

## Technical Memorandum

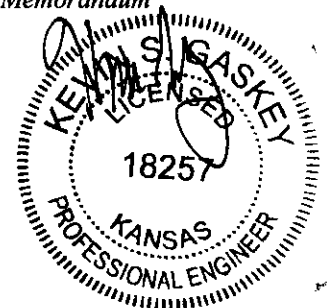
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Date: February 1, 2013

Subj: Detention Pond Design



21-13

Kimley-Horn and Associates Inc. (KHA) has prepared a detention pond design for a 38 +/- acre proposed Sam's Club located at the northeast corner of N Maize Rd. and West 29<sup>th</sup> St. N in the City of Wichita, Kansas. This analysis considers four outfall locations, which are designated by letters A-D for the purpose of this report. The locations of each outfall are shown on the attached Existing and Proposed Condition Drainage Area Maps.

The proposed detention ponds are designed to reduce the proposed condition peak discharge to less than or equal to the existing condition peak discharge for the 2-, 5-, 10-, 25-, and 100-year storm events. Additionally, compensatory storage is provided below elevation 1351.7 so there is no reduction in valley storage as a result of this project. Approximately 5.3 acre-feet of compensatory storage is required based on the existing topographic information within the site. Finally, the total provided detention storage exceeds the required detention storage by at least 10% as required by the City of Wichita.

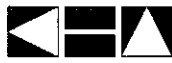
### Methodology

KHA prepared three hydrologic models for the site. The models represent existing and proposed conditions for the site at each outfall location and a determination of the minimum amount of detention storage.

Bentley PondPack V8i was used to calculate the peak flow rates and to size each detention pond. Each drainage area, as applicable, was divided into impervious and pervious sub-basins in accordance with City criteria.

The NRCS Unit Hydrograph Method was used to generate hydrographs and the NRCS Type II rainfall distribution was used to model precipitation for the 2-, 5-, 10-, 25-, and 100-year storm events. Local rainfall depths were obtained from the Sedgwick County Stormwater Manual. Existing and proposed time of concentrations were calculated in accordance with methodology described in the Sedgwick County Stormwater Manual. Curve Numbers for existing watershed conditions are based on land use and soil type. Existing land uses are based on on-ground survey information and aerial photography. Soil types are based on information obtained from the NRCS Websoil Survey (NRCS, 2012) and consist of Type B and Type D soils.

The amount of impervious area for each basin in proposed conditions was calculated based on the proposed site plan. An 85% impervious area was assumed for areas where no site plan was available. Pervious areas were assumed to be disturbed pervious, and an appropriate



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Curve Number was selected based on soil type. A Curve Number value of 98 was assumed for all impervious areas.

A tailwater condition was established for the proposed detention ponds. The tailwater stage table is based on existing condition Fox Ridge Lake, which was obtained from the City's HEC-HMS model for the Cadillac Lake drainage system.

**Existing Drainage Conditions**

Each drainage area was divided into pervious and impervious sub-basins. Pervious areas were assumed as pre-developed conditions, as classified by the Sedgwick County Stormwater Manual. Existing buildings and drives were considered to be impervious.

Approximately 14.9 acres drains to Outfall A which is located at the southwest corner of the site. Outfall A drains into the roadside ditch along the east side of N Maize Rd. Outfall C is located along the eastern property boundary. An existing 36" reinforced concrete pipe collects runoff from approximately 16.4 acres of the site and discharges into the adjacent Fox Ridge pond system which is located east of the site. The remaining 6.8 acres of the site drains to the southeast to Outfall D and into an existing storm sewer on the north side of West 29<sup>th</sup> St. N before ultimately discharging into the Fox Ridge pond.

Existing condition outfall locations and drainage area boundaries are shown on the attached Existing Condition Drainage Area Map. Table 1 summarizes the existing peak flow at each outfall for the modeled storm events.

**Table 1: Existing Condition Flow Summary**

| OUTFALL | Q <sub>2</sub> (cfs) | Q <sub>5</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>100</sub> (cfs) |
|---------|----------------------|----------------------|-----------------------|-----------------------|------------------------|
| A       | 16                   | 26                   | 34                    | 45                    | 65                     |
| C       | 17                   | 27                   | 36                    | 47                    | 69                     |
| D       | 10                   | 16                   | 21                    | 26                    | 37                     |

Existing condition hydrologic calculations, PondPack output, and digital models are attached to this memo.

**Proposed Drainage Conditions**

The City of Wichita requires proposed peak flows be less than or equal to existing condition peak flows for 2-, 5-, 10-, 25-, and 100-year storm events.

The site will drain to the proposed detention ponds, with the exception of small bypass areas that will drain directly to Outfalls A, C, and D.

Four detention ponds, shown on the attached Proposed Condition Drainage Area Map as Pond 1, Pond 2, Pond 3, and Pond 4, will reduce the proposed condition peak flow at Outfalls A, C, and D to less than or equal to existing conditions for each of the modeled storm events. Ponds 1 through 3 are proposed to be interconnected with 3-36" reinforced



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concrete pipes so water can flow between the ponds to efficiently utilize the available volume. Pond 4, which serves Outfall C, is independent of Ponds 1 through 3.

Compensatory storage will be provided in Ponds 2 and 3 below the gravity drain elevation of Pond 3. An 800 GPM pump will be located at the Pond 3 outfall to drain compensatory storage volume. Storage above the Pond 3 gravity drain elevation is considered detention storage. The pump will turn on as soon as it senses water in the pond. The pump will shut off once the water level reaches the Pond 3 gravity drain elevation and will turn on again after the entire detention volume has drained. This will prevent the pump from activating during the peak flow event. The detention storage will be controlled by a multistage hydraulic structure. Pond 2 has been graded to drain into Pond 3 during low flow conditions.

Tables 2, 3, 4, and 5 summarize the proposed detention ponds.

**Table 2: Pond 1 Summary; 100-Year Event**

| Drainage Area<br>(ac)                                         | Q <sub>in</sub><br>(cfs) | Q <sub>out</sub><br>(cfs) | Peak Storage<br>(ac-ft) | Peak WSEL<br>(ft) |
|---------------------------------------------------------------|--------------------------|---------------------------|-------------------------|-------------------|
| 3.03                                                          | 73.69                    | 36.01                     | 1.22                    | 1351.92           |
| Multistage Outfall: 12" Orifice and 20' Spillway; 36" Culvert |                          |                           |                         |                   |

**Table 3: Pond 2 Summary; 100-Year Event**

| Drainage Area<br>(ac)                                                                    | Q <sub>in</sub><br>(cfs) | Q <sub>out</sub><br>(cfs) | Peak Storage<br>(ac-ft) | Peak WSEL<br>(ft) |
|------------------------------------------------------------------------------------------|--------------------------|---------------------------|-------------------------|-------------------|
| 16.62                                                                                    | 153.36                   | 95.90                     | 4.21                    | 1352.06           |
| Outfall: No outfall, connected to Pond 1 and Pond 3 with 3-36" reinforced concrete pipes |                          |                           |                         |                   |

**Table 4: Pond 3 Summary; 100-Year Event**

| Drainage Area<br>(ac)                                         | Q <sub>in</sub><br>(cfs) | Q <sub>out</sub><br>(cfs) | Peak Storage<br>(ac-ft) | Peak WSEL<br>(ft) |
|---------------------------------------------------------------|--------------------------|---------------------------|-------------------------|-------------------|
| 7.41                                                          | 116.94                   | 23.83                     | 7.62                    | 1352.00           |
| Multistage Outfall: 18" Orifice and 12' Spillway; 27" Culvert |                          |                           |                         |                   |

**Table 5: Pond 4 Summary; 100-Year Event**

| Drainage Area<br>(ac)                                        | Q <sub>in</sub><br>(cfs) | Q <sub>out</sub><br>(cfs) | Peak Storage<br>(ac-ft) | Peak WSEL<br>(ft) |
|--------------------------------------------------------------|--------------------------|---------------------------|-------------------------|-------------------|
| 3.55                                                         | 30.23                    | 21.15                     | 0.45                    | 1352.04           |
| Multistage Outfall: 6" Orifice and 12' Spillway; 36" Culvert |                          |                           |                         |                   |

The proposed design detains proposed condition peak discharge back to less than existing condition. A separate model, included as *Sams\_Storage*, was created to calculate the minimum required detention storage to match existing flows at each outfall. The resulting required detention storage is 7.4 ac-feet. Approximately 5.3 ac-feet of compensatory storage is required on site. The total required storage, including an additional 10% of detention storage, is 13.4 ac-feet. The total storage provided to each pond's respective 100-year water surface elevation is 13.5 acre-feet, which exceeds the total required storage.

Table 6 summarizes the proposed peak flow at the outfall locations for each modeled storm event. The table shows the proposed condition peak flow is less than the existing condition peak flow rate for each event.



**Table 6: Proposed Condition Flow Summary**

| OUTFALL | Q <sub>2</sub> (cfs) | Q <sub>5</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>100</sub> (cfs) |
|---------|----------------------|----------------------|-----------------------|-----------------------|------------------------|
| A       | 11                   | 13                   | 19                    | 26                    | 40                     |
| C       | 15                   | 21                   | 35                    | 42                    | 61                     |
| D       | 10                   | 13                   | 17                    | 25                    | 32                     |

Proposed condition hydrologic calculations, PondPack output, and digital models are attached to this memo.

In addition to peak flow control, the City of Wichita requires stormwater quality measures be implemented to reduce total suspended solids. Stormceptors will be used at each outfall to reduce total suspended solids from the stormwater discharge prior to the site's outfall. The proprietary system is sized to meet the requirements in the Sedgwick County Stormwater Manual. Stormceptors specifications are included in the Operations and Maintenance plan.

**Attachments**

Existing Condition Drainage Area Map  
Existing Condition Hydrologic Calculations  
Existing Condition PondPack Output  
Proposed Condition Drainage Area Map  
Proposed Condition Hydrologic Calculations  
Proposed Condition PondPack Output  
Digital Files

EXISTING CONDITIONS, TIME OF CONCENTRATION CALCULATIONS

Sheet Flow

| Basin | L <sub>o</sub> (ft.) | S (ft./ft.) | Conditions          | n    | P <sub>2</sub> (in.) | t <sub>i</sub> (min) |
|-------|----------------------|-------------|---------------------|------|----------------------|----------------------|
| DA-A  | 100                  | 0.02        | Cultivated, no crop | 0.17 | 3.5                  | 11.6                 |
| DA-C  | 100                  | 0.02        | Cultivated, no crop | 0.17 | 3.5                  | 10.0                 |
| DA-D  | 100                  | 0.03        | Cultivated, no crop | 0.17 | 3.5                  | 8.7                  |

Shallow Flow

| Basin | L <sub>o</sub> (ft.) | S (ft./ft.) | Conditions          | K    | V (ft./s) | t <sub>i</sub> (min) |
|-------|----------------------|-------------|---------------------|------|-----------|----------------------|
| DA-A  | 614                  | 0.01        | Cultivated, no crop | 9.00 | 0.79      | 13.0                 |
| DA-C  | 640                  | 0.01        | Cultivated, no crop | 9.00 | 0.86      | 12.5                 |
| DA-D  | 561                  | 0.01        | Cultivated, no crop | 9.00 | 0.93      | 10.1                 |

Channel Flow

| Basin | L <sub>o</sub> (ft.) | S (ft./ft.) | Roughness (n) | b (ft.) | V (ft./s) | z (ft./V) | R <sub>h</sub> (ft.) | V (ft./s) | t <sub>ch</sub> (min) |
|-------|----------------------|-------------|---------------|---------|-----------|-----------|----------------------|-----------|-----------------------|
| DA-C  | 558                  | 0.0043      | .027          | 3       | 2         | 3         | 1.15                 | 3.96      | 2.3                   |

Total Time of Concentration

| Basin | t <sub>c</sub> (min) |
|-------|----------------------|
| DA-A  | 24.6                 |
| DA-C  | 24.8                 |
| DA-D  | 18.8                 |

