# 9th and Palm, Existing Conditions

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | EX100 | 0 | 4.424 | 264.000 | 61.50 |
| System 200 | EX100 | 0 | 3.763 | 260.000 | 51.50 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | EX100 | 0 | 8.169 | 263.000 | 46.41 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | EX100 | 0 | 4.424 | 264.000 | 61.50 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | EX100 | 0 | 4.395 | 280.000 | 27.18 | 13.97 | 1.855 |
| Onsite Pond 1 (IN) | EX100 | 0 | 8.159 | 260.000 | 52.69 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | EX100 | 0 | 8.169 | 263.000 | 46.41 | 13.31 | 0.044 |

# 9th and Palm, Existing Conditions

Subsection: Read Hydrograph
Label: System 100

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 61.50 $ft^3/s$ |
| Time to Peak | 264.000 min |
| Hydrograph Volume | 4.424 ac-ft |

**HYDROGRAPH ORDINATES ($ft^3/s$)**
**Output Time Increment = 22.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 1.90 | 3.50 | 3.70 | 4.00 |
| 110.000 | 4.30 | 4.90 | 5.30 | 6.50 | 7.40 |
| 220.000 | 10.90 | 9.00 | 61.50 | 8.80 | 5.90 |
| 330.000 | 4.60 | 3.80 | 0.00 | (N/A) | (N/A) |

# 9th and Palm, Existing Conditions

Subsection: Read Hydrograph
Label: System 200

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 51.50 ft³/s |
| Time to Peak | 260.000 min |
| Hydrograph Volume | 3.763 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 20.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 2.70 | 2.90 | 3.10 | 3.20 |
| 100.000 | 3.60 | 3.80 | 4.40 | 4.70 | 5.80 |
| 200.000 | 6.60 | 9.70 | 11.10 | 51.50 | 7.80 |
| 300.000 | 5.20 | 4.10 | 3.40 | 3.00 | 0.00 |

# 9th and Palm, Existing Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 46.41 ft³/s |
| Time to Peak | 263.000 min |
| Hydrograph Volume | 8.169 ac-ft |

## HYDROGRAPH ORDINATES (ft³/s)
## Output Time Increment = 1.000 min
## Time on left represents time for first value in each row.

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.16 | 0.38 | 0.60 | 0.84 |
| 5.000 | 1.06 | 1.29 | 1.52 | 1.74 | 1.96 |
| 10.000 | 2.18 | 2.40 | 2.63 | 2.85 | 3.07 |
| 15.000 | 3.29 | 3.51 | 3.73 | 3.95 | 4.18 |
| 20.000 | 4.40 | 4.51 | 4.60 | 4.69 | 4.77 |
| 25.000 | 4.85 | 4.94 | 5.02 | 5.10 | 5.18 |
| 30.000 | 5.27 | 5.35 | 5.43 | 5.52 | 5.60 |
| 35.000 | 5.68 | 5.76 | 5.85 | 5.93 | 6.01 |
| 40.000 | 6.09 | 6.18 | 6.26 | 6.34 | 6.42 |
| 45.000 | 6.46 | 6.48 | 6.49 | 6.51 | 6.53 |
| 50.000 | 6.55 | 6.57 | 6.59 | 6.61 | 6.63 |
| 55.000 | 6.65 | 6.67 | 6.69 | 6.70 | 6.72 |
| 60.000 | 6.74 | 6.76 | 6.77 | 6.79 | 6.80 |
| 65.000 | 6.81 | 6.83 | 6.85 | 6.86 | 6.88 |
| 70.000 | 6.90 | 6.92 | 6.94 | 6.96 | 6.98 |
| 75.000 | 6.99 | 7.01 | 7.03 | 7.05 | 7.07 |
| 80.000 | 7.09 | 7.12 | 7.15 | 7.19 | 7.22 |
| 85.000 | 7.25 | 7.29 | 7.32 | 7.35 | 7.39 |
| 90.000 | 7.42 | 7.46 | 7.49 | 7.52 | 7.56 |
| 95.000 | 7.59 | 7.62 | 7.66 | 7.69 | 7.72 |
| 100.000 | 7.76 | 7.78 | 7.81 | 7.83 | 7.85 |
| 105.000 | 7.88 | 7.90 | 7.92 | 7.95 | 7.97 |
| 110.000 | 8.00 | 8.03 | 8.07 | 8.10 | 8.14 |
| 115.000 | 8.18 | 8.21 | 8.25 | 8.29 | 8.33 |
| 120.000 | 8.36 | 8.42 | 8.48 | 8.53 | 8.59 |
| 125.000 | 8.65 | 8.70 | 8.75 | 8.81 | 8.86 |
| 130.000 | 8.92 | 8.95 | 8.98 | 9.01 | 9.04 |
| 135.000 | 9.08 | 9.11 | 9.15 | 9.18 | 9.22 |
| 140.000 | 9.25 | 9.28 | 9.30 | 9.32 | 9.34 |
| 145.000 | 9.37 | 9.39 | 9.41 | 9.44 | 9.46 |
| 150.000 | 9.48 | 9.51 | 9.53 | 9.55 | 9.58 |
| 155.000 | 9.60 | 9.63 | 9.66 | 9.69 | 9.72 |
| 160.000 | 9.75 | 9.81 | 9.88 | 9.95 | 10.03 |
| 165.000 | 10.10 | 10.18 | 10.25 | 10.33 | 10.41 |
| 170.000 | 10.49 | 10.57 | 10.65 | 10.73 | 10.81 |
| 175.000 | 10.90 | 10.98 | 11.07 | 11.15 | 11.24 |
| 180.000 | 11.33 | 11.40 | 11.47 | 11.54 | 11.61 |

# 9th and Palm, Existing Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 1.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 185.000 | 11.69 | 11.76 | 11.83 | 11.87 | 11.91 |
| 190.000 | 11.95 | 11.99 | 12.03 | 12.08 | 12.12 |
| 195.000 | 12.16 | 12.20 | 12.24 | 12.29 | 12.33 |
| 200.000 | 12.37 | 12.52 | 12.67 | 12.82 | 12.97 |
| 205.000 | 13.13 | 13.28 | 13.43 | 13.59 | 13.74 |
| 210.000 | 13.90 | 14.06 | 14.21 | 14.37 | 14.53 |
| 215.000 | 14.68 | 14.84 | 15.00 | 15.16 | 15.32 |
| 220.000 | 15.48 | 15.57 | 15.65 | 15.73 | 15.81 |
| 225.000 | 15.89 | 15.97 | 16.05 | 16.13 | 16.21 |
| 230.000 | 16.28 | 16.36 | 16.44 | 16.51 | 16.59 |
| 235.000 | 16.67 | 16.74 | 16.82 | 16.90 | 16.97 |
| 240.000 | 17.05 | 18.84 | 20.74 | 22.65 | 24.56 |
| 245.000 | 26.49 | 28.42 | 30.36 | 32.32 | 34.27 |
| 250.000 | 36.22 | 39.80 | 38.71 | 39.24 | 40.40 |
| 255.000 | 41.85 | 43.16 | 44.03 | 44.38 | 44.90 |
| 260.000 | 45.55 | 46.08 | 46.35 | 46.41 | 46.28 |
| 265.000 | 46.00 | 45.59 | 45.06 | 44.54 | 44.12 |
| 270.000 | 42.77 | 42.22 | 42.60 | 43.02 | 43.19 |
| 275.000 | 43.02 | 42.49 | 41.63 | 40.37 | 38.41 |
| 280.000 | 37.81 | 36.75 | 34.42 | 33.32 | 32.07 |
| 285.000 | 30.69 | 29.19 | 27.69 | 26.32 | 25.06 |
| 290.000 | 23.91 | 22.85 | 21.86 | 20.96 | 20.32 |
| 295.000 | 19.87 | 19.43 | 19.00 | 18.57 | 18.16 |
| 300.000 | 17.75 | 17.42 | 17.10 | 16.78 | 16.47 |
| 305.000 | 16.17 | 15.88 | 15.58 | 15.29 | 15.01 |
| 310.000 | 14.73 | 14.47 | 14.21 | 13.96 | 13.71 |
| 315.000 | 13.47 | 13.24 | 13.02 | 12.79 | 12.58 |
| 320.000 | 12.37 | 12.18 | 12.00 | 11.82 | 11.65 |
| 325.000 | 11.48 | 11.31 | 11.24 | 11.21 | 11.17 |
| 330.000 | 11.13 | 11.10 | 11.06 | 11.03 | 10.99 |
| 335.000 | 10.96 | 10.92 | 10.88 | 10.85 | 10.81 |
| 340.000 | 10.78 | 10.75 | 10.73 | 10.71 | 10.69 |
| 345.000 | 10.67 | 10.65 | 10.62 | 10.60 | 10.58 |
| 350.000 | 10.56 | 10.54 | 10.52 | 10.49 | 10.47 |
| 355.000 | 10.45 | 10.43 | 10.40 | 10.38 | 10.36 |
| 360.000 | 10.34 | 10.20 | 10.05 | 9.90 | 9.76 |
| 365.000 | 9.61 | 9.47 | 9.31 | 9.16 | 9.00 |
| 370.000 | 8.85 | 8.69 | 8.54 | 8.38 | 8.22 |
| 375.000 | 8.07 | 7.91 | 7.76 | 7.60 | 7.44 |
| 380.000 | 7.29 | 7.27 | 7.26 | 7.26 | 7.25 |
| 385.000 | 7.25 | 7.24 | 7.24 | 7.23 | 7.22 |
| 390.000 | 7.22 | 7.21 | 7.21 | 7.20 | 7.19 |

# 9th and Palm, Existing Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 1.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 395.000 | 7.19 | 7.18 | 7.18 | 7.17 | 7.16 |
| 400.000 | 7.16 | 7.15 | 7.15 | 7.14 | 7.13 |
| 405.000 | 7.13 | 7.12 | 7.12 | 7.11 | 7.10 |
| 410.000 | 7.10 | 7.09 | 7.09 | 7.08 | 7.08 |
| 415.000 | 7.07 | 7.06 | 7.06 | 7.05 | 7.05 |
| 420.000 | 7.04 | 7.03 | 7.03 | 7.02 | 7.02 |
| 425.000 | 7.01 | 7.00 | 7.00 | 6.99 | 6.99 |
| 430.000 | 6.98 | 6.97 | 6.97 | 6.96 | 6.96 |
| 435.000 | 6.95 | 6.94 | 6.94 | 6.93 | 6.93 |
| 440.000 | 6.92 | 6.92 | 6.91 | 6.90 | 6.90 |
| 445.000 | 6.89 | 6.89 | 6.88 | 6.86 | 6.84 |
| 450.000 | 6.82 | 6.80 | 6.78 | 6.77 | 6.75 |
| 455.000 | 6.73 | 6.71 | 6.69 | 6.67 | 6.66 |
| 460.000 | 6.64 | 6.62 | 6.60 | 6.58 | 6.56 |
| 465.000 | 6.55 | 6.53 | 6.51 | 6.49 | 6.47 |
| 470.000 | 6.45 | 6.44 | 6.42 | 6.40 | 6.38 |
| 475.000 | 6.36 | 6.34 | 6.33 | 6.31 | 6.29 |
| 480.000 | 6.27 | 6.25 | 6.24 | 6.22 | 6.20 |
| 485.000 | 6.18 | 6.16 | 6.15 | 6.13 | 6.11 |
| 490.000 | 6.09 | 6.07 | 6.05 | 6.04 | 6.02 |
| 495.000 | 6.00 | 5.98 | 5.96 | 5.84 | 5.67 |
| 500.000 | 5.49 | (N/A) | (N/A) | (N/A) | (N/A) |

# 9th and Palm, Existing Conditions

Subsection: Elevation-Area Volume Curve
Label: Offsite Pond @ Node 150

Return Event: 100 years
Storm Event:

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 8.84 | 0.0 | 13.000 | 0.000 | 0.000 | 0.000 |
| 10.90 | 0.0 | 13.000 | 39.000 | 0.001 | 0.001 |
| 11.00 | 0.0 | 92.900 | 140.652 | 0.000 | 0.001 |
| 12.00 | 0.0 | 5,267.700 | 6,060.149 | 0.046 | 0.047 |
| 13.00 | 0.0 | 39,000.740 | 58,601.765 | 0.448 | 0.496 |
| 14.00 | 0.0 | 86,599.620 | 183,716.186 | 1.406 | 1.901 |
| 16.00 | 0.0 | 200,765.380 | 419,221.762 | 6.416 | 8.317 |

# 9th and Palm, Existing Conditions

Subsection: Volume Equations | Return Event: 100 years
Label: Offsite Pond @ Node 150 | Storm Event:

**Pond Volume Equations**
*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

**Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))**

| | | |
|---|---|---|
| where: | EL1, EL2 | Lower and upper elevations of the increment |
| | Area1, Area2 | Areas computed for EL1, EL2, respectively |
| | Volume | Incremental volume between EL1 and EL2 |

# 9th and Palm, Existing Conditions

Subsection: Elevation-Area Volume Curve | Return Event: 100 years

Label: Onsite Pond 1 | Storm Event:

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 7.66 | 0.0 | 16.000 | 0.000 | 0.000 | 0.000 |
| 12.30 | 0.0 | 16.000 | 48.000 | 0.002 | 0.002 |
| 13.00 | 0.0 | 1,362.500 | 1,526.148 | 0.008 | 0.010 |
| 13.70 | 0.0 | 9,107.700 | 13,992.875 | 0.075 | 0.085 |
| 14.00 | 0.0 | 14,972.400 | 35,757.605 | 0.082 | 0.167 |
| 16.00 | 0.0 | 37,468.180 | 76,125.777 | 1.165 | 1.332 |

## Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

**Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))**

| | | |
|---|---|---|
| where: | EL1, EL2 | Lower and upper elevations of the increment |
| | Area1, Area2 | Areas computed for EL1, EL2, respectively |
| | Volume | Incremental volume between EL1 and EL2 |

# 9th and Palm, Existing Conditions

Subsection: Outlet Input Data
Label: Outlet#1

Return Event: 100 years
Storm Event:

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 7.66 ft |
| Increment (Headwater) | 0.50 ft |
| Maximum (Headwater) | 16.00 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Culvert-Circular | Culvert - 1 | Forward + Reverse | TW | 7.66 | 16.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

# 9th and Palm, Existing Conditions

Subsection: Outlet Input Data
Label: Outlet#1

Return Event: 100 years
Storm Event:

| Structure ID: Culvert - 1<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.0 in |
| Length | 364.95 ft |
| Length (Computed Barrel) | 364.95 ft |
| Slope (Computed) | 0.004 ft/ft |

| Outlet Control Data | |
|---|---|
| Manning's n | 0.013 |
| Ke | 0.500 |
| Kb | 0.007 |
| Kr | 0.500 |
| Convergence Tolerance | 0.00 ft |

| Inlet Control Data | |
|---|---|
| Equation Form | Form 1 |
| K | 0.0098 |
| M | 2.0000 |
| C | 0.0398 |
| Y | 0.6700 |
| T1 ratio (HW/D) | 1.158 |
| T2 ratio (HW/D) | 1.305 |
| Slope Correction Factor | -0.500 |

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

| | | | |
|---|---|---|---|
| T1 Elevation | 11.13 ft | T1 Flow | 42.85 $ft^3/s$ |
| T2 Elevation | 11.57 ft | T2 Flow | 48.97 $ft^3/s$ |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | 0.00 | 6.21 | 0.00 |
| 7.71 | 0.01 | 6.21 | 0.00 |
| 8.16 | 1.17 | 6.21 | 0.00 |
| 8.21 | 1.39 | 6.21 | 0.00 |
| 8.66 | 4.38 | 6.21 | 0.00 |
| 8.71 | 4.82 | 6.21 | 0.00 |
| 9.16 | 9.43 | 6.21 | 0.00 |
| 9.21 | 10.02 | 6.21 | 0.00 |
| 9.66 | 15.98 | 6.21 | 0.00 |
| 9.71 | 16.68 | 6.21 | 0.00 |
| 10.16 | 23.91 | 6.21 | 0.00 |
| 10.21 | 24.78 | 6.21 | 0.00 |
| 10.66 | 32.78 | 6.21 | 0.00 |
| 10.71 | 33.68 | 6.21 | 0.00 |
| 10.90 | 37.12 | 6.21 | 0.00 |
| 11.16 | 41.60 | 6.21 | 0.00 |
| 11.66 | 48.23 | 6.21 | 0.00 |
| 12.16 | 51.37 | 6.21 | 0.00 |
| 12.66 | 54.43 | 6.21 | 0.00 |
| 13.16 | 57.48 | 6.21 | 0.00 |
| 13.66 | 60.48 | 6.21 | 0.00 |
| 14.16 | 63.37 | 6.21 | 0.00 |
| 14.66 | 66.18 | 6.21 | 0.00 |
| 15.16 | 68.92 | 6.21 | 0.00 |
| 15.66 | 71.57 | 6.21 | 0.00 |
| 16.00 | 73.33 | 6.21 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | 0.00 | 6.71 | 0.00 |
| 7.71 | 0.01 | 6.71 | 0.00 |
| 8.16 | 1.17 | 6.71 | 0.00 |
| 8.21 | 1.39 | 6.71 | 0.00 |
| 8.66 | 4.38 | 6.71 | 0.00 |
| 8.71 | 4.82 | 6.71 | 0.00 |
| 9.16 | 9.43 | 6.71 | 0.00 |
| 9.21 | 10.02 | 6.71 | 0.00 |
| 9.66 | 15.98 | 6.71 | 0.00 |
| 9.71 | 16.68 | 6.71 | 0.00 |
| 10.16 | 23.91 | 6.71 | 0.00 |
| 10.21 | 24.78 | 6.71 | 0.00 |
| 10.66 | 32.78 | 6.71 | 0.00 |
| 10.71 | 33.68 | 6.71 | 0.00 |
| 10.90 | 37.12 | 6.71 | 0.00 |
| 11.16 | 41.60 | 6.71 | 0.00 |
| 11.66 | 48.23 | 6.71 | 0.00 |
| 12.16 | 51.37 | 6.71 | 0.00 |
| 12.66 | 54.43 | 6.71 | 0.00 |
| 13.16 | 57.48 | 6.71 | 0.00 |
| 13.66 | 60.48 | 6.71 | 0.00 |
| 14.16 | 63.37 | 6.71 | 0.00 |
| 14.66 | 66.18 | 6.71 | 0.00 |
| 15.16 | 68.92 | 6.71 | 0.00 |
| 15.66 | 71.57 | 6.71 | 0.00 |
| 16.00 | 73.33 | 6.71 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | 0.00 | 7.21 | 0.00 |
| 7.71 | 0.01 | 7.21 | 0.00 |
| 8.16 | 1.15 | 7.21 | 0.00 |
| 8.21 | 1.40 | 7.21 | 0.00 |
| 8.66 | 4.38 | 7.21 | 0.00 |
| 8.71 | 4.82 | 7.21 | 0.00 |
| 9.16 | 9.43 | 7.21 | 0.00 |
| 9.21 | 10.02 | 7.21 | 0.00 |
| 9.66 | 15.98 | 7.21 | 0.00 |
| 9.71 | 16.68 | 7.21 | 0.00 |
| 10.16 | 23.91 | 7.21 | 0.00 |
| 10.21 | 24.78 | 7.21 | 0.00 |
| 10.66 | 32.78 | 7.21 | 0.00 |
| 10.71 | 33.68 | 7.21 | 0.00 |
| 10.90 | 37.12 | 7.21 | 0.00 |
| 11.16 | 41.60 | 7.21 | 0.00 |
| 11.66 | 48.23 | 7.21 | 0.00 |
| 12.16 | 51.37 | 7.21 | 0.00 |
| 12.66 | 54.43 | 7.21 | 0.00 |
| 13.16 | 57.48 | 7.21 | 0.00 |
| 13.66 | 60.48 | 7.21 | 0.00 |
| 14.16 | 63.37 | 7.21 | 0.00 |
| 14.66 | 66.18 | 7.21 | 0.00 |
| 15.16 | 68.92 | 7.21 | 0.00 |
| 15.66 | 71.57 | 7.21 | 0.00 |
| 16.00 | 73.33 | 7.21 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | 0.00 | 7.66 | 0.00 |
| 7.71 | 0.01 | 7.66 | 0.00 |
| 8.16 | 1.16 | 7.66 | 0.00 |
| 8.21 | 1.40 | 7.66 | 0.00 |
| 8.66 | 4.38 | 7.66 | 0.00 |
| 8.71 | 4.82 | 7.66 | 0.00 |
| 9.16 | 9.43 | 7.66 | 0.00 |
| 9.21 | 10.02 | 7.66 | 0.00 |
| 9.66 | 15.98 | 7.66 | 0.00 |
| 9.71 | 16.68 | 7.66 | 0.00 |
| 10.16 | 23.91 | 7.66 | 0.00 |
| 10.21 | 24.78 | 7.66 | 0.00 |
| 10.66 | 32.78 | 7.66 | 0.00 |
| 10.71 | 33.68 | 7.66 | 0.00 |
| 10.90 | 37.12 | 7.66 | 0.00 |
| 11.16 | 41.60 | 7.66 | 0.00 |
| 11.66 | 48.23 | 7.66 | 0.00 |
| 12.16 | 51.37 | 7.66 | 0.00 |
| 12.66 | 54.43 | 7.66 | 0.00 |
| 13.16 | 57.48 | 7.66 | 0.00 |
| 13.66 | 60.48 | 7.66 | 0.00 |
| 14.16 | 63.37 | 7.66 | 0.00 |
| 14.66 | 66.18 | 7.66 | 0.00 |
| 15.16 | 68.92 | 7.66 | 0.00 |
| 15.66 | 71.57 | 7.66 | 0.00 |
| 16.00 | 73.33 | 7.66 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -0.01 | 7.71 | 0.00 |
| 7.71 | 0.00 | 7.71 | 0.00 |
| 8.16 | 1.15 | 7.71 | 0.00 |
| 8.21 | 1.40 | 7.71 | 0.00 |
| 8.66 | 4.38 | 7.71 | 0.00 |
| 8.71 | 4.82 | 7.71 | 0.00 |
| 9.16 | 9.43 | 7.71 | 0.00 |
| 9.21 | 10.02 | 7.71 | 0.00 |
| 9.66 | 15.98 | 7.71 | 0.00 |
| 9.71 | 16.68 | 7.71 | 0.00 |
| 10.16 | 23.91 | 7.71 | 0.00 |
| 10.21 | 24.78 | 7.71 | 0.00 |
| 10.66 | 32.78 | 7.71 | 0.00 |
| 10.71 | 33.68 | 7.71 | 0.00 |
| 10.90 | 37.12 | 7.71 | 0.00 |
| 11.16 | 41.60 | 7.71 | 0.00 |
| 11.66 | 48.23 | 7.71 | 0.00 |
| 12.16 | 51.37 | 7.71 | 0.00 |
| 12.66 | 54.43 | 7.71 | 0.00 |
| 13.16 | 57.48 | 7.71 | 0.00 |
| 13.66 | 60.48 | 7.71 | 0.00 |
| 14.16 | 63.37 | 7.71 | 0.00 |
| 14.66 | 66.18 | 7.71 | 0.00 |
| 15.16 | 68.92 | 7.71 | 0.00 |
| 15.66 | 71.57 | 7.71 | 0.00 |
| 16.00 | 73.33 | 7.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -1.39 | 8.21 | 0.00 |
| 7.71 | -1.39 | 8.21 | 0.00 |
| 8.16 | -1.03 | 8.21 | 0.00 |
| 8.21 | 0.00 | 8.21 | 0.00 |
| 8.66 | 4.38 | 8.21 | 0.00 |
| 8.71 | 4.82 | 8.21 | 0.00 |
| 9.16 | 9.43 | 8.21 | 0.00 |
| 9.21 | 10.02 | 8.21 | 0.00 |
| 9.66 | 15.98 | 8.21 | 0.00 |
| 9.71 | 16.68 | 8.21 | 0.00 |
| 10.16 | 23.91 | 8.21 | 0.00 |
| 10.21 | 24.81 | 8.21 | 0.00 |
| 10.66 | 32.78 | 8.21 | 0.00 |
| 10.71 | 33.68 | 8.21 | 0.00 |
| 10.90 | 37.12 | 8.21 | 0.00 |
| 11.16 | 41.60 | 8.21 | 0.00 |
| 11.66 | 48.23 | 8.21 | 0.00 |
| 12.16 | 51.37 | 8.21 | 0.00 |
| 12.66 | 54.43 | 8.21 | 0.00 |
| 13.16 | 57.48 | 8.21 | 0.00 |
| 13.66 | 60.48 | 8.21 | 0.00 |
| 14.16 | 63.37 | 8.21 | 0.00 |
| 14.66 | 66.18 | 8.21 | 0.00 |
| 15.16 | 68.92 | 8.21 | 0.00 |
| 15.66 | 71.57 | 8.21 | 0.00 |
| 16.00 | 73.33 | 8.21 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -4.86 | 8.71 | 0.00 |
| 7.71 | -4.86 | 8.71 | 0.00 |
| 8.16 | -4.86 | 8.71 | 0.00 |
| 8.21 | -4.86 | 8.71 | 0.00 |
| 8.66 | -2.67 | 8.71 | 0.00 |
| 8.71 | 0.00 | 8.71 | 0.00 |
| 9.16 | 9.73 | 8.71 | 0.00 |
| 9.21 | 10.28 | 8.71 | 0.00 |
| 9.66 | 16.01 | 8.71 | 0.00 |
| 9.71 | 16.68 | 8.71 | 0.00 |
| 10.16 | 23.93 | 8.71 | 0.00 |
| 10.21 | 24.74 | 8.71 | 0.00 |
| 10.66 | 32.78 | 8.71 | 0.00 |
| 10.71 | 33.70 | 8.71 | 0.00 |
| 10.90 | 37.12 | 8.71 | 0.00 |
| 11.16 | 41.54 | 8.71 | 0.00 |
| 11.66 | 48.09 | 8.71 | 0.00 |
| 12.16 | 51.25 | 8.71 | 0.00 |
| 12.66 | 54.37 | 8.71 | 0.00 |
| 13.16 | 57.47 | 8.71 | 0.00 |
| 13.66 | 60.48 | 8.71 | 0.00 |
| 14.16 | 63.37 | 8.71 | 0.00 |
| 14.66 | 66.18 | 8.71 | 0.00 |
| 15.16 | 68.92 | 8.71 | 0.00 |
| 15.66 | 71.57 | 8.71 | 0.00 |
| 16.00 | 73.33 | 8.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -9.87 | 9.21 | 0.00 |
| 7.71 | -9.87 | 9.21 | 0.00 |
| 8.16 | -9.87 | 9.21 | 0.00 |
| 8.21 | -9.87 | 9.21 | 0.00 |
| 8.66 | -9.87 | 9.21 | 0.00 |
| 8.71 | -9.85 | 9.21 | 0.00 |
| 9.16 | -4.29 | 9.21 | 0.00 |
| 9.21 | 0.00 | 9.21 | 0.00 |
| 9.66 | 15.38 | 9.21 | 0.00 |
| 9.71 | 16.33 | 9.21 | 0.00 |
| 10.16 | 24.14 | 9.21 | 0.00 |
| 10.21 | 24.97 | 9.21 | 0.00 |
| 10.66 | 32.56 | 9.21 | 0.00 |
| 10.71 | 33.40 | 9.21 | 0.00 |
| 10.90 | 36.39 | 9.21 | 0.00 |
| 11.16 | 40.00 | 9.21 | 0.00 |
| 11.66 | 43.64 | 9.21 | 0.00 |
| 12.16 | 47.88 | 9.21 | 0.00 |
| 12.66 | 51.77 | 9.21 | 0.00 |
| 13.16 | 55.40 | 9.21 | 0.00 |
| 13.66 | 58.80 | 9.21 | 0.00 |
| 14.16 | 62.01 | 9.21 | 0.00 |
| 14.66 | 65.08 | 9.21 | 0.00 |
| 15.16 | 68.00 | 9.21 | 0.00 |
| 15.66 | 70.79 | 9.21 | 0.00 |
| 16.00 | 72.63 | 9.21 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -15.57 | 9.71 | 0.00 |
| 7.71 | -15.57 | 9.71 | 0.00 |
| 8.16 | -15.57 | 9.71 | 0.00 |
| 8.21 | -15.57 | 9.71 | 0.00 |
| 8.66 | -15.57 | 9.71 | 0.00 |
| 8.71 | -15.57 | 9.71 | 0.00 |
| 9.16 | -14.93 | 9.71 | 0.00 |
| 9.21 | -14.59 | 9.71 | 0.00 |
| 9.66 | -5.53 | 9.71 | 0.00 |
| 9.71 | 0.00 | 9.71 | 0.00 |
| 10.16 | 18.29 | 9.71 | 0.00 |
| 10.21 | 19.35 | 9.71 | 0.00 |
| 10.66 | 27.25 | 9.71 | 0.00 |
| 10.71 | 27.99 | 9.71 | 0.00 |
| 10.90 | 30.57 | 9.71 | 0.00 |
| 11.16 | 33.58 | 9.71 | 0.00 |
| 11.66 | 38.92 | 9.71 | 0.00 |
| 12.16 | 43.63 | 9.71 | 0.00 |
| 12.66 | 47.88 | 9.71 | 0.00 |
| 13.16 | 51.78 | 9.71 | 0.00 |
| 13.66 | 55.40 | 9.71 | 0.00 |
| 14.16 | 58.80 | 9.71 | 0.00 |
| 14.66 | 62.01 | 9.71 | 0.00 |
| 15.16 | 65.08 | 9.71 | 0.00 |
| 15.66 | 67.99 | 9.71 | 0.00 |
| 16.00 | 69.91 | 9.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -21.20 | 10.21 | 0.00 |
| 7.71 | -21.20 | 10.21 | 0.00 |
| 8.16 | -21.20 | 10.21 | 0.00 |
| 8.21 | -21.20 | 10.21 | 0.00 |
| 8.66 | -21.20 | 10.21 | 0.00 |
| 8.71 | -21.20 | 10.21 | 0.00 |
| 9.16 | -21.20 | 10.21 | 0.00 |
| 9.21 | -21.17 | 10.21 | 0.00 |
| 9.66 | -18.45 | 10.21 | 0.00 |
| 9.71 | -17.83 | 10.21 | 0.00 |
| 10.16 | -6.10 | 10.21 | 0.00 |
| 10.21 | 0.00 | 10.21 | 0.00 |
| 10.66 | 18.73 | 10.21 | 0.00 |
| 10.71 | 19.76 | 10.21 | 0.00 |
| 10.90 | 23.14 | 10.21 | 0.00 |
| 11.16 | 27.17 | 10.21 | 0.00 |
| 11.66 | 33.57 | 10.21 | 0.00 |
| 12.16 | 38.92 | 10.21 | 0.00 |
| 12.66 | 43.63 | 10.21 | 0.00 |
| 13.16 | 47.88 | 10.21 | 0.00 |
| 13.66 | 51.78 | 10.21 | 0.00 |
| 14.16 | 55.40 | 10.21 | 0.00 |
| 14.66 | 58.80 | 10.21 | 0.00 |
| 15.16 | 62.01 | 10.21 | 0.00 |
| 15.66 | 65.07 | 10.21 | 0.00 |
| 16.00 | 67.07 | 10.21 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -26.49 | 10.71 | 0.00 |
| 7.71 | -26.49 | 10.71 | 0.00 |
| 8.16 | -26.49 | 10.71 | 0.00 |
| 8.21 | -26.49 | 10.71 | 0.00 |
| 8.66 | -26.49 | 10.71 | 0.00 |
| 8.71 | -26.49 | 10.71 | 0.00 |
| 9.16 | -26.49 | 10.71 | 0.00 |
| 9.21 | -26.49 | 10.71 | 0.00 |
| 9.66 | -25.58 | 10.71 | 0.00 |
| 9.71 | -25.27 | 10.71 | 0.00 |
| 10.16 | -20.22 | 10.71 | 0.00 |
| 10.21 | -19.36 | 10.71 | 0.00 |
| 10.66 | -6.29 | 10.71 | 0.00 |
| 10.71 | 0.00 | 10.71 | 0.00 |
| 10.90 | 12.14 | 10.71 | 0.00 |
| 11.16 | 18.69 | 10.71 | 0.00 |
| 11.66 | 27.16 | 10.71 | 0.00 |
| 12.16 | 33.57 | 10.71 | 0.00 |
| 12.66 | 38.92 | 10.71 | 0.00 |
| 13.16 | 43.63 | 10.71 | 0.00 |
| 13.66 | 47.88 | 10.71 | 0.00 |
| 14.16 | 51.78 | 10.71 | 0.00 |
| 14.66 | 55.40 | 10.71 | 0.00 |
| 15.16 | 58.80 | 10.71 | 0.00 |
| 15.66 | 62.02 | 10.71 | 0.00 |
| 16.00 | 64.11 | 10.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 7.66 | -28.40 | 10.90 | 0.00 |
| 7.71 | -28.40 | 10.90 | 0.00 |
| 8.16 | -28.40 | 10.90 | 0.00 |
| 8.21 | -28.40 | 10.90 | 0.00 |
| 8.66 | -28.40 | 10.90 | 0.00 |
| 8.71 | -28.40 | 10.90 | 0.00 |
| 9.16 | -28.40 | 10.90 | 0.00 |
| 9.21 | -28.40 | 10.90 | 0.00 |
| 9.66 | -27.82 | 10.90 | 0.00 |
| 9.71 | -27.59 | 10.90 | 0.00 |
| 10.16 | -23.44 | 10.90 | 0.00 |
| 10.21 | -22.75 | 10.90 | 0.00 |
| 10.66 | -13.64 | 10.90 | 0.00 |
| 10.71 | -12.16 | 10.90 | 0.00 |
| 10.90 | 0.00 | 10.90 | 0.00 |
| 11.16 | 14.22 | 10.90 | 0.00 |
| 11.66 | 24.30 | 10.90 | 0.00 |
| 12.16 | 31.30 | 10.90 | 0.00 |
| 12.66 | 36.98 | 10.90 | 0.00 |
| 13.16 | 41.91 | 10.90 | 0.00 |
| 13.66 | 46.31 | 10.90 | 0.00 |
| 14.16 | 50.33 | 10.90 | 0.00 |
| 14.66 | 54.05 | 10.90 | 0.00 |
| 15.16 | 57.53 | 10.90 | 0.00 |
| 15.66 | 60.81 | 10.90 | 0.00 |
| 16.00 | 62.95 | 10.90 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Existing Conditions

Subsection: Outlet Input Data
Label: Outlet#2

Return Event: 100 years
Storm Event:

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 8.84 ft |
| Increment (Headwater) | 0.50 ft |
| Maximum (Headwater) | 16.00 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Culvert-Circular | CV2 | Forward + Reverse | TW | 8.84 | 16.00 |
| Rectangular Weir | Weir - 1 | Forward + Reverse | TW | 13.70 | 16.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

