0.43   | 2.1 | 0.42 | 0.166 | 0.01  |
| 8.74  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 8.96  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 9.18  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 9.4   | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 9.62  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 9.84  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 10.06 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 10.28 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 10.5  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 10.72 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 10.94 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 11.16 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 11.38 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 11.6  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 11.82 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 12.04 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 12.26 | 0.55   | 2.1 | 0.47 | 0.168 | 0.01  |
| 12.48 | 0.43   | 2.1 | 0.48 | 0.167 | 0.01  |
| 12.7  | 0.55   | 2.1 | 0.49 | 0.168 | 0.01  |
| 12.92 | 0.55   | 2.1 | 0.53 | 0.168 | 0.01  |
| 13.14 | 0.55   | 2.1 | 0.54 | 0.168 | 0.01  |
| 13.36 | 0.64   | 2.2 | 0.58 | 0.169 | 0.01  |



| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 13.58 | 0.64   | 2.2 | 0.62 | 0.170 | 0.01  |
| 13.8  | 0.64   | 2.2 | 0.63 | 0.170 | 0.01  |
| 14.02 | 0.64   | 2.2 | 0.64 | 0.170 | 0.01  |
| 14.24 | 0.64   | 2.2 | 0.64 | 0.170 | 0.01  |
| 14.46 | 0.76   | 2.2 | 0.68 | 0.172 | 0.01  |
| 14.68 | 0.86   | 2.2 | 0.76 | 0.173 | 0.01  |
| 14.9  | 0.86   | 2.2 | 0.83 | 0.174 | 0.01  |
| 15.12 | 0.97   | 2.2 | 0.88 | 0.175 | 0.01  |
| 15.34 | 1.07   | 2.3 | 0.97 | 0.177 | 0.02  |
| 15.56 | 1.07   | 2.3 | 1.04 | 0.178 | 0.02  |
| 15.78 | 1.31   | 2.3 | 1.14 | 0.181 | 0.02  |
| 16    | 2.04   | 2.5 | 1.49 | 0.191 | 0.03  |
| 16.22 | 7.67   | 4.2 | 3.78 | 0.262 | 0.07  |
| 16.44 | 1.19   | 2.7 | 4.21 | 0.207 | 0.08  |
| 16.66 | 0.97   | 2.4 | 2.07 | 0.187 | 0.04  |
| 16.88 | 0.86   | 2.3 | 1.32 | 0.179 | 0.02  |
| 17.1  | 0.64   | 2.2 | 0.95 | 0.173 | 0.02  |
| 17.32 | 0.64   | 2.2 | 0.75 | 0.171 | 0.01  |
| 17.54 | 0.64   | 2.2 | 0.68 | 0.170 | 0.01  |
| 17.76 | 0.64   | 2.2 | 0.65 | 0.170 | 0.01  |
| 17.98 | 0.55   | 2.1 | 0.62 | 0.169 | 0.01  |
| 18.2  | 0.55   | 2.1 | 0.57 | 0.169 | 0.01  |
| 18.42 | 0.43   | 2.1 | 0.52 | 0.167 | 0.01  |
| 18.64 | 0.43   | 2.1 | 0.46 | 0.166 | 0.01  |
| 18.86 | 0.43   | 2.1 | 0.44 | 0.166 | 0.01  |
| 19.08 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 19.3  | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 19.52 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 19.74 | 0.43   | 2.1 | 0.43 | 0.166 | 0.01  |
| 19.96 | 0.33   | 2.1 | 0.40 | 0.165 | 0.01  |
| 20.18 | 0.33   | 2.1 | 0.35 | 0.164 | 0.01  |
| 20.4  | 0.33   | 2.1 | 0.34 | 0.164 | 0.00  |
| 20.62 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 20.84 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 21.06 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 21.28 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 21.5  | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 21.72 | 0.21   | 2.1 | 0.29 | 0.163 | 0.00  |
| 21.94 | 0.33   | 2.1 | 0.28 | 0.164 | 0.00  |
| 22.16 | 0.33   | 2.1 | 0.31 | 0.164 | 0.00  |
| 22.38 | 0.33   | 2.1 | 0.32 | 0.164 | 0.00  |
| 22.6  | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |



| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 22.82 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 23.04 | 0.33   | 2.1 | 0.33 | 0.164 | 0.00  |
| 23.26 | 0.21   | 2.1 | 0.29 | 0.163 | 0.00  |
| 23.48 | 0.21   | 2.0 | 0.24 | 0.162 | 0.00  |
| 23.7  | 0.33   | 2.1 | 0.26 | 0.164 | 0.00  |
| 23.92 | 0.33   | 2.1 | 0.31 | 0.164 | 0.00  |
| 24.14 | 0.33   | 2.1 | 0.32 | 0.164 | 0.00  |
| 24.36 | 0      | 2.0 | 0.22 | 0.160 | 0.00  |
| 24.58 | 0      | 2.0 | 0.09 | 0.159 | 0.00  |
| 24.8  | 0      | 2.0 | 0.07 | 0.157 | 0.00  |
| 25.02 | 0      | 2.0 | 0.07 | 0.156 | 0.00  |
| 25.24 | 0      | 1.9 | 0.07 | 0.155 | 0.00  |
| 25.46 | 0      | 1.9 | 0.07 | 0.154 | 0.00  |
| 25.68 | 0      | 1.9 | 0.07 | 0.152 | 0.00  |
| 25.9  | 0      | 1.9 | 0.07 | 0.151 | 0.00  |
| 26.12 | 0      | 1.9 | 0.07 | 0.150 | 0.00  |
| 26.34 | 0      | 1.9 | 0.07 | 0.149 | 0.00  |
| 26.56 | 0      | 1.9 | 0.07 | 0.147 | 0.00  |
| 26.78 | 0      | 1.9 | 0.07 | 0.146 | 0.00  |
| 27    | 0      | 1.8 | 0.07 | 0.145 | 0.00  |
| 27.22 | 0      | 1.8 | 0.07 | 0.144 | 0.00  |
| 27.44 | 0      | 1.8 | 0.07 | 0.143 | 0.00  |
| 27.66 | 0      | 1.8 | 0.07 | 0.141 | 0.00  |
| 27.88 | 0      | 1.8 | 0.07 | 0.140 | 0.00  |
| 28.1  | 0      | 1.8 | 0.07 | 0.139 | 0.00  |
| 28.32 | 0      | 1.8 | 0.07 | 0.138 | 0.00  |
| 28.54 | 0      | 1.7 | 0.07 | 0.136 | 0.00  |
| 28.76 | 0      | 1.7 | 0.07 | 0.135 | 0.00  |
| 28.98 | 0      | 1.7 | 0.07 | 0.134 | 0.00  |
| 29.2  | 0      | 1.7 | 0.07 | 0.133 | 0.00  |
| 29.42 | 0      | 1.7 | 0.07 | 0.132 | 0.00  |
| 29.64 | 0      | 1.7 | 0.07 | 0.130 | 0.00  |
| 29.86 | 0      | 1.7 | 0.07 | 0.129 | 0.00  |
| 30.08 | 0      | 1.6 | 0.07 | 0.128 | 0.00  |
| 30.3  | 0      | 1.6 | 0.07 | 0.127 | 0.00  |
| 30.52 | 0      | 1.6 | 0.07 | 0.125 | 0.00  |
| 30.74 | 0      | 1.6 | 0.07 | 0.124 | 0.00  |
| 30.96 | 0      | 1.6 | 0.07 | 0.123 | 0.00  |
| 31.18 | 0      | 1.6 | 0.07 | 0.122 | 0.00  |
| 31.4  | 0      | 1.6 | 0.07 | 0.120 | 0.00  |
| 31.62 | 0      | 1.5 | 0.07 | 0.119 | 0.00  |
| 31.84 | 0      | 1.5 | 0.07 | 0.118 | 0.00  |