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Subsection: Master Network Summary

**Catchments Summary**

| Label           | Scenario                 | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) |
|-----------------|--------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|
| DA-C-Impervious | Pre-Development 2-year   | 2                          | 0.192                           | 726.00                | 1.97                              |
| DA-C-Impervious | Pre-Development 5-year   | 5                          | 0.245                           | 726.00                | 2.49                              |
| DA-C-Impervious | Pre-Development 10-year  | 10                         | 0.292                           | 726.00                | 2.95                              |
| DA-C-Impervious | Pre-Development 25-year  | 25                         | 0.345                           | 726.00                | 3.46                              |
| DA-C-Impervious | Pre-Development 100-year | 100                        | 0.445                           | 726.00                | 4.44                              |
| DA-A-Pervious   | Pre-Development 2-year   | 2                          | 1.331                           | 729.00                | 14.39                             |
| DA-A-Pervious   | Pre-Development 5-year   | 5                          | 2.070                           | 729.00                | 23.16                             |
| DA-A-Pervious   | Pre-Development 10-year  | 10                         | 2.784                           | 729.00                | 31.53                             |
| DA-A-Pervious   | Pre-Development 25-year  | 25                         | 3.635                           | 729.00                | 41.40                             |
| DA-A-Pervious   | Pre-Development 100-year | 100                        | 5.334                           | 729.00                | 60.77                             |
| DA-D-Impervious | Pre-Development 2-year   | 2                          | 0.001                           | 723.00                | 0.01                              |
| DA-D-Impervious | Pre-Development 5-year   | 5                          | 0.001                           | 723.00                | 0.01                              |
| DA-D-Impervious | Pre-Development 10-year  | 10                         | 0.001                           | 723.00                | 0.01                              |
| DA-D-Impervious | Pre-Development 25-year  | 25                         | 0.001                           | 723.00                | 0.02                              |
| DA-D-Impervious | Pre-Development 100-year | 100                        | 0.002                           | 723.00                | 0.02                              |
| DA-A-Impervious | Pre-Development 2-year   | 2                          | 0.194                           | 726.00                | 2.00                              |
| DA-A-Impervious | Pre-Development 5-year   | 5                          | 0.247                           | 726.00                | 2.52                              |
| DA-A-Impervious | Pre-Development 10-year  | 10                         | 0.295                           | 726.00                | 2.99                              |
| DA-A-Impervious | Pre-Development 25-year  | 25                         | 0.348                           | 726.00                | 3.51                              |
| DA-A-Impervious | Pre-Development 100-year | 100                        | 0.449                           | 726.00                | 4.49                              |
| DA-D-Pervious   | Pre-Development 2-year   | 2                          | 0.811                           | 726.00                | 10.47                             |
| DA-D-Pervious   | Pre-Development 5-year   | 5                          | 1.206                           | 726.00                | 15.72                             |
| DA-D-Pervious   | Pre-Development 10-year  | 10                         | 1.581                           | 726.00                | 20.60                             |
| DA-D-Pervious   | Pre-Development 25-year  | 25                         | 2.019                           | 726.00                | 26.22                             |

Subsection: Master Network Summary

**Catchments Summary**

| Label         | Scenario                 | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow (ft <sup>3</sup> /s) |
|---------------|--------------------------|----------------------|---------------------------|--------------------|--------------------------------|
| DA-D-Pervious | Pre-Development 100-year | 100                  | 2.881                     | 723.00             | 37.28                          |
| DA-C-Pervious | Pre-Development 2-year   | 2                    | 1.382                     | 729.00             | 14.63                          |
| DA-C-Pervious | Pre-Development 5-year   | 5                    | 2.178                     | 729.00             | 24.06                          |
| DA-C-Pervious | Pre-Development 10-year  | 10                   | 2.952                     | 729.00             | 33.14                          |
| DA-C-Pervious | Pre-Development 25-year  | 25                   | 3.878                     | 729.00             | 43.88                          |
| DA-C-Pervious | Pre-Development 100-year | 100                  | 5.738                     | 729.00             | 65.11                          |

**Node Summary**

| Label     | Scenario                 | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow (ft <sup>3</sup> /s) |
|-----------|--------------------------|----------------------|---------------------------|--------------------|--------------------------------|
| Outfall C | Pre-Development 2-year   | 2                    | 1.575                     | 729.00             | 16.58                          |
| Outfall C | Pre-Development 5-year   | 5                    | 2.423                     | 729.00             | 26.52                          |
| Outfall C | Pre-Development 10-year  | 10                   | 3.244                     | 729.00             | 36.05                          |
| Outfall C | Pre-Development 25-year  | 25                   | 4.223                     | 729.00             | 47.30                          |
| Outfall C | Pre-Development 100-year | 100                  | 6.183                     | 729.00             | 69.49                          |
| Outfall D | Pre-Development 2-year   | 2                    | 0.811                     | 726.00             | 10.48                          |
| Outfall D | Pre-Development 5-year   | 5                    | 1.207                     | 726.00             | 15.73                          |
| Outfall D | Pre-Development 10-year  | 10                   | 1.582                     | 726.00             | 20.61                          |
| Outfall D | Pre-Development 25-year  | 25                   | 2.021                     | 726.00             | 26.24                          |
| Outfall D | Pre-Development 100-year | 100                  | 2.883                     | 723.00             | 37.30                          |
| Outfall A | Pre-Development 2-year   | 2                    | 1.525                     | 729.00             | 16.36                          |
| Outfall A | Pre-Development 5-year   | 5                    | 2.317                     | 729.00             | 25.64                          |
| Outfall A | Pre-Development 10-year  | 10                   | 3.079                     | 729.00             | 34.48                          |
| Outfall A | Pre-Development 25-year  | 25                   | 3.983                     | 729.00             | 44.86                          |
| Outfall A | Pre-Development 100-year | 100                  | 5.783                     | 729.00             | 65.21                          |



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| Proposed Curve Number |              |                         |                       |                                    |               |             |              |
|-----------------------|--------------|-------------------------|-----------------------|------------------------------------|---------------|-------------|--------------|
| Basin                 | Area (acres) | Impervious Area (acres) | Pervious Area (acres) | Soil Type                          | Impervious CN | Pervious CN | Composite CN |
| DA-A1                 | 16.62        | 13.49                   | 3.13                  | 97% Type B Soil<br>3% Type D Soil  | 98.0          | 80.2        | 94.6         |
| DA-A2                 | 2.13         | 1.14                    | 0.99                  | 71% Type B Soil<br>29% Type D Soil | 98.0          | 82.3        | 90.7         |
| DA-C1                 | 3.55         | 0.92                    | 2.63                  | 100% Type B Soil                   | 98.0          | 80.0        | 84.7         |
| DA-C2                 | 5.52         | 1.58                    | 3.94                  | 100% Type B Soil                   | 98.0          | 80.0        | 85.1         |
| DA-D1                 | 7.41         | 6.67                    | 0.74                  | 75% Type B Soil<br>25% Type D Soil | 98.0          | 82.0        | 96.4         |
| DA-D2                 | 1.23         | 0.26                    | 0.97                  | 43% Type B Soil<br>57% Type D Soil | 98.0          | 84.6        | 87.2         |
| Pond 1                | 1.63         | 1.47                    | 0.16                  | 64% Type B Soil<br>36% Type D Soil | 98.0          | 82.9        | 96.5         |

Note: Pervious CN assumes developed conditions

PROPOSED CONDITIONS, TIME OF CONCENTRATION

Sheet Flow

| Basin            | L <sub>s</sub> (ft.) | S (ft./ft.) | Conditions        | n     | P <sub>2</sub> (in.) | t <sub>1</sub> (min) |
|------------------|----------------------|-------------|-------------------|-------|----------------------|----------------------|
| DA-A1            | 100                  | 0.02        | Concrete          | 0.011 | 3.5                  | 1.2                  |
| DA-A2            | 100                  | 0.02        | Concrete          | 0.011 | 3.5                  | 1.3                  |
| DA-C1 Pervious   | 54                   | 0.35        | Berm, Short Grass | 0.150 | 3.5                  | 1.8                  |
| DA-C1 Impervious | 100                  | 0.02        | Concrete          | 0.011 | 3.5                  | 1.2                  |
| DA-C2 Pervious   | 56                   | 0.22        | Berm, Short Grass | 0.150 | 3.5                  | 2.3                  |
| DA-C2 Impervious | 100                  | 0.01        | Concrete          | 0.011 | 3.5                  | 1.5                  |
| DA-D1            | 100                  | 0.02        | Concrete          | 0.011 | 3.5                  | 1.2                  |
| DA-D2            | 25                   | 0.12        | Berm, Short Grass | 0.150 | 3.5                  | 1.5                  |
| POND 1           | 100                  | 0.01        | Concrete          | 0.011 | 3.5                  | 2.0                  |

Shallow Concentrated Flow

| Basin            | L (ft.) | S (ft./ft.) | K     | V (ft./s) | t <sub>2</sub> (min) |
|------------------|---------|-------------|-------|-----------|----------------------|
| DA-A2            | 224     | 0.01        | 20.30 | 1.66      | 2.2                  |
| DA-C2 Impervious | 219     | 0.01        | 20.30 | 2.03      | 1.8                  |

Channel Flow

| Basin            | L <sub>s</sub> (ft.) | S (ft./ft.) | Roughness (n) | b (ft.) | y (ft.) | z (ft.-v) | R <sub>h</sub> (ft.) | V (ft./s) | t <sub>3</sub> (min) |
|------------------|----------------------|-------------|---------------|---------|---------|-----------|----------------------|-----------|----------------------|
| DA-A1            | 1226                 |             |               |         |         |           |                      | 4.26      | 4.8                  |
| DA-C1 Pervious   | 976                  |             |               |         |         |           |                      | 4.00      | 4.1                  |
| DA-C1 Impervious | 117                  |             |               |         |         |           |                      | 4.00      | 0.5                  |
| DA-C2 Pervious   | 1128                 | 0.003       | .027          | 0       | 1       | 3         | 0.47                 | 1.83      | 10.3                 |
| DA-C2 Impervious | 395                  |             |               |         |         |           |                      | 4.61      | 1.4                  |
| DA-D1            | 168                  |             |               |         |         |           |                      | 4.00      | 0.7                  |
| DA-D2            | 378                  | 0.01        | .013          | 0       | 0.5     | 50        | 0.25                 | 5.22      | 1.2                  |
| POND 1           | 240                  |             |               |         |         |           |                      | 4.00      | 1.0                  |

Total Time of Concentration

| Basin            | t <sub>c</sub> (min) |
|------------------|----------------------|
| DA-A1            | 6.0                  |
| DA-A2            | 3.5                  |
| DA-C1 Pervious   | 5.9                  |
| DA-C1 Impervious | 1.6                  |
| DA-C2 Pervious   | 12.5                 |
| DA-C2 Impervious | 4.8                  |
| DA-D1            | 1.9                  |
| DA-D2            | 2.7                  |
| POND 1           | 3.0                  |

| Pond 1 Stage-Storage Table |                         |                                        |                                       |                            |
|----------------------------|-------------------------|----------------------------------------|---------------------------------------|----------------------------|
| Elevation                  | Area (ft <sup>2</sup> ) | Incremental Storage (ft <sup>3</sup> ) | Cumulative Storage (ft <sup>3</sup> ) | Cumulative Storage (ac-ft) |
| 1,349.00                   | 6,260                   | 0                                      | 0                                     | 0.00                       |
| 1,350.00                   | 18,735                  | 12,497                                 | 12,497                                | 0.29                       |
| 1351.00                    | 20,299                  | 19,517                                 | 32,014                                | 0.73                       |
| 1351.92                    | 21,779                  | 19,356                                 | 51,370                                | 1.18                       |
| 1,352.00                   | 21,911                  | 1,748                                  | 53,118                                | 1.22                       |
| 1,353.00                   | 23,562                  | 22,736                                 | 75,854                                | 1.74                       |
| 1354.00                    | 25,260                  | 24,411                                 | 100,265                               | 2.30                       |