# 9th and Palm, Existing Conditions

Subsection: Outlet Input Data
Label: Outlet#2

Return Event: 100 years
Storm Event:

| Structure ID: CV2<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 18.0 in |
| Length | 231.00 ft |
| Length (Computed Barrel) | 231.00 ft |
| Slope (Computed) | 0.004 ft/ft |

| Outlet Control Data | |
|---|---|
| Manning's n | 0.024 |
| Ke | 0.500 |
| Kb | 0.062 |
| Kr | 0.500 |
| Convergence Tolerance | 0.00 ft |

| Inlet Control Data | |
|---|---|
| Equation Form | Form 1 |
| K | 0.0078 |
| M | 2.0000 |
| C | 0.0379 |
| Y | 0.6900 |
| T1 ratio (HW/D) | 1.134 |
| T2 ratio (HW/D) | 1.295 |
| Slope Correction Factor | -0.500 |

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

| | | | |
|---|---|---|---|
| T1 Elevation | 10.54 ft | T1 Flow | 7.58 $ft^3/s$ |
| T2 Elevation | 10.78 ft | T2 Flow | 8.66 $ft^3/s$ |

# 9th and Palm, Existing Conditions

Subsection: Outlet Input Data
Label: Outlet#2

Return Event: 100 years
Storm Event:

| Structure ID: Weir - 1<br>Structure Type: Rectangular Weir | |
|---|---|
| Number of Openings | 1 |
| Elevation | 13.70 ft |
| Weir Length | 55.00 ft |
| Weir Coefficient | 2.60 (ft^0.5)/s |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 7.66 | 0.00 |
| 9.16 | 0.28 | 7.66 | 0.00 |
| 9.34 | 0.66 | 7.66 | 0.00 |
| 9.66 | 1.64 | 7.66 | 0.00 |
| 9.84 | 2.28 | 7.66 | 0.00 |
| 10.16 | 3.42 | 7.66 | 0.00 |
| 10.34 | 3.95 | 7.66 | 0.00 |
| 10.66 | 4.46 | 7.66 | 0.00 |
| 10.84 | 4.68 | 7.66 | 0.00 |
| 11.16 | 5.06 | 7.66 | 0.00 |
| 11.34 | 5.26 | 7.66 | 0.00 |
| 11.66 | 5.61 | 7.66 | 0.00 |
| 11.84 | 5.80 | 7.66 | 0.00 |
| 12.16 | 6.11 | 7.66 | 0.00 |
| 12.34 | 6.29 | 7.66 | 0.00 |
| 12.66 | 6.58 | 7.66 | 0.00 |
| 12.84 | 6.74 | 7.66 | 0.00 |
| 13.16 | 7.02 | 7.66 | 0.00 |
| 13.34 | 7.17 | 7.66 | 0.00 |
| 13.66 | 7.44 | 7.66 | 0.00 |
| 13.70 | 7.47 | 7.66 | 0.00 |
| 13.84 | 15.07 | 7.66 | 0.00 |
| 14.16 | 52.45 | 7.66 | 0.00 |
| 14.34 | 81.19 | 7.66 | 0.00 |
| 14.66 | 142.74 | 7.66 | 0.00 |
| 14.84 | 182.42 | 7.66 | 0.00 |
| 15.16 | 260.87 | 7.66 | 0.00 |
| 15.34 | 309.06 | 7.66 | 0.00 |
| 15.66 | 401.34 | 7.66 | 0.00 |
| 15.84 | 456.74 | 7.66 | 0.00 |
| 16.00 | 507.98 | 7.66 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.03 | 0.00 |
| 9.16 | 0.28 | 8.03 | 0.00 |
| 9.34 | 0.66 | 8.03 | 0.00 |
| 9.66 | 1.64 | 8.03 | 0.00 |
| 9.84 | 2.28 | 8.03 | 0.00 |
| 10.16 | 3.42 | 8.03 | 0.00 |
| 10.34 | 3.95 | 8.03 | 0.00 |
| 10.66 | 4.46 | 8.03 | 0.00 |
| 10.84 | 4.68 | 8.03 | 0.00 |
| 11.16 | 5.06 | 8.03 | 0.00 |
| 11.34 | 5.26 | 8.03 | 0.00 |
| 11.66 | 5.61 | 8.03 | 0.00 |
| 11.84 | 5.80 | 8.03 | 0.00 |
| 12.16 | 6.11 | 8.03 | 0.00 |
| 12.34 | 6.29 | 8.03 | 0.00 |
| 12.66 | 6.58 | 8.03 | 0.00 |
| 12.84 | 6.74 | 8.03 | 0.00 |
| 13.16 | 7.02 | 8.03 | 0.00 |
| 13.34 | 7.17 | 8.03 | 0.00 |
| 13.66 | 7.44 | 8.03 | 0.00 |
| 13.70 | 7.47 | 8.03 | 0.00 |
| 13.84 | 15.07 | 8.03 | 0.00 |
| 14.16 | 52.45 | 8.03 | 0.00 |
| 14.34 | 81.19 | 8.03 | 0.00 |
| 14.66 | 142.74 | 8.03 | 0.00 |
| 14.84 | 182.42 | 8.03 | 0.00 |
| 15.16 | 260.87 | 8.03 | 0.00 |
| 15.34 | 309.06 | 8.03 | 0.00 |
| 15.66 | 401.34 | 8.03 | 0.00 |
| 15.84 | 456.74 | 8.03 | 0.00 |
| 16.00 | 507.98 | 8.03 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.16 | 0.00 |
| 9.16 | 0.28 | 8.16 | 0.00 |
| 9.34 | 0.66 | 8.16 | 0.00 |
| 9.66 | 1.64 | 8.16 | 0.00 |
| 9.84 | 2.28 | 8.16 | 0.00 |
| 10.16 | 3.42 | 8.16 | 0.00 |
| 10.34 | 3.95 | 8.16 | 0.00 |
| 10.66 | 4.46 | 8.16 | 0.00 |
| 10.84 | 4.68 | 8.16 | 0.00 |
| 11.16 | 5.06 | 8.16 | 0.00 |
| 11.34 | 5.26 | 8.16 | 0.00 |
| 11.66 | 5.61 | 8.16 | 0.00 |
| 11.84 | 5.80 | 8.16 | 0.00 |
| 12.16 | 6.11 | 8.16 | 0.00 |
| 12.34 | 6.29 | 8.16 | 0.00 |
| 12.66 | 6.58 | 8.16 | 0.00 |
| 12.84 | 6.74 | 8.16 | 0.00 |
| 13.16 | 7.02 | 8.16 | 0.00 |
| 13.34 | 7.17 | 8.16 | 0.00 |
| 13.66 | 7.44 | 8.16 | 0.00 |
| 13.70 | 7.47 | 8.16 | 0.00 |
| 13.84 | 15.07 | 8.16 | 0.00 |
| 14.16 | 52.45 | 8.16 | 0.00 |
| 14.34 | 81.19 | 8.16 | 0.00 |
| 14.66 | 142.74 | 8.16 | 0.00 |
| 14.84 | 182.42 | 8.16 | 0.00 |
| 15.16 | 260.87 | 8.16 | 0.00 |
| 15.34 | 309.06 | 8.16 | 0.00 |
| 15.66 | 401.34 | 8.16 | 0.00 |
| 15.84 | 456.74 | 8.16 | 0.00 |
| 16.00 | 507.98 | 8.16 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.66 | 0.00 |
| 9.16 | 0.27 | 8.66 | 0.00 |
| 9.34 | 0.66 | 8.66 | 0.00 |
| 9.66 | 1.64 | 8.66 | 0.00 |
| 9.84 | 2.28 | 8.66 | 0.00 |
| 10.16 | 3.42 | 8.66 | 0.00 |
| 10.34 | 3.95 | 8.66 | 0.00 |
| 10.66 | 4.46 | 8.66 | 0.00 |
| 10.84 | 4.68 | 8.66 | 0.00 |
| 11.16 | 5.06 | 8.66 | 0.00 |
| 11.34 | 5.26 | 8.66 | 0.00 |
| 11.66 | 5.61 | 8.66 | 0.00 |
| 11.84 | 5.80 | 8.66 | 0.00 |
| 12.16 | 6.11 | 8.66 | 0.00 |
| 12.34 | 6.29 | 8.66 | 0.00 |
| 12.66 | 6.58 | 8.66 | 0.00 |
| 12.84 | 6.74 | 8.66 | 0.00 |
| 13.16 | 7.02 | 8.66 | 0.00 |
| 13.34 | 7.17 | 8.66 | 0.00 |
| 13.66 | 7.44 | 8.66 | 0.00 |
| 13.70 | 7.47 | 8.66 | 0.00 |
| 13.84 | 15.07 | 8.66 | 0.00 |
| 14.16 | 52.45 | 8.66 | 0.00 |
| 14.34 | 81.19 | 8.66 | 0.00 |
| 14.66 | 142.74 | 8.66 | 0.00 |
| 14.84 | 182.42 | 8.66 | 0.00 |
| 15.16 | 260.87 | 8.66 | 0.00 |
| 15.34 | 309.06 | 8.66 | 0.00 |
| 15.66 | 401.34 | 8.66 | 0.00 |
| 15.84 | 456.74 | 8.66 | 0.00 |
| 16.00 | 507.98 | 8.66 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.84 | 0.00 |
| 9.16 | 0.27 | 8.84 | 0.00 |
| 9.34 | 0.66 | 8.84 | 0.00 |
| 9.66 | 1.63 | 8.84 | 0.00 |
| 9.84 | 2.28 | 8.84 | 0.00 |
| 10.16 | 3.42 | 8.84 | 0.00 |
| 10.34 | 3.95 | 8.84 | 0.00 |
| 10.66 | 4.46 | 8.84 | 0.00 |
| 10.84 | 4.68 | 8.84 | 0.00 |
| 11.16 | 5.06 | 8.84 | 0.00 |
| 11.34 | 5.26 | 8.84 | 0.00 |
| 11.66 | 5.61 | 8.84 | 0.00 |
| 11.84 | 5.80 | 8.84 | 0.00 |
| 12.16 | 6.11 | 8.84 | 0.00 |
| 12.34 | 6.29 | 8.84 | 0.00 |
| 12.66 | 6.58 | 8.84 | 0.00 |
| 12.84 | 6.74 | 8.84 | 0.00 |
| 13.16 | 7.02 | 8.84 | 0.00 |
| 13.34 | 7.17 | 8.84 | 0.00 |
| 13.66 | 7.44 | 8.84 | 0.00 |
| 13.70 | 7.47 | 8.84 | 0.00 |
| 13.84 | 15.07 | 8.84 | 0.00 |
| 14.16 | 52.45 | 8.84 | 0.00 |
| 14.34 | 81.19 | 8.84 | 0.00 |
| 14.66 | 142.74 | 8.84 | 0.00 |
| 14.84 | 182.42 | 8.84 | 0.00 |
| 15.16 | 260.87 | 8.84 | 0.00 |
| 15.34 | 309.06 | 8.84 | 0.00 |
| 15.66 | 401.34 | 8.84 | 0.00 |
| 15.84 | 456.74 | 8.84 | 0.00 |
| 16.00 | 507.98 | 8.84 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -0.22 | 9.16 | 0.00 |
| 9.16 | 0.00 | 9.16 | 0.00 |
| 9.34 | 0.58 | 9.16 | 0.00 |
| 9.66 | 1.58 | 9.16 | 0.00 |
| 9.84 | 2.22 | 9.16 | 0.00 |
| 10.16 | 3.36 | 9.16 | 0.00 |
| 10.34 | 3.89 | 9.16 | 0.00 |
| 10.66 | 4.38 | 9.16 | 0.00 |
| 10.84 | 4.61 | 9.16 | 0.00 |
| 11.16 | 5.01 | 9.16 | 0.00 |
| 11.34 | 5.22 | 9.16 | 0.00 |
| 11.66 | 5.57 | 9.16 | 0.00 |
| 11.84 | 5.77 | 9.16 | 0.00 |
| 12.16 | 6.10 | 9.16 | 0.00 |
| 12.34 | 6.27 | 9.16 | 0.00 |
| 12.66 | 6.58 | 9.16 | 0.00 |
| 12.84 | 6.74 | 9.16 | 0.00 |
| 13.16 | 7.02 | 9.16 | 0.00 |
| 13.34 | 7.18 | 9.16 | 0.00 |
| 13.66 | 7.44 | 9.16 | 0.00 |
| 13.70 | 7.47 | 9.16 | 0.00 |
| 13.84 | 15.08 | 9.16 | 0.00 |
| 14.16 | 52.45 | 9.16 | 0.00 |
| 14.34 | 81.19 | 9.16 | 0.00 |
| 14.66 | 142.71 | 9.16 | 0.00 |
| 14.84 | 182.42 | 9.16 | 0.00 |
| 15.16 | 260.87 | 9.16 | 0.00 |
| 15.34 | 309.06 | 9.16 | 0.00 |
| 15.66 | 401.34 | 9.16 | 0.00 |
| 15.84 | 456.74 | 9.16 | 0.00 |
| 16.00 | 507.98 | 9.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -1.24 | 9.66 | 0.00 |
| 9.16 | -1.24 | 9.66 | 0.00 |
| 9.34 | -1.23 | 9.66 | 0.00 |
| 9.66 | 0.00 | 9.66 | 0.00 |
| 9.84 | 1.43 | 9.66 | 0.00 |
| 10.16 | 2.58 | 9.66 | 0.00 |
| 10.34 | 2.97 | 9.66 | 0.00 |
| 10.66 | 3.56 | 9.66 | 0.00 |
| 10.84 | 3.87 | 9.66 | 0.00 |
| 11.16 | 4.36 | 9.66 | 0.00 |
| 11.34 | 4.62 | 9.66 | 0.00 |
| 11.66 | 5.04 | 9.66 | 0.00 |
| 11.84 | 5.26 | 9.66 | 0.00 |
| 12.16 | 5.63 | 9.66 | 0.00 |
| 12.34 | 5.83 | 9.66 | 0.00 |
| 12.66 | 6.17 | 9.66 | 0.00 |
| 12.84 | 6.35 | 9.66 | 0.00 |
| 13.16 | 6.66 | 9.66 | 0.00 |
| 13.34 | 6.83 | 9.66 | 0.00 |
| 13.66 | 7.12 | 9.66 | 0.00 |
| 13.70 | 7.16 | 9.66 | 0.00 |
| 13.84 | 14.77 | 9.66 | 0.00 |
| 14.16 | 52.17 | 9.66 | 0.00 |
| 14.34 | 80.92 | 9.66 | 0.00 |
| 14.66 | 142.47 | 9.66 | 0.00 |
| 14.84 | 182.16 | 9.66 | 0.00 |
| 15.16 | 260.62 | 9.66 | 0.00 |
| 15.34 | 308.82 | 9.66 | 0.00 |
| 15.66 | 401.12 | 9.66 | 0.00 |
| 15.84 | 456.52 | 9.66 | 0.00 |
| 16.00 | 507.77 | 9.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -2.36 | 10.16 | 0.00 |
| 9.16 | -2.36 | 10.16 | 0.00 |
| 9.34 | -2.36 | 10.16 | 0.00 |
| 9.66 | -2.25 | 10.16 | 0.00 |
| 9.84 | -1.94 | 10.16 | 0.00 |
| 10.16 | 0.00 | 10.16 | 0.00 |
| 10.34 | 1.51 | 10.16 | 0.00 |
| 10.66 | 2.52 | 10.16 | 0.00 |
| 10.84 | 2.94 | 10.16 | 0.00 |
| 11.16 | 3.56 | 10.16 | 0.00 |
| 11.34 | 3.87 | 10.16 | 0.00 |
| 11.66 | 4.36 | 10.16 | 0.00 |
| 11.84 | 4.62 | 10.16 | 0.00 |
| 12.16 | 5.04 | 10.16 | 0.00 |
| 12.34 | 5.26 | 10.16 | 0.00 |
| 12.66 | 5.63 | 10.16 | 0.00 |
| 12.84 | 5.83 | 10.16 | 0.00 |
| 13.16 | 6.17 | 10.16 | 0.00 |
| 13.34 | 6.35 | 10.16 | 0.00 |
| 13.66 | 6.66 | 10.16 | 0.00 |
| 13.70 | 6.70 | 10.16 | 0.00 |
| 13.84 | 14.32 | 10.16 | 0.00 |
| 14.16 | 51.74 | 10.16 | 0.00 |
| 14.34 | 80.50 | 10.16 | 0.00 |
| 14.66 | 142.06 | 10.16 | 0.00 |
| 14.84 | 181.76 | 10.16 | 0.00 |
| 15.16 | 260.23 | 10.16 | 0.00 |
| 15.34 | 308.44 | 10.16 | 0.00 |
| 15.66 | 400.75 | 10.16 | 0.00 |
| 15.84 | 456.16 | 10.16 | 0.00 |
| 16.00 | 507.41 | 10.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -3.27 | 10.66 | 0.00 |
| 9.16 | -3.27 | 10.66 | 0.00 |
| 9.34 | -3.27 | 10.66 | 0.00 |
| 9.66 | -3.25 | 10.66 | 0.00 |
| 9.84 | -3.11 | 10.66 | 0.00 |
| 10.16 | -2.53 | 10.66 | 0.00 |
| 10.34 | -2.01 | 10.66 | 0.00 |
| 10.66 | 0.00 | 10.66 | 0.00 |
| 10.84 | 1.51 | 10.66 | 0.00 |
| 11.16 | 2.52 | 10.66 | 0.00 |
| 11.34 | 2.94 | 10.66 | 0.00 |
| 11.66 | 3.56 | 10.66 | 0.00 |
| 11.84 | 3.87 | 10.66 | 0.00 |
| 12.16 | 4.36 | 10.66 | 0.00 |
| 12.34 | 4.62 | 10.66 | 0.00 |
| 12.66 | 5.04 | 10.66 | 0.00 |
| 12.84 | 5.26 | 10.66 | 0.00 |
| 13.16 | 5.63 | 10.66 | 0.00 |
| 13.34 | 5.83 | 10.66 | 0.00 |
| 13.66 | 6.17 | 10.66 | 0.00 |
| 13.70 | 6.21 | 10.66 | 0.00 |
| 13.84 | 13.84 | 10.66 | 0.00 |
| 14.16 | 51.28 | 10.66 | 0.00 |
| 14.34 | 80.05 | 10.66 | 0.00 |
| 14.66 | 141.63 | 10.66 | 0.00 |
| 14.84 | 181.34 | 10.66 | 0.00 |
| 15.16 | 259.82 | 10.66 | 0.00 |
| 15.34 | 308.04 | 10.66 | 0.00 |
| 15.66 | 400.36 | 10.66 | 0.00 |
| 15.84 | 455.78 | 10.66 | 0.00 |
| 16.00 | 507.03 | 10.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -4.02 | 11.16 | 0.00 |
| 9.16 | -4.02 | 11.16 | 0.00 |
| 9.34 | -4.02 | 11.16 | 0.00 |
| 9.66 | -4.03 | 11.16 | 0.00 |
| 9.84 | -3.96 | 11.16 | 0.00 |
| 10.16 | -3.56 | 11.16 | 0.00 |
| 10.34 | -3.22 | 11.16 | 0.00 |
| 10.66 | -2.52 | 11.16 | 0.00 |
| 10.84 | -2.01 | 11.16 | 0.00 |
| 11.16 | 0.00 | 11.16 | 0.00 |
| 11.34 | 1.51 | 11.16 | 0.00 |
| 11.66 | 2.52 | 11.16 | 0.00 |
| 11.84 | 2.94 | 11.16 | 0.00 |
| 12.16 | 3.56 | 11.16 | 0.00 |
| 12.34 | 3.87 | 11.16 | 0.00 |
| 12.66 | 4.36 | 11.16 | 0.00 |
| 12.84 | 4.62 | 11.16 | 0.00 |
| 13.16 | 5.04 | 11.16 | 0.00 |
| 13.34 | 5.26 | 11.16 | 0.00 |
| 13.66 | 5.63 | 11.16 | 0.00 |
| 13.70 | 5.68 | 11.16 | 0.00 |
| 13.84 | 13.32 | 11.16 | 0.00 |
| 14.16 | 50.78 | 11.16 | 0.00 |
| 14.34 | 79.57 | 11.16 | 0.00 |
| 14.66 | 141.17 | 11.16 | 0.00 |
| 14.84 | 180.89 | 11.16 | 0.00 |
| 15.16 | 259.39 | 11.16 | 0.00 |
| 15.34 | 307.61 | 11.16 | 0.00 |
| 15.66 | 399.95 | 11.16 | 0.00 |
| 15.84 | 455.37 | 11.16 | 0.00 |
| 16.00 | 506.64 | 11.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -4.68 | 11.66 | 0.00 |
| 9.16 | -4.68 | 11.66 | 0.00 |
| 9.34 | -4.68 | 11.66 | 0.00 |
| 9.66 | -4.68 | 11.66 | 0.00 |
| 9.84 | -4.65 | 11.66 | 0.00 |
| 10.16 | -4.36 | 11.66 | 0.00 |
| 10.34 | -4.09 | 11.66 | 0.00 |
| 10.66 | -3.56 | 11.66 | 0.00 |
| 10.84 | -3.22 | 11.66 | 0.00 |
| 11.16 | -2.52 | 11.66 | 0.00 |
| 11.34 | -2.01 | 11.66 | 0.00 |
| 11.66 | 0.00 | 11.66 | 0.00 |
| 11.84 | 1.51 | 11.66 | 0.00 |
| 12.16 | 2.52 | 11.66 | 0.00 |
| 12.34 | 2.94 | 11.66 | 0.00 |
| 12.66 | 3.56 | 11.66 | 0.00 |
| 12.84 | 3.87 | 11.66 | 0.00 |
| 13.16 | 4.36 | 11.66 | 0.00 |
| 13.34 | 4.62 | 11.66 | 0.00 |
| 13.66 | 5.04 | 11.66 | 0.00 |
| 13.70 | 5.09 | 11.66 | 0.00 |
| 13.84 | 12.75 | 11.66 | 0.00 |
| 14.16 | 50.24 | 11.66 | 0.00 |
| 14.34 | 79.05 | 11.66 | 0.00 |
| 14.66 | 140.68 | 11.66 | 0.00 |
| 14.84 | 180.41 | 11.66 | 0.00 |
| 15.16 | 258.93 | 11.66 | 0.00 |
| 15.34 | 307.16 | 11.66 | 0.00 |
| 15.66 | 399.52 | 11.66 | 0.00 |
| 15.84 | 454.95 | 11.66 | 0.00 |
| 16.00 | 506.22 | 11.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -5.26 | 12.16 | 0.00 |
| 9.16 | -5.26 | 12.16 | 0.00 |
| 9.34 | -5.26 | 12.16 | 0.00 |
| 9.66 | -5.26 | 12.16 | 0.00 |
| 9.84 | -5.26 | 12.16 | 0.00 |
| 10.16 | -5.03 | 12.16 | 0.00 |
| 10.34 | -4.80 | 12.16 | 0.00 |
| 10.66 | -4.36 | 12.16 | 0.00 |
| 10.84 | -4.09 | 12.16 | 0.00 |
| 11.16 | -3.56 | 12.16 | 0.00 |
| 11.34 | -3.22 | 12.16 | 0.00 |
| 11.66 | -2.52 | 12.16 | 0.00 |
| 11.84 | -2.01 | 12.16 | 0.00 |
| 12.16 | 0.00 | 12.16 | 0.00 |
| 12.34 | 1.51 | 12.16 | 0.00 |
| 12.66 | 2.52 | 12.16 | 0.00 |
| 12.84 | 2.94 | 12.16 | 0.00 |
| 13.16 | 3.56 | 12.16 | 0.00 |
| 13.34 | 3.87 | 12.16 | 0.00 |
| 13.66 | 4.36 | 12.16 | 0.00 |
| 13.70 | 4.42 | 12.16 | 0.00 |
| 13.84 | 12.11 | 12.16 | 0.00 |
| 14.16 | 49.65 | 12.16 | 0.00 |
| 14.34 | 78.47 | 12.16 | 0.00 |
| 14.66 | 140.14 | 12.16 | 0.00 |
| 14.84 | 179.89 | 12.16 | 0.00 |
| 15.16 | 258.44 | 12.16 | 0.00 |
| 15.34 | 306.68 | 12.16 | 0.00 |
| 15.66 | 399.06 | 12.16 | 0.00 |
| 15.84 | 454.50 | 12.16 | 0.00 |
| 16.00 | 505.78 | 12.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -5.79 | 12.66 | 0.00 |
| 9.16 | -5.79 | 12.66 | 0.00 |
| 9.34 | -5.79 | 12.66 | 0.00 |
| 9.66 | -5.79 | 12.66 | 0.00 |
| 9.84 | -5.79 | 12.66 | 0.00 |
| 10.16 | -5.62 | 12.66 | 0.00 |
| 10.34 | -5.42 | 12.66 | 0.00 |
| 10.66 | -5.04 | 12.66 | 0.00 |
| 10.84 | -4.80 | 12.66 | 0.00 |
| 11.16 | -4.36 | 12.66 | 0.00 |
| 11.34 | -4.09 | 12.66 | 0.00 |
| 11.66 | -3.56 | 12.66 | 0.00 |
| 11.84 | -3.22 | 12.66 | 0.00 |
| 12.16 | -2.52 | 12.66 | 0.00 |
| 12.34 | -2.01 | 12.66 | 0.00 |
| 12.66 | 0.00 | 12.66 | 0.00 |
| 12.84 | 1.51 | 12.66 | 0.00 |
| 13.16 | 2.52 | 12.66 | 0.00 |
| 13.34 | 2.94 | 12.66 | 0.00 |
| 13.66 | 3.56 | 12.66 | 0.00 |
| 13.70 | 3.63 | 12.66 | 0.00 |
| 13.84 | 11.36 | 12.66 | 0.00 |
| 14.16 | 48.98 | 12.66 | 0.00 |
| 14.34 | 77.83 | 12.66 | 0.00 |
| 14.66 | 139.54 | 12.66 | 0.00 |
| 14.84 | 179.32 | 12.66 | 0.00 |
| 15.16 | 257.90 | 12.66 | 0.00 |
| 15.34 | 306.16 | 12.66 | 0.00 |
| 15.66 | 398.56 | 12.66 | 0.00 |
| 15.84 | 454.02 | 12.66 | 0.00 |
| 16.00 | 505.31 | 12.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -6.28 | 13.16 | 0.00 |
| 9.16 | -6.28 | 13.16 | 0.00 |
| 9.34 | -6.28 | 13.16 | 0.00 |
| 9.66 | -6.28 | 13.16 | 0.00 |
| 9.84 | -6.29 | 13.16 | 0.00 |
| 10.16 | -6.15 | 13.16 | 0.00 |
| 10.34 | -5.98 | 13.16 | 0.00 |
| 10.66 | -5.63 | 13.16 | 0.00 |
| 10.84 | -5.42 | 13.16 | 0.00 |
| 11.16 | -5.04 | 13.16 | 0.00 |
| 11.34 | -4.80 | 13.16 | 0.00 |
| 11.66 | -4.36 | 13.16 | 0.00 |
| 11.84 | -4.09 | 13.16 | 0.00 |
| 12.16 | -3.56 | 13.16 | 0.00 |
| 12.34 | -3.22 | 13.16 | 0.00 |
| 12.66 | -2.52 | 13.16 | 0.00 |
| 12.84 | -2.01 | 13.16 | 0.00 |
| 13.16 | 0.00 | 13.16 | 0.00 |
| 13.34 | 1.51 | 13.16 | 0.00 |
| 13.66 | 2.52 | 13.16 | 0.00 |
| 13.70 | 2.62 | 13.16 | 0.00 |
| 13.84 | 10.43 | 13.16 | 0.00 |
| 14.16 | 48.18 | 13.16 | 0.00 |
| 14.34 | 77.09 | 13.16 | 0.00 |
| 14.66 | 138.87 | 13.16 | 0.00 |
| 14.84 | 178.68 | 13.16 | 0.00 |
| 15.16 | 257.31 | 13.16 | 0.00 |
| 15.34 | 305.59 | 13.16 | 0.00 |
| 15.66 | 398.02 | 13.16 | 0.00 |
| 15.84 | 453.50 | 13.16 | 0.00 |
| 16.00 | 504.80 | 13.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -6.74 | 13.66 | 0.00 |
| 9.16 | -6.74 | 13.66 | 0.00 |
| 9.34 | -6.74 | 13.66 | 0.00 |
| 9.66 | -6.74 | 13.66 | 0.00 |
| 9.84 | -6.74 | 13.66 | 0.00 |
| 10.16 | -6.65 | 13.66 | 0.00 |
| 10.34 | -6.49 | 13.66 | 0.00 |
| 10.66 | -6.17 | 13.66 | 0.00 |
| 10.84 | -5.98 | 13.66 | 0.00 |
| 11.16 | -5.63 | 13.66 | 0.00 |
| 11.34 | -5.42 | 13.66 | 0.00 |
| 11.66 | -5.04 | 13.66 | 0.00 |
| 11.84 | -4.80 | 13.66 | 0.00 |
| 12.16 | -4.36 | 13.66 | 0.00 |
| 12.34 | -4.09 | 13.66 | 0.00 |
| 12.66 | -3.56 | 13.66 | 0.00 |
| 12.84 | -3.22 | 13.66 | 0.00 |
| 13.16 | -2.52 | 13.66 | 0.00 |
| 13.34 | -2.01 | 13.66 | 0.00 |
| 13.66 | 0.00 | 13.66 | 0.00 |
| 13.70 | 0.71 | 13.66 | 0.00 |
| 13.84 | 9.00 | 13.66 | 0.00 |
| 14.16 | 47.13 | 13.66 | 0.00 |
| 14.34 | 76.15 | 13.66 | 0.00 |
| 14.66 | 138.07 | 13.66 | 0.00 |
| 14.84 | 177.93 | 13.66 | 0.00 |
| 15.16 | 256.63 | 13.66 | 0.00 |
| 15.34 | 304.95 | 13.66 | 0.00 |
| 15.66 | 397.43 | 13.66 | 0.00 |
| 15.84 | 452.93 | 13.66 | 0.00 |
| 16.00 | 504.25 | 13.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -6.78 | 13.70 | 0.00 |
| 9.16 | -6.78 | 13.70 | 0.00 |
| 9.34 | -6.78 | 13.70 | 0.00 |
| 9.66 | -6.78 | 13.70 | 0.00 |
| 9.84 | -6.78 | 13.70 | 0.00 |
| 10.16 | -6.68 | 13.70 | 0.00 |
| 10.34 | -6.53 | 13.70 | 0.00 |
| 10.66 | -6.21 | 13.70 | 0.00 |
| 10.84 | -6.02 | 13.70 | 0.00 |
| 11.16 | -5.68 | 13.70 | 0.00 |
| 11.34 | -5.47 | 13.70 | 0.00 |
| 11.66 | -5.09 | 13.70 | 0.00 |
| 11.84 | -4.86 | 13.70 | 0.00 |
| 12.16 | -4.42 | 13.70 | 0.00 |
| 12.34 | -4.15 | 13.70 | 0.00 |
| 12.66 | -3.63 | 13.70 | 0.00 |
| 12.84 | -3.30 | 13.70 | 0.00 |
| 13.16 | -2.62 | 13.70 | 0.00 |
| 13.34 | -2.14 | 13.70 | 0.00 |
| 13.66 | -0.72 | 13.70 | 0.00 |
| 13.70 | 0.00 | 13.70 | 0.00 |
| 13.84 | 8.82 | 13.70 | 0.00 |
| 14.16 | 47.03 | 13.70 | 0.00 |
| 14.34 | 76.06 | 13.70 | 0.00 |
| 14.66 | 138.00 | 13.70 | 0.00 |
| 14.84 | 177.86 | 13.70 | 0.00 |
| 15.16 | 256.57 | 13.70 | 0.00 |
| 15.34 | 304.89 | 13.70 | 0.00 |
| 15.66 | 397.38 | 13.70 | 0.00 |
| 15.84 | 452.88 | 13.70 | 0.00 |
| 16.00 | 504.20 | 13.70 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -51.78 | 14.16 | 0.00 |
| 9.16 | -51.78 | 14.16 | 0.00 |
| 9.34 | -51.78 | 14.16 | 0.00 |
| 9.66 | -51.78 | 14.16 | 0.00 |
| 9.84 | -51.78 | 14.16 | 0.00 |
| 10.16 | -51.72 | 14.16 | 0.00 |
| 10.34 | -51.58 | 14.16 | 0.00 |
| 10.66 | -51.28 | 14.16 | 0.00 |
| 10.84 | -51.10 | 14.16 | 0.00 |
| 11.16 | -50.78 | 14.16 | 0.00 |
| 11.34 | -50.60 | 14.16 | 0.00 |
| 11.66 | -50.25 | 14.16 | 0.00 |
| 11.84 | -50.04 | 14.16 | 0.00 |
| 12.16 | -49.65 | 14.16 | 0.00 |
| 12.34 | -49.42 | 14.16 | 0.00 |
| 12.66 | -48.98 | 14.16 | 0.00 |
| 12.84 | -48.71 | 14.16 | 0.00 |
| 13.16 | -48.18 | 14.16 | 0.00 |
| 13.34 | -47.84 | 14.16 | 0.00 |
| 13.66 | -47.13 | 14.16 | 0.00 |
| 13.70 | -47.03 | 14.16 | 0.00 |
| 13.84 | -43.58 | 14.16 | 0.00 |
| 14.16 | 0.00 | 14.16 | 0.00 |
| 14.34 | 52.49 | 14.16 | 0.00 |
| 14.66 | 117.69 | 14.16 | 0.00 |
| 14.84 | 158.24 | 14.16 | 0.00 |
| 15.16 | 237.62 | 14.16 | 0.00 |
| 15.34 | 286.17 | 14.16 | 0.00 |
| 15.66 | 378.94 | 14.16 | 0.00 |
| 15.84 | 434.55 | 14.16 | 0.00 |
| 16.00 | 485.96 | 14.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -142.11 | 14.66 | 0.00 |
| 9.16 | -142.11 | 14.66 | 0.00 |
| 9.34 | -142.11 | 14.66 | 0.00 |
| 9.66 | -142.11 | 14.66 | 0.00 |
| 9.84 | -142.11 | 14.66 | 0.00 |
| 10.16 | -142.04 | 14.66 | 0.00 |
| 10.34 | -141.91 | 14.66 | 0.00 |
| 10.66 | -141.63 | 14.66 | 0.00 |
| 10.84 | -141.47 | 14.66 | 0.00 |
| 11.16 | -141.17 | 14.66 | 0.00 |
| 11.34 | -141.00 | 14.66 | 0.00 |
| 11.66 | -140.68 | 14.66 | 0.00 |
| 11.84 | -140.49 | 14.66 | 0.00 |
| 12.16 | -140.14 | 14.66 | 0.00 |
| 12.34 | -139.93 | 14.66 | 0.00 |
| 12.66 | -139.54 | 14.66 | 0.00 |
| 12.84 | -139.31 | 14.66 | 0.00 |
| 13.16 | -138.87 | 14.66 | 0.00 |
| 13.34 | -138.60 | 14.66 | 0.00 |
| 13.66 | -138.07 | 14.66 | 0.00 |
| 13.70 | -138.00 | 14.66 | 0.00 |
| 13.84 | -134.80 | 14.66 | 0.00 |
| 14.16 | -117.69 | 14.66 | 0.00 |
| 14.34 | -101.40 | 14.66 | 0.00 |
| 14.66 | 0.00 | 14.66 | 0.00 |
| 14.84 | 99.90 | 14.66 | 0.00 |
| 15.16 | 190.66 | 14.66 | 0.00 |
| 15.34 | 241.88 | 14.66 | 0.00 |
| 15.66 | 337.40 | 14.66 | 0.00 |
| 15.84 | 394.00 | 14.66 | 0.00 |
| 16.00 | 446.09 | 14.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -260.26 | 15.16 | 0.00 |
| 9.16 | -260.26 | 15.16 | 0.00 |
| 9.34 | -260.26 | 15.16 | 0.00 |
| 9.66 | -260.26 | 15.16 | 0.00 |
| 9.84 | -260.26 | 15.16 | 0.00 |
| 10.16 | -260.21 | 15.16 | 0.00 |
| 10.34 | -260.09 | 15.16 | 0.00 |
| 10.66 | -259.82 | 15.16 | 0.00 |
| 10.84 | -259.67 | 15.16 | 0.00 |
| 11.16 | -259.39 | 15.16 | 0.00 |
| 11.34 | -259.23 | 15.16 | 0.00 |
| 11.66 | -258.93 | 15.16 | 0.00 |
| 11.84 | -258.76 | 15.16 | 0.00 |
| 12.16 | -258.44 | 15.16 | 0.00 |
| 12.34 | -258.25 | 15.16 | 0.00 |
| 12.66 | -257.90 | 15.16 | 0.00 |
| 12.84 | -257.69 | 15.16 | 0.00 |
| 13.16 | -257.31 | 15.16 | 0.00 |
| 13.34 | -257.07 | 15.16 | 0.00 |
| 13.66 | -256.63 | 15.16 | 0.00 |
| 13.70 | -256.57 | 15.16 | 0.00 |
| 13.84 | -253.45 | 15.16 | 0.00 |
| 14.16 | -237.62 | 15.16 | 0.00 |
| 14.34 | -224.30 | 15.16 | 0.00 |
| 14.66 | -190.66 | 15.16 | 0.00 |
| 14.84 | -162.73 | 15.16 | 0.00 |
| 15.16 | 0.00 | 15.16 | 0.00 |
| 15.34 | 149.84 | 15.16 | 0.00 |
| 15.66 | 266.48 | 15.16 | 0.00 |
| 15.84 | 328.28 | 15.16 | 0.00 |
| 16.00 | 383.54 | 15.16 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -400.76 | 15.66 | 0.00 |
| 9.16 | -400.76 | 15.66 | 0.00 |
| 9.34 | -400.76 | 15.66 | 0.00 |
| 9.66 | -400.76 | 15.66 | 0.00 |
| 9.84 | -400.76 | 15.66 | 0.00 |
| 10.16 | -400.71 | 15.66 | 0.00 |
| 10.34 | -400.61 | 15.66 | 0.00 |
| 10.66 | -400.36 | 15.66 | 0.00 |
| 10.84 | -400.21 | 15.66 | 0.00 |
| 11.16 | -399.95 | 15.66 | 0.00 |
| 11.34 | -399.79 | 15.66 | 0.00 |
| 11.66 | -399.51 | 15.66 | 0.00 |
| 11.84 | -399.35 | 15.66 | 0.00 |
| 12.16 | -399.06 | 15.66 | 0.00 |
| 12.34 | -398.88 | 15.66 | 0.00 |
| 12.66 | -398.56 | 15.66 | 0.00 |
| 12.84 | -398.37 | 15.66 | 0.00 |
| 13.16 | -398.02 | 15.66 | 0.00 |
| 13.34 | -397.82 | 15.66 | 0.00 |
| 13.66 | -397.43 | 15.66 | 0.00 |
| 13.70 | -397.38 | 15.66 | 0.00 |
| 13.84 | -394.30 | 15.66 | 0.00 |
| 14.16 | -378.94 | 15.66 | 0.00 |
| 14.34 | -366.49 | 15.66 | 0.00 |
| 14.66 | -337.40 | 15.66 | 0.00 |
| 14.84 | -316.34 | 15.66 | 0.00 |
| 15.16 | -266.48 | 15.66 | 0.00 |
| 15.34 | -226.56 | 15.66 | 0.00 |
| 15.66 | 0.00 | 15.66 | 0.00 |
| 15.84 | 201.60 | 15.66 | 0.00 |
| 16.00 | 277.26 | 15.66 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -507.41 | 16.00 | 0.00 |
| 9.16 | -507.41 | 16.00 | 0.00 |
| 9.34 | -507.41 | 16.00 | 0.00 |
| 9.66 | -507.41 | 16.00 | 0.00 |
| 9.84 | -507.41 | 16.00 | 0.00 |
| 10.16 | -507.38 | 16.00 | 0.00 |
| 10.34 | -507.28 | 16.00 | 0.00 |
| 10.66 | -507.03 | 16.00 | 0.00 |
| 10.84 | -506.89 | 16.00 | 0.00 |
| 11.16 | -506.64 | 16.00 | 0.00 |
| 11.34 | -506.49 | 16.00 | 0.00 |
| 11.66 | -506.22 | 16.00 | 0.00 |
| 11.84 | -506.07 | 16.00 | 0.00 |
| 12.16 | -505.78 | 16.00 | 0.00 |
| 12.34 | -505.62 | 16.00 | 0.00 |
| 12.66 | -505.31 | 16.00 | 0.00 |
| 12.84 | -505.13 | 16.00 | 0.00 |
| 13.16 | -504.80 | 16.00 | 0.00 |
| 13.34 | -504.61 | 16.00 | 0.00 |
| 13.66 | -504.25 | 16.00 | 0.00 |
| 13.70 | -504.20 | 16.00 | 0.00 |
| 13.84 | -501.14 | 16.00 | 0.00 |
| 14.16 | -485.96 | 16.00 | 0.00 |
| 14.34 | -473.82 | 16.00 | 0.00 |
| 14.66 | -446.08 | 16.00 | 0.00 |
| 14.84 | -426.67 | 16.00 | 0.00 |
| 15.16 | -383.54 | 16.00 | 0.00 |
| 15.34 | -352.71 | 16.00 | 0.00 |
| 15.66 | -277.25 | 16.00 | 0.00 |
| 15.84 | -208.95 | 16.00 | 0.00 |
| 16.00 | 0.00 | 16.00 | 0.00 |

