



Stormwater Management Plan

Eleven Mile Creek Basin Stormwater Pond at
Hwy 97 and Hwy 297A

August 2023

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Stormwater Management Plan

Eleven Mile Creek Basin Stormwater Pond at
Hwy 97 and Hwy 297A

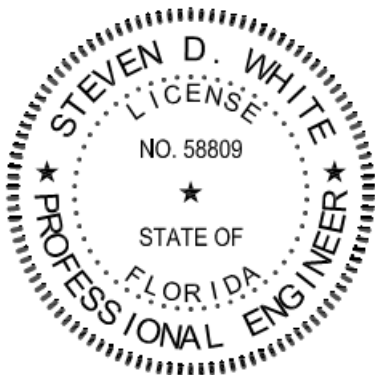
August 2023

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PAGES 1-13, APPENDICES A, B, C, D, E, F, AND H.



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Executive summary

The proposed Eleven Mile Creek Basin Stormwater Pond at Hwy 97 and Hwy 297A project is a single-phase project involving the expansion of an existing dry retention pond which serves the Glenmoor Trail subdivision. The existing dry detention pond was designed to accommodate the 25-year 1 and 2 hour storm events under a now obsolete Escambia County stormwater management requirement. In an effort to decrease peak stages in the adjacent segment of Eleven Mile Creek, Escambia County has identified this pond as a candidate for expansion to bring the facility into substantial compliance with its current stormwater management criteria and to further attenuate peak discharge rates from the facility into Eleven Mile Creek.

The proposed expansion of the Glenmoor Trail subdivision pond should allow the pond to better attenuate stormwater discharge rates to Eleven Mile Creek in all storm events and will bring the facility into closer alignment with current Escambia County stormwater management requirements. The project layout has been designed to avoid impacts to jurisdictional wetlands on-site. The project overall should provide a net improvement in both stormwater quality (treatment) and quantity (discharge rates) when compared to the current conditions. The manner in which this is being achieved should have no adverse impacts to surrounding or downstream areas. The project should qualify for permitting through the State of Florida Environmental Resource Permitting (ERP) program as a retrofit project.

1 Stormwater Narrative

This narrative is intended to provide facts and information related to the Eleven Mile Creek Basin Stormwater Pond Hwy 97 and Hwy 297A project. More specifically, this information is intended to demonstrate compliance with State of Florida Environmental Resource Permit requirements for qualification of a retrofit project pursuant to Chapter 62-330.451, Florida Administrative Code (F.A.C.).

1.1 DESCRIPTION

The proposed Eleven Mile Creek Basin Stormwater Pond at Hwy 97 and Hwy 297A project is a single-phase project involving the expansion of an existing dry retention pond which serves the Glenmoor Trail subdivision. The existing dry detention pond was designed to accommodate the 25-year 1 and 2 hour storm events under a now obsolete Escambia County stormwater management requirement. In an effort to decrease peak stages in the adjacent segment of Eleven Mile Creek, Escambia County has identified this pond as a candidate for expansion to bring the facility into substantial compliance with its current stormwater management criteria and to further attenuate peak discharge rates from the facility into Eleven Mile Creek.

1.2 PROJECT LOCATION

The project is in the Cantonment area of Escambia County, Florida and specifically located on Parcels 361N31430000010 and 361N314401001003 immediately adjacent to the westerly right of way of Hwy 297A and just north of Hwy 97, in section 36, township 1N, Range 31W. The entire project site lies within Flood Zone X, areas of minimal flood hazard, as depicted in the National Flood Insurance Program, Flood Insurance Rate Map (FIRM) Panels 12033C0290G dated September 29, 2006. It should be noted that FEMA has issued preliminary FIRM maps for Escambia County and, while the preliminary maps have not yet been adopted, the preliminary FIRM maps for this area indicates the site to remain within the same Zone X designation with a proposed reduction in the adjacent Eleven mile Creek BFE's. Refer to **Figures 1.1 and 1.2** for Currently Effective Flood Insurance Rate Map Firmette and clipped portion of preliminary Firm Map.

Figure 1.1: Currently Effective Flood Insurance Rate Map Firmette

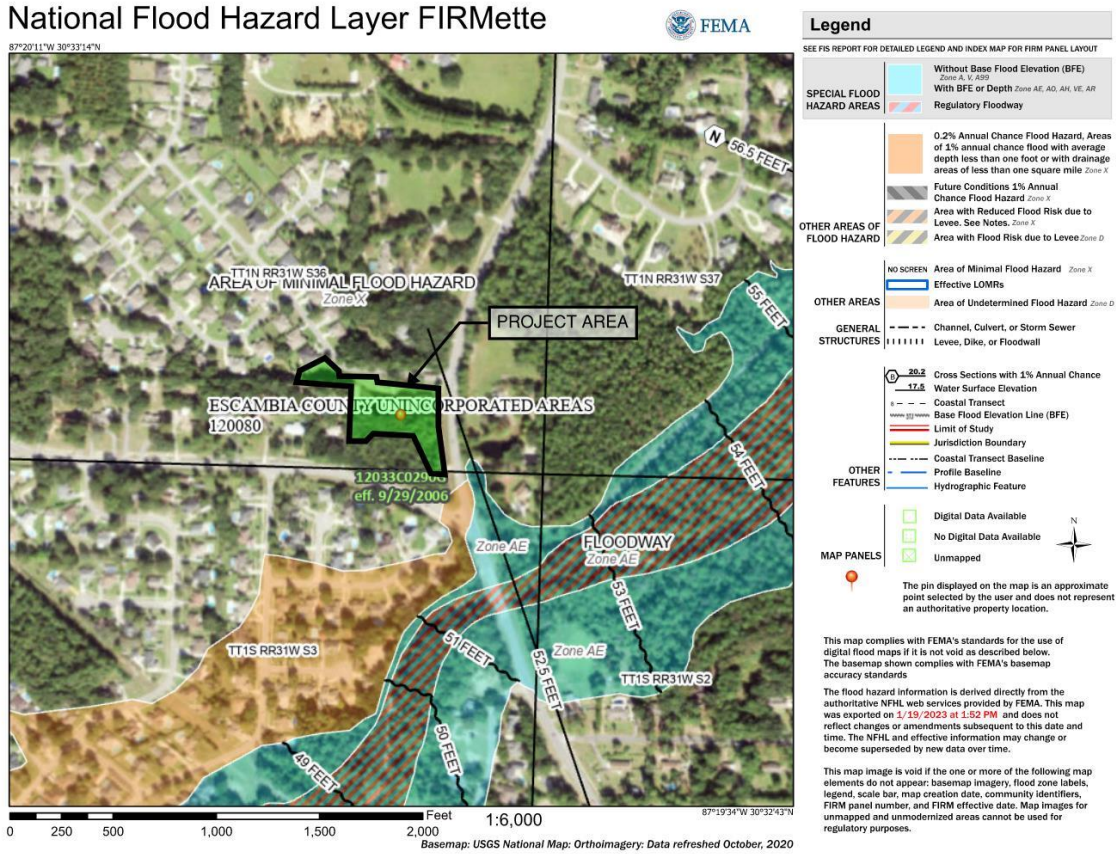
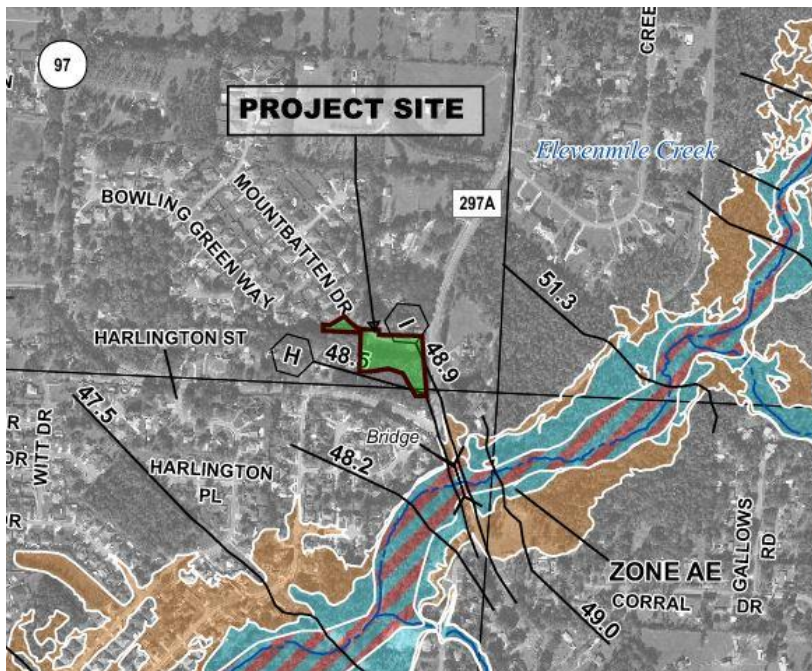


Figure 1.2: Preliminary Flood Insurance Rate Map



1.3 PROJECT PURPOSE

The Eleven Mile Creek Basin stormwater master plan, previously prepared by Mott MacDonald identified numerous potential sites within the Eleven Mile Creek basin for installation of regional stormwater management facilities in order to reduce peak stages within Eleven Mile Creek during the 100-year design storm. Since the time of the completion of that master plan, several of the potential Regional Stormwater Pond sites have been lost to development. Escambia County previously tasked Mott MacDonald with performing a desktop review of the Regional Stormwater Pond sites identified in the Eleven Mile Creek Basin master plan to determine their current feasibility and to identify alternate pond site locations in order to offset some of the potential regional stormwater pond capacity lost as a result of development. The project site is one of the sites identified as an alternative site for a stormwater management facility intended to attenuate stormwater discharges to Eleven Mile Creek during storm events. The overall project parcel identified in the desktop review, was purchased by Farm Hill Utilities for the installation of a ground storage tank, however the northerly extents of the parcel were to remain undeveloped. Escambia County subsequently tasked Mott MacDonald with completing a feasibility study on using only the northerly extents of the parcel to attenuate stormwater discharge rates.

The feasibility study concluded that routing of stormwater flows from either of the swale systems along Hwy 97 or Hwy 297A is impractical given the physical constraints. More specifically, the useable capacity of any stormwater pond on the site to which flows were routed from either swale system would be limited by the elevations of the swale system. In fact, the swale systems would act to limit capacity in two manners. The effective top of the stormwater pond would need to be at or below the bottom of the swale system as it would represent a potential discharge point given stages in the pond higher than the swale bottom. Secondly, due to poorly drainage underlying soils, the bottom will require a pond bottom filter in order to recover. As such, the pond bottom elevation must be higher than the lowest point along the swale to which such a filter could be discharged. These two competing constraints act together to limit the available pond depth to only a couple of feet at best and completely eliminates the possibility of storage at worst. As such, the study concluded that the only practical means to use the project parcel for stormwater management purposes is to simply expand the existing Glenmoor Trail stormwater pond and to attenuate flows from the Glenmoor Trail subdivision to greater extent than currently provided.

1.4 Peak Runoff Rates Prior to Construction of Glenmoor Trail

Available documentation for the original stormwater design lacked a basin delineation exhibit but indicated that the overall basin being served by the stormwater pond to be 44.7 acres of on-site area and 16.0 acres of off-site contribution, for a total contributing basin of 60.7 acres. However, evaluation of the overall basin being served by the stormwater pond using the 2017 Northwest Florida Water Management District 2017 LIDAR data, and the Glenmoor Trail Subdivision construction plans resulted in an overall basin area of 75.56 acres, when considering the planned stormwater pond Expansion.

Considering advancements in stormwater modelling software/methodologies which have occurred since the original design, a re-analysis of the existing stormwater pond performance was undertaken through the development of an ICPR4 model. As ICPR4 modelling uses the NRCS (formerly SCS) methodology, as opposed to the modified rational methodology used for the original design, a review of the stormwater modelling characteristics was undertaken using available LIDAR topographic data for the area and the original Glenmoor Trail Subdivision construction plans.

The ICPR4 model was used to evaluate the pre-development discharge rates from the 75.56 acre contributing watershed, using the National Resource Conservation Service (formerly SCS)

methodology. Historic aerial photography from 1999 indicates that that the overall contributing basin was predominantly wooded prior to the construction of Glenmoor Trail. For the purposes of estimating peak runoff rates prior to the construction of the subdivision, it was assumed conservatively assumed that the overall contributing basin was wooded. The NRCS websoil survey was then utilized to determine the percentages of the various hydrologic soils groups within the overall basin in order to calculate the overall runoff curve number (CN) for the original basin. This review resulted in an CN of 56 for the original site conditions. It is difficult to evaluate the original conditions time of concentration, since reliable/detailed topographic information is not readily available. Therefore, the time of concentration used in the Glenmoor Trail subdivision original design calculations (41 minutes) was held. The estimated existing conditions peak runoff rates for the 25-year and 100-year design storms for various durations are summarized in Table 1.1

Table 1.1: Peak Runoff Rates Prior to Construction of Glenmoor Trail Subdivision

| DESIGN STORM | DURATION (HRS) | PEAK RUNOFF RATE (CFS) |
|--------------|----------------|------------------------|
| 25-YR | 1 | 50.62 |
| 25-YR | 2 | 61.26 |
| 25-YR | 4 | 73.2 |
| 25-YR | 8 | 93.35 |
| 25-YR | 24 | 44.14 |
| 100-YR | 1 | 87.68 |
| 100-YR | 2 | 106.95 |
| 100-YR | 4 | 117.53 |
| 100-YR | 8 | 147.31 |
| 100-YR | 24 | 63.68 |

Refer to **Appendix A** for Original Conditions ICPR4 Inputs and Routing Results.

1.5 Current Conditions

As indicated previously. Review of the overall watershed which contributes flow to the stormwater pond of 75.56 acres, as opposed to the original Glenmoor Trail subdivision design calculations purported 60.70 acre watershed. Holding the runoff coefficients , 'C' values, used in the original Glenmoor Trail Subdivision stormwater calculation of 0.48 for the 44.7 acre subdivision area 0.30 for the offsite contributing area provides an overall weighted runoff coefficient for the 75.56 overall watershed of:

$$C = [(0.48)*(44.7 \text{ ac})+(0.30)*(30.86 \text{ ac})]/(75.56 \text{ ac.}) = 0.41$$

As the overall C value is less than 0.50 the required treatment volume is one-half inch of runoff over the contributing area or:

$$VT = (75.56 \text{ ac})*(43,560 \text{ ft}^2/\text{ac})*(0.5 \text{ in})*(1 \text{ ft}/12\text{in}) = \mathbf{137,142 \text{ ft}^3}$$

Topographic survey for the project was used to develop the stage storage relationship of the stormwater pond as it currently exists and as detailed in the below table.

Table 1.2: Glenmoor Trail Dry Retention Pond Current Stage-Storage Relationship

| ELEVATION | AREA (FT ²) | INCREMENTAL VOLUME (FT ³) | CUMULATIVE VOLUME (FT ³) | DESCRIPTION |
|-----------|-------------------------|---------------------------------------|--------------------------------------|--|
| 59.00 | 0 | 0.00 | 0.00 | POND BOTTOM |
| 60.00 | 6,167 | 3,084 | 3,084 | |
| 61.00 | 25,676 | 15,922 | 19,005 | “Silt Trap” Volume = 16,517 CF, Elev. = 60.84 |
| 62.00 | 35,639 | 30,658 | 49,663 | |
| 63.00 | 40,541 | 38,091 | 87,753 | |
| | | | | Elev. 63.75 – “begin discharge” volume = 120,041 CF -16,517 CF silt trap = 103,524 CF < FDEP Treatment Volume = 137,142 CF |
| 64.00 | 45,561 | 43,051 | 130,804 | |
| 65.00 | 50,708 | 48,135 | 178,938 | |
| 66.00 | 55,978 | 53,343 | 232,281 | |
| 66.30 | 57,622 | 17,0470 | 249,321 | Top of Pond |

From the above table, it can be seen that the Glenmoor Trail stormwater pond top elevation of 66.30 is lower than the original design top of pond elevation of 67.00, by 0.70 feet. Further, it should be noted that the initial discharge elevation of 63.75 is 0.18 feet lower than the initial discharge elevation of 63.95 as indicated in the original Glenmoor Trail stormwater management plan. Using linear interpolation the estimated pond volume at the initial discharge elevation of 63.75 is estimated to be 120,041 ft³ and the volume below the top elevation of the silt trap, assumed to be at an elevation of 60.84 (top of 8” cleanout at pond bottom filter), is estimated as 16,517 ft³. Subtracting the volume of the silt trap from the volume below the initial treatment volume results in a provided treatment volume capacity of 103,524 ft³ which is less than the calculated required treatment volume of 137,142 ft³. It is also noted that the currently provided treatment volume is actually less than the required treatment volume calculated in the original Glenmoor Trail Subdivision design, of 110,171 ft³. Refer to **Appendix B** for Original Glenmoor Trail Subdivision Stormwater Management Plan.

The overall basin was then subdivided based upon the topography and the stormwater infrastructure/inlets indicated in the subdivision construction plans. Independent basin characteristic calculations were then performed, in order to develop an ICPR4 model which includes the subdivision stormwater infrastructure in order to more accurately reflect stormwater flow travel times from the various sub-basins to the stormwater pond. See **Appendix C** for Current Conditions Basin Delineations and Supporting Documents.

The ICPR model was subsequently used to simulate the 25-year and 100-year design storm events in order to estimate the peak stages within the stormwater pond and the associated peak discharge rates, under the currently existing conditions. The results of this evaluation are reflected in Table 1.3

Table 1.3: Current Conditions Stormwater Pond Peak Stage and Runoff Rates

| DESIGN STORM | DURATION (HRS) | PEAK POND STAGE (FT, NAVD 88) | PEAK RUNOFF RATE (CFS) |
|--------------|----------------|-------------------------------|------------------------|
| 25-YR | 1 | 65.11 | 31.02 |
| 25-YR | 2 | 65.93 | 57.96 |
| 25-YR | 4 | 66.56 | 87.47 |
| 25-YR | 8 | 66.70 | 110.01 |
| 25-YR | 24 | 65.77 | 52.88 |
| 100-YR | 1 | 66.10 | 63.27 |
| 100-YR | 2 | 66.73 | 118.9 |
| 100-YR | 4 | 66.79 | 151.31 |
| 100-YR | 8 | 66.83 | 181.91 |
| 100-YR | 24 | 66.33 | 73.26 |

It should be noted, that the original Glenmoor Trail Subdivision evaluated only the 25-year 1- and 2-hour storm events. Evaluation of the current conditions suggest that the Glenmoor Trail subdivision stormwater pond top elevation of 66.30' is exceeded in the 25-year 4-hour, 25-year 8-hour, 100-year 2-hour, 100-year 4-hour, 100-year, 8-hour and 100-year 24-hour events. Refer to **Appendix D** for Current Conditions ICPR4 Inputs and Results.

1.6 Proposed Conditions

The Eleven Mile Creek Basin Stormwater Pond at Hwy 97 and Hwy 297A project proposes only to expand the existing Glenmoor Trail stormwater pond and to raise the top of pond elevation to 67.00 in accordance with the original Glenmoor Trail Subdivision design. As such, the proposed conditions model is identical to the existing conditions model, with the exception of the stormwater pond storage capacity, the size of the sub-basin contributing flows overland to the stormwater pond, and the pond bottom filter stage discharge relationship. Refer to **Appendix E** for Proposed Conditions Basin Delineations and Supporting Documents. Table 1.4 details the proposed stage storage relationship for the stormwater pond.

Table 1.4: Glenmoor Trail Dry Retention Pond Proposed Stage-Storage Relationship

| ELEVATION | AREA (FT ²) | INCREMENTAL VOLUME (FT ³) | CUMULATIVE VOLUME (FT ³) | DESCRIPTION |
|-----------|-------------------------|---------------------------------------|--------------------------------------|--|
| 59.00 | 36,668 | 0 | 0 | Pond Bottom |
| 60.00 | 40,232 | 38,450 | 38,450 | |
| 61.00 | 44,028 | 42,130 | 80,580 | |
| 62.00 | 56,866 | 50,447 | 131,027 | |
| 62.25 | 58,607 | 14,434 | 145,461 | Initial Discharge 18" Dia. Orifice. Treatment Volume CF |
| 63.00 | 62,366 | 45,365 | 190,826 | |
| 64.00 | 67,963 | 65,164 | 255,990 | |
| 65.00 | 73,665 | 70,814 | 326,804 | |
| 66.00 | 79,475 | 76,570 | 403,374 | |
| 66.30 | 81,786 | 24,189 | 427,564 | Top of Pond |
| 67.00 | 86,726 | 58,979 | 486,543 | Elev. 66.92 – Peak Stage 100-year 8-hour storm |

As indicated in Table 1.4, the proposed pond expansion would provide a total of 145,461 ft³ of treatment volume which exceeds the required treatment volume of 137,142 ft³, and represents a 40.51% increase over the current pond conditions.

A proposed conditions scenario was created in the ICPR4 model reflecting the increased stormwater pond sub-basin size and the design storms simulated to predict peak stage within the stormwater pond and the associated peak discharge rates. The model results for the proposed conditions is summarized in Table 1.5.

Table 1.5: Proposed Conditions Stormwater Pond Peak Stage and Runoff Rates

| DESIGN STORM | DURATION (HRS) | PEAK POND STAGE (FT, NAVD 88) | PEAK RUNOFF RATE (CFS) |
|--------------|----------------|-------------------------------|------------------------|
| 25-YR | 1 | 63.43 | 11.53 |
| 25-YR | 2 | 64.78 | 37.68 |
| 25-YR | 4 | 65.60 | 65.59 |
| 25-YR | 8 | 65.88 | 74.52 |
| 25-YR | 24 | 65.19 | 49.41 |
| 100-YR | 1 | 64.62 | 32.92 |
| 100-YR | 2 | 65.86 | 74.37 |
| 100-YR | 4 | 66.73 | 116.97 |
| 100-YR | 8 | 66.92 | 131.62 |
| 100-YR | 24 | 65.77 | 70.06 |

Refer to **Appendix F** for Proposed Conditions ICPR4 Inputs and Results.

1.7 Attenuation

Table 1.6 provides a comparison of predicted peak discharge rates for the original, current and proposed conditions:

Table 1.6: Peak Discharge Rate Comparison

| DESIGN STORM | DURATION (HRS) | ORIGINAL CONDITIONS PEAK DISCHARGE RATE (CFS) | EXISTING CONDITIONS PEAK DISCHARGE RATE (CFS) | PROPOSED CONDITIONS PEAK DISCHARGE RATE (CFS) | PROPOSED BAM FILTER CONDITIONS PEAK DISCHARGE RATE (CFS) |
|--------------|----------------|---|---|---|--|
| 25-YR | 1 | 50.62 | 31.02 | 11.53 | 11.59 |
| 25-YR | 2 | 61.26 | 57.96 | 37.68 | 37.66 |
| 25-YR | 4 | 73.2 | 87.47 | 65.59 | 65.57 |
| 25-YR | 8 | 93.35 | 110.01 | 74.52 | 74.51 |
| 25-YR | 24 | 44.14 | 52.88 | 49.41 | 49.38 |
| 100-YR | 1 | 87.68 | 63.27 | 32.92 | 32.95 |
| 100-YR | 2 | 106.95 | 118.9 | 74.37 | 74.37 |
| 100-YR | 4 | 117.53 | 151.31 | 116.97 | 116.94 |
| 100-YR | 8 | 147.31 | 181.91 | 131.62 | 131.56 |
| 100-YR | 24 | 63.68 | 73.26 | 70.06 | 70.06 |

The bolded numbers in the table 1.6 above, indicate peak discharge rates in excess of the corresponding peak discharge rate in the original condition. As can be seen, in the existing conditions, the stormwater pond fails to attenuate in each condition other than the 25-year 1-hour and 2-hour events, and the 100-year 1-hour event. Under the proposed conditions, it is anticipated that the pond would attenuate flows to less than the original conditions peak discharge rates in all but the 25-year 24-hour, and 100-year 24 hour events. However, the proposed conditions is anticipated to attenuate peak discharge rates from current conditions anywhere from 4.37% to 62.83% across all storm events considered. Table 1.7 summarizes the percent decrease in peak discharge rates from the current conditions to the proposed conditions for each storm event.

Table 1.7: Decrease in Peak Discharge Rates

| DESIGN STORM | DURATION (HRS) | EXISTING CONDITIONS PEAK DISCHARGE RATE (CFS) | PROPOSED CONDITIONS PEAK DISCHARGE RATE (CFS) | DECREASE IN PEAK DISCHARGE RATE (CFS) | DECREASE IN PEAK DISCHARGE RATE (%) |
|--------------|----------------|---|---|---------------------------------------|-------------------------------------|
| 25-YR | 1 | 31.02 | 11.53 | 19.49 | 62.83% |
| 25-YR | 2 | 57.96 | 37.68 | 20.28 | 34.99% |
| 25-YR | 4 | 87.47 | 65.59 | 21.88 | 25.01% |
| 25-YR | 8 | 110.01 | 74.52 | 35.49 | 32.26% |
| 25-YR | 24 | 52.88 | 49.41 | 3.47 | 6.56% |
| 100-YR | 1 | 63.27 | 32.92 | 30.35 | 47.97% |
| 100-YR | 2 | 118.9 | 74.37 | 44.53 | 37.45% |
| 100-YR | 4 | 151.31 | 116.97 | 34.34 | 22.70% |
| 100-YR | 8 | 181.91 | 131.62 | 50.29 | 27.65% |
| 100-YR | 24 | 73.26 | 70.06 | 3.20 | 4.37% |

As indicated above, the pond expansion should provide a net positive benefit in terms of discharge rates to Eleven Mile Creek in all storm events.

1.8 Pond Recovery

The geotechnical exploration performed for the project included advancing two Standard Penetration Test (SPT) borings to a depth of 26' within the area of the proposed pond expansion. These borings encountered mostly poorly drainage silty fine sand at the planned pond bottom elevation and they very poorly draining clayey sand and sandy clay to a depth of approximately 23 feet. The geotechnical report concludes that the pond site presents poor conditions for stormwater recovery and that the proposed facility will need to rely upon a pond bottom filter to recover, as it does in the current conditions. Refer to **Appendix G** for Report of Geotechnical Exploration. The original design calculations and Glenmoor Trail subdivision specified the use of a 50' x 40' pond bottom filter for the purposes of pond volume recovery. The current pond expansion will require the removal of the existing pond bottom filter and specifies the construction of a new 50' x 60' pond bottom filter or a 60' x 72' Biosorption Activated Media filter.

Pond volume recovery requirements are stipulated by both the State of Florida Environmental Resource Permitting (ERP) rules and the Escambia County Land Development Code. Table 1.8 summarizes the recovery requirements for each regulatory agency.

Table 1.8: Stormwater Management Criteria

| STORMWATER MANAGEMENT REQUIREMENT | ESCAMBIA COUNTY | STATE OF FLORIDA ENVIRONMENTAL RESOURCE PERMIT |
|--|--|--|
| Treatment | First one-half inch of runoff | For on-line systems - Treatment of the runoff from the first one-inch of rainfall over the contributing basin with a minimum of one-half inch of runoff retained. |
| Attenuation | For retrofit projects, no increase in current peak discharge rates and no reduction in provided treatment capacity | For retrofit projects, no increase in current peak discharge rates and no reduction in provided treatment capacity. |
| Recovery | Treatment Volume – 72 hours Full pond Volume with Positive Outfall – 7 days Full pond Volume without Positive Outfall – 10 days | Treatment Volume – 72 hours with a 2:1 safety factor (i.e., recovery within 36 hours) |

Note: Bolded requirements represent controlling criteria

From the table above, it can be seen that the pond must meet two separate recovery criteria. The proposed pond bottom filter was designed using Darcy’s Law for flow through porous media. The calculations indicate that the pond bottom filter will allow for the recovery of the required treatment volume within 12.00 hours, while the full pond volume is recovered in 49.06 hours, both well below the regulatory requirements. Please refer to **Appendix H** for Pond Bottom Filter Design and Recovery Calculations.

1.9 Enhanced Stormwater Treatment Options

At the request of the County, various enhanced stormwater treatment options were reviewed for feasibility with respect to incorporation into the design plan. Additional treatment options considered were:

- Curb Inlet Filters
- Hydrodynamic Separators
- Use of biosorption activated media (BAM)

After review of each enhanced treatment option, it was concluded that the use of biosorption activated media offered the greatest potential stormwater treatment enhancement without significant increase in maintenance costs/points for the County.

1.9.1 Biosorption Activated Media (BAM)

Biosorption Activated Media (BAM), such as Bold and Gold, are engineered filtration media developed to remove total nitrogen (TN), total phosphorous (TP), total suspended solids (TSS) and pathogens from polluted water. BAM maintains an anaerobic environment to activate the biological reaction that is needed to remove nitrogen and the adsorption process to remove phosphorus.

In his study “Pollutant Removal Efficiencies for Typical Stormwater Management Systems in Florida”, Harvey H. Harper, Ph.D., PE suggests “...there is little evidence to indicate that filter systems improve the operational performance of stormwater management systems. In fact, much of the research indicates that filter systems may actually degrade the pollutant removal effectiveness of either wet detention or dry detention systems.” This publication includes a “comparison of treatment efficiencies for Typical Stormwater Management Systems used in Florida” table, in which Harper assigns removal efficiencies of 0% for TN, TP and BOD for dry detention with standard filtration. If this contention is accurate, the use of BAM in the planned pond bottom filter

may provide a benefit with respect to nutrient removal efficiencies for the stormwater pond.

In the most recent evaluation cycle FDEP delisted the receiving segment of Eleven Mile Creek (Water Body ID (WBID) 489) from the State 303(d) list (impaired water bodies) for a number of parameters including nutrients. However, it is our understanding that Escambia County continues with monitoring of Eleven Mile Creek for a number of parameters including nutrients.

WBID 489 is still listed by FDEP as a Water Not Attaining Standards (WNAS) with the listed parameter being *Escherichia coli* (*E. coli*). The WNAS listing indicates that “This waterbody will remain in category 4e (ongoing restoration activities) on the Study list because there are ongoing restoration activities identified in the Eleven Mile Creek Bacteria Pollution Control Plan that will address with the bacteria impairment. This parameter will remain on the 303(d) List.” In two case studies for Fecal Coliform Removal using Bold & Gold, from the Environmental Conservation Solutions website the average removal or *E. coli* removal was 77.6%. Specifics regarding these case studies can be found at [Fecal Coliform Solutions in the Carolinas \(ecs-water.com\)](https://www.ecs-water.com). However, it is not currently known if the existing pond discharge is a significant source of *E. Coli* loading to Eleven Mile Creek.

Considering the additional costs (increased material costs, increased filter dimensions to provide similar throughput), Escambia has opted to include the use of BAM media in the proposed pond bottom filter as an alternate. Final determination regarding the installation of a standard pond bottom filter or one equipped with BAM will be made once bids have been received and actual cost differentials and available construction funding are available.

1.10 Conclusion

The proposed expansion of the Glenmore Trail subdivision pond should allow the pond to better attenuate stormwater discharge rates to Eleven Mile Creek in all storm events and will bring the facility into closer alignment with current Escambia County stormwater management requirements. The project layout has been designed to avoid impacts to jurisdictional wetlands on-site. The project overall should provide a net improvement in both stormwater quality (treatment) and quantity (discharge rates) when compared to the current conditions. The manner in which this is being achieved should have no adverse impacts to surrounding or downstream areas. The project should qualify for permitting through the State of Florida Environmental Resource Permitting (ERP) program as a retrofit project.