100-Year WSEL

| Pond 2 Stage-Storage Table |                         |                                        |                                       |                            |
|----------------------------|-------------------------|----------------------------------------|---------------------------------------|----------------------------|
| Elevation                  | Area (ft <sup>2</sup> ) | Incremental Storage (ft <sup>3</sup> ) | Cumulative Storage (ft <sup>3</sup> ) | Cumulative Storage (ac-ft) |
| 1,344.00                   | 9,296                   | 0                                      | 0                                     | 0.00                       |
| 1,345.00                   | 17,250                  | 13,273                                 | 13,273                                | 0.30                       |
| 1346.00                    | 19,075                  | 18,162                                 | 31,435                                | 0.72                       |
| 1347.00                    | 20,965                  | 20,020                                 | 51,455                                | 1.18                       |
| 1,348.00                   | 22,926                  | 21,946                                 | 73,401                                | 1.69                       |
| 1,348.10                   | 23,129                  | 2,303                                  | 75,703                                | 1.74                       |
| 1349.00                    | 24,956                  | 21,638                                 | 97,341                                | 2.23                       |
| 1350.00                    | 27,046                  | 26,001                                 | 123,342                               | 2.83                       |
| 1,351.00                   | 29,211                  | 28,129                                 | 151,471                               | 3.48                       |
| 1,352.00                   | 31,442                  | 30,326                                 | 181,798                               | 4.17                       |
| 1352.06                    | 31,579                  | 1,891                                  | 183,688                               | 4.22                       |
| 1353.00                    | 33,737                  | 30,699                                 | 214,387                               | 4.92                       |
| 1,354.00                   | 36,103                  | 34,920                                 | 249,307                               | 5.72                       |

Compensatory Storage

100-Year WSEL

| Pond 3 Stage-Storage Table |                         |                                        |                                       |                            |
|----------------------------|-------------------------|----------------------------------------|---------------------------------------|----------------------------|
| Elevation                  | Area (ft <sup>2</sup> ) | Incremental Storage (ft <sup>3</sup> ) | Cumulative Storage (ft <sup>3</sup> ) | Cumulative Storage (ac-ft) |
| 1,342.00                   | 8,002                   | 0                                      | 0                                     | 0.00                       |
| 1,343.00                   | 22,573                  | 15,287                                 | 15,287                                | 0.35                       |
| 1344.00                    | 25,470                  | 24,021                                 | 39,309                                | 0.90                       |
| 1345.00                    | 28,083                  | 26,776                                 | 66,085                                | 1.52                       |
| 1,346.00                   | 30,784                  | 29,433                                 | 95,518                                | 2.19                       |
| 1,347.00                   | 33,563                  | 32,173                                 | 127,692                               | 2.93                       |
| 1348.00                    | 36,425                  | 34,994                                 | 162,686                               | 3.73                       |
| 1348.10                    | 36,719                  | 3,657                                  | 166,343                               | 3.82                       |
| 1,349.00                   | 39,370                  | 37,897                                 | 200,583                               | 4.60                       |
| 1,350.00                   | 42,397                  | 40,883                                 | 241,466                               | 5.54                       |
| 1351.00                    | 45,507                  | 43,952                                 | 285,418                               | 6.55                       |
| 1352.00                    | 48,696                  | 47,101                                 | 332,520                               | 7.63                       |
| 1353.00                    | 51,893                  | 50,294                                 | 382,814                               | 8.79                       |
| 1354.00                    | 55,234                  | 53,564                                 | 436,378                               | 10.02                      |

Compensatory Storage

100-Year WSEL

| Pond 4 Stage-Storage Table |                         |                                        |                                       |                            |
|----------------------------|-------------------------|----------------------------------------|---------------------------------------|----------------------------|
| Elevation                  | Area (ft <sup>2</sup> ) | Incremental Storage (ft <sup>3</sup> ) | Cumulative Storage (ft <sup>3</sup> ) | Cumulative Storage (ac-ft) |
| 1,350.00                   | 5,815                   | 0                                      | 0                                     | 0.00                       |
| 1,351.00                   | 9,383                   | 7,599                                  | 7,599                                 | 0.17                       |
| 1352.00                    | 10,934                  | 10,158                                 | 17,757                                | 0.41                       |
| 1352.04                    | 10,999                  | 439                                    | 18,196                                | 0.42                       |
| 1353.00                    | 12,558                  | 11,307                                 | 29,503                                | 0.68                       |
| 1354.00                    | 14,244                  | 13,401                                 | 42,904                                | 0.98                       |

100-Year WSEL

| Pond  | Compensatory Storage (ac-ft) | Detention Storage (ac-ft) |
|-------|------------------------------|---------------------------|
| 1     | 0.00                         | 1.18                      |
| 2     | 1.74                         | 2.48                      |
| 3     | 3.82                         | 3.81                      |
| 4     | 0.00                         | 0.42                      |
| Total | 5.56                         | 7.89                      |

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#### 2-year

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### Pond 4

#### 2-year

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Subsection: Master Network Summary

**Catchments Summary**

| Label            | Scenario                  | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) |
|------------------|---------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|
| DA-C1-Pervious   | Post-Development 2-year   | 2                          | 0.358                           | 717.00                | 6.48                              |
| DA-C1-Pervious   | Post-Development 5-year   | 5                          | 0.520                           | 717.00                | 9.38                              |
| DA-C1-Pervious   | Post-Development 10-year  | 10                         | 0.671                           | 717.00                | 12.04                             |
| DA-C1-Pervious   | Post-Development 25-year  | 25                         | 0.847                           | 717.00                | 15.07                             |
| DA-C1-Pervious   | Post-Development 100-year | 100                        | 1.190                           | 717.00                | 20.84                             |
| DA-C1-Impervious | Post-Development 2-year   | 2                          | 0.252                           | 714.00                | 4.42                              |
| DA-C1-Impervious | Post-Development 5-year   | 5                          | 0.321                           | 714.00                | 5.58                              |
| DA-C1-Impervious | Post-Development 10-year  | 10                         | 0.382                           | 714.00                | 6.61                              |
| DA-C1-Impervious | Post-Development 25-year  | 25                         | 0.451                           | 714.00                | 7.76                              |
| DA-C1-Impervious | Post-Development 100-year | 100                        | 0.582                           | 714.00                | 9.93                              |
| DA-A1-Pervious   | Post-Development 2-year   | 2                          | 0.431                           | 717.00                | 7.78                              |
| DA-A1-Pervious   | Post-Development 5-year   | 5                          | 0.625                           | 717.00                | 11.26                             |
| DA-A1-Pervious   | Post-Development 10-year  | 10                         | 0.806                           | 717.00                | 14.43                             |
| DA-A1-Pervious   | Post-Development 25-year  | 25                         | 1.016                           | 717.00                | 18.05                             |
| DA-A1-Pervious   | Post-Development 100-year | 100                        | 1.425                           | 717.00                | 24.94                             |
| DA-A1-Impervious | Post-Development 2-year   | 2                          | 3.668                           | 717.00                | 57.15                             |
| DA-A1-Impervious | Post-Development 5-year   | 5                          | 4.676                           | 717.00                | 72.11                             |
| DA-A1-Impervious | Post-Development 10-year  | 10                         | 5.573                           | 717.00                | 85.38                             |
| DA-A1-Impervious | Post-Development 25-year  | 25                         | 6.583                           | 717.00                | 100.29                            |
| DA-A1-Impervious | Post-Development 100-year | 100                        | 8.490                           | 717.00                | 128.42                            |
| DA-D2-Pervious   | Post-Development 2-year   | 2                          | 0.160                           | 714.00                | 3.21                              |
| DA-D2-Pervious   | Post-Development 5-year   | 5                          | 0.224                           | 714.00                | 4.46                              |
| DA-D2-Pervious   | Post-Development 10-year  | 10                         | 0.283                           | 714.00                | 5.58                              |
| DA-D2-Pervious   | Post-Development 25-year  | 25                         | 0.351                           | 714.00                | 6.84                              |

Subsection: Master Network Summary

**Catchments Summary**

| Label             | Scenario                     | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) |
|-------------------|------------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|
| DA-D2-Pervious    | Post-Development<br>100-year | 100                        | 0.481                           | 714.00                | 9.22                              |
| DA-D1-Impervious  | Post-Development 2-<br>year  | 2                          | 1.816                           | 714.00                | 31.92                             |
| DA-D1-Impervious  | Post-Development 5-<br>year  | 5                          | 2.315                           | 714.00                | 40.26                             |
| DA-D1-Impervious  | Post-Development 10<br>-year | 10                         | 2.759                           | 714.00                | 47.67                             |
| DA-D1-Impervious  | Post-Development 25<br>-year | 25                         | 3.259                           | 714.00                | 55.99                             |
| DA-D1-Impervious  | Post-Development<br>100-year | 100                        | 4.203                           | 714.00                | 71.69                             |
| DA-D1-Pervious    | Post-Development 2-<br>year  | 2                          | 0.110                           | 714.00                | 2.26                              |
| DA-D1-Pervious    | Post-Development 5-<br>year  | 5                          | 0.157                           | 714.00                | 3.20                              |
| DA-D1-Pervious    | Post-Development 10<br>-year | 10                         | 0.201                           | 714.00                | 4.05                              |
| DA-D1-Pervious    | Post-Development 25<br>-year | 25                         | 0.251                           | 714.00                | 5.02                              |
| DA-D1-Pervious    | Post-Development<br>100-year | 100                        | 0.349                           | 714.00                | 6.85                              |
| Pond 1 Impervious | Post-Development 2-<br>year  | 2                          | 0.400                           | 714.00                | 6.97                              |
| Pond 1 Impervious | Post-Development 5-<br>year  | 5                          | 0.510                           | 714.00                | 8.80                              |
| Pond 1 Impervious | Post-Development 10<br>-year | 10                         | 0.608                           | 714.00                | 10.42                             |
| Pond 1 Impervious | Post-Development 25<br>-year | 25                         | 0.718                           | 714.00                | 12.23                             |
| Pond 1 Impervious | Post-Development<br>100-year | 100                        | 0.926                           | 714.00                | 15.67                             |
| Pond 1 Pervious   | Post-Development 2-<br>year  | 2                          | 0.024                           | 714.00                | 0.48                              |
| Pond 1 Pervious   | Post-Development 5-<br>year  | 5                          | 0.034                           | 714.00                | 0.68                              |
| Pond 1 Pervious   | Post-Development 10<br>-year | 10                         | 0.043                           | 714.00                | 0.86                              |
| Pond 1 Pervious   | Post-Development 25<br>-year | 25                         | 0.054                           | 714.00                | 1.06                              |
| Pond 1 Pervious   | Post-Development<br>100-year | 100                        | 0.075                           | 714.00                | 1.44                              |
| DA-D2 Impervious  | Post-Development 2-<br>year  | 2                          | 0.072                           | 714.00                | 1.27                              |
| DA-D2 Impervious  | Post-Development 5-<br>year  | 5                          | 0.092                           | 714.00                | 1.60                              |
| DA-D2 Impervious  | Post-Development 10<br>-year | 10                         | 0.110                           | 714.00                | 1.89                              |