Contributing Structures

| |
|---|
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |
| CV2 + Weir - 1 |

# 9th and Palm, Existing Conditions

Subsection: Interconnected Pond Routing Summary
Label: Offsite Pond @ Node 150

Return Event: 100 years
Storm Event:

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | | | Calculation Tolerances | | |
|---|---|---|---|---|---|
| Elevation (Starting Water Surface Computed) | 8.84 | ft | Flow Tolerance (Minimum) | 0.000 | ft³/s |
| Volume (Starting) | 0.000 | ac-ft | Maximum Iterations | 100 | |
| Outflow (Starting) | 0.00 | ft³/s | ICPM Time Step | 0.050 | min |

| Maximum Storage | | |
|---|---|---|
| Time to Peak (min) | Elevation (ft) | Volume (ac-ft) |
| 279.000 | 13.97 | 1.855 |

| | Forward Flow Peaks | | Reverse Flow Peaks | |
|---|---|---|---|---|
| | Time to Peak (min) | Flow (Peak) (ft³/s) | Time to Peak (min) | Flow (Peak) (ft³/s) |
| Pond Inflow.... | 260.000 | 52.69 | 0.000 | 0.00 |
| Pond Outflow... | 263.000 | 46.41 | 0.000 | 0.00 |

| | Total Volume In | | Total Volume Out | |
|---|---|---|---|---|
| | Volume (ac-ft) | Direction | Volume (ac-ft) | Direction |
| Pond Inflow.... | 8.159 | Forward | 0.000 | Reverse |
| Pond Outflow... | 0.000 | Reverse | 8.169 | Forward |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial ICPM) | 0.000 ac-ft |
| Volume (Total In ICPM) | 4.424 ac-ft |
| Volume (Total Out ICPM) | 4.395 ac-ft |
| Volume (Ending) | 0.026 ac-ft |
| Elevation (Ending) | 11.54 ft |
| Difference | 0.003 ac-ft |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) | 0.1 % |

# 9th and Palm, Existing Conditions

Subsection: Interconnected Pond Routing Summary
Label: Onsite Pond 1

Return Event: 100 years
Storm Event:

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | | | Calculation Tolerances | | |
|---|---|---|---|---|---|
| Elevation (Starting Water Surface Computed) | 7.66 | ft | Flow Tolerance (Minimum) | 0.000 | $ft^3/s$ |
| Volume (Starting) | 0.000 | ac-ft | Maximum Iterations | 100 | |
| Outflow (Starting) | 0.00 | $ft^3/s$ | ICPM Time Step | 0.050 | min |

| Maximum Storage | | |
|---|---|---|
| Time to Peak (min) | Elevation (ft) | Volume (ac-ft) |
| 263.000 | 13.31 | 0.044 |

| | Forward Flow Peaks | | Reverse Flow Peaks | |
|---|---|---|---|---|
| | Time to Peak (min) | Flow (Peak) ($ft^3/s$) | Time to Peak (min) | Flow (Peak) ($ft^3/s$) |
| Pond Inflow.... | 260.000 | 52.69 | 0.000 | 0.00 |
| Pond Outflow... | 263.000 | 46.41 | 0.000 | 0.00 |

| | Total Volume In | | Total Volume Out | |
|---|---|---|---|---|
| | Volume (ac-ft) | Direction | Volume (ac-ft) | Direction |
| Pond Inflow.... | 8.159 | Forward | 0.000 | Reverse |
| Pond Outflow... | 0.000 | Reverse | 8.169 | Forward |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial ICPM) | 0.000 ac-ft |
| Volume (Total In ICPM) | 8.159 ac-ft |
| Volume (Total Out ICPM) | 8.169 ac-ft |
| Volume (Ending) | 0.000 ac-ft |
| Elevation (Ending) | 8.78 ft |
| Difference | -0.011 ac-ft |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) | 0.1 % |

# 9th and Palm, Existing Conditions

Subsection: Elev-Flow
Label: Outfall

Return Event: 100 years
Storm Event:

## Elevation-Flow Curve

| Elevation (ft) | Flow ($ft^3/s$) |
|---|---|
| 6.21 | 0.00 |
| 6.88 | 4.00 |
| 7.16 | 8.00 |
| 7.39 | 12.00 |
| 7.60 | 16.00 |
| 7.79 | 20.00 |
| 7.98 | 24.00 |
| 8.18 | 28.00 |
| 8.39 | 32.00 |
| 8.63 | 36.00 |
| 9.21 | 36.53 |
| 10.11 | 36.53 |
| 10.30 | 37.67 |
| 10.50 | 43.78 |
| 10.70 | 59.44 |
| 10.90 | 84.69 |

# 9th and Palm, Existing Conditions

## Index

M

Master Network Summary...2

O

Offsite Pond @ Node 150 (Elevation-Area Volume Curve)...

Offsite Pond @ Node 150 (Elevation-Area Volume Curve, 100 years)...8

Offsite Pond @ Node 150 (Interconnected Pond Routing Summary)...

Offsite Pond @ Node 150 (Interconnected Pond Routing Summary, 100 years)...83

Offsite Pond @ Node 150 (Volume Equations)...

Offsite Pond @ Node 150 (Volume Equations, 100 years)...9

Onsite Pond 1 (Elevation-Area Volume Curve)...

Onsite Pond 1 (Elevation-Area Volume Curve, 100 years)...10

Onsite Pond 1 (Interconnected Pond Routing Summary)...

Onsite Pond 1 (Interconnected Pond Routing Summary, 100 years)...84

Onsite Pond 1 (Volume Equations)...

Onsite Pond 1 (Volume Equations, 100 years)...11

Outfall (Elev-Flow)...

Outfall (Elev-Flow, 100 years)...85

Outfall (Hydrograph)...

Outfall (Hydrograph, 100 years)...5, 6, 7

Outlet#1 (Composite Rating Curve)...

Outlet#1 (Composite Rating Curve, 100 years)...14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37

Outlet#1 (Outlet Input Data)...

Outlet#1 (Outlet Input Data, 100 years)...12, 13

Outlet#2 (Composite Rating Curve)...

Outlet#2 (Composite Rating Curve, 100 years)...41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82

Outlet#2 (Outlet Input Data)...

Outlet#2 (Outlet Input Data, 100 years)...38, 39, 40

S

System 100 (Read Hydrograph)...

# 9th and Palm, Existing Conditions

System 100 (Read Hydrograph, 100 years)...3

System 200 (Read Hydrograph)...

System 200 (Read Hydrograph, 100 years)...4

# 9th and Palm, Proposed Conditions

| Project Summary | |
|---|---|
| Title | 9th and Palm |
| Engineer | PDC |
| Company | PDC |
| Date | 10/11/2011 |

Notes

# Table of Contents


| | | |
|---|---|---|
| | Master Network Summary | 2 |
| System 100 | | |
| | Read Hydrograph | 3 |
| System 200 | | |
| | Read Hydrograph | 4 |
| Outfall | Hydrograph | 5 |
| Offsite Pond @ Node 150 | | |
| | Elevation-Area Volume Curve | 8 |
| | Volume Equations | 9 |
| Onsite Pond 1 | | |
| | Elevation-Area Volume Curve | 10 |
| | Volume Equations | 11 |
| Outlet#1 | | |
| | Outlet Input Data | 12 |
| | Composite Rating Curve | 14 |
| Outlet#2 | | |
| | Outlet Input Data | 38 |
| | Composite Rating Curve | 40 |
| Offsite Pond @ Node 150 | | |
| | Interconnected Pond Routing Summary | 94 |
| Onsite Pond 1 | | |
| | Interconnected Pond Routing Summary | 95 |

# 9th and Palm, Proposed Conditions

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | PR100 | 0 | 4.012 | 264.000 | 56.40 |
| System 200 | PR100 | 0 | 4.164 | 266.000 | 56.20 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | PR100 | 0 | 8.194 | 266.000 | 46.22 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | PR100 | 0 | 4.012 | 264.000 | 56.40 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | PR100 | 0 | 4.081 | 286.000 | 23.80 | 14.02 | 1.609 |
| Offsite Pond @ Node 150 (Reverse) | PR100 | 0 | -0.084 | 266.000 | -9.83 | (N/A) | (N/A) |
| Onsite Pond 1 (IN) | PR100 | 0 | 8.161 | 266.000 | 46.37 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | PR100 | 0 | 8.194 | 266.000 | 46.22 | 13.98 | 0.003 |

# 9th and Palm, Proposed Conditions

Subsection: Read Hydrograph
Label: System 100

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 56.40 $ft^3/s$ |
| Time to Peak | 264.000 min |
| Hydrograph Volume | 4.012 ac-ft |

**HYDROGRAPH ORDINATES ($ft^3/s$)**
**Output Time Increment = 22.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) | Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 1.90 | 3.20 | 3.30 | 3.70 |
| 110.000 | 3.90 | 4.50 | 4.80 | 5.90 | 6.70 |
| 220.000 | 9.90 | 7.40 | 56.40 | 7.90 | 5.30 |
| 330.000 | 4.10 | 3.50 | 0.00 | (N/A) | (N/A) |

# 9th and Palm, Proposed Conditions

Subsection: Read Hydrograph
Label: System 200

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 56.20 ft³/s |
| Time to Peak | 266.000 min |
| Hydrograph Volume | 4.164 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 19.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 2.70 | 3.10 | 3.30 | 3.50 |
| 95.000 | 3.70 | 4.10 | 4.40 | 5.00 | 5.40 |
| 190.000 | 6.60 | 7.60 | 11.10 | 15.50 | 56.20 |
| 285.000 | 8.90 | 6.00 | 4.70 | 3.90 | 3.40 |
| 380.000 | 0.00 | (N/A) | (N/A) | (N/A) | (N/A) |

# 9th and Palm, Proposed Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

| | |
|---|---|
| Peak Discharge | 46.22 ft³/s |
| Time to Peak | 266.000 min |
| Hydrograph Volume | 8.194 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 1.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.12 | 0.39 | 0.63 | 0.86 |
| 5.000 | 1.09 | 1.32 | 1.54 | 1.78 | 2.02 |
| 10.000 | 2.25 | 2.47 | 2.71 | 2.94 | 3.17 |
| 15.000 | 3.40 | 3.62 | 3.85 | 4.08 | 4.31 |
| 20.000 | 4.43 | 4.54 | 4.64 | 4.73 | 4.81 |
| 25.000 | 4.89 | 4.97 | 5.05 | 5.13 | 5.21 |
| 30.000 | 5.29 | 5.37 | 5.45 | 5.53 | 5.61 |
| 35.000 | 5.69 | 5.77 | 5.85 | 5.93 | 6.00 |
| 40.000 | 6.07 | 6.14 | 6.21 | 6.28 | 6.35 |
| 45.000 | 6.38 | 6.39 | 6.41 | 6.42 | 6.44 |
| 50.000 | 6.45 | 6.47 | 6.48 | 6.50 | 6.51 |
| 55.000 | 6.53 | 6.54 | 6.56 | 6.57 | 6.59 |
| 60.000 | 6.60 | 6.62 | 6.63 | 6.65 | 6.66 |
| 65.000 | 6.68 | 6.69 | 6.72 | 6.75 | 6.78 |
| 70.000 | 6.81 | 6.83 | 6.86 | 6.89 | 6.92 |
| 75.000 | 6.95 | 6.98 | 7.01 | 7.04 | 7.06 |
| 80.000 | 7.09 | 7.12 | 7.15 | 7.18 | 7.21 |
| 85.000 | 7.24 | 7.26 | 7.29 | 7.32 | 7.34 |
| 90.000 | 7.36 | 7.38 | 7.40 | 7.42 | 7.44 |
| 95.000 | 7.46 | 7.49 | 7.52 | 7.55 | 7.58 |
| 100.000 | 7.61 | 7.64 | 7.67 | 7.70 | 7.73 |
| 105.000 | 7.76 | 7.79 | 7.82 | 7.85 | 7.88 |
| 110.000 | 7.91 | 7.96 | 8.01 | 8.05 | 8.10 |
| 115.000 | 8.15 | 8.19 | 8.23 | 8.28 | 8.32 |
| 120.000 | 8.36 | 8.40 | 8.45 | 8.49 | 8.53 |
| 125.000 | 8.58 | 8.62 | 8.66 | 8.71 | 8.75 |
| 130.000 | 8.79 | 8.84 | 8.88 | 8.91 | 8.95 |
| 135.000 | 9.00 | 9.04 | 9.09 | 9.13 | 9.18 |
| 140.000 | 9.23 | 9.27 | 9.32 | 9.36 | 9.41 |
| 145.000 | 9.45 | 9.50 | 9.54 | 9.59 | 9.63 |
| 150.000 | 9.68 | 9.72 | 9.77 | 9.80 | 9.84 |
| 155.000 | 9.90 | 9.97 | 10.04 | 10.12 | 10.19 |
| 160.000 | 10.26 | 10.33 | 10.40 | 10.47 | 10.54 |
| 165.000 | 10.61 | 10.68 | 10.76 | 10.83 | 10.90 |
| 170.000 | 10.97 | 11.04 | 11.15 | 11.26 | 11.37 |
| 175.000 | 11.49 | 11.60 | 11.70 | 11.80 | 11.90 |
| 180.000 | 12.00 | 12.10 | 12.20 | 12.30 | 12.40 |

# 9th and Palm, Proposed Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

## HYDROGRAPH ORDINATES (ft³/s)
## Output Time Increment = 1.000 min
## Time on left represents time for first value in each row.

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 185.000 | 12.50 | 12.60 | 12.70 | 12.80 | 12.90 |
| 190.000 | 13.00 | 13.09 | 13.18 | 13.27 | 13.35 |
| 195.000 | 13.44 | 13.53 | 13.62 | 13.71 | 13.89 |
| 200.000 | 14.09 | 14.29 | 14.49 | 14.69 | 14.88 |
| 205.000 | 15.08 | 15.28 | 15.48 | 15.68 | 15.87 |
| 210.000 | 16.19 | 16.52 | 16.83 | 17.16 | 17.48 |
| 215.000 | 17.62 | 17.77 | 17.95 | 18.16 | 18.41 |
| 220.000 | 18.68 | 18.95 | 19.19 | 19.39 | 19.57 |
| 225.000 | 19.72 | 19.85 | 19.97 | 20.08 | 20.20 |
| 230.000 | 20.32 | 20.44 | 20.57 | 20.68 | 20.80 |
| 235.000 | 20.92 | 21.04 | 21.16 | 21.28 | 21.39 |
| 240.000 | 21.51 | 21.63 | 21.75 | 22.26 | 23.55 |
| 245.000 | 24.51 | 25.69 | 27.57 | 29.88 | 31.55 |
| 250.000 | 33.14 | 34.64 | 36.42 | 37.35 | 39.02 |
| 255.000 | 40.99 | 38.46 | 38.48 | 39.86 | 40.68 |
| 260.000 | 41.35 | 41.99 | 42.61 | 43.29 | 44.42 |
| 265.000 | 45.44 | 46.22 | 45.86 | 45.55 | 45.25 |
| 270.000 | 44.95 | 44.67 | 44.39 | 44.09 | 43.72 |
| 275.000 | 43.30 | 42.68 | 41.69 | 40.68 | 39.62 |
| 280.000 | 38.40 | 37.32 | 39.25 | 37.19 | 34.77 |
| 285.000 | 32.79 | 32.56 | 32.37 | 32.18 | 31.98 |
| 290.000 | 31.79 | 31.60 | 31.40 | 31.21 | 31.01 |
| 295.000 | 30.81 | 30.61 | 30.42 | 30.22 | 30.02 |
| 300.000 | 29.82 | 29.62 | 29.42 | 29.23 | 29.03 |
| 305.000 | 28.89 | 28.76 | 28.63 | 28.49 | 28.36 |
| 310.000 | 28.23 | 28.10 | 27.97 | 27.84 | 27.70 |
| 315.000 | 27.57 | 27.44 | 27.30 | 27.17 | 27.03 |
| 320.000 | 26.90 | 26.76 | 26.62 | 26.49 | 26.37 |
| 325.000 | 26.25 | 26.14 | 26.02 | 25.91 | 25.79 |
| 330.000 | 25.68 | 25.57 | 25.45 | 25.34 | 25.23 |
| 335.000 | 25.12 | 24.91 | 24.61 | 24.31 | 24.00 |
| 340.000 | 23.70 | 23.41 | 23.11 | 22.84 | 22.57 |
| 345.000 | 22.29 | 22.02 | 21.73 | 21.45 | 21.18 |
| 350.000 | 20.91 | 20.65 | 20.39 | 19.12 | 17.10 |
| 355.000 | 15.19 | 6.43 | 6.24 | 6.05 | 5.87 |
| 360.000 | 5.69 | 5.50 | 5.19 | 4.85 | 4.51 |
| 365.000 | 4.16 | 3.83 | 3.49 | 3.15 | 2.81 |
| 370.000 | 2.48 | 2.15 | 1.82 | 1.50 | 1.15 |
| 375.000 | 0.94 | 0.76 | 0.57 | 0.39 | 0.24 |
| 380.000 | 0.07 | 0.01 | 0.00 | 0.00 | 0.00 |
| 385.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 390.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 9th and Palm, Proposed Conditions

Subsection: Hydrograph
Label: Outfall

Return Event: 100 years
Storm Event:

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 1.000 min**
**Time on left represents time for first value in each row.**

| Time (min) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 395.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 405.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 410.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 415.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 420.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 425.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 430.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 435.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 445.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 450.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 455.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 460.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 465.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 470.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 475.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 480.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 485.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 490.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 495.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.000 | 0.00 | (N/A) | (N/A) | (N/A) | (N/A) |

# 9th and Palm, Proposed Conditions

Subsection: Elevation-Area Volume Curve | Return Event: 100 years

Label: Offsite Pond @ Node 150 | Storm Event:

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 8.84 | 0.0 | 13.000 | 0.000 | 0.000 | 0.000 |
| 10.90 | 0.0 | 13.000 | 39.000 | 0.001 | 0.001 |
| 11.00 | 0.0 | 92.900 | 140.652 | 0.000 | 0.001 |
| 12.00 | 0.0 | 4,200.920 | 4,918.532 | 0.038 | 0.038 |
| 13.00 | 0.0 | 30,515.080 | 46,038.165 | 0.352 | 0.391 |
| 14.00 | 0.0 | 73,647.640 | 151,569.087 | 1.160 | 1.551 |
| 16.00 | 0.0 | 183,496.340 | 373,394.023 | 5.715 | 7.265 |

## Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

**Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))**

| | | |
|---|---|---|
| where: | EL1, EL2 | Lower and upper elevations of the increment |
| | Area1, Area2 | Areas computed for EL1, EL2, respectively |
| | Volume | Incremental volume between EL1 and EL2 |

# 9th and Palm, Proposed Conditions

Subsection: Elevation-Area Volume Curve | Return Event: 100 years

Label: Onsite Pond 1 | Storm Event:

| Elevation (ft) | Planimeter ($ft^2$) | Area ($ft^2$) | A1+A2+sqr (A1*A2) ($ft^2$) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 8.46 | 0.0 | 24.000 | 0.000 | 0.000 | 0.000 |
| 20.30 | 0.0 | 24.000 | 72.000 | 0.007 | 0.007 |

## Pond Volume Equations
## * Incremental volume computed by the Conic Method for Reservoir Volumes.

**Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))**

| | | |
|---|---|---|
| where: | EL1, EL2 | Lower and upper elevations of the increment |
| | Area1, Area2 | Areas computed for EL1, EL2, respectively |
| | Volume | Incremental volume between EL1 and EL2 |

# 9th and Palm, Proposed Conditions

Subsection: Outlet Input Data
Label: Outlet#1

Return Event: 100 years
Storm Event:

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 8.46 ft |
| Increment (Headwater) | 0.50 ft |
| Maximum (Headwater) | 20.30 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Culvert-Circular | Culvert - 1 | Forward + Reverse | TW | 8.46 | 20.30 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

# 9th and Palm, Proposed Conditions

Subsection: Outlet Input Data
Label: Outlet#1

Return Event: 100 years
Storm Event:

| Structure ID: Culvert - 1<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.0 in |
| Length | 509.44 ft |
| Length (Computed Barrel) | 509.44 ft |
| Slope (Computed) | 0.004 ft/ft |

| Outlet Control Data | |
|---|---|
| Manning's n | 0.013 |
| Ke | 0.500 |
| Kb | 0.007 |
| Kr | 0.500 |
| Convergence Tolerance | 0.00 ft |

| Inlet Control Data | |
|---|---|
| Equation Form | Form 1 |
| K | 0.0098 |
| M | 2.0000 |
| C | 0.0398 |
| Y | 0.6700 |
| T1 ratio (HW/D) | 1.158 |
| T2 ratio (HW/D) | 1.305 |
| Slope Correction Factor | -0.500 |