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| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 32.06 | 0      | 1.5 | 0.07 | 0.117 | 0.00  |
| 32.28 | 0      | 1.5 | 0.07 | 0.116 | 0.00  |
| 32.5  | 0      | 1.5 | 0.07 | 0.114 | 0.00  |
| 32.72 | 0      | 1.5 | 0.07 | 0.113 | 0.00  |
| 32.94 | 0      | 1.5 | 0.07 | 0.112 | 0.00  |
| 33.16 | 0      | 1.5 | 0.07 | 0.111 | 0.00  |
| 33.38 | 0      | 1.4 | 0.07 | 0.109 | 0.00  |
| 33.6  | 0      | 1.4 | 0.07 | 0.108 | 0.00  |
| 33.82 | 0      | 1.4 | 0.07 | 0.107 | 0.00  |
| 34.04 | 0      | 1.4 | 0.07 | 0.106 | 0.00  |
| 34.26 | 0      | 1.4 | 0.07 | 0.104 | 0.00  |
| 34.48 | 0      | 1.4 | 0.07 | 0.103 | 0.00  |
| 34.7  | 0      | 1.4 | 0.07 | 0.102 | 0.00  |
| 34.92 | 0      | 1.3 | 0.07 | 0.101 | 0.00  |
| 35.14 | 0      | 1.3 | 0.07 | 0.100 | 0.00  |
| 35.36 | 0      | 1.3 | 0.07 | 0.098 | 0.00  |
| 35.58 | 0      | 1.3 | 0.07 | 0.097 | 0.00  |
| 35.8  | 0      | 1.3 | 0.07 | 0.096 | 0.00  |
| 36.02 | 0      | 1.3 | 0.07 | 0.095 | 0.00  |
| 36.24 | 0      | 1.3 | 0.07 | 0.093 | 0.00  |
| 36.46 | 0      | 1.2 | 0.07 | 0.092 | 0.00  |
| 36.68 | 0      | 1.2 | 0.07 | 0.091 | 0.00  |
| 36.9  | 0      | 1.2 | 0.07 | 0.090 | 0.00  |
| 37.12 | 0      | 1.2 | 0.07 | 0.089 | 0.00  |
| 37.34 | 0      | 1.2 | 0.07 | 0.087 | 0.00  |
| 37.56 | 0      | 1.2 | 0.07 | 0.086 | 0.00  |
| 37.78 | 0      | 1.2 | 0.07 | 0.085 | 0.00  |
| 38    | 0      | 1.1 | 0.07 | 0.084 | 0.00  |
| 38.22 | 0      | 1.1 | 0.07 | 0.082 | 0.00  |
| 38.44 | 0      | 1.1 | 0.07 | 0.081 | 0.00  |
| 38.66 | 0      | 1.1 | 0.07 | 0.080 | 0.00  |
| 38.88 | 0      | 1.1 | 0.07 | 0.079 | 0.00  |
| 39.1  | 0      | 1.1 | 0.07 | 0.077 | 0.00  |
| 39.32 | 0      | 1.1 | 0.07 | 0.076 | 0.00  |
| 39.54 | 0      | 1.1 | 0.07 | 0.075 | 0.00  |
| 39.76 | 0      | 1.0 | 0.07 | 0.074 | 0.00  |
| 39.98 | 0      | 1.0 | 0.07 | 0.073 | 0.00  |
| 40.2  | 0      | 1.0 | 0.07 | 0.071 | 0.00  |
| 40.42 | 0      | 1.0 | 0.07 | 0.070 | 0.00  |
| 40.64 | 0      | 1.0 | 0.07 | 0.069 | 0.00  |
| 40.86 | 0      | 1.0 | 0.07 | 0.068 | 0.00  |
| 41.08 | 0      | 0.9 | 0.07 | 0.067 | 0.00  |

**FR100****Encompass Associates, Inc.**

| Time  | Inflow | d   | Qout | S     | S-out |
|-------|--------|-----|------|-------|-------|
| Hrs   | cfs    | ft  | cfs  | ac-ft | ac-ft |
| 41.3  | 0      | 0.9 | 0.07 | 0.065 | 0.00  |
| 41.52 | 0      | 0.9 | 0.07 | 0.064 | 0.00  |
| 41.74 | 0      | 0.9 | 0.07 | 0.063 | 0.00  |
| 41.96 | 0      | 0.9 | 0.07 | 0.062 | 0.00  |
| 42.18 | 0      | 0.9 | 0.07 | 0.061 | 0.00  |
| 42.4  | 0      | 0.9 | 0.07 | 0.060 | 0.00  |
| 42.62 | 0      | 0.8 | 0.07 | 0.059 | 0.00  |
| 42.84 | 0      | 0.8 | 0.07 | 0.058 | 0.00  |
| 43.06 | 0      | 0.8 | 0.07 | 0.057 | 0.00  |
| 43.28 | 0      | 0.8 | 0.07 | 0.056 | 0.00  |
| 43.5  | 0      | 0.8 | 0.07 | 0.055 | 0.00  |
| 43.72 | 0      | 0.8 | 0.07 | 0.054 | 0.00  |
| 43.94 | 0      | 0.8 | 0.07 | 0.053 | 0.00  |
| 44.16 | 0      | 0.7 | 0.07 | 0.052 | 0.00  |
| 44.38 | 0      | 0.7 | 0.07 | 0.051 | 0.00  |
| 44.6  | 0      | 0.7 | 0.07 | 0.050 | 0.00  |
| 44.82 | 0      | 0.7 | 0.07 | 0.049 | 0.00  |
| 45.04 | 0      | 0.7 | 0.07 | 0.049 | 0.00  |
| 45.26 | 0      | 0.7 | 0.07 | 0.048 | 0.00  |
| 45.48 | 0      | 0.7 | 0.07 | 0.047 | 0.00  |
| 45.7  | 0      | 0.7 | 0.07 | 0.046 | 0.00  |
| 45.92 | 0      | 0.6 | 0.07 | 0.045 | 0.00  |
| 46.14 | 0      | 0.6 | 0.07 | 0.045 | 0.00  |
| 46.36 | 0      | 0.6 | 0.07 | 0.044 | 0.00  |
| 46.58 | 0      | 0.6 | 0.07 | 0.043 | 0.00  |
| 46.8  | 0      | 0.6 | 0.07 | 0.042 | 0.00  |
| 47.02 | 0      | 0.6 | 0.07 | 0.042 | 0.00  |
| 47.24 | 0      | 0.6 | 0.07 | 0.041 | 0.00  |
| 47.46 | 0      | 0.6 | 0.07 | 0.040 | 0.00  |
| 47.68 | 0      | 0.6 | 0.07 | 0.039 | 0.00  |
| 47.9  | 0      | 0.6 | 0.07 | 0.039 | 0.00  |
| 48.12 | 0      | 0.5 | 0.07 | 0.038 | 0.00  |