A. Original Conditions ICPR4 Inputs and Results

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restorator

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

| | |
|-----------------------------------|---------|
| SUBBASIN NO..... | Overall |
| NODE NO..... | Outfall |
| UNIT HYDROGRAPH..... | 484 |
| AREA (Ac.)..... | 75.560 |
| CURVE NUMBER (CN)..... | 56 |
| DCIA (%)..... | 0.0 |
| CURVE NUMBER (CN); DCIA ADJ..... | NA |
| TIME OF CONCENTRATION (Min.)..... | 0 |

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

| | |
|------------------------------|-----|
| DCIA AREA (AC)..... | 0.0 |
| NON-DCIA IMP. AREA (AC)..... | 0.0 |

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|--------|----------------|----|---|---|----------------------|-----|-----|-----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 100.00 | 21 | 70 | 9 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 0.00 | 0 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -POND..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 100 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 21 | 70 | 9 | 0 | COMPOSITE CN..... 56 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.000 | 0.180 | 0 | 0.0 | 0 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.030 | TOTAL TIME OF CONCENTRATION..... | | | 0 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

Simple Basin: OVERALL

Scenario: ORIGINAL CONDITIONS
 Node: OUTFALL
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 41.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 75.5600 ac
 Curve Number: 56.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Node: OUTFALL

Scenario: ORIGINAL CONDITIONS
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 0.00 ft
 Warning Stage: 0.10 ft
 Boundary Stage:

| Year | Month | Day | Hour | Stage [ft] |
|------|-------|-----|----------|------------|
| 0 | 0 | 0 | 0.0000 | 0.00 |
| 0 | 0 | 0 | 999.0000 | 0.00 |

Comment:

Simulation: 025YR-001HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:11:44 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|-----------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:
OF Region Rain Opt: Global

| | |
|---------------------------------|---------------------------------|
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-1 |
| Edge Length Option: Automatic | Rainfall Amount: 3.70 in |
| | Storm Duration: 1.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| | |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-002HR
 Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:11:46 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

| Resources | Lookup Tables |
|-------------------------|------------------------|
| Rainfall Folder: | Boundary Stage Set: |
| Reference ET Folder: | Extern Hydrograph Set: |
| Unit Hydrograph Folder: | Curve Number Set: |
| | Green-Ampt Set: |
| | Vertical Layers Set: |
| | Impervious Set: |
| | Roughness Set: |
| | Crop Coef Set: |
| | Fillable Porosity Set: |
| | Conductivity Set: |
| | Leakage Set: |

Tolerances & Options

| | |
|---------------------------------|---------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight Fact: 0.5 dec | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Opt: Global |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-2 |
| Edge Length Option: Automatic | Rainfall Amount: 4.80 in |
| | Storm Duration: 2.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-004HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:11:47 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |

End Time: 0 0 0 12.0000

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global

| | |
|---------------------------------|---------------------------------|
| Max dZ: 1.0000 ft | Opt: |
| Link Optimizer Tol: 0.0001 ft | OF Region Rain Opt: Global |
| Edge Length Option: Automatic | Rainfall Name: ~FDOT-4 |
| | Rainfall Amount: 5.92 in |
| | Storm Duration: 4.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-008HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:11:49 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 24.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph
 Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

| | | | |
|---------------------|-----------|-----------------------|------------|
| Time Marching: | SAOR | IA Recovery Time: | 24.0000 hr |
| Max Iterations: | 6 | ET for Manual Basins: | False |
| Over-Relax Weight | 0.5 dec | | |
| Fact: | | | |
| dZ Tolerance: | 0.0010 ft | Smp/Man Basin Rain | Global |
| | | Opt: | |
| Max dZ: | 1.0000 ft | OF Region Rain Opt: | Global |
| Link Optimizer Tol: | 0.0001 ft | Rainfall Name: | ~FDOT-8 |
| | | Rainfall Amount: | 7.44 in |
| Edge Length Option: | Automatic | Storm Duration: | 8.0000 hr |
| | | | |
| Dflt Damping (2D): | 0.0050 ft | Dflt Damping (1D): | 0.0050 ft |
| Min Node Srf Area | 100 ft2 | Min Node Srf Area | 100 ft2 |
| (2D): | | (1D): | |
| Energy Switch (2D): | Energy | Energy Switch (1D): | Energy |

Comment:

Simulation: 025YR-024HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:11:53 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

| | | | |
|---------------------|-----------|---------------------|------------|
| Fact: | | Smp/Man Basin Rain | Global |
| dZ Tolerance: | 0.0010 ft | Opt: | |
| Max dZ: | 1.0000 ft | OF Region Rain Opt: | Global |
| Link Optimizer Tol: | 0.0001 ft | Rainfall Name: | ~FDOT-24 |
| Edge Length Option: | Automatic | Rainfall Amount: | 10.80 in |
| | | Storm Duration: | 24.0000 hr |
| Dflt Damping (2D): | 0.0050 ft | Dflt Damping (1D): | 0.0050 ft |
| Min Node Srf Area | 100 ft2 | Min Node Srf Area | 100 ft2 |
| (2D): | | (1D): | |
| Energy Switch (2D): | Energy | Energy Switch (1D): | Energy |

Comment:

Simulation: 100YR-001HR
 Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:12:01 PM
 Program Version: ICPR4 4.07.08

| General | | | | |
|-----------------------|-----------------|--------------------------|-------------------|-----------|
| Run Mode: | Normal | | | |
| | Year | Month | Day | Hour [hr] |
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |
| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] | |
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 | |
| Max Calculation Time: | | 30.0000 | | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| | | | | |

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|---------------------------------|---------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight Fact: 0.5 dec | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Opt: Global |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-1 |
| Edge Length Option: Automatic | Rainfall Amount: 4.50 in |
| | Storm Duration: 1.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

| |
|----------|
| Comment: |
|----------|

Simulation: 100YR-002HR

Scenario: ORIGINAL CONDITIONS
Run Date/Time: 1/23/2023 1:12:02 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-2 |
| | Rainfall Amount: 6.00 in |
| Edge Length Option: Automatic | Storm Duration: 2.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-004HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:12:05 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 12.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-4 |
| | Rainfall Amount: 7.52 in |
| Edge Length Option: Automatic | Storm Duration: 4.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-008HR

Scenario: ORIGINAL CONDITIONS
Run Date/Time: 1/23/2023 1:12:08 PM

Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 24.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-8 |
| | Rainfall Amount: 9.44 in |
| Edge Length Option: Automatic | Storm Duration: 8.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-024HR

Scenario: ORIGINAL CONDITIONS
 Run Date/Time: 1/23/2023 1:12:14 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-----------------------|-----------------|-----------------------------|-------------------|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |
| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] | |
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 | |
| Max Calculation Time: | | 30.0000 | | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
|------|-------|-----|-----------|----------------------|

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area 100 ft2
(2D):
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-24
Rainfall Amount: 13.44 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

B. Original Glenmoor Trail Subdivision Stormwater Management Plan

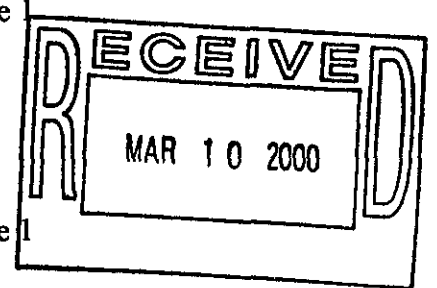
GLENMOOR TRAIL
Pensacola, Florida

Stormwater Management Plan
DSL Project # 990180

David S. Lamar
18 pages
2/22/2000

OWNER : JBL Properties, Inc.
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DEVELOPER: JBL Properties, Inc.
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PROJECT REPRESENTATIVE: Mr. David S. Lamar, P.E.
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DATE: January 17, 2000 (REVISED February 22, 2000)

A. STORMWATER NARRATIVE

1. Project Description. The proposed project will provide infrastructure and subdivision improvements supporting an eighty-nine (89) lot single family residential subdivision on approximately forty-five (45) acres. The average lot will measure approximately 90' x 160'. The property consists of ~ 43 acres zoned V-2. The remaining two acres are zoned V-1. The project will be constructed in two phases. Phase 1 will provide the main entrance to C.R. 297A, the stormwater retention facilities for the entire project, and fifty-two (52) lots. Phase 2 will complete the streets, extend the water and sewer and complete the remaining 37 lots. The subdivision streets will be constructed to Escambia County standards and will consist of 20 feet of asphalt framed by 2.5 foot wide concrete curb & gutter each side.
2. Upland Acreage Considerations. Approximately 23 acres of land lies upland, to the northwest, of the proposed Glenmoor Trail development. Runoff from this property will affect the overall stormwater management plan for Glenmoor Trail. In an effort to account for this off-site runoff and to plan for a means of handling possible future concentrated flows from this property, the design of Glenmoor



Trail extends the storm sewer collection system to the property boundary. The system will be sized to carry the projected pre-development flow from approximately 16 of the 23 acres. The remaining 7 acres can be drained to the existing swale on the east side of C.R. 97. The projected pre-development flows from this 16 acres will be in the range of 20 to 25 cfs.

The effect of this 16 acres of off-site acreage was considered using two scenarios. The first scenario addressed the runoff that would come to Glenmoor Trail from the 16 acres in its pre-developed state. This flow would be sheet flow and shallow concentrated flow and would begin coming to Glenmoor based on the time of concentration and would be unimpeded by retention facilities. The assumed rate of flow was considered to be the pre-development flow from the 25-Yr Storm. The arrival time at the retention pond for this flow was considered to lag behind the on-site Glenmoor Trail flow by 0.5 hours.

The second scenario assumed that the 16 acres would be developed and that pre-development flow would be point discharged to Glenmoor after having been collected in a retention/detention facility constructed on the off-site parcel. The stormwater design for the developed parcel would send metered runoff into the Glenmoor trail storm sewer system after collecting the FDEP first half-inch for the 16-acre site. Even when discharge begins, it will be less than the allowable pre-development discharge for some additional period of time. This would, in effect, increase the lag time for the inflow hydrograph from the off-site development. An inlet and pipe has been designed and will be constructed as part of Phase 2 of Glenmoor Trail to pick up this expected point source.

Due to the increased lag time for the second scenario, the first scenario (16-acres undeveloped) presents the more severe condition for the design of the Glenmoor Trail pond. The pond sizing calculations which follow use this assumption. The allowable post-development discharge for the Glenmoor Trail pond includes the estimated pre-development discharge from these 16 off-site acres (22 cfs).

3. Pre-Development Site and Hydrologic Conditions. The 44.7 acre Glenmoor Trail site slopes moderately from the northwest to the southeast. Based on the topographic survey, the elevation of the site ranges from 117 feet NGVD to 64 feet NGVD. The majority of the site is heavily wooded but there are farm roads which have been cut through the wooded areas providing access to most of the site. Other areas are heavily covered with underbrush. The pre-development runoff coefficient is assumed to be 0.30 for both the on-site and off-site acreage.
4. Post Development Site and Hydrologic Conditions. The subdivision streets will intercept runoff from the lots. The curb & gutter system will route the flow to a series of inlets where it will be piped to the retention pond. Areas at the rear of lots will drain through a series of perimeter swales to ditch bottom inlets at strategic locations in order to minimize the post development flow of runoff onto adjacent downstream parcels. The FDEP first half-inch for both the 44.7 on-site

acres and the 16 off-site acres will be collected before off-site discharge begins. Based on the soil boring information provided by Pensacola Testing Laboratories, the native soil will not provide natural percolation for the treatment of the FDEP first half-inch of runoff. For FDEP permitting purposes, a 2080 SF sand filter and perforated ADS under drain system will be installed to provide the required treatment. The pond design incorporates a silt trap to extend the life of the filter system.

The retention/detention pond is designed to attenuate the excess volume during the critical duration – 25 YR storm. The 2-Year return frequency storm was the critical storm for this analysis. The pond discharges into the existing paved ditch that runs along the west side of C.R. 297-A. A portion of the existing ditch has been eroded away. The construction plans show how we propose to restore the missing ditch paving and integrate the discharge from the new pond into the existing county system.

5. Stormwater Pond Design. The FDOT method was used to estimate the size the retention/detention ponds contemplated for this subdivision. The critical duration, 25-Year storm was used to size the drainage facilities for this project. Composite hydrographs from both 1-hour and 2-hour return frequency storms were used in the analysis. The rationale and calculations used to determine retention/detention pond size, pond drawdown times, required collection system pipe sizes & slopes follow:

B. CALCULATIONS

1. Pre-Development Discharge:

Given: Slope, $s = 3.0\%$,
 Distance Traveled, $d = 1700'$
 Pre-Development Runoff Coefficient, $c_{pre} = 0.30$
 Area = 44.7 acres

$$T_c = \frac{1.8 (1.1 - c_{pre}) D^{1/2}}{S^{1/3}} = \frac{(1.8) (1.1 - 0.30) (1700^{1/2})}{3.0^{1/3}}$$

$T_c = 41$ min; $I_{41} = 4.6$ in/hr. (from FDOT Zone 1 chart – 25 Year Storm)

Pre-Development Discharge, $Q_{pre} = c_{pre} I_{41} A = (0.30)(4.6)(44.7) = 61.7$ cfs

NOTE: The pre-development discharge attributable to the 16 off-site acres was calculated using the same c_{pre} and I .

Hydrograph for 2-Hour storm $I_{25} = 2.4$ inches/hour $P_{total} = 4.8$ inches
 $C_{post} = 0.48$ On-Site Acreage, $A = 44.7$ acres

| <u>Time</u> | <u>I/P_{total}</u> | <u>I (in/hr)</u> | <u>Q(cfs) = c I A</u> |
|-------------|----------------------------|------------------|--------------------------|
| 0.2 | 0.5 | 2.4 | 51.5 = (0.48)(2.4)(44.7) |
| 0.4 | 0.75 | 3.6 | 77.2 |
| 0.6 | 1.0 | 4.8 | 103.0 |
| 0.8 | 1.25 | 6.0 | 128.7 |
| 1.0 | 0.5 | 2.4 | 51.5 |
| 1.2 | 0.3 | 1.44 | 30.9 |
| 1.4 | 0.25 | 1.20 | 25.7 |
| 1.6 | 0.2 | 0.96 | 20.6 |
| 1.8 | 0.15 | 0.72 | 15.4 |
| 2.0 | 0.0 | 0.00 | 0.0 |

4. FDOT Pond Design Calculations – Off-Site (undeveloped) In-Flow Hydrographs

These calculations assume the in-flow hydrograph is from a 25-YR return frequency storm.

Hydrograph for 1-Hour storm $I_{25} = 3.7$ inches/hour $P_{total} = 3.7$ inches
 $C_{pre} = 0.30$ Off-Site Acreage, $A = 16.0$ acres

| <u>Time</u> | <u>I/P_{total}</u> | <u>I (in/hr)</u> | <u>Q(cfs) = c I A</u> |
|-------------|----------------------------|------------------|--------------------------|
| 0.1 | 0.2 | 0.74 | 3.6 = (0.30)(0.74)(16.0) |
| 0.2 | 0.6 | 2.22 | 10.7 |
| 0.3 | 1.2 | 4.44 | 21.3 |
| 0.4 | 2.1 | 7.77 | 37.3 |
| 0.5 | 2.15 | 7.96 | 38.2 |
| 0.6 | 1.8 | 6.66 | 32.0 |
| 0.7 | 1.1 | 4.07 | 19.5 |
| 0.8 | 0.7 | 2.59 | 12.4 |
| 0.9 | 0.1 | 0.37 | 1.8 |
| 1.0 | 0.0 | 0.00 | 0.0 |

Composite In-Flow Hydrograph for 25-Year 2-Hour storm

| <u>Time*</u> | <u>In-Flow (On-Site)</u> | + | <u>In-Flow (Off-Site)</u> | <u>Total In-Flow (cfs)</u> |
|--------------|------------------------------|---|-------------------------------|--------------------------------|
| 0.0 | 0.0 | | 0.0 | 0.0 |
| 0.1 | 25.8 | | 0.0 | 25.8 |
| 0.2 | 51.5 | | 0.0 | 51.5 |
| 0.3 | 64.4 | | 0.0 | 64.4 |
| 0.4 | 77.2 | | 0.0 | 77.2 |
| 0.5 | 90.1 | | 5.8 | 95.9 |
| 0.6 | 103.0 | | 11.5 | 114.5 |
| 0.7 | 115.9 | | 14.4 | 130.3 |
| 0.8 | 128.7 | | 17.3 | 146.0 |
| 0.9 | 90.1 | | 20.2 | 110.3 |
| 1.0 | 51.5 | | 23.0 | 74.5 |
| 1.1 | 41.2 | | 25.9 | 67.1 |
| 1.2 | 30.9 | | 28.8 | 59.7 |
| 1.3 | 28.3 | | 20.2 | 48.5 |
| 1.4 | 25.7 | | 11.5 | 37.2 |
| 1.5 | 23.2 | | 9.2 | 32.4 |
| 1.6 | 20.6 | | 6.9 | 27.5 |
| 1.7 | 18.0 | | 6.4 | 24.4 |
| 1.8 | 15.4 | | 5.8 | 21.2 |
| 1.9 | 7.7 | | 5.2 | 12.9 |
| 2.0 | 0.0 | | 4.6 | 4.6 |
| 2.1 | 0.0 | | 4.1 | 4.1 |
| 2.2 | 0.0 | | 3.5 | 3.5 |
| 2.3 | 0.0 | | 1.8 | 1.8 |
| 2.4 | 0.0 | | 0.0 | 0.0 |

* The 0.1 hour increments shown for the 2-hour storm in-flow hydrographs were graphically determined from a plot of the 0.2 hour increment data.

5. Stage vs. Storage (Retention/Detention Pond)

| <u>Elevation (Feet)</u> | <u>Area (SF)</u> | <u>Incremental Volume (CF)</u> | <u>Cumulative Volume (CF)</u> | <u>Remarks</u> |
|-----------------------------|----------------------|------------------------------------|-----------------------------------|--|
| 60.00 | 14,382 | -- | -- | |
| 60.50 | 15,389 | 7,443 | 7,443 | "Silt Trap" Volume = 14,059 CF |
| 61.00 | 24,282 | 8,501 | 15,944 | ~~~~ Elev = 60.92 - lowest level of FDEP Treatment Volume |
| 61.50 | 25,496 | 12,445 | 28,389 | |
| 62.00 | 38,245 | 13,115 | 41,504 | |
| 62.50 | 41,093 | 19,835 | 61,339 | |
| 63.00 | 43,670 | 21,191 | 82,530 | |
| 63.50 | 46,555 | 22,556 | 105,086 | |
| 64.00 | 49,165 | 23,930 | 129,016 | ~~~~ Elev = 63.90 - "Begin Discharge" > FDEP Treatment Volume = 14,059 CF + 110,171 CF |
| 64.50 | 52,101 | 25,317 | 154,333 | |
| 65.00 | 54,758 | 26,715 | 181,048 | |
| 65.50 | 58,293 | 28,263 | 209,311 | |
| 66.00 | 61,491 | 29,946 | 239,257 | |
| 66.50 | 64,895 | 31,597 | 270,854 | ~~~~ Max Elev = 66.28 25-Year Storm Volume = 256,951 CF |
| 67.00 | 67,975 | 33,218 | 304,072 | |

6. Flood Routing Analysis

| <u>Elevation</u> | <u>2S/Δt(storage)</u> | | <u>"Discharge" (cfs)</u> |
|------------------|------------------------|---|--------------------------|
| 60.5 | 2(7,443)/(0.1)(3600) | = | 41 |
| 61.0 | 2(15,944)/(0.1)(3600) | = | 89 |
| 61.5 | 2(28,389)/(0.1)(3600) | = | 158 |
| 62.0 | 2(41,504)/(0.1)(3600) | = | 231 |
| 62.5 | 2(61,339)/(0.1)(3600) | = | 341 |
| 63.0 | 2(82,530)/(0.1)(3600) | = | 459 |
| 63.5 | 2(105,086)/(0.1)(3600) | = | 584 |
| 64.0 | 2(129,016)/(0.1)(3600) | = | 717 |
| 64.5 | 2(154,333)/(0.1)(3600) | = | 857 |
| 65.0 | 2(181,048)/(0.1)(3600) | = | 1006 |
| 65.5 | 2(209,311)/(0.1)(3600) | = | 1163 |
| 66.0 | 2(239,257)/(0.1)(3600) | = | 1329 |
| 66.5 | 2(270,854)/(0.1)(3600) | = | 1505 |
| 67.0 | 2(304,072)/(0.1)(3600) | = | 1689 |

7. Stage vs. Discharge - Discharge Structure

After collecting an amount (130,924 CF) which exceeds the required FDEP first half-inch of runoff (110,171 CF), stormwater will "pop off" to the county system through a weir constructed as part of the concrete discharge structure. The weir geometry is set so that the discharge through the weir does not exceed the maximum allowable discharge (83.7 cfs) during a 25-Yr Storm. The expected flow through the weir is calculated using the equation:

$$Q = 3.3 (L - .2H) (H)^{3/2}$$

For weir width, L = 6.50 feet, the following stage versus discharge curve can be developed. This assumes that discharge through the weir begins at elevation 63.90.

| <u>Elevation</u> | <u>Discharge(cfs)</u> |
|------------------|-----------------------|
| 63.90 | 0.0 |
| 64.00 | 0.7 |
| 64.50 | 9.8 |
| 65.00 | 23.9 |
| 65.50 | 41.3 |
| 66.00 | 61.6 |
| 66.40 | 78.3 |

8. Flood Routing Tabulation (composite hydrograph for 1-hour, 25-Year Storm)

| 1 time (hrs) | 2 inflow (cfs) | 3 I1 + I2 | 4 $\frac{2S1 + O1 - 2O1}{\Delta t}$ | 5 $\frac{2S2 + O2}{\Delta t}$ | 6 Stage (ft) | 7 Outflow (cfs) |
|--------------------|----------------------|--------------|--|----------------------------------|--------------------|-----------------------|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 60.00 | 0.0 |
| 0.1 | 15.9 | 15.9 | 0.0 | 15.9 | 60.00 | 0.0 |
| 0.2 | 47.6 | 63.5 | 15.9 | 79.4 | 60.90 | 0.0 |
| 0.3 | 95.3 | 142.9 | 79.4 | 222.3 | 61.95 | 0.0 |
| 0.4 | 166.7 | 262.0 | 222.3 | 484.3 | 63.10 | 0.0 |
| 0.5 | 174.4 | 341.1 | 484.3 | 825.4 | 64.40 | 8.0 |
| 0.6 | 153.6 | 328.0 | 809.4 | 1137.4 | 65.45 | 40.0 |
| 0.7 | 108.6 | 262.2 | 1057.4 | 1319.6 | 65.95 | 60.0 |
| 0.8 | 92.9 | 201.5 | 1199.6 | 1401.1 | 66.20 | 69.0 |
| 0.9 | 46.1 | 139.0 | 1263.1 | 1402.1 | 66.20 | 69.0 Max Stage |
| 1.0 | 32.0 | 78.1 | 1264.1 | 1342.2 | 66.05 | 62.0 |
| 1.1 | 19.5 | 51.5 | 1218.2 | 1269.7 | 65.85 | 55.0 |
| 1.2 | 12.4 | 31.9 | 1159.7 | 1191.6 | 65.60 | 45.0 |
| 1.3 | 1.8 | 14.2 | 1101.6 | 1115.8 | 65.35 | 36.0 |
| 1.4 | 0.0 | 1.8 | 1043.8 | 1045.6 | 65.15 | 29.0 |

9. Flood Routing Tabulation (composite hydrograph for 2-hour, 25-Year Storm)

| 1 time (hrs) | 2 inflow (cfs) | 3 I1 + I2 | 4 $\frac{2S1 + O1 - 2O1}{\Delta t}$ | 5 $\frac{2S2 + O2}{\Delta t}$ | 6 Stage (ft) | 7 Outflow (cfs) |
|--------------------|----------------------|--------------|--|----------------------------------|--------------------|-----------------------|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 60.00 | 0.0 |
| 0.1 | 25.8 | 25.8 | 0.0 | 25.8 | 60.00 | 0.0 |
| 0.2 | 51.5 | 77.3 | 25.8 | 103.1 | 61.10 | 0.0 |
| 0.3 | 64.4 | 115.9 | 103.1 | 219.0 | 61.92 | 0.0 |
| 0.4 | 77.2 | 141.6 | 219.0 | 360.6 | 62.50 | 0.0 |
| 0.5 | 95.9 | 173.1 | 360.6 | 533.7 | 63.30 | 0.0 |
| 0.6 | 114.5 | 210.4 | 533.7 | 744.1 | 64.12 | 3.0 |
| 0.7 | 130.3 | 244.8 | 738.1 | 982.9 | 64.92 | 22.0 |
| 0.8 | 146.0 | 276.3 | 938.9 | 1215.2 | 65.68 | 48.0 |
| 0.9 | 110.3 | 256.3 | 1119.0 | 1375.3 | 66.14 | 67.0 |
| 1.0 | 74.5 | 184.8 | 1241.3 | 1426.1 | 66.28 | 73.0 Max Stage |
| 1.1 | 67.1 | 141.6 | 1280.1 | 1421.7 | 66.25 | 72.0 |
| 1.2 | 59.7 | 126.8 | 1277.7 | 1404.5 | 66.21 | 70.0 |
| 1.3 | 48.5 | 108.2 | 1264.5 | 1372.7 | 66.15 | 67.0 |
| 1.4 | 37.2 | 85.7 | 1238.7 | 1324.4 | 65.95 | 60.0 |
| 1.5 | 32.4 | 69.6 | 1204.4 | 1274.0 | 65.85 | 55.0 |
| 1.6 | 27.5 | 59.9 | 1164.0 | 1223.9 | 65.70 | 48.0 |
| 1.7 | 24.4 | 51.9 | 1127.9 | 1179.8 | 65.58 | 44.0 |
| 1.8 | 21.2 | 45.6 | 1091.8 | 1137.4 | 65.45 | 39.0 |
| 1.9 | 12.9 | 34.1 | 1059.4 | 1093.5 | 65.30 | 34.0 |
| 2.0 | 4.6 | 17.5 | 1025.5 | 1043.0 | 65.15 | 29.0 |
| 2.1 | 4.1 | 8.7 | 985.0 | 993.7 | 64.95 | 23.0 |
| 2.2 | 3.5 | 7.6 | 947.7 | 955.3 | 64.82 | 19.0 |
| 2.3 | 1.8 | 5.3 | 917.3 | 922.6 | 64.72 | 16.0 |
| 2.4 | 0.0 | 1.8 | 890.6 | 892.4 | 64.62 | 14.0 |

10. Pond Drawdown Calculations. Due to the poor draining characteristics of the soils present in the retention pond, the required FDEP Treatment will occur through a sand "bottom" filter bed. The filter will flow under submerged (tailwater) conditions.

The filter bed will consist of select builder's sand meeting the FDEP criteria for filter media. The filter bed will be back filled to a top elevation of 60.92. The FDEP treatment volume of 110,171 CF will be treated by vertical flow through this "bottom" filter. This FDEP volume lies between elevations 60.92 and 63.9. Skimmed discharge will leave the site when water in the pond rises to the "Begin Discharge" elevation of 63.9.

The westerly end of the pond will be slightly over-excavated to elevation 60. This part of the pond will serve as a silt trap, prolonging the life of the filter.

Assumptions: Filter can be analyzed as a 1-D flow problem using Darcy's equation, $Q = kiA$
 Coefficient of Permeability, $k = 28 \text{ ft/day (1.17/ft/hour)}$
 Hydraulic Gradient, i , will vary as the head over the filter media falls over time $i = \Delta H/ L$ (average head/length of path)
 Area, $A = \text{surface area of the filter (2080 SF)}$

Drawdown Table

| Elev (ft) | k (ft/hr) | avg. head (ft) | L (ft) | I (ft/ft) | A (sf) | Q (kiA) (cf/hr) | Vol (cf) | Δt (hr) | cum time (hr) |
|-----------|-----------|----------------|--------|-----------|--------|-----------------|----------|-----------------|---------------|
| 63.9 | | | | | | | | | |
| | 1.17 | 4.7 | 2.0 | 4.7/2.0 | 2080 | 5719 | 19,144 | 3.3 | 3.3 |
| 63.5 | | | | | | | | | |
| | 1.17 | 4.25 | 2.0 | 4.25/2.0 | 2080 | 5172 | 22,556 | 4.4 | 7.7 |
| 63.0 | | | | | | | | | |
| | 1.17 | 3.75 | 2.0 | 3.75/2.0 | 2080 | 4563 | 21,191 | 4.6 | 12.3 |
| 62.5 | | | | | | | | | |
| | 1.17 | 3.25 | 2.0 | 3.25/2.0 | 2080 | 3954 | 19,835 | 5.0 | 17.3 |
| 62.0 | | | | | | | | | |
| | 1.17 | 2.75 | 2.0 | 2.75/2.0 | 2080 | 3346 | 13,115 | 3.9 | 21.2 |
| 61.5 | | | | | | | | | |
| | 1.17 | 2.25 | 2.0 | 2.25/2.0 | 2080 | 2738 | 12,445 | 4.5 | 25.7 |
| 61.0 | | | | | | | | | |
| | 1.17 | 1.96 | 2.0 | 1.96/2.0 | 2080 | 2385 | 1,885 | 0.8 | 26.5 |
| 60.92 | | | | | | | | | |

26.5 hours < 72 hours ~ OK!

11. Under Drain Capacity Calculation

The worst case for checking the flow capacity in the 8" ADS under occurs when the greatest flow rate (5719 CF/Hr) is flowing or when the differential head condition is the lowest (60.92 - 59.0 = 1.92 ft). Using a FlowMaster analysis (see attached) for submerged (pressure) flow, the capacity of the 8" ADS manifold pipe is 1121 GPM (8992 CF/Hr). This flow rate exceeds the required, worst case condition.

12. Gutter Spread Calculations

The capacity of the various gutter sections were evaluated @ two depths of flow:

- a. Depth to provide for a driving lane of 8 feet straddle lane (4 feet each side of the centerline).
- b. Depth to cover the entire crown of the street.

The curb, gutter and street sections were simplified to a "triangular" open channel for analysis using FLOW MASTER software. The following assumptions were made regarding the sections analyzed:

- a. Left slope (flow line of the gutter to top of curb) - 2H:1V
- b. Right slope (flow line of gutter to the crown of the road) - 35H:1V
- c. Manning's Coefficient, $n = 0.015$
- d. Longitudinal slope, $s =$ (varies with the location within the subdivision)
- e. Depth (8 foot lane) = 0.21 ft
- f. Depth (cover crown) = 0.33 ft

The results of the FLOW MASTER runs are attached. They are summarized below:

Section # 1

Street: Bowling Green Way
STA: 19+00 Left (Inlet #11)
Slope, $s = 3.8\%$
Gutter capacity @ 8 foot lane = 3.49 cfs
Gutter capacity @ covered crown = 11.65 cfs
Flow expected in section @ build out (Watershed "C") = 12.2 cfs.
STATUS: Exceeds 8-foot straddle lane. Exceeds the crown but the right lane (heading to the southeast) is clear nearly the entire width of the roadway. This provides an adequate driving lane. OK!

Section # 2

Street: Byron Place
STA: 14+78 Left (Inlet # 7)
Slope, $s = 2.75\%$
Gutter capacity @ 8 foot lane = 2.97 cfs
Gutter capacity @ covered crown = 9.91 cfs
Flow expected in section @ build out (Watershed "D") = 10.1 cfs.
STATUS: Exceeds 8-foot straddle lane. Exceeds the crown but right lane (heading to the north) is clear nearly the entire width of the road way. This provides an adequate driving lane. OK!

Section # 3

Street: Mountbatten Drive

STA: 14+82 Left (Inlet # 5)

Slope, $s = 3.5\%$

Gutter capacity @ 8 foot lane = 3.35 cfs

Gutter capacity @ covered crown = 11.18 cfs

Flow expected in section @ build out (Watershed "F") = 12.9 cfs.

STATUS: Exceeds 8-foot straddle lane. Exceeds the crown but right lane (heading to the south) is clear nearly the entire width of the road way.

This provides an adequate driving lane. OK!

Section # 4A

Street: Bowling Green Way

STA: 26+75 Left (Inlet #13) approximately 50 feet east of the inlet

Slope, $s = 1.04\%$

Gutter capacity @ 8 foot lane = 1.83 cfs

Gutter capacity @ covered crown = 6.10 cfs

Flow expected in section @ build out (based on the easterly portion of Watershed "Q") = 10.3 cfs.

STATUS: Flow from the watershed comes from both sides. Exceeds 8-foot straddle lane. Exceeds the crown but right lane (heading to the east) is clear nearly the entire width of the roadway. This provides an adequate driving lane. The inlet capacity is sufficient to clear the flow as fast as it arrives at the structure. OK!

Section # 4B

Street: Bowling Green Way

STA: 26+75 Left (Inlet #13) approximately 50 feet west of the inlet

Slope, $s = 1.24\%$

Gutter capacity @ 8 foot lane = 1.99 cfs

Gutter capacity @ covered crown = 6.66 cfs

Flow expected in section @ build out (based on the westerly portion of Watershed "Q") = 6.6 cfs.

STATUS: Flow from the watershed comes from both sides. Exceeds 8-foot straddle lane but does not exceed the crown of the roadway. The inlet capacity is sufficient to clear the flow as fast as it arrives at the structure. OK!

Section # 5

Street: Mountbatten Drive

STA: 17+45 Left (Inlet # 3)

Slope, $s = 2.2\%$

Gutter capacity @ 8 foot lane = 2.66 cfs

Gutter capacity @ covered crown = 8.87 cfs

Flow expected in section @ build out (Watershed "H") = 15.5 cfs.

STATUS: Exceeds 8-foot straddle lane. Exceeds the crown but right lane (heading to the south) is clear nearly the entire width of the roadway. This provides an adequate driving lane. OK!

Section # 6

Street: Bowling Green Way

STA: 16+50 Left (Inlet #9)

Slope, $s = 1.05\%$

Gutter capacity @ 8 foot lane = 1.84 cfs

Gutter capacity @ covered crown = 6.12 cfs

Flow expected in section @ build out (based on the westerly portion of Watershed "B") = 8.9 cfs.

STATUS: Flow to the inlet comes from both sides. Exceeds 8-foot straddle lane. Exceeds the crown but right lane (heading to the east) is clear nearly the entire width of the roadway. This provides an adequate driving lane. The additional pavement in the intersection will help provide an adequate width for driving area. The inlet capacity is sufficient to clear the flow as fast as it arrives at the structure. OK!