## Subsection: Master Network Summary

### Catchments Summary

| Label            | Scenario                  | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow (ft <sup>3</sup> /s) |
|------------------|---------------------------|----------------------|---------------------------|--------------------|--------------------------------|
| DA-D2 Impervious | Post-Development 25-year  | 25                   | 0.130                     | 714.00             | 2.22                           |
| DA-D2 Impervious | Post-Development 100-year | 100                  | 0.168                     | 714.00             | 2.84                           |
| DA-C2 Pervious   | Post-Development 2-year   | 2                    | 0.536                     | 720.00             | 8.21                           |
| DA-C2 Pervious   | Post-Development 5-year   | 5                    | 0.778                     | 720.00             | 12.00                          |
| DA-C2 Pervious   | Post-Development 10-year  | 10                   | 1.005                     | 720.00             | 15.48                          |
| DA-C2 Pervious   | Post-Development 25-year  | 25                   | 1.268                     | 720.00             | 19.46                          |
| DA-C2 Pervious   | Post-Development 100-year | 100                  | 1.781                     | 720.00             | 27.06                          |
| DA-C2 Impervious | Post-Development 2-year   | 2                    | 0.430                     | 714.00             | 7.08                           |
| DA-C2 Impervious | Post-Development 5-year   | 5                    | 0.548                     | 714.00             | 8.93                           |
| DA-C2 Impervious | Post-Development 10-year  | 10                   | 0.653                     | 714.00             | 10.58                          |
| DA-C2 Impervious | Post-Development 25-year  | 25                   | 0.771                     | 714.00             | 12.43                          |
| DA-C2 Impervious | Post-Development 100-year | 100                  | 0.995                     | 714.00             | 15.92                          |
| DA-A2-Pervious   | Post-Development 2-year   | 2                    | 0.148                     | 714.00             | 2.89                           |
| DA-A2-Pervious   | Post-Development 5-year   | 5                    | 0.211                     | 714.00             | 4.12                           |
| DA-A2-Pervious   | Post-Development 10-year  | 10                   | 0.269                     | 714.00             | 5.23                           |
| DA-A2-Pervious   | Post-Development 25-year  | 25                   | 0.336                     | 714.00             | 6.50                           |
| DA-A2-Pervious   | Post-Development 100-year | 100                  | 0.467                     | 714.00             | 8.89                           |
| DA-A2-Impervious | Post-Development 2-year   | 2                    | 0.311                     | 714.00             | 5.36                           |
| DA-A2-Impervious | Post-Development 5-year   | 5                    | 0.396                     | 714.00             | 6.76                           |
| DA-A2-Impervious | Post-Development 10-year  | 10                   | 0.472                     | 714.00             | 8.01                           |
| DA-A2-Impervious | Post-Development 25-year  | 25                   | 0.558                     | 714.00             | 9.41                           |
| DA-A2-Impervious | Post-Development 100-year | 100                  | 0.719                     | 714.00             | 12.05                          |

### Node Summary

Subsection: Master Network Summary

**Node Summary**

| Label     | Scenario                  | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) |
|-----------|---------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|
| Outfall C | Post-Development 2-year   | 2                          | 1.564                           | 720.00                | 14.83                             |
| Outfall C | Post-Development 5-year   | 5                          | 2.154                           | 720.00                | 21.26                             |
| Outfall C | Post-Development 10-year  | 10                         | 2.697                           | 720.00                | 31.58                             |
| Outfall C | Post-Development 25-year  | 25                         | 3.322                           | 720.00                | 42.00                             |
| Outfall C | Post-Development 100-year | 100                        | 4.529                           | 720.00                | 60.68                             |
| Outfall D | Post-Development 2-year   | 2                          | 4.110                           | 720.00                | 9.99                              |
| Outfall D | Post-Development 2-year   | 2                          | -0.385                          | 813.00                | -5.76                             |
| Outfall D | Post-Development 5-year   | 5                          | 4.717                           | 714.00                | 12.69                             |
| Outfall D | Post-Development 5-year   | 5                          | -0.238                          | 813.00                | -5.05                             |
| Outfall D | Post-Development 10-year  | 10                         | 5.421                           | 720.00                | 16.83                             |
| Outfall D | Post-Development 10-year  | 10                         | -0.136                          | 813.00                | -3.81                             |
| Outfall D | Post-Development 25-year  | 25                         | 6.325                           | 720.00                | 24.51                             |
| Outfall D | Post-Development 25-year  | 25                         | -0.050                          | 813.00                | -2.62                             |
| Outfall D | Post-Development 100-year | 100                        | 7.944                           | 720.00                | 31.86                             |
| Outfall A | Post-Development 2-year   | 2                          | 2.690                           | 996.00                | 11.49                             |
| Outfall A | Post-Development 2-year   | 2                          | -0.759                          | 813.00                | -12.53                            |
| Outfall A | Post-Development 5-year   | 5                          | 3.630                           | 741.00                | 12.90                             |
| Outfall A | Post-Development 5-year   | 5                          | -0.425                          | 813.00                | -9.75                             |
| Outfall A | Post-Development 10-year  | 10                         | 4.451                           | 735.00                | 18.54                             |
| Outfall A | Post-Development 10-year  | 10                         | -0.230                          | 813.00                | -7.87                             |
| Outfall A | Post-Development 25-year  | 25                         | 5.377                           | 732.00                | 25.93                             |
| Outfall A | Post-Development 25-year  | 25                         | -0.085                          | 813.00                | -5.80                             |
| Outfall A | Post-Development 100-year | 100                        | 7.534                           | 720.00                | 39.52                             |
| A-2       | Post-Development 2-year   | 2                          | 0.458                           | 714.00                | 8.25                              |

# Subsection: Master Network Summary

## Node Summary

| Label | Scenario                  | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow (ft <sup>3</sup> /s) |
|-------|---------------------------|----------------------|---------------------------|--------------------|--------------------------------|
| A-2   | Post-Development 5-year   | 5                    | 0.607                     | 714.00             | 10.88                          |
| A-2   | Post-Development 10-year  | 10                   | 0.741                     | 714.00             | 13.24                          |
| A-2   | Post-Development 25-year  | 25                   | 0.894                     | 714.00             | 15.91                          |
| A-2   | Post-Development 100-year | 100                  | 1.186                     | 714.00             | 20.94                          |

## Pond Summary

| Label            | Scenario                 | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (min) | Peak Flow (ft <sup>3</sup> /s) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|------------------|--------------------------|----------------------|---------------------------|--------------------|--------------------------------|--------------------------------------|------------------------------|
| Pond 2 (IN)      | Post-Development 2-year  | 2                    | 4.099                     | 717.00             | 64.93                          | (N/A)                                | (N/A)                        |
| Pond 2 (OUT)     | Post-Development 2-year  | 2                    | 3.771                     | 717.00             | 30.20                          | 1,351.10                             | 3.543                        |
| Pond 2 (Reverse) | Post-Development 2-year  | 2                    | -0.236                    | 816.00             | -4.25                          | (N/A)                                | (N/A)                        |
| Pond 2 (IN)      | Post-Development 5-year  | 5                    | 5.301                     | 717.00             | 83.37                          | (N/A)                                | (N/A)                        |
| Pond 2 (OUT)     | Post-Development 5-year  | 5                    | 4.807                     | 720.00             | 41.35                          | 1,351.12                             | 3.557                        |
| Pond 2 (Reverse) | Post-Development 5-year  | 5                    | -0.098                    | 816.00             | -2.78                          | (N/A)                                | (N/A)                        |
| Pond 2 (IN)      | Post-Development 10-year | 10                   | 6.379                     | 717.00             | 99.81                          | (N/A)                                | (N/A)                        |
| Pond 2 (OUT)     | Post-Development 10-year | 10                   | 5.793                     | 720.00             | 54.11                          | 1,351.14                             | 3.570                        |
| Pond 2 (Reverse) | Post-Development 10-year | 10                   | -0.029                    | 819.00             | -1.57                          | (N/A)                                | (N/A)                        |
| Pond 2 (IN)      | Post-Development 25-year | 25                   | 7.598                     | 717.00             | 118.34                         | (N/A)                                | (N/A)                        |
| Pond 2 (OUT)     | Post-Development 25-year | 25                   | 6.955                     | 720.00             | 67.07                          | 1,351.42                             | 3.767                        |

Subsection: Master Network Summary

**Pond Summary**

| Label               | Scenario                         | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) | Maximum<br>Water<br>Surface<br>Elevation<br>(ft) | Maximum<br>Pond Storage<br>(ac-ft) |
|---------------------|----------------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|--------------------------------------------------|------------------------------------|
| Pond 2<br>(Reverse) | Post-<br>Development<br>25-year  | 25                         | -0.001                          | 819.00                | -0.30                             | (N/A)                                            | (N/A)                              |
| Pond 2 (IN)         | Post-<br>Development<br>100-year | 100                        | 9.915                           | 717.00                | 153.36                            | (N/A)                                            | (N/A)                              |
| Pond 2<br>(OUT)     | Post-<br>Development<br>100-year | 100                        | 9.223                           | 720.00                | 95.90                             | 1,352.06                                         | 4.210                              |
| Pond 1 (IN)         | Post-<br>Development<br>2-year   | 2                          | 1.955                           | 720.00                | 9.28                              | (N/A)                                            | (N/A)                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>2-year   | 2                          | -0.442                          | 819.00                | -7.54                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(OUT)     | Post-<br>Development<br>2-year   | 2                          | 2.267                           | 996.00                | 11.35                             | 1,351.09                                         | 0.814                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>2-year   | 2                          | -0.793                          | 813.00                | -12.84                            | (N/A)                                            | (N/A)                              |
| Pond 1 (IN)         | Post-<br>Development<br>5-year   | 5                          | 2.858                           | 723.00                | 20.25                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>5-year   | 5                          | -0.223                          | 819.00                | -5.43                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(OUT)     | Post-<br>Development<br>5-year   | 5                          | 3.054                           | 744.00                | 11.83                             | 1,351.11                                         | 0.822                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>5-year   | 5                          | -0.461                          | 813.00                | -10.16                            | (N/A)                                            | (N/A)                              |
| Pond 1 (IN)         | Post-<br>Development<br>10-year  | 10                         | 3.620                           | 726.00                | 33.13                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>10-year  | 10                         | -0.100                          | 819.00                | -4.09                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(OUT)     | Post-<br>Development<br>10-year  | 10                         | 3.742                           | 735.00                | 16.97                             | 1,351.12                                         | 0.828                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>10-year  | 10                         | -0.260                          | 813.00                | -8.36                             | (N/A)                                            | (N/A)                              |

Subsection: Master Network Summary

**Pond Summary**

| Label               | Scenario                         | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) | Maximum<br>Water<br>Surface<br>Elevation<br>(ft) | Maximum<br>Pond Storage<br>(ac-ft) |
|---------------------|----------------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|--------------------------------------------------|------------------------------------|
| Pond 1 (IN)         | Post-<br>Development<br>25-year  | 25                         | 4.465                           | 723.00                | 46.28                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>25-year  | 25                         | -0.026                          | 819.00                | -2.60                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(OUT)     | Post-<br>Development<br>25-year  | 25                         | 4.506                           | 732.00                | 23.88                             | 1,351.22                                         | 0.876                              |
| Pond 1<br>(Reverse) | Post-<br>Development<br>25-year  | 25                         | -0.110                          | 813.00                | -6.39                             | (N/A)                                            | (N/A)                              |
| Pond 1 (IN)         | Post-<br>Development<br>100-year | 100                        | 6.401                           | 720.00                | 73.69                             | (N/A)                                            | (N/A)                              |
| Pond 1<br>(OUT)     | Post-<br>Development<br>100-year | 100                        | 6.348                           | 729.00                | 36.01                             | 1,351.92                                         | 1.217                              |
| Pond 3 (IN)         | Post-<br>Development<br>2-year   | 2                          | 4.433                           | 714.00                | 58.76                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>2-year   | 2                          | -0.059                          | 999.00                | -1.93                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(OUT)     | Post-<br>Development<br>2-year   | 2                          | 3.896                           | 729.00                | 7.27                              | 1,351.10                                         | 6.646                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>2-year   | 2                          | -0.402                          | 813.00                | -5.93                             | (N/A)                                            | (N/A)                              |
| Pond 3 (IN)         | Post-<br>Development<br>5-year   | 5                          | 5.138                           | 714.00                | 74.70                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>5-year   | 5                          | -0.049                          | 999.00                | -1.86                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(OUT)     | Post-<br>Development<br>5-year   | 5                          | 4.420                           | 729.00                | 8.73                              | 1,351.12                                         | 6.669                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>5-year   | 5                          | -0.256                          | 813.00                | -5.27                             | (N/A)                                            | (N/A)                              |
| Pond 3 (IN)         | Post-<br>Development<br>10-year  | 10                         | 5.893                           | 714.00                | 85.10                             | (N/A)                                            | (N/A)                              |