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

| | | | |
|---|---|---|---|
| T1 Elevation | 11.93 ft | T1 Flow | 42.85 ft³/s |
| T2 Elevation | 12.37 ft | T2 Flow | 48.97 ft³/s |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 6.21 | 0.00 |
| 8.71 | 0.30 | 6.21 | 0.00 |
| 8.96 | 1.14 | 6.21 | 0.00 |
| 9.21 | 2.51 | 6.21 | 0.00 |
| 9.46 | 4.38 | 6.21 | 0.00 |
| 9.71 | 6.70 | 6.21 | 0.00 |
| 9.96 | 9.43 | 6.21 | 0.00 |
| 10.21 | 12.55 | 6.21 | 0.00 |
| 10.46 | 15.96 | 6.21 | 0.00 |
| 10.71 | 19.69 | 6.21 | 0.00 |
| 10.90 | 22.65 | 6.21 | 0.00 |
| 10.96 | 23.64 | 6.21 | 0.00 |
| 11.46 | 32.46 | 6.21 | 0.00 |
| 11.96 | 41.72 | 6.21 | 0.00 |
| 12.46 | 48.99 | 6.21 | 0.00 |
| 12.96 | 51.47 | 6.21 | 0.00 |
| 13.46 | 53.79 | 6.21 | 0.00 |
| 13.96 | 56.23 | 6.21 | 0.00 |
| 14.46 | 58.65 | 6.21 | 0.00 |
| 14.96 | 61.04 | 6.21 | 0.00 |
| 15.46 | 63.38 | 6.21 | 0.00 |
| 15.96 | 65.66 | 6.21 | 0.00 |
| 16.46 | 67.87 | 6.21 | 0.00 |
| 16.96 | 70.03 | 6.21 | 0.00 |
| 17.46 | 72.15 | 6.21 | 0.00 |
| 17.96 | 74.20 | 6.21 | 0.00 |
| 18.46 | 76.22 | 6.21 | 0.00 |
| 18.96 | 78.18 | 6.21 | 0.00 |
| 19.46 | 80.11 | 6.21 | 0.00 |
| 19.96 | 81.99 | 6.21 | 0.00 |
| 20.30 | 83.25 | 6.21 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 6.71 | 0.00 |
| 8.71 | 0.30 | 6.71 | 0.00 |
| 8.96 | 1.14 | 6.71 | 0.00 |
| 9.21 | 2.51 | 6.71 | 0.00 |
| 9.46 | 4.38 | 6.71 | 0.00 |
| 9.71 | 6.70 | 6.71 | 0.00 |
| 9.96 | 9.43 | 6.71 | 0.00 |
| 10.21 | 12.55 | 6.71 | 0.00 |
| 10.46 | 15.96 | 6.71 | 0.00 |
| 10.71 | 19.69 | 6.71 | 0.00 |
| 10.90 | 22.65 | 6.71 | 0.00 |
| 10.96 | 23.64 | 6.71 | 0.00 |
| 11.46 | 32.46 | 6.71 | 0.00 |
| 11.96 | 41.72 | 6.71 | 0.00 |
| 12.46 | 48.99 | 6.71 | 0.00 |
| 12.96 | 51.47 | 6.71 | 0.00 |
| 13.46 | 53.79 | 6.71 | 0.00 |
| 13.96 | 56.23 | 6.71 | 0.00 |
| 14.46 | 58.65 | 6.71 | 0.00 |
| 14.96 | 61.04 | 6.71 | 0.00 |
| 15.46 | 63.38 | 6.71 | 0.00 |
| 15.96 | 65.66 | 6.71 | 0.00 |
| 16.46 | 67.87 | 6.71 | 0.00 |
| 16.96 | 70.03 | 6.71 | 0.00 |
| 17.46 | 72.15 | 6.71 | 0.00 |
| 17.96 | 74.20 | 6.71 | 0.00 |
| 18.46 | 76.22 | 6.71 | 0.00 |
| 18.96 | 78.18 | 6.71 | 0.00 |
| 19.46 | 80.11 | 6.71 | 0.00 |
| 19.96 | 81.99 | 6.71 | 0.00 |
| 20.30 | 83.25 | 6.71 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 7.21 | 0.00 |
| 8.71 | 0.29 | 7.21 | 0.00 |
| 8.96 | 1.14 | 7.21 | 0.00 |
| 9.21 | 2.51 | 7.21 | 0.00 |
| 9.46 | 4.38 | 7.21 | 0.00 |
| 9.71 | 6.70 | 7.21 | 0.00 |
| 9.96 | 9.43 | 7.21 | 0.00 |
| 10.21 | 12.55 | 7.21 | 0.00 |
| 10.46 | 15.96 | 7.21 | 0.00 |
| 10.71 | 19.69 | 7.21 | 0.00 |
| 10.90 | 22.65 | 7.21 | 0.00 |
| 10.96 | 23.64 | 7.21 | 0.00 |
| 11.46 | 32.46 | 7.21 | 0.00 |
| 11.96 | 41.72 | 7.21 | 0.00 |
| 12.46 | 48.99 | 7.21 | 0.00 |
| 12.96 | 51.47 | 7.21 | 0.00 |
| 13.46 | 53.79 | 7.21 | 0.00 |
| 13.96 | 56.23 | 7.21 | 0.00 |
| 14.46 | 58.65 | 7.21 | 0.00 |
| 14.96 | 61.04 | 7.21 | 0.00 |
| 15.46 | 63.38 | 7.21 | 0.00 |
| 15.96 | 65.66 | 7.21 | 0.00 |
| 16.46 | 67.87 | 7.21 | 0.00 |
| 16.96 | 70.03 | 7.21 | 0.00 |
| 17.46 | 72.15 | 7.21 | 0.00 |
| 17.96 | 74.20 | 7.21 | 0.00 |
| 18.46 | 76.22 | 7.21 | 0.00 |
| 18.96 | 78.18 | 7.21 | 0.00 |
| 19.46 | 80.11 | 7.21 | 0.00 |
| 19.96 | 81.99 | 7.21 | 0.00 |
| 20.30 | 83.25 | 7.21 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 7.71 | 0.00 |
| 8.71 | 0.29 | 7.71 | 0.00 |
| 8.96 | 1.14 | 7.71 | 0.00 |
| 9.21 | 2.51 | 7.71 | 0.00 |
| 9.46 | 4.38 | 7.71 | 0.00 |
| 9.71 | 6.70 | 7.71 | 0.00 |
| 9.96 | 9.43 | 7.71 | 0.00 |
| 10.21 | 12.55 | 7.71 | 0.00 |
| 10.46 | 15.96 | 7.71 | 0.00 |
| 10.71 | 19.69 | 7.71 | 0.00 |
| 10.90 | 22.65 | 7.71 | 0.00 |
| 10.96 | 23.64 | 7.71 | 0.00 |
| 11.46 | 32.46 | 7.71 | 0.00 |
| 11.96 | 41.72 | 7.71 | 0.00 |
| 12.46 | 48.99 | 7.71 | 0.00 |
| 12.96 | 51.47 | 7.71 | 0.00 |
| 13.46 | 53.79 | 7.71 | 0.00 |
| 13.96 | 56.23 | 7.71 | 0.00 |
| 14.46 | 58.65 | 7.71 | 0.00 |
| 14.96 | 61.04 | 7.71 | 0.00 |
| 15.46 | 63.38 | 7.71 | 0.00 |
| 15.96 | 65.66 | 7.71 | 0.00 |
| 16.46 | 67.87 | 7.71 | 0.00 |
| 16.96 | 70.03 | 7.71 | 0.00 |
| 17.46 | 72.15 | 7.71 | 0.00 |
| 17.96 | 74.20 | 7.71 | 0.00 |
| 18.46 | 76.22 | 7.71 | 0.00 |
| 18.96 | 78.18 | 7.71 | 0.00 |
| 19.46 | 80.11 | 7.71 | 0.00 |
| 19.96 | 81.99 | 7.71 | 0.00 |
| 20.30 | 83.25 | 7.71 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 8.21 | 0.00 |
| 8.71 | 0.29 | 8.21 | 0.00 |
| 8.96 | 1.14 | 8.21 | 0.00 |
| 9.21 | 2.51 | 8.21 | 0.00 |
| 9.46 | 4.38 | 8.21 | 0.00 |
| 9.71 | 6.70 | 8.21 | 0.00 |
| 9.96 | 9.43 | 8.21 | 0.00 |
| 10.21 | 12.55 | 8.21 | 0.00 |
| 10.46 | 15.96 | 8.21 | 0.00 |
| 10.71 | 19.69 | 8.21 | 0.00 |
| 10.90 | 22.65 | 8.21 | 0.00 |
| 10.96 | 23.64 | 8.21 | 0.00 |
| 11.46 | 32.46 | 8.21 | 0.00 |
| 11.96 | 41.72 | 8.21 | 0.00 |
| 12.46 | 48.99 | 8.21 | 0.00 |
| 12.96 | 51.47 | 8.21 | 0.00 |
| 13.46 | 53.79 | 8.21 | 0.00 |
| 13.96 | 56.23 | 8.21 | 0.00 |
| 14.46 | 58.65 | 8.21 | 0.00 |
| 14.96 | 61.04 | 8.21 | 0.00 |
| 15.46 | 63.38 | 8.21 | 0.00 |
| 15.96 | 65.66 | 8.21 | 0.00 |
| 16.46 | 67.87 | 8.21 | 0.00 |
| 16.96 | 70.03 | 8.21 | 0.00 |
| 17.46 | 72.15 | 8.21 | 0.00 |
| 17.96 | 74.20 | 8.21 | 0.00 |
| 18.46 | 76.22 | 8.21 | 0.00 |
| 18.96 | 78.18 | 8.21 | 0.00 |
| 19.46 | 80.11 | 8.21 | 0.00 |
| 19.96 | 81.99 | 8.21 | 0.00 |
| 20.30 | 83.25 | 8.21 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | 0.00 | 8.46 | 0.00 |
| 8.71 | 0.29 | 8.46 | 0.00 |
| 8.96 | 1.14 | 8.46 | 0.00 |
| 9.21 | 2.51 | 8.46 | 0.00 |
| 9.46 | 4.38 | 8.46 | 0.00 |
| 9.71 | 6.70 | 8.46 | 0.00 |
| 9.96 | 9.43 | 8.46 | 0.00 |
| 10.21 | 12.55 | 8.46 | 0.00 |
| 10.46 | 15.96 | 8.46 | 0.00 |
| 10.71 | 19.69 | 8.46 | 0.00 |
| 10.90 | 22.65 | 8.46 | 0.00 |
| 10.96 | 23.64 | 8.46 | 0.00 |
| 11.46 | 32.48 | 8.46 | 0.00 |
| 11.96 | 41.71 | 8.46 | 0.00 |
| 12.46 | 48.99 | 8.46 | 0.00 |
| 12.96 | 51.47 | 8.46 | 0.00 |
| 13.46 | 53.79 | 8.46 | 0.00 |
| 13.96 | 56.23 | 8.46 | 0.00 |
| 14.46 | 58.65 | 8.46 | 0.00 |
| 14.96 | 61.04 | 8.46 | 0.00 |
| 15.46 | 63.38 | 8.46 | 0.00 |
| 15.96 | 65.66 | 8.46 | 0.00 |
| 16.46 | 67.87 | 8.46 | 0.00 |
| 16.96 | 70.03 | 8.46 | 0.00 |
| 17.46 | 72.15 | 8.46 | 0.00 |
| 17.96 | 74.20 | 8.46 | 0.00 |
| 18.46 | 76.22 | 8.46 | 0.00 |
| 18.96 | 78.18 | 8.46 | 0.00 |
| 19.46 | 80.11 | 8.46 | 0.00 |
| 19.96 | 81.99 | 8.46 | 0.00 |
| 20.30 | 83.25 | 8.46 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -0.29 | 8.71 | 0.00 |
| 8.71 | 0.00 | 8.71 | 0.00 |
| 8.96 | 1.14 | 8.71 | 0.00 |
| 9.21 | 2.51 | 8.71 | 0.00 |
| 9.46 | 4.38 | 8.71 | 0.00 |
| 9.71 | 6.70 | 8.71 | 0.00 |
| 9.96 | 9.43 | 8.71 | 0.00 |
| 10.21 | 12.55 | 8.71 | 0.00 |
| 10.46 | 15.96 | 8.71 | 0.00 |
| 10.71 | 19.69 | 8.71 | 0.00 |
| 10.90 | 22.65 | 8.71 | 0.00 |
| 10.96 | 23.64 | 8.71 | 0.00 |
| 11.46 | 32.42 | 8.71 | 0.00 |
| 11.96 | 41.73 | 8.71 | 0.00 |
| 12.46 | 48.92 | 8.71 | 0.00 |
| 12.96 | 51.37 | 8.71 | 0.00 |
| 13.46 | 53.74 | 8.71 | 0.00 |
| 13.96 | 56.21 | 8.71 | 0.00 |
| 14.46 | 58.65 | 8.71 | 0.00 |
| 14.96 | 61.04 | 8.71 | 0.00 |
| 15.46 | 63.38 | 8.71 | 0.00 |
| 15.96 | 65.66 | 8.71 | 0.00 |
| 16.46 | 67.87 | 8.71 | 0.00 |
| 16.96 | 70.03 | 8.71 | 0.00 |
| 17.46 | 72.15 | 8.71 | 0.00 |
| 17.96 | 74.20 | 8.71 | 0.00 |
| 18.46 | 76.22 | 8.71 | 0.00 |
| 18.96 | 78.18 | 8.71 | 0.00 |
| 19.46 | 80.11 | 8.71 | 0.00 |
| 19.96 | 81.99 | 8.71 | 0.00 |
| 20.30 | 83.25 | 8.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -2.59 | 9.21 | 0.00 |
| 8.71 | -2.59 | 9.21 | 0.00 |
| 8.96 | -2.59 | 9.21 | 0.00 |
| 9.21 | 0.00 | 9.21 | 0.00 |
| 9.46 | 4.54 | 9.21 | 0.00 |
| 9.71 | 6.70 | 9.21 | 0.00 |
| 9.96 | 9.43 | 9.21 | 0.00 |
| 10.21 | 12.55 | 9.21 | 0.00 |
| 10.46 | 15.96 | 9.21 | 0.00 |
| 10.71 | 19.69 | 9.21 | 0.00 |
| 10.90 | 22.65 | 9.21 | 0.00 |
| 10.96 | 23.64 | 9.21 | 0.00 |
| 11.46 | 32.48 | 9.21 | 0.00 |
| 11.96 | 41.65 | 9.21 | 0.00 |
| 12.46 | 44.91 | 9.21 | 0.00 |
| 12.96 | 48.23 | 9.21 | 0.00 |
| 13.46 | 51.35 | 9.21 | 0.00 |
| 13.96 | 54.29 | 9.21 | 0.00 |
| 14.46 | 57.07 | 9.21 | 0.00 |
| 14.96 | 59.73 | 9.21 | 0.00 |
| 15.46 | 62.27 | 9.21 | 0.00 |
| 15.96 | 64.71 | 9.21 | 0.00 |
| 16.46 | 67.07 | 9.21 | 0.00 |
| 16.96 | 69.34 | 9.21 | 0.00 |
| 17.46 | 71.54 | 9.21 | 0.00 |
| 17.96 | 73.68 | 9.21 | 0.00 |
| 18.46 | 75.76 | 9.21 | 0.00 |
| 18.96 | 77.78 | 9.21 | 0.00 |
| 19.46 | 79.75 | 9.21 | 0.00 |
| 19.96 | 81.67 | 9.21 | 0.00 |
| 20.30 | 82.95 | 9.21 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -6.68 | 9.71 | 0.00 |
| 8.71 | -6.68 | 9.71 | 0.00 |
| 8.96 | -6.68 | 9.71 | 0.00 |
| 9.21 | -6.68 | 9.71 | 0.00 |
| 9.46 | -6.15 | 9.71 | 0.00 |
| 9.71 | 0.00 | 9.71 | 0.00 |
| 9.96 | 8.77 | 9.71 | 0.00 |
| 10.21 | 12.84 | 9.71 | 0.00 |
| 10.46 | 16.40 | 9.71 | 0.00 |
| 10.71 | 20.13 | 9.71 | 0.00 |
| 10.90 | 23.19 | 9.71 | 0.00 |
| 10.96 | 24.22 | 9.71 | 0.00 |
| 11.46 | 32.34 | 9.71 | 0.00 |
| 11.96 | 37.56 | 9.71 | 0.00 |
| 12.46 | 41.30 | 9.71 | 0.00 |
| 12.96 | 44.91 | 9.71 | 0.00 |
| 13.46 | 48.23 | 9.71 | 0.00 |
| 13.96 | 51.35 | 9.71 | 0.00 |
| 14.46 | 54.28 | 9.71 | 0.00 |
| 14.96 | 57.07 | 9.71 | 0.00 |
| 15.46 | 59.73 | 9.71 | 0.00 |
| 15.96 | 62.27 | 9.71 | 0.00 |
| 16.46 | 64.71 | 9.71 | 0.00 |
| 16.96 | 67.07 | 9.71 | 0.00 |
| 17.46 | 69.34 | 9.71 | 0.00 |
| 17.96 | 71.54 | 9.71 | 0.00 |
| 18.46 | 73.68 | 9.71 | 0.00 |
| 18.96 | 75.75 | 9.71 | 0.00 |
| 19.46 | 77.77 | 9.71 | 0.00 |
| 19.96 | 79.74 | 9.71 | 0.00 |
| 20.30 | 81.06 | 9.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -11.71 | 10.21 | 0.00 |
| 8.71 | -11.71 | 10.21 | 0.00 |
| 8.96 | -11.71 | 10.21 | 0.00 |
| 9.21 | -11.71 | 10.21 | 0.00 |
| 9.46 | -11.71 | 10.21 | 0.00 |
| 9.71 | -11.40 | 10.21 | 0.00 |
| 9.96 | -9.30 | 10.21 | 0.00 |
| 10.21 | 0.00 | 10.21 | 0.00 |
| 10.46 | 11.43 | 10.21 | 0.00 |
| 10.71 | 16.64 | 10.21 | 0.00 |
| 10.90 | 19.93 | 10.21 | 0.00 |
| 10.96 | 20.92 | 10.21 | 0.00 |
| 11.46 | 27.85 | 10.21 | 0.00 |
| 11.96 | 32.96 | 10.21 | 0.00 |
| 12.46 | 37.36 | 10.21 | 0.00 |
| 12.96 | 41.30 | 10.21 | 0.00 |
| 13.46 | 44.91 | 10.21 | 0.00 |
| 13.96 | 48.24 | 10.21 | 0.00 |
| 14.46 | 51.34 | 10.21 | 0.00 |
| 14.96 | 54.29 | 10.21 | 0.00 |
| 15.46 | 57.07 | 10.21 | 0.00 |
| 15.96 | 59.72 | 10.21 | 0.00 |
| 16.46 | 62.27 | 10.21 | 0.00 |
| 16.96 | 64.71 | 10.21 | 0.00 |
| 17.46 | 67.07 | 10.21 | 0.00 |
| 17.96 | 69.34 | 10.21 | 0.00 |
| 18.46 | 71.54 | 10.21 | 0.00 |
| 18.96 | 73.68 | 10.21 | 0.00 |
| 19.46 | 75.76 | 10.21 | 0.00 |
| 19.96 | 77.78 | 10.21 | 0.00 |
| 20.30 | 79.12 | 10.21 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -16.86 | 10.71 | 0.00 |
| 8.71 | -16.86 | 10.71 | 0.00 |
| 8.96 | -16.86 | 10.71 | 0.00 |
| 9.21 | -16.86 | 10.71 | 0.00 |
| 9.46 | -16.86 | 10.71 | 0.00 |
| 9.71 | -16.86 | 10.71 | 0.00 |
| 9.96 | -16.55 | 10.71 | 0.00 |
| 10.21 | -14.90 | 10.71 | 0.00 |
| 10.46 | -11.35 | 10.71 | 0.00 |
| 10.71 | 0.00 | 10.71 | 0.00 |
| 10.90 | 10.73 | 10.71 | 0.00 |
| 10.96 | 12.35 | 10.71 | 0.00 |
| 11.46 | 21.60 | 10.71 | 0.00 |
| 11.96 | 27.85 | 10.71 | 0.00 |
| 12.46 | 32.95 | 10.71 | 0.00 |
| 12.96 | 37.37 | 10.71 | 0.00 |
| 13.46 | 41.30 | 10.71 | 0.00 |
| 13.96 | 44.90 | 10.71 | 0.00 |
| 14.46 | 48.23 | 10.71 | 0.00 |
| 14.96 | 51.35 | 10.71 | 0.00 |
| 15.46 | 54.29 | 10.71 | 0.00 |
| 15.96 | 57.07 | 10.71 | 0.00 |
| 16.46 | 59.73 | 10.71 | 0.00 |
| 16.96 | 62.27 | 10.71 | 0.00 |
| 17.46 | 64.71 | 10.71 | 0.00 |
| 17.96 | 67.06 | 10.71 | 0.00 |
| 18.46 | 69.34 | 10.71 | 0.00 |
| 18.96 | 71.54 | 10.71 | 0.00 |
| 19.46 | 73.68 | 10.71 | 0.00 |
| 19.96 | 75.76 | 10.71 | 0.00 |
| 20.30 | 77.13 | 10.71 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.46 | -18.75 | 10.90 | 0.00 |
| 8.71 | -18.75 | 10.90 | 0.00 |
| 8.96 | -18.75 | 10.90 | 0.00 |
| 9.21 | -18.75 | 10.90 | 0.00 |
| 9.46 | -18.75 | 10.90 | 0.00 |
| 9.71 | -18.75 | 10.90 | 0.00 |
| 9.96 | -18.67 | 10.90 | 0.00 |
| 10.21 | -17.57 | 10.90 | 0.00 |
| 10.46 | -15.04 | 10.90 | 0.00 |
| 10.71 | -10.40 | 10.90 | 0.00 |
| 10.90 | 0.00 | 10.90 | 0.00 |
| 10.96 | 6.07 | 10.90 | 0.00 |
| 11.46 | 18.66 | 10.90 | 0.00 |
| 11.96 | 25.64 | 10.90 | 0.00 |
| 12.46 | 31.11 | 10.90 | 0.00 |
| 12.96 | 35.75 | 10.90 | 0.00 |
| 13.46 | 39.86 | 10.90 | 0.00 |
| 13.96 | 43.58 | 10.90 | 0.00 |
| 14.46 | 47.00 | 10.90 | 0.00 |
| 14.96 | 50.19 | 10.90 | 0.00 |
| 15.46 | 53.19 | 10.90 | 0.00 |
| 15.96 | 56.03 | 10.90 | 0.00 |
| 16.46 | 58.74 | 10.90 | 0.00 |
| 16.96 | 61.32 | 10.90 | 0.00 |
| 17.46 | 63.79 | 10.90 | 0.00 |
| 17.96 | 66.19 | 10.90 | 0.00 |
| 18.46 | 68.49 | 10.90 | 0.00 |
| 18.96 | 70.72 | 10.90 | 0.00 |
| 19.46 | 72.88 | 10.90 | 0.00 |
| 19.96 | 74.97 | 10.90 | 0.00 |
| 20.30 | 76.37 | 10.90 | 0.00 |

Contributing Structures

| |
|---|
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#1

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |
| Culvert - 1 |

# 9th and Palm, Proposed Conditions

Subsection: Outlet Input Data
Label: Outlet#2

Return Event: 100 years
Storm Event:

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 8.84 ft |
| Increment (Headwater) | 0.50 ft |
| Maximum (Headwater) | 16.00 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Culvert-Circular | CV2 | Forward + Reverse | TW | 8.84 | 16.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

# 9th and Palm, Proposed Conditions

Subsection: Outlet Input Data
Label: Outlet#2

Return Event: 100 years
Storm Event:

| Structure ID: CV2<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 24.0 in |
| Length | 108.00 ft |
| Length (Computed Barrel) | 108.00 ft |
| Slope (Computed) | 0.003 ft/ft |

| Outlet Control Data | |
|---|---|
| Manning's n | 0.013 |
| Ke | 0.500 |
| Kb | 0.012 |
| Kr | 0.500 |
| Convergence Tolerance | 0.00 ft |

| Inlet Control Data | |
|---|---|
| Equation Form | Form 1 |
| K | 0.0098 |
| M | 2.0000 |
| C | 0.0398 |
| Y | 0.6700 |
| T1 ratio (HW/D) | 1.159 |
| T2 ratio (HW/D) | 1.305 |
| Slope Correction Factor | -0.500 |

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

| | | | |
|---|---|---|---|
| T1 Elevation | 11.16 ft | T1 Flow | 15.55 $ft^3/s$ |
| T2 Elevation | 11.45 ft | T2 Flow | 17.77 $ft^3/s$ |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.46 | 0.00 |
| 8.96 | 0.06 | 8.46 | 0.00 |
| 9.34 | 0.94 | 8.46 | 0.00 |
| 9.46 | 1.43 | 8.46 | 0.00 |
| 9.84 | 3.53 | 8.46 | 0.00 |
| 9.96 | 4.35 | 8.46 | 0.00 |
| 10.34 | 7.35 | 8.46 | 0.00 |
| 10.46 | 8.39 | 8.46 | 0.00 |
| 10.84 | 11.84 | 8.46 | 0.00 |
| 10.96 | 12.94 | 8.46 | 0.00 |
| 11.34 | 16.13 | 8.46 | 0.00 |
| 11.46 | 16.98 | 8.46 | 0.00 |
| 11.84 | 18.99 | 8.46 | 0.00 |
| 11.96 | 19.57 | 8.46 | 0.00 |
| 12.34 | 21.38 | 8.46 | 0.00 |
| 12.46 | 21.92 | 8.46 | 0.00 |
| 12.84 | 23.62 | 8.46 | 0.00 |
| 12.96 | 24.14 | 8.46 | 0.00 |
| 13.34 | 25.76 | 8.46 | 0.00 |
| 13.46 | 26.25 | 8.46 | 0.00 |
| 13.84 | 27.75 | 8.46 | 0.00 |
| 13.96 | 28.21 | 8.46 | 0.00 |
| 14.34 | 29.63 | 8.46 | 0.00 |
| 14.46 | 30.06 | 8.46 | 0.00 |
| 14.84 | 31.41 | 8.46 | 0.00 |
| 14.96 | 31.82 | 8.46 | 0.00 |
| 15.34 | 33.13 | 8.46 | 0.00 |
| 15.46 | 33.48 | 8.46 | 0.00 |
| 15.84 | 34.73 | 8.46 | 0.00 |
| 15.96 | 35.11 | 8.46 | 0.00 |
| 16.00 | 35.24 | 8.46 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.47 | 0.00 |
| 8.96 | 0.06 | 8.47 | 0.00 |
| 9.34 | 0.94 | 8.47 | 0.00 |
| 9.46 | 1.43 | 8.47 | 0.00 |
| 9.84 | 3.53 | 8.47 | 0.00 |
| 9.96 | 4.35 | 8.47 | 0.00 |
| 10.34 | 7.35 | 8.47 | 0.00 |
| 10.46 | 8.39 | 8.47 | 0.00 |
| 10.84 | 11.84 | 8.47 | 0.00 |
| 10.96 | 12.94 | 8.47 | 0.00 |
| 11.34 | 16.13 | 8.47 | 0.00 |
| 11.46 | 16.98 | 8.47 | 0.00 |
| 11.84 | 18.99 | 8.47 | 0.00 |
| 11.96 | 19.57 | 8.47 | 0.00 |
| 12.34 | 21.38 | 8.47 | 0.00 |
| 12.46 | 21.92 | 8.47 | 0.00 |
| 12.84 | 23.62 | 8.47 | 0.00 |
| 12.96 | 24.14 | 8.47 | 0.00 |
| 13.34 | 25.76 | 8.47 | 0.00 |
| 13.46 | 26.25 | 8.47 | 0.00 |
| 13.84 | 27.75 | 8.47 | 0.00 |
| 13.96 | 28.21 | 8.47 | 0.00 |
| 14.34 | 29.63 | 8.47 | 0.00 |
| 14.46 | 30.06 | 8.47 | 0.00 |
| 14.84 | 31.41 | 8.47 | 0.00 |
| 14.96 | 31.82 | 8.47 | 0.00 |
| 15.34 | 33.13 | 8.47 | 0.00 |
| 15.46 | 33.48 | 8.47 | 0.00 |
| 15.84 | 34.73 | 8.47 | 0.00 |
| 15.96 | 35.11 | 8.47 | 0.00 |
| 16.00 | 35.24 | 8.47 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | 0.00 | 8.84 | 0.00 |
| 8.96 | 0.06 | 8.84 | 0.00 |
| 9.34 | 0.94 | 8.84 | 0.00 |
| 9.46 | 1.43 | 8.84 | 0.00 |
| 9.84 | 3.53 | 8.84 | 0.00 |
| 9.96 | 4.35 | 8.84 | 0.00 |
| 10.34 | 7.35 | 8.84 | 0.00 |
| 10.46 | 8.39 | 8.84 | 0.00 |
| 10.84 | 11.84 | 8.84 | 0.00 |
| 10.96 | 12.94 | 8.84 | 0.00 |
| 11.34 | 16.13 | 8.84 | 0.00 |
| 11.46 | 16.98 | 8.84 | 0.00 |
| 11.84 | 18.99 | 8.84 | 0.00 |
| 11.96 | 19.57 | 8.84 | 0.00 |
| 12.34 | 21.38 | 8.84 | 0.00 |
| 12.46 | 21.92 | 8.84 | 0.00 |
| 12.84 | 23.62 | 8.84 | 0.00 |
| 12.96 | 24.14 | 8.84 | 0.00 |
| 13.34 | 25.76 | 8.84 | 0.00 |
| 13.46 | 26.25 | 8.84 | 0.00 |
| 13.84 | 27.75 | 8.84 | 0.00 |
| 13.96 | 28.21 | 8.84 | 0.00 |
| 14.34 | 29.63 | 8.84 | 0.00 |
| 14.46 | 30.06 | 8.84 | 0.00 |
| 14.84 | 31.41 | 8.84 | 0.00 |
| 14.96 | 31.82 | 8.84 | 0.00 |
| 15.34 | 33.13 | 8.84 | 0.00 |
| 15.46 | 33.48 | 8.84 | 0.00 |
| 15.84 | 34.73 | 8.84 | 0.00 |
| 15.96 | 35.11 | 8.84 | 0.00 |
| 16.00 | 35.24 | 8.84 | 0.00 |