Section # 7

Street: Cromwell Court

STA: 10+30 Left (Inlet #9)

Slope, $s = 2.8\%$

Gutter capacity @ 8 foot lane = 3.00 cfs

Gutter capacity @ covered crown = 10.00 cfs

Flow expected in section @ build out (based on the easterly portion of Watershed "B") = 3.1 cfs.

STATUS: Flow from the watershed comes from both sides. Flow barely exceeds 8-foot straddle lane but does not exceed the crown of the roadway. The inlet capacity is sufficient to clear the flow as fast as it arrives at the structure. OK!

C. SUMMARY. System as designed :

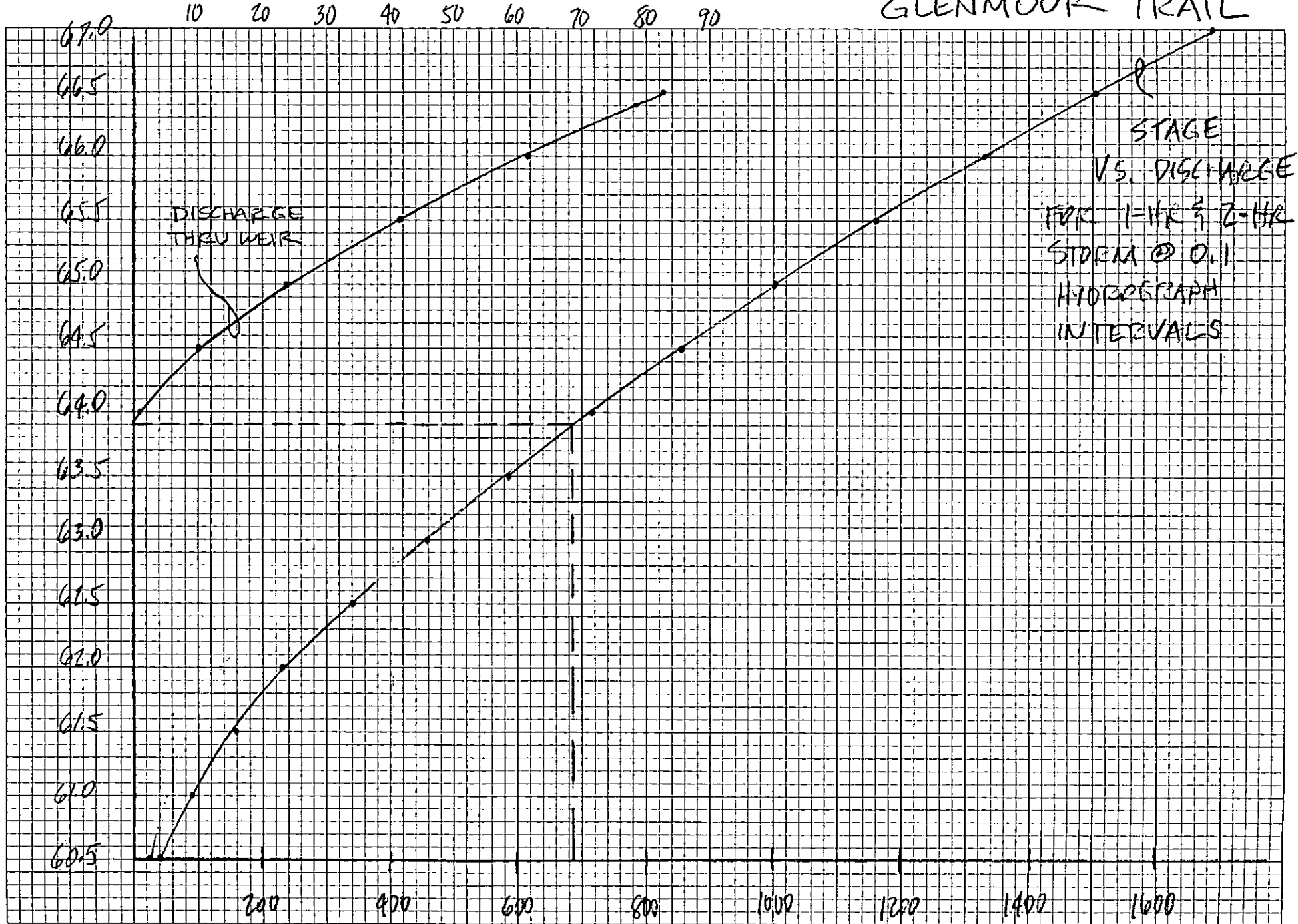
1. Retains in excess of the first-half inch of runoff before beginning off-site discharge.
2. Discharges to the existing Escambia County drainage system in C.R. 297 while not exceeding the 25-Yr pre-development discharge rate.
3. Considers the effects of 16 acres of off-site drainage in the design of the pond, the underground piping network, pre-development discharge, and the pond overflow structure.
4. Filters FDEP treatment volume within the required time frame.
5. Inlet spacing and the moderate street grades provide adequate driving lanes during the 25-Year Storm.

DISCHARGE THRU WEIR (cfs.)



No. 5510 - 8 1/2" x 11"

GLENMOOR TRAIL



Pressure Pipe Analysis & Design
Circular Pipe

Worksheet Name: Glenmoor Under drain

Comment: Filter under drain capacity analysis - 8"ADS

Solve For Discharge

Given Input Data:

| | |
|--------------------|----------|
| Elevation @ 1..... | 60.92 ft |
| Pressure @ 1..... | 0.00 psi |
| Elevation @ 2..... | 59.00 ft |
| Pressure @ 2..... | 0.00 psi |
| Diameter..... | 8.00 in |
| Length..... | 85.00 ft |
| Hazen-Williams C.. | 130.00 |

Computed Results:

| | |
|--------------------|-------------------|
| Discharge..... | 1121.27 gpm |
| Velocity..... | 7.16 fps |
| Headloss..... | 1.92 ft |
| Energy Grade @ 1.. | 61.72 ft |
| Energy Grade @ 2.. | 59.80 ft |
| Friction Slope.... | 22.588 ft/1000 ft |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

David Pinner
2/22/2000
16 pages

Worksheet Name: Glenmoor Trail

Comment: Section #1 Gutter Spread Bowling Green Way

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0380 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 3.49 cfs |
| Velocity..... | 4.28 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.29 ft |
| Critical Slope... | 0.0063 ft/ft |
| Froude Number.... | 2.33 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #1 GS Bowling Green Way 19+00 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0380 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 11.65 cfs |
| Velocity..... | 5.78 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.48 ft |
| Critical Slope... | 0.0053 ft/ft |
| Froude Number.... | 2.51 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #2 GS Byron Place 14+78 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0275 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 2.97 cfs |
| Velocity..... | 3.64 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.28 ft |
| Critical Slope... | 0.0064 ft/ft |
| Froude Number.... | 1.98 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #2 GS Byron Place 14+78 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0275 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 9.91 cfs |
| Velocity..... | 4.92 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.45 ft |
| Critical Slope... | 0.0055 ft/ft |
| Froude Number.... | 2.13 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #3 GS Mountbatten Drive 14+82 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0350 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 3.35 cfs |
| Velocity..... | 4.11 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.29 ft |
| Critical Slope... | 0.0063 ft/ft |
| Froude Number.... | 2.23 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #3 GS Mountbatten Drive 14+82 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0350 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 11.18 cfs |
| Velocity..... | 5.55 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.47 ft |
| Critical Slope... | 0.0054 ft/ft |
| Froude Number.... | 2.41 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #4 GS Bowling Green Way 26+23 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0104 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 6.10 cfs |
| Velocity..... | 3.03 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.37 ft |
| Critical Slope... | 0.0058 ft/ft |
| Froude Number.... | 1.31 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #44 GS Bowling Green Way 26+23 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0104 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 1.83 cfs |
| Velocity..... | 2.24 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.23 ft |
| Critical Slope... | 0.0068 ft/ft |
| Froude Number.... | 1.22 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #48GS Bowling Green Way 26+23 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0124 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 1.99 cfs |
| Velocity..... | 2.44 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.24 ft |
| Critical Slope... | 0.0068 ft/ft |
| Froude Number.... | 1.33 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #48GS Bowling Green Way 26+23 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0124 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 6.66 cfs |
| Velocity..... | 3.30 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.38 ft |
| Critical Slope... | 0.0058 ft/ft |
| Froude Number.... | 1.43 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #5 GS Mountbatten Drive 17+45 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0220 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 2.66 cfs |
| Velocity..... | 3.26 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.26 ft |
| Critical Slope... | 0.0065 ft/ft |
| Froude Number.... | 1.77 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #5 GS Mountbatten Drive 17+45 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0220 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 8.87 cfs |
| Velocity..... | 4.40 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width.. | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.43 ft |
| Critical Slope... | 0.0055 ft/ft |
| Froude Number.... | 1.91 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #6 GS Bowling Green Way 16+50 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0105 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 1.84 cfs |
| Velocity..... | 2.25 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width... | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.23 ft |
| Critical Slope... | 0.0068 ft/ft |
| Froude Number.... | 1.22 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #6 GS Bowling Green Way 16+50 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0105 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 6.12 cfs |
| Velocity..... | 3.04 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.37 ft |
| Critical Slope... | 0.0058 ft/ft |
| Froude Number.... | 1.32 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #7 GS Cromwell Court 10+30 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0280 ft/ft |
| Depth..... | 0.21 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 3.00 cfs |
| Velocity..... | 3.67 fps |
| Flow Area..... | 0.82 sf |
| Flow Top Width.. | 7.77 ft |
| Wetted Perimeter. | 7.82 ft |
| Critical Depth... | 0.28 ft |
| Critical Slope... | 0.0064 ft/ft |
| Froude Number.... | 2.00 (flow is Supercritical) |

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: Glenmoor Trail

Comment: Section #7 GS Cromwell Court 10+30 Left

Solve For Discharge

Given Input Data:

| | |
|-------------------|---------------|
| Left Side Slope.. | 2.00:1 (H:V) |
| Right Side Slope. | 35.00:1 (H:V) |
| Manning's n..... | 0.015 |
| Channel Slope.... | 0.0280 ft/ft |
| Depth..... | 0.33 ft |

Computed Results:

| | |
|-------------------|------------------------------|
| Discharge..... | 10.00 cfs |
| Velocity..... | 4.96 fps |
| Flow Area..... | 2.01 sf |
| Flow Top Width... | 12.21 ft |
| Wetted Perimeter. | 12.29 ft |
| Critical Depth... | 0.45 ft |
| Critical Slope... | 0.0054 ft/ft |
| Froude Number.... | 2.15 (flow is Supercritical) |

C. Current Conditions Basin Delineations and Supporting Documents



- | | |
|--|--|
| ① B-0001 AREA = 0.638 AC. CN = 75 Tc = 11 MIN. | ⑫ B-0012 AREA = 1.067 AC. CN = 65 Tc = 7 MIN. |
| ② B-0002 AREA = 7.139 AC. CN = 65 Tc = 33 MIN. | ⑬ B-0013 AREA = 5.180 AC. CN = 67 Tc = 16 MIN. |
| ③ B-0003 AREA = 9.932 AC. CN = 73 Tc = 44 MIN. | ⑭ B-0014 AREA = 0.778 AC. CN = 58 Tc = 8 MIN. |
| ④ B-0004 AREA = 0.871 AC. CN = 59 Tc = 9 MIN. | ⑮ B-0015 AREA = 2.619 AC. CN = 63 Tc = 15 MIN. |
| ⑤ B-0005 AREA = 1.284 AC. CN = 73 Tc = 13 MIN. | ⑯ B-0016 AREA = 2.119 AC. CN = 62 Tc = 21 MIN. |
| ⑥ B-0006 AREA = 1.210 AC. CN = 73 Tc = 14 MIN. | ⑰ B-0017 AREA = 1.465 AC. CN = 71 Tc = 19 MIN. |
| ⑦ B-0007 AREA = 12.747 AC. CN = 66 Tc = 51 MIN. | ⑱ B-0018 AREA = 5.679 AC. CN = 62 Tc = 33 MIN. |
| ⑧ B-0008 AREA = 8.611 AC. CN = 65 Tc = 39 MIN. | (POND) POND BASIN AREA = 2.769 AC. CN = 77 Tc = 8 MIN. |
| ⑨ B-0009 AREA = 4.653 AC. CN = 71 Tc = 27 MIN. | |
| ⑩ B-0010 AREA = 1.679 AC. CN = 71 Tc = 29 MIN. | |
| ⑪ B-0011 AREA = 4.563 AC. CN = 72 Tc = 26 MIN. | |

| Rev | Date | Drawn | Description | Ch'k'd | App'd |
|-----|------|-------|-------------|--------|-------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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Client
**ESCAMBA COUNTY
ENGINEERING**

Title
**ELEVEN MILE CREEK BASIN
STORMWATER POND AT
HWY 297A AND HWY 97
CURRENT CONDITIONS BASIN DELINEATIONS**

**THIS DRAWING IS
NOT FOR
CONSTRUCTION**

| | | |
|------------------------------------|------------------------|------------------------|
| Project Number 502101061 | B/O 1 | Total |
| Designed S. WHITE | Eng check K. MORGAN | |
| Drawn S. WHITE | Coordination | |
| Dwg check | Approved | |
| Scale at ANSI D | Status PRE | Rev P1 |
| | | Security STD |

Drawing Number
CURRENT CONDITIONS BASINS

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|---|---|---|-----------------------------|-----|-----|-----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 15.00 | 100 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 16.03 | 100 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 16.03 | 100 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -POND..... | 0.800 | 52.94 | 100 | 0 | 0 | 0 | 100 | 100 | 100 | 100 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 100 | 0 | 0 | 0 | COMPOSITE CN..... 77 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|-----------------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.002 | 0.180 | 31 | 0.1 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.002 | TOTAL TIME OF CONCENTRATION..... | | | 8 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|---|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 38.96 | 100 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 0.00 | 0 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other - BUILDINGS/ROADS..... | 0.800 | 61.04 | 100 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 100 | 0 | 0 | 0 | COMPOSITE CN..... 75 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.012 | 0.180 | 69 | 0.1 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.010 | 0.050 | 381 | 2.1 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|----|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 21.73 | 39 | 50 | 10 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 21.72 | 39 | 50 | 10 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 56.55 | 36 | 22 | 42 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 37 | 34 | 28 | 0 | COMPOSITE CN..... 65 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.016 | 0.190 | 300 | 0.2 | 23 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.027 | 0.050 | 1565 | 2.7 | 10 |
| Shallow Con. (Paved)..... | 0.006 | 0.050 | 32 | 1.5 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|----|----|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 31.38 | 0 | 65 | 35 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 31.38 | 0 | 65 | 35 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 37.24 | 29 | 0 | 71 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 11 | 41 | 48 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.007 | 0.190 | 300 | 0.2 | 32 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.022 | 0.050 | 1374 | 2.4 | 10 |
| Shallow Con. (Unpaved)..... | 0.163 | 0.050 | 28 | 6.5 | 0 |
| Shallow Con. (Paved)..... | 0.024 | 0.050 | 351 | 3.1 | 2 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.022 | TOTAL TIME OF CONCENTRATION..... | | | 44 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 89 | 11 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 89 | 11 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 89 | 11 | 0 | 0 | COMPOSITE CN..... 59 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.042 | 0.180 | 115 | 0.3 | 7 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.019 | 0.050 | 343 | 2.8 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.037 | 0.180 | 188 | 0.3 | 11 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.044 | 0.050 | 419 | 4.2 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 49.02 | 0 | 92 | 9 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 49.01 | 0 | 92 | 9 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 1.97 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 92 | 8 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.015 | 0.180 | 108 | 0.2 | 10 |
| Sheet Flow..... | 0.016 | 0.011 | 105 | 1.8 | 1 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.021 | 0.050 | 517 | 3.0 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 7.40 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 7.41 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 85.19 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 66 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.008 | 0.190 | 300 | 0.2 | 31 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.006 | 0.050 | 1191 | 1.2 | 17 |
| Shallow Con. (Paved)..... | 0.022 | 0.050 | 569 | 3.0 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.010 | TOTAL TIME OF CONCENTRATION..... | | | 51 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 0.64 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 0.64 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 98.72 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 65 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.009 | 0.190 | 300 | 0.2 | 29 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.012 | 0.050 | 1075 | 1.7 | 10 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.011 | TOTAL TIME OF CONCENTRATION..... | | | 39 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 38.00 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 38.00 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 24.00 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 71 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.017 | 0.190 | 300 | 0.2 | 22 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.012 | 0.050 | 96 | 1.8 | 1 |
| Shallow Con. (Paved)..... | 0.018 | 0.050 | 673 | 2.7 | 4 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.017 | TOTAL TIME OF CONCENTRATION..... | | | 27 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 40.18 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 40.18 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 19.64 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 71 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.018 | 0.190 | 300 | 0.2 | 22 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.024 | 0.050 | 163 | 2.5 | 1 |
| Shallow Con. (Paved)..... | 0.018 | 0.050 | 922 | 2.7 | 6 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.018 | TOTAL TIME OF CONCENTRATION..... | | | 29 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 49.39 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 49.38 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 1.23 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... 72 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.017 | 0.180 | 300 | 0.2 | 21 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.031 | 0.050 | 414 | 2.8 | 2 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 433 | 2.9 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.023 | TOTAL TIME OF CONCENTRATION..... | | | 26 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 51 | 49 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 51 | 49 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 51 | 49 | 0 | 0 | COMPOSITE CN..... 65 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.059 | 0.180 | 99 | 0.3 | 5 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 372 | 4.0 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

| | |
|-----------------------------------|--------|
| SUBBASIN NO..... | B-0013 |
| NODE NO..... | I-0013 |
| UNIT HYDROGRAPH..... | 484 |
| AREA (Ac.)..... | 5.180 |
| CURVE NUMBER (CN)..... | 67 |
| DCIA (%)..... | 0.0 |
| CURVE NUMBER (CN); DCIA ADJ..... | NA |
| TIME OF CONCENTRATION (Min.)..... | 16 |

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

| | |
|------------------------------|-----|
| DCIA AREA (AC)..... | 0.0 |
| NON-DCIA IMP. AREA (AC)..... | 0.0 |

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 37 | 63 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 37 | 63 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 37 | 63 | 0 | 0 | COMPOSITE CN..... 67 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.046 | 0.180 | 300 | 0.4 | 14 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.041 | 0.050 | 445 | 3.2 | 2 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 62 | 4.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.042 | TOTAL TIME OF CONCENTRATION..... | | | 16 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|---|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 100 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 100 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 100 | 0 | 0 | 0 | COMPOSITE CN..... 58 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.059 | 0.180 | 157 | 0.3 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 82 | 4.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 66 | 35 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 66 | 35 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 66 | 35 | 0 | 0 | COMPOSITE CN..... 63 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.044 | 0.180 | 286 | 0.3 | 14 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 234 | 2.9 | 1 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

| | |
|-----------------------------------|--------|
| SUBBASIN NO..... | B-0016 |
| NODE NO..... | I-0016 |
| UNIT HYDROGRAPH..... | 484 |
| AREA (Ac.)..... | 2.119 |
| CURVE NUMBER (CN)..... | 62 |
| DCIA (%)..... | 0.0 |
| CURVE NUMBER (CN); DCIA ADJ..... | NA |
| TIME OF CONCENTRATION (Min.)..... | 21 |

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

| | |
|------------------------------|-----|
| DCIA AREA (AC)..... | 0.0 |
| NON-DCIA IMP. AREA (AC)..... | 0.0 |

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|-------|---------|----------------|----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 26.29 | 84 | 16 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 26.28 | 84 | 16 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 47.43 | 4 | 96 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | | 100.000 | 46 | 54 | 0 | 0 | COMPOSITE CN..... | | | | 62 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.029 | 0.190 | 300 | 0.3 | 18 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.046 | 0.050 | 192 | 3.4 | 1 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 308 | 2.9 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.029 | TOTAL TIME OF CONCENTRATION..... | | | 21 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|-------|---------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 40.18 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 40.18 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 19.64 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | | 100.000 | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 71 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.025 | 0.180 | 264 | 0.3 | 17 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.014 | 0.050 | 221 | 1.9 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.020 | TOTAL TIME OF CONCENTRATION..... | | | 19 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 34.90 | 59 | 41 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 34.90 | 59 | 41 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 30.20 | 35 | 66 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 51 | 49 | 0 | 0 | COMPOSITE CN..... 62 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.019 | 0.180 | 300 | 0.2 | 21 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.029 | 0.050 | 1020 | 2.8 | 6 |
| Shallow Con. (Paved)..... | 0.013 | 0.050 | 785 | 2.3 | 6 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.022 | TOTAL TIME OF CONCENTRATION..... | | | 33 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

D. Current Conditions ICPR4 Inputs and Results

Simple Basin: B-0001

Scenario: EXISTING CONDITIONS
Node: I-0001
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 0.6380 ac
Curve Number: 75.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0002

Scenario: EXISTING CONDITIONS
Node: I-0002
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 33.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 7.1390 ac
Curve Number: 65.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0003

Scenario: EXISTING CONDITIONS
Node: I-0003
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 44.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 9.9320 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0004

Scenario: EXISTING CONDITIONS
Node: I-0004
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 9.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 0.8710 ac
Curve Number: 59.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0005

Scenario: EXISTING CONDITIONS
Node: I-0005
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.2840 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00

% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0006

Scenario: EXISTING CONDITIONS
Node: I-0006
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.2100 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0007

Scenario: EXISTING CONDITIONS
Node: I-0007
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 51.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 12.7470 ac
Curve Number: 66.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0008

Scenario: EXISTING CONDITIONS
 Node: I-0008
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 39.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH323
 Peaking Factor: 323.0
 Area: 8.6110 ac
 Curve Number: 65.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: B-0009

Scenario: EXISTING CONDITIONS
 Node: I-0009
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 27.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 4.6530 ac
 Curve Number: 71.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: B-0010

Scenario: EXISTING CONDITIONS
 Node: I-0010
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 29.0000 min
 Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 1.6790 ac
 Curve Number: 71.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: B-0011

Scenario: EXISTING CONDITIONS
 Node: I-0011
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 26.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 4.4563 ac
 Curve Number: 72.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: B-0012

Scenario: EXISTING CONDITIONS
 Node: I-0012
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 7.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 1.0670 ac
 Curve Number: 65.0
 % Impervious: 0.00
 % DCIA: 0.00

% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0013

Scenario: EXISTING CONDITIONS
Node: I-0013
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 5.1800 ac
Curve Number: 67.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0014

Scenario: EXISTING CONDITIONS
Node: I-0014
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 0.7780 ac
Curve Number: 58.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0015

Scenario: EXISTING CONDITIONS
Node: I-0015
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 2.6190 ac
Curve Number: 63.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0016

Scenario: EXISTING CONDITIONS
Node: I-0016
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 21.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 2.1190 ac
Curve Number: 62.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0017

Scenario: EXISTING CONDITIONS
Node: I-0017
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 1.4650 ac
 Curve Number: 71.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: B-0018

Scenario: EXISTING CONDITIONS
 Node: I-0018
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 33.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 5.6790 ac
 Curve Number: 62.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Simple Basin: POND BASIN

Scenario: EXISTING CONDITIONS
 Node: POND
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 8.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH256
 Peaking Factor: 256.0
 Area: 2.7690 ac
 Curve Number: 77.0
 % Impervious: 0.00
 % DCIA: 0.00

% Direct: 0.00
 Rainfall Name:

Comment:

Node: CONCRETE SWALE

Scenario: EXISTING CONDITIONS
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 58.43 ft
 Warning Stage: 59.89 ft
 Boundary Stage:

| Year | Month | Day | Hour | Stage [ft] |
|------|-------|-----|---------|------------|
| 0 | 0 | 0 | 0.0000 | 58.43 |
| 0 | 0 | 0 | 12.0000 | 59.88 |
| 0 | 0 | 0 | 24.0000 | 58.43 |

Comment:

Node: CONTROL STRUCTURE

Scenario: EXISTING CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 58.62 ft
 Warning Stage: 66.30 ft

Comment:

Node: I-0001

Scenario: EXISTING CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 63.48 ft
 Warning Stage: 68.21 ft

Comment:

Node: I-0002

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 64.38 ft
Warning Stage: 68.21 ft

Comment:

Node: I-0003

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 68.43 ft
Warning Stage: 74.96 ft

Comment:

Node: I-0004

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 63.11 ft
Warning Stage: 68.85 ft

Comment:

Node: I-0005

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 75.00 ft
Warning Stage: 82.25 ft

Comment:

Node: I-0006

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 96.00 ft
Warning Stage: 103.32 ft

Comment:

Node: I-0007

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 96.88 ft
Warning Stage: 103.62 ft

Comment:

Node: I-0008

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 102.00 ft
Warning Stage: 106.00 ft

Comment:

Node: I-0009

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 93.20 ft
Warning Stage: 100.10 ft

Comment:

Node: I-0010

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 87.00 ft
Warning Stage: 95.40 ft

Comment:

Node: I-0011

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 85.06 ft
Warning Stage: 91.20 ft

Comment:

Node: I-0012

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 68.32 ft
Warning Stage: 76.50 ft

Comment:

Node: I-0013

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 65.50 ft
Warning Stage: 68.39 ft

Comment:

Node: I-0014

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 62.05 ft
Warning Stage: 68.39 ft

Comment:

Node: I-0015

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 70.74 ft
Warning Stage: 74.55 ft

Comment:

Node: I-0016

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 71.58 ft
Warning Stage: 74.55 ft

Comment:

Node: I-0017

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 89.00 ft
Warning Stage: 92.50 ft

Comment:

Node: I-0018

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 63.77 ft
Warning Stage: 66.67 ft

Comment:

Node: MH-0001

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 94.00 ft
Warning Stage: 101.40 ft

Comment:

Node: MH-0002

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 64.45 ft
Warning Stage: 69.40 ft

Comment:

Node: MH-0003

Scenario: EXISTING CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 84.15 ft
Warning Stage: 90.60 ft

Comment:

Node: NTZ-0290

Scenario: EXISTING CONDITIONS
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 0.00 ft
 Warning Stage: 0.00 ft
 Boundary Stage:

Comment:

Node: POND

Scenario: EXISTING CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 59.00 ft
 Warning Stage: 66.30 ft

| Stage [ft] | Area [ac] | Area [ft2] |
|------------|-----------|------------|
| 59.00 | 0.0000 | 0 |
| 60.00 | 0.1416 | 6167 |
| 61.00 | 0.5894 | 25676 |
| 62.00 | 0.8182 | 35639 |
| 63.00 | 0.9307 | 40541 |
| 64.00 | 1.0459 | 45561 |
| 65.00 | 1.1641 | 50708 |
| 66.00 | 1.2851 | 55978 |
| 66.30 | 1.3228 | 57622 |

Comment:

Weir Link: CONTROL STRUCTURE RIM

Scenario: EXISTING CONDITIONS
 From Node: POND
 To Node: CONTROL STRUCTURE
 Link Count: 1
 Flow Direction: Both
 Damping: 0.0000 ft
 Weir Type: Horizontal
 Geometry Type: Circular
 Invert: 66.25 ft
 Control Elevation: 66.25 ft
 Max Depth: 6.00 ft

Bottom Clip

Default: 0.00 ft

Op Table:

Ref Node:

Top Clip

Default: 0.00 ft

Op Table:

Ref Node:

Discharge Coefficients

Weir Default: 2.800

Weir Table:

Orifice Default: 0.600

Orifice Table:

Comment:

Weir Link: CONTROL STRUCTURE SLOT

| | | |
|--------------------|------------------------|------------------------|
| Scenario: | EXISTING CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | CONTROL STRUCTURE | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Sharp Crested Vertical | Op Table: |
| Geometry Type: | Rectangular | Ref Node: |
| Invert: | 63.75 ft | Discharge Coefficients |
| Control Elevation: | 63.75 ft | Weir Default: 2.800 |
| Max Depth: | 2.50 ft | Weir Table: |
| Max Width: | 6.50 ft | Orifice Default: 0.600 |
| Fillet: | 0.00 ft | Orifice Table: |

Comment:

Weir Link: EMERGENCY SPILLWAY

| | | |
|--------------------|---------------------|------------------------|
| Scenario: | EXISTING CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | CONCRETE SWALE | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Paved Road Vertical | Op Table: |
| Geometry Type: | Irregular | Ref Node: |
| Invert: | 66.34 ft | Discharge Coefficients |
| Control Elevation: | 66.34 ft | Weir Default: 2.800 |
| Cross Section: | X-0010W | Weir Table: |
| | | Orifice Default: 0.600 |
| | | Orifice Table: |

Comment:

Weir Link: L-0300W

| | | |
|-----------------|------------------------|------------------|
| Scenario: | EXISTING CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | NTZ-0290 | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Broad Crested Vertical | Op Table: |

Geometry Type: Irregular
 Invert: 66.55 ft
 Control Elevation: 66.55 ft
 Cross Section: X-0020W

Ref Node:
 Discharge Coefficients
 Weir Default: 2.800
 Weir Table:
 Orifice Default: 0.600
 Orifice Table:

Comment:

| Pipe Link: P-0001 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: EXISTING | Invert: 63.48 ft | Invert: 62.50 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0001 | Geometry: Circular | Geometry: Circular |
| To Node: POND | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 56.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 1.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0002 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: EXISTING | Invert: 64.20 ft | Invert: 63.60 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0002 | Geometry: Circular | Geometry: Circular |
| To Node: I-0001 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 28.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0003 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | EXISTING | Invert: 68.43 ft | Invert: 63.80 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0003 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0004 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 356.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0004 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | EXISTING | Invert: 63.11 ft | Invert: 62.23 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0004 | Geometry: Circular | Geometry: Circular |
| To Node: | POND | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 60.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 1.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0005 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | EXISTING | Invert: 75.00 ft | Invert: 68.93 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0005 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0003 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 262.36 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |

| | | | | | |
|-----------------|----------|--------------|---------|--------------|---------|
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0006 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | EXISTING | Invert: 96.00 ft | Invert: 94.48 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0006 | Geometry: Circular | Geometry: Circular |
| To Node: | MH-0001 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 76.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0007 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | EXISTING | Invert: 96.88 ft | Invert: 96.34 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0007 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0006 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 32.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0008 | | Upstream | Downstream |
|-------------------|----------|-------------------|------------------|
| Scenario: | EXISTING | Invert: 102.00 ft | Invert: 99.42 ft |

| | | | |
|-----------------|------------|---------------------|---------------------|
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0008 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0007 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 172.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

| | | | |
|-------------------|------------|---------------------|---------------------|
| Pipe Link: P-0009 | | Upstream | Downstream |
| Scenario: | EXISTING | Invert: 93.20 ft | Invert: 90.32 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0009 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0010 | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 192.38 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

| | | | |
|-------------------|------------|---------------------|---------------------|
| Pipe Link: P-0010 | | Upstream | Downstream |
| Scenario: | EXISTING | Invert: 87.00 ft | Invert: 85.44 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0010 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0011 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 104.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |

Bend Location: 0.00 dec Ref Node: Ref Node:
 Energy Switch: Energy Manning's N: 0.0000 Manning's N: 0.0000

Comment:

| Pipe Link: P-0011 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: EXISTING | Invert: 85.06 ft | Invert: 71.14 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0011 | Geometry: Circular | Geometry: Circular |
| To Node: I-0012 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 392.31 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0012 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: EXISTING | Invert: 68.32 ft | Invert: 64.58 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0012 | Geometry: Circular | Geometry: Circular |
| To Node: MH-0002 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 208.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0013 | Upstream | Downstream |
|--------------------|---------------------|---------------------|
| Scenario: EXISTING | Invert: 65.50 ft | Invert: 65.22 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0013 | Geometry: Circular | Geometry: Circular |

| | | | | | |
|-----------------|-----------|--------------|---------|--------------|---------|
| To Node: | I-0014 | Max Depth: | 2.00 ft | Max Depth: | 2.00 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 28.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Comment: | | | | | |

| | | | | | |
|-----------------|------------|--------------|----------|--------------|----------|
| Pipe Link: | P-0014 | Upstream | | Downstream | |
| Scenario: | EXISTING | Invert: | 62.05 ft | Invert: | 61.87 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | I-0014 | Geometry: | Circular | Geometry: | Circular |
| To Node: | POND | Max Depth: | 3.00 ft | Max Depth: | 3.00 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 152.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 1.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Comment: | | | | | |

| | | | | | |
|-----------------|------------|--------------|----------|--------------|----------|
| Pipe Link: | P-0015 | Upstream | | Downstream | |
| Scenario: | EXISTING | Invert: | 70.74 ft | Invert: | 68.82 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | I-0015 | Geometry: | Circular | Geometry: | Circular |
| To Node: | I-0012 | Max Depth: | 2.00 ft | Max Depth: | 2.00 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 128.98 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0016 | | Upstream | Downstream |
|-------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 71.58 ft | Invert: 71.30 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0016 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0015 | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 | Op Table: | Op Table: |
| Length: | 28.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0017 | | Upstream | Downstream |
|-------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 89.00 ft | Invert: 87.60 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0017 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0010 | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 | Op Table: | Op Table: |
| Length: | 140.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0018 | | Upstream | Downstream |
|-------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 63.77 ft | Invert: 63.33 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0018 | Geometry: Circular | Geometry: Circular |
| To Node: | POND | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |

| | | | | | |
|-----------------|-----------|--------------|---------|--------------|---------|
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 20.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 1.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0020 | | Upstream | Downstream | | |
|-------------------|----------------|--------------|------------|--------------|----------|
| Scenario: | EXISTING | Invert: | 58.62 ft | Invert: | 58.43 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | CONTROL | Geometry: | Circular | Geometry: | Circular |
| | STRUCTURE | Max Depth: | 1.50 ft | Max Depth: | 1.50 ft |
| To Node: | CONCRETE SWALE | Bottom Clip | | | |
| Link Count: | 1 | Default: | 0.00 ft | Default: | 0.00 ft |
| Flow Direction: | Both | Op Table: | | Op Table: | |
| Damping: | 0.0000 ft | Ref Node: | | Ref Node: | |
| Length: | 63.56 ft | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| FHWA Code: | 1 | Top Clip | | | |
| Entr Loss Coef: | 0.50 | Default: | 0.00 ft | Default: | 0.00 ft |
| Exit Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Loss Coef: | 0.00 | Ref Node: | | Ref Node: | |
| Bend Location: | 0.00 dec | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Energy Switch: | Energy | | | | |