Subsection: Master Network Summary

**Pond Summary**

| Label               | Scenario                         | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) | Maximum<br>Water<br>Surface<br>Elevation<br>(ft) | Maximum<br>Pond Storage<br>(ac-ft) |
|---------------------|----------------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|--------------------------------------------------|------------------------------------|
| Pond 3<br>(Reverse) | Post-<br>Development<br>10-year  | 10                         | -0.040                          | 999.00                | -1.67                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(OUT)     | Post-<br>Development<br>10-year  | 10                         | 5.046                           | 726.00                | 14.66                             | 1,351.14                                         | 6.688                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>10-year  | 10                         | -0.153                          | 813.00                | -4.09                             | (N/A)                                            | (N/A)                              |
| Pond 3 (IN)         | Post-<br>Development<br>25-year  | 25                         | 6.828                           | 714.00                | 96.54                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>25-year  | 25                         | -0.032                          | 999.00                | -1.46                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(OUT)     | Post-<br>Development<br>25-year  | 25                         | 5.856                           | 726.00                | 19.82                             | 1,351.39                                         | 6.957                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>25-year  | 25                         | -0.063                          | 813.00                | -2.95                             | (N/A)                                            | (N/A)                              |
| Pond 3 (IN)         | Post-<br>Development<br>100-year | 100                        | 8.394                           | 714.00                | 116.94                            | (N/A)                                            | (N/A)                              |
| Pond 3<br>(Reverse) | Post-<br>Development<br>100-year | 100                        | -0.019                          | 1,002.00              | -1.11                             | (N/A)                                            | (N/A)                              |
| Pond 3<br>(OUT)     | Post-<br>Development<br>100-year | 100                        | 7.295                           | 723.00                | 23.83                             | 1,352.00                                         | 7.615                              |
| Pond 4 (IN)         | Post-<br>Development<br>2-year   | 2                          | 0.610                           | 714.00                | 10.43                             | (N/A)                                            | (N/A)                              |
| Pond 4<br>(OUT)     | Post-<br>Development<br>2-year   | 2                          | 0.598                           | 738.00                | 1.19                              | 1,351.21                                         | 0.255                              |
| Pond 4 (IN)         | Post-<br>Development<br>5-year   | 5                          | 0.841                           | 714.00                | 14.44                             | (N/A)                                            | (N/A)                              |
| Pond 4<br>(OUT)     | Post-<br>Development<br>5-year   | 5                          | 0.828                           | 726.00                | 4.96                              | 1,351.45                                         | 0.310                              |
| Pond 4 (IN)         | Post-<br>Development<br>10-year  | 10                         | 1.054                           | 714.00                | 18.10                             | (N/A)                                            | (N/A)                              |

Subsection: Master Network Summary

**Pond Summary**

| Label           | Scenario                         | Return<br>Event<br>(years) | Hydrograph<br>Volume<br>(ac-ft) | Time to Peak<br>(min) | Peak Flow<br>(ft <sup>3</sup> /s) | Maximum<br>Water<br>Surface<br>Elevation<br>(ft) | Maximum<br>Pond Storage<br>(ac-ft) |
|-----------------|----------------------------------|----------------------------|---------------------------------|-----------------------|-----------------------------------|--------------------------------------------------|------------------------------------|
| Pond 4<br>(OUT) | Post-<br>Development<br>10-year  | 10                         | 1.039                           | 723.00                | 9.21                              | 1,351.61                                         | 0.348                              |
| Pond 4 (IN)     | Post-<br>Development<br>25-year  | 25                         | 1.299                           | 714.00                | 22.28                             | (N/A)                                            | (N/A)                              |
| Pond 4<br>(OUT) | Post-<br>Development<br>25-year  | 25                         | 1.283                           | 723.00                | 13.54                             | 1,351.77                                         | 0.387                              |
| Pond 4 (IN)     | Post-<br>Development<br>100-year | 100                        | 1.772                           | 714.00                | 30.23                             | (N/A)                                            | (N/A)                              |
| Pond 4<br>(OUT) | Post-<br>Development<br>100-year | 100                        | 1.753                           | 720.00                | 21.15                             | 1,352.04                                         | 0.450                              |

Subsection: Volume Equations  
Label: Pond 1

Return Event: 100 years  
Storm Event: 2-year

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

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

|        |              |                                             |
|--------|--------------|---------------------------------------------|
| 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      |



Subsection: Elevation-Area Volume Curve  
 Label: Pond 2

Return Event: 100 years  
 Storm Event: 2-year

| Elevation<br>(ft) | Planimeter<br>(ft <sup>2</sup> ) | Area<br>(acres) | A1+A2+sqr<br>(A1*A2)<br>(acres) | Volume<br>(ac-ft) | Volume (Total)<br>(ac-ft) |
|-------------------|----------------------------------|-----------------|---------------------------------|-------------------|---------------------------|
| 1,344.00          | 0.0                              | 0.213           | 0.000                           | 0.000             | 0.000                     |
| 1,345.00          | 0.0                              | 0.396           | 0.899                           | 0.300             | 0.300                     |
| 1,346.00          | 0.0                              | 0.438           | 1.250                           | 0.417             | 0.717                     |
| 1,347.00          | 0.0                              | 0.481           | 1.378                           | 0.459             | 1.176                     |
| 1,348.00          | 0.0                              | 0.526           | 1.510                           | 0.503             | 1.679                     |
| 1,349.00          | 0.0                              | 0.573           | 1.648                           | 0.549             | 2.229                     |
| 1,350.00          | 0.0                              | 0.621           | 1.791                           | 0.597             | 2.825                     |
| 1,351.00          | 0.0                              | 0.671           | 1.938                           | 0.646             | 3.471                     |
| 1,352.00          | 0.0                              | 0.722           | 2.089                           | 0.696             | 4.168                     |
| 1,353.00          | 0.0                              | 0.775           | 2.245                           | 0.748             | 4.916                     |
| 1,354.00          | 0.0                              | 0.829           | 2.406                           | 0.802             | 5.718                     |

Subsection: Volume Equations  
Label: Pond 3

Return Event: 100 years  
Storm Event: 2-year

### **Pond Volume Equations**

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

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

|        |              |                                             |
|--------|--------------|---------------------------------------------|
| 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      |

Subsection: Elevation-Area Volume Curve

Label: Pond 4

Return Event: 100 years

Storm Event: 2-year

| Elevation<br>(ft) | Planimeter<br>(ft <sup>2</sup> ) | Area<br>(acres) | A1+A2+sqr<br>(A1*A2)<br>(acres) | Volume<br>(ac-ft) | Volume (Total)<br>(ac-ft) |
|-------------------|----------------------------------|-----------------|---------------------------------|-------------------|---------------------------|
| 1,349.25          | 0.0                              | 0.000           | 0.000                           | 0.000             | 0.000                     |
| 1,350.00          | 0.0                              | 0.134           | 0.134                           | 0.033             | 0.033                     |
| 1,351.00          | 0.0                              | 0.215           | 0.519                           | 0.173             | 0.206                     |
| 1,352.00          | 0.0                              | 0.251           | 0.698                           | 0.233             | 0.439                     |
| 1,353.00          | 0.0                              | 0.288           | 0.808                           | 0.269             | 0.708                     |
| 1,354.00          | 0.0                              | 0.327           | 0.922                           | 0.307             | 1.016                     |

Subsection: Outlet Input Data  
Label: P-A to P-D

Return Event: 100 years  
Storm Event: 2-year

| Requested Pond Water Surface Elevations |             |
|-----------------------------------------|-------------|
| Minimum (Headwater)                     | 1,344.00 ft |
| Increment (Headwater)                   | 0.50 ft     |
| Maximum (Headwater)                     | 1,354.00 ft |

**Outlet Connectivity**

| Structure Type     | Outlet ID   | Direction            | Outfall | E1<br>(ft) | E2<br>(ft) |
|--------------------|-------------|----------------------|---------|------------|------------|
| Culvert-Circular   | Culvert - 1 | Forward +<br>Reverse | TW      | 1,343.70   | 1,354.00   |
| Tailwater Settings | Tailwater   |                      |         | (N/A)      | (N/A)      |

Subsection: Outlet Input Data  
 Label: P-A to P-D

Return Event: 100 years  
 Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: Culvert - 1        |             |
| Structure Type: Culvert-Circular |             |
| Number of Barrels                | 3           |
| Diameter                         | 36.0 in     |
| Length                           | 104.00 ft   |
| Length (Computed Barrel)         | 104.00 ft   |
| Slope (Computed)                 | 0.005 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                                | 0.0260      |
| M                                | 1.0000      |
| C                                | 0.0347      |
| Y                                | 0.8100      |
| T1 ratio (HW/D)                  | 1.129       |
| T2 ratio (HW/D)                  | 1.363       |
| 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 | 1,347.09 ft | T1 Flow | 42.85 ft <sup>3</sup> /s |
| T2 Elevation | 1,347.79 ft | T2 Flow | 48.97 ft <sup>3</sup> /s |

Subsection: Outlet Input Data  
Label: P-Comp to P-A

Return Event: 100 years  
Storm Event: 2-year

---

Requested Pond Water Surface Elevations

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|                       |             |
|-----------------------|-------------|
| Minimum (Headwater)   | 1,344.00 ft |
| Increment (Headwater) | 0.50 ft     |
| Maximum (Headwater)   | 1,354.00 ft |

---

**Outlet Connectivity**

| Structure Type     | Outlet ID   | Direction            | Outfall | E1<br>(ft) | E2<br>(ft) |
|--------------------|-------------|----------------------|---------|------------|------------|
| Culvert-Circular   | Culvert - 1 | Forward +<br>Reverse | TW      | 1,349.53   | 1,354.00   |
| Tailwater Settings | Tailwater   |                      |         | (N/A)      | (N/A)      |

Subsection: Outlet Input Data  
 Label: P-Comp to P-A

Return Event: 100 years  
 Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: Culvert - 1        |             |
| Structure Type: Culvert-Circular |             |
| Number of Barrels                | 3           |
| Diameter                         | 36.0 in     |
| Length                           | 52.00 ft    |
| Length (Computed Barrel)         | 52.00 ft    |
| Slope (Computed)                 | 0.003 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                                | 0.0260      |
| M                                | 1.0000      |
| C                                | 0.0347      |
| Y                                | 0.8100      |
| T1 ratio (HW/D)                  | 1.130       |
| T2 ratio (HW/D)                  | 1.364       |
| 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 | 1,352.92 ft | T1 Flow | 42.85 ft <sup>3</sup> /s |
| T2 Elevation | 1,353.62 ft | T2 Flow | 48.97 ft <sup>3</sup> /s |

Subsection: Outlet Input Data  
Label: Pond Outfall A

Return Event: 100 years  
Storm Event: 2-year

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Requested Pond Water Surface Elevations

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|                       |             |
|-----------------------|-------------|
| Minimum (Headwater)   | 1,344.00 ft |
| Increment (Headwater) | 0.50 ft     |
| Maximum (Headwater)   | 1,354.00 ft |

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**Outlet Connectivity**

| Structure Type     | Outlet ID   | Direction            | Outfall  | E1<br>(ft) | E2<br>(ft) |
|--------------------|-------------|----------------------|----------|------------|------------|
| Orifice-Circular   | Orifice - 1 | Forward +<br>Reverse | 36" Pipe | 1,348.67   | 1,354.00   |
| Rectangular Weir   | Orifice - 2 | Forward +<br>Reverse | 36" Pipe | 1,350.17   | 1,354.00   |
| Culvert-Circular   | 36" Pipe    | Forward +<br>Reverse | TW       | 1,348.67   | 1,354.00   |
| Tailwater Settings | Tailwater   |                      |          | (N/A)      | (N/A)      |



Subsection: Outlet Input Data  
Label: Pond Outfall A

Return Event: 100 years  
Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: Orifice - 1        |             |
| Structure Type: Orifice-Circular |             |
| Number of Openings               | 1           |
| Elevation                        | 1,348.67 ft |
| Orifice Diameter                 | 12.0 in     |
| Orifice Coefficient              | 0.600       |