## **REFERENCES & MAPS**

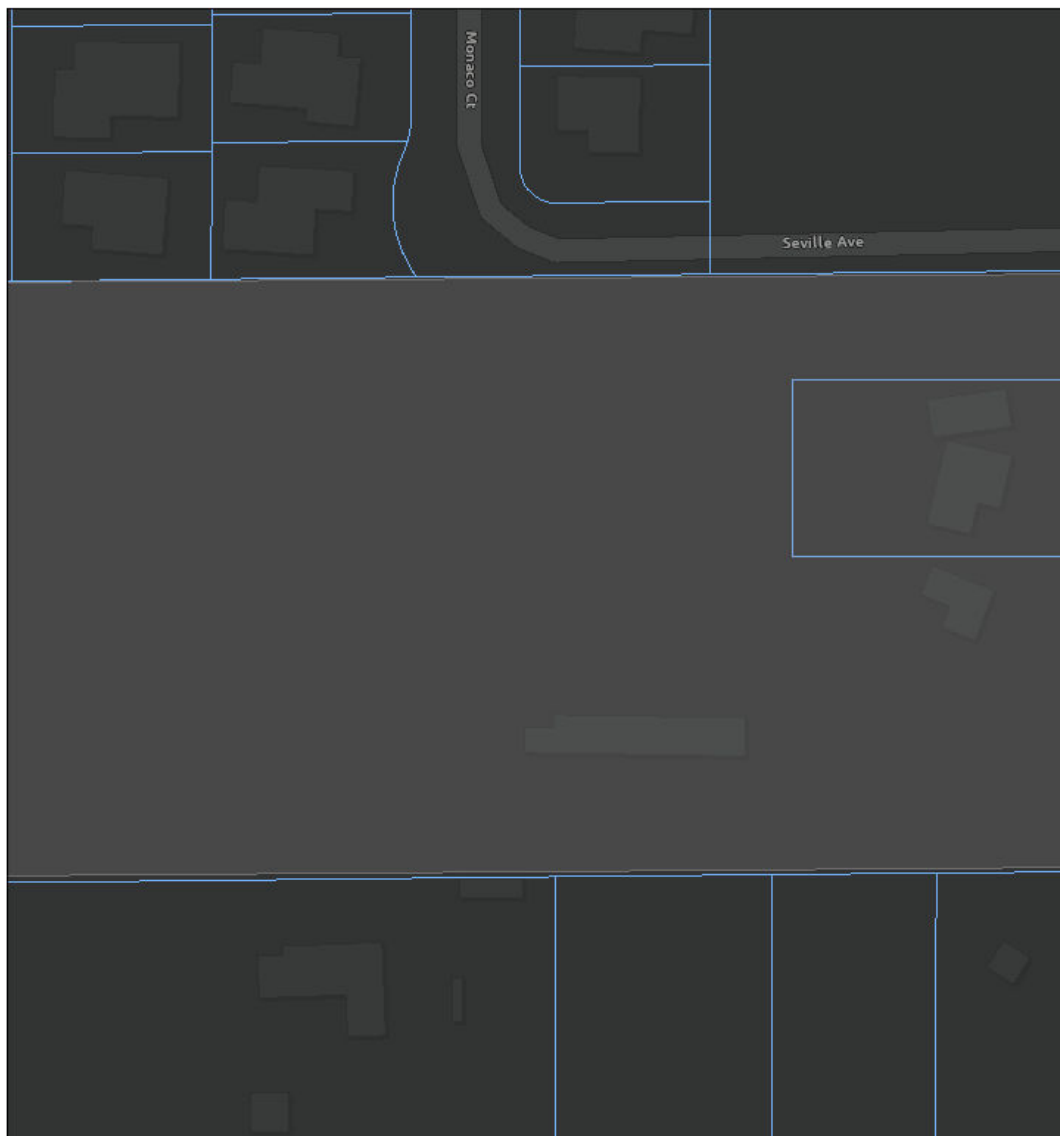


# WQMP Project Report - San Bernardino Co. Stormwater Program

## Area of Interest (AOI) Information

Area : 200,755.04 ft<sup>2</sup>

Dec 6 2023 14:01:21 Pacific Standard Time



 Parcels

1:1,128  
0 0.01 0.01 0.03 mi  
0 0.01 0.03 0.05 km

Esri Community Maps Contributors, City of Fontana, City of Rancho Cucamonga, County of San Bernardino, California State Parks, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Project Site Parcel Numbers

| # | ParcelNumber | Acreage | Area(ft²)  |
|---|--------------|---------|------------|
| 1 | 023003167    | 0.45    | 16,271.25  |
| 2 | 023003168    | 4.40    | 184,483.71 |

HCOC Exempt Area

| # | Type              | Status | Area(ft²)  |
|---|-------------------|--------|------------|
| 1 | HCOC Exempt Areas | Yes    | 200,755.04 |

Drainage Segment Details

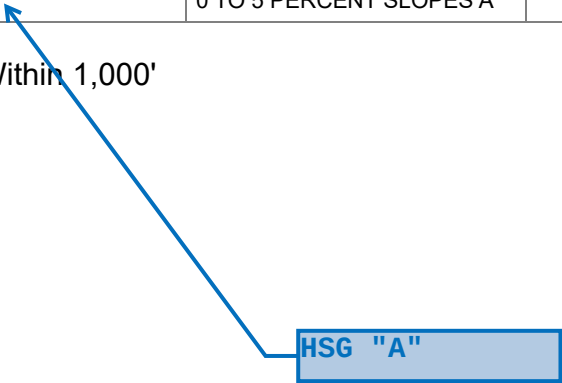
| # | System Number | Facility Name       | Closest channel segment's susceptibility to Hydromodification | Highest downstream hydromodification susceptibility | Is this drainage segment subject to TMDLs? |
|---|---------------|---------------------|---------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------|
| 1 | 1-801-1F      | San Sevaine Channel | EHM                                                           | EHM                                                 | No                                         |

| # | Are there downstream drainage segments subject to TMDLs? | Is this drainage segment a 303d listed stream? | Are there 303d listed streams downstream? | Area(ft²)  |
|---|----------------------------------------------------------|------------------------------------------------|-------------------------------------------|------------|
| 1 | No                                                       | No                                             | No                                        | 200,755.04 |

Onsite Soil Groups

| # | Onsite Soils Group    | Soil Type                                       | Soil Type Abbreviation | Area(ft²)  |
|---|-----------------------|-------------------------------------------------|------------------------|------------|
| 1 | Soils - Hydro Group A | TuB TUJUNGA LOAMY SAND, 0 TO 5 PERCENT SLOPES A | TUJUNGA LOAMY SAND     | 200,755.04 |