Contributing Structures

| |
|---|
| None Contributing |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -0.05 | 8.96 | 0.00 |
| 8.96 | 0.00 | 8.96 | 0.00 |
| 9.34 | 0.94 | 8.96 | 0.00 |
| 9.46 | 1.43 | 8.96 | 0.00 |
| 9.84 | 3.53 | 8.96 | 0.00 |
| 9.96 | 4.35 | 8.96 | 0.00 |
| 10.34 | 7.35 | 8.96 | 0.00 |
| 10.46 | 8.39 | 8.96 | 0.00 |
| 10.84 | 11.84 | 8.96 | 0.00 |
| 10.96 | 12.94 | 8.96 | 0.00 |
| 11.34 | 16.13 | 8.96 | 0.00 |
| 11.46 | 16.98 | 8.96 | 0.00 |
| 11.84 | 18.99 | 8.96 | 0.00 |
| 11.96 | 19.57 | 8.96 | 0.00 |
| 12.34 | 21.38 | 8.96 | 0.00 |
| 12.46 | 21.92 | 8.96 | 0.00 |
| 12.84 | 23.62 | 8.96 | 0.00 |
| 12.96 | 24.14 | 8.96 | 0.00 |
| 13.34 | 25.76 | 8.96 | 0.00 |
| 13.46 | 26.25 | 8.96 | 0.00 |
| 13.84 | 27.75 | 8.96 | 0.00 |
| 13.96 | 28.21 | 8.96 | 0.00 |
| 14.34 | 29.63 | 8.96 | 0.00 |
| 14.46 | 30.06 | 8.96 | 0.00 |
| 14.84 | 31.41 | 8.96 | 0.00 |
| 14.96 | 31.82 | 8.96 | 0.00 |
| 15.34 | 33.13 | 8.96 | 0.00 |
| 15.46 | 33.48 | 8.96 | 0.00 |
| 15.84 | 34.73 | 8.96 | 0.00 |
| 15.96 | 35.11 | 8.96 | 0.00 |
| 16.00 | 35.24 | 8.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -1.37 | 9.46 | 0.00 |
| 8.96 | -1.37 | 9.46 | 0.00 |
| 9.34 | -1.26 | 9.46 | 0.00 |
| 9.46 | 0.00 | 9.46 | 0.00 |
| 9.84 | 3.53 | 9.46 | 0.00 |
| 9.96 | 4.35 | 9.46 | 0.00 |
| 10.34 | 7.35 | 9.46 | 0.00 |
| 10.46 | 8.39 | 9.46 | 0.00 |
| 10.84 | 11.84 | 9.46 | 0.00 |
| 10.96 | 12.94 | 9.46 | 0.00 |
| 11.34 | 16.13 | 9.46 | 0.00 |
| 11.46 | 16.98 | 9.46 | 0.00 |
| 11.84 | 18.99 | 9.46 | 0.00 |
| 11.96 | 19.57 | 9.46 | 0.00 |
| 12.34 | 21.38 | 9.46 | 0.00 |
| 12.46 | 21.92 | 9.46 | 0.00 |
| 12.84 | 23.62 | 9.46 | 0.00 |
| 12.96 | 24.14 | 9.46 | 0.00 |
| 13.34 | 25.76 | 9.46 | 0.00 |
| 13.46 | 26.25 | 9.46 | 0.00 |
| 13.84 | 27.75 | 9.46 | 0.00 |
| 13.96 | 28.21 | 9.46 | 0.00 |
| 14.34 | 29.63 | 9.46 | 0.00 |
| 14.46 | 30.06 | 9.46 | 0.00 |
| 14.84 | 31.41 | 9.46 | 0.00 |
| 14.96 | 31.82 | 9.46 | 0.00 |
| 15.34 | 33.13 | 9.46 | 0.00 |
| 15.46 | 33.48 | 9.46 | 0.00 |
| 15.84 | 34.73 | 9.46 | 0.00 |
| 15.96 | 35.11 | 9.46 | 0.00 |
| 16.00 | 35.24 | 9.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -4.17 | 9.96 | 0.00 |
| 8.96 | -4.17 | 9.96 | 0.00 |
| 9.34 | -4.17 | 9.96 | 0.00 |
| 9.46 | -4.17 | 9.96 | 0.00 |
| 9.84 | -3.12 | 9.96 | 0.00 |
| 9.96 | 0.00 | 9.96 | 0.00 |
| 10.34 | 6.97 | 9.96 | 0.00 |
| 10.46 | 8.19 | 9.96 | 0.00 |
| 10.84 | 11.78 | 9.96 | 0.00 |
| 10.96 | 12.90 | 9.96 | 0.00 |
| 11.34 | 16.13 | 9.96 | 0.00 |
| 11.46 | 16.98 | 9.96 | 0.00 |
| 11.84 | 18.99 | 9.96 | 0.00 |
| 11.96 | 19.57 | 9.96 | 0.00 |
| 12.34 | 21.38 | 9.96 | 0.00 |
| 12.46 | 21.92 | 9.96 | 0.00 |
| 12.84 | 23.62 | 9.96 | 0.00 |
| 12.96 | 24.14 | 9.96 | 0.00 |
| 13.34 | 25.76 | 9.96 | 0.00 |
| 13.46 | 26.25 | 9.96 | 0.00 |
| 13.84 | 27.75 | 9.96 | 0.00 |
| 13.96 | 28.21 | 9.96 | 0.00 |
| 14.34 | 29.63 | 9.96 | 0.00 |
| 14.46 | 30.06 | 9.96 | 0.00 |
| 14.84 | 31.41 | 9.96 | 0.00 |
| 14.96 | 31.82 | 9.96 | 0.00 |
| 15.34 | 33.13 | 9.96 | 0.00 |
| 15.46 | 33.48 | 9.96 | 0.00 |
| 15.84 | 34.73 | 9.96 | 0.00 |
| 15.96 | 35.11 | 9.96 | 0.00 |
| 16.00 | 35.24 | 9.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -7.88 | 10.46 | 0.00 |
| 8.96 | -7.88 | 10.46 | 0.00 |
| 9.34 | -7.88 | 10.46 | 0.00 |
| 9.46 | -7.88 | 10.46 | 0.00 |
| 9.84 | -7.88 | 10.46 | 0.00 |
| 9.96 | -7.77 | 10.46 | 0.00 |
| 10.34 | -4.77 | 10.46 | 0.00 |
| 10.46 | 0.00 | 10.46 | 0.00 |
| 10.84 | 9.35 | 10.46 | 0.00 |
| 10.96 | 10.78 | 10.46 | 0.00 |
| 11.34 | 14.07 | 10.46 | 0.00 |
| 11.46 | 14.96 | 10.46 | 0.00 |
| 11.84 | 17.57 | 10.46 | 0.00 |
| 11.96 | 18.32 | 10.46 | 0.00 |
| 12.34 | 20.50 | 10.46 | 0.00 |
| 12.46 | 21.15 | 10.46 | 0.00 |
| 12.84 | 23.07 | 10.46 | 0.00 |
| 12.96 | 23.64 | 10.46 | 0.00 |
| 13.34 | 25.37 | 10.46 | 0.00 |
| 13.46 | 25.90 | 10.46 | 0.00 |
| 13.84 | 27.49 | 10.46 | 0.00 |
| 13.96 | 27.97 | 10.46 | 0.00 |
| 14.34 | 29.45 | 10.46 | 0.00 |
| 14.46 | 29.90 | 10.46 | 0.00 |
| 14.84 | 31.29 | 10.46 | 0.00 |
| 14.96 | 31.72 | 10.46 | 0.00 |
| 15.34 | 33.03 | 10.46 | 0.00 |
| 15.46 | 33.43 | 10.46 | 0.00 |
| 15.84 | 34.68 | 10.46 | 0.00 |
| 15.96 | 35.06 | 10.46 | 0.00 |
| 16.00 | 35.19 | 10.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -11.49 | 10.96 | 0.00 |
| 8.96 | -11.49 | 10.96 | 0.00 |
| 9.34 | -11.49 | 10.96 | 0.00 |
| 9.46 | -11.49 | 10.96 | 0.00 |
| 9.84 | -11.49 | 10.96 | 0.00 |
| 9.96 | -11.49 | 10.96 | 0.00 |
| 10.34 | -10.86 | 10.96 | 0.00 |
| 10.46 | -10.13 | 10.96 | 0.00 |
| 10.84 | -5.20 | 10.96 | 0.00 |
| 10.96 | 0.00 | 10.96 | 0.00 |
| 11.34 | 9.23 | 10.96 | 0.00 |
| 11.46 | 10.57 | 10.96 | 0.00 |
| 11.84 | 14.02 | 10.96 | 0.00 |
| 11.96 | 14.95 | 10.96 | 0.00 |
| 12.34 | 17.56 | 10.96 | 0.00 |
| 12.46 | 18.31 | 10.96 | 0.00 |
| 12.84 | 20.51 | 10.96 | 0.00 |
| 12.96 | 21.14 | 10.96 | 0.00 |
| 13.34 | 23.07 | 10.96 | 0.00 |
| 13.46 | 23.64 | 10.96 | 0.00 |
| 13.84 | 25.37 | 10.96 | 0.00 |
| 13.96 | 25.90 | 10.96 | 0.00 |
| 14.34 | 27.49 | 10.96 | 0.00 |
| 14.46 | 27.98 | 10.96 | 0.00 |
| 14.84 | 29.46 | 10.96 | 0.00 |
| 14.96 | 29.91 | 10.96 | 0.00 |
| 15.34 | 31.29 | 10.96 | 0.00 |
| 15.46 | 31.72 | 10.96 | 0.00 |
| 15.84 | 33.03 | 10.96 | 0.00 |
| 15.96 | 33.43 | 10.96 | 0.00 |
| 16.00 | 33.57 | 10.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -14.65 | 11.46 | 0.00 |
| 8.96 | -14.65 | 11.46 | 0.00 |
| 9.34 | -14.65 | 11.46 | 0.00 |
| 9.46 | -14.65 | 11.46 | 0.00 |
| 9.84 | -14.65 | 11.46 | 0.00 |
| 9.96 | -14.65 | 11.46 | 0.00 |
| 10.34 | -14.57 | 11.46 | 0.00 |
| 10.46 | -14.26 | 11.46 | 0.00 |
| 10.84 | -11.78 | 11.46 | 0.00 |
| 10.96 | -10.57 | 11.46 | 0.00 |
| 11.34 | -5.20 | 11.46 | 0.00 |
| 11.46 | 0.00 | 11.46 | 0.00 |
| 11.84 | 9.22 | 11.46 | 0.00 |
| 11.96 | 10.58 | 11.46 | 0.00 |
| 12.34 | 14.02 | 11.46 | 0.00 |
| 12.46 | 14.95 | 11.46 | 0.00 |
| 12.84 | 17.57 | 11.46 | 0.00 |
| 12.96 | 18.31 | 11.46 | 0.00 |
| 13.34 | 20.50 | 11.46 | 0.00 |
| 13.46 | 21.15 | 11.46 | 0.00 |
| 13.84 | 23.07 | 11.46 | 0.00 |
| 13.96 | 23.65 | 11.46 | 0.00 |
| 14.34 | 25.38 | 11.46 | 0.00 |
| 14.46 | 25.90 | 11.46 | 0.00 |
| 14.84 | 27.49 | 11.46 | 0.00 |
| 14.96 | 27.97 | 11.46 | 0.00 |
| 15.34 | 29.46 | 11.46 | 0.00 |
| 15.46 | 29.91 | 11.46 | 0.00 |
| 15.84 | 31.29 | 11.46 | 0.00 |
| 15.96 | 31.72 | 11.46 | 0.00 |
| 16.00 | 31.86 | 11.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -17.49 | 11.96 | 0.00 |
| 8.96 | -17.49 | 11.96 | 0.00 |
| 9.34 | -17.49 | 11.96 | 0.00 |
| 9.46 | -17.49 | 11.96 | 0.00 |
| 9.84 | -17.49 | 11.96 | 0.00 |
| 9.96 | -17.49 | 11.96 | 0.00 |
| 10.34 | -17.49 | 11.96 | 0.00 |
| 10.46 | -17.42 | 11.96 | 0.00 |
| 10.84 | -15.83 | 11.96 | 0.00 |
| 10.96 | -14.95 | 11.96 | 0.00 |
| 11.34 | -11.78 | 11.96 | 0.00 |
| 11.46 | -10.57 | 11.96 | 0.00 |
| 11.84 | -5.20 | 11.96 | 0.00 |
| 11.96 | 0.00 | 11.96 | 0.00 |
| 12.34 | 9.23 | 11.96 | 0.00 |
| 12.46 | 10.57 | 11.96 | 0.00 |
| 12.84 | 14.03 | 11.96 | 0.00 |
| 12.96 | 14.96 | 11.96 | 0.00 |
| 13.34 | 17.56 | 11.96 | 0.00 |
| 13.46 | 18.31 | 11.96 | 0.00 |
| 13.84 | 20.50 | 11.96 | 0.00 |
| 13.96 | 21.15 | 11.96 | 0.00 |
| 14.34 | 23.06 | 11.96 | 0.00 |
| 14.46 | 23.64 | 11.96 | 0.00 |
| 14.84 | 25.38 | 11.96 | 0.00 |
| 14.96 | 25.90 | 11.96 | 0.00 |
| 15.34 | 27.49 | 11.96 | 0.00 |
| 15.46 | 27.97 | 11.96 | 0.00 |
| 15.84 | 29.45 | 11.96 | 0.00 |
| 15.96 | 29.90 | 11.96 | 0.00 |
| 16.00 | 30.05 | 11.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -20.06 | 12.46 | 0.00 |
| 8.96 | -20.06 | 12.46 | 0.00 |
| 9.34 | -20.06 | 12.46 | 0.00 |
| 9.46 | -20.06 | 12.46 | 0.00 |
| 9.84 | -20.06 | 12.46 | 0.00 |
| 9.96 | -20.06 | 12.46 | 0.00 |
| 10.34 | -20.06 | 12.46 | 0.00 |
| 10.46 | -20.06 | 12.46 | 0.00 |
| 10.84 | -19.04 | 12.46 | 0.00 |
| 10.96 | -18.31 | 12.46 | 0.00 |
| 11.34 | -15.83 | 12.46 | 0.00 |
| 11.46 | -14.95 | 12.46 | 0.00 |
| 11.84 | -11.78 | 12.46 | 0.00 |
| 11.96 | -10.57 | 12.46 | 0.00 |
| 12.34 | -5.20 | 12.46 | 0.00 |
| 12.46 | 0.00 | 12.46 | 0.00 |
| 12.84 | 9.21 | 12.46 | 0.00 |
| 12.96 | 10.57 | 12.46 | 0.00 |
| 13.34 | 14.03 | 12.46 | 0.00 |
| 13.46 | 14.95 | 12.46 | 0.00 |
| 13.84 | 17.57 | 12.46 | 0.00 |
| 13.96 | 18.31 | 12.46 | 0.00 |
| 14.34 | 20.51 | 12.46 | 0.00 |
| 14.46 | 21.15 | 12.46 | 0.00 |
| 14.84 | 23.07 | 12.46 | 0.00 |
| 14.96 | 23.64 | 12.46 | 0.00 |
| 15.34 | 25.38 | 12.46 | 0.00 |
| 15.46 | 25.90 | 12.46 | 0.00 |
| 15.84 | 27.49 | 12.46 | 0.00 |
| 15.96 | 27.97 | 12.46 | 0.00 |
| 16.00 | 28.13 | 12.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -22.46 | 12.96 | 0.00 |
| 8.96 | -22.46 | 12.96 | 0.00 |
| 9.34 | -22.46 | 12.96 | 0.00 |
| 9.46 | -22.46 | 12.96 | 0.00 |
| 9.84 | -22.46 | 12.96 | 0.00 |
| 9.96 | -22.46 | 12.96 | 0.00 |
| 10.34 | -22.46 | 12.96 | 0.00 |
| 10.46 | -22.46 | 12.96 | 0.00 |
| 10.84 | -21.77 | 12.96 | 0.00 |
| 10.96 | -21.15 | 12.96 | 0.00 |
| 11.34 | -19.04 | 12.96 | 0.00 |
| 11.46 | -18.31 | 12.96 | 0.00 |
| 11.84 | -15.83 | 12.96 | 0.00 |
| 11.96 | -14.95 | 12.96 | 0.00 |
| 12.34 | -11.78 | 12.96 | 0.00 |
| 12.46 | -10.57 | 12.96 | 0.00 |
| 12.84 | -5.20 | 12.96 | 0.00 |
| 12.96 | 0.00 | 12.96 | 0.00 |
| 13.34 | 9.22 | 12.96 | 0.00 |
| 13.46 | 10.58 | 12.96 | 0.00 |
| 13.84 | 14.03 | 12.96 | 0.00 |
| 13.96 | 14.96 | 12.96 | 0.00 |
| 14.34 | 17.56 | 12.96 | 0.00 |
| 14.46 | 18.32 | 12.96 | 0.00 |
| 14.84 | 20.51 | 12.96 | 0.00 |
| 14.96 | 21.15 | 12.96 | 0.00 |
| 15.34 | 23.07 | 12.96 | 0.00 |
| 15.46 | 23.64 | 12.96 | 0.00 |
| 15.84 | 25.38 | 12.96 | 0.00 |
| 15.96 | 25.90 | 12.96 | 0.00 |
| 16.00 | 26.07 | 12.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -24.67 | 13.46 | 0.00 |
| 8.96 | -24.67 | 13.46 | 0.00 |
| 9.34 | -24.67 | 13.46 | 0.00 |
| 9.46 | -24.67 | 13.46 | 0.00 |
| 9.84 | -24.67 | 13.46 | 0.00 |
| 9.96 | -24.67 | 13.46 | 0.00 |
| 10.34 | -24.67 | 13.46 | 0.00 |
| 10.46 | -24.67 | 13.46 | 0.00 |
| 10.84 | -24.20 | 13.46 | 0.00 |
| 10.96 | -23.64 | 13.46 | 0.00 |
| 11.34 | -21.77 | 13.46 | 0.00 |
| 11.46 | -21.15 | 13.46 | 0.00 |
| 11.84 | -19.04 | 13.46 | 0.00 |
| 11.96 | -18.31 | 13.46 | 0.00 |
| 12.34 | -15.83 | 13.46 | 0.00 |
| 12.46 | -14.95 | 13.46 | 0.00 |
| 12.84 | -11.78 | 13.46 | 0.00 |
| 12.96 | -10.57 | 13.46 | 0.00 |
| 13.34 | -5.20 | 13.46 | 0.00 |
| 13.46 | 0.00 | 13.46 | 0.00 |
| 13.84 | 9.21 | 13.46 | 0.00 |
| 13.96 | 10.57 | 13.46 | 0.00 |
| 14.34 | 14.03 | 13.46 | 0.00 |
| 14.46 | 14.96 | 13.46 | 0.00 |
| 14.84 | 17.57 | 13.46 | 0.00 |
| 14.96 | 18.31 | 13.46 | 0.00 |
| 15.34 | 20.50 | 13.46 | 0.00 |
| 15.46 | 21.15 | 13.46 | 0.00 |
| 15.84 | 23.06 | 13.46 | 0.00 |
| 15.96 | 23.64 | 13.46 | 0.00 |
| 16.00 | 23.83 | 13.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -26.74 | 13.96 | 0.00 |
| 8.96 | -26.74 | 13.96 | 0.00 |
| 9.34 | -26.74 | 13.96 | 0.00 |
| 9.46 | -26.74 | 13.96 | 0.00 |
| 9.84 | -26.74 | 13.96 | 0.00 |
| 9.96 | -26.74 | 13.96 | 0.00 |
| 10.34 | -26.74 | 13.96 | 0.00 |
| 10.46 | -26.74 | 13.96 | 0.00 |
| 10.84 | -26.41 | 13.96 | 0.00 |
| 10.96 | -25.90 | 13.96 | 0.00 |
| 11.34 | -24.20 | 13.96 | 0.00 |
| 11.46 | -23.64 | 13.96 | 0.00 |
| 11.84 | -21.77 | 13.96 | 0.00 |
| 11.96 | -21.15 | 13.96 | 0.00 |
| 12.34 | -19.04 | 13.96 | 0.00 |
| 12.46 | -18.31 | 13.96 | 0.00 |
| 12.84 | -15.83 | 13.96 | 0.00 |
| 12.96 | -14.95 | 13.96 | 0.00 |
| 13.34 | -11.78 | 13.96 | 0.00 |
| 13.46 | -10.57 | 13.96 | 0.00 |
| 13.84 | -5.20 | 13.96 | 0.00 |
| 13.96 | 0.00 | 13.96 | 0.00 |
| 14.34 | 9.23 | 13.96 | 0.00 |
| 14.46 | 10.57 | 13.96 | 0.00 |
| 14.84 | 14.03 | 13.96 | 0.00 |
| 14.96 | 14.95 | 13.96 | 0.00 |
| 15.34 | 17.57 | 13.96 | 0.00 |
| 15.46 | 18.31 | 13.96 | 0.00 |
| 15.84 | 20.50 | 13.96 | 0.00 |
| 15.96 | 21.15 | 13.96 | 0.00 |
| 16.00 | 21.36 | 13.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -28.69 | 14.46 | 0.00 |
| 8.96 | -28.69 | 14.46 | 0.00 |
| 9.34 | -28.69 | 14.46 | 0.00 |
| 9.46 | -28.69 | 14.46 | 0.00 |
| 9.84 | -28.69 | 14.46 | 0.00 |
| 9.96 | -28.69 | 14.46 | 0.00 |
| 10.34 | -28.69 | 14.46 | 0.00 |
| 10.46 | -28.69 | 14.46 | 0.00 |
| 10.84 | -28.45 | 14.46 | 0.00 |
| 10.96 | -27.98 | 14.46 | 0.00 |
| 11.34 | -26.41 | 14.46 | 0.00 |
| 11.46 | -25.90 | 14.46 | 0.00 |
| 11.84 | -24.20 | 14.46 | 0.00 |
| 11.96 | -23.64 | 14.46 | 0.00 |
| 12.34 | -21.77 | 14.46 | 0.00 |
| 12.46 | -21.15 | 14.46 | 0.00 |
| 12.84 | -19.04 | 14.46 | 0.00 |
| 12.96 | -18.31 | 14.46 | 0.00 |
| 13.34 | -15.83 | 14.46 | 0.00 |
| 13.46 | -14.95 | 14.46 | 0.00 |
| 13.84 | -11.78 | 14.46 | 0.00 |
| 13.96 | -10.57 | 14.46 | 0.00 |
| 14.34 | -5.20 | 14.46 | 0.00 |
| 14.46 | 0.00 | 14.46 | 0.00 |
| 14.84 | 9.22 | 14.46 | 0.00 |
| 14.96 | 10.58 | 14.46 | 0.00 |
| 15.34 | 14.03 | 14.46 | 0.00 |
| 15.46 | 14.95 | 14.46 | 0.00 |
| 15.84 | 17.57 | 14.46 | 0.00 |
| 15.96 | 18.31 | 14.46 | 0.00 |
| 16.00 | 18.56 | 14.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -30.53 | 14.96 | 0.00 |
| 8.96 | -30.53 | 14.96 | 0.00 |
| 9.34 | -30.53 | 14.96 | 0.00 |
| 9.46 | -30.53 | 14.96 | 0.00 |
| 9.84 | -30.53 | 14.96 | 0.00 |
| 9.96 | -30.53 | 14.96 | 0.00 |
| 10.34 | -30.53 | 14.96 | 0.00 |
| 10.46 | -30.53 | 14.96 | 0.00 |
| 10.84 | -30.35 | 14.96 | 0.00 |
| 10.96 | -29.91 | 14.96 | 0.00 |
| 11.34 | -28.45 | 14.96 | 0.00 |
| 11.46 | -27.98 | 14.96 | 0.00 |
| 11.84 | -26.41 | 14.96 | 0.00 |
| 11.96 | -25.90 | 14.96 | 0.00 |
| 12.34 | -24.20 | 14.96 | 0.00 |
| 12.46 | -23.64 | 14.96 | 0.00 |
| 12.84 | -21.77 | 14.96 | 0.00 |
| 12.96 | -21.15 | 14.96 | 0.00 |
| 13.34 | -19.04 | 14.96 | 0.00 |
| 13.46 | -18.31 | 14.96 | 0.00 |
| 13.84 | -15.83 | 14.96 | 0.00 |
| 13.96 | -14.95 | 14.96 | 0.00 |
| 14.34 | -11.78 | 14.96 | 0.00 |
| 14.46 | -10.57 | 14.96 | 0.00 |
| 14.84 | -5.20 | 14.96 | 0.00 |
| 14.96 | 0.00 | 14.96 | 0.00 |
| 15.34 | 9.22 | 14.96 | 0.00 |
| 15.46 | 10.57 | 14.96 | 0.00 |
| 15.84 | 14.03 | 14.96 | 0.00 |
| 15.96 | 14.95 | 14.96 | 0.00 |
| 16.00 | 15.25 | 14.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -32.25 | 15.46 | 0.00 |
| 8.96 | -32.25 | 15.46 | 0.00 |
| 9.34 | -32.25 | 15.46 | 0.00 |
| 9.46 | -32.25 | 15.46 | 0.00 |
| 9.84 | -32.25 | 15.46 | 0.00 |
| 9.96 | -32.25 | 15.46 | 0.00 |
| 10.34 | -32.25 | 15.46 | 0.00 |
| 10.46 | -32.25 | 15.46 | 0.00 |
| 10.84 | -32.14 | 15.46 | 0.00 |
| 10.96 | -31.72 | 15.46 | 0.00 |
| 11.34 | -30.35 | 15.46 | 0.00 |
| 11.46 | -29.91 | 15.46 | 0.00 |
| 11.84 | -28.45 | 15.46 | 0.00 |
| 11.96 | -27.98 | 15.46 | 0.00 |
| 12.34 | -26.41 | 15.46 | 0.00 |
| 12.46 | -25.90 | 15.46 | 0.00 |
| 12.84 | -24.20 | 15.46 | 0.00 |
| 12.96 | -23.64 | 15.46 | 0.00 |
| 13.34 | -21.77 | 15.46 | 0.00 |
| 13.46 | -21.15 | 15.46 | 0.00 |
| 13.84 | -19.04 | 15.46 | 0.00 |
| 13.96 | -18.31 | 15.46 | 0.00 |
| 14.34 | -15.83 | 15.46 | 0.00 |
| 14.46 | -14.95 | 15.46 | 0.00 |
| 14.84 | -11.78 | 15.46 | 0.00 |
| 14.96 | -10.57 | 15.46 | 0.00 |
| 15.34 | -5.20 | 15.46 | 0.00 |
| 15.46 | 0.00 | 15.46 | 0.00 |
| 15.84 | 9.22 | 15.46 | 0.00 |
| 15.96 | 10.58 | 15.46 | 0.00 |
| 16.00 | 10.99 | 15.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -33.93 | 15.96 | 0.00 |
| 8.96 | -33.93 | 15.96 | 0.00 |
| 9.34 | -33.93 | 15.96 | 0.00 |
| 9.46 | -33.93 | 15.96 | 0.00 |
| 9.84 | -33.93 | 15.96 | 0.00 |
| 9.96 | -33.93 | 15.96 | 0.00 |
| 10.34 | -33.93 | 15.96 | 0.00 |
| 10.46 | -33.93 | 15.96 | 0.00 |
| 10.84 | -33.83 | 15.96 | 0.00 |
| 10.96 | -33.44 | 15.96 | 0.00 |
| 11.34 | -32.14 | 15.96 | 0.00 |
| 11.46 | -31.72 | 15.96 | 0.00 |
| 11.84 | -30.35 | 15.96 | 0.00 |
| 11.96 | -29.91 | 15.96 | 0.00 |
| 12.34 | -28.45 | 15.96 | 0.00 |
| 12.46 | -27.98 | 15.96 | 0.00 |
| 12.84 | -26.41 | 15.96 | 0.00 |
| 12.96 | -25.90 | 15.96 | 0.00 |
| 13.34 | -24.20 | 15.96 | 0.00 |
| 13.46 | -23.64 | 15.96 | 0.00 |
| 13.84 | -21.77 | 15.96 | 0.00 |
| 13.96 | -21.15 | 15.96 | 0.00 |
| 14.34 | -19.04 | 15.96 | 0.00 |
| 14.46 | -18.31 | 15.96 | 0.00 |
| 14.84 | -15.83 | 15.96 | 0.00 |
| 14.96 | -14.95 | 15.96 | 0.00 |
| 15.34 | -11.78 | 15.96 | 0.00 |
| 15.46 | -10.57 | 15.96 | 0.00 |
| 15.84 | -5.20 | 15.96 | 0.00 |
| 15.96 | 0.00 | 15.96 | 0.00 |
| 16.00 | 2.97 | 15.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -35.53 | 16.46 | 0.00 |
| 8.96 | -35.53 | 16.46 | 0.00 |
| 9.34 | -35.53 | 16.46 | 0.00 |
| 9.46 | -35.53 | 16.46 | 0.00 |
| 9.84 | -35.53 | 16.46 | 0.00 |
| 9.96 | -35.53 | 16.46 | 0.00 |
| 10.34 | -35.53 | 16.46 | 0.00 |
| 10.46 | -35.53 | 16.46 | 0.00 |
| 10.84 | -35.45 | 16.46 | 0.00 |
| 10.96 | -35.07 | 16.46 | 0.00 |
| 11.34 | -33.83 | 16.46 | 0.00 |
| 11.46 | -33.44 | 16.46 | 0.00 |
| 11.84 | -32.14 | 16.46 | 0.00 |
| 11.96 | -31.72 | 16.46 | 0.00 |
| 12.34 | -30.35 | 16.46 | 0.00 |
| 12.46 | -29.91 | 16.46 | 0.00 |
| 12.84 | -28.45 | 16.46 | 0.00 |
| 12.96 | -27.98 | 16.46 | 0.00 |
| 13.34 | -26.41 | 16.46 | 0.00 |
| 13.46 | -25.90 | 16.46 | 0.00 |
| 13.84 | -24.20 | 16.46 | 0.00 |
| 13.96 | -23.64 | 16.46 | 0.00 |
| 14.34 | -21.77 | 16.46 | 0.00 |
| 14.46 | -21.15 | 16.46 | 0.00 |
| 14.84 | -19.04 | 16.46 | 0.00 |
| 14.96 | -18.31 | 16.46 | 0.00 |
| 15.34 | -15.83 | 16.46 | 0.00 |
| 15.46 | -14.95 | 16.46 | 0.00 |
| 15.84 | -11.78 | 16.46 | 0.00 |
| 15.96 | -10.57 | 16.46 | 0.00 |
| 16.00 | -10.13 | 16.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -37.06 | 16.96 | 0.00 |
| 8.96 | -37.06 | 16.96 | 0.00 |
| 9.34 | -37.06 | 16.96 | 0.00 |
| 9.46 | -37.06 | 16.96 | 0.00 |
| 9.84 | -37.06 | 16.96 | 0.00 |
| 9.96 | -37.06 | 16.96 | 0.00 |
| 10.34 | -37.06 | 16.96 | 0.00 |
| 10.46 | -37.06 | 16.96 | 0.00 |
| 10.84 | -36.99 | 16.96 | 0.00 |
| 10.96 | -36.63 | 16.96 | 0.00 |
| 11.34 | -35.45 | 16.96 | 0.00 |
| 11.46 | -35.07 | 16.96 | 0.00 |
| 11.84 | -33.83 | 16.96 | 0.00 |
| 11.96 | -33.44 | 16.96 | 0.00 |
| 12.34 | -32.14 | 16.96 | 0.00 |
| 12.46 | -31.72 | 16.96 | 0.00 |
| 12.84 | -30.35 | 16.96 | 0.00 |
| 12.96 | -29.91 | 16.96 | 0.00 |
| 13.34 | -28.45 | 16.96 | 0.00 |
| 13.46 | -27.98 | 16.96 | 0.00 |
| 13.84 | -26.41 | 16.96 | 0.00 |
| 13.96 | -25.90 | 16.96 | 0.00 |
| 14.34 | -24.20 | 16.96 | 0.00 |
| 14.46 | -23.64 | 16.96 | 0.00 |
| 14.84 | -21.77 | 16.96 | 0.00 |
| 14.96 | -21.15 | 16.96 | 0.00 |
| 15.34 | -19.04 | 16.96 | 0.00 |
| 15.46 | -18.31 | 16.96 | 0.00 |
| 15.84 | -15.83 | 16.96 | 0.00 |
| 15.96 | -14.95 | 16.96 | 0.00 |
| 16.00 | -14.65 | 16.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -38.53 | 17.46 | 0.00 |
| 8.96 | -38.53 | 17.46 | 0.00 |
| 9.34 | -38.53 | 17.46 | 0.00 |
| 9.46 | -38.53 | 17.46 | 0.00 |
| 9.84 | -38.53 | 17.46 | 0.00 |
| 9.96 | -38.53 | 17.46 | 0.00 |
| 10.34 | -38.53 | 17.46 | 0.00 |
| 10.46 | -38.53 | 17.46 | 0.00 |
| 10.84 | -38.47 | 17.46 | 0.00 |
| 10.96 | -38.12 | 17.46 | 0.00 |
| 11.34 | -36.99 | 17.46 | 0.00 |
| 11.46 | -36.63 | 17.46 | 0.00 |
| 11.84 | -35.45 | 17.46 | 0.00 |
| 11.96 | -35.07 | 17.46 | 0.00 |
| 12.34 | -33.83 | 17.46 | 0.00 |
| 12.46 | -33.44 | 17.46 | 0.00 |
| 12.84 | -32.14 | 17.46 | 0.00 |
| 12.96 | -31.72 | 17.46 | 0.00 |
| 13.34 | -30.35 | 17.46 | 0.00 |
| 13.46 | -29.91 | 17.46 | 0.00 |
| 13.84 | -28.45 | 17.46 | 0.00 |
| 13.96 | -27.98 | 17.46 | 0.00 |
| 14.34 | -26.41 | 17.46 | 0.00 |
| 14.46 | -25.90 | 17.46 | 0.00 |
| 14.84 | -24.20 | 17.46 | 0.00 |
| 14.96 | -23.64 | 17.46 | 0.00 |
| 15.34 | -21.77 | 17.46 | 0.00 |
| 15.46 | -21.15 | 17.46 | 0.00 |
| 15.84 | -19.04 | 17.46 | 0.00 |
| 15.96 | -18.31 | 17.46 | 0.00 |
| 16.00 | -18.07 | 17.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -39.94 | 17.96 | 0.00 |
| 8.96 | -39.94 | 17.96 | 0.00 |
| 9.34 | -39.94 | 17.96 | 0.00 |
| 9.46 | -39.94 | 17.96 | 0.00 |
| 9.84 | -39.94 | 17.96 | 0.00 |
| 9.96 | -39.94 | 17.96 | 0.00 |
| 10.34 | -39.94 | 17.96 | 0.00 |
| 10.46 | -39.94 | 17.96 | 0.00 |
| 10.84 | -39.90 | 17.96 | 0.00 |
| 10.96 | -39.56 | 17.96 | 0.00 |
| 11.34 | -38.47 | 17.96 | 0.00 |
| 11.46 | -38.12 | 17.96 | 0.00 |
| 11.84 | -36.99 | 17.96 | 0.00 |
| 11.96 | -36.63 | 17.96 | 0.00 |
| 12.34 | -35.45 | 17.96 | 0.00 |
| 12.46 | -35.07 | 17.96 | 0.00 |
| 12.84 | -33.83 | 17.96 | 0.00 |
| 12.96 | -33.44 | 17.96 | 0.00 |
| 13.34 | -32.14 | 17.96 | 0.00 |
| 13.46 | -31.72 | 17.96 | 0.00 |
| 13.84 | -30.35 | 17.96 | 0.00 |
| 13.96 | -29.91 | 17.96 | 0.00 |
| 14.34 | -28.45 | 17.96 | 0.00 |
| 14.46 | -27.98 | 17.96 | 0.00 |
| 14.84 | -26.41 | 17.96 | 0.00 |
| 14.96 | -25.90 | 17.96 | 0.00 |
| 15.34 | -24.20 | 17.96 | 0.00 |
| 15.46 | -23.64 | 17.96 | 0.00 |
| 15.84 | -21.77 | 17.96 | 0.00 |
| 15.96 | -21.15 | 17.96 | 0.00 |
| 16.00 | -20.93 | 17.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -41.32 | 18.46 | 0.00 |
| 8.96 | -41.32 | 18.46 | 0.00 |
| 9.34 | -41.32 | 18.46 | 0.00 |
| 9.46 | -41.32 | 18.46 | 0.00 |
| 9.84 | -41.32 | 18.46 | 0.00 |
| 9.96 | -41.32 | 18.46 | 0.00 |
| 10.34 | -41.32 | 18.46 | 0.00 |
| 10.46 | -41.32 | 18.46 | 0.00 |
| 10.84 | -41.28 | 18.46 | 0.00 |
| 10.96 | -40.95 | 18.46 | 0.00 |
| 11.34 | -39.90 | 18.46 | 0.00 |
| 11.46 | -39.56 | 18.46 | 0.00 |
| 11.84 | -38.47 | 18.46 | 0.00 |
| 11.96 | -38.12 | 18.46 | 0.00 |
| 12.34 | -36.99 | 18.46 | 0.00 |
| 12.46 | -36.63 | 18.46 | 0.00 |
| 12.84 | -35.45 | 18.46 | 0.00 |
| 12.96 | -35.07 | 18.46 | 0.00 |
| 13.34 | -33.83 | 18.46 | 0.00 |
| 13.46 | -33.44 | 18.46 | 0.00 |
| 13.84 | -32.14 | 18.46 | 0.00 |
| 13.96 | -31.72 | 18.46 | 0.00 |
| 14.34 | -30.35 | 18.46 | 0.00 |
| 14.46 | -29.91 | 18.46 | 0.00 |
| 14.84 | -28.45 | 18.46 | 0.00 |
| 14.96 | -27.98 | 18.46 | 0.00 |
| 15.34 | -26.41 | 18.46 | 0.00 |
| 15.46 | -25.90 | 18.46 | 0.00 |
| 15.84 | -24.20 | 18.46 | 0.00 |
| 15.96 | -23.64 | 18.46 | 0.00 |
| 16.00 | -23.45 | 18.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -42.64 | 18.96 | 0.00 |
| 8.96 | -42.64 | 18.96 | 0.00 |
| 9.34 | -42.64 | 18.96 | 0.00 |
| 9.46 | -42.64 | 18.96 | 0.00 |
| 9.84 | -42.64 | 18.96 | 0.00 |
| 9.96 | -42.64 | 18.96 | 0.00 |
| 10.34 | -42.64 | 18.96 | 0.00 |
| 10.46 | -42.64 | 18.96 | 0.00 |
| 10.84 | -42.61 | 18.96 | 0.00 |
| 10.96 | -42.30 | 18.96 | 0.00 |
| 11.34 | -41.28 | 18.96 | 0.00 |
| 11.46 | -40.95 | 18.96 | 0.00 |
| 11.84 | -39.90 | 18.96 | 0.00 |
| 11.96 | -39.56 | 18.96 | 0.00 |
| 12.34 | -38.47 | 18.96 | 0.00 |
| 12.46 | -38.12 | 18.96 | 0.00 |
| 12.84 | -36.99 | 18.96 | 0.00 |
| 12.96 | -36.63 | 18.96 | 0.00 |
| 13.34 | -35.45 | 18.96 | 0.00 |
| 13.46 | -35.07 | 18.96 | 0.00 |
| 13.84 | -33.83 | 18.96 | 0.00 |
| 13.96 | -33.44 | 18.96 | 0.00 |
| 14.34 | -32.14 | 18.96 | 0.00 |
| 14.46 | -31.72 | 18.96 | 0.00 |
| 14.84 | -30.35 | 18.96 | 0.00 |
| 14.96 | -29.91 | 18.96 | 0.00 |
| 15.34 | -28.45 | 18.96 | 0.00 |
| 15.46 | -27.98 | 18.96 | 0.00 |
| 15.84 | -26.41 | 18.96 | 0.00 |
| 15.96 | -25.90 | 18.96 | 0.00 |
| 16.00 | -25.73 | 18.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow (ft³/s) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -43.93 | 19.46 | 0.00 |
| 8.96 | -43.93 | 19.46 | 0.00 |
| 9.34 | -43.93 | 19.46 | 0.00 |
| 9.46 | -43.93 | 19.46 | 0.00 |
| 9.84 | -43.93 | 19.46 | 0.00 |
| 9.96 | -43.93 | 19.46 | 0.00 |
| 10.34 | -43.93 | 19.46 | 0.00 |
| 10.46 | -43.93 | 19.46 | 0.00 |
| 10.84 | -43.90 | 19.46 | 0.00 |
| 10.96 | -43.59 | 19.46 | 0.00 |
| 11.34 | -42.61 | 19.46 | 0.00 |
| 11.46 | -42.30 | 19.46 | 0.00 |
| 11.84 | -41.28 | 19.46 | 0.00 |
| 11.96 | -40.95 | 19.46 | 0.00 |
| 12.34 | -39.90 | 19.46 | 0.00 |
| 12.46 | -39.56 | 19.46 | 0.00 |
| 12.84 | -38.47 | 19.46 | 0.00 |
| 12.96 | -38.12 | 19.46 | 0.00 |
| 13.34 | -36.99 | 19.46 | 0.00 |
| 13.46 | -36.63 | 19.46 | 0.00 |
| 13.84 | -35.45 | 19.46 | 0.00 |
| 13.96 | -35.07 | 19.46 | 0.00 |
| 14.34 | -33.83 | 19.46 | 0.00 |
| 14.46 | -33.44 | 19.46 | 0.00 |
| 14.84 | -32.14 | 19.46 | 0.00 |
| 14.96 | -31.72 | 19.46 | 0.00 |
| 15.34 | -30.35 | 19.46 | 0.00 |
| 15.46 | -29.91 | 19.46 | 0.00 |
| 15.84 | -28.45 | 19.46 | 0.00 |
| 15.96 | -27.98 | 19.46 | 0.00 |
| 16.00 | -27.81 | 19.46 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -45.18 | 19.96 | 0.00 |
| 8.96 | -45.18 | 19.96 | 0.00 |
| 9.34 | -45.18 | 19.96 | 0.00 |
| 9.46 | -45.18 | 19.96 | 0.00 |
| 9.84 | -45.18 | 19.96 | 0.00 |
| 9.96 | -45.18 | 19.96 | 0.00 |
| 10.34 | -45.18 | 19.96 | 0.00 |
| 10.46 | -45.18 | 19.96 | 0.00 |
| 10.84 | -45.16 | 19.96 | 0.00 |
| 10.96 | -44.86 | 19.96 | 0.00 |
| 11.34 | -43.90 | 19.96 | 0.00 |
| 11.46 | -43.59 | 19.96 | 0.00 |
| 11.84 | -42.61 | 19.96 | 0.00 |
| 11.96 | -42.30 | 19.96 | 0.00 |
| 12.34 | -41.28 | 19.96 | 0.00 |
| 12.46 | -40.95 | 19.96 | 0.00 |
| 12.84 | -39.90 | 19.96 | 0.00 |
| 12.96 | -39.56 | 19.96 | 0.00 |
| 13.34 | -38.47 | 19.96 | 0.00 |
| 13.46 | -38.12 | 19.96 | 0.00 |
| 13.84 | -36.99 | 19.96 | 0.00 |
| 13.96 | -36.63 | 19.96 | 0.00 |
| 14.34 | -35.45 | 19.96 | 0.00 |
| 14.46 | -35.07 | 19.96 | 0.00 |
| 14.84 | -33.83 | 19.96 | 0.00 |
| 14.96 | -33.44 | 19.96 | 0.00 |
| 15.34 | -32.14 | 19.96 | 0.00 |
| 15.46 | -31.72 | 19.96 | 0.00 |
| 15.84 | -30.35 | 19.96 | 0.00 |
| 15.96 | -29.91 | 19.96 | 0.00 |
| 16.00 | -29.75 | 19.96 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 8.84 | -46.01 | 20.30 | 0.00 |
| 8.96 | -46.01 | 20.30 | 0.00 |
| 9.34 | -46.01 | 20.30 | 0.00 |
| 9.46 | -46.01 | 20.30 | 0.00 |
| 9.84 | -46.01 | 20.30 | 0.00 |
| 9.96 | -46.01 | 20.30 | 0.00 |
| 10.34 | -46.01 | 20.30 | 0.00 |
| 10.46 | -46.01 | 20.30 | 0.00 |
| 10.84 | -45.99 | 20.30 | 0.00 |
| 10.96 | -45.70 | 20.30 | 0.00 |
| 11.34 | -44.76 | 20.30 | 0.00 |
| 11.46 | -44.46 | 20.30 | 0.00 |
| 11.84 | -43.49 | 20.30 | 0.00 |
| 11.96 | -43.18 | 20.30 | 0.00 |
| 12.34 | -42.19 | 20.30 | 0.00 |
| 12.46 | -41.87 | 20.30 | 0.00 |
| 12.84 | -40.84 | 20.30 | 0.00 |
| 12.96 | -40.51 | 20.30 | 0.00 |
| 13.34 | -39.45 | 20.30 | 0.00 |
| 13.46 | -39.11 | 20.30 | 0.00 |
| 13.84 | -38.00 | 20.30 | 0.00 |
| 13.96 | -37.65 | 20.30 | 0.00 |
| 14.34 | -36.50 | 20.30 | 0.00 |
| 14.46 | -36.14 | 20.30 | 0.00 |
| 14.84 | -34.94 | 20.30 | 0.00 |
| 14.96 | -34.55 | 20.30 | 0.00 |
| 15.34 | -33.30 | 20.30 | 0.00 |
| 15.46 | -32.90 | 20.30 | 0.00 |
| 15.84 | -31.58 | 20.30 | 0.00 |
| 15.96 | -31.15 | 20.30 | 0.00 |
| 16.00 | -31.01 | 20.30 | 0.00 |

Contributing Structures

| |
|---|
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Composite Rating Curve
Label: Outlet#2

Return Event: 100 years
Storm Event:

Composite Outflow Summary

| Contributing Structures |
| --- |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |
| CV2 |

# 9th and Palm, Proposed Conditions

Subsection: Interconnected Pond Routing Summary
Label: Offsite Pond @ Node 150

Return Event: 100 years
Storm Event:

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | | | Calculation Tolerances | | |
|---|---|---|---|---|---|
| Elevation (Starting Water Surface Computed) | 8.84 | ft | Flow Tolerance (Minimum) | 0.000 | ft³/s |
| Volume (Starting) | 0.000 | ac-ft | Maximum Iterations | 100 | |
| Outflow (Starting) | 0.00 | ft³/s | ICPM Time Step | 0.050 | min |

| Maximum Storage | | |
|---|---|---|
| Time to Peak (min) | Elevation (ft) | Volume (ac-ft) |
| 281.000 | 14.02 | 1.609 |

| | Forward Flow Peaks | | Reverse Flow Peaks | |
|---|---|---|---|---|
| | Time to Peak (min) | Flow (Peak) (ft³/s) | Time to Peak (min) | Flow (Peak) (ft³/s) |
| Pond Inflow.... | 266.000 | 46.37 | 0.074 | 0.00 |
| Pond Outflow... | 266.000 | 46.22 | 0.000 | 0.00 |

| | Total Volume In | | Total Volume Out | |
|---|---|---|---|---|
| | Volume (ac-ft) | Direction | Volume (ac-ft) | Direction |
| Pond Inflow.... | 8.161 | Forward | 0.000 | Reverse |
| Pond Outflow... | 0.000 | Reverse | 8.194 | Forward |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial ICPM) | 0.000 ac-ft |
| Volume (Total In ICPM) | 4.096 ac-ft |
| Volume (Total Out ICPM) | 4.081 ac-ft |
| Volume (Ending) | 0.000 ac-ft |
| Elevation (Ending) | 8.84 ft |
| Difference | 0.015 ac-ft |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) | 0.4 % |

# 9th and Palm, Proposed Conditions

Subsection: Interconnected Pond Routing Summary
Label: Onsite Pond 1

Return Event: 100 years
Storm Event:

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | | | Calculation Tolerances | | |
|---|---|---|---|---|---|
| Elevation (Starting Water Surface Computed) | 8.46 | ft | Flow Tolerance (Minimum) | 0.000 | ft³/s |
| Volume (Starting) | 0.000 | ac-ft | Maximum Iterations | 100 | |
| Outflow (Starting) | 0.00 | ft³/s | ICPM Time Step | 0.050 | min |

| | Maximum Storage | | |
|---|---|---|---|
| | Time to Peak (min) | Elevation (ft) | Volume (ac-ft) |
| | 266.000 | 13.98 | 0.003 |

| | Forward Flow Peaks | | Reverse Flow Peaks | |
|---|---|---|---|---|
| | Time to Peak (min) | Flow (Peak) (ft³/s) | Time to Peak (min) | Flow (Peak) (ft³/s) |
| Pond Inflow.... | 266.000 | 46.37 | 0.074 | 0.00 |
| Pond Outflow... | 266.000 | 46.22 | 0.000 | 0.00 |

| | Total Volume In | | Total Volume Out | |
|---|---|---|---|---|
| | Volume (ac-ft) | Direction | Volume (ac-ft) | Direction |
| Pond Inflow.... | 8.161 | Forward | 0.000 | Reverse |
| Pond Outflow... | 0.000 | Reverse | 8.194 | Forward |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial ICPM) | 0.000 ac-ft |
| Volume (Total In ICPM) | 8.161 ac-ft |
| Volume (Total Out ICPM) | 8.194 ac-ft |
| Volume (Ending) | 0.000 ac-ft |
| Elevation (Ending) | 8.46 ft |
| Difference | -0.033 ac-ft |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) | 0.4 % |

# 9th and Palm, Proposed Conditions

## Index

M

Master Network Summary...2

O

Offsite Pond @ Node 150 (Elevation-Area Volume Curve)...