Subsection: Outlet Input Data  
 Label: Pond Outfall A

Return Event: 100 years  
 Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: 36" Pipe           |             |
| Structure Type: Culvert-Circular |             |
| Number of Barrels                | 1           |
| Diameter                         | 36.0 in     |
| Length                           | 46.00 ft    |
| Length (Computed Barrel)         | 46.01 ft    |
| Slope (Computed)                 | 0.021 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)         | 1.150  |
| T2 ratio (HW/D)         | 1.296  |
| 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 | 1,352.12 ft | T1 Flow | 42.85 ft <sup>3</sup> /s |
| T2 Elevation | 1,352.56 ft | T2 Flow | 48.97 ft <sup>3</sup> /s |

Subsection: Outlet Input Data  
Label: Pond Outfall A

Return Event: 100 years  
Storm Event: 2-year

---

|                                  |                             |
|----------------------------------|-----------------------------|
| Structure ID: Orifice - 2        |                             |
| Structure Type: Rectangular Weir |                             |
| <hr/>                            |                             |
| Number of Openings               | 1                           |
| Elevation                        | 1,350.17 ft                 |
| Weir Length                      | 20.00 ft                    |
| Weir Coefficient                 | 3.33 (ft <sup>0.5</sup> )/s |

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Subsection: Outlet Input Data  
Label: Pond Outfall C

Return Event: 100 years  
Storm Event: 2-year

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Requested Pond Water Surface Elevations

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|                       |             |
|-----------------------|-------------|
| Minimum (Headwater)   | 1,349.25 ft |
| Increment (Headwater) | 0.50 ft     |
| Maximum (Headwater)   | 1,354.00 ft |

---

**Outlet Connectivity**

| Structure Type     | Outlet ID   | Direction            | Outfall  | E1<br>(ft) | E2<br>(ft) |
|--------------------|-------------|----------------------|----------|------------|------------|
| Orifice-Circular   | Orifice - 1 | Forward +<br>Reverse | 36" Pipe | 1,349.25   | 1,354.00   |
| Rectangular Weir   | Orifice - 2 | Forward +<br>Reverse | 36" Pipe | 1,351.30   | 1,354.00   |
| Culvert-Circular   | 36" Pipe    | Forward +<br>Reverse | TW       | 1,349.25   | 1,354.00   |
| Tailwater Settings | Tailwater   |                      |          | (N/A)      | (N/A)      |

Subsection: Outlet Input Data  
Label: Pond Outfall C

Return Event: 100 years  
Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: Orifice - 1        |             |
| Structure Type: Orifice-Circular |             |
| Number of Openings               | 1           |
| Elevation                        | 1,349.25 ft |
| Orifice Diameter                 | 6.0 in      |
| Orifice Coefficient              | 0.600       |

Subsection: Outlet Input Data  
 Label: Pond Outfall C

Return Event: 100 years  
 Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: 36" Pipe           |             |
| Structure Type: Culvert-Circular |             |
| Number of Barrels                | 1           |
| Diameter                         | 36.0 in     |
| Length                           | 637.00 ft   |
| Length (Computed Barrel)         | 637.01 ft   |
| Slope (Computed)                 | 0.005 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)                  | 1.304       |
| 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 | 1,352.72 ft | T1 Flow | 42.85 ft <sup>3</sup> /s |
| T2 Elevation | 1,353.16 ft | T2 Flow | 48.97 ft <sup>3</sup> /s |

Subsection: Outlet Input Data  
Label: Pond Outfall C

Return Event: 100 years  
Storm Event: 2-year

|                                  |                             |
|----------------------------------|-----------------------------|
| Structure ID: Orifice - 2        |                             |
| Structure Type: Rectangular Weir |                             |
| Number of Openings               | 1                           |
| Elevation                        | 1,351.30 ft                 |
| Weir Length                      | 12.00 ft                    |
| Weir Coefficient                 | 3.33 (ft <sup>0.5</sup> )/s |

Subsection: Outlet Input Data  
Label: Pond Outfall D

Return Event: 100 years  
Storm Event: 2-year

---

Requested Pond Water Surface Elevations

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|                       |             |
|-----------------------|-------------|
| Minimum (Headwater)   | 1,342.00 ft |
| Increment (Headwater) | 0.50 ft     |
| Maximum (Headwater)   | 1,354.00 ft |

---

**Outlet Connectivity**

| Structure Type     | Outlet ID   | Direction            | Outfall  | E1<br>(ft) | E2<br>(ft) |
|--------------------|-------------|----------------------|----------|------------|------------|
| Orifice-Circular   | Orifice - 1 | Forward +<br>Reverse | 27" Pipe | 1,348.10   | 1,354.00   |
| Rectangular Weir   | Orifice - 2 | Forward +<br>Reverse | 27" Pipe | 1,350.75   | 1,354.00   |
| Culvert-Circular   | 27" Pipe    | Forward +<br>Reverse | TW       | 1,348.10   | 1,354.00   |
| Tailwater Settings | Tailwater   |                      |          | (N/A)      | (N/A)      |



Subsection: Outlet Input Data  
Label: Pond Outfall D

Return Event: 100 years  
Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: Orifice - 1        |             |
| Structure Type: Orifice-Circular |             |
| Number of Openings               | 1           |
| Elevation                        | 1,348.10 ft |
| Orifice Diameter                 | 18.0 in     |
| Orifice Coefficient              | 0.600       |

Subsection: Outlet Input Data  
 Label: Pond Outfall D

Return Event: 100 years  
 Storm Event: 2-year

|                                  |             |
|----------------------------------|-------------|
| Structure ID: 27" Pipe           |             |
| Structure Type: Culvert-Circular |             |
| Number of Barrels                | 1           |
| Diameter                         | 27.0 in     |
| Length                           | 356.82 ft   |
| Length (Computed Barrel)         | 356.82 ft   |
| Slope (Computed)                 | 0.003 ft/ft |
| Outlet Control Data              |             |
| Manning's n                      | 0.013       |
| Ke                               | 0.500       |
| Kb                               | 0.011       |
| 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 | 1,350.71 ft | T1 Flow | 20.87 ft <sup>3</sup> /s |
| T2 Elevation | 1,351.04 ft | T2 Flow | 23.86 ft <sup>3</sup> /s |

Subsection: Outlet Input Data  
Label: Pond Outfall D

Return Event: 100 years  
Storm Event: 2-year

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|                                  |                             |
|----------------------------------|-----------------------------|
| Structure ID: Orifice - 2        |                             |
| Structure Type: Rectangular Weir |                             |
| <hr/>                            |                             |
| Number of Openings               | 1                           |
| Elevation                        | 1,350.75 ft                 |
| Weir Length                      | 12.00 ft                    |
| Weir Coefficient                 | 3.33 (ft <sup>0.5</sup> )/s |

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Subsection: Interconnected Pond Routing Summary  
Label: Pond 1

Return Event: 2 years  
Storm Event: 2-year

| Infiltration                                                      |                       |                                      |                          |                                     |                    |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|-------------------------------------|--------------------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                                     |                    |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                                     |                    |
| Elevation (Starting Water Surface Computed)                       | 1,344.00              | ft                                   | Flow Tolerance (Minimum) | 0.000                               | ft <sup>3</sup> /s |
| Volume (Starting)                                                 | 0.000                 | ac-ft                                | Maximum Iterations       | 35                                  |                    |
| Outflow (Starting)                                                | 0.00                  | ft <sup>3</sup> /s                   | ICPM Time Step           | 3.00                                | min                |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                                     |                    |
|                                                                   | 867.00                | 1,351.09                             | 0.814                    |                                     |                    |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft <sup>3</sup> /s)  | Time to Peak<br>(min)    | Flow (Peak)<br>(ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                                   | 714.00                | 10.43                                | 0.23                     | 0.00                                |                    |
| Pond Outflow...                                                   | 738.00                | 1.19                                 | 0.00                     | 0.00                                |                    |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                                     |                    |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction                           |                    |
| Pond Inflow....                                                   | 0.610                 | Forward                              | 0.000                    | Reverse                             |                    |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 0.598                    | Forward                             |                    |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                                     |                    |
| Volume (Initial ICPM)                                             |                       | 0.000 ac-ft                          |                          |                                     |                    |
| Volume (Total In ICPM)                                            |                       | 2.747 ac-ft                          |                          |                                     |                    |
| Volume (Total Out ICPM)                                           |                       | 2.709 ac-ft                          |                          |                                     |                    |
| Volume (Ending)                                                   |                       | 0.038 ac-ft                          |                          |                                     |                    |
| Elevation (Ending)                                                |                       | 1,348.79 ft                          |                          |                                     |                    |
| Difference                                                        |                       | 0.000 ac-ft                          |                          |                                     |                    |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.0 %                                |                          |                                     |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 1

Return Event: 5 years  
Storm Event: 5-year

| Infiltration                                                |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| Initial Conditions                                          |                    |                                  | Calculation Tolerances         |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,344.00           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 861.00                           | 1,351.11                       | 0.822                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Forward Flow Peaks               |                                | Reverse Flow Peaks               |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 14.44                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 726.00             | 4.96                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Total Volume In                  |                                | Total Volume Out                 |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 0.841              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 0.828                          | Forward                          |                    |
| Mass Balance (ac-ft)                                        |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 3.319 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 3.278 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.040 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,348.82 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.002 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.1 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 1

Return Event: 10 years  
Storm Event: 10-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| Infiltration                                                |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| Initial Conditions                                          |                    |                                  | Calculation Tolerances         |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,344.00           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 861.00                           | 1,351.12                       | 0.828                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Forward Flow Peaks               |                                | Reverse Flow Peaks               |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 18.10                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 723.00             | 9.21                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Total Volume In Direction        |                                | Total Volume Out Direction       |                    |
|                                                             | Volume (ac-ft)     |                                  | Volume (ac-ft)                 |                                  |                    |
| Pond Inflow....                                             | 1.054              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 1.039                          | Forward                          |                    |
| Mass Balance (ac-ft)                                        |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 3.880 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 3.843 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.042 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,348.86 ft                      |                                |                                  |                    |
| Difference                                                  |                    | -0.004 ac-ft                     |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.1 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 1

Return Event: 25 years  
Storm Event: 25-year

| Infiltration                                                      |                       |                        |                                      |                        |       |
|-------------------------------------------------------------------|-----------------------|------------------------|--------------------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration        |                                      |                        |       |
| Initial Conditions                                                |                       |                        | Calculation Tolerances               |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,344.00              | ft                     | Flow Tolerance (Minimum)             | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 0.000                 | ac-ft                  | Maximum Iterations                   | 35                     |       |
| Outflow (Starting)                                                | 0.00                  | ft³/s                  | ICPM Time Step                       | 3.00                   | min   |
|                                                                   |                       | Time to Peak<br>(min)  | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)      |       |
|                                                                   |                       | 732.00                 | 1,351.22                             | 0.876                  |       |
|                                                                   |                       | Forward Flow Peaks     |                                      | Reverse Flow Peaks     |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s) | Time to Peak<br>(min)                | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 22.28                  | 0.23                                 | 0.00                   |       |
| Pond Outflow...                                                   | 723.00                | 13.54                  | 0.00                                 | 0.00                   |       |
|                                                                   |                       | Total Volume In        |                                      | Total Volume Out       |       |
|                                                                   | Volume<br>(ac-ft)     | Direction              | Volume<br>(ac-ft)                    | Direction              |       |
| Pond Inflow....                                                   | 1.299                 | Forward                | 0.000                                | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                | 1.283                                | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                        |                                      |                        |       |
| Volume (Initial ICPM)                                             |                       | 0.000 ac-ft            |                                      |                        |       |
| Volume (Total In ICPM)                                            |                       | 4.575 ac-ft            |                                      |                        |       |
| Volume (Total Out ICPM)                                           |                       | 4.532 ac-ft            |                                      |                        |       |
| Volume (Ending)                                                   |                       | 0.044 ac-ft            |                                      |                        |       |
| Elevation (Ending)                                                |                       | 1,348.92 ft            |                                      |                        |       |
| Difference                                                        |                       | -0.001 ac-ft           |                                      |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.0 %                  |                                      |                        |       |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 1