Septic Tanks Within 1,000'



| #  | APN       | Area(ft²)  |
|----|-----------|------------|
| 1  | 023030155 | 7,744.59   |
| 2  | 023030138 | 11,482.99  |
| 3  | 023030156 | 31,615.37  |
| 4  | 023011120 | 43,199.02  |
| 5  | 023035120 | 59,032.02  |
| 6  | 023035121 | 65,959.52  |
| 7  | 023035119 | 67,228.10  |
| 8  | 023035122 | 74,059.61  |
| 9  | 023035123 | 78,632.05  |
| 10 | 023035126 | 81,302.42  |
| 11 | 023035124 | 81,748.54  |
| 12 | 023035125 | 82,485.95  |
| 13 | 023035118 | 88,985.08  |
| 14 | 023035127 | 90,127.74  |
| 15 | 023035128 | 105,660.98 |
| 16 | 023035117 | 108,514.51 |
| 17 | 023035110 | 116,474.93 |
| 18 | 023035109 | 123,040.96 |
| 19 | 023035129 | 125,524.22 |
| 20 | 023035116 | 127,969.78 |
| 21 | 023035111 | 136,630.23 |
| 22 | 023035108 | 143,224.55 |
| 23 | 023035130 | 145,081.37 |
| 24 | 023035115 | 147,425.96 |
| 25 | 023035112 | 156,785.23 |
| 26 | 023035107 | 163,408.23 |
| 27 | 023035131 | 164,638.34 |
| 28 | 023035113 | 176,940.44 |
| 29 | 023035106 | 183,591.61 |
| 30 | 023035132 | 184,195.19 |
| 31 | 023035114 | 195,933.86 |
| 32 | 023035136 | 198,697.08 |
| 33 | 023035105 | 200,588.62 |
| 34 | 023035133 | 200,591.65 |
| 35 | 023035102 | 200,755.04 |
| 36 | 023035103 | 200,755.04 |
| 37 | 023035101 | 200,755.04 |
| 38 | 023035104 | 200,755.04 |
| 39 | 023035134 | 200,755.04 |
| 40 | 023035135 | 200,755.04 |

## Ground Water Contour

| # | GW_Contour | Length(ft) |
|---|------------|------------|
| 1 | -475       | 148.84     |

## Studies and Reports Related to Project Site

| #  | Report Link                                                     | Source                                       | Date          | Area(ft²)  |
|----|-----------------------------------------------------------------|----------------------------------------------|---------------|------------|
| 1  | <a href="#">Chino Basin Water Master 32nd Annual Report</a>     | Chino Basin Watermaster                      | 2008-2009     | 200,755.04 |
| 2  | <a href="#">Chino Basin Recharge Master Plan</a>                | WE, Inc                                      | August 2001   | 200,755.04 |
| 3  | <a href="#">San Servaine Channel</a>                            | San Bernardino County Flood Control District | December 1979 | 200,755.04 |
| 4  | <a href="#">Banana Street - San Servaine Channel</a>            | San Bernardino County Flood Control District | July 1979     | 200,755.04 |
| 5  | <a href="#">Summary Report Master Storm Drainage Plan Study</a> | Hall & Foreman                               | June 1992     | 200,755.04 |
| 6  | <a href="#">Summary Report Master Storm Drainage Plan Map</a>   | Hall & Foreman, Inc                          | June 1992     | 200,755.04 |
| 7  | <a href="#">FONTANA MPD FEE STUDY</a>                           | Flory, Olson & Van Osdel                     | June 1992     | 200,755.04 |
| 8  | <a href="#">San Sevaine - Boyle Map 0001</a>                    | Boyle Engineering                            | June 1997     | 200,755.04 |
| 9  | <a href="#">San Sevaine - Boyle Map 0002</a>                    | Boyle Engineering                            | June 1997     | 200,755.04 |
| 10 | <a href="#">San Sevaine - Boyle Map 0003</a>                    | Boyle Engineering                            | June 1997     | 200,755.04 |
| 11 | <a href="#">SBCounty CSDP Project No.2 Volume 1</a>             | Moffatt & Nichol                             | March 1969    | 200,755.04 |
| 12 | <a href="#">SBCounty CSDP Project No.2 Volume 2</a>             | Moffatt & Nichol                             | March 1969    | 200,755.04 |
| 13 | <a href="#">Volume 2 Map</a>                                    | Moffatt & Nichol                             | March 1969    | 200,755.04 |
| 14 | <a href="#">SBCounty CSDP Project No.3 Volume I</a>             | Verpet Engineering Company                   | May 1973      | 200,755.04 |
| 15 | <a href="#">SBCounty CSDP Project No.3 Volume II</a>            | Verpet Engineering Company                   | May 1973      | 200,755.04 |
| 16 | <a href="#">Master SD Hydrology Calcs for Fontana Vol III</a>   | Hall & Foreman, Inc                          | May 1992      | 200,755.04 |
| 17 | <a href="#">Master SD Hydrology Calcs For Fontana Vol II</a>    | Hall & Foreman, Inc                          | May 1992      | 200,755.04 |
| 18 | <a href="#">Master SD Hydrology Calcs for Fontana Vol V</a>     | Hall & Foreman, Inc                          | May 1992      | 200,755.04 |
| 19 | <a href="#">Master SD Hydrology Calcs for Fontana Vol IV</a>    | Hall & Foreman, Inc                          | May 1992      | 200,755.04 |
| 20 | <a href="#">West Fontana Channel Preliminary Basin Study</a>    | San Bernardino County Flood Control District | October 1986  | 200,755.04 |

Note: The information provided in this report and on the Stormwater Geodatabase for the County of San Bernardino Stormwater Program is intended to provide basic guidance in the preparation of the applicant's Water Quality Management Plan (WQMP) and should not be relied upon without independent verification. without independent verification.



**NOAA Atlas 14, Volume 6, Version 2**  
**Location name: Fontana, California, USA\***  
**Latitude: 34.1007°, Longitude: -117.4979°**  
**Elevation: 1185 ft\*\***