Offsite Pond @ Node 150 (Elevation-Area Volume Curve, 100 years)...8

Offsite Pond @ Node 150 (Interconnected Pond Routing Summary)...

Offsite Pond @ Node 150 (Interconnected Pond Routing Summary, 100 years)...94

Offsite Pond @ Node 150 (Volume Equations)...

Offsite Pond @ Node 150 (Volume Equations, 100 years)...9

Onsite Pond 1 (Elevation-Area Volume Curve)...

Onsite Pond 1 (Elevation-Area Volume Curve, 100 years)...10

Onsite Pond 1 (Interconnected Pond Routing Summary)...

Onsite Pond 1 (Interconnected Pond Routing Summary, 100 years)...95

Onsite Pond 1 (Volume Equations)...

Onsite Pond 1 (Volume Equations, 100 years)...11

Outfall (Hydrograph)...

Outfall (Hydrograph, 100 years)...5, 6, 7

Outlet#1 (Composite Rating Curve)...

Outlet#1 (Composite Rating Curve, 100 years)...14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37

Outlet#1 (Outlet Input Data)...

Outlet#1 (Outlet Input Data, 100 years)...12, 13

Outlet#2 (Composite Rating Curve)...

Outlet#2 (Composite Rating Curve, 100 years)...40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93

Outlet#2 (Outlet Input Data)...

Outlet#2 (Outlet Input Data, 100 years)...38, 39

S

System 100 (Read Hydrograph)...

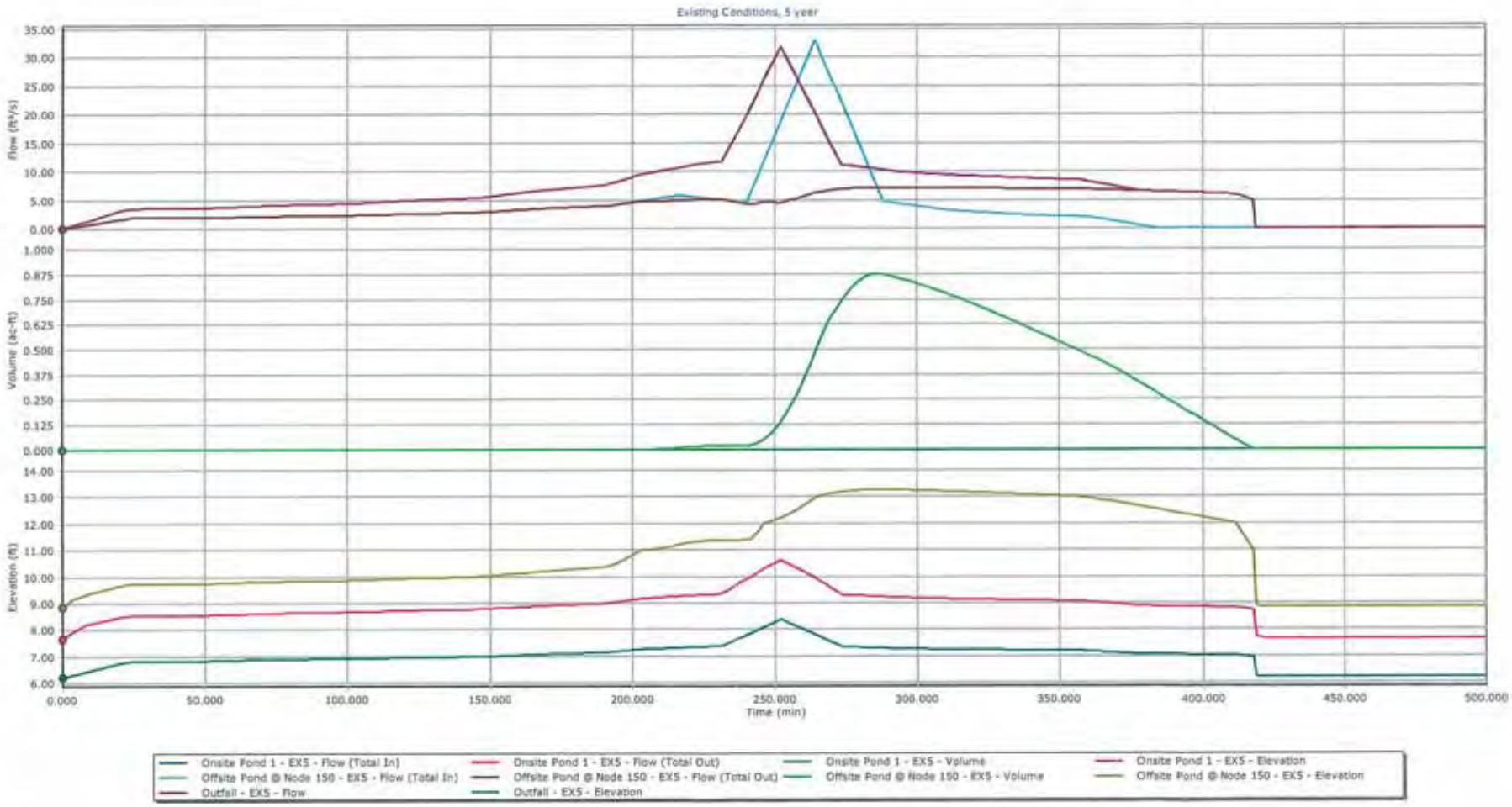
System 100 (Read Hydrograph, 100 years)...3

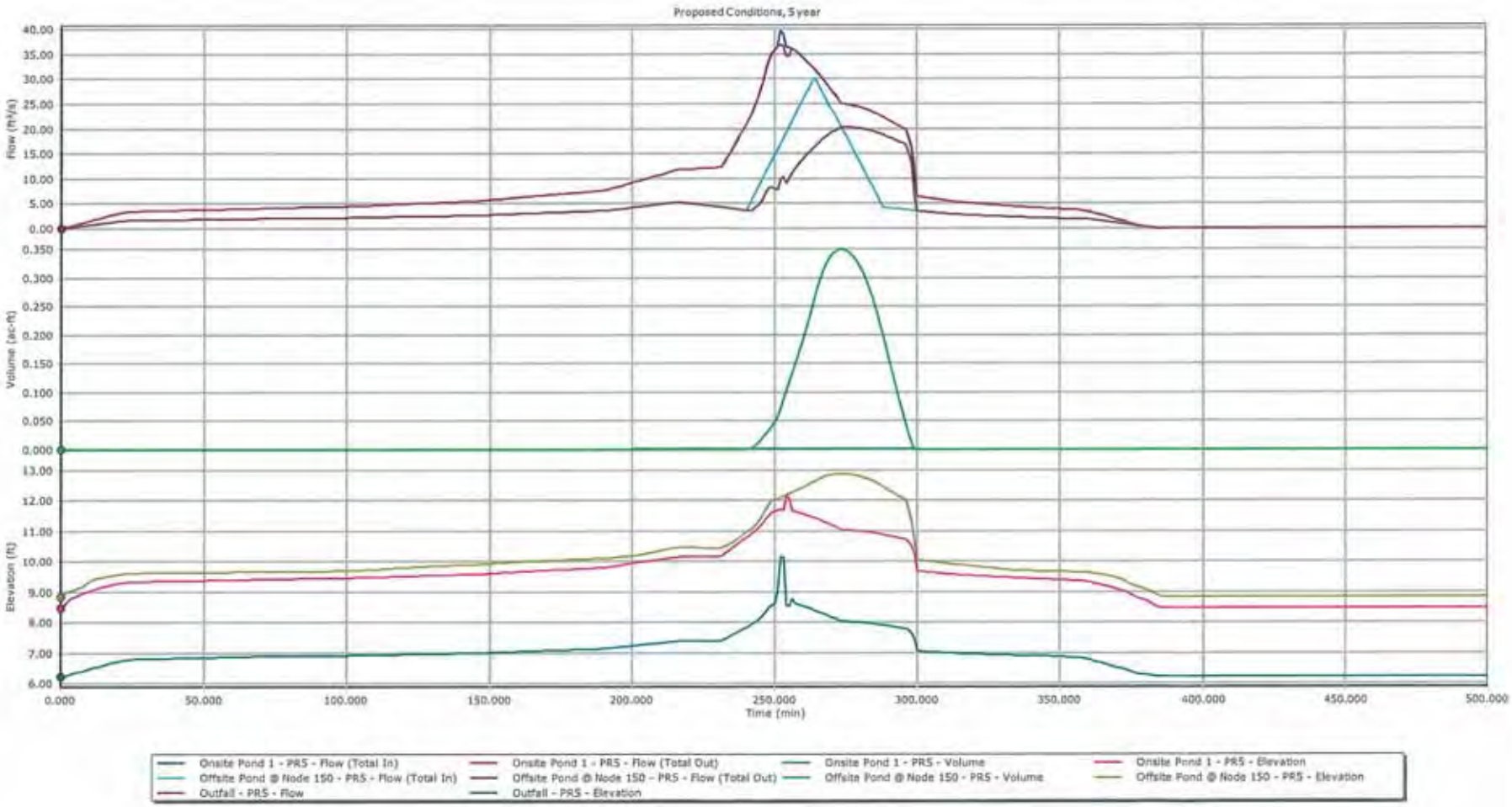
System 200 (Read Hydrograph)...

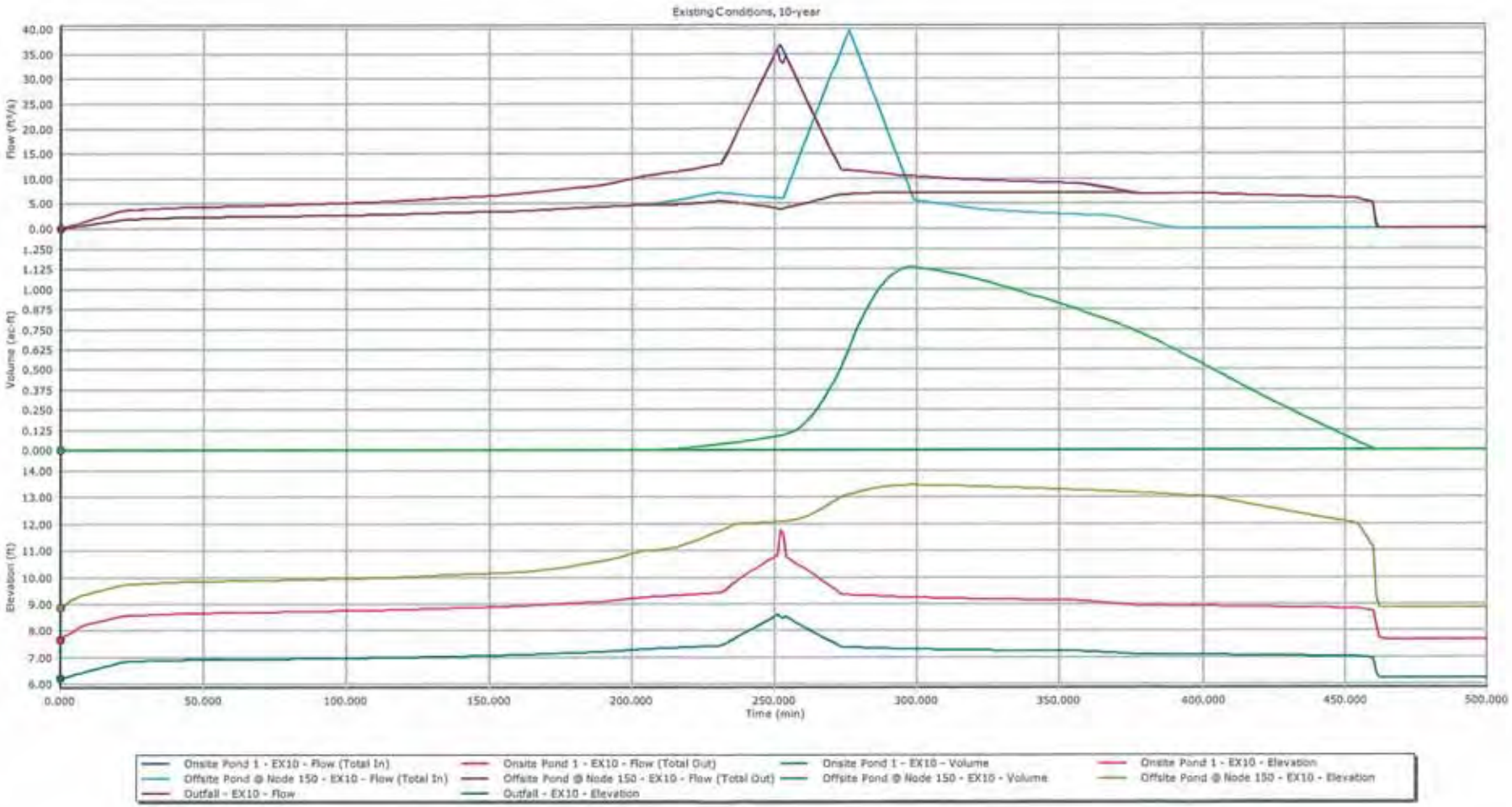
# 9th and Palm, Proposed Conditions

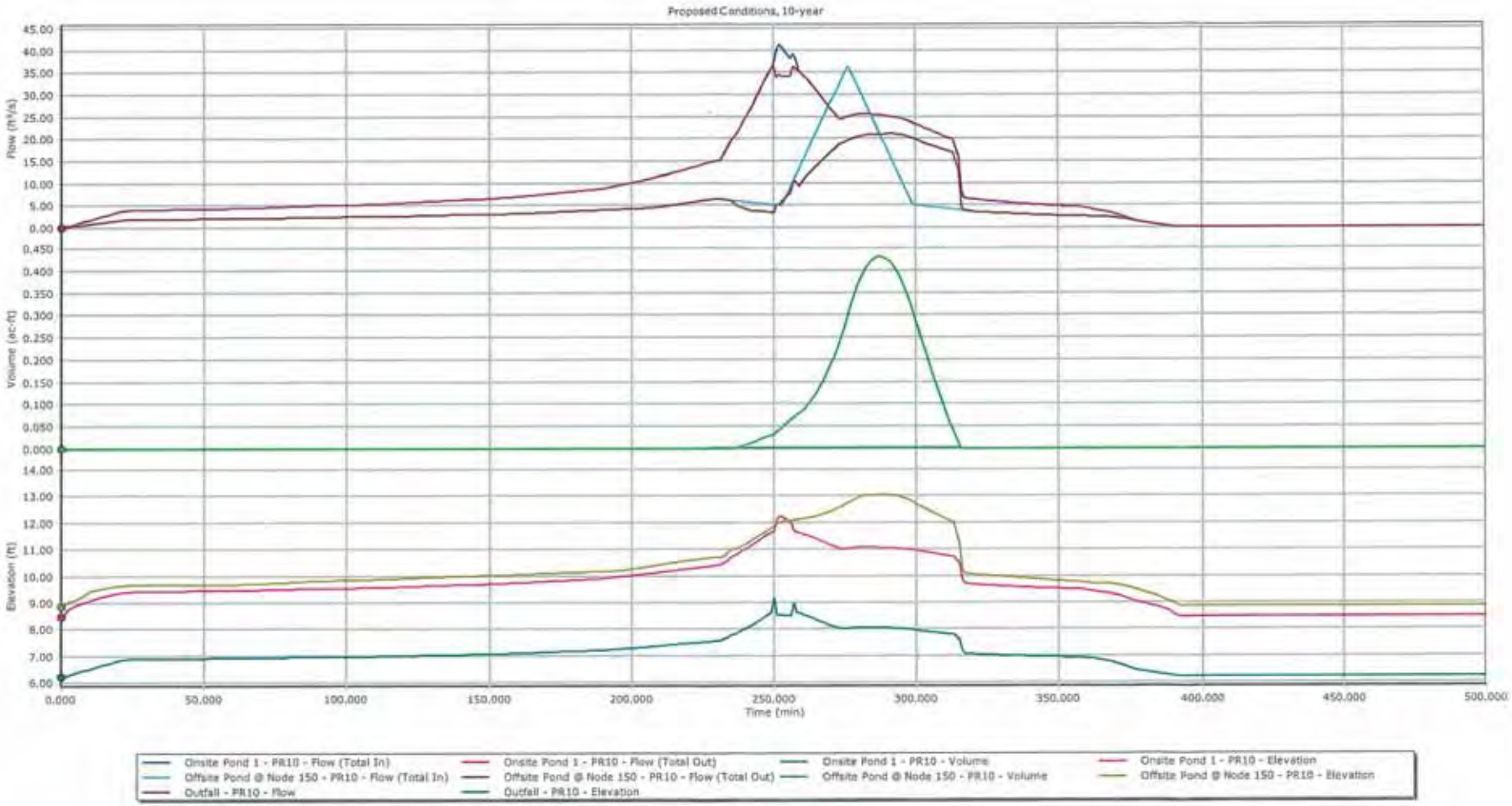
System 200 (Read Hydrograph, 100 years)...4

# 5 & 10-year Storms: Abbreviated Routing Summary and Results


Existing Conditions, 5 year
Flow (ft³/s)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Volume (ac-ft)
1.000
0.875
0.750
0.625
0.500
0.375
0.250
0.125
0.000
Elevation (ft)
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
0.000
50.000
100.000
150.000
200.000
250.000
300.000
350.000
400.000
450.000
500.000
Time (min)
Onsite Pond 1 - EX5 - Flow (Total In)
Offsite Pond @ Node 150 - EX5 - Flow (Total In)
Outfall - EX5 - Flow
Onsite Pond 1 - EX5 - Flow (Total Out)
Offsite Pond @ Node 150 - EX5 - Flow (Total Out)
Outfall - EX5 - Elevation
Onsite Pond 1 - EX5 - Volume
Offsite Pond @ Node 150 - EX5 - Volume
Onsite Pond 1 - EX5 - Elevation
Offsite Pond @ Node 150 - EX5 - Elevation


Proposed Conditions, 5 year
Flow (ft³/s)
Volume (ac-ft)
Elevation (ft)
Time (min)
Onsite Pond 1 - PRS - Flow (Total In)
Offsite Pond @ Node 150 - PRS - Flow (Total In)
Outfall - PRS - Flow
Onsite Pond 1 - PRS - Flow (Total Out)
Offsite Pond @ Node 150 - PRS - Flow (Total Out)
Outfall - PRS - Elevation
Onsite Pond 1 - PRS - Volume
Offsite Pond @ Node 150 - PRS - Volume
Onsite Pond 1 - PRS - Elevation
Offsite Pond @ Node 150 - PRS - Elevation


Existing Conditions, 10-year
Flow (ft³/s)
Volume (ac-ft)
Elevation (ft)
Time (min)
Onsite Pond 1 - EX10 - Flow (Total In)
Offsite Pond @ Node 150 - EX10 - Flow (Total In)
Outfall - EX10 - Flow
Onsite Pond 1 - EX10 - Flow (Total Out)
Offsite Pond @ Node 150 - EX10 - Flow (Total Out)
Outfall - EX10 - Elevation
Onsite Pond 1 - EX10 - Volume
Offsite Pond @ Node 150 - EX10 - Volume
Onsite Pond 1 - EX10 - Elevation
Offsite Pond @ Node 150 - EX10 - Elevation


Proposed Conditions, 10-year
Flow (ft³/s)
Volume (ac-ft)
Elevation (ft)
Time (min)
Onsite Pond 1 - PR10 - Flow (Total In)
Offsite Pond @ Node 150 - PR10 - Flow (Total In)
Outfall - PR10 - Flow
Onsite Pond 1 - PR10 - Flow (Total Out)
Offsite Pond @ Node 150 - PR10 - Flow (Total Out)
Outfall - PR10 - Elevation
Onsite Pond 1 - PR10 - Volume
Offsite Pond @ Node 150 - PR10 - Volume
Onsite Pond 1 - PR10 - Elevation
Offsite Pond @ Node 150 - PR10 - Elevation

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | EX5 | 0 | 2.536 | 264.000 | 33.00 |
| System 200 | EX5 | 0 | 2.114 | 252.000 | 27.40 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | EX5 | 0 | 4.652 | 252.000 | 31.83 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | EX5 | 0 | 2.536 | 264.000 | 33.00 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | EX5 | 0 | 2.538 | 294.000 | 7.07 | 13.27 | 0.876 |
| Onsite Pond 1 (IN) | EX5 | 0 | 4.652 | 252.000 | 31.89 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | EX5 | 0 | 4.652 | 252.000 | 31.83 | 10.61 | 0.001 |

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | PR5 | 0 | 2.298 | 264.000 | 30.30 |
| System 200 | PR5 | 0 | 2.343 | 252.000 | 29.90 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | PR5 | 0 | 4.643 | 252.000 | 36.86 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | PR5 | 0 | 2.298 | 264.000 | 30.30 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | PR5 | 0 | 2.308 | 274.000 | 20.30 | 12.88 | 0.349 |
| Onsite Pond 1 (IN) | PR5 | 0 | 4.651 | 252.000 | 39.66 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | PR5 | 0 | 4.643 | 252.000 | 36.86 | 12.15 | 0.002 |

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | EX10 | 0 | 3.025 | 276.000 | 39.70 |
| System 200 | EX10 | 0 | 2.502 | 252.000 | 33.10 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | EX10 | 0 | 5.520 | 251.000 | 35.78 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | EX10 | 0 | 3.025 | 276.000 | 39.70 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | EX10 | 0 | 3.026 | 313.000 | 7.22 | 13.46 | 1.137 |
| Onsite Pond 1 (IN) | EX10 | 0 | 5.528 | 252.000 | 36.88 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | EX10 | 0 | 5.520 | 251.000 | 35.78 | 11.78 | 0.002 |

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| System 100 | PR10 | 0 | 2.734 | 276.000 | 36.40 |
| System 200 | PR10 | 0 | 2.762 | 252.000 | 36.10 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| Outfall | PR10 | 0 | 5.482 | 250.000 | 36.49 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Offsite Pond @ Node 150 (IN) | PR10 | 0 | 2.734 | 276.000 | 36.40 | (N/A) | (N/A) |
| Offsite Pond @ Node 150 (OUT) | PR10 | 0 | 2.772 | 291.000 | 21.03 | 13.03 | 0.430 |
| Onsite Pond 1 (IN) | PR10 | 0 | 5.535 | 252.000 | 41.22 | (N/A) | (N/A) |
| Onsite Pond 1 (OUT) | PR10 | 0 | 5.482 | 250.000 | 36.49 | 12.23 | 0.002 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S100E05.TXT**
TIME OF CONCENTRATION 24 MIN.
6 HOUR RAINFALL 1.35 INCHES
BASIN AREA 38.6 ACRES
RUNOFF COEFFICIENT 0.587
PEAK DISCHARGE 33 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 24 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 48 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 72 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 96 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 120 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 144 | DISCHARGE (CFS) = 2.8 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 3.5 |
| TIME (MIN) = 192 | DISCHARGE (CFS) = 4 |
| TIME (MIN) = 216 | DISCHARGE (CFS) = 5.8 |
| TIME (MIN) = 240 | DISCHARGE (CFS) = 4.5 |
| TIME (MIN) = 264 | DISCHARGE (CFS) = 33 |
| TIME (MIN) = 288 | DISCHARGE (CFS) = 4.7 |
| TIME (MIN) = 312 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 360 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 384 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S200E05.TXT**
TIME OF CONCENTRATION 21 MIN.
6 HOUR RAINFALL 1.35 INCHES
BASIN AREA 26.9 ACRES
RUNOFF COEFFICIENT 0.704
PEAK DISCHARGE 27.4 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 21 | DISCHARGE (CFS) = 1.6 |
| TIME (MIN) = 42 | DISCHARGE (CFS) = 1.7 |
| TIME (MIN) = 63 | DISCHARGE (CFS) = 1.8 |
| TIME (MIN) = 84 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 105 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 126 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 147 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 3.2 |
| TIME (MIN) = 189 | DISCHARGE (CFS) = 3.6 |
| TIME (MIN) = 210 | DISCHARGE (CFS) = 5.3 |
| TIME (MIN) = 231 | DISCHARGE (CFS) = 6.7 |
| TIME (MIN) = 252 | DISCHARGE (CFS) = 27.4 |
| TIME (MIN) = 273 | DISCHARGE (CFS) = 4.2 |
| TIME (MIN) = 294 | DISCHARGE (CFS) = 2.8 |
| TIME (MIN) = 315 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 357 | DISCHARGE (CFS) = 1.6 |
| TIME (MIN) = 378 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S100P05.TXT**
TIME OF CONCENTRATION 24 MIN.
6 HOUR RAINFALL 1.35 INCRES
BASIN AREA 36 ACRES
RUNOFF COEFFICIENT 0.57
PEAK DISCHARGE 30.3 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 24 | DISCHARGE (CFS) = 1.7 |
| TIME (MIN) = 48 | DISCHARGE (CFS) = 1.8 |
| TIME (MIN) = 72 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 96 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 120 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 144 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 192 | DISCHARGE (CFS) = 3.6 |
| TIME (MIN) = 216 | DISCHARGE (CFS) = 5.3 |
| TIME (MIN) = 240 | DISCHARGE (CFS) = 3.6 |
| TIME (MIN) = 264 | DISCHARGE (CFS) = 30.3 |
| TIME (MIN) = 288 | DISCHARGE (CFS) = 4.2 |
| TIME (MIN) = 312 | DISCHARGE (CFS) = 2.8 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 360 | DISCHARGE (CFS) = 1.8 |
| TIME (MIN) = 384 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/11/2011
**HYDROGRAPH FILE NAME S200P05.TXT**
TIME OF CONCENTRATION 21 MIN.
6 HOUR RAINFALL 1.35 INCHES
BASIN AREA 29.5 ACRES
RUNOFF COEFFICIENT 0.711
PEAK DISCHARGE 29.9 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 21 | DISCHARGE (CFS) = 1.7 |
| TIME (MIN) = 42 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 63 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 84 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 105 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 126 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 147 | DISCHARGE (CFS) = 2.9 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 3.5 |
| TIME (MIN) = 189 | DISCHARGE (CFS) = 4 |
| TIME (MIN) = 210 | DISCHARGE (CFS) = 5.9 |
| TIME (MIN) = 231 | DISCHARGE (CFS) = 7.9 |
| TIME (MIN) = 252 | DISCHARGE (CFS) = 29.9 |
| TIME (MIN) = 273 | DISCHARGE (CFS) = 4.7 |
| TIME (MIN) = 294 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 315 | DISCHARGE (CFS) = 2.5 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 357 | DISCHARGE (CFS) = 1.8 |
| TIME (MIN) = 378 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S100E10.TXT**
TIME OF CONCENTRATION 23 MIN.
6 HOUR RAINFALL 1.6 INCHES
BASIN AREA 38.6 ACRES
RUNOFF COEFFICIENT 0.587
PEAK DISCHARGE 39.7 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 23 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 46 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 69 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 92 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 115 | DISCHARGE (CFS) = 2.8 |
| TIME (MIN) = 138 | DISCHARGE (CFS) = 3.2 |
| TIME (MIN) = 161 | DISCHARGE (CFS) = 3.5 |
| TIME (MIN) = 184 | DISCHARGE (CFS) = 4.2 |
| TIME (MIN) = 207 | DISCHARGE (CFS) = 4.8 |
| TIME (MIN) = 230 | DISCHARGE (CFS) = 7.1 |
| TIME (MIN) = 253 | DISCHARGE (CFS) = 6 |
| TIME (MIN) = 276 | DISCHARGE (CFS) = 39.7 |
| TIME (MIN) = 299 | DISCHARGE (CFS) = 5.7 |
| TIME (MIN) = 322 | DISCHARGE (CFS) = 3.8 |
| TIME (MIN) = 345 | DISCHARGE (CFS) = 3 |
| TIME (MIN) = 368 | DISCHARGE (CFS) = 2.5 |
| TIME (MIN) = 391 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S200E10.TXT**
TIME OF CONCENTRATION 21 MIN.
6 HOUR RAINFALL 1.6 INCHES
BASIN AREA 26.9 ACRES
RUNOFF COEFFICIENT 0.704
PEAK DISCHARGE 33.1 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 21 | DISCHARGE (CFS) = 1.8 |
| TIME (MIN) = 42 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 63 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 84 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 105 | DISCHARGE (CFS) = 2.5 |
| TIME (MIN) = 126 | DISCHARGE (CFS) = 2.8 |
| TIME (MIN) = 147 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 3.7 |
| TIME (MIN) = 189 | DISCHARGE (CFS) = 4.3 |
| TIME (MIN) = 210 | DISCHARGE (CFS) = 6.3 |
| TIME (MIN) = 231 | DISCHARGE (CFS) = 7.4 |
| TIME (MIN) = 252 | DISCHARGE (CFS) = 33.1 |
| TIME (MIN) = 273 | DISCHARGE (CFS) = 5 |
| TIME (MIN) = 294 | DISCHARGE (CFS) = 3.4 |
| TIME (MIN) = 315 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 357 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 378 | DISCHARGE (CFS) = 0 |

RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S100P10.TXT**
TIME OF CONCENTRATION 23 MIN.
6 HOUR RAINFALL 1.6 INCHES
BASIN AREA 36 ACRES
RUNOFF COEFFICIENT 0.57
PEAK DISCHARGE 36.4 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 23 | DISCHARGE (CFS) = 1.9 |
| TIME (MIN) = 46 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 69 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 92 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 115 | DISCHARGE (CFS) = 2.5 |
| TIME (MIN) = 138 | DISCHARGE (CFS) = 2.9 |
| TIME (MIN) = 161 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 184 | DISCHARGE (CFS) = 3.8 |
| TIME (MIN) = 207 | DISCHARGE (CFS) = 4.4 |
| TIME (MIN) = 230 | DISCHARGE (CFS) = 6.4 |
| TIME (MIN) = 253 | DISCHARGE (CFS) = 4.9 |
| TIME (MIN) = 276 | DISCHARGE (CFS) = 36.4 |
| TIME (MIN) = 299 | DISCHARGE (CFS) = 5.1 |
| TIME (MIN) = 322 | DISCHARGE (CFS) = 3.4 |
| TIME (MIN) = 345 | DISCHARGE (CFS) = 2.7 |
| TIME (MIN) = 368 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 391 | DISCHARGE (CFS) = 0 |

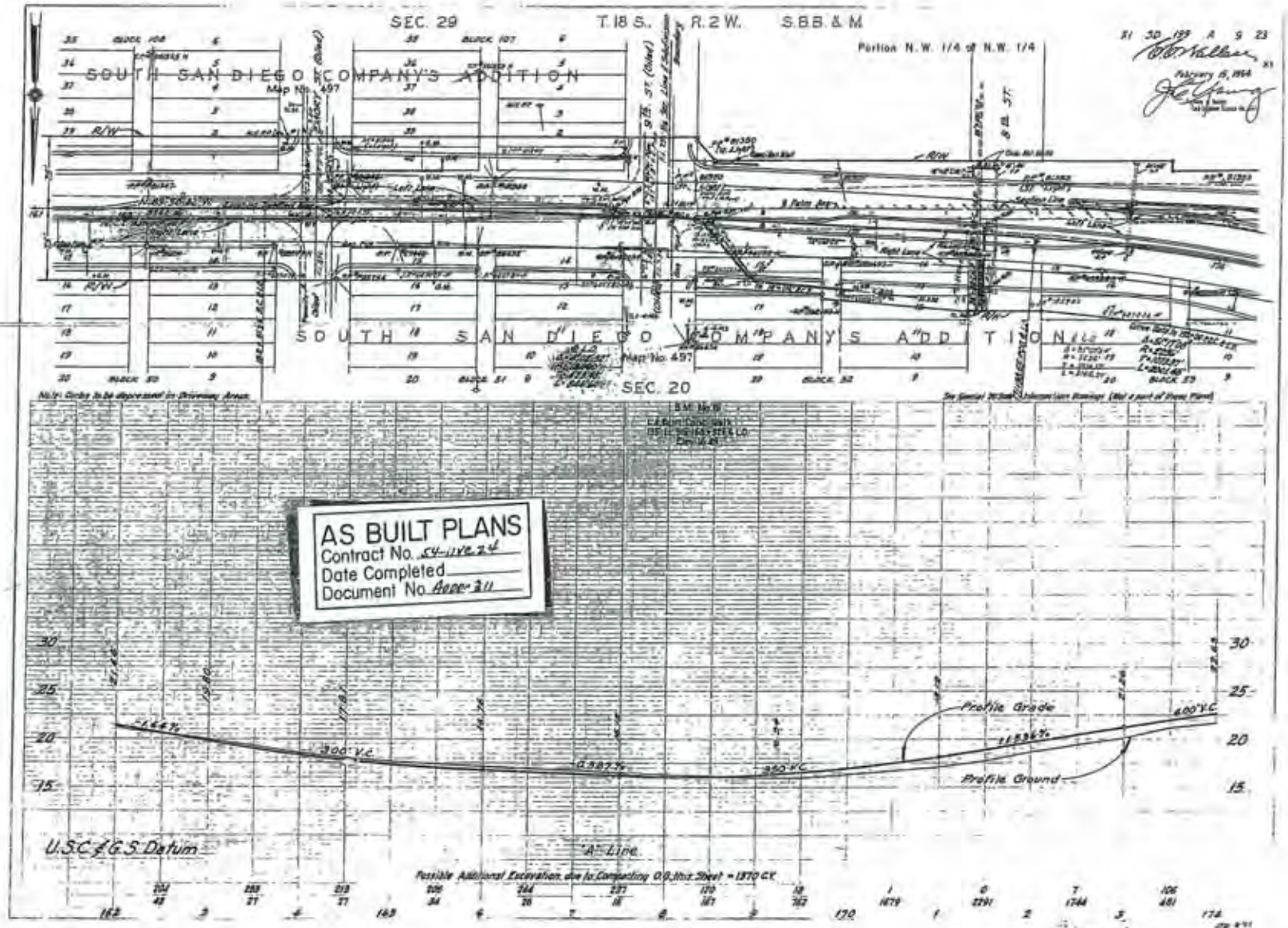
RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001 RICK ENGINEERING COMPANY

RUN DATE 10/10/2011
**HYDROGRAPH FILE NAME S200P10.TXT**
TIME OF CONCENTRATION 21 MIN.
6 HOUR RAINFALL 1.6 INCHES
BASIN AREA 29.5 ACRES
RUNOFF COEFFICIENT 0.711
PEAK DISCHARGE 36.1 CFS

| | |
|---|---|
| TIME (MIN) = 0 | DISCHARGE (CFS) = 0 |
| TIME (MIN) = 21 | DISCHARGE (CFS) = 2 |
| TIME (MIN) = 42 | DISCHARGE (CFS) = 2.2 |
| TIME (MIN) = 63 | DISCHARGE (CFS) = 2.3 |
| TIME (MIN) = 84 | DISCHARGE (CFS) = 2.6 |
| TIME (MIN) = 105 | DISCHARGE (CFS) = 2.7 |
| TIME (MIN) = 126 | DISCHARGE (CFS) = 3.1 |
| TIME (MIN) = 147 | DISCHARGE (CFS) = 3.4 |
| TIME (MIN) = 168 | DISCHARGE (CFS) = 4.1 |
| TIME (MIN) = 189 | DISCHARGE (CFS) = 4.7 |
| TIME (MIN) = 210 | DISCHARGE (CFS) = 6.9 |
| TIME (MIN) = 231 | DISCHARGE (CFS) = 8.7 |
| TIME (MIN) = 252 | DISCHARGE (CFS) = 36.1 |
| TIME (MIN) = 273 | DISCHARGE (CFS) = 5.6 |
| TIME (MIN) = 294 | DISCHARGE (CFS) = 3.7 |
| TIME (MIN) = 315 | DISCHARGE (CFS) = 2.9 |
| TIME (MIN) = 336 | DISCHARGE (CFS) = 2.4 |
| TIME (MIN) = 357 | DISCHARGE (CFS) = 2.1 |
| TIME (MIN) = 378 | DISCHARGE (CFS) = 0 |

# APPENDIX 5

## Reduced Copies of Storm Drain As Builts


SEC. 29
T. 18 S.
R. 2 W.
S.B.B. & M.
Portion N.W. 1/4 of N.W. 1/4
SOUTH SAN DIEGO COMPANY'S ADDITION
Map No. 497
SOUTH SAN DIEGO COMPANY'S ADDITION
Map No. 497
SEC. 20
AS BUILT PLANS
Contract No. 54-11ve 24
Date Completed
Document No. Appr-311
Profile Grade
Profile Ground
300' V.C.
350' V.C.
600' V.C.
U.S.C. & G.S. Datum
"A" Line
Possible Additional Excavation due to Compacting O.G. this Sheet = 1370 C.Y.