Return Event: 100 years  
Storm Event: 100-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,344.00              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 0.000                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.00                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 729.00                | 1,351.92                             | 1.217                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 30.23                                | 0.00                     | 0.00                   |       |
| Pond Outflow...                                                   | 720.00                | 21.15                                | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 1.772                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 1.753                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             |                       | 0.000 ac-ft                          |                          |                        |       |
| Volume (Total In ICPM)                                            |                       | 6.401 ac-ft                          |                          |                        |       |
| Volume (Total Out ICPM)                                           |                       | 6.348 ac-ft                          |                          |                        |       |
| Volume (Ending)                                                   |                       | 0.052 ac-ft                          |                          |                        |       |
| Elevation (Ending)                                                |                       | 1,349.01 ft                          |                          |                        |       |
| Difference                                                        |                       | 0.001 ac-ft                          |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.0 %                                |                          |                        |       |



Subsection: Interconnected Pond Routing Summary  
Label: Pond 2

Return Event: 2 years  
Storm Event: 2-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 1.734                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.02                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 879.00                | 1,351.10                             | 3.543                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 10.43                                | 0.23                     | 0.00                   |       |
| Pond Outflow...                                                   | 738.00                | 1.19                                 | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 0.610                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 0.598                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             |                       | 1.734 ac-ft                          |                          |                        |       |
| Volume (Total In ICPM)                                            |                       | 4.335 ac-ft                          |                          |                        |       |
| Volume (Total Out ICPM)                                           |                       | 3.771 ac-ft                          |                          |                        |       |
| Volume (Ending)                                                   |                       | 2.295 ac-ft                          |                          |                        |       |
| Elevation (Ending)                                                |                       | 1,349.11 ft                          |                          |                        |       |
| Difference                                                        |                       | 0.004 ac-ft                          |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.1 %                                |                          |                        |       |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 2

Return Event: 5 years  
Storm Event: 5-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 1.734                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.02                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 873.00                | 1,351.12                             | 3.557                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 14.44                                | 0.23                     | 0.00                   |       |
| Pond Outflow...                                                   | 726.00                | 4.96                                 | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 0.841                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 0.828                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             |                       | 1.734 ac-ft                          |                          |                        |       |
| Volume (Total In ICPM)                                            |                       | 5.399 ac-ft                          |                          |                        |       |
| Volume (Total Out ICPM)                                           |                       | 4.807 ac-ft                          |                          |                        |       |
| Volume (Ending)                                                   |                       | 2.323 ac-ft                          |                          |                        |       |
| Elevation (Ending)                                                |                       | 1,349.16 ft                          |                          |                        |       |
| Difference                                                        |                       | 0.004 ac-ft                          |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.1 %                                |                          |                        |       |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 2

Return Event: 10 years  
Storm Event: 10-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| <b>Infiltration</b>                                         |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| <b>Initial Conditions</b>                                   |                    |                                  | <b>Calculation Tolerances</b>  |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,348.10           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 1.734              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.02               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 873.00                           | 1,351.14                       | 3.570                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Forward Flow Peaks</b>        |                                | <b>Reverse Flow Peaks</b>        |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 18.10                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 723.00             | 9.21                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Total Volume In</b>           |                                | <b>Total Volume Out</b>          |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 1.054              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 1.039                          | Forward                          |                    |
| <b>Mass Balance (ac-ft)</b>                                 |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 1.734 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 6.408 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 5.793 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 2.347 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.20 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.002 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.0 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 2

Return Event: 25 years  
Storm Event: 25-year

| Infiltration                                                   |                       |                                      |                          |                                     |                    |
|----------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|-------------------------------------|--------------------|
| Infiltration Method<br>(Computed)                              |                       | No Infiltration                      |                          |                                     |                    |
| Initial Conditions                                             |                       |                                      | Calculation Tolerances   |                                     |                    |
| Elevation (Starting Water Surface Computed)                    | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                               | ft <sup>3</sup> /s |
| Volume (Starting)                                              | 1.734                 | ac-ft                                | Maximum Iterations       | 35                                  |                    |
| Outflow (Starting)                                             | 0.02                  | ft <sup>3</sup> /s                   | ICPM Time Step           | 3.00                                | min                |
|                                                                |                       |                                      |                          |                                     |                    |
|                                                                | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                                     |                    |
|                                                                | 726.00                | 1,351.42                             | 3.767                    |                                     |                    |
|                                                                |                       |                                      |                          |                                     |                    |
|                                                                | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                                     |                    |
|                                                                | Time to Peak<br>(min) | Flow (Peak)<br>(ft <sup>3</sup> /s)  | Time to Peak<br>(min)    | Flow (Peak)<br>(ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                                | 714.00                | 22.28                                | 0.23                     | 0.00                                |                    |
| Pond Outflow...                                                | 723.00                | 13.54                                | 0.00                     | 0.00                                |                    |
|                                                                |                       |                                      |                          |                                     |                    |
|                                                                | Total Volume In       |                                      | Total Volume Out         |                                     |                    |
|                                                                | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction                           |                    |
| Pond Inflow....                                                | 1.299                 | Forward                              | 0.000                    | Reverse                             |                    |
| Pond Outflow...                                                | 0.000                 | Reverse                              | 1.283                    | Forward                             |                    |
| Mass Balance (ac-ft)                                           |                       |                                      |                          |                                     |                    |
| Volume (Initial ICPM)                                          |                       | 1.734 ac-ft                          |                          |                                     |                    |
| Volume (Total In ICPM)                                         |                       | 7.600 ac-ft                          |                          |                                     |                    |
| Volume (Total Out ICPM)                                        |                       | 6.955 ac-ft                          |                          |                                     |                    |
| Volume (Ending)                                                |                       | 2.373 ac-ft                          |                          |                                     |                    |
| Elevation (Ending)                                             |                       | 1,349.24 ft                          |                          |                                     |                    |
| Difference                                                     |                       | 0.006 ac-ft                          |                          |                                     |                    |
| Percent of Inflow Volume<br>(Interconnected Pond Mass Balance) |                       | 0.1 %                                |                          |                                     |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 2

Return Event: 100 years  
Storm Event: 100-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 1.734                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.02                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 729.00                | 1,352.06                             | 4.210                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 30.23                                | 0.00                     | 0.00                   |       |
| Pond Outflow...                                                   | 720.00                | 21.15                                | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 1.772                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 1.753                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             |                       | 1.734 ac-ft                          |                          |                        |       |
| Volume (Total In ICPM)                                            |                       | 9.915 ac-ft                          |                          |                        |       |
| Volume (Total Out ICPM)                                           |                       | 9.223 ac-ft                          |                          |                        |       |
| Volume (Ending)                                                   |                       | 2.423 ac-ft                          |                          |                        |       |
| Elevation (Ending)                                                |                       | 1,349.32 ft                          |                          |                        |       |
| Difference                                                        |                       | 0.004 ac-ft                          |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.0 %                                |                          |                        |       |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 3

Return Event: 2 years  
Storm Event: 2-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| Infiltration                                                |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| Initial Conditions                                          |                    |                                  | Calculation Tolerances         |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,348.10           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 3.806              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 876.00                           | 1,351.10                       | 6.646                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Forward Flow Peaks               |                                | Reverse Flow Peaks               |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 10.43                            | 0.23                           | 0.00                             |                    |
| Pond Outflow....                                            | 738.00             | 1.19                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Total Volume In                  |                                | Total Volume Out                 |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 0.610              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow....                                            | 0.000              | Reverse                          | 0.598                          | Forward                          |                    |
| Mass Balance (ac-ft)                                        |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 3.806 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 4.836 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 3.956 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 4.683 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.10 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.003 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.1 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 3

Return Event: 5 years  
Storm Event: 5-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 3.806                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.00                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 873.00                | 1,351.12                             | 6.669                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 14.44                                | 0.23                     | 0.00                   |       |
| Pond Outflow...                                                   | 726.00                | 4.96                                 | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 0.841                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 0.828                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             |                       | 3.806 ac-ft                          |                          |                        |       |
| Volume (Total In ICPM)                                            |                       | 5.394 ac-ft                          |                          |                        |       |
| Volume (Total Out ICPM)                                           |                       | 4.469 ac-ft                          |                          |                        |       |
| Volume (Ending)                                                   |                       | 4.725 ac-ft                          |                          |                        |       |
| Elevation (Ending)                                                |                       | 1,349.15 ft                          |                          |                        |       |
| Difference                                                        |                       | 0.006 ac-ft                          |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.1 %                                |                          |                        |       |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 3

Return Event: 10 years  
Storm Event: 10-year

| Infiltration                                                      |                       |                                      |                          |                        |       |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|------------------------|-------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                        |       |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                        |       |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                  | ft³/s |
| Volume (Starting)                                                 | 3.806                 | ac-ft                                | Maximum Iterations       | 35                     |       |
| Outflow (Starting)                                                | 0.00                  | ft³/s                                | ICPM Time Step           | 3.00                   | min   |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                        |       |
|                                                                   | 870.00                | 1,351.14                             | 6.688                    |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                        |       |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft³/s)               | Time to Peak<br>(min)    | Flow (Peak)<br>(ft³/s) |       |
| Pond Inflow....                                                   | 714.00                | 18.10                                | 0.23                     | 0.00                   |       |
| Pond Outflow...                                                   | 723.00                | 9.21                                 | 0.00                     | 0.00                   |       |
|                                                                   |                       |                                      |                          |                        |       |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                        |       |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction              |       |
| Pond Inflow....                                                   | 1.054                 | Forward                              | 0.000                    | Reverse                |       |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 1.039                    | Forward                |       |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                        |       |
|                                                                   |                       |                                      |                          |                        |       |
| Volume (Initial ICPM)                                             | 3.806 ac-ft           |                                      |                          |                        |       |
| Volume (Total In ICPM)                                            | 6.046 ac-ft           |                                      |                          |                        |       |
| Volume (Total Out ICPM)                                           | 5.086 ac-ft           |                                      |                          |                        |       |
| Volume (Ending)                                                   | 4.763 ac-ft           |                                      |                          |                        |       |
| Elevation (Ending)                                                | 1,349.18 ft           |                                      |                          |                        |       |
| Difference                                                        | 0.004 ac-ft           |                                      |                          |                        |       |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) | 0.1 %                 |                                      |                          |                        |       |



Subsection: Interconnected Pond Routing Summary  
Label: Pond 3

Return Event: 25 years  
Storm Event: 25-year

| Infiltration                                                      |                       |                                      |                          |                                     |                    |
|-------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------------|-------------------------------------|--------------------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                      |                          |                                     |                    |
| Initial Conditions                                                |                       |                                      | Calculation Tolerances   |                                     |                    |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                   | Flow Tolerance (Minimum) | 0.000                               | ft <sup>3</sup> /s |
| Volume (Starting)                                                 | 3.806                 | ac-ft                                | Maximum Iterations       | 35                                  |                    |
| Outflow (Starting)                                                | 0.00                  | ft <sup>3</sup> /s                   | ICPM Time Step           | 3.00                                | min                |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)        |                                     |                    |
|                                                                   | 726.00                | 1,351.39                             | 6.957                    |                                     |                    |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Forward Flow Peaks    |                                      | Reverse Flow Peaks       |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft <sup>3</sup> /s)  | Time to Peak<br>(min)    | Flow (Peak)<br>(ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                                   | 714.00                | 22.28                                | 0.23                     | 0.00                                |                    |
| Pond Outflow...                                                   | 723.00                | 13.54                                | 0.00                     | 0.00                                |                    |
|                                                                   |                       |                                      |                          |                                     |                    |
|                                                                   | Total Volume In       |                                      | Total Volume Out         |                                     |                    |
|                                                                   | Volume<br>(ac-ft)     | Direction                            | Volume<br>(ac-ft)        | Direction                           |                    |
| Pond Inflow....                                                   | 1.299                 | Forward                              | 0.000                    | Reverse                             |                    |
| Pond Outflow...                                                   | 0.000                 | Reverse                              | 1.283                    | Forward                             |                    |
| Mass Balance (ac-ft)                                              |                       |                                      |                          |                                     |                    |
|                                                                   |                       |                                      |                          |                                     |                    |
| Volume (Initial ICPM)                                             | 3.806 ac-ft           |                                      |                          |                                     |                    |
| Volume (Total In ICPM)                                            | 6.892 ac-ft           |                                      |                          |                                     |                    |
| Volume (Total Out ICPM)                                           | 5.887 ac-ft           |                                      |                          |                                     |                    |
| Volume (Ending)                                                   | 4.804 ac-ft           |                                      |                          |                                     |                    |
| Elevation (Ending)                                                | 1,349.23 ft           |                                      |                          |                                     |                    |
| Difference                                                        | 0.007 ac-ft           |                                      |                          |                                     |                    |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) | 0.1 %                 |                                      |                          |                                     |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 3