Comment:

| Pipe Link: P-0021 | | Upstream | Downstream | | |
|-------------------|----------------|--------------|------------|--------------|----------|
| Scenario: | EXISTING | Invert: | 60.25 ft | Invert: | 61.45 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | CONTROL | Geometry: | Circular | Geometry: | Circular |
| | STRUCTURE | Max Depth: | 3.00 ft | Max Depth: | 3.00 ft |
| To Node: | CONCRETE SWALE | Bottom Clip | | | |
| Link Count: | 1 | Default: | 0.00 ft | Default: | 0.00 ft |
| Flow Direction: | Both | Op Table: | | Op Table: | |
| Damping: | 0.0000 ft | Ref Node: | | Ref Node: | |
| Length: | 26.96 ft | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| FHWA Code: | 1 | Top Clip | | | |
| Entr Loss Coef: | 0.50 | Default: | 0.00 ft | Default: | 0.00 ft |
| Exit Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Loss Coef: | 0.00 | Ref Node: | | Ref Node: | |
| Bend Location: | 0.00 dec | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Energy Switch: | Energy | | | | |

Comment:

| Pipe Link: PH-0001 | | Upstream | Downstream |
|--------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 94.00 ft | Invert: 84.42 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | MH-0001 | Geometry: Circular | Geometry: Circular |
| To Node: | MH-0003 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 252.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: PH-0002 | | Upstream | Downstream |
|--------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 64.45 ft | Invert: 62.51 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | MH-0002 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0014 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 108.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: PH-0003 | | Upstream | Downstream |
|--------------------|---------------------|---------------------|---------------------|
| Scenario: | EXISTING CONDITIONS | Invert: 84.15 ft | Invert: 76.49 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | MH-0003 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0005 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |

Flow Direction: Both Default: 0.00 ft Default: 0.00 ft
 Damping: 0.0000 ft Op Table: Op Table:
 Length: 196.00 ft Ref Node: Ref Node:
 FHWA Code: 1 Manning's N: 0.0000 Manning's N: 0.0000
 Entr Loss Coef: 0.50 **Top Clip**
 Exit Loss Coef: 0.00 Default: 0.00 ft Default: 0.00 ft
 Bend Loss Coef: 0.00 Op Table: Op Table:
 Bend Location: 0.00 dec Ref Node: Ref Node:
 Energy Switch: Energy Manning's N: 0.0000 Manning's N: 0.0000

Comment:

Rating Curve Link: POND BOTTOM FILTER

Scenario: EXISTING CONDITIONS
 From Node: POND
 To Node: CONTROL STRUCTURE
 Link Count: 1
 Flow Direction: Both

| Table | Elev On [ft] | Elev On Node | Elev Off [ft] | Elev Off Node |
|---------|--------------|--------------|---------------|---------------|
| RC-0010 | 61.00 | POND | 61.00 | POND |

Comment:

Simulation: 025YR-001HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:13:55 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-1
Rainfall Amount: 3.70 in
Storm Duration: 1.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 025YR-002HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:13:59 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:

Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-2 |
| | Rainfall Amount: 4.80 in |
| Edge Length Option: Automatic | Storm Duration: 2.0000 hr |
| | |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-004HR

Scenario: EXISTING CONDITIONS
Run Date/Time: 1/26/2023 9:14:07 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 12.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-4
Rainfall Amount: 5.92 in
Storm Duration: 4.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 025YR-008HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:14:15 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 24.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:

Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-8 |
| | Rainfall Amount: 7.44 in |
| Edge Length Option: Automatic | Storm Duration: 8.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-024HR

Scenario: EXISTING CONDITIONS
Run Date/Time: 1/26/2023 9:14:27 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight: 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area: 100 ft2
(2D):
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain: Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-24
Rainfall Amount: 10.80 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area: 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simulation: 100YR-001HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:14:56 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:

Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-1 |
| | Rainfall Amount: 4.50 in |
| Edge Length Option: Automatic | Storm Duration: 1.0000 hr |
| | |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-002HR

Scenario: EXISTING CONDITIONS
Run Date/Time: 1/26/2023 9:15:08 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight Fact: 0.5 dec
 dZ Tolerance: 0.0010 ft

 Max dZ: 1.0000 ft
 Link Optimizer Tol: 0.0001 ft

 Edge Length Option: Automatic

 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False

 Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: ~FDOT-2
 Rainfall Amount: 6.00 in
 Storm Duration: 2.0000 hr

 Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area (1D): 100 ft2
 Energy Switch (1D): Energy

Comment:

Simulation: 100YR-004HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:15:20 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 12.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:

Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-4 |
| | Rainfall Amount: 7.52 in |
| Edge Length Option: Automatic | Storm Duration: 4.0000 hr |
| | |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-008HR

Scenario: EXISTING CONDITIONS
Run Date/Time: 1/26/2023 9:15:32 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 24.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area 100 ft2
(2D):
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-8
Rainfall Amount: 9.44 in
Storm Duration: 8.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simulation: 100YR-024HR

Scenario: EXISTING CONDITIONS
 Run Date/Time: 1/26/2023 9:15:52 AM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:

Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-24 |
| | Rainfall Amount: 13.44 in |
| Edge Length Option: Automatic | Storm Duration: 24.0000 hr |
| | |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0001 | 025YR-00 1HR | 1.83 | 0.7000 | 3.70 | 1.45 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 2HR | 1.80 | 0.8667 | 4.80 | 2.29 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 4HR | 1.23 | 2.5167 | 5.92 | 3.22 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 8HR | 1.57 | 4.0167 | 7.44 | 4.55 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-02 4HR | 0.58 | 12.0000 | 10.80 | 7.65 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 1HR | 2.56 | 0.6833 | 4.50 | 2.06 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 2HR | 2.59 | 0.8667 | 6.00 | 3.29 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 4HR | 1.76 | 2.0667 | 7.52 | 4.62 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 8HR | 2.14 | 4.0000 | 9.44 | 6.37 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-02 4HR | 0.76 | 12.0000 | 13.44 | 10.16 | 0.6380 | 75.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0002 | 025YR-00 1HR | 10.30 | 0.9667 | 3.70 | 0.86 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 2HR | 10.88 | 1.1500 | 4.80 | 1.52 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 4HR | 10.12 | 2.6833 | 5.92 | 2.30 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 8HR | 12.85 | 4.1500 | 7.44 | 3.45 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-02 4HR | 5.35 | 12.1000 | 10.80 | 6.27 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 1HR | 15.74 | 0.9500 | 4.50 | 1.33 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 2HR | 17.07 | 1.1167 | 6.00 | 2.36 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 4HR | 15.00 | 2.6500 | 7.52 | 3.52 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 8HR | 18.74 | 4.1333 | 9.44 | 5.10 | 7.1390 | 65.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0002 | 100YR-02 4HR | 7.32 | 12.0833 | 13.44 | 8.63 | 7.1390 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0003 | 025YR-00 1HR | 17.64 | 1.0667 | 3.70 | 1.32 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 2HR | 18.67 | 1.2500 | 4.80 | 2.13 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 4HR | 17.02 | 2.7167 | 5.92 | 3.03 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 8HR | 20.57 | 4.2167 | 7.44 | 4.33 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-02 4HR | 8.49 | 12.1500 | 10.80 | 7.37 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 1HR | 25.23 | 1.0500 | 4.50 | 1.90 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 2HR | 27.33 | 1.2333 | 6.00 | 3.09 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 4HR | 24.19 | 2.6667 | 7.52 | 4.40 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 8HR | 28.76 | 4.2000 | 9.44 | 6.12 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-02 4HR | 11.23 | 12.1500 | 13.44 | 9.85 | 9.9320 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0004 | 025YR-00 1HR | 1.42 | 0.6833 | 3.70 | 0.58 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 2HR | 1.49 | 0.8500 | 4.80 | 1.12 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 4HR | 1.12 | 2.5167 | 5.92 | 1.79 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 8HR | 1.52 | 4.0167 | 7.44 | 2.82 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-02 4HR | 0.59 | 12.0000 | 10.80 | 5.42 | 0.8710 | 59.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0004 | 100YR-00 1HR | 2.29 | 0.6667 | 4.50 | 0.96 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 2HR | 2.45 | 0.8333 | 6.00 | 1.84 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 4HR | 1.70 | 2.5167 | 7.52 | 2.88 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 8HR | 2.25 | 4.0000 | 9.44 | 4.33 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-02 4HR | 0.82 | 12.0000 | 13.44 | 7.65 | 0.8710 | 59.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0005 | 025YR-00 1HR | 4.07 | 0.6833 | 3.70 | 1.32 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 2HR | 3.89 | 0.8667 | 4.80 | 2.13 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 4HR | 2.45 | 2.0667 | 5.92 | 3.03 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 8HR | 3.10 | 4.0167 | 7.44 | 4.33 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-02 4HR | 1.14 | 12.0000 | 10.80 | 7.37 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 1HR | 5.77 | 0.6833 | 4.50 | 1.90 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 2HR | 5.62 | 0.8500 | 6.00 | 3.10 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 4HR | 3.54 | 2.0667 | 7.52 | 4.40 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 8HR | 4.25 | 4.0167 | 9.44 | 6.12 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-02 4HR | 1.50 | 12.0000 | 13.44 | 9.86 | 1.2840 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0006 | 025YR-00 1HR | 3.75 | 0.7000 | 3.70 | 1.32 | 1.2100 | 73.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0006 | 025YR-00 2HR | 3.60 | 0.8833 | 4.80 | 2.13 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-00 4HR | 2.29 | 2.0833 | 5.92 | 3.03 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-00 8HR | 2.91 | 4.0167 | 7.44 | 4.32 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-02 4HR | 1.07 | 12.0167 | 10.80 | 7.36 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 1HR | 5.32 | 0.6833 | 4.50 | 1.90 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 2HR | 5.21 | 0.8667 | 6.00 | 3.09 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 4HR | 3.31 | 2.0667 | 7.52 | 4.39 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 8HR | 3.99 | 4.0167 | 9.44 | 6.11 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-02 4HR | 1.41 | 12.0000 | 13.44 | 9.85 | 1.2100 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0007 | 025YR-00 1HR | 9.55 | 1.1833 | 3.70 | 0.90 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 2HR | 11.38 | 1.4667 | 4.80 | 1.60 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 4HR | 13.78 | 3.1000 | 5.92 | 2.39 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 8HR | 16.04 | 4.3833 | 7.44 | 3.56 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-02 4HR | 8.59 | 12.3333 | 10.80 | 6.41 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 1HR | 14.56 | 1.1667 | 4.50 | 1.38 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 2HR | 17.65 | 1.4333 | 6.00 | 2.45 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 4HR | 20.54 | 3.0333 | 7.52 | 3.63 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 8HR | 23.74 | 4.3667 | 9.44 | 5.23 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-02 4HR | 11.79 | 12.3167 | 13.44 | 8.79 | 12.7470 | 66.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0008 | 025YR-00 1HR | 7.56 | 1.0667 | 3.70 | 0.86 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 2HR | 8.55 | 1.2833 | 4.80 | 1.53 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 4HR | 9.87 | 2.8833 | 5.92 | 2.30 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 8HR | 11.91 | 4.2667 | 7.44 | 3.46 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-02 4HR | 5.95 | 12.2167 | 10.80 | 6.27 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 1HR | 11.61 | 1.0500 | 4.50 | 1.33 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 2HR | 13.43 | 1.2667 | 6.00 | 2.36 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 4HR | 14.85 | 2.8167 | 7.52 | 3.52 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 8HR | 17.67 | 4.2500 | 9.44 | 5.10 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-02 4HR | 8.18 | 12.2000 | 13.44 | 8.63 | 8.6110 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0009 | 025YR-00 1HR | 10.25 | 0.8833 | 3.70 | 1.20 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 2HR | 10.22 | 1.0333 | 4.80 | 1.97 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 4HR | 7.99 | 2.6000 | 5.92 | 2.84 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 8HR | 10.14 | 4.0833 | 7.44 | 4.10 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-02 4HR | 3.95 | 12.0500 | 10.80 | 7.10 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 1HR | 14.81 | 0.8667 | 4.50 | 1.75 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 2HR | 15.15 | 1.0167 | 6.00 | 2.90 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 4HR | 11.35 | 2.5667 | 7.52 | 4.17 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 8HR | 14.20 | 4.0833 | 9.44 | 5.86 | 4.6530 | 71.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0009 | 100YR-02 4HR | 5.26 | 12.0500 | 13.44 | 9.56 | 4.6530 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0010 | 025YR-00 1HR | 3.56 | 0.9000 | 3.70 | 1.20 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 2HR | 3.57 | 1.0667 | 4.80 | 1.97 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 4HR | 2.87 | 2.6167 | 5.92 | 2.84 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 8HR | 3.62 | 4.1000 | 7.44 | 4.10 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-02 4HR | 1.42 | 12.0667 | 10.80 | 7.10 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 1HR | 5.15 | 0.8833 | 4.50 | 1.75 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 2HR | 5.30 | 1.0500 | 6.00 | 2.90 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 4HR | 4.08 | 2.5833 | 7.52 | 4.17 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 8HR | 5.08 | 4.0833 | 9.44 | 5.86 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-02 4HR | 1.89 | 12.0500 | 13.44 | 9.55 | 1.6790 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0011 | 025YR-00 1HR | 10.48 | 0.8667 | 3.70 | 1.26 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 2HR | 10.36 | 1.0167 | 4.80 | 2.05 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 4HR | 7.87 | 2.5833 | 5.92 | 2.93 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 8HR | 9.98 | 4.0833 | 7.44 | 4.22 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-02 4HR | 3.85 | 12.0500 | 10.80 | 7.23 | 4.4563 | 72.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0011 | 100YR-00 1HR | 15.02 | 0.8500 | 4.50 | 1.82 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 2HR | 15.24 | 1.0167 | 6.00 | 3.00 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 4HR | 11.14 | 2.2500 | 7.52 | 4.28 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 8HR | 13.89 | 4.0667 | 9.44 | 5.99 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-02 4HR | 5.10 | 12.0333 | 13.44 | 9.71 | 4.4563 | 72.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0012 | 025YR-00 1HR | 2.61 | 0.6333 | 3.70 | 0.86 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 2HR | 2.58 | 0.8000 | 4.80 | 1.52 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 4HR | 1.67 | 2.5000 | 5.92 | 2.30 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 8HR | 2.22 | 4.0000 | 7.44 | 3.45 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-02 4HR | 0.83 | 12.0000 | 10.80 | 6.27 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 1HR | 3.95 | 0.6167 | 4.50 | 1.33 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 2HR | 3.97 | 0.8000 | 6.00 | 2.35 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 4HR | 2.46 | 2.0167 | 7.52 | 3.52 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 8HR | 3.16 | 4.0000 | 9.44 | 5.10 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-02 4HR | 1.13 | 12.0000 | 13.44 | 8.62 | 1.0670 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0013 | 025YR-00 1HR | 11.64 | 0.7500 | 3.70 | 0.97 | 5.1800 | 67.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0013 | 025YR-00 2HR | 11.62 | 0.9167 | 4.80 | 1.67 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-00 4HR | 8.25 | 2.5500 | 5.92 | 2.47 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-00 8HR | 10.84 | 4.0333 | 7.44 | 3.67 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-02 4HR | 4.14 | 12.0167 | 10.80 | 6.54 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 1HR | 17.31 | 0.7333 | 4.50 | 1.47 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 2HR | 17.72 | 0.9000 | 6.00 | 2.53 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 4HR | 11.94 | 2.1167 | 7.52 | 3.73 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 8HR | 15.38 | 4.0333 | 9.44 | 5.35 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-02 4HR | 5.59 | 12.0167 | 13.44 | 8.94 | 5.1800 | 67.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0014 | 025YR-00 1HR | 1.20 | 0.6833 | 3.70 | 0.53 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 2HR | 1.27 | 0.8500 | 4.80 | 1.06 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 4HR | 0.97 | 2.5167 | 5.92 | 1.71 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 8HR | 1.32 | 4.0000 | 7.44 | 2.72 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-02 4HR | 0.51 | 12.0000 | 10.80 | 5.28 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 1HR | 1.98 | 0.6500 | 4.50 | 0.91 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 2HR | 2.13 | 0.8333 | 6.00 | 1.76 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 4HR | 1.48 | 2.5167 | 7.52 | 2.77 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 8HR | 1.98 | 4.0000 | 9.44 | 4.20 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-02 4HR | 0.72 | 12.0000 | 13.44 | 7.49 | 0.7780 | 58.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0015 | 025YR-00 1HR | 4.84 | 0.7500 | 3.70 | 0.76 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 2HR | 4.94 | 0.9167 | 4.80 | 1.39 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 4HR | 3.74 | 2.5500 | 5.92 | 2.12 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 8HR | 4.97 | 4.0333 | 7.44 | 3.24 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-02 4HR | 1.93 | 12.0167 | 10.80 | 5.99 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 1HR | 7.47 | 0.7333 | 4.50 | 1.20 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 2HR | 7.85 | 0.9000 | 6.00 | 2.18 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 4HR | 5.51 | 2.5333 | 7.52 | 3.30 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 8HR | 7.22 | 4.0333 | 9.44 | 4.84 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-02 4HR | 2.66 | 12.0167 | 13.44 | 8.31 | 2.6190 | 63.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0016 | 025YR-00 1HR | 3.26 | 0.8333 | 3.70 | 0.71 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 2HR | 3.35 | 0.9833 | 4.80 | 1.32 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 4HR | 2.86 | 2.5833 | 5.92 | 2.04 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 8HR | 3.77 | 4.0667 | 7.44 | 3.13 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-02 4HR | 1.51 | 12.0333 | 10.80 | 5.85 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 1HR | 5.11 | 0.8167 | 4.50 | 1.14 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 2HR | 5.43 | 0.9667 | 6.00 | 2.09 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 4HR | 4.28 | 2.5667 | 7.52 | 3.19 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 8HR | 5.55 | 4.0667 | 9.44 | 4.71 | 2.1190 | 62.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0016 | 100YR-02 4HR | 2.10 | 12.0333 | 13.44 | 8.15 | 2.1190 | 62.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0017 | 025YR-00 1HR | 3.77 | 0.7833 | 3.70 | 1.20 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 2HR | 3.69 | 0.9333 | 4.80 | 1.97 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 4HR | 2.56 | 2.5500 | 5.92 | 2.84 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 8HR | 3.32 | 4.0500 | 7.44 | 4.10 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-02 4HR | 1.25 | 12.0167 | 10.80 | 7.10 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 1HR | 5.43 | 0.7667 | 4.50 | 1.75 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 2HR | 5.45 | 0.9333 | 6.00 | 2.90 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 4HR | 3.71 | 2.1333 | 7.52 | 4.17 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 8HR | 4.62 | 4.0333 | 9.44 | 5.86 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-02 4HR | 1.67 | 12.0167 | 13.44 | 9.56 | 1.4650 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0018 | 025YR-00 1HR | 6.85 | 0.9833 | 3.70 | 0.71 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 2HR | 7.40 | 1.1667 | 4.80 | 1.32 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 4HR | 7.28 | 2.7000 | 5.92 | 2.04 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 8HR | 9.32 | 4.1500 | 7.44 | 3.13 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-02 4HR | 3.98 | 12.1000 | 10.80 | 5.85 | 5.6790 | 62.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0018 | 100YR-00 1HR | 10.82 | 0.9667 | 4.50 | 1.14 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 2HR | 11.98 | 1.1333 | 6.00 | 2.09 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 4HR | 11.03 | 2.6667 | 7.52 | 3.20 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 8HR | 13.88 | 4.1500 | 9.44 | 4.71 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-02 4HR | 5.52 | 12.1000 | 13.44 | 8.15 | 5.6790 | 62.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [EXISTING CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| POND BASIN | 025YR-00 1HR | 8.57 | 0.6667 | 3.70 | 1.58 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 2HR | 8.42 | 0.8500 | 4.80 | 2.45 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 4HR | 5.66 | 2.0500 | 5.92 | 3.40 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 8HR | 7.07 | 4.0000 | 7.44 | 4.75 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-02 4HR | 2.59 | 12.0000 | 10.80 | 7.88 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 1HR | 11.85 | 0.6500 | 4.50 | 2.21 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 2HR | 11.91 | 0.8333 | 6.00 | 3.47 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 4HR | 8.00 | 2.0500 | 7.52 | 4.83 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 8HR | 9.54 | 4.0000 | 9.44 | 6.60 | 2.7690 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-02 4HR | 3.36 | 12.0000 | 13.44 | 10.40 | 2.7690 | 77.0 | 0.00 | 0.00 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|----------------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONCRETE SWALE | 025YR-001HR | 59.89 | 58.91 | 0.0004 | 31.02 | 0.00 | 0 | 4.0008 | 0.2793 | 1.4421 | 0.0000 |
| CONCRETE SWALE | 025YR-002HR | 59.89 | 59.40 | 0.0008 | 57.96 | 0.00 | 0 | 8.0035 | 7.6824 | 1.8184 | 0.0000 |
| CONCRETE SWALE | 025YR-004HR | 59.89 | 59.88 | 0.0010 | 87.47 | 0.00 | 0 | 11.9990 | 0.7194 | 3.1309 | 1.6998 |
| CONCRETE SWALE | 025YR-008HR | 59.89 | 59.88 | 0.0010 | 96.30 | 0.01 | 0 | 11.9992 | 0.7194 | 4.3130 | 1.9439 |
| CONCRETE SWALE | 025YR-024HR | 59.89 | 59.88 | 0.0010 | 52.88 | 0.01 | 0 | 12.0002 | 0.7194 | 12.3029 | 1.9503 |
| CONCRETE SWALE | 100YR-001HR | 59.89 | 58.91 | 0.0004 | 63.27 | 0.00 | 0 | 4.0002 | 0.2511 | 1.3202 | 0.0000 |
| CONCRETE SWALE | 100YR-002HR | 59.89 | 59.40 | 0.0008 | 97.94 | 0.00 | 0 | 8.0016 | 7.7720 | 1.4557 | 0.0000 |
| CONCRETE SWALE | 100YR-004HR | 59.89 | 59.88 | 0.0010 | 101.95 | 0.00 | 0 | 12.0003 | 0.7194 | 2.6111 | 0.0000 |
| CONCRETE SWALE | 100YR-008HR | 59.89 | 59.88 | 0.0010 | 104.69 | 0.01 | 0 | 11.9998 | 0.7194 | 4.0810 | 1.9419 |
| CONCRETE SWALE | 100YR-024HR | 59.89 | 59.88 | 0.0010 | 73.26 | 0.01 | 0 | 12.0001 | 0.7194 | 12.2339 | 1.9503 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|----------------|-------------|--------------------|---------------------|----------------------------------|
| CONCRETE SWALE | 025YR-001HR | 146018 | 0 | 146018 |
| CONCRETE SWALE | 025YR-002HR | 359296 | 0 | 359296 |
| CONCRETE SWALE | 025YR-004HR | 592541 | 0 | 592541 |
| CONCRETE SWALE | 025YR-008HR | 946223 | 16 | 946207 |
| CONCRETE SWALE | 025YR-024HR | 1773842 | 54 | 1773788 |
| CONCRETE SWALE | 100YR-001HR | 280712 | 0 | 280712 |
| CONCRETE SWALE | 100YR-002HR | 577034 | 0 | 577034 |
| CONCRETE SWALE | 100YR-004HR | 821207 | 0 | 821207 |