# APPENDIX 6

## Excerpts from City Master Drainage Plan

City of Imperial Beach
Storm Drain Study August 2010

Existing Storm Drain System

Figure 4.1

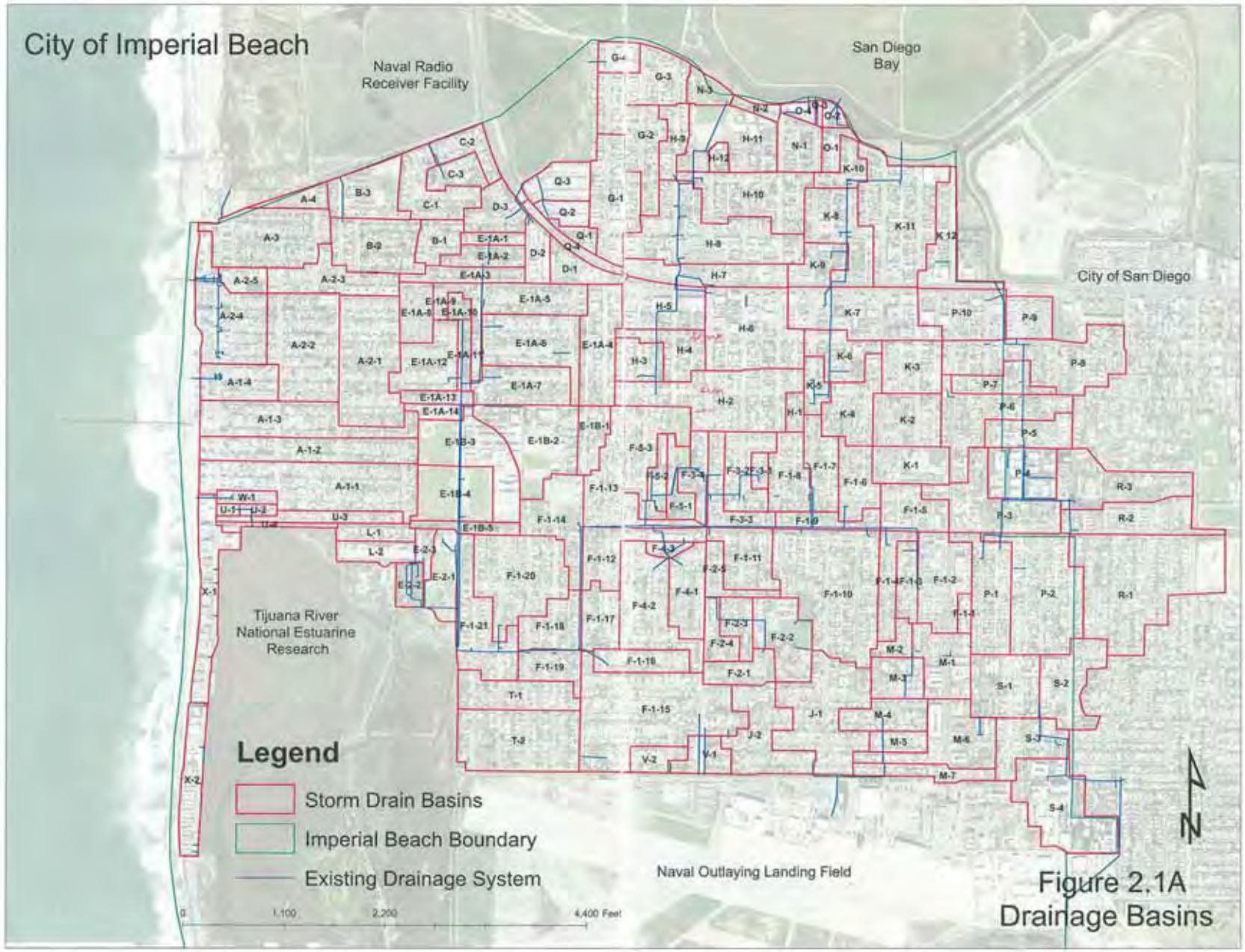



Figure 2.1A
Drainage Basins

# DRAINAGE AREA H

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2009 Version 7.8

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 04/20/10

---

City of Imperial Beach
AREA H - Existing Conditions
2-year Storm Event
March 2010

---

********* Hydrology Study Control Information **********

---

Program License Serial Number 6235

---

Rational hydrology study storm event year is 2.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 1.000
24 hour precipitation(inches) = 1.700
P6/P24 = 58.8%
San Diego hydrology manual 'C' values used

********** I N P U T D A T A L I S T I N G **********
Element Capacity Space Remaining = 3642
Element Points and Process used between Points

| Number | Upstream | Downstream | Process |
|---|---|---|---|
| 1 | 82.100 | 82.200 | Initial Area |
| 2 | 82.200 | 82.000 | Street Flow + Subarea |
| 3 | 82.000 | 69.000 | Pipeflow Time(user inp) |
| 4 | 82.000 | 69.000 | Subarea Flow Addition |
| 5 | 69.000 | 314.000 | Pipeflow Time(user inp) |
| 6 | 69.000 | 314.000 | Subarea Flow Addition |
| 7 | 314.000 | 313.000 | Pipeflow Time(user inp) |
| 8 | 313.000 | 3.000 | Pipeflow Time(user inp) |
| 9 | 313.000 | 3.000 | Subarea Flow Addition |
| 10 | 313.000 | 3.000 | Confluence |
| 11 | 75.100 | 75.000 | Initial Area |
| 12 | 75.000 | 3.000 | Pipeflow Time(user inp) |
| 13 | 75.000 | 3.000 | Confluence |
| 14 | 3.000 | 306.000 | Pipeflow Time(user inp) |
| 15 | 3.000 | 306.000 | Subarea Flow Addition |
| 16 | 306.000 | 300.000 | Pipeflow Time(user inp) |
| 17 | 306.000 | 300.000 | Subarea Flow Addition |
| 18 | 300.000 | 176.000 | Pipeflow Time(user inp) |
| 19 | 300.000 | 176.000 | Subarea Flow Addition |
| 20 | 176.000 | 167.000 | Pipeflow Time(user inp) |
| 21 | 176.000 | 167.000 | Confluence |
| 22 | 167.100 | 167.000 | Initial Area |
| 23 | 167.100 | 167.000 | Confluence |
| 24 | 167.000 | 295.000 | Pipeflow Time(user inp) |
| 25 | 167.000 | 295.000 | Subarea Flow Addition |
| 26 | 295.000 | 393.000 | Pipeflow Time(user inp) |
| 27 | 295.000 | 393.000 | Subarea Flow Addition |
| 28 | 393.000 | 131.000 | Pipeflow Time(user inp) |

End of listing.....

```
              San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2009 Version 7.8

Rational method hydrology  program based on
San Diego County Flood Control Division 2003 hydrology manual
     Rational Hydrology Study        Date: 03/20/10
------------------------------------------------------------------------
City of Imperial Beach
AREA H  - Existing Conditions
2-year Storm Event
March 2010
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------


Program License Serial Number 6235

------------------------------------------------------------------------
Rational hydrology study storm event year is     2.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour,  precipitation(inches) =  1.000
24 hour precipitation(inches) =  1.700
P6/P24 =    62.5%
San Diego hydrology manual 'C' values used


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       82.100 to Point/Station       82.200
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[MEDIUM DENSITY RESIDENTIAL                    ]
(7.3 DU/A or Less        )
Impervious value, Ai = 0.400
Sub-Area C Value = 0.570
Initial subarea total flow distance =  450.000(Ft.)
Highest elevation =   32.500(Ft.)
Lowest elevation =   30.200(Ft.)
Elevation difference =    2.300(Ft.) Slope =  0.511 %
Top of Initial Area Slope adjusted by User to  0.300 %
Bottom of Initial Area Slope adjusted by User to  0.300 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 50.00 (Ft)
for the top area slope value of   0.30 %, in a development type of
 7.3 DU/A or Less
In Accordance With Figure 3-3
Initial Area Time of Concentration =  10.08 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.5700)*(  50.000^.5)/(   0.300^(1/3)]=  10.08
The initial area total distance of  450.00 (Ft.) entered leaves a
remaining distance of  400.00 (Ft.)
Using Figure 3-4, the travel time for this distance is   7.37 minutes
for a distance of 400.00 (Ft.) and a slope of  0.30 %
with an elevation difference of   1.20(Ft.) from the end of the top area
Tt = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr)
 =    7.370 Minutes
Tt=[(11.9*0.0758^3)/(  1.20)]^.385=  7.37
Total initial area Ti =  10.08 minutes from Figure 3-3 formula plus
  7.37 minutes from the Figure 3-4 formula =  17.45 minutes
```

```
Total initial area Ti =  10.08 minutes from Figure 3-3 formula plus
  7.37 minutes from the Figure 3-4 formula =  17.45 minutes
Rainfall intensity (I) =      1.177(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.570
Subarea runoff =      1.301(CFS)
Total initial stream area =        1.940(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       82.200 to Point/Station       82.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________
Top of street segment elevation =    30.200(Ft.)
End of street segment elevation =    20.600(Ft.)
Length of street segment  =  1600.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      6.437(CFS)
Depth of flow =   0.373(Ft.), Average velocity =   1.962(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.302(Ft.)
Flow velocity =   1.96(Ft/s)
Travel time =   13.59 min.     TC =   31.04  min.
 Adding area flow to street
Rainfall intensity (I) =      0.812(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.570 given for subarea
Rainfall intensity =      0.812(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.570  CA =     14.016
Subarea runoff =     10.074(CFS) for     22.650(Ac.)
Total runoff =     11.375(CFS)      Total area =      24.590(Ac.)
Street flow at end of street =     11.375(CFS)
Half street flow at end of street =      5.687(CFS)
Depth of flow =   0.437(Ft.), Average velocity =   2.248(Ft/s)
Flow width (from curb towards crown)=  15.501(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       82.000 to Point/Station       69.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =    11.680(Ft.)
Downstream point/station elevation =    11.170(Ft.)
Pipe length  =   203.00(Ft.) Slope =   0.0025  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    11.375(CFS)
Given pipe size =     18.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     2.835(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      2.380(Ft.)
 Minor friction loss =      0.965(Ft.)    K-factor =   1.50
Pipe flow velocity =      6.44(Ft/s)
Travel time through pipe =    0.53 min.
Time of concentration (TC) =    31.56 min.
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       82.000 to Point/Station       69.000
**** SUBAREA FLOW ADDITION ****

Rainfall intensity (I) =      0.803(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.570 given for subarea
Time of concentration =    31.56 min.
Rainfall intensity =      0.803(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.570  CA =     17.163
Subarea runoff =      2.403(CFS) for      5.520(Ac.)
Total runoff =     13.778(CFS)      Total area =      30.110(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       69.000 to Point/Station      314.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation =    11.170(Ft.)
Downstream point/station elevation =    10.100(Ft.)
Pipe length  =   469.00(Ft.) Slope =   0.0023  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.778(CFS)
Given pipe size =     18.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     8.412(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      8.066(Ft.)
 Minor friction loss =      1.416(Ft.)    K-factor =   1.50
Pipe flow velocity =      7.80(Ft/s)
Travel time through pipe =    1.00 min.
Time of concentration (TC) =    32.57 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       69.000 to Point/Station      314.000
**** SUBAREA FLOW ADDITION ****

Rainfall intensity (I) =      0.787(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.570 given for subarea
Time of concentration =    32.57 min.
Rainfall intensity =      0.787(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.570  CA =     21.187
Subarea runoff =      2.891(CFS) for      7.060(Ac.)
Total runoff =     16.669(CFS)      Total area =      37.170(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      314.000 to Point/Station      313.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation =    10.100(Ft.)
Downstream point/station elevation =     9.840(Ft.)
Pipe length  =   208.00(Ft.) Slope =   0.0012  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    16.669(CFS)
Given pipe size =     18.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     7.049(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      5.236(Ft.)
 Minor friction loss =      2.072(Ft.)    K-factor =   1.50
Pipe flow velocity =      9.43(Ft/s)
Travel time through pipe =    0.37 min.
Time of concentration (TC) =    32.93 min.
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       313.000 to Point/Station        3.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =     9.840(Ft.)
Downstream point/station elevation =     7.420(Ft.)
Pipe length  =   484.00(Ft.) Slope =   0.0050  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    16.669(CFS)
Given pipe size =     24.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     0.863(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      2.627(Ft.)
 Minor friction loss =      0.656(Ft.)    K-factor =   1.50
Pipe flow velocity =      5.31(Ft/s)
Travel time through pipe =    1.52 min.
Time of concentration (TC) =    34.45 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       313.000 to Point/Station        3.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.759(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.690 given for subarea
Time of concentration =    34.45 min.
Rainfall intensity =      0.759(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.597  CA =     28.591
Subarea runoff =      5.022(CFS) for     10.730(Ac.)
Total runoff =     21.691(CFS)      Total area =      47.900(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       313.000 to Point/Station        3.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     47.900(Ac.)
Runoff from this stream =     21.691(CFS)
Time of concentration =   34.45 min.
Rainfall intensity =     0.759(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       75.100 to Point/Station       75.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[MEDIUM DENSITY RESIDENTIAL                    |
(7.3 DU/A or Less        )
Impervious value, Ai = 0.400
Sub-Area C Value = 0.570
Initial subarea total flow distance  = 1600.000(Ft.)
Highest elevation =   34.500(Ft.)
Lowest elevation =   16.900(Ft.)
Elevation difference =   17.600(Ft.) Slope =  1.100 %
Top of Initial Area Slope adjusted by User to  0.500 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 50.00 (Ft)
for the top area slope value of   0.50 %, in a development type of
 7.3 DU/A or Less
```

```
In Accordance With Figure 3-3
Initial Area Time of Concentration =   8.50 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.5700)*(  50.000^.5)/(   0.500^(1/3)]=   8.50
The initial area total distance of 1600.00 (Ft.) entered leaves a
remaining distance of 1550.00 (Ft.)
Using Figure 3-4, the travel time for this distance is  12.68 minutes
for a distance of 1550.00 (Ft.) and a slope of  1.10 %
with an elevation difference of  17.05(Ft.) from the end of the top area
Tt = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr)
 =   12.683 Minutes
Tt=[(11.9*0.2936^3)/( 17.05)]^.385= 12.68
Total initial area Ti =   8.50 minutes from Figure 3-3 formula plus
 12.68 minutes from the Figure 3-4 formula =  21.18 minutes
Rainfall intensity (I) =      1.038(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.570
Subarea runoff =     12.174(CFS)
Total initial stream area =       20.570(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       75.000 to Point/Station        3.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =    11.320(Ft.)
Downstream point/station elevation =     7.420(Ft.)
Pipe length  =   396.00(Ft.) Slope =   0.0098  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.174(CFS)
Given pipe size =     12.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
    47.917(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =     46.221(Ft.)
 Minor friction loss =      5.596(Ft.)    K-factor =   1.50
Pipe flow velocity =     15.50(Ft/s)
Travel time through pipe =    0.43 min.
Time of concentration (TC) =    21.61 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       75.000 to Point/Station        3.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     20.570(Ac.)
Runoff from this stream =     12.174(CFS)
Time of concentration =   21.61 min.
Rainfall intensity =     1.025(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1       21.691     34.45                 0.759
2       12.174     21.61                 1.025
Qmax(1) =
         1.000 *    1.000 *    21.691) +
         0.740 *    1.000 *    12.174) + =      30.702
Qmax(2) =
         1.000 *    0.627 *    21.691) +
         1.000 *    1.000 *    12.174) + =      25.778

Total of 2 streams to confluence:
Flow rates before confluence point:
     21.691      12.174
```

```
Maximum flow rates at confluence using above data:
       30.702       25.778
Area of streams before confluence:
       47.900       20.570
Results of confluence:
Total flow rate =      30.702(CFS)
Time of concentration =    34.453 min.
Effective stream area after confluence =      68.470(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station      306.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =      7.420(Ft.)
Downstream point/station elevation =      6.860(Ft.)
Pipe length  =   158.00(Ft.) Slope =   0.0035  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     30.702(CFS)
Given pipe size =      36.00(In.)
Calculated individual pipe flow  =    30.702(CFS)
Normal flow depth in pipe =   23.77(In.)
Flow top width inside pipe =   34.10(In.)
Critical Depth =   21.54(In.)
Pipe flow velocity =       6.20(Ft/s)
Travel time through pipe =    0.42 min.
Time of concentration (TC) =    34.88 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station      306.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.753(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.790 given for subarea
Time of concentration =    34.88 min.
Rainfall intensity =      0.753(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.614  CA =     48.200
Subarea runoff =       5.579(CFS) for       9.980(Ac.)
Total runoff =     36.281(CFS)       Total area =      78.450(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      306.000 to Point/Station      300.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =      6.860(Ft.)
Downstream point/station elevation =      5.770(Ft.)
Pipe length  =   450.00(Ft.) Slope =   0.0024  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     36.281(CFS)
Given pipe size =      36.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     0.855(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =       1.331(Ft.)
 Minor friction loss =       0.614(Ft.)    K-factor =   1.50
Pipe flow velocity =       5.13(Ft/s)
Travel time through pipe =    1.46 min.
Time of concentration (TC) =    36.34 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      306.000 to Point/Station      300.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.733(In/Hr) for a     2.0 year storm
```

```
User specified 'C' value of 0.710 given for subarea
Time of concentration =    36.34 min.
Rainfall intensity =      0.733(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.637  CA =     65.531
Subarea runoff =     11.757(CFS) for     24.410(Ac.)
Total runoff =     48.037(CFS)      Total area =     102.860(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      176.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =     5.770(Ft.)
Downstream point/station elevation =     4.250(Ft.)
Pipe length  =   566.00(Ft.) Slope =   0.0027  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    48.037(CFS)
Given pipe size =     36.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     2.491(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      2.935(Ft.)
 Minor friction loss =      1.076(Ft.)    K-factor =   1.50
Pipe flow velocity =      6.80(Ft/s)
Travel time through pipe =    1.39 min.
Time of concentration (TC) =    37.73 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      176.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.716(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.570 given for subarea
Time of concentration =    37.73 min.
Rainfall intensity =      0.716(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.634  CA =     68.244
Subarea runoff =      0.794(CFS) for      4.760(Ac.)
Total runoff =     48.831(CFS)      Total area =     107.620(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      176.000 to Point/Station      167.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =     4.250(Ft.)
Downstream point/station elevation =     3.820(Ft.)
Pipe length  =   155.00(Ft.) Slope =   0.0028  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    48.831(CFS)
Given pipe size =     42.00(In.)
Calculated individual pipe flow  =    48.831(CFS)
Normal flow depth in pipe =   31.78(In.)
Flow top width inside pipe =   36.04(In.)
Critical Depth =   26.22(In.)
Pipe flow velocity =      6.25(Ft/s)
Travel time through pipe =    0.41 min.
Time of concentration (TC) =    38.14 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      176.000 to Point/Station      167.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    107.620(Ac.)
```

```
Runoff from this stream =      48.831(CFS)
Time of concentration =   38.14 min.
Rainfall intensity =     0.711(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      167.100 to Point/Station      167.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[MEDIUM DENSITY RESIDENTIAL                    ]
(7.3 DU/A or Less        )
Impervious value, Ai = 0.400
Sub-Area C Value = 0.570
Initial subarea total flow distance  = 1300.000(Ft.)
Highest elevation =   24.000(Ft.)
Lowest elevation =    8.400(Ft.)
Elevation difference =   15.600(Ft.) Slope =  1.200 %
Top of Initial Area Slope adjusted by User to  0.500 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 50.00 (Ft)
for the top area slope value of   0.50 %, in a development type of
 7.3 DU/A or Less
In Accordance With Figure 3-3
Initial Area Time of Concentration =   8.50 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.5700)*(  50.000^.5)/(   0.500^(1/3)]=   8.50
The initial area total distance of 1300.00 (Ft.) entered leaves a
remaining distance of 1250.00 (Ft.)
Using Figure 3-4, the travel time for this distance is  10.39 minutes
for a distance of 1250.00 (Ft.) and a slope of  1.20 %
with an elevation difference of  15.00(Ft.) from the end of the top area
Tt = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr)
 =   10.393 Minutes
Tt=[(11.9*0.2367^3)/( 15.00)]^.385= 10.39
Total initial area Ti =   8.50 minutes from Figure 3-3 formula plus
 10.39 minutes from the Figure 3-4 formula =  18.89 minutes
Rainfall intensity (I) =      1.118(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.570
Subarea runoff =     10.182(CFS)
Total initial stream area =       15.980(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      167.100 to Point/Station      167.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     15.980(Ac.)
Runoff from this stream =     10.182(CFS)
Time of concentration =   18.89 min.
Rainfall intensity =     1.118(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1       48.831     38.14                0.711
2       10.182     18.89                1.118
Qmax(1) =
         1.000 *    1.000 *    48.831) +
         0.636 *    1.000 *    10.182) + =      55.303
```

```
Qmax(2) =
        1.000 *    0.495 *    48.831) +
        1.000 *    1.000 *    10.182) + =      34.369

Total of 2 streams to confluence:
Flow rates before confluence point:
      48.831       10.182
Maximum flow rates at confluence using above data:
       55.303       34.369
Area of streams before confluence:
      107.620       15.980
Results of confluence:
Total flow rate =      55.303(CFS)
Time of concentration =    38.140 min.
Effective stream area after confluence =    123.600(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      167.000 to Point/Station      295.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =      3.820(Ft.)
Downstream point/station elevation =      2.970(Ft.)
Pipe length  =   350.00(Ft.) Slope =   0.0024  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    55.303(CFS)
Given pipe size =      42.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     0.977(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =       1.057(Ft.)
 Minor friction loss =      0.770(Ft.)    K-factor =   1.50
Pipe flow velocity =       5.75(Ft/s)
Travel time through pipe =    1.01 min.
Time of concentration (TC) =    39.16 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      167.000 to Point/Station      295.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.699(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.530 given for subarea
Time of concentration =    39.16 min.
Rainfall intensity =      0.699(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.616  CA =     85.000
Subarea runoff =      4.078(CFS) for     14.430(Ac.)
Total runoff =     59.381(CFS)      Total area =     138.030(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      295.000 to Point/Station      393.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =      2.970(Ft.)
Downstream point/station elevation =      2.730(Ft.)
Pipe length  =   128.00(Ft.) Slope =   0.0019  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    59.381(CFS)
Given pipe size =      42.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     1.093(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =       0.446(Ft.)
 Minor friction loss =      0.887(Ft.)    K-factor =   1.50
Pipe flow velocity =       6.17(Ft/s)
Travel time through pipe =    0.35 min.
```

```
Time of concentration (TC) =    39.50 min.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      295.000 to Point/Station      393.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
Rainfall intensity (I) =      0.695(In/Hr) for a     2.0 year storm
User specified 'C' value of 0.550 given for subarea
Time of concentration =    39.50 min.
Rainfall intensity =      0.695(In/Hr) for a     2.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.615  CA =     85.836
Subarea runoff =      0.245(CFS) for      1.520(Ac.)
Total runoff =     59.626(CFS)      Total area =     139.550(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      393.000 to Point/Station      131.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________
Upstream point/station elevation =     2.730(Ft.)
Downstream point/station elevation =     2.040(Ft.)
Pipe length  =   598.00(Ft.) Slope =   0.0012  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    59.626(CFS)
Given pipe size =     48.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     0.864(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      1.030(Ft.)
 Minor friction loss =      0.524(Ft.)    K-factor =   1.50
Pipe flow velocity =      4.74(Ft/s)
Travel time through pipe =    2.10 min.
Time of concentration (TC) =    41.60 min.
End of computations, total study area =        139.550 (Ac.)
```

City of Imperial Beach
AREA H - Existing Conditions
5-year Storm Event
March 2010

Project: IBareaHfinal.rd3 Page 1 Calculated By: ro
Study Date: 03/20/10 Checked By:
5.0 Year Storm mp

********** R A T I O N A L H Y D R O L O G Y - S A N D I E G O C O **********

| Station/ Point No. | Soil Type A,B,C,D | Devel. Type | Area (Acres) | I in/h | C | C Avg | Q (sub) | Q Total | Slope v/hz | Section | V Fps | L ft. | T min. | Tc min. | Hydraulics or notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82.20 | D-100% | R7.3/A | 1.9 | 1.65 | 0.57 | 0.57 | 1.8 | | | | | | | 17.4 | |
| | | | | | | | | 1.82 | 0.006 | Street | 2.1 | 1600 | 12.5 | | qavg= 9.13 |
| 40.0 wide street flow to pt.# | | | | | | | | | | | | | | dn=0.5 | Flow hw=17.9 |
| | | | | | | | | Wdth Ctr-Brk= 18.0 | | | Ix-fall= 0.0200 | | | Ox-fall= 0.0200 | |
| 82.00 | B-100% | User E | 22.6 | 1.16 | 0.57 | 0.57 | 14.5 | | | | | | | 30.0 | |
| No. Pipes = 1 Pipe flow travel time --- 'N' = 0.013 | | | | | | | | 16.3 | 0.003 | d= 18 | 9.2 | 203 | 0.4 | 30.3 | hgl= 6.4(Ft.) |
| 69.00 | D-100% | User E | 5.5 | 1.15 | 0.57 | 0.57 | 3.5 | | | | | | | 30.3 | |
| No. Pipes = 1 Pipe flow travel time --- 'N' = 0.013 | | | | | | | | 19.8 | 0.002 | d= 18 | 11.2 | 469 | 0.7 | 31.0 | hgl= 18.5(Ft.) |
| 314.00 | D-100% | User E | 7.1 | 1.14 | 0.57 | 0.57 | 4.3 | | | | | | | 31.0 | |
| No. Pipes = 1 Pipe flow travel time --- 'N' = 0.013 | | | | | | | | 24.1 | 0.001 | d= 18 | 13.6 | 208 | 0.3 | 31.3 | hgl= 15.0(Ft.) |
| No. Pipes = 1 Pipe flow travel time --- 'N' = 0.013 | | | | | | | | 24.1 | 0.005 | d= 24 | 7.7 | 484 | 1.1 | 32.3 | hgl= 4.4(Ft.) |
| 3.00 | D-100% | User E | 10.7 | 1.11 | 0.69 | 0.60 | 7.6 | | | | | | | 32.3 | |
| 3.00 | | | 47.9 | 1.11 | | | 31.6 | | | | | | | 32.3 | Stream Summary |
| 75.00 | D-100% | R7.3/A | 20.6 | 1.45 | 0.57 | 0.57 | 17.0 | | | | | | | 21.2 | |
| No. Pipes = 1 Pipe flow travel time --- 'N' = 0.013 | | | | | | | | 17.0 | 0.010 | d= 12 | 21.7 | 396 | 0.3 | 21.5 | hgl= 97.7(Ft.) |

Version 7.8 Copyright (c) CIVILCADD/CIVILDESIGN, 1991 - 2009

City of Imperial Beach
AREA H - Existing Conditions
5-year Storm Event
March 2010

Project: IBareaHfinal.rd3 Page 2 Calculated By:
Study Date: 03/20/10 Checked By:
5.0 Year Storm