Return Event: 100 years  
Storm Event: 100-year

| Infiltration                                                      |                       |                                     |                          |                                     |                    |
|-------------------------------------------------------------------|-----------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------|
| Infiltration Method<br>(Computed)                                 |                       | No Infiltration                     |                          |                                     |                    |
| Initial Conditions                                                |                       |                                     | Calculation Tolerances   |                                     |                    |
| Elevation (Starting Water Surface Computed)                       | 1,348.10              | ft                                  | Flow Tolerance (Minimum) | 0.000                               | ft <sup>3</sup> /s |
| Volume (Starting)                                                 | 3.806                 | ac-ft                               | Maximum Iterations       | 35                                  |                    |
| Outflow (Starting)                                                | 0.00                  | ft <sup>3</sup> /s                  | ICPM Time Step           | 3.00                                | min                |
|                                                                   |                       |                                     |                          |                                     |                    |
|                                                                   |                       | Maximum Storage                     |                          |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Elevation<br>(ft)                   | Volume<br>(ac-ft)        |                                     |                    |
|                                                                   | 726.00                | 1,352.00                            | 7.615                    |                                     |                    |
|                                                                   |                       |                                     |                          |                                     |                    |
| Forward Flow Peaks                                                |                       | Reverse Flow Peaks                  |                          |                                     |                    |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft <sup>3</sup> /s) | Time to Peak<br>(min)    | Flow (Peak)<br>(ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                                   | 714.00                | 30.23                               | 0.00                     | 0.00                                |                    |
| Pond Outflow...                                                   | 720.00                | 21.15                               | 0.00                     | 0.00                                |                    |
|                                                                   |                       |                                     |                          |                                     |                    |
| Total Volume In                                                   |                       | Total Volume Out                    |                          |                                     |                    |
|                                                                   | Volume<br>(ac-ft)     | Direction                           | Volume<br>(ac-ft)        | Direction                           |                    |
| Pond Inflow....                                                   | 1.772                 | Forward                             | 0.000                    | Reverse                             |                    |
| Pond Outflow...                                                   | 0.000                 | Reverse                             | 1.753                    | Forward                             |                    |
| Mass Balance (ac-ft)                                              |                       |                                     |                          |                                     |                    |
| Volume (Initial ICPM)                                             |                       | 3.806 ac-ft                         |                          |                                     |                    |
| Volume (Total In ICPM)                                            |                       | 8.394 ac-ft                         |                          |                                     |                    |
| Volume (Total Out ICPM)                                           |                       | 7.314 ac-ft                         |                          |                                     |                    |
| Volume (Ending)                                                   |                       | 4.879 ac-ft                         |                          |                                     |                    |
| Elevation (Ending)                                                |                       | 1,349.31 ft                         |                          |                                     |                    |
| Difference                                                        |                       | 0.007 ac-ft                         |                          |                                     |                    |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.1 %                               |                          |                                     |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 4

Return Event: 2 years  
Storm Event: 2-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| Infiltration                                                |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| Initial Conditions                                          |                    |                                  | Calculation Tolerances         |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,349.25           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 885.00                           | 1,351.21                       | 0.255                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Forward Flow Peaks               |                                | Reverse Flow Peaks               |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 10.43                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 738.00             | 1.19                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Total Volume In                  |                                | Total Volume Out                 |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 0.610              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 0.598                          | Forward                          |                    |
| Mass Balance (ac-ft)                                        |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 0.610 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 0.598 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.011 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.50 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.0 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 4

Return Event: 5 years  
Storm Event: 5-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| <b>Infiltration</b>                                         |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| <b>Initial Conditions</b>                                   |                    |                                  | <b>Calculation Tolerances</b>  |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,349.25           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 726.00                           | 1,351.45                       | 0.310                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Forward Flow Peaks</b>        |                                | <b>Reverse Flow Peaks</b>        |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 14.44                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 726.00             | 4.96                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Total Volume In</b>           |                                | <b>Total Volume Out</b>          |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 0.841              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 0.828                          | Forward                          |                    |
| <b>Mass Balance (ac-ft)</b>                                 |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 0.841 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 0.828 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.012 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.53 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.0 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 4

Return Event: 10 years  
Storm Event: 10-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| <b>Infiltration</b>                                         |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| <b>Initial Conditions</b>                                   |                    |                                  | <b>Calculation Tolerances</b>  |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,349.25           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 723.00                           | 1,351.61                       | 0.348                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Forward Flow Peaks</b>        |                                | <b>Reverse Flow Peaks</b>        |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 18.10                            | 0.23                           | 0.00                             |                    |
| Pond Outflow...                                             | 723.00             | 9.21                             | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | <b>Total Volume In</b>           |                                | <b>Total Volume Out</b>          |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 1.054              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 1.039                          | Forward                          |                    |
| <b>Mass Balance (ac-ft)</b>                                 |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 1.054 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 1.039 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.014 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.56 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.0 %                            |                                |                                  |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 4

Return Event: 25 years  
Storm Event: 25-year

| Infiltration                                                      |                       |                                     |                                      |                                     |                    |
|-------------------------------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------|
| Infiltration Method<br>(Computed)                                 | No Infiltration       |                                     |                                      |                                     |                    |
| Initial Conditions                                                |                       |                                     | Calculation Tolerances               |                                     |                    |
| Elevation (Starting Water Surface Computed)                       | 1,349.25              | ft                                  | Flow Tolerance (Minimum)             | 0.000                               | ft <sup>3</sup> /s |
| Volume (Starting)                                                 | 0.000                 | ac-ft                               | Maximum Iterations                   | 35                                  |                    |
| Outflow (Starting)                                                | 0.00                  | ft <sup>3</sup> /s                  | ICPM Time Step                       | 3.00                                | min                |
|                                                                   |                       |                                     |                                      |                                     |                    |
|                                                                   |                       | Time to Peak<br>(min)               | Maximum Storage<br>Elevation<br>(ft) | Volume<br>(ac-ft)                   |                    |
|                                                                   |                       | 723.00                              | 1,351.77                             | 0.387                               |                    |
|                                                                   |                       |                                     |                                      |                                     |                    |
|                                                                   |                       | Forward Flow Peaks                  |                                      | Reverse Flow Peaks                  |                    |
|                                                                   | Time to Peak<br>(min) | Flow (Peak)<br>(ft <sup>3</sup> /s) | Time to Peak<br>(min)                | Flow (Peak)<br>(ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                                   | 714.00                | 22.28                               | 0.23                                 | 0.00                                |                    |
| Pond Outflow...                                                   | 723.00                | 13.54                               | 0.00                                 | 0.00                                |                    |
|                                                                   |                       |                                     |                                      |                                     |                    |
|                                                                   |                       | Total Volume In                     |                                      | Total Volume Out                    |                    |
|                                                                   | Volume<br>(ac-ft)     | Direction                           | Volume<br>(ac-ft)                    | Direction                           |                    |
| Pond Inflow....                                                   | 1.299                 | Forward                             | 0.000                                | Reverse                             |                    |
| Pond Outflow...                                                   | 0.000                 | Reverse                             | 1.283                                | Forward                             |                    |
| Mass Balance (ac-ft)                                              |                       |                                     |                                      |                                     |                    |
| Volume (Initial ICPM)                                             |                       | 0.000 ac-ft                         |                                      |                                     |                    |
| Volume (Total In ICPM)                                            |                       | 1.299 ac-ft                         |                                      |                                     |                    |
| Volume (Total Out ICPM)                                           |                       | 1.283 ac-ft                         |                                      |                                     |                    |
| Volume (Ending)                                                   |                       | 0.015 ac-ft                         |                                      |                                     |                    |
| Elevation (Ending)                                                |                       | 1,349.59 ft                         |                                      |                                     |                    |
| Difference                                                        |                       | 0.000 ac-ft                         |                                      |                                     |                    |
| Percent of Inflow Volume<br>(Interconnected Pond Mass<br>Balance) |                       | 0.0 %                               |                                      |                                     |                    |

Subsection: Interconnected Pond Routing Summary  
Label: Pond 4

Return Event: 100 years  
Storm Event: 100-year

|                                                             |                    |                                  |                                |                                  |                    |
|-------------------------------------------------------------|--------------------|----------------------------------|--------------------------------|----------------------------------|--------------------|
| Infiltration                                                |                    |                                  |                                |                                  |                    |
| Infiltration Method (Computed)                              | No Infiltration    |                                  |                                |                                  |                    |
| Initial Conditions                                          |                    |                                  | Calculation Tolerances         |                                  |                    |
| Elevation (Starting Water Surface Computed)                 | 1,349.25           | ft                               | Flow Tolerance (Minimum)       | 0.000                            | ft <sup>3</sup> /s |
| Volume (Starting)                                           | 0.000              | ac-ft                            | Maximum Iterations             | 35                               |                    |
| Outflow (Starting)                                          | 0.00               | ft <sup>3</sup> /s               | ICPM Time Step                 | 3.00                             | min                |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Time to Peak (min)               | Maximum Storage Elevation (ft) | Volume (ac-ft)                   |                    |
|                                                             |                    | 720.00                           | 1,352.04                       | 0.450                            |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Forward Flow Peaks               |                                | Reverse Flow Peaks               |                    |
|                                                             | Time to Peak (min) | Flow (Peak) (ft <sup>3</sup> /s) | Time to Peak (min)             | Flow (Peak) (ft <sup>3</sup> /s) |                    |
| Pond Inflow....                                             | 714.00             | 30.23                            | 0.00                           | 0.00                             |                    |
| Pond Outflow...                                             | 720.00             | 21.15                            | 0.00                           | 0.00                             |                    |
|                                                             |                    |                                  |                                |                                  |                    |
|                                                             |                    | Total Volume In                  |                                | Total Volume Out                 |                    |
|                                                             | Volume (ac-ft)     | Direction                        | Volume (ac-ft)                 | Direction                        |                    |
| Pond Inflow....                                             | 1.772              | Forward                          | 0.000                          | Reverse                          |                    |
| Pond Outflow...                                             | 0.000              | Reverse                          | 1.753                          | Forward                          |                    |
| Mass Balance (ac-ft)                                        |                    |                                  |                                |                                  |                    |
| Volume (Initial ICPM)                                       |                    | 0.000 ac-ft                      |                                |                                  |                    |
| Volume (Total In ICPM)                                      |                    | 1.772 ac-ft                      |                                |                                  |                    |
| Volume (Total Out ICPM)                                     |                    | 1.753 ac-ft                      |                                |                                  |                    |
| Volume (Ending)                                             |                    | 0.019 ac-ft                      |                                |                                  |                    |
| Elevation (Ending)                                          |                    | 1,349.67 ft                      |                                |                                  |                    |
| Difference                                                  |                    | 0.001 ac-ft                      |                                |                                  |                    |
| Percent of Inflow Volume (Interconnected Pond Mass Balance) |                    | 0.0 %                            |                                |                                  |                    |

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