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|----------------|-------------|--------------------|---------------------|----------------------------------|
| CONCRETE SWALE | 100YR-008HR | 1231942 | 13 | 1231930 |
| CONCRETE SWALE | 100YR-024HR | 2425512 | 45 | 2425467 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|--------------------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONTR OL STRUCTURE | 025YR-001HR | 66.30 | 63.10 | 0.0010 | 31.02 | 31.02 | 100 | 1.4411 | 1.0726 | 1.4406 | 1.4421 |
| CONTR OL STRUCTURE | 025YR-002HR | 66.30 | 64.25 | 0.0012 | 57.96 | 57.96 | 100 | 1.8162 | 1.1875 | 1.8184 | 1.8184 |
| CONTR OL STRUCTURE | 025YR-004HR | 66.30 | 65.51 | 0.0011 | 84.72 | 84.72 | 100 | 3.1309 | 2.2955 | 3.1294 | 3.1319 |
| CONTR OL STRUCTURE | 025YR-008HR | 66.30 | 65.87 | 0.0012 | 88.82 | 88.82 | 100 | 4.3123 | 3.7128 | 4.3108 | 4.3130 |
| CONTR OL STRUCTURE | 025YR-024HR | 66.30 | 64.06 | 0.0010 | 52.88 | 52.88 | 100 | 12.3020 | 9.1472 | 12.3024 | 12.3029 |
| CONTR OL STRUCTURE | 100YR-001HR | 66.30 | 64.43 | 0.0017 | 63.27 | 63.27 | 100 | 1.3185 | 0.9197 | 1.3191 | 1.3202 |
| CONTR OL STRUCTURE | 100YR-002HR | 66.30 | 65.93 | 0.0019 | 89.46 | 89.46 | 100 | 1.4548 | 1.0135 | 1.4536 | 1.4565 |
| CONTR OL STRUCTURE | 100YR-004HR | 66.30 | 66.04 | 0.0014 | 90.75 | 90.75 | 100 | 2.6111 | 2.0559 | 2.6098 | 2.6119 |
| CONTR OL STRUCTURE | 100YR-008HR | 66.30 | 66.11 | 0.0013 | 91.53 | 91.53 | 100 | 4.0810 | 3.4706 | 4.0798 | 4.0819 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-------------------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONTROL STRUCTURE | 100YR-024HR | 66.30 | 64.76 | 0.0010 | 73.26 | 73.26 | 100 | 12.2335 | 8.0553 | 12.2315 | 12.2339 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-------------------|-------------|---------------------------------|----------------------------------|---|
| CONTROL STRUCTURE | 025YR-001HR | 146111 | 146018 | 93 |
| CONTROL STRUCTURE | 025YR-002HR | 359379 | 359296 | 83 |
| CONTROL STRUCTURE | 025YR-004HR | 589420 | 589291 | 129 |
| CONTROL STRUCTURE | 025YR-008HR | 933261 | 933198 | 63 |
| CONTROL STRUCTURE | 025YR-024HR | 1773887 | 1773842 | 45 |
| CONTROL STRUCTURE | 100YR-001HR | 280822 | 280712 | 110 |
| CONTROL STRUCTURE | 100YR-002HR | 563169 | 563082 | 87 |
| CONTROL STRUCTURE | 100YR-004HR | 784328 | 784196 | 132 |
| CONTROL STRUCTURE | 100YR-008HR | 1180415 | 1180352 | 63 |
| CONTROL STRUCTURE | 100YR-024HR | 2425557 | 2425512 | 45 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0001 | 025YR-001HR | 68.21 | 65.31 | 0.0016 | 11.30 | 11.30 | 100 | 0.9511 | 1.5063 | 0.9500 | 0.9507 |
| I-0001 | 025YR-002HR | 68.21 | 66.04 | -0.0011 | 12.06 | 12.06 | 100 | 1.7488 | 2.5049 | 1.1243 | 1.1262 |
| I-0001 | 025YR-004HR | 68.21 | 66.85 | 0.0016 | 11.12 | 11.04 | 100 | 3.0669 | 4.3847 | 2.6392 | 2.6527 |
| I-0001 | 025YR-008HR | 68.21 | 67.27 | 0.0014 | 14.06 | 13.98 | 100 | 4.2405 | 6.8832 | 4.1064 | 4.1176 |
| I-0001 | 025YR-024HR | 68.21 | 65.87 | -0.0017 | 6.16 | 5.93 | 100 | 12.2556 | 17.1379 | 11.9643 | 12.0843 |
| I-0001 | 100YR-001HR | 68.21 | 66.36 | -0.0011 | 17.19 | 17.19 | 100 | 1.1410 | 1.7070 | 0.9347 | 0.9374 |
| I-0001 | 100YR-002HR | 68.21 | 67.36 | -0.0010 | 18.72 | 18.59 | 100 | 1.3615 | 2.6782 | 1.0826 | 1.0681 |
| I-0001 | 100YR-0 | 68.21 | 67.69 | -0.0011 | 16.56 | 16.56 | 100 | 2.5940 | 4.4644 | 2.5877 | 2.5929 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 04HR | | | | | | | | | | |
| I-0001 | 100YR-008HR | 68.21 | 68.22 | -0.0017 | 20.59 | 20.59 | 100 | 4.0931 | 7.3506 | 4.0889 | 4.0964 |
| I-0001 | 100YR-024HR | 68.21 | 66.53 | -0.0017 | 8.06 | 8.05 | 100 | 12.1789 | 20.2315 | 12.0553 | 12.0562 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0001 | 025YR-001HR | 25687 | 25641 | 46 |
| I-0001 | 025YR-002HR | 44873 | 44846 | 28 |
| I-0001 | 025YR-004HR | 67059 | 67028 | 31 |
| I-0001 | 025YR-008HR | 100100 | 100042 | 58 |
| I-0001 | 025YR-024HR | 180529 | 180207 | 322 |
| I-0001 | 100YR-001HR | 39326 | 39272 | 53 |
| I-0001 | 100YR-002HR | 68697 | 68684 | 13 |
| I-0001 | 100YR-004HR | 101874 | 101858 | 16 |
| I-0001 | 100YR-008HR | 146914 | 146873 | 41 |
| I-0001 | 100YR-024HR | 247242 | 247180 | 62 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0002 | 025YR-001HR | 68.21 | 65.92 | -0.0015 | 10.30 | 10.30 | 100 | 0.9685 | 1.5067 | 0.9667 | 0.9681 |
| I-0002 | 025YR-002HR | 68.21 | 66.08 | -0.0011 | 10.88 | 10.88 | 100 | 1.7255 | 2.2641 | 1.1500 | 1.1502 |
| I-0002 | 025YR-004HR | 68.21 | 66.94 | -0.0014 | 10.12 | 10.05 | 100 | 3.0525 | 4.3847 | 2.6831 | 2.6837 |
| I-0002 | 025YR-008HR | 68.21 | 67.46 | -0.0014 | 12.85 | 12.78 | 100 | 4.2336 | 6.8832 | 4.1500 | 4.1522 |
| I-0002 | 025YR-024HR | 68.21 | 65.90 | 0.0017 | 5.35 | 5.90 | 100 | 12.2064 | 17.1379 | 12.0999 | 17.1128 |
| I-0002 | 100YR-001HR | 68.21 | 66.56 | -0.0010 | 15.74 | 15.73 | 100 | 1.1000 | 1.7795 | 0.9500 | 0.9522 |
| I-0002 | 100YR-002HR | 68.21 | 67.60 | -0.0010 | 17.07 | 16.88 | 100 | 1.3273 | 2.7115 | 1.1167 | 1.0826 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0002 | 100YR-004HR | 68.21 | 67.97 | -0.0010 | 15.00 | 15.01 | 100 | 2.6044 | 4.1456 | 2.6500 | 2.6505 |
| I-0002 | 100YR-008HR | 68.21 | 68.66 | 0.0015 | 18.74 | 18.75 | 100 | 4.1015 | 7.3506 | 4.1333 | 4.1355 |
| I-0002 | 100YR-024HR | 68.21 | 66.60 | 0.0017 | 7.32 | 7.31 | 100 | 12.1774 | 20.2315 | 12.0834 | 12.0971 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0002 | 025YR-001HR | 22309 | 22331 | -22 |
| I-0002 | 025YR-002HR | 39515 | 39560 | -44 |
| I-0002 | 025YR-004HR | 59544 | 59596 | -52 |
| I-0002 | 025YR-008HR | 89485 | 89559 | -74 |
| I-0002 | 025YR-024HR | 162472 | 162823 | -350 |
| I-0002 | 100YR-001HR | 34542 | 34564 | -23 |
| I-0002 | 100YR-002HR | 61049 | 61075 | -26 |
| I-0002 | 100YR-004HR | 91129 | 91168 | -38 |
| I-0002 | 100YR-008HR | 132091 | 132150 | -60 |
| I-0002 | 100YR-024HR | 223605 | 223719 | -114 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0003 | 025YR-001HR | 74.96 | 72.15 | -0.0010 | 35.34 | 35.34 | 693 | 1.0713 | 1.3145 | 1.0667 | 1.0707 |
| I-0003 | 025YR-002HR | 74.96 | 72.78 | -0.0010 | 40.40 | 40.40 | 694 | 1.3033 | 1.7275 | 1.3001 | 1.3038 |
| I-0003 | 025YR-004HR | 74.96 | 73.16 | 0.0010 | 43.10 | 43.10 | 693 | 2.8600 | 1.1804 | 2.8550 | 2.8600 |
| I-0003 | 025YR-008HR | 74.96 | 75.57 | -0.0010 | 50.91 | 50.88 | 691 | 4.2673 | 4.5029 | 4.2334 | 4.2514 |
| I-0003 | 025YR-024HR | 74.96 | 71.13 | 0.0009 | 24.83 | 24.83 | 690 | 12.1167 | 3.9117 | 12.1162 | 12.1167 |
| I-0003 | 100YR-001HR | 74.96 | 75.05 | -0.0010 | 52.15 | 52.11 | 695 | 1.0741 | 1.2022 | 1.0667 | 1.0730 |
| I-0003 | 100YR-0 | 74.96 | 79.10 | 0.0010 | 60.60 | 60.48 | 695 | 1.3339 | 1.0453 | 1.2918 | 1.3048 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 02HR | | | | | | | | | | |
| I-0003 | 100YR-004HR | 74.96 | 80.30 | -0.0010 | 62.63 | 62.63 | 694 | 2.8521 | 3.0027 | 2.8369 | 2.8550 |
| I-0003 | 100YR-008HR | 74.96 | 84.07 | -0.0010 | 70.94 | 70.93 | 691 | 4.3006 | 4.4564 | 4.2834 | 4.3027 |
| I-0003 | 100YR-024HR | 74.96 | 71.96 | 0.0010 | 33.62 | 33.62 | 691 | 12.1190 | 3.3876 | 12.1165 | 12.1181 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0003 | 025YR-001HR | 127806 | 127702 | 105 |
| I-0003 | 025YR-002HR | 217600 | 217503 | 97 |
| I-0003 | 025YR-004HR | 318916 | 318827 | 88 |
| I-0003 | 025YR-008HR | 467943 | 467871 | 72 |
| I-0003 | 025YR-024HR | 825242 | 825251 | -10 |
| I-0003 | 100YR-001HR | 190857 | 190628 | 229 |
| I-0003 | 100YR-002HR | 326410 | 326300 | 111 |
| I-0003 | 100YR-004HR | 476057 | 475971 | 87 |
| I-0003 | 100YR-008HR | 677208 | 677147 | 61 |
| I-0003 | 100YR-024HR | 1121150 | 1121161 | -11 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0004 | 025YR-001HR | 68.85 | 66.84 | -0.0010 | 35.45 | 35.44 | 505 | 1.0722 | 3.9626 | 1.0691 | 1.0722 |
| I-0004 | 025YR-002HR | 68.85 | 67.54 | -0.0010 | 40.97 | 40.97 | 505 | 1.3064 | 2.1776 | 1.3027 | 1.3064 |
| I-0004 | 025YR-004HR | 68.85 | 68.93 | -0.0010 | 43.94 | 43.91 | 506 | 3.0026 | 3.5509 | 2.8652 | 2.8700 |
| I-0004 | 025YR-008HR | 68.85 | 70.07 | -0.0010 | 51.56 | 51.53 | 505 | 4.2773 | 5.5404 | 4.2397 | 4.2532 |
| I-0004 | 025YR-024HR | 68.85 | 66.56 | -0.0010 | 25.34 | 25.33 | 496 | 12.2151 | 27.5811 | 12.0933 | 12.0947 |
| I-0004 | 100YR-001HR | 68.85 | 69.28 | 0.0011 | 52.27 | 52.27 | 505 | 1.0745 | 0.7227 | 1.0698 | 1.0745 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0004 | 100YR-002HR | 68.85 | 71.38 | 0.0013 | 61.33 | 61.24 | 505 | 1.3621 | 0.8247 | 1.3023 | 1.3084 |
| I-0004 | 100YR-004HR | 68.85 | 71.96 | -0.0010 | 63.86 | 63.86 | 506 | 2.8499 | 4.0925 | 2.8556 | 2.8598 |
| I-0004 | 100YR-008HR | 68.85 | 73.37 | 0.0010 | 71.87 | 71.88 | 505 | 4.2944 | 3.6604 | 4.3014 | 4.3052 |
| I-0004 | 100YR-024HR | 68.85 | 67.81 | 0.0010 | 34.33 | 34.32 | 495 | 12.1398 | 11.5460 | 12.0900 | 12.0929 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0004 | 025YR-001HR | 129526 | 129174 | 352 |
| I-0004 | 025YR-002HR | 221056 | 220735 | 321 |
| I-0004 | 025YR-004HR | 324486 | 324209 | 277 |
| I-0004 | 025YR-008HR | 476784 | 476530 | 254 |
| I-0004 | 025YR-024HR | 842385 | 842250 | 135 |
| I-0004 | 100YR-001HR | 193672 | 193244 | 428 |
| I-0004 | 100YR-002HR | 332120 | 331796 | 323 |
| I-0004 | 100YR-004HR | 485065 | 484781 | 284 |
| I-0004 | 100YR-008HR | 690823 | 690578 | 245 |
| I-0004 | 100YR-024HR | 1145353 | 1145210 | 143 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0005 | 025YR-001HR | 82.25 | 77.58 | 0.0010 | 17.72 | 17.71 | 438 | 1.0824 | 0.3922 | 1.0794 | 1.0828 |
| I-0005 | 025YR-002HR | 82.25 | 78.29 | -0.0010 | 22.14 | 22.14 | 438 | 1.3825 | 5.7695 | 1.3775 | 1.3826 |
| I-0005 | 025YR-004HR | 82.25 | 79.23 | 0.0009 | 26.87 | 26.87 | 438 | 3.0343 | 1.1457 | 3.0295 | 3.0349 |
| I-0005 | 025YR-008HR | 82.25 | 80.35 | -0.0010 | 30.49 | 30.56 | 438 | 4.2826 | 5.1391 | 4.3086 | 4.3408 |
| I-0005 | 025YR-024HR | 82.25 | 77.40 | -0.0009 | 16.35 | 16.35 | 438 | 12.1096 | 27.0343 | 12.1020 | 12.1050 |
| I-0005 | 100YR-0 | 82.25 | 79.25 | 0.0010 | 26.96 | 26.96 | 438 | 1.0877 | 0.3630 | 1.0790 | 1.0877 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 01HR | | | | | | | | | | |
| I-0005 | 100YR-002HR | 82.25 | 85.08 | -0.0010 | 34.10 | 34.23 | 438 | 1.3487 | 1.5034 | 1.3573 | 1.3980 |
| I-0005 | 100YR-004HR | 82.25 | 88.31 | -0.0010 | 39.79 | 39.90 | 438 | 2.9255 | 3.2826 | 3.0169 | 3.0447 |
| I-0005 | 100YR-008HR | 82.25 | 93.71 | 0.0012 | 44.11 | 44.41 | 438 | 4.3706 | 3.8249 | 4.4913 | 4.5195 |
| I-0005 | 100YR-024HR | 82.25 | 78.34 | -0.0009 | 22.40 | 22.40 | 438 | 12.1053 | 27.1717 | 12.0998 | 12.1061 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0005 | 025YR-001HR | 80296 | 80271 | 25 |
| I-0005 | 025YR-002HR | 140808 | 140852 | -44 |
| I-0005 | 025YR-004HR | 209692 | 209746 | -54 |
| I-0005 | 025YR-008HR | 311970 | 312004 | -33 |
| I-0005 | 025YR-024HR | 559528 | 559541 | -13 |
| I-0005 | 100YR-001HR | 122459 | 122384 | 75 |
| I-0005 | 100YR-002HR | 214828 | 214848 | -19 |
| I-0005 | 100YR-004HR | 317546 | 317592 | -46 |
| I-0005 | 100YR-008HR | 456672 | 456693 | -20 |
| I-0005 | 100YR-024HR | 765861 | 765872 | -11 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0006 | 025YR-001HR | 103.32 | 98.52 | 0.0010 | 17.23 | 17.23 | 107 | 1.1084 | 0.4002 | 1.1047 | 1.1085 |
| I-0006 | 025YR-002HR | 103.32 | 99.08 | 0.0010 | 20.88 | 20.88 | 107 | 1.3887 | 0.4184 | 1.3858 | 1.3904 |
| I-0006 | 025YR-004HR | 103.32 | 99.88 | -0.0010 | 25.17 | 25.17 | 107 | 3.0356 | 7.4070 | 3.0329 | 3.0371 |
| I-0006 | 025YR-008HR | 103.32 | 100.73 | 0.0009 | 29.09 | 29.09 | 107 | 4.3199 | 2.1223 | 4.3161 | 4.3202 |
| I-0006 | 025YR-024HR | 103.32 | 98.29 | 0.0009 | 15.34 | 15.34 | 107 | 12.1932 | 4.7151 | 12.2080 | 12.1938 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0006 | 100YR-001HR | 103.32 | 100.12 | 0.0010 | 26.34 | 26.34 | 107 | 1.1046 | 0.3724 | 1.1007 | 1.1050 |
| I-0006 | 100YR-002HR | 103.32 | 101.67 | 0.0010 | 32.36 | 32.34 | 107 | 1.3673 | 0.3633 | 1.3517 | 1.3617 |
| I-0006 | 100YR-004HR | 103.32 | 103.80 | 0.0010 | 37.38 | 37.38 | 107 | 2.9978 | 1.0374 | 2.9782 | 2.9937 |
| I-0006 | 100YR-008HR | 103.32 | 113.30 | 0.0010 | 42.23 | 42.09 | 107 | 4.4111 | 4.0833 | 4.3521 | 4.4036 |
| I-0006 | 100YR-024HR | 103.32 | 99.11 | 0.0010 | 21.05 | 21.05 | 107 | 12.1807 | 3.9382 | 12.1789 | 12.1811 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0006 | 025YR-001HR | 74295 | 74266 | 29 |
| I-0006 | 025YR-002HR | 130896 | 130895 | 0 |
| I-0006 | 025YR-004HR | 195580 | 195579 | 0 |
| I-0006 | 025YR-008HR | 291804 | 291804 | 0 |
| I-0006 | 025YR-024HR | 525159 | 525159 | 0 |
| I-0006 | 100YR-001HR | 113793 | 113758 | 35 |
| I-0006 | 100YR-002HR | 200414 | 200414 | 0 |
| I-0006 | 100YR-004HR | 297057 | 297056 | 0 |
| I-0006 | 100YR-008HR | 428152 | 428152 | 0 |
| I-0006 | 100YR-024HR | 719904 | 719904 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0007 | 025YR-001HR | 103.62 | 99.34 | -0.0006 | 16.79 | 16.79 | 187 | 1.1345 | 1.7478 | 1.1337 | 1.1348 |
| I-0007 | 025YR-002HR | 103.62 | 99.76 | -0.0008 | 19.68 | 19.68 | 187 | 1.4045 | 5.6082 | 1.3999 | 1.4062 |
| I-0007 | 025YR-004HR | 103.62 | 100.61 | -0.0008 | 23.57 | 23.58 | 186 | 3.0402 | 7.3584 | 3.0484 | 3.0765 |
| I-0007 | 025YR-008HR | 103.62 | 101.75 | -0.0009 | 27.73 | 27.73 | 186 | 4.3224 | 4.8915 | 4.3250 | 4.3339 |
| I-0007 | 025YR-0 | 103.62 | 99.07 | -0.0009 | 14.51 | 14.51 | 182 | 12.2673 | 26.8748 | 12.2726 | 12.2679 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 24HR | | | | | | | | | | |
| I-0007 | 100YR-001HR | 103.62 | 100.99 | 0.0007 | 25.68 | 25.70 | 187 | 1.1093 | 0.8580 | 1.1162 | 1.1253 |
| I-0007 | 100YR-002HR | 103.62 | 102.91 | -0.0010 | 30.65 | 30.64 | 186 | 1.3685 | 2.0125 | 1.3583 | 1.3707 |
| I-0007 | 100YR-004HR | 103.62 | 105.44 | -0.0010 | 35.19 | 35.18 | 186 | 2.9950 | 3.6215 | 2.9666 | 2.9844 |
| I-0007 | 100YR-008HR | 103.62 | 115.45 | 0.0011 | 40.73 | 40.48 | 185 | 4.4085 | 4.0834 | 4.3333 | 4.3695 |
| I-0007 | 100YR-024HR | 103.62 | 99.80 | 0.0010 | 19.93 | 19.93 | 182 | 12.2612 | 4.2319 | 12.2569 | 12.2625 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0007 | 025YR-001HR | 68561 | 68508 | 52 |
| I-0007 | 025YR-002HR | 121581 | 121553 | 28 |
| I-0007 | 025YR-004HR | 182316 | 182290 | 26 |
| I-0007 | 025YR-008HR | 272839 | 272821 | 18 |
| I-0007 | 025YR-024HR | 492818 | 492814 | 4 |
| I-0007 | 100YR-001HR | 105519 | 105457 | 62 |
| I-0007 | 100YR-002HR | 186869 | 186833 | 35 |
| I-0007 | 100YR-004HR | 277800 | 277766 | 34 |
| I-0007 | 100YR-008HR | 401328 | 401308 | 20 |
| I-0007 | 100YR-024HR | 676660 | 676654 | 5 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0008 | 025YR-001HR | 106.00 | 103.41 | -0.0009 | 7.56 | 7.56 | 170 | 1.0669 | 3.8318 | 1.0667 | 1.0650 |
| I-0008 | 025YR-002HR | 106.00 | 103.52 | -0.0009 | 8.55 | 8.55 | 170 | 1.3003 | 4.6209 | 1.2834 | 1.2920 |
| I-0008 | 025YR-004HR | 106.00 | 103.67 | -0.0008 | 9.87 | 9.87 | 170 | 2.8884 | 6.3793 | 2.8832 | 2.8797 |
| I-0008 | 025YR-008HR | 106.00 | 103.90 | -0.0009 | 11.91 | 11.91 | 170 | 4.2677 | 10.2652 | 4.2666 | 4.2678 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0008 | 025YR-024HR | 106.00 | 103.22 | 0.0010 | 5.95 | 5.95 | 170 | 12.2151 | 5.2308 | 12.2165 | 12.2151 |
| I-0008 | 100YR-001HR | 106.00 | 103.87 | -0.0010 | 11.61 | 11.61 | 170 | 1.0515 | 3.8996 | 1.0500 | 1.0498 |
| I-0008 | 100YR-002HR | 106.00 | 104.07 | -0.0009 | 13.43 | 13.43 | 170 | 1.2673 | 4.7181 | 1.2667 | 1.2661 |
| I-0008 | 100YR-004HR | 106.00 | 106.22 | -0.0009 | 14.85 | 14.76 | 170 | 2.9838 | 6.4887 | 2.8167 | 2.8529 |
| I-0008 | 100YR-008HR | 106.00 | 116.47 | 0.0011 | 17.67 | 17.10 | 170 | 4.4050 | 4.0834 | 4.2500 | 4.2898 |
| I-0008 | 100YR-024HR | 106.00 | 103.48 | 0.0008 | 8.18 | 8.18 | 170 | 12.2020 | 4.4447 | 12.1998 | 12.1985 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0008 | 025YR-001HR | 26919 | 26914 | 6 |
| I-0008 | 025YR-002HR | 47691 | 47690 | 1 |
| I-0008 | 025YR-004HR | 71863 | 71862 | 1 |
| I-0008 | 025YR-008HR | 108000 | 107995 | 5 |
| I-0008 | 025YR-024HR | 196088 | 196088 | -1 |
| I-0008 | 100YR-001HR | 41680 | 41673 | 7 |
| I-0008 | 100YR-002HR | 73680 | 73673 | 8 |
| I-0008 | 100YR-004HR | 109983 | 109977 | 7 |
| I-0008 | 100YR-008HR | 159420 | 159412 | 8 |
| I-0008 | 100YR-024HR | 269868 | 269869 | -1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0009 | 025YR-001HR | 100.10 | 95.53 | 0.0006 | 10.25 | 10.24 | 151 | 0.8852 | 0.4448 | 0.8833 | 0.8846 |
| I-0009 | 025YR-002HR | 100.10 | 95.52 | 0.0007 | 10.22 | 10.21 | 151 | 1.0462 | 0.4558 | 1.0333 | 1.0473 |
| I-0009 | 025YR-004HR | 100.10 | 95.01 | 0.0010 | 7.99 | 7.99 | 151 | 2.6011 | 1.2072 | 2.5999 | 2.6030 |
| I-0009 | 025YR-0 | 100.10 | 95.50 | 0.0010 | 10.14 | 10.13 | 151 | 4.0947 | 2.1600 | 4.0834 | 4.0950 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|--------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 08HR | | | | | | | | | | |
| I-0009 | 025YR-0 24HR | 100.10 | 94.30 | -0.0009 | 3.95 | 3.95 | 143 | 12.0587 | 24.6679 | 12.0501 | 12.0483 |
| I-0009 | 100YR-0 01HR | 100.10 | 97.78 | 0.0010 | 14.81 | 14.68 | 151 | 0.8940 | 0.8262 | 0.8667 | 0.9020 |
| I-0009 | 100YR-0 02HR | 100.10 | 98.32 | 0.0010 | 15.15 | 15.04 | 151 | 1.0562 | 0.9519 | 1.0167 | 1.0639 |
| I-0009 | 100YR-0 04HR | 100.10 | 95.83 | 0.0009 | 11.35 | 11.34 | 151 | 2.5723 | 1.0907 | 2.5667 | 2.5732 |
| I-0009 | 100YR-0 08HR | 100.10 | 96.96 | 0.0010 | 14.20 | 14.16 | 151 | 4.1039 | 1.9178 | 4.0833 | 4.1131 |
| I-0009 | 100YR-0 24HR | 100.10 | 94.53 | 0.0010 | 5.26 | 5.26 | 143 | 12.0454 | 3.6073 | 12.0497 | 12.0454 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0009 | 025YR-001HR | 20188 | 20187 | 0 |
| I-0009 | 025YR-002HR | 33278 | 33276 | 1 |
| I-0009 | 025YR-004HR | 47964 | 47964 | 1 |
| I-0009 | 025YR-008HR | 69324 | 69323 | 1 |
| I-0009 | 025YR-024HR | 119885 | 119886 | -1 |
| I-0009 | 100YR-001HR | 29552 | 29552 | 0 |
| I-0009 | 100YR-002HR | 49053 | 49052 | 0 |
| I-0009 | 100YR-004HR | 70482 | 70482 | 0 |
| I-0009 | 100YR-008HR | 99018 | 99019 | 0 |
| I-0009 | 100YR-024HR | 161388 | 161388 | -1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|--------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0010 | 025YR-0 01HR | 95.40 | 90.16 | -0.0010 | 17.12 | 17.11 | 346 | 0.8855 | 0.9493 | 0.8767 | 0.8894 |
| I-0010 | 025YR-0 02HR | 95.40 | 90.12 | 0.0010 | 17.07 | 17.06 | 346 | 1.0451 | 0.9277 | 1.0363 | 1.0480 |
| I-0010 | 025YR-0 04HR | 95.40 | 89.07 | 0.0010 | 13.41 | 13.41 | 345 | 2.5906 | 1.2204 | 2.5857 | 2.5850 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0010 | 025YR-008HR | 95.40 | 90.03 | -0.0010 | 17.01 | 17.00 | 346 | 4.0990 | 4.1874 | 4.0873 | 4.0981 |
| I-0010 | 025YR-024HR | 95.40 | 88.30 | 0.0010 | 6.62 | 6.62 | 345 | 12.0581 | 4.1300 | 12.0501 | 12.0549 |
| I-0010 | 100YR-001HR | 95.40 | 94.05 | -0.0010 | 24.40 | 24.42 | 346 | 0.8898 | 1.0927 | 0.8839 | 0.9029 |
| I-0010 | 100YR-002HR | 95.40 | 94.40 | 0.0010 | 25.01 | 25.02 | 346 | 1.0524 | 0.7907 | 1.0473 | 1.0641 |
| I-0010 | 100YR-004HR | 95.40 | 90.93 | -0.0010 | 19.02 | 19.02 | 345 | 2.5810 | 2.8703 | 2.5696 | 2.5835 |
| I-0010 | 100YR-008HR | 95.40 | 93.48 | -0.0010 | 23.73 | 23.73 | 346 | 4.1009 | 4.4104 | 4.0922 | 4.1072 |
| I-0010 | 100YR-024HR | 95.40 | 88.55 | 0.0009 | 8.81 | 8.81 | 345 | 12.0543 | 3.5405 | 12.0480 | 12.0428 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0010 | 025YR-001HR | 33827 | 33778 | 49 |
| I-0010 | 025YR-002HR | 55761 | 55729 | 32 |
| I-0010 | 025YR-004HR | 80373 | 80354 | 19 |
| I-0010 | 025YR-008HR | 116165 | 116151 | 14 |
| I-0010 | 025YR-024HR | 200892 | 200888 | 5 |
| I-0010 | 100YR-001HR | 49520 | 49465 | 55 |
| I-0010 | 100YR-002HR | 82197 | 82163 | 34 |
| I-0010 | 100YR-004HR | 118107 | 118083 | 24 |
| I-0010 | 100YR-008HR | 165925 | 165908 | 18 |
| I-0010 | 100YR-024HR | 270438 | 270433 | 6 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0011 | 025YR-001HR | 91.20 | 89.42 | 0.0010 | 27.54 | 27.53 | 488 | 0.8845 | 0.7084 | 0.8792 | 0.8845 |
| I-0011 | 025YR-002HR | 91.20 | 89.39 | 0.0010 | 27.38 | 27.38 | 487 | 1.0443 | 0.8467 | 1.0381 | 1.0443 |
| I-0011 | 025YR-0 | 91.20 | 88.19 | 0.0010 | 21.28 | 21.28 | 486 | 2.5914 | 1.1932 | 2.5850 | 2.5917 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 04HR | | | | | | | | | | |
| I-0011 | 025YR-008HR | 91.20 | 89.30 | -0.0010 | 26.97 | 26.97 | 486 | 4.0989 | 4.2443 | 4.0918 | 4.0989 |
| I-0011 | 025YR-024HR | 91.20 | 86.79 | 0.0009 | 10.47 | 10.47 | 486 | 12.0697 | 4.0443 | 12.0549 | 12.0609 |
| I-0011 | 100YR-001HR | 91.20 | 92.55 | -0.0010 | 39.19 | 39.17 | 488 | 0.8870 | 1.1233 | 0.8810 | 0.8870 |
| I-0011 | 100YR-002HR | 91.20 | 92.83 | -0.0010 | 40.05 | 40.03 | 487 | 1.0502 | 1.3982 | 1.0401 | 1.0502 |
| I-0011 | 100YR-004HR | 91.20 | 90.02 | 0.0010 | 30.11 | 30.10 | 487 | 2.5785 | 1.0766 | 2.5710 | 2.5785 |
| I-0011 | 100YR-008HR | 91.20 | 92.06 | 0.0010 | 37.58 | 37.58 | 486 | 4.0993 | 3.3793 | 4.0899 | 4.0993 |
| I-0011 | 100YR-024HR | 91.20 | 87.18 | -0.0009 | 13.92 | 13.91 | 486 | 12.0533 | 12.2740 | 12.0428 | 12.0463 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0011 | 025YR-001HR | 54100 | 54098 | 2 |
| I-0011 | 025YR-002HR | 88876 | 88874 | 3 |
| I-0011 | 025YR-004HR | 127812 | 127810 | 1 |
| I-0011 | 025YR-008HR | 184336 | 184336 | 0 |
| I-0011 | 025YR-024HR | 317922 | 317923 | -1 |
| I-0011 | 100YR-001HR | 78970 | 78968 | 2 |
| I-0011 | 100YR-002HR | 130679 | 130678 | 2 |
| I-0011 | 100YR-004HR | 187390 | 187389 | 0 |
| I-0011 | 100YR-008HR | 262808 | 262808 | -1 |
| I-0011 | 100YR-024HR | 427448 | 427449 | -1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0012 | 025YR-001HR | 76.50 | 72.12 | -0.0009 | 36.07 | 36.05 | 757 | 0.8533 | 1.3010 | 0.8500 | 0.8535 |
| I-0012 | 025YR-002HR | 76.50 | 72.15 | -0.0009 | 36.28 | 36.27 | 756 | 1.0211 | 2.2371 | 1.0169 | 1.0218 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0012 | 025YR-004HR | 76.50 | 71.40 | 0.0010 | 29.37 | 29.37 | 757 | 2.5531 | 1.2590 | 2.5500 | 2.5534 |
| I-0012 | 025YR-008HR | 76.50 | 72.29 | 0.0010 | 37.47 | 37.47 | 756 | 4.0506 | 2.1849 | 4.0466 | 4.0506 |
| I-0012 | 025YR-024HR | 76.50 | 70.20 | 0.0009 | 14.71 | 14.71 | 756 | 12.0380 | 4.1247 | 12.0269 | 12.0383 |
| I-0012 | 100YR-001HR | 76.50 | 74.47 | 0.0009 | 51.98 | 52.02 | 752 | 0.8522 | 0.6301 | 0.8507 | 0.8668 |
| I-0012 | 100YR-002HR | 76.50 | 75.07 | 0.0009 | 53.83 | 53.98 | 756 | 1.0182 | 0.7704 | 1.0333 | 1.0361 |
| I-0012 | 100YR-004HR | 76.50 | 73.08 | 0.0009 | 42.09 | 42.07 | 757 | 2.5582 | 1.1103 | 2.5500 | 2.5568 |
| I-0012 | 100YR-008HR | 76.50 | 76.77 | -0.0010 | 52.79 | 52.76 | 756 | 4.0580 | 8.2902 | 4.0500 | 4.0615 |
| I-0012 | 100YR-024HR | 76.50 | 70.61 | 0.0009 | 19.77 | 19.76 | 755 | 12.0318 | 3.5199 | 12.0182 | 12.0273 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|-----------|-------------|--------------------|---------------------|----------------------------------|
| I-0012 | 025YR-001HR | 70142 | 70035 | 108 |
| I-0012 | 025YR-002HR | 118099 | 118019 | 80 |
| I-0012 | 025YR-004HR | 172595 | 172513 | 83 |
| I-0012 | 025YR-008HR | 252614 | 252500 | 114 |
| I-0012 | 025YR-024HR | 444123 | 444123 | 0 |
| I-0012 | 100YR-001HR | 104354 | 104159 | 195 |
| I-0012 | 100YR-002HR | 176637 | 176450 | 186 |
| I-0012 | 100YR-004HR | 256966 | 256852 | 114 |
| I-0012 | 100YR-008HR | 364815 | 364665 | 150 |
| I-0012 | 100YR-024HR | 602533 | 602513 | 20 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0013 | 025YR-001HR | 68.39 | 67.37 | 0.0010 | 11.64 | 11.63 | 100 | 0.7545 | 0.4202 | 0.7500 | 0.7539 |
| I-0013 | 025YR-0 | 68.39 | 67.37 | 0.0010 | 11.62 | 11.61 | 100 | 0.9178 | 0.4712 | 0.9167 | 0.9170 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 02HR | | | | | | | | | | |
| I-0013 | 025YR-004HR | 68.39 | 67.26 | 0.0010 | 8.25 | 8.25 | 100 | 3.0282 | 1.2432 | 2.5500 | 2.5500 |
| I-0013 | 025YR-008HR | 68.39 | 68.27 | -0.0010 | 10.84 | 10.71 | 100 | 4.1023 | 8.1452 | 4.0334 | 4.0456 |
| I-0013 | 025YR-024HR | 68.39 | 66.49 | -0.0009 | 4.14 | 4.14 | 100 | 12.0191 | 24.2516 | 12.0168 | 12.0176 |
| I-0013 | 100YR-001HR | 68.39 | 68.76 | 0.0010 | 17.31 | 17.07 | 100 | 0.8163 | 0.3854 | 0.7333 | 0.7419 |
| I-0013 | 100YR-002HR | 68.39 | 68.97 | 0.0010 | 17.72 | 17.54 | 100 | 0.9670 | 0.4024 | 0.9000 | 0.9059 |
| I-0013 | 100YR-004HR | 68.39 | 69.28 | 0.0009 | 11.94 | 11.94 | 100 | 2.5547 | 1.1253 | 2.1166 | 2.1082 |
| I-0013 | 100YR-008HR | 68.39 | 70.82 | -0.0010 | 15.38 | 15.33 | 100 | 4.0510 | 8.1604 | 4.0333 | 4.0366 |
| I-0013 | 100YR-024HR | 68.39 | 66.85 | 0.0010 | 5.59 | 5.73 | 100 | 12.0725 | 11.9560 | 12.0166 | 12.0543 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0013 | 025YR-001HR | 18164 | 18164 | 0 |
| I-0013 | 025YR-002HR | 31351 | 31350 | 1 |
| I-0013 | 025YR-004HR | 46502 | 46501 | 1 |
| I-0013 | 025YR-008HR | 68933 | 68933 | 0 |
| I-0013 | 025YR-024HR | 123046 | 123047 | -1 |
| I-0013 | 100YR-001HR | 27560 | 27560 | 0 |
| I-0013 | 100YR-002HR | 47635 | 47633 | 3 |
| I-0013 | 100YR-004HR | 70159 | 70160 | 0 |
| I-0013 | 100YR-008HR | 100590 | 100590 | 0 |
| I-0013 | 100YR-024HR | 168045 | 168045 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0014 | 025YR-001HR | 68.39 | 66.67 | 0.0010 | 47.57 | 47.57 | 611 | 0.8261 | 0.6451 | 0.8229 | 0.8262 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0014 | 025YR-002HR | 68.39 | 66.67 | 0.0010 | 47.64 | 47.64 | 610 | 0.9828 | 0.6727 | 0.9804 | 0.9828 |
| I-0014 | 025YR-004HR | 68.39 | 67.22 | 0.0010 | 38.56 | 38.46 | 609 | 3.0288 | 1.3009 | 2.5463 | 2.5465 |
| I-0014 | 025YR-008HR | 68.39 | 68.14 | 0.0010 | 49.31 | 49.20 | 609 | 4.1092 | 3.1970 | 4.0457 | 4.0485 |
| I-0014 | 025YR-024HR | 68.39 | 66.01 | -0.0010 | 19.35 | 19.34 | 517 | 12.1230 | 31.8473 | 12.0335 | 12.0342 |
| I-0014 | 100YR-001HR | 68.39 | 68.44 | 0.0011 | 68.60 | 68.58 | 611 | 0.8217 | 0.6135 | 0.8168 | 0.8217 |
| I-0014 | 100YR-002HR | 68.39 | 68.63 | -0.0012 | 70.51 | 70.50 | 611 | 0.9820 | 2.6378 | 0.9789 | 0.9818 |
| I-0014 | 100YR-004HR | 68.39 | 69.11 | 0.0010 | 55.34 | 55.34 | 609 | 2.5559 | 1.6600 | 2.5499 | 2.5534 |
| I-0014 | 100YR-008HR | 68.39 | 70.52 | 0.0010 | 69.87 | 69.86 | 600 | 4.0521 | 3.3259 | 4.0498 | 4.0514 |
| I-0014 | 100YR-024HR | 68.39 | 66.81 | -0.0010 | 26.20 | 26.03 | 537 | 12.0773 | 33.1594 | 12.0543 | 12.0261 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0014 | 025YR-001HR | 89666 | 88303 | 1363 |
| I-0014 | 025YR-002HR | 152308 | 151106 | 1202 |
| I-0014 | 025YR-004HR | 223786 | 222864 | 921 |
| I-0014 | 025YR-008HR | 329041 | 328448 | 594 |
| I-0014 | 025YR-024HR | 582085 | 581850 | 235 |
| I-0014 | 100YR-001HR | 134190 | 132813 | 1377 |
| I-0014 | 100YR-002HR | 228977 | 227765 | 1212 |
| I-0014 | 100YR-004HR | 334780 | 333819 | 961 |
| I-0014 | 100YR-008HR | 477053 | 476546 | 507 |
| I-0014 | 100YR-024HR | 791706 | 791446 | 260 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0015 | 025YR-0 | 74.55 | 72.27 | -0.0007 | 7.88 | 7.88 | 149 | 0.8484 | 0.9282 | 0.7909 | 0.7930 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 01HR | | | | | | | | | | |
| I-0015 | 025YR-002HR | 74.55 | 72.30 | 0.0006 | 8.08 | 8.08 | 148 | 1.0138 | 0.5224 | 0.9355 | 0.9385 |
| I-0015 | 025YR-004HR | 74.55 | 72.03 | -0.0005 | 6.58 | 6.58 | 148 | 2.5671 | 3.1585 | 2.5645 | 2.5645 |
| I-0015 | 025YR-008HR | 74.55 | 72.50 | -0.0008 | 8.71 | 8.71 | 149 | 4.0515 | 4.1731 | 4.0496 | 4.0567 |
| I-0015 | 025YR-024HR | 74.55 | 71.63 | 0.0008 | 3.44 | 3.44 | 149 | 12.0337 | 5.3465 | 12.0293 | 12.0315 |
| I-0015 | 100YR-001HR | 74.55 | 74.86 | 0.0008 | 11.94 | 11.66 | 149 | 0.8486 | 0.6639 | 0.7833 | 0.8042 |
| I-0015 | 100YR-002HR | 74.55 | 75.48 | 0.0009 | 12.67 | 12.32 | 148 | 1.0164 | 0.8166 | 0.9192 | 0.9187 |
| I-0015 | 100YR-004HR | 74.55 | 73.36 | -0.0006 | 9.78 | 9.82 | 148 | 2.5605 | 2.7600 | 2.5668 | 2.5844 |
| I-0015 | 100YR-008HR | 74.55 | 77.25 | -0.0010 | 12.69 | 12.77 | 149 | 4.0607 | 4.2253 | 4.0667 | 4.0840 |
| I-0015 | 100YR-024HR | 74.55 | 71.81 | -0.0009 | 4.75 | 4.75 | 149 | 12.0243 | 24.4924 | 12.0171 | 12.0243 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0015 | 025YR-001HR | 12717 | 12711 | 5 |
| I-0015 | 025YR-002HR | 23326 | 23322 | 4 |
| I-0015 | 025YR-004HR | 35890 | 35889 | 1 |
| I-0015 | 025YR-008HR | 54913 | 54908 | 5 |
| I-0015 | 025YR-024HR | 101926 | 101926 | 0 |
| I-0015 | 100YR-001HR | 20237 | 20225 | 12 |
| I-0015 | 100YR-002HR | 36841 | 36838 | 2 |
| I-0015 | 100YR-004HR | 55964 | 55963 | 1 |
| I-0015 | 100YR-008HR | 82278 | 82272 | 5 |
| I-0015 | 100YR-024HR | 141678 | 141678 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0016 | 025YR-001HR | 74.55 | 72.56 | 0.0003 | 3.26 | 3.26 | 100 | 0.8412 | 0.4939 | 0.8334 | 0.8388 |
| I-0016 | 025YR-002HR | 74.55 | 72.58 | -0.0004 | 3.35 | 3.35 | 100 | 0.9994 | 2.2375 | 0.9834 | 0.9995 |
| I-0016 | 025YR-004HR | 74.55 | 72.49 | 0.0004 | 2.86 | 2.86 | 100 | 2.5992 | 1.4310 | 2.5834 | 2.5883 |
| I-0016 | 025YR-008HR | 74.55 | 72.65 | 0.0006 | 3.77 | 3.77 | 100 | 4.0710 | 2.5990 | 4.0667 | 4.0692 |
| I-0016 | 025YR-024HR | 74.55 | 72.21 | 0.0009 | 1.51 | 1.51 | 100 | 12.0403 | 5.7647 | 12.0335 | 12.0427 |
| I-0016 | 100YR-001HR | 74.55 | 74.97 | 0.0009 | 5.11 | 5.10 | 100 | 0.8496 | 0.6929 | 0.8167 | 0.8686 |
| I-0016 | 100YR-002HR | 74.55 | 75.61 | 0.0009 | 5.43 | 5.40 | 100 | 1.0169 | 0.8169 | 0.9667 | 1.0392 |
| I-0016 | 100YR-004HR | 74.55 | 73.45 | -0.0005 | 4.28 | 4.36 | 100 | 2.5624 | 2.7319 | 2.5667 | 2.6194 |
| I-0016 | 100YR-008HR | 74.55 | 77.39 | -0.0010 | 5.55 | 5.75 | 100 | 4.0624 | 4.2253 | 4.0667 | 4.1192 |
| I-0016 | 100YR-024HR | 74.55 | 72.34 | 0.0008 | 2.10 | 2.10 | 100 | 12.0346 | 5.0568 | 12.0332 | 12.0332 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0016 | 025YR-001HR | 5483 | 5483 | 0 |
| I-0016 | 025YR-002HR | 10145 | 10145 | 0 |
| I-0016 | 025YR-004HR | 15689 | 15688 | 0 |
| I-0016 | 025YR-008HR | 24108 | 24108 | 0 |
| I-0016 | 025YR-024HR | 44982 | 44982 | 0 |
| I-0016 | 100YR-001HR | 8785 | 8785 | 0 |
| I-0016 | 100YR-002HR | 16109 | 16109 | 0 |
| I-0016 | 100YR-004HR | 24574 | 24574 | 0 |
| I-0016 | 100YR-008HR | 36250 | 36250 | 0 |
| I-0016 | 100YR-024HR | 62672 | 62673 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0017 | 025YR-001HR | 92.50 | 90.29 | -0.0010 | 3.77 | 3.77 | 105 | 0.8833 | 0.9493 | 0.7833 | 0.7833 |
| I-0017 | 025YR-002HR | 92.50 | 90.25 | 0.0006 | 3.69 | 3.69 | 105 | 1.0425 | 0.4712 | 0.9333 | 0.9397 |
| I-0017 | 025YR-004HR | 92.50 | 89.85 | 0.0009 | 2.56 | 2.56 | 105 | 2.5561 | 1.2240 | 2.5500 | 2.5528 |
| I-0017 | 025YR-008HR | 92.50 | 90.16 | -0.0009 | 3.32 | 3.27 | 105 | 4.0961 | 4.1793 | 4.0500 | 3.9889 |
| I-0017 | 025YR-024HR | 92.50 | 89.57 | 0.0010 | 1.25 | 1.25 | 103 | 12.0295 | 4.9226 | 12.0168 | 12.0183 |
| I-0017 | 100YR-001HR | 92.50 | 94.33 | -0.0010 | 5.43 | 4.90 | 105 | 0.8877 | 1.0407 | 0.7667 | 0.6869 |
| I-0017 | 100YR-002HR | 92.50 | 94.69 | 0.0010 | 5.45 | 4.94 | 105 | 1.0502 | 0.8729 | 0.9333 | 0.9638 |
| I-0017 | 100YR-004HR | 92.50 | 91.10 | -0.0009 | 3.71 | 3.60 | 105 | 2.5776 | 2.8325 | 2.1334 | 2.2113 |
| I-0017 | 100YR-008HR | 92.50 | 93.75 | -0.0010 | 4.62 | 4.53 | 105 | 4.0977 | 4.3560 | 4.0333 | 4.0577 |
| I-0017 | 100YR-024HR | 92.50 | 89.67 | -0.0009 | 1.67 | 1.67 | 105 | 12.0198 | 24.3652 | 12.0166 | 12.0198 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0017 | 025YR-001HR | 6357 | 6356 | 1 |
| I-0017 | 025YR-002HR | 10479 | 10478 | 1 |
| I-0017 | 025YR-004HR | 15104 | 15104 | 0 |
| I-0017 | 025YR-008HR | 21830 | 21830 | 0 |
| I-0017 | 025YR-024HR | 37752 | 37752 | 0 |
| I-0017 | 100YR-001HR | 9306 | 9305 | 1 |
| I-0017 | 100YR-002HR | 15447 | 15446 | 0 |
| I-0017 | 100YR-004HR | 22195 | 22194 | 0 |
| I-0017 | 100YR-008HR | 31181 | 31181 | 0 |
| I-0017 | 100YR-024HR | 50821 | 50821 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0018 | 025YR-001HR | 66.67 | 65.37 | -0.0006 | 6.85 | 6.85 | 100 | 0.9841 | 1.8880 | 0.9833 | 0.9836 |
| I-0018 | 025YR-002HR | 66.67 | 66.07 | -0.0005 | 7.40 | 7.40 | 100 | 1.7382 | 2.2375 | 1.1666 | 1.1646 |
| I-0018 | 025YR-004HR | 66.67 | 66.91 | 0.0008 | 7.28 | 7.21 | 100 | 3.0749 | 2.6319 | 2.6999 | 2.7019 |
| I-0018 | 025YR-008HR | 66.67 | 67.42 | 0.0008 | 9.32 | 9.25 | 100 | 4.2385 | 3.8755 | 4.1500 | 4.1680 |
| I-0018 | 025YR-024HR | 66.67 | 65.90 | 0.0010 | 3.98 | 3.97 | 100 | 12.2340 | 23.7146 | 12.1001 | 12.1172 |
| I-0018 | 100YR-001HR | 66.67 | 66.48 | -0.0005 | 10.82 | 10.81 | 100 | 1.1202 | 2.3847 | 0.9667 | 0.9692 |
| I-0018 | 100YR-002HR | 66.67 | 67.51 | -0.0005 | 11.98 | 11.80 | 100 | 1.3501 | 2.4368 | 1.1333 | 1.0933 |
| I-0018 | 100YR-004HR | 66.67 | 67.88 | 0.0009 | 11.03 | 11.03 | 100 | 2.6633 | 2.2088 | 2.6667 | 2.6698 |
| I-0018 | 100YR-008HR | 66.67 | 68.56 | 0.0008 | 13.88 | 13.88 | 100 | 4.1453 | 3.5638 | 4.1500 | 4.1514 |
| I-0018 | 100YR-024HR | 66.67 | 66.59 | -0.0010 | 5.52 | 5.51 | 100 | 12.1750 | 24.2466 | 12.0998 | 12.1024 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0018 | 025YR-001HR | 14696 | 14681 | 15 |
| I-0018 | 025YR-002HR | 27192 | 27191 | 1 |
| I-0018 | 025YR-004HR | 42050 | 42050 | 1 |
| I-0018 | 025YR-008HR | 64617 | 64616 | 1 |
| I-0018 | 025YR-024HR | 120565 | 120562 | 3 |
| I-0018 | 100YR-001HR | 23547 | 23526 | 21 |
| I-0018 | 100YR-002HR | 43177 | 43176 | 1 |
| I-0018 | 100YR-004HR | 65864 | 65864 | 0 |
| I-0018 | 100YR-008HR | 97160 | 97160 | 1 |
| I-0018 | 100YR-024HR | 167980 | 167982 | -1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0001 | 025YR-001HR | 101.40 | 96.50 | 0.0007 | 17.23 | 17.23 | 320 | 1.1123 | 0.4459 | 1.1085 | 1.1128 |
| MH-0001 | 025YR-002HR | 101.40 | 97.06 | 0.0009 | 20.88 | 20.88 | 320 | 1.3942 | 0.4507 | 1.3904 | 1.3944 |
| MH-0001 | 025YR-004HR | 101.40 | 97.86 | 0.0009 | 25.17 | 25.17 | 320 | 3.0424 | 1.1286 | 3.0371 | 3.0432 |
| MH-0001 | 025YR-008HR | 101.40 | 98.71 | 0.0009 | 29.09 | 29.09 | 320 | 4.3260 | 1.9967 | 4.3202 | 4.3271 |
| MH-0001 | 025YR-024HR | 101.40 | 96.28 | -0.0009 | 15.34 | 15.34 | 320 | 12.1973 | 26.8231 | 12.1938 | 12.1966 |
| MH-0001 | 100YR-001HR | 101.40 | 98.10 | 0.0007 | 26.34 | 26.34 | 320 | 1.1105 | 0.4154 | 1.1050 | 1.1109 |
| MH-0001 | 100YR-002HR | 101.40 | 99.52 | 0.0009 | 32.34 | 32.34 | 320 | 1.3695 | 0.3902 | 1.3617 | 1.3704 |
| MH-0001 | 100YR-004HR | 101.40 | 100.94 | -0.0010 | 37.38 | 37.38 | 320 | 3.0024 | 3.7777 | 2.9937 | 3.0027 |
| MH-0001 | 100YR-008HR | 101.40 | 109.66 | -0.0010 | 42.09 | 42.16 | 320 | 4.4121 | 5.7921 | 4.4036 | 4.4557 |
| MH-0001 | 100YR-024HR | 101.40 | 97.09 | -0.0007 | 21.05 | 21.05 | 320 | 12.1854 | 26.9679 | 12.1811 | 12.1854 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| MH-0001 | 025YR-001HR | 74266 | 74220 | 47 |
| MH-0001 | 025YR-002HR | 130895 | 130892 | 3 |
| MH-0001 | 025YR-004HR | 195579 | 195578 | 2 |
| MH-0001 | 025YR-008HR | 291804 | 291803 | 1 |
| MH-0001 | 025YR-024HR | 525159 | 525158 | 1 |
| MH-0001 | 100YR-001HR | 113758 | 113696 | 62 |
| MH-0001 | 100YR-002HR | 200414 | 200411 | 3 |
| MH-0001 | 100YR-004HR | 297056 | 297055 | 2 |
| MH-0001 | 100YR-008HR | 428152 | 428151 | 1 |
| MH-0001 | 100YR-024HR | 719904 | 719903 | 1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage | Time to Max Total Inflow | Time to Max Total Outflow |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|-----------------------------|--------------------------|---------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|-----------------------------|--------------------------|---------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0002 | 025YR-001HR | 69.40 | 68.25 | 0.0010 | 36.05 | 36.05 | 380 | 0.8569 | 0.6779 | 0.8535 | 0.8570 |
| MH-0002 | 025YR-002HR | 69.40 | 68.28 | 0.0010 | 36.27 | 36.27 | 379 | 1.0249 | 0.8067 | 1.0218 | 1.0250 |
| MH-0002 | 025YR-004HR | 69.40 | 67.77 | -0.0010 | 29.37 | 29.36 | 379 | 2.7070 | 3.0880 | 2.5534 | 2.5463 |
| MH-0002 | 025YR-008HR | 69.40 | 69.33 | 0.0010 | 37.47 | 37.36 | 379 | 4.0929 | 2.2089 | 4.0506 | 4.0559 |
| MH-0002 | 025YR-024HR | 69.40 | 66.33 | 0.0009 | 14.71 | 14.71 | 364 | 12.0466 | 4.1402 | 12.0383 | 12.0450 |
| MH-0002 | 100YR-001HR | 69.40 | 70.76 | 0.0014 | 52.02 | 52.13 | 380 | 0.8401 | 0.6075 | 0.8668 | 0.8680 |
| MH-0002 | 100YR-002HR | 69.40 | 71.11 | 0.0010 | 53.98 | 54.15 | 380 | 1.0079 | 0.7081 | 1.0361 | 1.0346 |
| MH-0002 | 100YR-004HR | 69.40 | 70.64 | 0.0008 | 42.07 | 42.08 | 379 | 2.5580 | 1.7546 | 2.5568 | 2.5629 |
| MH-0002 | 100YR-008HR | 69.40 | 72.94 | 0.0010 | 52.76 | 52.79 | 379 | 4.0567 | 3.6124 | 4.0615 | 4.0709 |
| MH-0002 | 100YR-024HR | 69.40 | 67.14 | -0.0010 | 19.76 | 19.79 | 368 | 12.0689 | 12.3322 | 12.0273 | 12.0543 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|-----------|-------------|--------------------|---------------------|----------------------------------|
| MH-0002 | 025YR-001HR | 70035 | 69992 | 43 |
| MH-0002 | 025YR-002HR | 118019 | 117959 | 61 |
| MH-0002 | 025YR-004HR | 172513 | 172455 | 58 |
| MH-0002 | 025YR-008HR | 252500 | 252434 | 66 |
| MH-0002 | 025YR-024HR | 444123 | 444129 | -7 |
| MH-0002 | 100YR-001HR | 104159 | 104071 | 88 |
| MH-0002 | 100YR-002HR | 176450 | 176375 | 75 |
| MH-0002 | 100YR-004HR | 256852 | 256787 | 65 |
| MH-0002 | 100YR-008HR | 364665 | 364603 | 62 |
| MH-0002 | 100YR-024HR | 602513 | 602512 | 1 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0003 | 025YR-001HR | 90.60 | 86.65 | 0.0010 | 17.23 | 17.23 | 428 | 1.1167 | 0.9123 | 1.1128 | 1.1169 |
| MH-0003 | 025YR-002HR | 90.60 | 87.21 | 0.0009 | 20.88 | 20.88 | 428 | 1.3991 | 1.0225 | 1.3944 | 1.3995 |
| MH-0003 | 025YR-004HR | 90.60 | 88.01 | 0.0008 | 25.17 | 25.17 | 427 | 3.0495 | 2.1788 | 3.0432 | 3.0495 |
| MH-0003 | 025YR-008HR | 90.60 | 88.86 | 0.0010 | 29.09 | 29.09 | 427 | 4.3325 | 3.6184 | 4.3271 | 4.3325 |
| MH-0003 | 025YR-024HR | 90.60 | 86.43 | 0.0007 | 15.34 | 15.34 | 426 | 12.2226 | 3.7503 | 12.1966 | 12.2032 |
| MH-0003 | 100YR-001HR | 90.60 | 88.25 | -0.0007 | 26.34 | 26.33 | 428 | 1.1164 | 1.5091 | 1.1109 | 1.1164 |
| MH-0003 | 100YR-002HR | 90.60 | 89.67 | -0.0008 | 32.34 | 32.34 | 428 | 1.3770 | 2.0369 | 1.3704 | 1.3772 |
| MH-0003 | 100YR-004HR | 90.60 | 93.95 | -0.0010 | 37.38 | 37.48 | 427 | 2.9479 | 3.2019 | 3.0027 | 3.0604 |
| MH-0003 | 100YR-008HR | 90.60 | 100.84 | 0.0012 | 42.16 | 42.39 | 427 | 4.3993 | 3.9762 | 4.4557 | 4.4953 |
| MH-0003 | 100YR-024HR | 90.60 | 87.24 | 0.0008 | 21.05 | 21.05 | 426 | 12.1934 | 3.2580 | 12.1854 | 12.1934 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| MH-0003 | 025YR-001HR | 74220 | 74147 | 73 |
| MH-0003 | 025YR-002HR | 130892 | 130879 | 13 |
| MH-0003 | 025YR-004HR | 195578 | 195569 | 8 |
| MH-0003 | 025YR-008HR | 291803 | 291798 | 5 |
| MH-0003 | 025YR-024HR | 525158 | 525156 | 2 |
| MH-0003 | 100YR-001HR | 113696 | 113601 | 95 |
| MH-0003 | 100YR-002HR | 200411 | 200396 | 14 |
| MH-0003 | 100YR-004HR | 297055 | 297046 | 8 |
| MH-0003 | 100YR-008HR | 428151 | 428146 | 5 |
| MH-0003 | 100YR-024HR | 719903 | 719901 | 2 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| NTZ-0290 | 025YR-001HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NTZ-0290 | 025YR-002HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NTZ-0290 | 025YR-004HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NTZ-0290 | 025YR-008HR | 0.00 | 0.00 | 0.0000 | 13.71 | 0.00 | 0 | 0.0000 | 0.0000 | 4.3122 | 0.0000 |
| NTZ-0290 | 025YR-024HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NTZ-0290 | 100YR-001HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NTZ-0290 | 100YR-002HR | 0.00 | 0.00 | 0.0000 | 20.95 | 0.00 | 0 | 0.0000 | 0.0000 | 1.4551 | 0.0000 |
| NTZ-0290 | 100YR-004HR | 0.00 | 0.00 | 0.0000 | 49.36 | 0.00 | 0 | 0.0000 | 0.0000 | 2.6109 | 0.0000 |
| NTZ-0290 | 100YR-008HR | 0.00 | 0.00 | 0.0000 | 77.22 | 0.00 | 0 | 0.0000 | 0.0000 | 4.0810 | 0.0000 |
| NTZ-0290 | 100YR-024HR | 0.00 | 0.00 | 0.0000 | 0.00 | 0.00 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| NTZ-0290 | 025YR-001HR | 0 | 0 | 0 |
| NTZ-0290 | 025YR-002HR | 0 | 0 | 0 |
| NTZ-0290 | 025YR-004HR | 0 | 0 | 0 |
| NTZ-0290 | 025YR-008HR | 11840 | 0 | 11840 |
| NTZ-0290 | 025YR-024HR | 0 | 0 | 0 |
| NTZ-0290 | 100YR-001HR | 0 | 0 | 0 |
| NTZ-0290 | 100YR-002HR | 19041 | 0 | 19041 |
| NTZ-0290 | 100YR-004HR | 114928 | 0 | 114928 |
| NTZ-0290 | 100YR-008HR | 185344 | 0 | 185344 |
| NTZ-0290 | 100YR-024HR | 0 | 0 | 0 |