********** R A T I O N A L H Y D R O L O G Y - S A N D I E G O C O **********

| Station/ Point No. | Soil Type A,B,C,D | Devel. Type | Area (Acres) | I in/h | C | C Avg | Q (sub) | Q Total | Slope v/hz | Section | V Fps | L ft. | T min. | Tc min. | Hydraulics or notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Confluence Analysis | | | TC#1= 32.3 | TC#2= 21.5 | TC#3= 0.0 | TC#4= 0.0 | TC#5= 0.0 | | | | | | | | Largest Confluence |
| | | | Q#1= 31.64 | Q#2= 17.04 | Q#3= 0.00 | Q#4= 0.00 | Q#5= 0.00 | Area = 68.47 | | | | | | | |

```
                                I#1=  1.11  I#2=  1.44  I#3=  0.00  I#4=  0.00  I#5=  0.00|                          Q= 44.74
     3.00|                      AR1=  47.9  AR2=  20.6  AR3=   0.0  AR4=   0.0  AR5=   0.0|
                                Q1 =  44.7  Q2 =  38.1  Q3 =   0.0  Q4 =   0.0  Q5 =   0.0|
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  44.7|0.004|d=   36|  6.3|  158|  0.4|  32.7|hgl=  1.1(Ft.)
   306.00|          D-100%|User E|   10.0|1.10|  0.79|  0.61|  8.2|------|-----|-------|----|----|----|  32.7|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  52.9|0.002|d=   36|  7.5|  450|  1.0|  33.7|hgl=  3.0(Ft.)
   300.00|          B-100%|User E|   24.4|1.08|  0.71|  0.64| 17.6|------|-----|-------|----|----|----|  33.7|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  70.5|0.003|d=   36|10.0|  566|  0.9|  34.7|hgl=  7.1(Ft.)
   176.00|          D-100%|User E|    4.8|1.06|  0.57|  0.63|  1.6|------|-----|-------|----|----|----|  34.7|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  72.2|0.003|d=   42|  7.5|  155|  0.3|  35.0|hgl=  1.7(Ft.)
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
   167.00|                      107.6|1.05|                 72.2|                                                 35.0|Stream Summary
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
   167.00|          D-100%|R7.3/A|   16.0|1.56|  0.57|  0.57| 14.3|------|-----|-------|----|----|----|  18.9|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
  Confluence                    TC#1= 35.0  TC#2= 18.9  TC#3=  0.0  TC#4=  0.0  TC#5=  0.0|                          Largest
   Analysis                     Q#1= 72.17  Q#2= 14.25  Q#3=  0.00  Q#4=  0.00  Q#5=  0.00|Area =  123.60          Confluence
                                I#1=  1.05  I#2=  1.56  I#3=  0.00  I#4=  0.00  I#5=  0.00|                          Q= 81.74
   167.00|                      AR1= 107.6  AR2=  16.0  AR3=   0.0  AR4=   0.0  AR5=   0.0|
                                Q1 =  81.7  Q2 =  53.2  Q3 =   0.0  Q4 =   0.0  Q5 =   0.0|
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  81.7|0.002|d=   42|  8.5|  350|  0.7|  35.7|hgl=  3.1(Ft.)
   295.00|          D-100%|User E|   14.4|1.04|  0.53|  0.62|  6.5|------|-----|-------|----|----|----|  35.7|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  88.2|0.002|d=   42|  9.2|  128|  0.2|  36.0|hgl=  2.7(Ft.)
   393.00|          D-100%|User E|    1.5|1.03|  0.55|  0.62|  0.5|------|-----|-------|----|----|----|  36.0|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  88.7|0.001|d=   48|  7.1|  598|  1.4|  37.4|hgl=  2.8(Ft.)
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
         Version 7.8              Copyright (c) CIVILCADD/CIVILDESIGN, 1991 - 2009
```

```
                    City of Imperial Beach
                    AREA H  - Existing Conditions
                    10-year Storm Event
                    March 2010
  Project:   ibareahfinal.rd3                                          Page  1        Calculated By:        ro

  Study Date: 03/20/10                                                                Checked By:           mp
  10.0 Year Storm
********************************** R A T I O N A L   H Y D R O L O G Y  -  S A N  D I E G O  C O ****************************
Station/ | Soil Type  |Devel.| Area  | I   |  C   |C Avg |  Q   |  Q   |Slope|Section| V  | L  | T  | Tc  | Hydraulics
Point No.|  A,B,C,D  |Type  |(Acres)|in/h |      |      |(sub) |Total |v/hz |       |Fps |ft. |min.|min. |  or notes
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
   82.20 |     D-100%|R7.3/A|   1.9 |1.88|  0.57|  0.57|  2.1|------|-----|-------|----|----|----|17.4 |----------
---------|-----------|------|-------|----|------|------|-----|  2.08|0.006| Street| 2.2|1600|12.1|-----| qavg= 10.51
 40.0 wide street                                                |     |     |       |    |    |    |     | dn=0.5  Flow hw=19.0
 flow to pt.#                                                   Wdth Ctr-Brk=  18.0| Ix-fall= 0.0200 ox-fall= 0.0200
   82.00 |     B-100%|User E|  22.6 |1.34|  0.57|  0.57| 16.7|------|-----|-------|----|----|----|29.5 |----------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------ -----  18.8|0.003|d=   18|10.6| 203| 0.3|29.9 |hgl=  8.6(Ft.)
   69.00 |     D-100%|User E|   5.5 |1.33|  0.57|  0.57|  4.1|------|-----|-------|----|----|----|29.9 |----------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------ -----  22.9|0.002|d=   18|12.9| 469| 0.6|30.5 |hgl= 25.0(Ft.)
  314.00 |     D-100%|User E|   7.1 |1.31|  0.57|  0.57|  5.0|------|-----|-------|----|----|----|30.5 |----------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------ -----  27.8|0.001|d=   18|15.8| 208| 0.2|30.7 |hgl= 20.1(Ft.)
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------ -----  27.8|0.005|d=   24| 8.9| 484| 0.9|31.6 |hgl=  6.7(Ft.)
    3.00 |     D-100%|User E|  10.7 |1.28|  0.69|  0.60|  8.9|------|-----|-------|----|----|----|31.6 |----------
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
    3.00 |           |      |  47.9 |1.28|      |      | 36.7|      |     |       |    |    |    |     |----------
---------|-----------|------|-------|----|------|------|-----|      |     |       |    |    |    |31.6 |Stream Summary
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
   75.00 |     D-100%|R7.3/A|  20.6 |1.66|  0.57|  0.57| 19.5|------|-----|-------|----|----|----|21.2 |----------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------ -----  19.5|0.010|d=   12|24.8| 396| 0.3|21.4 |hgl=128.8(Ft.)
---------|-----------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|----------
```

```
 Confluence                    TC#1= 31.6  TC#2= 21.4  TC#3=  0.0  TC#4=  0.0  TC#5=  0.0|     |     |   Largest
  Analysis                     Q#1= 36.71  Q#2= 19.48  Q#3=  0.00  Q#4=  0.00  Q#5=  0.00 Area =   68.47   Confluence
                               I#1=  1.28  I#2=  1.65  I#3=  0.00  I#4=  0.00  I#5=  0.00|     |     |     Q= 51.88
    3.00|                      AR1=  47.9  AR2=  20.6  AR3=   0.0  AR4=   0.0  AR5=   0.0
        |                      Q1 =  51.9  Q2 =  44.4  Q3 =   0.0  Q4 =   0.0  Q5 =   0.0
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  51.9|0.004|d=   36| 7.3| 158| 0.4| 31.9|hgl=  1.7(Ft.)
   306.00|          D-100%|User E|   10.0|1.27|  0.79|  0.61|  9.6|------|-----|-------|----|----|----| 31.9|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  61.4|0.002|d=   36| 8.7| 450| 0.9| 32.8|hgl=  4.5(Ft.)
   300.00|          B-100%|User E|   24.4|1.25|  0.71|  0.64| 20.7|------|-----|-------|----|----|----| 32.8|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  82.1|0.003|d=   36|11.6| 566| 0.8| 33.6|hgl= 10.2(Ft.)
   176.00|          D-100%|User E|    4.8|1.23|  0.57|  0.63|  2.1|------|-----|-------|----|----|----| 33.6|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  84.2|0.003|d=   42| 8.7| 155| 0.3| 33.9|hgl=  2.4(Ft.)
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
   167.00|                |      |  107.6|1.23|      |      | 84.2|      |     |       |    |    |    | 33.9|Stream Summary
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
   167.00|          D-100%|R7.3/A|   16.0|1.79|  0.57|  0.57| 16.3|------|-----|-------|----|----|----| 18.9|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
 Confluence                    TC#1= 33.9  TC#2= 18.9  TC#3=  0.0  TC#4=  0.0  TC#5=  0.0|     |     |   Largest
  Analysis                     Q#1= 84.16  Q#2= 16.29  Q#3=  0.00  Q#4=  0.00  Q#5=  0.00 Area =  123.60   Confluence
                               I#1=  1.23  I#2=  1.79  I#3=  0.00  I#4=  0.00  I#5=  0.00|     |     |     Q= 95.33
   167.00|                     AR1= 107.6  AR2=  16.0  AR3=   0.0  AR4=   0.0  AR5=   0.0
        |                      Q1 =  95.3  Q2 =  63.2  Q3 =   0.0  Q4 =   0.0  Q5 =   0.0
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----|  95.3|0.002|d=   42| 9.9| 350| 0.6| 34.5|hgl=  4.6(Ft.)
   295.00|          D-100%|User E|   14.4|1.21|  0.53|  0.62|  7.8|------|-----|-------|----|----|----| 34.5|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----| 103.1|0.002|d=   42|10.7| 128| 0.2| 34.7|hgl=  3.8(Ft.)
   393.00|          D-100%|User E|    1.5|1.21|  0.55|  0.62|  0.6|------|-----|-------|----|----|----| 34.7|---------------
No. Pipes = 1  Pipe flow travel time ---  'N' = 0.013 ------|-----| 103.7|0.001|d=   48| 8.3| 598| 1.2| 35.9|hgl=  4.0(Ft.)
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
---------|----------------|------|-------|----|------|------|-----|------|-----|-------|----|----|----|-----|---------------
         Version 7.8                Copyright (c) CIVILCADD/CIVILDESIGN, 1991 - 2009
```

# APPENDIX 7

## Imperial Beach Promenade (CVS Pharmacy) Drainage Report

## (For Reference)

MORRISON ENGINEERING
INCORPORATED

CIVIL ENGINEERING • SURVEYING • LAND PLANNING

JOB NO. 00010

# PRELIMINARY HYDROLOGY STUDY

# FOR

# IMPERIAL BEACH PROMENADE

Joel G. Morrison 9/11/00

JOEL G. MORRISON RCE 39788 DATE
RCE EXPIRATION DATE: 12/31/01

1927 Frankfort Street, Suite A, San Diego, California 92110 • 619-276-0425 • Fax 619-276-0404

**PROPOSED IMPROVEMENTS:**

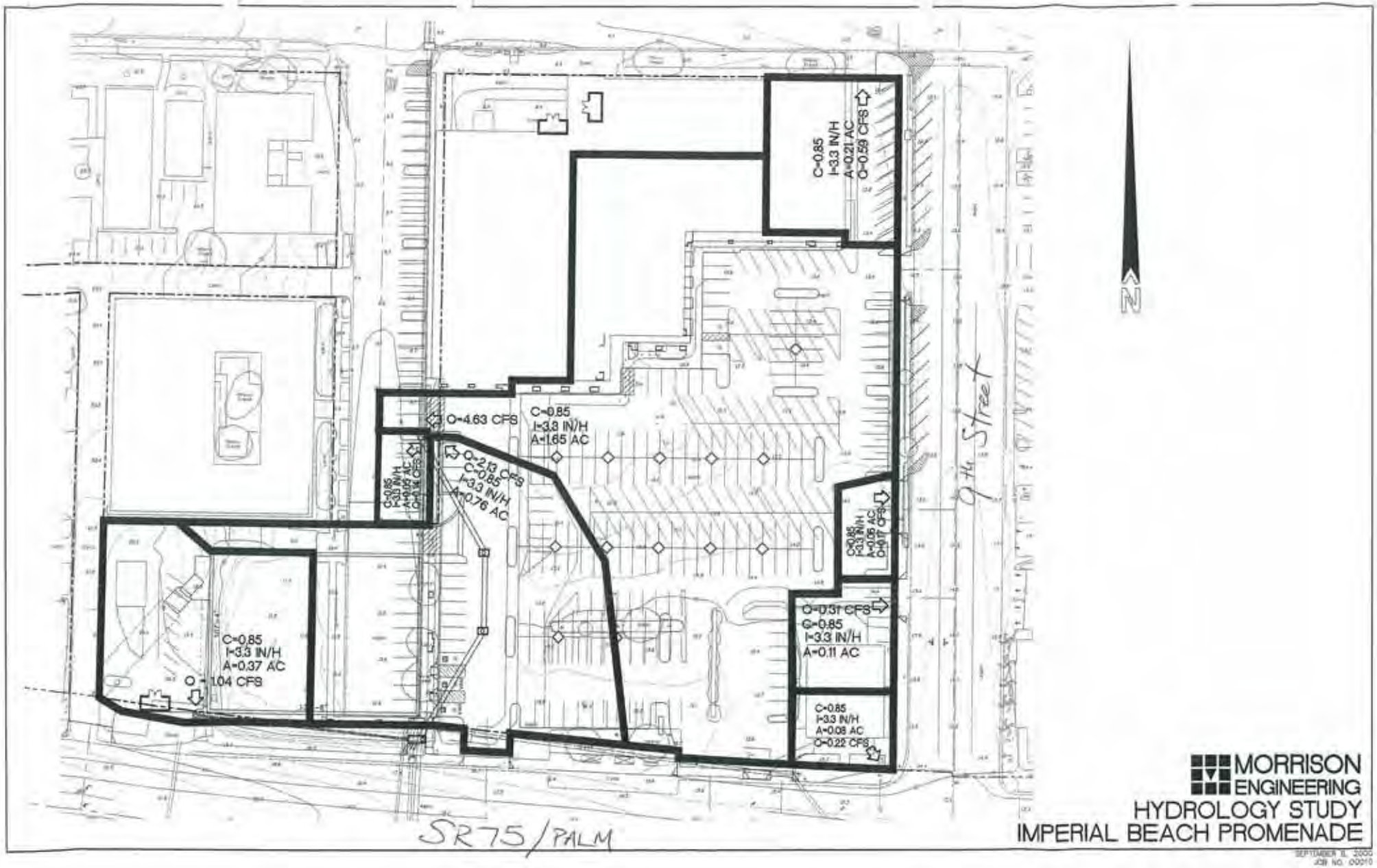
STORM DRAIN IMPROVEMENTS WILL CONSIST OF RELOCATING THE EXISTING PUBLIC 36" RCP STORM DRAIN EASTERLY AROUND THE PROPOSED SAV-ON BUILDING. SURFACE DRAINAGE ON THE EXISTING PARKING LOT WILL REMAIN RELATIVELY THE SAME, WITH MOST DRAINAGE CONTINUING TO DRAIN IN A GENERAL NORTHWESTERLY DIRECTION TOWARDS 8$^{TH}$ STREET. THIS WATER WILL BE PARTIALLY COLLECTED BY A NEW QUIKSET DB1212 INLET; THE REMAINDER WILL BE COLLECTED BY A NEW CURB INLET PRIOR TO FLOWING ONTO 8$^{TH}$ STREET. ON THE WEST SIDE OF THE NEW SAV-ON BUILDING, DRAINAGE IN THE LOADING DOCK AREA WILL BE DIRECTED TO THE SOUTH AND INTO A PRIVATE CURB INLET. A SMALL 8" PVC STORM DRAIN WILL CONVEY THIS WATER INTO THE EXISTING PUBLIC 36" RCP STORM DRAIN AT THE SOUTHEASTERLY CORNER OF THE SAV-ON BUILDING.

**HYDROLOGY:**

THE RATIONAL METHOD IN CONFORMANCE WITH THE CITY OF SAN DIEGO DRAINAGE MANUAL WAS UTILIZED FOR THE SITE. DRAINAGE BASIN ARE SMALL, WITH VERY SHORT TIME OF CONCENTRATIONS. CONSEQUENTLY, THE DEFAULT TIME OF CONCENTRATION OF 10 MINUTES WAS UTILIZED FOR ALL BASINS. CITY APPENDIX I-B SHOWS A RAINFALL INTENSITY OF 3.3 INCHES/HOUR FOR A 50-YEAR STORM. RUNOFF COEFFICIENT "C" FROM CITY TABLE 2 SHOWS A VALUE OF 0.85 FOR COMMERCIAL DEVELOPMENTS. IN SUMMARY, THE FOLLOWING VALUES WERE UTILIZED FOR ALL BASINS AS SHOWN ON THE ATTACHED HYDROLOGY BASE MAP:

COMMERCIAL DEVELOPMENT, C = 0.85 (TABLE 2)
$T_c$ = 10.0 MINUTES (ASSUME MINIMUM)
$I_{50}$ = 3.3 INCHES/HOUR

PLEASE SEE ATTACHED HYDROLOGY PLAT FOR SITE HYDROLOGY BY DRAINAGE BASIN. HYDRAULIC CALCULATIONS ARE ALSO ATTACHED FOR THE PRIVATE 8" PVC STORM DRAIN.




MORRISON ENGINEERING

HYDROLOGY STUDY

IMPERIAL BEACH PROMENADE

SEPTEMBER 8, 2000

JOB NO. 00010

Manning Pipe Calculator

PRIVATE 8" PVC STORM DRAIN

Given Input Data:

| | |
|---|---|
| Shape ..... | Circular |
| Solving for ..... | Depth of Flow |
| Diameter ..... | 8.0000 in |
| Flowrate ..... | 1.0400 cfs |
| Slope ..... | 0.0450 ft/ft |
| Manning's n ..... | 0.0130 |

Computed Results:

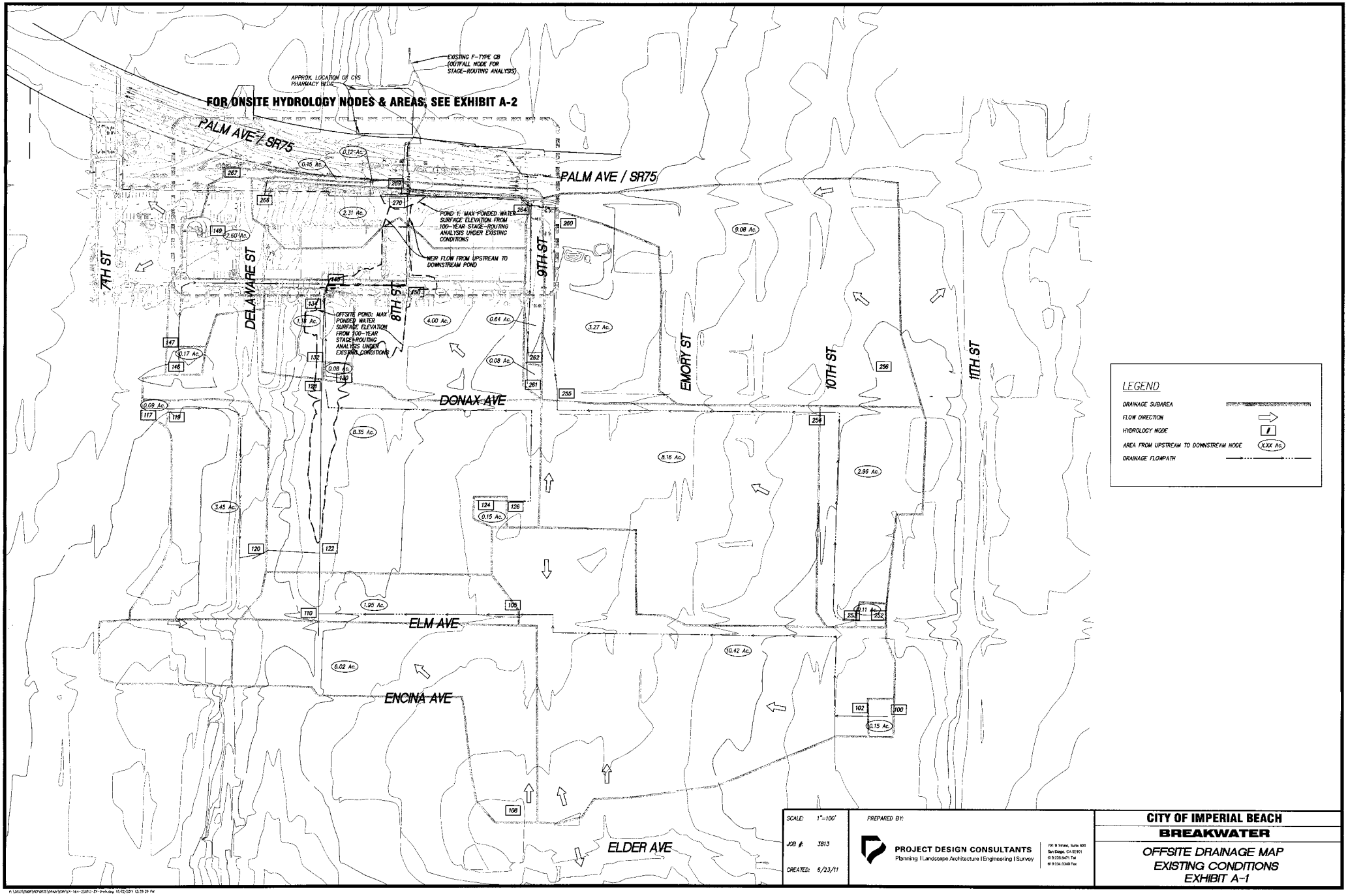
| | |
|---|---|
| Depth ..... | 3.5469 in |
| Area ..... | 0.3491 ft2 |
| Wetted Area ..... | 0.1494 ft2 |
| Wetted Perimeter ..... | 11.6582 in |
| Perimeter ..... | 25.1327 in |
| Velocity ..... | 6.9605 fps |
| Hydraulic Radius ..... | 1.8455 in |
| Percent Full ..... | 44.3361 % |
| Full flow Flowrate ..... | 2.5634 cfs |
| Full flow velocity ..... | 7.3437 fps |

Critical Information

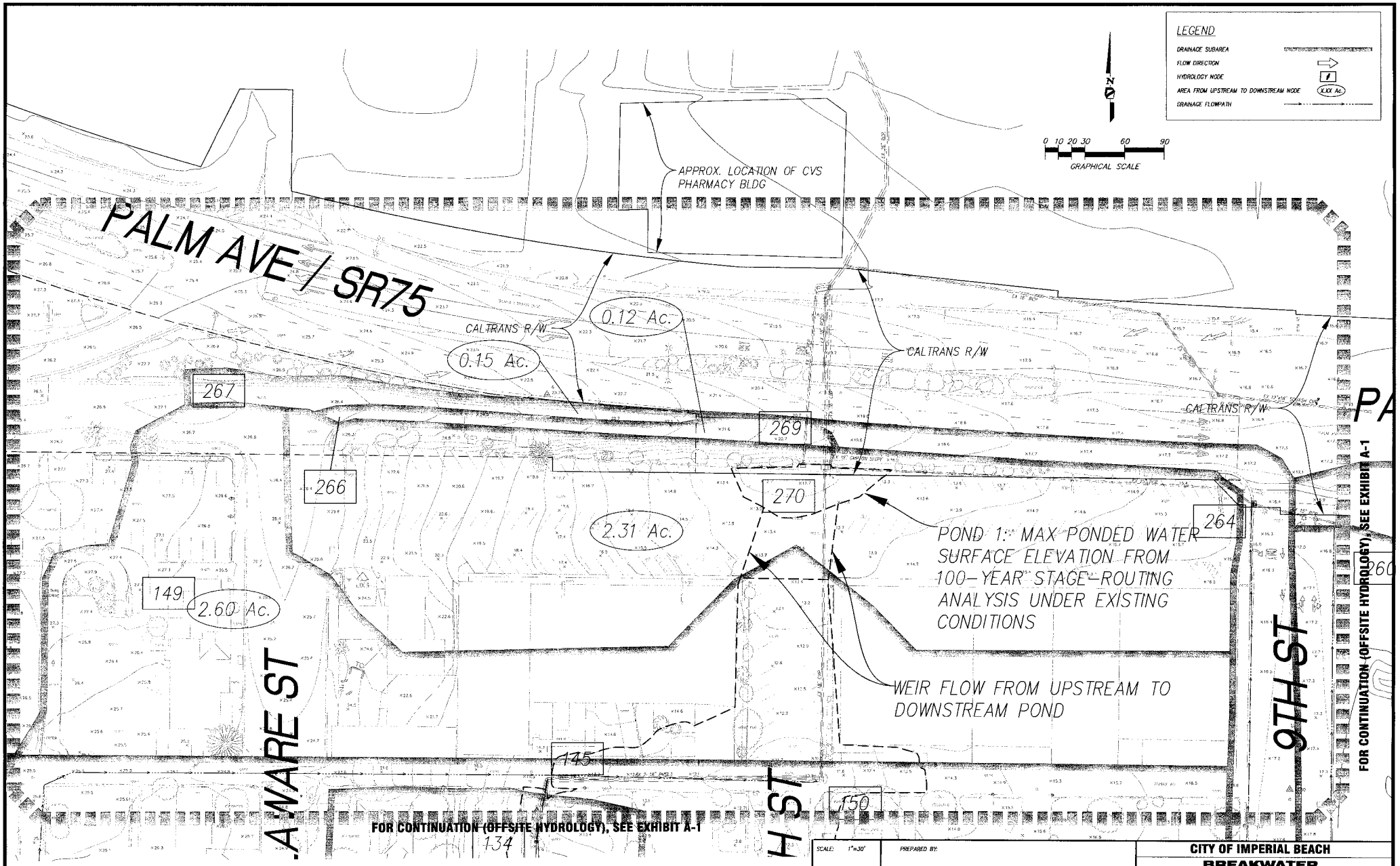
| | |
|---|---|
| Critical depth ..... | 5.9333 in |
| Critical slope ..... | 0.0086 ft/ft |
| Critical velocity ..... | 3.6887 fps |
| Critical area ..... | 0.2819 ft2 |
| Critical perimeter ..... | 16.4330 in |
| Critical hydraulic radius ..... | 2.4706 in |
| Critical top width ..... | 8.0000 in |
| Specific energy ..... | 1.0485 ft |
| Minimum energy ..... | 0.7417 ft |
| Froude number ..... | 2.5837 |
| Flow condition ..... | Supercritical |

# APPENDIX 8

## Drainage Exhibits



FOR ONSITE HYDROLOGY NODES & AREAS, SEE EXHIBIT A-2
EXISTING F-TYPE CB (OUTFALL NODE FOR STAGE-ROUTING ANALYSIS)
APPROX. LOCATION OF CVS PHARMACY BLDG
PALM AVE / SR75
PALM AVE / SR75
POND 1: MAX PONDED WATER SURFACE ELEVATION FROM 100-YEAR STAGE-ROUTING ANALYSIS UNDER EXISTING CONDITIONS
WEIR FLOW FROM UPSTREAM TO DOWNSTREAM POND
OFFSITE POND: MAX PONDED WATER SURFACE ELEVATION FROM 100-YEAR STAGE-ROUTING ANALYSIS UNDER EXISTING CONDITIONS
7TH ST
DELAWARE ST
8TH ST
9TH ST
EMORY ST
10TH ST
11TH ST
DONAX AVE
ELM AVE
ENCINA AVE
ELDER AVE
LEGEND
DRAINAGE SUBAREA
FLOW DIRECTION
HYDROLOGY NODE
AREA FROM UPSTREAM TO DOWNSTREAM NODE
X.XX Ac.
DRAINAGE FLOWPATH
SCALE: 1"=100'
JOB #: 3813
CREATED: 6/23/11
PREPARED BY:
PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 600
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax
CITY OF IMPERIAL BEACH
BREAKWATER
OFFSITE DRAINAGE MAP
EXISTING CONDITIONS
EXHIBIT A-1




SCALE: 1"=30'

JOB #: 3813

CREATED: 6/23/11

PREPARED BY:

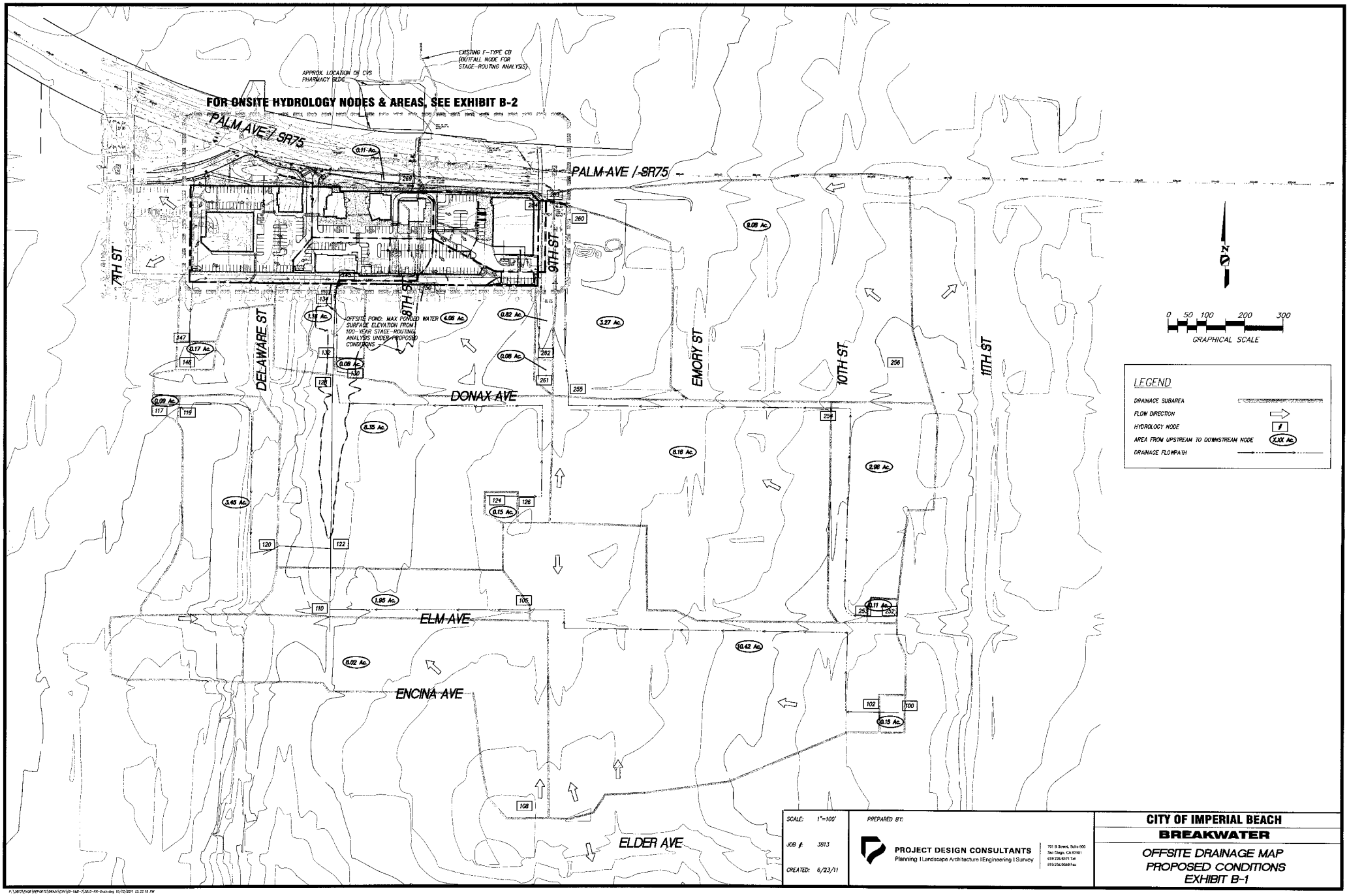
PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey

701 B Street, Suite 800
San Diego, CA 92101
619 235-9471 Tel
619 234-0349 Fax

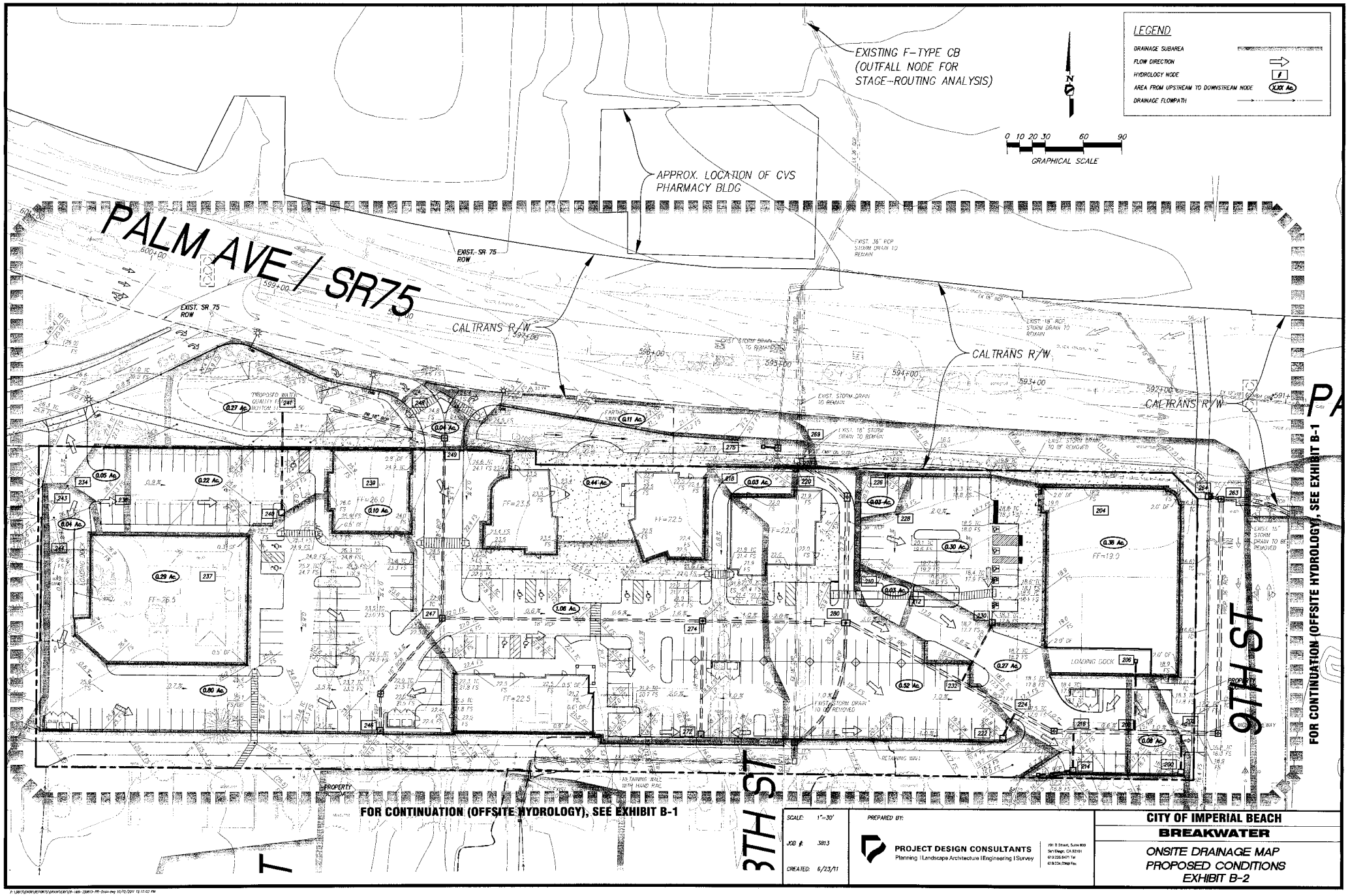
**CITY OF IMPERIAL BEACH**

**BREAKWATER**

*ONSITE DRAINAGE MAP*
*EXISTING CONDITIONS*
*EXHIBIT A-2*



FOR ONSITE HYDROLOGY NODES & AREAS, SEE EXHIBIT B-2
EXISTING F-TYPE CB (OUTFALL NODE FOR STAGE-ROUTING ANALYSIS)
APPROX. LOCATION OF CVS PHARMACY BLDG
PALM AVE / SR75
PALM AVE / SR75
7TH ST
8TH ST
9TH ST
DELAWARE ST
EMORY ST
10TH ST
11TH ST
DONAX AVE
ELM AVE
ENCINA AVE
ELDER AVE
OFFSITE POND: MAX PONDED WATER SURFACE ELEVATION FROM 100-YEAR STAGE-ROUTING ANALYSIS UNDER PROPOSED CONDITIONS
0.11 Ac.
9.08 Ac.
1.16 Ac.
4.06 Ac.
0.82 Ac.
3.27 Ac.
0.17 Ac.
0.08 Ac.
0.08 Ac.
0.09 Ac.
8.35 Ac.
8.16 Ac.
2.98 Ac.
3.45 Ac.
0.15 Ac.
1.95 Ac.
0.11 Ac.
10.42 Ac.
8.02 Ac.
0.15 Ac.
N
0 50 100 200 300
GRAPHICAL SCALE
LEGEND
DRAINAGE SUBAREA
FLOW DIRECTION
HYDROLOGY NODE
AREA FROM UPSTREAM TO DOWNSTREAM NODE
X.XX Ac.
DRAINAGE FLOWPATH
SCALE: 1"=100'
JOB #: 3813
CREATED: 6/23/11
PREPARED BY:
PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 900
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax
CITY OF IMPERIAL BEACH
BREAKWATER
OFFSITE DRAINAGE MAP
PROPOSED CONDITIONS
EXHIBIT B-1




SCALE: 1"=30'

JOB #: 3813

CREATED: 6/23/11

PREPARED BY:

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.234.7349 Fax

**CITY OF IMPERIAL BEACH**

**BREAKWATER**

*ONSITE DRAINAGE MAP*
*PROPOSED CONDITIONS*
*EXHIBIT B-2*