\* source: ESRI Maps

\*\* source: USGS



**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

**PF tabular**

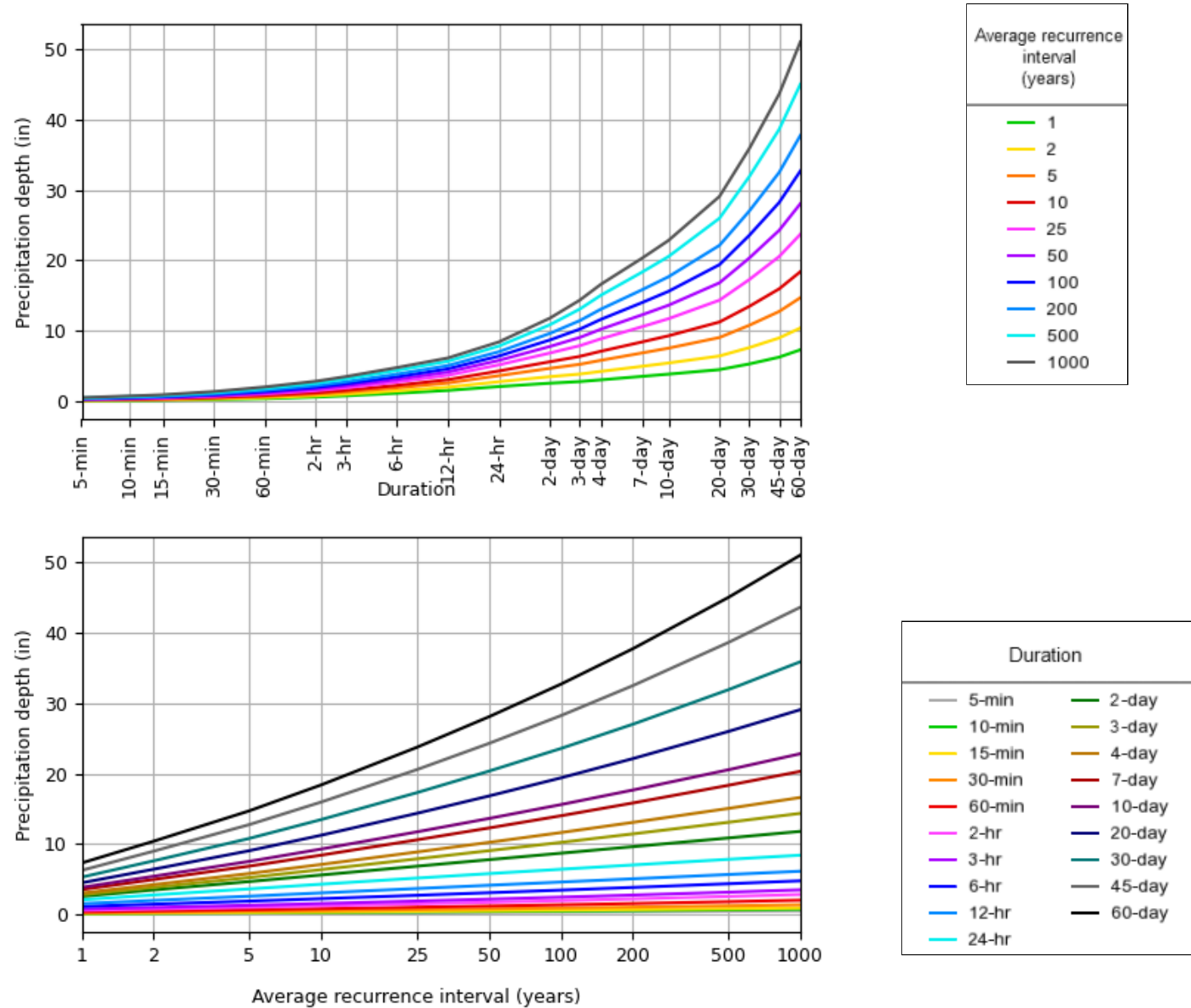
| <b>PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)<sup>1</sup></b> |                                            |                               |                               |                               |                               |                               |                               |                               |                               |                               |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>Duration</b>                                                                                                | <b>Average recurrence interval (years)</b> |                               |                               |                               |                               |                               |                               |                               |                               |                               |
|                                                                                                                | <b>1</b>                                   | <b>2</b>                      | <b>5</b>                      | <b>10</b>                     | <b>25</b>                     | <b>50</b>                     | <b>100</b>                    | <b>200</b>                    | <b>500</b>                    | <b>1000</b>                   |
| <b>5-min</b>                                                                                                   | <b>0.111</b><br>(0.092-0.134)              | <b>0.146</b><br>(0.121-0.177) | <b>0.193</b><br>(0.160-0.235) | <b>0.233</b><br>(0.191-0.286) | <b>0.289</b><br>(0.229-0.367) | <b>0.333</b><br>(0.259-0.433) | <b>0.380</b><br>(0.288-0.506) | <b>0.429</b><br>(0.316-0.589) | <b>0.499</b><br>(0.352-0.715) | <b>0.556</b><br>(0.379-0.825) |
| <b>10-min</b>                                                                                                  | <b>0.159</b><br>(0.132-0.192)              | <b>0.209</b><br>(0.174-0.253) | <b>0.277</b><br>(0.229-0.337) | <b>0.334</b><br>(0.274-0.410) | <b>0.414</b><br>(0.329-0.526) | <b>0.478</b><br>(0.371-0.620) | <b>0.544</b><br>(0.413-0.725) | <b>0.616</b><br>(0.453-0.844) | <b>0.716</b><br>(0.505-1.02)  | <b>0.797</b><br>(0.543-1.18)  |
| <b>15-min</b>                                                                                                  | <b>0.192</b><br>(0.160-0.233)              | <b>0.252</b><br>(0.210-0.306) | <b>0.335</b><br>(0.278-0.407) | <b>0.403</b><br>(0.332-0.495) | <b>0.500</b><br>(0.398-0.636) | <b>0.577</b><br>(0.449-0.750) | <b>0.658</b><br>(0.499-0.877) | <b>0.744</b><br>(0.548-1.02)  | <b>0.866</b><br>(0.611-1.24)  | <b>0.964</b><br>(0.656-1.43)  |
| <b>30-min</b>                                                                                                  | <b>0.282</b><br>(0.235-0.342)              | <b>0.371</b><br>(0.309-0.450) | <b>0.491</b><br>(0.408-0.598) | <b>0.593</b><br>(0.488-0.728) | <b>0.735</b><br>(0.584-0.934) | <b>0.848</b><br>(0.660-1.10)  | <b>0.967</b><br>(0.733-1.29)  | <b>1.09</b><br>(0.805-1.50)   | <b>1.27</b><br>(0.897-1.82)   | <b>1.42</b><br>(0.964-2.10)   |
| <b>60-min</b>                                                                                                  | <b>0.412</b><br>(0.343-0.499)              | <b>0.542</b><br>(0.451-0.658) | <b>0.718</b><br>(0.596-0.875) | <b>0.867</b><br>(0.713-1.06)  | <b>1.08</b><br>(0.854-1.37)   | <b>1.24</b><br>(0.965-1.61)   | <b>1.41</b><br>(1.07-1.88)    | <b>1.60</b><br>(1.18-2.19)    | <b>1.86</b><br>(1.31-2.66)    | <b>2.07</b><br>(1.41-3.07)    |
| <b>2-hr</b>                                                                                                    | <b>0.632</b><br>(0.527-0.766)              | <b>0.816</b><br>(0.679-0.990) | <b>1.06</b><br>(0.881-1.29)   | <b>1.27</b><br>(1.04-1.55)    | <b>1.55</b><br>(1.23-1.97)    | <b>1.78</b><br>(1.38-2.31)    | <b>2.01</b><br>(1.52-2.68)    | <b>2.26</b><br>(1.66-3.09)    | <b>2.60</b><br>(1.84-3.72)    | <b>2.88</b><br>(1.96-4.27)    |
| <b>3-hr</b>                                                                                                    | <b>0.813</b><br>(0.677-0.986)              | <b>1.04</b><br>(0.867-1.27)   | <b>1.35</b><br>(1.12-1.64)    | <b>1.60</b><br>(1.32-1.96)    | <b>1.95</b><br>(1.55-2.47)    | <b>2.22</b><br>(1.72-2.88)    | <b>2.50</b><br>(1.90-3.33)    | <b>2.80</b><br>(2.06-3.83)    | <b>3.21</b><br>(2.26-4.59)    | <b>3.53</b><br>(2.41-5.24)    |
| <b>6-hr</b>                                                                                                    | <b>1.18</b><br>(0.981-1.43)                | <b>1.51</b><br>(1.26-1.83)    | <b>1.94</b><br>(1.61-2.36)    | <b>2.29</b><br>(1.88-2.81)    | <b>2.76</b><br>(2.20-3.51)    | <b>3.13</b><br>(2.43-4.06)    | <b>3.50</b><br>(2.65-4.66)    | <b>3.88</b><br>(2.86-5.32)    | <b>4.40</b><br>(3.11-6.30)    | <b>4.81</b><br>(3.28-7.14)    |