Node Max Conditions w/ Times [EXISTING CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| POND | 025YR-001HR | 66.30 | 65.11 | 0.0010 | 99.21 | 31.02 | 51310 | 1.4406 | 0.8458 | 0.8903 | 1.4406 |
| POND | 025YR-002HR | 66.30 | 65.93 | 0.0010 | 105.44 | 57.96 | 55615 | 1.8181 | 0.3070 | 1.0886 | 1.8184 |
| POND | 025YR-004HR | 66.30 | 66.56 | 0.0010 | 103.61 | 87.47 | 57629 | 3.1305 | 2.0553 | 2.5871 | 3.1302 |
| POND | 025YR-008HR | 66.30 | 66.70 | 0.0010 | 128.39 | 110.01 | 57629 | 4.3122 | 2.3859 | 4.0699 | 4.3122 |
| POND | 025YR-024HR | 66.30 | 65.77 | 0.0010 | 56.97 | 52.88 | 54749 | 12.3024 | 7.1938 | 12.0501 | 12.3024 |
| POND | 100YR-001HR | 66.30 | 66.10 | 0.0010 | 147.07 | 63.27 | 56536 | 1.3191 | 0.2908 | 0.8819 | 1.3191 |
| POND | 100YR-002HR | 66.30 | 66.73 | 0.0010 | 159.12 | 118.90 | 57629 | 1.4550 | 0.3029 | 1.0392 | 1.4551 |
| POND | 100YR-004HR | 66.30 | 66.79 | 0.0010 | 151.63 | 151.31 | 57629 | 2.6109 | 1.9075 | 2.5748 | 2.6109 |
| POND | 100YR-008HR | 66.30 | 66.83 | 0.0010 | 182.16 | 181.91 | 57629 | 4.0810 | 2.1871 | 4.0641 | 4.0810 |
| POND | 100YR-024HR | 66.30 | 66.33 | 0.0010 | 77.10 | 73.26 | 57629 | 12.2326 | 5.6917 | 12.0553 | 12.2315 |

Node Mass Balance Condensed [EXISTING CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| POND | 025YR-001HR | 273655 | 146111 | 127544 |
| POND | 025YR-002HR | 468518 | 359379 | 109139 |
| POND | 025YR-004HR | 690348 | 592670 | 97678 |
| POND | 025YR-008HR | 1017412 | 958110 | 59303 |
| POND | 025YR-024HR | 1804029 | 1773833 | 30197 |
| POND | 100YR-001HR | 411028 | 280822 | 130206 |
| POND | 100YR-002HR | 706318 | 596162 | 110155 |
| POND | 100YR-004HR | 1034829 | 936267 | 98562 |
| POND | 100YR-008HR | 1477455 | 1417336 | 60119 |
| POND | 100YR-024HR | 2456326 | 2425513 | 30813 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------|-------------------------------|-------------------------------|
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------|-------------------------------|-------------------------------|

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE RIM | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 04HR | 9.11 | 0.00 | 0.02 | 1.56 | 1.56 | 3.1305 | 0.0000 | 3.0394 | 3.1309 | 3.1309 |
| CONTR OL STRUCTURE RIM | 025YR-0 08HR | 16.17 | 0.00 | 0.02 | 1.89 | 1.89 | 4.3122 | 0.0000 | 4.1779 | 4.3123 | 4.3123 |
| CONTR OL STRUCTURE RIM | 025YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 100YR-0 02HR | 17.50 | 0.00 | 0.01 | 1.94 | 1.94 | 1.4551 | 0.0000 | 1.3286 | 1.4551 | 1.4551 |
| CONTR OL STRUCTURE RIM | 100YR-0 04HR | 20.82 | 0.00 | -0.01 | 2.05 | 2.05 | 2.6109 | 0.0000 | 3.7176 | 2.6111 | 2.6111 |
| CONTR OL STRUCTURE RIM | 100YR-0 08HR | 23.09 | 0.00 | -0.01 | 2.13 | 2.13 | 4.0810 | 0.0000 | 5.5011 | 4.0812 | 4.0812 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|------------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE RIM | 100YR-0 24HR | 1.14 | 0.00 | 0.01 | 0.78 | 0.78 | 12.2326 | 0.0000 | 12.0562 | 12.2329 | 12.2329 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-------------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE SLOT | 025YR-0 01HR | 28.95 | 0.00 | -0.01 | 3.27 | 3.27 | 1.4406 | 0.0000 | 1.7483 | 1.4407 | 1.4407 |
| CONTR OL STRUCTURE SLOT | 025YR-0 02HR | 55.62 | 0.00 | 0.02 | 3.93 | 3.93 | 1.8184 | 0.0000 | 1.4493 | 1.8201 | 1.8201 |
| CONTR OL STRUCTURE SLOT | 025YR-0 04HR | 73.66 | 0.00 | 0.04 | 4.53 | 4.53 | 2.9394 | 0.0000 | 2.7614 | 2.9394 | 2.9394 |
| CONTR OL STRUCTURE SLOT | 025YR-0 08HR | 73.77 | 0.00 | 0.02 | 4.54 | 4.54 | 4.1367 | 0.0000 | 3.8755 | 4.1367 | 4.1367 |
| CONTR OL STRUCTURE SLOT | 025YR-0 24HR | 50.59 | 0.00 | -0.02 | 3.86 | 3.86 | 12.3024 | 0.0000 | 13.5437 | 12.3034 | 12.3034 |
| CONTR OL STRUCTURE SLOT | 100YR-0 01HR | 60.87 | 0.00 | -0.02 | 3.98 | 3.98 | 1.3191 | 0.0000 | 1.6897 | 1.3197 | 1.3197 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|----------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE SLOT | 100YR-0 02HR | 73.82 | 0.00 | -0.02 | 4.54 | 4.54 | 1.2975 | 0.0000 | 2.1921 | 1.2975 | 1.2975 |
| CONTR OL STRUCTURE SLOT | 100YR-0 04HR | 73.84 | 0.00 | 0.02 | 4.54 | 4.54 | 2.3978 | 0.0000 | 2.2044 | 2.3978 | 2.3978 |
| CONTR OL STRUCTURE SLOT | 100YR-0 08HR | 73.89 | 0.00 | 0.02 | 4.55 | 4.55 | 3.8015 | 0.0000 | 3.5638 | 3.8015 | 3.8015 |
| CONTR OL STRUCTURE SLOT | 100YR-0 24HR | 69.65 | 0.00 | 0.03 | 4.29 | 4.29 | 12.2315 | 0.0000 | 11.9895 | 12.2315 | 12.2315 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| EMEREN CY SPILLW AY | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMEREN CY SPILLW AY | 025YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMEREN CY SPILLW AY | 025YR-0 04HR | 2.75 | 0.00 | 0.01 | 1.14 | 1.14 | 3.1305 | 0.0000 | 3.0394 | 3.1312 | 3.1312 |
| EMEREN CY SPILLW | 025YR-0 08HR | 7.47 | 0.00 | 0.01 | 1.50 | 1.50 | 4.3122 | 0.0000 | 4.1793 | 4.3123 | 4.3123 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| AY | | | | | | | | | | | |
| EMEREN CY SPILLW AY | 025YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMEREN CY SPILLW AY | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMEREN CY SPILLW AY | 100YR-0 02HR | 8.49 | 0.00 | 0.01 | 1.55 | 1.55 | 1.4551 | 0.0000 | 1.3439 | 1.4552 | 1.4552 |
| EMEREN CY SPILLW AY | 100YR-0 04HR | 11.20 | 0.00 | 0.00 | 1.66 | 1.66 | 2.6109 | 0.0000 | 2.4524 | 2.6109 | 2.6109 |
| EMEREN CY SPILLW AY | 100YR-0 08HR | 13.16 | 0.00 | 0.00 | 1.73 | 1.73 | 4.0810 | 0.0000 | 3.8437 | 4.0811 | 4.0811 |
| EMEREN CY SPILLW AY | 100YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| L-0300 W | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| L-0300 W | 025YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| L-0300 W | 025YR-0 04HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| L-0300 W | 025YR-0 08HR | 13.71 | 0.00 | 0.02 | 0.80 | 0.80 | 4.3122 | 0.0000 | 4.2138 | 4.3123 | 4.3123 |
| L-0300 W | 025YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| L-0300 W | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| L-0300 W | 100YR-0 02HR | 20.95 | 0.00 | 0.03 | 0.89 | 0.89 | 1.4551 | 0.0000 | 1.3982 | 1.4552 | 1.4552 |
| L-0300 W | 100YR-0 04HR | 49.36 | 0.00 | 0.03 | 0.99 | 0.99 | 2.6109 | 0.0000 | 2.4708 | 2.6111 | 2.6111 |
| L-0300 W | 100YR-0 08HR | 77.22 | 0.00 | 0.03 | 1.09 | 1.09 | 4.0810 | 0.0000 | 3.8685 | 4.0810 | 4.0810 |
| L-0300 W | 100YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0001 | 025YR-0 01HR | 11.30 | 0.00 | -0.78 | 3.75 | 9.40 | 0.9507 | 2.1074 | 1.7356 | 0.9538 | 0.9441 |
| P-0001 | 025YR-0 02HR | 12.06 | 0.00 | 0.62 | 3.89 | 9.55 | 1.1262 | 3.0347 | 2.6956 | 1.1332 | 1.1539 |
| P-0001 | 025YR-0 04HR | 11.04 | 0.00 | -0.78 | 3.60 | 8.77 | 2.6527 | 0.0000 | 4.4939 | 2.3658 | 2.1432 |
| P-0001 | 025YR-0 08HR | 13.98 | 0.00 | -0.87 | 4.45 | 8.70 | 4.1176 | 0.0000 | 8.3992 | 4.1176 | 3.5651 |
| P-0001 | 025YR-0 24HR | 5.93 | 0.00 | -0.97 | 2.31 | 5.13 | 12.0843 | 0.0000 | 23.4735 | 9.0165 | 8.1746 |
| P-0001 | 100YR-0 01HR | 17.19 | 0.00 | 0.62 | 5.47 | 10.45 | 0.9374 | 0.0000 | 1.7958 | 0.9374 | 0.9067 |
| P-0001 | 100YR-0 02HR | 18.59 | 0.00 | 0.69 | 5.92 | 10.50 | 1.0681 | 0.0000 | 2.7115 | 1.0681 | 1.0011 |
| P-0001 | 100YR-0 04HR | 16.56 | 0.00 | 0.58 | 5.27 | 9.59 | 2.5929 | 0.0000 | 4.4957 | 2.5929 | 2.0283 |
| P-0001 | 100YR-0 08HR | 20.59 | 0.00 | -0.74 | 6.55 | 8.48 | 4.0964 | 0.0000 | 8.5762 | 4.0964 | 3.3297 |
| P-0001 | 100YR-0 24HR | 8.05 | 0.00 | -0.86 | 2.56 | 5.39 | 12.0562 | 24.6301 | 24.3314 | 12.0562 | 7.0815 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link | Sim | Max | Min | Min/Max | Max Us | Max Ds | Time to | Time to | Time to | Time to | Time to |
|------|-----|-----|-----|---------|--------|--------|---------|---------|---------|---------|---------|
|------|-----|-----|-----|---------|--------|--------|---------|---------|---------|---------|---------|