| <b>12-hr</b>                                                                                                   | <b>1.58</b><br>(1.31-1.91)                 | <b>2.04</b><br>(1.70-2.48)    | <b>2.63</b><br>(2.18-3.20)    | <b>3.10</b><br>(2.55-3.81)    | <b>3.72</b><br>(2.96-4.73)    | <b>4.18</b><br>(3.25-5.43)    | <b>4.64</b><br>(3.52-6.18)    | <b>5.10</b><br>(3.76-6.99)    | <b>5.71</b><br>(4.03-8.17)    | <b>6.17</b><br>(4.20-9.16)    |
| <b>24-hr</b>                                                                                                   | <b>2.13</b><br>(1.88-2.45)                 | <b>2.81</b><br>(2.49-3.24)    | <b>3.67</b><br>(3.24-4.24)    | <b>4.34</b><br>(3.79-5.06)    | <b>5.20</b><br>(4.40-6.26)    | <b>5.83</b><br>(4.84-7.17)    | <b>6.45</b><br>(5.22-8.13)    | <b>7.06</b><br>(5.57-9.15)    | <b>7.86</b><br>(5.94-10.6)    | <b>8.45</b><br>(6.18-11.8)    |
| <b>2-day</b>                                                                                                   | <b>2.60</b><br>(2.30-3.00)                 | <b>3.53</b><br>(3.12-4.07)    | <b>4.71</b><br>(4.15-5.44)    | <b>5.64</b><br>(4.94-6.58)    | <b>6.88</b><br>(5.83-8.29)    | <b>7.81</b><br>(6.48-9.60)    | <b>8.73</b><br>(7.07-11.0)    | <b>9.66</b><br>(7.61-12.5)    | <b>10.9</b><br>(8.24-14.7)    | <b>11.8</b><br>(8.64-16.5)    |
| <b>3-day</b>                                                                                                   | <b>2.83</b><br>(2.51-3.26)                 | <b>3.90</b><br>(3.44-4.50)    | <b>5.28</b><br>(4.66-6.11)    | <b>6.40</b><br>(5.60-7.46)    | <b>7.92</b><br>(6.70-9.54)    | <b>9.08</b><br>(7.53-11.2)    | <b>10.3</b><br>(8.31-12.9)    | <b>11.5</b><br>(9.04-14.9)    | <b>13.1</b><br>(9.91-17.7)    | <b>14.4</b><br>(10.5-20.1)    |
| <b>4-day</b>                                                                                                   | <b>3.08</b><br>(2.73-3.55)                 | <b>4.28</b><br>(3.78-4.93)    | <b>5.85</b><br>(5.16-6.76)    | <b>7.13</b><br>(6.24-8.32)    | <b>8.89</b><br>(7.53-10.7)    | <b>10.3</b><br>(8.51-12.6)    | <b>11.7</b><br>(9.44-14.7)    | <b>13.1</b><br>(10.3-17.0)    | <b>15.1</b><br>(11.4-20.3)    | <b>16.6</b><br>(12.2-23.2)    |
| <b>7-day</b>                                                                                                   | <b>3.57</b><br>(3.16-4.12)                 | <b>5.00</b><br>(4.42-5.77)    | <b>6.89</b><br>(6.08-7.97)    | <b>8.45</b><br>(7.40-9.86)    | <b>10.6</b><br>(8.98-12.8)    | <b>12.3</b><br>(10.2-15.1)    | <b>14.0</b><br>(11.4-17.7)    | <b>15.8</b><br>(12.5-20.5)    | <b>18.3</b><br>(13.9-24.8)    | <b>20.3</b><br>(14.9-28.4)    |
| <b>10-day</b>                                                                                                  | <b>3.88</b><br>(3.44-4.48)                 | <b>5.46</b><br>(4.83-6.30)    | <b>7.57</b><br>(6.68-8.76)    | <b>9.32</b><br>(8.15-10.9)    | <b>11.7</b><br>(9.94-14.1)    | <b>13.6</b><br>(11.3-16.8)    | <b>15.6</b><br>(12.6-19.7)    | <b>17.7</b><br>(13.9-22.9)    | <b>20.5</b><br>(15.5-27.7)    | <b>22.8</b><br>(16.7-31.9)    |
| <b>20-day</b>                                                                                                  | <b>4.52</b><br>(4.01-5.22)                 | <b>6.46</b><br>(5.71-7.45)    | <b>9.08</b><br>(8.00-10.5)    | <b>11.3</b><br>(9.86-13.2)    | <b>14.4</b><br>(12.2-17.3)    | <b>16.8</b><br>(14.0-20.7)    | <b>19.4</b><br>(15.7-24.4)    | <b>22.1</b><br>(17.4-28.7)    | <b>26.0</b><br>(19.7-35.0)    | <b>29.1</b><br>(21.3-40.6)    |
| <b>30-day</b>                                                                                                  | <b>5.33</b><br>(4.72-6.14)                 | <b>7.65</b><br>(6.76-8.83)    | <b>10.8</b><br>(9.54-12.5)    | <b>13.5</b><br>(11.8-15.7)    | <b>17.3</b><br>(14.6-20.8)    | <b>20.3</b><br>(16.9-25.0)    | <b>23.6</b><br>(19.1-29.7)    | <b>27.0</b><br>(21.3-35.0)    | <b>31.9</b><br>(24.1-43.0)    | <b>35.9</b><br>(26.2-50.0)    |
| <b>45-day</b>                                                                                                  | <b>6.30</b><br>(5.57-7.26)                 | <b>9.02</b><br>(7.98-10.4)    | <b>12.8</b><br>(11.3-14.8)    | <b>16.0</b><br>(14.0-18.6)    | <b>20.6</b><br>(17.4-24.8)    | <b>24.3</b><br>(20.1-29.9)    | <b>28.2</b><br>(22.9-35.6)    | <b>32.5</b><br>(25.6-42.1)    | <b>38.6</b><br>(29.2-52.0)    | <b>43.6</b><br>(31.9-60.8)    |
| <b>60-day</b>                                                                                                  | <b>7.34</b><br>(6.50-8.46)                 | <b>10.4</b><br>(9.22-12.0)    | <b>14.7</b><br>(13.0-17.0)    | <b>18.4</b><br>(16.1-21.5)    | <b>23.7</b><br>(20.1-28.6)    | <b>28.0</b><br>(23.3-34.5)    | <b>32.7</b><br>(26.5-41.2)    | <b>37.7</b><br>(29.7-48.8)    | <b>45.0</b><br>(34.0-60.7)    | <b>51.0</b><br>(37.3-71.1)    |