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0002 | 025YR-001HR | 10.30 | 0.00 | 5.38 | 3.83 | 8.93 | 0.9681 | 0.0000 | 1.4275 | 1.4275 | 1.1749 |
| P-0002 | 025YR-002HR | 10.88 | -0.03 | -2.83 | 3.68 | 3.67 | 1.1502 | 2.6187 | 2.6659 | 1.1520 | 1.1679 |
| P-0002 | 025YR-004HR | 10.05 | 0.00 | -3.26 | 3.49 | 5.34 | 2.6837 | 4.3640 | 4.4483 | 2.4714 | 1.6225 |
| P-0002 | 025YR-008HR | 12.78 | 0.00 | -4.54 | 4.07 | 6.34 | 4.1522 | 0.0000 | 6.8192 | 4.1522 | 3.2072 |
| P-0002 | 025YR-024HR | 5.90 | 0.00 | 5.73 | 4.15 | 6.24 | 17.1128 | 0.0000 | 17.1128 | 17.1128 | 9.0843 |
| P-0002 | 100YR-001HR | 15.73 | 0.00 | -2.18 | 5.01 | 5.01 | 0.9522 | 2.0056 | 1.7069 | 0.9522 | 0.9522 |
| P-0002 | 100YR-002HR | 16.88 | -0.01 | -2.02 | 5.37 | 5.37 | 1.0826 | 2.8991 | 2.5514 | 1.0826 | 1.0826 |
| P-0002 | 100YR-004HR | 15.01 | -0.02 | 2.03 | 4.78 | 4.78 | 2.6505 | 4.6135 | 4.2816 | 2.6505 | 2.6505 |
| P-0002 | 100YR-008HR | 18.75 | 0.00 | 4.86 | 5.97 | 7.16 | 4.1355 | 0.0000 | 7.5886 | 4.1355 | 3.1370 |
| P-0002 | 100YR-024HR | 7.31 | 0.00 | -5.64 | 4.07 | 5.91 | 12.0971 | 0.0000 | 20.2256 | 20.2255 | 7.9708 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0003 | 025YR-001HR | 35.34 | 0.00 | -0.02 | 7.20 | 10.66 | 1.0707 | 0.0000 | 1.3448 | 1.0707 | 1.2931 |
| P-0003 | 025YR-002HR | 40.40 | 0.00 | 0.02 | 8.23 | 10.62 | 1.3038 | 0.0000 | 0.8933 | 1.3038 | 0.9836 |
| P-0003 | 025YR-004HR | 43.10 | 0.00 | 0.02 | 8.78 | 10.61 | 2.8600 | 0.0000 | 2.0136 | 2.8600 | 2.1576 |
| P-0003 | 025YR-008HR | 50.88 | 0.00 | 0.02 | 10.37 | 10.60 | 4.2514 | 0.0000 | 3.4931 | 4.2514 | 3.6100 |
| P-0003 | 025YR-024HR | 24.83 | 0.00 | -0.02 | 5.06 | 9.35 | 12.1167 | 0.0000 | 3.9102 | 12.1167 | 10.9534 |
| P-0003 | 100YR-001HR | 52.11 | 0.00 | -0.02 | 10.62 | 10.62 | 1.0730 | 0.0000 | 0.3866 | 1.0730 | 1.0730 |
| P-0003 | 100YR-002HR | 60.48 | 0.00 | 0.02 | 12.32 | 12.32 | 1.3048 | 0.0000 | 0.7838 | 1.3048 | 1.3048 |
| P-0003 | 100YR-0 | 62.63 | 0.00 | 0.02 | 12.76 | 12.76 | 2.8550 | 0.0000 | 1.7976 | 2.8550 | 2.8550 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 04HR | | | | | | | | | | |
| P-0003 | 100YR-008HR | 70.93 | 0.00 | 0.02 | 14.45 | 14.45 | 4.3027 | 0.0000 | 11.5789 | 4.3027 | 4.3027 |
| P-0003 | 100YR-024HR | 33.62 | 0.00 | 0.02 | 6.85 | 9.27 | 12.1181 | 0.0000 | 27.2447 | 12.1181 | 9.7500 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0004 | 025YR-001HR | 35.44 | 0.00 | -1.09 | 7.22 | 11.70 | 1.0722 | 0.0000 | 3.7485 | 1.0722 | 1.0907 |
| P-0004 | 025YR-002HR | 40.97 | 0.00 | -1.18 | 8.35 | 12.00 | 1.3064 | 0.0000 | 4.5887 | 1.3064 | 1.2022 |
| P-0004 | 025YR-004HR | 43.91 | 0.00 | -1.38 | 8.94 | 11.69 | 2.8700 | 6.8212 | 6.1374 | 2.8700 | 2.3125 |
| P-0004 | 025YR-008HR | 51.53 | 0.00 | -1.22 | 10.50 | 11.72 | 4.2532 | 10.4461 | 9.4748 | 4.2532 | 3.7278 |
| P-0004 | 025YR-024HR | 25.33 | 0.00 | -1.32 | 5.16 | 7.69 | 12.0947 | 25.9270 | 25.1116 | 12.0947 | 8.4756 |
| P-0004 | 100YR-001HR | 52.27 | 0.00 | 1.17 | 10.65 | 12.40 | 1.0745 | 0.0000 | 3.7790 | 1.0745 | 0.9268 |
| P-0004 | 100YR-002HR | 61.24 | 0.00 | -1.29 | 12.47 | 12.47 | 1.3084 | 5.2445 | 4.6892 | 1.3084 | 1.3084 |
| P-0004 | 100YR-004HR | 63.86 | 0.00 | -1.27 | 13.01 | 13.01 | 2.8598 | 7.4102 | 6.2984 | 2.8598 | 2.8598 |
| P-0004 | 100YR-008HR | 71.88 | 0.00 | -1.26 | 14.64 | 14.64 | 4.3052 | 0.0000 | 9.7779 | 4.3052 | 4.3052 |
| P-0004 | 100YR-024HR | 34.32 | 0.00 | -1.22 | 6.99 | 7.66 | 12.0929 | 26.0696 | 25.1906 | 12.0929 | 7.1147 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0005 | 025YR-0 | 17.71 | 0.00 | -0.01 | 5.64 | 10.73 | 1.0828 | 0.0000 | 0.3919 | 1.0828 | 0.7743 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 01HR | | | | | | | | | | |
| P-0005 | 025YR-0 02HR | 22.14 | 0.00 | 0.01 | 7.05 | 11.07 | 1.3826 | 0.0000 | 5.7680 | 1.3826 | 2.2227 |
| P-0005 | 025YR-0 04HR | 26.87 | 0.00 | 0.01 | 8.55 | 11.28 | 3.0349 | 0.0000 | 7.5216 | 3.0349 | 3.9172 |
| P-0005 | 025YR-0 08HR | 30.56 | 0.00 | 0.01 | 9.73 | 11.34 | 4.3408 | 0.0000 | 11.3710 | 4.3408 | 5.8206 |
| P-0005 | 025YR-0 24HR | 16.35 | 0.00 | -0.01 | 5.21 | 11.10 | 12.1050 | 0.0000 | 4.1992 | 12.1050 | 13.2395 |
| P-0005 | 100YR-0 01HR | 26.96 | 0.00 | -0.01 | 8.58 | 11.19 | 1.0877 | 0.0000 | 0.3627 | 1.0877 | 0.6720 |
| P-0005 | 100YR-0 02HR | 34.23 | 0.00 | 0.01 | 10.89 | 11.36 | 1.3980 | 0.0000 | 5.8723 | 1.3980 | 2.4794 |
| P-0005 | 100YR-0 04HR | 39.90 | 0.00 | 0.01 | 12.70 | 12.70 | 3.0447 | 0.0000 | 7.6329 | 3.0447 | 3.0447 |
| P-0005 | 100YR-0 08HR | 44.41 | 0.00 | 0.01 | 14.14 | 14.14 | 4.5195 | 0.0000 | 11.5070 | 4.5195 | 4.5195 |
| P-0005 | 100YR-0 24HR | 22.40 | 0.00 | -0.01 | 7.13 | 11.14 | 12.1061 | 0.0000 | 3.5122 | 12.1061 | 16.2005 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0006 | 025YR-0 01HR | 17.23 | 0.00 | -0.01 | 5.49 | 10.83 | 1.1085 | 0.0000 | 0.3983 | 1.1085 | 0.9799 |
| P-0006 | 025YR-0 02HR | 20.88 | 0.00 | 0.01 | 6.65 | 10.84 | 1.3904 | 0.0000 | 5.6536 | 1.3904 | 1.0655 |
| P-0006 | 025YR-0 04HR | 25.17 | 0.00 | 0.01 | 8.01 | 10.83 | 3.0371 | 0.0000 | 7.4054 | 3.0371 | 2.2456 |
| P-0006 | 025YR-0 08HR | 29.09 | 0.00 | 0.01 | 9.26 | 10.84 | 4.3202 | 0.0000 | 11.2632 | 4.3202 | 3.6694 |
| P-0006 | 025YR-0 24HR | 15.34 | 0.00 | -0.01 | 4.88 | 10.70 | 12.1938 | 0.0000 | 4.7132 | 12.1938 | 12.2191 |
| P-0006 | 100YR-0 01HR | 26.34 | 0.00 | -0.01 | 8.38 | 10.85 | 1.1050 | 0.0000 | 0.3690 | 1.1050 | 0.7772 |
| P-0006 | 100YR-0 02HR | 32.34 | 0.00 | 0.01 | 10.29 | 10.85 | 1.3617 | 0.0000 | 5.7561 | 1.3617 | 0.8734 |
| P-0006 | 100YR-0 04HR | 37.38 | 0.00 | 0.01 | 11.90 | 11.90 | 2.9937 | 0.0000 | 7.5165 | 2.9937 | 2.9937 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0006 | 100YR-008HR | 42.09 | 0.00 | -0.01 | 13.40 | 13.40 | 4.4036 | 0.0000 | 1.8604 | 4.4036 | 4.4036 |
| P-0006 | 100YR-024HR | 21.05 | 0.00 | -0.01 | 6.70 | 10.82 | 12.1811 | 0.0000 | 3.9364 | 12.1811 | 14.6114 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0007 | 025YR-001HR | 16.79 | 0.00 | -0.01 | 5.34 | 9.92 | 1.1348 | 0.0000 | 0.4659 | 1.1348 | 1.3238 |
| P-0007 | 025YR-002HR | 19.68 | 0.00 | -0.01 | 6.26 | 9.89 | 1.4062 | 0.0000 | 0.5311 | 1.4062 | 2.1524 |
| P-0007 | 025YR-004HR | 23.58 | 0.00 | 0.01 | 7.51 | 9.89 | 3.0765 | 0.0000 | 7.3575 | 3.0765 | 3.9258 |
| P-0007 | 025YR-008HR | 27.73 | 0.00 | 0.01 | 8.83 | 9.86 | 4.3339 | 0.0000 | 11.2117 | 4.3339 | 5.8468 |
| P-0007 | 025YR-024HR | 14.51 | 0.00 | 0.01 | 4.62 | 9.81 | 12.2679 | 0.0000 | 26.8729 | 12.2679 | 12.5558 |
| P-0007 | 100YR-001HR | 25.70 | 0.00 | -0.01 | 8.18 | 9.93 | 1.1253 | 0.0000 | 0.4295 | 1.1253 | 1.5978 |
| P-0007 | 100YR-002HR | 30.64 | 0.00 | 0.01 | 9.75 | 9.93 | 1.3707 | 0.0000 | 5.7105 | 1.3707 | 2.5146 |
| P-0007 | 100YR-004HR | 35.18 | 0.00 | 0.01 | 11.20 | 11.20 | 2.9844 | 0.0000 | 7.4688 | 2.9844 | 2.9844 |
| P-0007 | 100YR-008HR | 40.48 | 0.00 | 0.01 | 12.88 | 12.88 | 4.3695 | 0.0000 | 11.3459 | 4.3695 | 4.3695 |
| P-0007 | 100YR-024HR | 19.93 | 0.00 | 0.01 | 6.34 | 9.81 | 12.2625 | 0.0000 | 27.0103 | 12.2625 | 15.6496 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0008 | 025YR-001HR | 7.56 | 0.00 | 0.02 | 3.20 | 7.96 | 1.0650 | 0.0000 | 3.8303 | 1.0700 | 1.0701 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0008 | 025YR-0 02HR | 8.55 | 0.00 | 0.03 | 3.33 | 8.23 | 1.2920 | 0.0000 | 4.6194 | 1.3050 | 1.2921 |
| P-0008 | 025YR-0 04HR | 9.87 | 0.00 | 0.02 | 3.52 | 8.56 | 2.8797 | 0.0000 | 6.3786 | 2.9033 | 2.8732 |
| P-0008 | 025YR-0 08HR | 11.91 | 0.00 | 0.02 | 3.86 | 8.80 | 4.2678 | 0.0000 | 10.2644 | 4.2700 | 4.0670 |
| P-0008 | 025YR-0 24HR | 5.95 | 0.00 | 0.02 | 2.97 | 7.44 | 12.2151 | 0.0000 | 25.9446 | 12.2243 | 12.2253 |
| P-0008 | 100YR-0 01HR | 11.61 | 0.00 | 0.02 | 3.80 | 8.94 | 1.0498 | 0.0000 | 3.8981 | 1.0543 | 1.0544 |
| P-0008 | 100YR-0 02HR | 13.43 | 0.00 | -0.02 | 4.27 | 9.05 | 1.2661 | 0.0000 | 0.4822 | 1.2661 | 1.0963 |
| P-0008 | 100YR-0 04HR | 14.76 | 0.00 | 0.03 | 4.70 | 8.86 | 2.8529 | 0.0000 | 6.4880 | 2.8529 | 2.2765 |
| P-0008 | 100YR-0 08HR | 17.10 | 0.00 | 0.02 | 5.44 | 8.87 | 4.2898 | 0.0000 | 10.3971 | 4.2898 | 3.7097 |
| P-0008 | 100YR-0 24HR | 8.18 | 0.00 | 0.02 | 3.28 | 8.13 | 12.1985 | 0.0000 | 26.0799 | 12.2129 | 12.1989 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0009 | 025YR-0 01HR | 10.24 | 0.00 | 0.01 | 5.80 | 7.49 | 0.8846 | 0.0000 | 2.0216 | 0.8846 | 1.1361 |
| P-0009 | 025YR-0 02HR | 10.21 | 0.00 | 0.01 | 5.78 | 7.49 | 1.0473 | 0.0000 | 2.9236 | 1.0473 | 1.4555 |
| P-0009 | 025YR-0 04HR | 7.99 | 0.00 | 0.01 | 4.52 | 7.49 | 2.6030 | 0.0000 | 4.7926 | 2.6030 | 3.1865 |
| P-0009 | 025YR-0 08HR | 10.13 | 0.00 | 0.01 | 5.74 | 7.49 | 4.0950 | 0.0000 | 8.7819 | 4.0950 | 4.5107 |
| P-0009 | 025YR-0 24HR | 3.95 | 0.00 | -0.01 | 2.84 | 6.78 | 12.0483 | 0.0000 | 4.2312 | 12.0748 | 12.0770 |
| P-0009 | 100YR-0 01HR | 14.68 | 0.00 | 0.01 | 8.31 | 8.89 | 0.9020 | 0.0000 | 2.0595 | 0.9020 | 0.7486 |
| P-0009 | 100YR-0 02HR | 15.04 | 0.00 | 0.01 | 8.51 | 8.90 | 1.0639 | 0.0000 | 2.9756 | 1.0639 | 0.8825 |
| P-0009 | 100YR-0 04HR | 11.34 | 0.00 | 0.01 | 6.42 | 8.78 | 2.5732 | 0.0000 | 4.8448 | 2.5732 | 2.5848 |
| P-0009 | 100YR-0 | 14.16 | 0.00 | 0.01 | 8.02 | 8.90 | 4.1131 | 0.0000 | 8.8338 | 4.1131 | 3.7403 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 08HR | | | | | | | | | | |
| P-0009 | 100YR-0 24HR | 5.26 | 0.00 | 0.01 | 3.17 | 7.33 | 12.0454 | 0.0000 | 24.7076 | 12.0562 | 12.0591 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0010 | 025YR-0 01HR | 17.11 | 0.00 | 0.02 | 5.45 | 7.31 | 0.8894 | 0.0000 | 2.0942 | 0.8894 | 0.6038 |
| P-0010 | 025YR-0 02HR | 17.06 | 0.00 | 0.02 | 5.43 | 7.10 | 1.0480 | 0.0000 | 3.0027 | 1.0480 | 0.6974 |
| P-0010 | 025YR-0 04HR | 13.41 | 0.00 | 0.02 | 4.27 | 6.86 | 2.5850 | 0.0000 | 4.8772 | 2.5850 | 1.6731 |
| P-0010 | 025YR-0 08HR | 17.00 | 0.00 | 0.02 | 5.41 | 6.97 | 4.0981 | 0.0000 | 8.8677 | 4.0981 | 3.2198 |
| P-0010 | 025YR-0 24HR | 6.62 | 0.00 | 0.02 | 3.07 | 6.81 | 12.0549 | 0.0000 | 24.7503 | 12.0677 | 14.7359 |
| P-0010 | 100YR-0 01HR | 24.42 | 0.00 | 0.02 | 7.77 | 7.77 | 0.9029 | 0.0000 | 2.1312 | 0.9029 | 0.9029 |
| P-0010 | 100YR-0 02HR | 25.02 | 0.00 | 0.02 | 7.97 | 7.97 | 1.0641 | 0.0000 | 3.0527 | 1.0641 | 1.0641 |
| P-0010 | 100YR-0 04HR | 19.02 | 0.00 | 0.02 | 6.05 | 6.84 | 2.5835 | 0.0000 | 4.9287 | 2.5835 | 1.4726 |
| P-0010 | 100YR-0 08HR | 23.73 | 0.00 | 0.02 | 7.55 | 7.55 | 4.1072 | 0.0000 | 8.9191 | 4.1072 | 4.1072 |
| P-0010 | 100YR-0 24HR | 8.81 | 0.00 | 0.02 | 3.37 | 6.79 | 12.0428 | 0.0000 | 24.7940 | 12.0658 | 16.3591 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0011 | 025YR-0 01HR | 27.53 | 0.00 | -0.01 | 8.76 | 15.34 | 0.8845 | 0.0000 | 1.2347 | 0.8845 | 0.8876 |
| P-0011 | 025YR-0 | 27.38 | 0.00 | 0.01 | 8.71 | 15.32 | 1.0443 | 0.0000 | 0.8066 | 1.0443 | 1.0443 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 02HR | | | | | | | | | | |
| P-0011 | 025YR-0 04HR | 21.28 | 0.00 | -0.01 | 6.77 | 14.40 | 2.5917 | 0.0000 | 3.2793 | 2.5917 | 2.5995 |
| P-0011 | 025YR-0 08HR | 26.97 | 0.00 | 0.01 | 8.59 | 15.26 | 4.0989 | 0.0000 | 3.3567 | 4.0989 | 4.1010 |
| P-0011 | 025YR-0 24HR | 10.47 | 0.00 | 0.01 | 3.63 | 11.89 | 12.0609 | 0.0000 | 10.2714 | 12.0786 | 12.0819 |
| P-0011 | 100YR-0 01HR | 39.17 | 0.00 | 0.01 | 12.47 | 16.13 | 0.8870 | 0.0000 | 0.6075 | 0.8870 | 1.0009 |
| P-0011 | 100YR-0 02HR | 40.03 | 0.00 | 0.01 | 12.74 | 15.98 | 1.0502 | 0.0000 | 0.7074 | 1.0502 | 1.2259 |
| P-0011 | 100YR-0 04HR | 30.10 | 0.00 | 0.01 | 9.58 | 15.65 | 2.5785 | 0.0000 | 1.7484 | 2.5785 | 2.6019 |
| P-0011 | 100YR-0 08HR | 37.58 | 0.00 | 0.01 | 11.96 | 15.82 | 4.0993 | 0.0000 | 3.2763 | 4.0993 | 4.2850 |
| P-0011 | 100YR-0 24HR | 13.91 | 0.00 | -0.01 | 4.43 | 12.86 | 12.0463 | 0.0000 | 12.2315 | 12.0463 | 12.0648 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0012 | 025YR-0 01HR | 36.05 | 0.00 | -0.02 | 7.35 | 11.36 | 0.8535 | 0.0000 | 1.2347 | 0.8535 | 0.6779 |
| P-0012 | 025YR-0 02HR | 36.27 | 0.00 | 0.02 | 7.39 | 11.34 | 1.0218 | 0.0000 | 3.1571 | 1.0218 | 0.8066 |
| P-0012 | 025YR-0 04HR | 29.37 | 0.00 | -0.02 | 5.98 | 11.27 | 2.5534 | 0.0000 | 3.2793 | 2.5534 | 1.9813 |
| P-0012 | 025YR-0 08HR | 37.47 | 0.00 | 0.02 | 7.63 | 11.27 | 4.0506 | 0.0000 | 3.3534 | 4.0506 | 3.4528 |
| P-0012 | 025YR-0 24HR | 14.71 | 0.00 | 0.02 | 3.71 | 10.05 | 12.0383 | 0.0000 | 24.9158 | 12.0470 | 12.0383 |
| P-0012 | 100YR-0 01HR | 52.02 | 0.00 | 0.02 | 10.60 | 11.42 | 0.8668 | 0.0000 | 2.2579 | 0.8668 | 0.6074 |
| P-0012 | 100YR-0 02HR | 53.98 | 0.00 | 0.02 | 11.00 | 11.37 | 1.0361 | 0.0000 | 3.2063 | 1.0361 | 0.7080 |
| P-0012 | 100YR-0 04HR | 42.07 | 0.00 | 0.02 | 8.57 | 11.29 | 2.5568 | 0.0000 | 5.0862 | 2.5568 | 1.7532 |
| P-0012 | 100YR-0 08HR | 52.76 | 0.00 | 0.02 | 10.75 | 11.30 | 4.0615 | 0.0000 | 9.0784 | 4.0615 | 3.2837 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0012 | 100YR-0 24HR | 19.76 | 0.00 | -0.02 | 4.19 | 10.67 | 12.0273 | 0.0000 | 12.3306 | 12.0368 | 11.4669 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0013 | 025YR-0 01HR | 11.63 | 0.00 | 0.02 | 3.81 | 7.48 | 0.7539 | 0.0000 | 1.5327 | 0.7567 | 0.6751 |
| P-0013 | 025YR-0 02HR | 11.61 | 0.00 | 0.02 | 3.80 | 7.30 | 0.9170 | 0.0000 | 2.5338 | 0.9192 | 0.8076 |
| P-0013 | 025YR-0 04HR | 8.25 | 0.00 | -0.36 | 3.29 | 6.83 | 2.5500 | 0.0000 | 3.0473 | 2.5548 | 2.0205 |
| P-0013 | 025YR-0 08HR | 10.71 | 0.00 | 0.40 | 3.57 | 6.89 | 4.0456 | 0.0000 | 4.9670 | 3.8875 | 3.4771 |
| P-0013 | 025YR-0 24HR | 4.14 | 0.00 | 0.03 | 2.67 | 5.48 | 12.0176 | 0.0000 | 24.3961 | 12.0262 | 11.1868 |
| P-0013 | 100YR-0 01HR | 17.07 | 0.00 | 0.10 | 5.43 | 7.73 | 0.7419 | 0.0000 | 1.6286 | 0.7419 | 0.6004 |
| P-0013 | 100YR-0 02HR | 17.54 | 0.00 | -0.77 | 5.58 | 7.41 | 0.9059 | 0.0000 | 2.2526 | 0.9059 | 0.7064 |
| P-0013 | 100YR-0 04HR | 11.94 | 0.00 | 0.03 | 3.87 | 6.99 | 2.1082 | 0.0000 | 4.4967 | 2.1189 | 1.7627 |
| P-0013 | 100YR-0 08HR | 15.33 | 0.00 | -0.03 | 4.88 | 7.15 | 4.0366 | 0.0000 | 3.5606 | 4.0366 | 3.2855 |
| P-0013 | 100YR-0 24HR | 5.73 | 0.00 | -0.49 | 2.90 | 5.47 | 12.0543 | 0.0000 | 12.3387 | 11.7457 | 10.2055 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0014 | 025YR-0 01HR | 47.57 | 0.00 | -1.65 | 6.73 | 8.38 | 0.8262 | 0.0000 | 1.6994 | 0.8262 | 0.8262 |
| P-0014 | 025YR-0 02HR | 47.64 | 0.00 | -1.54 | 6.74 | 8.39 | 0.9828 | 0.0000 | 2.5568 | 0.9828 | 0.9828 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0014 | 025YR-004HR | 38.46 | 0.00 | -1.53 | 5.44 | 7.46 | 2.5465 | 0.0000 | 4.4618 | 2.5465 | 2.1865 |
| P-0014 | 025YR-008HR | 49.20 | 0.00 | 1.42 | 6.96 | 7.62 | 4.0485 | 0.0000 | 8.4246 | 4.0485 | 3.6159 |
| P-0014 | 025YR-024HR | 19.34 | 0.00 | -0.80 | 2.74 | 3.81 | 12.0342 | 0.0000 | 24.3591 | 12.0342 | 7.6914 |
| P-0014 | 100YR-001HR | 68.58 | 0.00 | 1.51 | 9.70 | 10.40 | 0.8217 | 0.0000 | 1.7885 | 0.8217 | 0.7977 |
| P-0014 | 100YR-002HR | 70.50 | 0.00 | -1.49 | 9.97 | 10.62 | 0.9818 | 0.0000 | 2.6940 | 0.9818 | 0.9818 |
| P-0014 | 100YR-004HR | 55.34 | 0.00 | -1.62 | 7.83 | 8.53 | 2.5534 | 0.0000 | 4.5198 | 2.5534 | 2.0143 |
| P-0014 | 100YR-008HR | 69.86 | 0.00 | -1.42 | 9.88 | 9.88 | 4.0514 | 0.0000 | 8.5089 | 4.0514 | 4.0514 |
| P-0014 | 100YR-024HR | 26.03 | 0.00 | -1.41 | 3.68 | 4.06 | 12.0261 | 0.0000 | 24.3894 | 12.0261 | 6.7198 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0015 | 025YR-001HR | 7.88 | 0.00 | 0.02 | 3.24 | 5.25 | 0.7930 | 0.0000 | 1.6626 | 0.7997 | 0.5495 |
| P-0015 | 025YR-002HR | 8.08 | 0.00 | 0.02 | 3.27 | 4.52 | 0.9385 | 0.0000 | 2.6248 | 0.9440 | 0.6194 |
| P-0015 | 025YR-004HR | 6.58 | 0.00 | 0.02 | 3.06 | 3.88 | 2.5645 | 0.0000 | 4.5352 | 2.5704 | 4.1410 |
| P-0015 | 025YR-008HR | 8.71 | 0.00 | 0.02 | 3.28 | 4.20 | 4.0567 | 0.0000 | 8.5375 | 3.9014 | 7.4498 |
| P-0015 | 025YR-024HR | 3.44 | 0.00 | -0.02 | 2.55 | 4.30 | 12.0315 | 0.0000 | 5.3450 | 12.0403 | 21.4097 |
| P-0015 | 100YR-001HR | 11.66 | 0.00 | 0.02 | 3.71 | 5.44 | 0.8042 | 0.0000 | 1.7075 | 0.8042 | 0.5079 |
| P-0015 | 100YR-002HR | 12.32 | 0.00 | 0.02 | 3.92 | 4.70 | 0.9187 | 0.0000 | 2.6710 | 0.9187 | 0.5494 |
| P-0015 | 100YR-004HR | 9.82 | 0.00 | 0.02 | 3.29 | 3.67 | 2.5844 | 0.0000 | 4.5808 | 1.9799 | 1.3109 |
| P-0015 | 100YR-008HR | 12.77 | 0.00 | 0.02 | 4.07 | 4.07 | 4.0840 | 0.0000 | 8.5802 | 4.0840 | 4.0840 |
| P-0015 | 100YR-0 | 4.75 | 0.00 | -0.02 | 2.79 | 4.27 | 12.0243 | 0.0000 | 4.5874 | 12.0291 | 22.2084 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 24HR | | | | | | | | | | |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0016 | 025YR-0 01HR | 3.26 | 0.00 | 0.01 | 2.66 | 4.67 | 0.8388 | 0.0000 | 1.6344 | 0.8461 | 1.0693 |
| P-0016 | 025YR-0 02HR | 3.35 | 0.00 | 0.01 | 2.69 | 4.41 | 0.9995 | 0.0000 | 2.5859 | 1.0020 | 1.6135 |
| P-0016 | 025YR-0 04HR | 2.86 | 0.00 | 0.01 | 2.56 | 4.53 | 2.5883 | 0.0000 | 4.4900 | 2.6048 | 3.2667 |
| P-0016 | 025YR-0 08HR | 3.77 | 0.00 | 0.01 | 2.79 | 4.47 | 4.0692 | 0.0000 | 8.4918 | 4.0760 | 5.1882 |
| P-0016 | 025YR-0 24HR | 1.51 | 0.00 | -0.01 | 2.15 | 4.40 | 12.0427 | 0.0000 | 5.7628 | 12.0560 | 12.1895 |
| P-0016 | 100YR-0 01HR | 5.10 | 0.00 | 0.01 | 2.88 | 4.77 | 0.8686 | 0.0000 | 1.6812 | 0.8686 | 1.1271 |
| P-0016 | 100YR-0 02HR | 5.40 | 0.00 | -0.02 | 3.05 | 4.43 | 1.0392 | 0.0000 | 0.7940 | 1.0392 | 1.9136 |
| P-0016 | 100YR-0 04HR | 4.36 | 0.00 | 0.01 | 2.83 | 4.45 | 2.6194 | 0.0000 | 4.5383 | 2.7537 | 3.4532 |
| P-0016 | 100YR-0 08HR | 5.75 | 0.00 | 0.01 | 3.25 | 4.52 | 4.1192 | 0.0000 | 8.5372 | 4.1192 | 5.3054 |
| P-0016 | 100YR-0 24HR | 2.10 | 0.00 | -0.01 | 2.35 | 4.37 | 12.0332 | 0.0000 | 5.0551 | 12.0463 | 15.1340 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0017 | 025YR-0 01HR | 3.77 | 0.00 | 0.01 | 2.79 | 5.00 | 0.7833 | 0.0000 | 1.5559 | 0.7878 | 0.6134 |
| P-0017 | 025YR-0 02HR | 3.69 | 0.00 | 0.01 | 2.77 | 4.69 | 0.9397 | 0.0000 | 2.5107 | 0.9462 | 0.7105 |
| P-0017 | 025YR-0 | 2.56 | 0.00 | 0.01 | 2.48 | 4.17 | 2.5528 | 0.0000 | 4.4181 | 2.5669 | 1.6854 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 04HR | | | | | | | | | | |
| P-0017 | 025YR-0 08HR | 3.27 | 0.00 | 0.01 | 2.67 | 4.24 | 3.9889 | 0.0000 | 8.4157 | 3.9889 | 3.2236 |
| P-0017 | 025YR-0 24HR | 1.25 | 0.00 | 0.02 | 2.04 | 3.75 | 12.0183 | 0.0000 | 24.3313 | 12.0413 | 10.3621 |
| P-0017 | 100YR-0 01HR | 4.90 | 0.00 | 0.01 | 3.07 | 5.17 | 0.6869 | 0.0000 | 1.5901 | 0.6869 | 0.5664 |
| P-0017 | 100YR-0 02HR | 4.94 | 0.00 | 0.01 | 2.97 | 4.80 | 0.9638 | 0.0000 | 2.5489 | 0.8125 | 0.6315 |
| P-0017 | 100YR-0 04HR | 3.60 | 0.00 | 0.01 | 2.73 | 4.18 | 2.2113 | 0.0000 | 4.4568 | 2.0240 | 1.4875 |
| P-0017 | 100YR-0 08HR | 4.53 | 0.00 | 0.01 | 2.76 | 3.79 | 4.0577 | 0.0000 | 8.4529 | 3.5058 | 2.8575 |
| P-0017 | 100YR-0 24HR | 1.67 | 0.00 | -0.01 | 2.20 | 3.67 | 12.0198 | 0.0000 | 4.0151 | 12.0291 | 8.7238 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0018 | 025YR-0 01HR | 6.85 | 0.00 | 0.09 | 3.87 | 9.05 | 0.9836 | 0.0000 | 1.7487 | 0.9836 | 0.9817 |
| P-0018 | 025YR-0 02HR | 7.40 | 0.00 | -0.01 | 4.19 | 9.21 | 1.1646 | 0.0000 | 0.5749 | 1.1646 | 1.2121 |
| P-0018 | 025YR-0 04HR | 7.21 | 0.00 | -0.01 | 4.08 | 8.86 | 2.7019 | 0.0000 | 4.5565 | 2.7019 | 2.3407 |
| P-0018 | 025YR-0 08HR | 9.25 | 0.00 | -0.36 | 5.24 | 9.02 | 4.1680 | 0.0000 | 8.4798 | 4.1680 | 3.7534 |
| P-0018 | 025YR-0 24HR | 3.97 | 0.00 | -0.48 | 2.24 | 5.70 | 12.1172 | 0.0000 | 24.3411 | 12.1172 | 8.8166 |
| P-0018 | 100YR-0 01HR | 10.81 | 0.00 | -0.01 | 6.12 | 10.12 | 0.9692 | 0.0000 | 0.4546 | 0.9692 | 0.9437 |
| P-0018 | 100YR-0 02HR | 11.80 | 0.00 | -0.01 | 6.68 | 10.20 | 1.0933 | 0.0000 | 0.5036 | 1.0933 | 1.0350 |
| P-0018 | 100YR-0 04HR | 11.03 | 0.00 | -0.01 | 6.24 | 9.43 | 2.6698 | 0.0000 | 1.2900 | 2.6698 | 2.0874 |
| P-0018 | 100YR-0 08HR | 13.88 | 0.00 | 0.29 | 7.85 | 9.20 | 4.1514 | 0.0000 | 8.5059 | 4.1514 | 3.5060 |
| P-0018 | 100YR-0 24HR | 5.51 | 0.00 | -0.43 | 3.12 | 5.43 | 12.1024 | 0.0000 | 24.4183 | 12.1024 | 7.6705 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0020 | 025YR-0 01HR | 16.52 | 0.00 | 0.01 | 9.35 | 9.61 | 1.4421 | 0.0000 | 1.0332 | 1.4421 | 1.4421 |
| P-0020 | 025YR-0 02HR | 19.05 | 0.00 | -0.01 | 10.78 | 11.08 | 1.8184 | 0.0000 | 7.7716 | 1.8184 | 1.8184 |
| P-0020 | 025YR-0 04HR | 21.49 | 0.00 | 0.24 | 12.16 | 12.50 | 3.1319 | 1.6998 | 11.4719 | 3.1319 | 3.1319 |
| P-0020 | 025YR-0 08HR | 22.14 | -0.01 | 0.30 | 12.53 | 12.87 | 4.3130 | 1.9439 | 12.8211 | 4.3130 | 4.3130 |
| P-0020 | 025YR-0 24HR | 18.67 | -0.01 | 0.07 | 10.56 | 10.85 | 12.3029 | 1.9503 | 6.0509 | 12.3029 | 12.3773 |
| P-0020 | 100YR-0 01HR | 19.42 | 0.00 | 0.01 | 10.99 | 11.29 | 1.3202 | 0.0000 | 0.8835 | 1.3202 | 1.3202 |
| P-0020 | 100YR-0 02HR | 22.24 | 0.00 | -0.01 | 12.58 | 12.93 | 1.4565 | 0.0000 | 7.9388 | 1.4565 | 1.4565 |
| P-0020 | 100YR-0 04HR | 22.45 | 0.00 | 0.21 | 12.70 | 13.05 | 2.6119 | 0.0000 | 11.8639 | 2.6119 | 2.6119 |
| P-0020 | 100YR-0 08HR | 22.57 | -0.01 | 0.28 | 12.77 | 13.12 | 4.0819 | 1.9419 | 12.6289 | 4.0819 | 4.0819 |
| P-0020 | 100YR-0 24HR | 20.07 | -0.01 | 0.06 | 11.36 | 11.63 | 12.2339 | 1.9503 | 5.2982 | 12.2339 | 12.3765 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0021 | 025YR-0 01HR | 14.50 | 0.00 | 0.02 | 2.09 | 5.41 | 1.4421 | 0.0000 | 1.1927 | 1.4421 | 1.4438 |
| P-0021 | 025YR-0 02HR | 38.91 | 0.00 | 0.03 | 5.50 | 7.64 | 1.8184 | 0.0000 | 1.4522 | 1.8184 | 1.8193 |
| P-0021 | 025YR-0 04HR | 63.23 | 0.00 | 0.04 | 8.95 | 9.37 | 3.1319 | 0.0000 | 2.7713 | 3.1319 | 3.1328 |
| P-0021 | 025YR-0 08HR | 66.69 | 0.00 | 0.03 | 9.43 | 9.68 | 4.3130 | 0.0000 | 4.0984 | 4.3130 | 4.3147 |
| P-0021 | 025YR-0 24HR | 34.21 | 0.00 | 0.02 | 4.84 | 7.25 | 12.3029 | 0.0000 | 10.2962 | 12.3029 | 12.3050 |
| P-0021 | 100YR-0 01HR | 43.85 | 0.00 | -0.01 | 6.20 | 8.06 | 1.3202 | 0.0000 | 1.6934 | 1.3202 | 1.3247 |
| P-0021 | 100YR-0 02HR | 67.22 | 0.00 | -0.03 | 9.51 | 9.75 | 1.4565 | 0.0000 | 2.1237 | 1.4565 | 1.4565 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0021 | 100YR-004HR | 68.31 | 0.00 | 0.03 | 9.66 | 9.91 | 2.6119 | 0.0000 | 2.2054 | 2.6119 | 2.6119 |
| P-0021 | 100YR-008HR | 68.96 | 0.00 | 0.02 | 9.76 | 10.00 | 4.0819 | 0.0000 | 3.5755 | 4.0819 | 4.0819 |
| P-0021 | 100YR-024HR | 53.19 | 0.00 | 0.04 | 7.52 | 8.88 | 12.2339 | 0.0000 | 12.0524 | 12.2339 | 12.2348 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0001 | 025YR-001HR | 17.23 | 0.00 | -0.01 | 5.49 | 13.35 | 1.1128 | 0.0000 | 0.4226 | 1.1128 | 0.9121 |
| PH-0001 | 025YR-002HR | 20.88 | 0.00 | 0.01 | 6.65 | 13.36 | 1.3944 | 0.0000 | 5.5964 | 1.3944 | 1.0224 |
| PH-0001 | 025YR-004HR | 25.17 | 0.00 | 0.01 | 8.01 | 13.33 | 3.0432 | 0.0000 | 7.3477 | 3.0432 | 2.1786 |
| PH-0001 | 025YR-008HR | 29.09 | 0.00 | 0.01 | 9.26 | 13.35 | 4.3271 | 0.0000 | 11.1744 | 4.3271 | 3.6182 |
| PH-0001 | 025YR-024HR | 15.34 | 0.00 | 0.01 | 4.88 | 13.28 | 12.1966 | 0.0000 | 26.8211 | 12.1966 | 11.8086 |
| PH-0001 | 100YR-001HR | 26.34 | 0.00 | -0.01 | 8.38 | 13.42 | 1.1109 | 0.0000 | 1.5072 | 1.1109 | 0.7547 |
| PH-0001 | 100YR-002HR | 32.34 | 0.00 | 0.01 | 10.29 | 13.44 | 1.3704 | 0.0000 | 5.7068 | 1.3704 | 0.8542 |
| PH-0001 | 100YR-004HR | 37.38 | 0.00 | 0.01 | 11.90 | 13.37 | 3.0027 | 0.0000 | 1.8806 | 3.0027 | 1.9239 |
| PH-0001 | 100YR-008HR | 42.16 | 0.00 | 0.01 | 13.42 | 13.42 | 4.4557 | 0.0000 | 11.3168 | 4.4557 | 4.4557 |
| PH-0001 | 100YR-024HR | 21.05 | 0.00 | 0.01 | 6.70 | 13.28 | 12.1854 | 0.0000 | 26.9625 | 12.1854 | 10.8079 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0002 | 025YR-001HR | 36.05 | 0.00 | -0.10 | 7.34 | 7.54 | 0.8570 | 0.0000 | 1.6307 | 0.8570 | 0.5576 |
| PH-0002 | 025YR-002HR | 36.27 | 0.00 | -0.81 | 7.39 | 8.01 | 1.0250 | 0.0000 | 2.5296 | 1.0250 | 0.6623 |
| PH-0002 | 025YR-004HR | 29.36 | 0.00 | 0.20 | 5.98 | 8.59 | 2.5463 | 0.0000 | 4.4618 | 2.5463 | 1.6615 |
| PH-0002 | 025YR-008HR | 37.36 | 0.00 | -0.12 | 7.61 | 8.47 | 4.0559 | 0.0000 | 4.9714 | 4.0559 | 3.1693 |
| PH-0002 | 025YR-024HR | 14.71 | 0.00 | 0.02 | 3.71 | 7.41 | 12.0450 | 0.0000 | 24.9787 | 12.0519 | 8.4529 |
| PH-0002 | 100YR-001HR | 52.13 | 0.00 | 1.58 | 10.62 | 10.62 | 0.8680 | 0.0000 | 1.7406 | 0.8680 | 0.8680 |
| PH-0002 | 100YR-002HR | 54.15 | 0.00 | 1.59 | 11.03 | 11.03 | 1.0346 | 0.0000 | 2.6014 | 1.0346 | 1.0346 |
| PH-0002 | 100YR-004HR | 42.08 | 0.00 | 1.21 | 8.57 | 8.60 | 2.5629 | 0.0000 | 4.4828 | 2.5629 | 1.4710 |
| PH-0002 | 100YR-008HR | 52.79 | 0.00 | 0.02 | 10.76 | 10.76 | 4.0709 | 0.0000 | 3.2838 | 4.0709 | 4.0709 |
| PH-0002 | 100YR-024HR | 19.79 | 0.00 | -0.16 | 4.03 | 7.22 | 12.0543 | 0.0000 | 12.6356 | 12.0543 | 7.2870 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0003 | 025YR-001HR | 17.23 | 0.00 | 0.01 | 5.48 | 14.12 | 1.1169 | 0.0000 | 0.9153 | 1.1169 | 1.1216 |
| PH-0003 | 025YR-002HR | 20.88 | 0.00 | 0.01 | 6.65 | 14.85 | 1.3995 | 0.0000 | 1.0271 | 1.3995 | 1.4080 |
| PH-0003 | 025YR-004HR | 25.17 | 0.00 | 0.01 | 8.01 | 15.02 | 3.0495 | 0.0000 | 7.4360 | 3.0495 | 3.4430 |
| PH-0003 | 025YR-008HR | 29.09 | 0.00 | 0.01 | 9.26 | 15.03 | 4.3325 | 0.0000 | 3.6187 | 4.3325 | 5.2500 |
| PH-0003 | 025YR-024HR | 15.34 | 0.00 | 0.01 | 4.88 | 13.68 | 12.2032 | 0.0000 | 26.8817 | 12.2032 | 12.2415 |
| PH-0003 | 100YR-001HR | 26.33 | 0.00 | -0.01 | 8.38 | 15.12 | 1.1164 | 0.0000 | 1.5105 | 1.1164 | 1.3343 |
| PH-0003 | 100YR-002HR | 32.34 | 0.00 | 0.01 | 10.29 | 15.07 | 1.3772 | 0.0000 | 0.8545 | 1.3772 | 2.1514 |
| PH-0003 | 100YR-0 | 37.48 | 0.00 | 0.01 | 11.93 | 15.07 | 3.0604 | 0.0000 | 1.9241 | 3.0604 | 3.9019 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 04HR | | | | | | | | | | |
| PH-0003 | 100YR-008HR | 42.39 | 0.00 | 0.01 | 13.49 | 15.02 | 4.4953 | 0.0000 | 3.3980 | 4.4953 | 5.7835 |
| PH-0003 | 100YR-024HR | 21.05 | 0.00 | 0.01 | 6.70 | 14.88 | 12.1934 | 0.0000 | 27.0240 | 12.1934 | 12.1934 |