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).  
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.  
 Please refer to NOAA Atlas 14 document for more information.

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**PF graphical**

PDS-based depth-duration-frequency (DDF) curves  
Latitude: 34.1007°, Longitude: -117.4979°



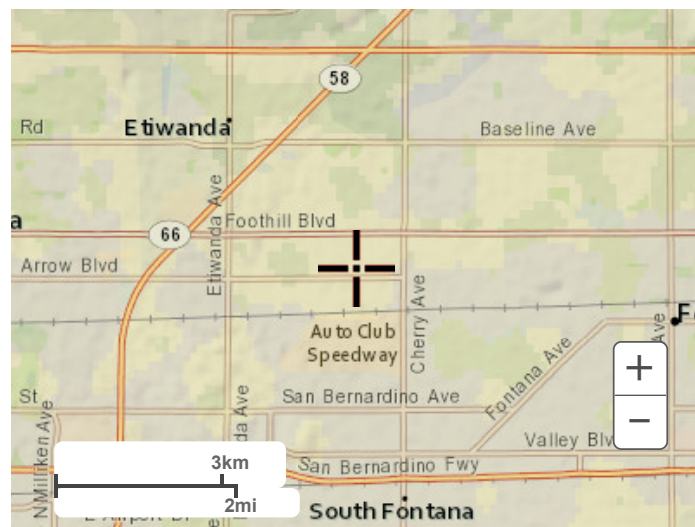
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Dec 6 22:08:17 2023

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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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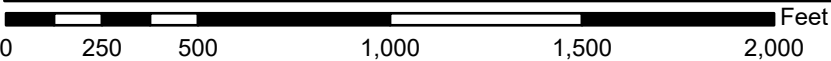
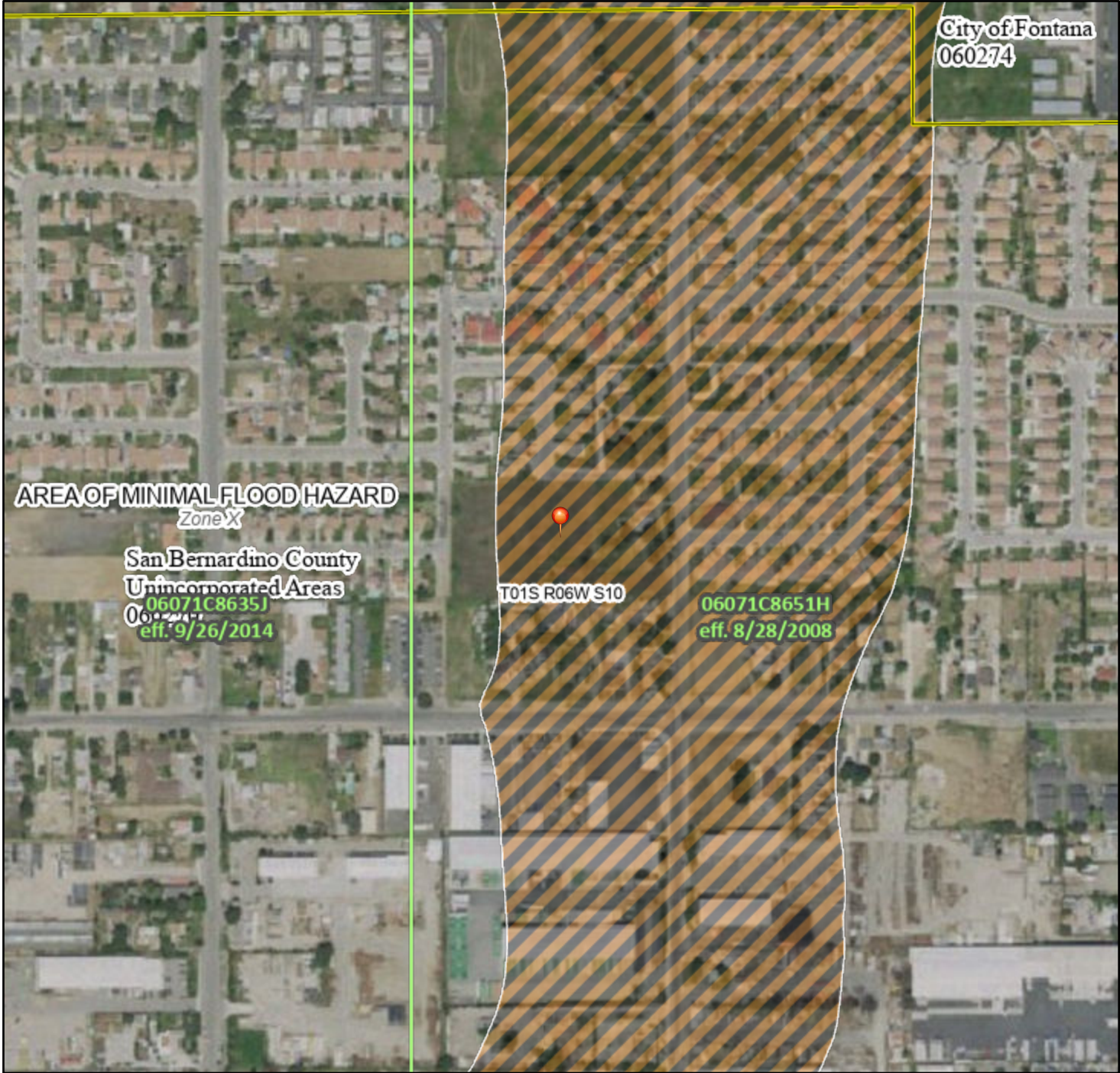
[US Department of Commerce](#)  
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[National Water Center](#)  
1325 East West Highway  
Silver Spring, MD 20910  
Questions?: [HDSC.Questions@noaa.gov](mailto:HDSC.Questions@noaa.gov)

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# National Flood Hazard Layer FIRMMette



117°30'14"W 34°6'17"N



1:6,000

117°29'36"W 34°5'47"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

|                             |  |                                                                                                                                                                   |
|-----------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS  |  | Without Base Flood Elevation (BFE)<br>Zone A, V, A99                                                                                                              |
|                             |  | With BFE or Depth Zone AE, AO, AH, VE, AR                                                                                                                         |
|                             |  | Regulatory Floodway                                                                                                                                               |
| OTHER AREAS OF FLOOD HAZARD |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                             |  | Future Conditions 1% Annual Chance Flood Hazard Zone X                                                                                                            |
|                             |  | Area with Reduced Flood Risk due to Levee. See Notes. Zone X                                                                                                      |
|                             |  | Area with Flood Risk due to Levee Zone D                                                                                                                          |
| OTHER AREAS                 |  | NO SCREEN Area of Minimal Flood Hazard Zone X                                                                                                                     |
|                             |  | Effective LOMRs                                                                                                                                                   |
| GENERAL STRUCTURES          |  | Area of Undetermined Flood Hazard Zone D                                                                                                                          |
|                             |  | Channel, Culvert, or Storm Sewer                                                                                                                                  |
|                             |  | Levee, Dike, or Floodwall                                                                                                                                         |
| OTHER FEATURES              |  | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation                                                                                                 |
|                             |  | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation                                                                                                 |
|                             |  | Coastal Transect                                                                                                                                                  |
|                             |  | Base Flood Elevation Line (BFE)                                                                                                                                   |
|                             |  | Limit of Study                                                                                                                                                    |
|                             |  | Jurisdiction Boundary                                                                                                                                             |
|                             |  | Coastal Transect Baseline                                                                                                                                         |
|                             |  | Profile Baseline                                                                                                                                                  |
| MAP PANELS                  |  | Digital Data Available                                                                                                                                            |
|                             |  | No Digital Data Available                                                                                                                                         |
|                             |  | Unmapped                                                                                                                                                          |



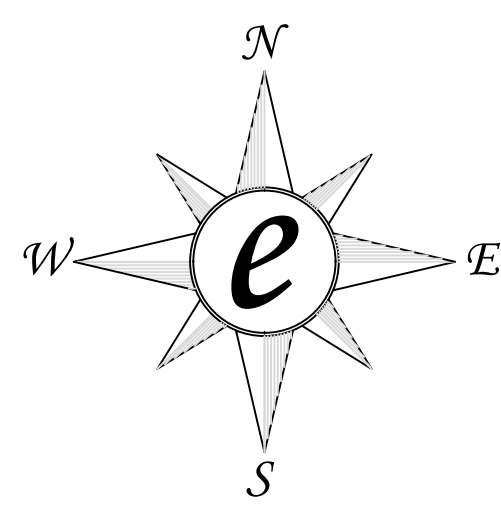
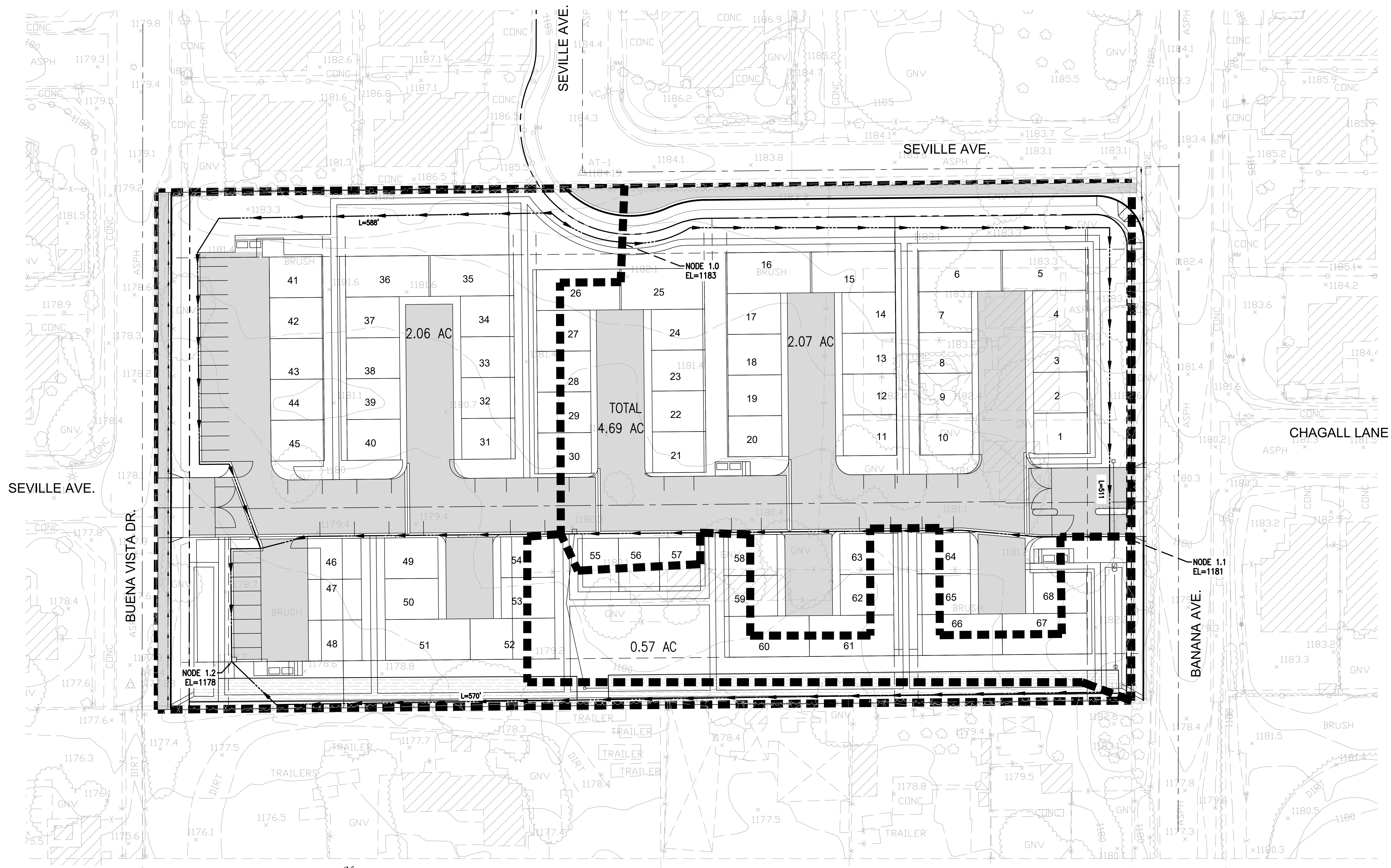
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

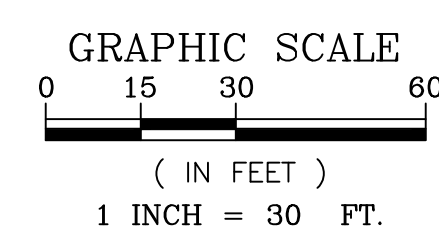
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/7/2024 at 6:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





SCALE: 1"=30'

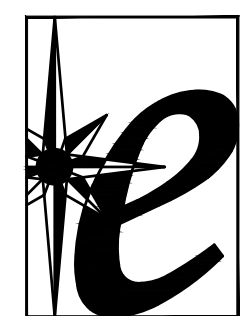


### LEGEND

- DRAINAGE AREA
- FLOW PATH
- L=100' FLOW LENGTH (FT)
- 20.0 AC SUBAREA SIZE (AC)
- NODE # CONCENTRATION POINT W/ SURFACE ELEVATION (FT)
- ELEV.

## Developed Condition Hydrology Map TRACT 20727

BANANA AVE., SAN BERNARDINO COUNTY



ENCOMPASS ASSOCIATES, INC.