Link Min/Max Conditions with Times [EXISTING CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| POND BOTTO M FILTER | 025YR-001HR | 2.07 | 0.00 | 0.34 | 0.00 | 0.00 | 1.4406 | 0.0000 | 0.6625 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-002HR | 2.34 | 0.00 | 0.34 | 0.00 | 0.00 | 1.8181 | 0.0000 | 0.7646 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-004HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 2.7877 | 0.0000 | 1.6995 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-008HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 4.0782 | 0.0000 | 2.9439 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-024HR | 2.29 | 0.00 | 0.34 | 0.00 | 0.00 | 12.3024 | 0.0000 | 6.0508 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-001HR | 2.40 | 0.00 | 0.34 | 0.00 | 0.00 | 1.3192 | 0.0000 | 0.6074 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-002HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 1.2525 | 0.0000 | 0.6831 | 0.0000 | 0.0000 |
| POND BOTTO | 100YR-004HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 2.3535 | 0.0000 | 1.5331 | 0.0000 | 0.0000 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| M FILTER | | | | | | | | | | | |
| POND BOTTO M FILTER | 100YR-0 08HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 3.7641 | 0.0000 | 2.6309 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 24HR | 2.47 | 0.00 | 0.34 | 0.00 | 0.00 | 12.0721 | 0.0000 | 5.2981 | 0.0000 | 0.0000 |

E. Proposed Conditions Basin Delineations and Supporting Documents



- ① B-0001
AREA = 0.638 AC.
CN = 75
Tc = 11 MIN.
- ② B-0002
AREA = 7.139 AC.
CN = 65
Tc = 33 MIN.
- ③ B-0003
AREA = 9.932 AC.
CN = 73
Tc = 44 MIN.
- ④ B-0004
AREA = 0.871 AC.
CN = 59
Tc = 9 MIN.
- ⑤ B-0005
AREA = 1.284 AC.
CN = 73
Tc = 13 MIN.
- ⑥ B-0006
AREA = 1.210 AC.
CN = 73
Tc = 14 MIN.
- ⑦ B-0007
AREA = 12.747 AC.
CN = 66
Tc = 51 MIN.
- ⑧ B-0008
AREA = 8.611 AC.
CN = 65
Tc = 39 MIN.
- ⑨ B-0009
AREA = 4.653 AC.
CN = 71
Tc = 27 MIN.
- ⑩ B-0010
AREA = 1.679 AC.
CN = 71
Tc = 29 MIN.
- ⑪ B-0011
AREA = 4.563 AC.
CN = 72
Tc = 26 MIN.
- ⑫ B-0012
AREA = 1.067 AC.
CN = 65
Tc = 7 MIN.
- ⑬ B-0013
AREA = 5.180 AC.
CN = 67
Tc = 16 MIN.
- ⑭ B-0014
AREA = 0.778 AC.
CN = 58
Tc = 8 MIN.
- ⑮ B-0015
AREA = 2.619 AC.
CN = 63
Tc = 15 MIN.
- ⑯ B-0016
AREA = 2.119 AC.
CN = 62
Tc = 21 MIN.
- ⑰ B-0017
AREA = 1.465 AC.
CN = 71
Tc = 19 MIN.
- ⑱ B-0018
AREA = 5.679 AC.
CN = 62
Tc = 33 MIN.
- ⑲ **POND** POND BASIN
AREA = 3.325 AC.
CN = 81
Tc = 8 MIN.

| Rev | Date | Drawn | Description | Ch'k'd | App'd |
|-----|------|-------|-------------|--------|-------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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Architects Engineers Surveyors
AA - C0000035 EB - 0000155 LB - 0006783

Client
**ESCAMBA COUNTY
ENGINEERING**

Title
**ELEVEN MILE CREEK BASIN
STORMWATER POND AT
HWY 297A AND HWY 97
PROPOSED CONDITIONS BASIN DELINEATIONS**

| | | | |
|------------------------------------|------------------------|------------------|------------------------|
| Project Number 502101061 | | B/O 1 | Total |
| Designed S. WHITE | Eng check K. MORGAN | | |
| Drawn S. WHITE | Coordination | | |
| Dwg check | Approved | | |
| Scale at ANSI D | Status PRE | Rev P1 | Security STD |

Drawing Number
CURRENT CONDITIONS BASINS

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|---|---|---|----------------------|-----|-----|-----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 12.49 | 100 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 13.08 | 100 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 13.08 | 100 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -POND..... | 0.800 | 61.35 | 98 | 0 | 0 | 2 | 100 | 100 | 100 | 100 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 99 | 0 | 0 | 1 | COMPOSITE CN..... 81 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.002 | 0.180 | 31 | 0.1 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.002 | TOTAL TIME OF CONCENTRATION..... | | | 8 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|---|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 38.96 | 100 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 0.00 | 0 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other - BUILDINGS/ROADS..... | 0.800 | 61.04 | 100 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 100 | 0 | 0 | 0 | COMPOSITE CN..... 75 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.012 | 0.180 | 69 | 0.1 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.010 | 0.050 | 381 | 2.1 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|----|----|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 21.73 | 39 | 50 | 10 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 21.72 | 39 | 50 | 10 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 56.55 | 36 | 22 | 42 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 37 | 34 | 28 | 0 | COMPOSITE CN..... 65 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.016 | 0.190 | 300 | 0.2 | 23 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.027 | 0.050 | 1565 | 2.7 | 10 |
| Shallow Con. (Paved)..... | 0.006 | 0.050 | 32 | 1.5 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|----|----|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 31.38 | 0 | 65 | 35 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 31.38 | 0 | 65 | 35 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 37.24 | 29 | 0 | 71 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 11 | 41 | 48 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.007 | 0.190 | 300 | 0.2 | 32 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.022 | 0.050 | 1374 | 2.4 | 10 |
| Shallow Con. (Unpaved)..... | 0.163 | 0.050 | 28 | 6.5 | 0 |
| Shallow Con. (Paved)..... | 0.024 | 0.050 | 351 | 3.1 | 2 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.022 | TOTAL TIME OF CONCENTRATION..... | | | 44 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 89 | 11 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 89 | 11 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 89 | 11 | 0 | 0 | COMPOSITE CN..... 59 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.042 | 0.180 | 115 | 0.3 | 7 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.019 | 0.050 | 343 | 2.8 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|-----|---|---|-----------------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 0 | 100 | 0 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|-----------------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.037 | 0.180 | 188 | 0.3 | 11 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.044 | 0.050 | 419 | 4.2 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 49.02 | 0 | 92 | 9 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 49.01 | 0 | 92 | 9 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 1.97 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 92 | 8 | 0 | COMPOSITE CN..... 73 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.015 | 0.180 | 108 | 0.2 | 10 |
| Sheet Flow..... | 0.016 | 0.011 | 105 | 1.8 | 1 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.021 | 0.050 | 517 | 3.0 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 7.40 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 7.41 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 85.19 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... 66 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.008 | 0.190 | 300 | 0.2 | 31 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.006 | 0.050 | 1191 | 1.2 | 17 |
| Shallow Con. (Paved)..... | 0.022 | 0.050 | 569 | 3.0 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.010 | TOTAL TIME OF CONCENTRATION..... | | | 51 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 0.64 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 0.64 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 98.72 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 65 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.009 | 0.190 | 300 | 0.2 | 29 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.012 | 0.050 | 1075 | 1.7 | 10 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.011 | TOTAL TIME OF CONCENTRATION..... | | | 39 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 38.00 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 38.00 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 24.00 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... 71 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.017 | 0.190 | 300 | 0.2 | 22 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.012 | 0.050 | 96 | 1.8 | 1 |
| Shallow Con. (Paved)..... | 0.018 | 0.050 | 673 | 2.7 | 4 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.017 | TOTAL TIME OF CONCENTRATION..... | | | 27 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 40.18 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 40.18 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 19.64 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 71 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.018 | 0.190 | 300 | 0.2 | 22 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.024 | 0.050 | 163 | 2.5 | 1 |
| Shallow Con. (Paved)..... | 0.018 | 0.050 | 922 | 2.7 | 6 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.018 | TOTAL TIME OF CONCENTRATION..... | | | 29 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|-------|---------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 49.39 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 49.38 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 1.23 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | | 100.000 | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 72 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.017 | 0.180 | 300 | 0.2 | 21 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.031 | 0.050 | 414 | 2.8 | 2 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 433 | 2.9 | 3 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.023 | TOTAL TIME OF CONCENTRATION..... | | | 26 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 51 | 49 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 51 | 49 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 51 | 49 | 0 | 0 | COMPOSITE CN..... 65 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.059 | 0.180 | 99 | 0.3 | 5 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 372 | 4.0 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 37 | 63 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 37 | 63 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 37 | 63 | 0 | 0 | COMPOSITE CN..... 67 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.046 | 0.180 | 300 | 0.4 | 14 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.041 | 0.050 | 445 | 3.2 | 2 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 62 | 4.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|---------|-------|----------------|---|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 100 | 0 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 100 | 0 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | 100.000 | | 100 | 0 | 0 | 0 | COMPOSITE CN..... 58 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.059 | 0.180 | 157 | 0.3 | 8 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.039 | 0.050 | 82 | 4.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.052 | TOTAL TIME OF CONCENTRATION..... | | | 8 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

| | |
|-----------------------------------|---------------|
| SUBBASIN NO..... | <u>B-0015</u> |
| NODE NO..... | <u>I-0015</u> |
| UNIT HYDROGRAPH..... | <u>484</u> |
| AREA (Ac.)..... | <u>2.619</u> |
| CURVE NUMBER (CN)..... | <u>63</u> |
| DCIA (%)..... | <u>0.0</u> |
| CURVE NUMBER (CN); DCIA ADJ..... | <u>NA</u> |
| TIME OF CONCENTRATION (Min.)..... | <u>15</u> |

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

| | |
|------------------------------|------------|
| DCIA AREA (AC)..... | <u>0.0</u> |
| NON-DCIA IMP. AREA (AC)..... | <u>0.0</u> |

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|---------|-------|----------------|----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 50.00 | 66 | 35 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 50.00 | 66 | 35 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 0.00 | 0 | 0 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | 100.000 | | 66 | 35 | 0 | 0 | COMPOSITE CN..... | | | | 63 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.044 | 0.180 | 286 | 0.3 | 14 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 234 | 2.9 | 1 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.033 | TOTAL TIME OF CONCENTRATION..... | | | 15 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

| | |
|-----------------------------------|--------|
| SUBBASIN NO..... | B-0016 |
| NODE NO..... | I-0016 |
| UNIT HYDROGRAPH..... | 484 |
| AREA (Ac.)..... | 2.119 |
| CURVE NUMBER (CN)..... | 62 |
| DCIA (%)..... | 0.0 |
| CURVE NUMBER (CN); DCIA ADJ..... | NA |
| TIME OF CONCENTRATION (Min.)..... | 21 |

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

| | |
|------------------------------|-----|
| DCIA AREA (AC)..... | 0.0 |
| NON-DCIA IMP. AREA (AC)..... | 0.0 |

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|-------|---------|----------------|----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 26.29 | 84 | 16 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 26.28 | 84 | 16 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 47.43 | 4 | 96 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | | 100.000 | 46 | 54 | 0 | 0 | COMPOSITE CN..... | | | | 62 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|----------------------------------|-------------|----------------|------------|
| Sheet Flow..... | 0.029 | 0.190 | 300 | 0.3 | 18 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.046 | 0.050 | 192 | 3.4 | 1 |
| Shallow Con. (Paved)..... | 0.020 | 0.050 | 308 | 2.9 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| AVG. SLOPE..... | 0.029 | TOTAL TIME OF CONCENTRATION..... | | | 21 |

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|--------------------------------|-------|---------|----------------|-----|---|---|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 | |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 | |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 | |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 | |
| 1/4 Ac. Residential..... | 0.110 | 40.18 | 0 | 100 | 0 | 0 | 61 | 75 | 83 | 87 | |
| 1/2 Ac. Residential..... | 0.140 | 40.18 | 0 | 100 | 0 | 0 | 54 | 70 | 80 | 85 | |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 | |
| 2 Ac. Residential..... | 0.190 | 19.64 | 0 | 100 | 0 | 0 | 46 | 65 | 77 | 82 | |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 | |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 | |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 | |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 | |
| TOTALS..... | | 100.000 | 0 | 100 | 0 | 0 | COMPOSITE CN..... | | | | 71 |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | | |
|-------------------------------|-------|----|----------------|----|----|----|-------------------|----|----|----|----|
| | | | A | B | C | D | A | B | C | D | |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 | |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 | |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... | | | | NA |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.025 | 0.180 | 264 | 0.3 | 17 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.014 | 0.050 | 221 | 1.9 | 2 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

TR-55 - HYDROLOGIC DATA SPREADSHEET

PROJECT: Eleven Mile Creek Stream Restoration

COMPUTED BY: Steven D. White, PE

JOB NO.: 502100770

DATE: 06/18/21

SUBBASIN NO.....

NODE NO.....

UNIT HYDROGRAPH.....

AREA (Ac.).....

CURVE NUMBER (CN).....

DCIA (%).....

CURVE NUMBER (CN); DCIA ADJ.....

TIME OF CONCENTRATION (Min.).....

NOTE: Unit hydrographs assume the following slopes
 256 (< 0.5%)
 323 (0.5% - 1.5%)
 484 (> 1.5%)

DCIA AREA (AC).....

NON-DCIA IMP. AREA (AC).....

CURVE NUMBER CALCULATION:

Taken From: Tables 2-2a,b,c&d. TR-55 2nd Edition., June 1986

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|--------------------------------|-------|---------|----------------|----|---|---|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pasture/Grasslands..... | 0.240 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Dense Woods..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 36 | 60 | 73 | 79 |
| Orchard Type Woods..... | 0.400 | 0.00 | 0 | 0 | 0 | 0 | 57 | 73 | 82 | 86 |
| Open Space (Cover < 50%)..... | 0.110 | 0.00 | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Open Space (Cover 50-75%)..... | 0.150 | 0.00 | 0 | 0 | 0 | 0 | 49 | 69 | 79 | 84 |
| Open Space (Cover > 75%)..... | 0.180 | 0.00 | 0 | 0 | 0 | 0 | 39 | 61 | 74 | 80 |
| 1/4 Ac. Residential..... | 0.110 | 34.90 | 59 | 41 | 0 | 0 | 61 | 75 | 83 | 87 |
| 1/2 Ac. Residential..... | 0.140 | 34.90 | 59 | 41 | 0 | 0 | 54 | 70 | 80 | 85 |
| 1 Ac. Residential..... | 0.160 | 0.00 | 0 | 0 | 0 | 0 | 51 | 68 | 79 | 84 |
| 2 Ac. Residential..... | 0.190 | 30.20 | 35 | 66 | 0 | 0 | 46 | 65 | 77 | 82 |
| Industrial..... | 0.050 | 0.00 | 0 | 0 | 0 | 0 | 81 | 88 | 91 | 93 |
| Commercial..... | 0.060 | 0.00 | 0 | 0 | 0 | 0 | 89 | 92 | 94 | 95 |
| Streets & Roads..... | 0.011 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - County/City RW..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 69 | 80 | 86 | 89 |
| Other -BUILDINGS/ROADS..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| Other - Gravel..... | 0.800 | 0.00 | 0 | 0 | 0 | 0 | 76 | 85 | 89 | 91 |
| TOTALS..... | | 100.000 | 51 | 49 | 0 | 0 | COMPOSITE CN..... 62 | | | |

DCIA ADJUSTED CURVE NUMBER CALCULATIONS

| LAND USE | N | % | SOIL GROUPS, % | | | | CN, Soil Groups | | | |
|-------------------------------|-------|----|----------------|----|----|----|----------------------|----|----|----|
| | | | A | B | C | D | A | B | C | D |
| Pervious Area..... | 0.240 | NA | 0 | 0 | 0 | 0 | 68 | 79 | 86 | 89 |
| Impervious Non DCIA Area..... | 0.011 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 | 98 |
| TOTALS..... | | | NA | NA | NA | NA | DCIA ADJ. CN..... NA | | | |

TIME OF CONCENTRATION CALCULATIONS:

Taken From: Chapter-3, TR-55 2nd Edition., June 1986

| TYPE FLOW | SLOPE, Ft./Ft. | MANNING, N | LENGTH, Ft. | VELOCITY, Ft/s | TIME, Min. |
|-----------------------------|----------------|------------|-------------|----------------|------------|
| Sheet Flow..... | 0.019 | 0.180 | 300 | 0.2 | 21 |
| Sheet Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |
| Shallow Con. (Unpaved)..... | 0.029 | 0.050 | 1020 | 2.8 | 6 |
| Shallow Con. (Paved)..... | 0.013 | 0.050 | 785 | 2.3 | 6 |
| Shallow Con. (Paved)..... | 0.000 | 0.050 | 0 | 0.0 | 0 |
| Pipe Flow..... | N/A | 0.012 | 0 | 3.5 | 0 |
| Ditch Flow..... | 0.000 | 0.000 | 0 | 0.0 | 0 |

AVG. SLOPE..... TOTAL TIME OF CONCENTRATION.....

NOTE: Ditch flow assumes a typical road side ditch with a 2' bot. width, 3:1 ss, and a 1' depth.
 Pipe flow assumes an RCP with a typical velocity of 3.5 ft/s.

F. Proposed Conditions ICPR4 Inputs and Results

Simple Basin: B-0001

Scenario: PROPOSED CONDITIONS
Node: I-0001
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 0.6380 ac
Curve Number: 75.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0002

Scenario: PROPOSED CONDITIONS
Node: I-0002
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 33.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 7.1390 ac
Curve Number: 65.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0003

Scenario: PROPOSED CONDITIONS
Node: I-0003
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 44.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 9.9320 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0004

Scenario: PROPOSED CONDITIONS
Node: I-0004
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 9.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 0.8710 ac
Curve Number: 59.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0005

Scenario: PROPOSED CONDITIONS
Node: I-0005
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.2840 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00

% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0006

Scenario: PROPOSED CONDITIONS
Node: I-0006
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.2100 ac
Curve Number: 73.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0007

Scenario: PROPOSED CONDITIONS
Node: I-0007
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 51.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 12.7470 ac
Curve Number: 66.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0008

Scenario: PROPOSED CONDITIONS
Node: I-0008
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 39.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 8.6110 ac
Curve Number: 65.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0009

Scenario: PROPOSED CONDITIONS
Node: I-0009
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 27.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 4.6530 ac
Curve Number: 71.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0010

Scenario: PROPOSED CONDITIONS
Node: I-0010
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 29.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.6790 ac
Curve Number: 71.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0011

Scenario: PROPOSED CONDITIONS
Node: I-0011
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 26.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 4.4563 ac
Curve Number: 72.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0012

Scenario: PROPOSED CONDITIONS
Node: I-0012
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 7.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.0670 ac
Curve Number: 65.0
% Impervious: 0.00
% DCIA: 0.00

% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0013

Scenario: PROPOSED CONDITIONS
Node: I-0013
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 5.1800 ac
Curve Number: 67.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0014

Scenario: PROPOSED CONDITIONS
Node: I-0014
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 0.7780 ac
Curve Number: 58.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0015

Scenario: PROPOSED CONDITIONS
Node: I-0015
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 2.6190 ac
Curve Number: 63.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0016

Scenario: PROPOSED CONDITIONS
Node: I-0016
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 21.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 2.1190 ac
Curve Number: 62.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0017

Scenario: PROPOSED CONDITIONS
Node: I-0017
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 1.4650 ac
Curve Number: 71.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: B-0018

Scenario: PROPOSED CONDITIONS
Node: I-0018
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 33.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH484
Peaking Factor: 484.0
Area: 5.6790 ac
Curve Number: 62.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: POND BASIN

Scenario: PROPOSED CONDITIONS
Node: POND
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 3.3250 ac
Curve Number: 77.0
% Impervious: 0.00
% DCIA: 0.00

% Direct: 0.00
 Rainfall Name:

Comment:

Node: CONCRETE SWALE

Scenario: PROPOSED CONDITIONS
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 58.43 ft
 Warning Stage: 59.89 ft
 Boundary Stage:

| Year | Month | Day | Hour | Stage [ft] |
|------|-------|-----|---------|------------|
| 0 | 0 | 0 | 0.0000 | 58.43 |
| 0 | 0 | 0 | 12.0000 | 59.88 |
| 0 | 0 | 0 | 24.0000 | 58.43 |

Comment:

Node: CONTROL STRUCTURE

Scenario: PROPOSED CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 58.62 ft
 Warning Stage: 66.30 ft

Comment:

Node: I-0001

Scenario: PROPOSED CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 63.48 ft
 Warning Stage: 68.21 ft

Comment:

Node: I-0002

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 64.38 ft
Warning Stage: 68.21 ft

Comment:

Node: I-0003

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 68.43 ft
Warning Stage: 74.96 ft

Comment:

Node: I-0004

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 63.11 ft
Warning Stage: 68.85 ft

Comment:

Node: I-0005

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 75.00 ft
Warning Stage: 82.25 ft

Comment:

Node: I-0006

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 96.00 ft
Warning Stage: 103.32 ft

Comment:

Node: I-0007

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 96.88 ft
Warning Stage: 103.62 ft

Comment:

Node: I-0008

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 102.00 ft
Warning Stage: 106.00 ft

Comment:

Node: I-0009

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 93.20 ft
Warning Stage: 100.10 ft

Comment:

Node: I-0010

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 87.00 ft
Warning Stage: 95.40 ft

Comment:

Node: I-0011

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 85.06 ft
Warning Stage: 91.20 ft

Comment:

Node: I-0012

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 68.32 ft
Warning Stage: 76.50 ft

Comment:

Node: I-0013

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 65.50 ft
Warning Stage: 68.39 ft

Comment:

Node: I-0014

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 62.05 ft
Warning Stage: 68.39 ft

Comment:

Node: I-0015

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 70.74 ft
Warning Stage: 74.55 ft

Comment:

Node: I-0016

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 71.58 ft
Warning Stage: 74.55 ft

Comment:

Node: I-0017

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 89.00 ft
Warning Stage: 92.50 ft

Comment:

Node: I-0018

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 63.77 ft
Warning Stage: 66.67 ft

Comment:

Node: MH-0001

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 94.00 ft
Warning Stage: 101.40 ft

Comment:

Node: MH-0002

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 64.45 ft
Warning Stage: 69.40 ft

Comment:

Node: MH-0003

Scenario: PROPOSED CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 84.15 ft
Warning Stage: 90.60 ft

Comment:

Node: P-RISER

Scenario: PROPOSED CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 56.10 ft
 Warning Stage: 66.30 ft

Comment:

Node: POND

Scenario: PROPOSED CONDITIONS
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 59.00 ft
 Warning Stage: 67.00 ft

| Stage [ft] | Area [ac] | Area [ft2] |
|------------|-----------|------------|
| 59.00 | 0.8418 | 36668 |
| 60.00 | 0.9236 | 40232 |
| 61.00 | 1.0107 | 44028 |
| 62.00 | 1.3055 | 56866 |
| 62.25 | 1.3454 | 58607 |
| 63.00 | 1.4317 | 62366 |
| 64.00 | 1.5602 | 67963 |
| 65.00 | 1.6911 | 73665 |
| 66.00 | 1.8245 | 79475 |
| 66.30 | 1.8775 | 81786 |
| 67.00 | 1.9910 | 86726 |

Comment:

Weir Link: CONTROL STRUCTURE RIM

| | |
|-----------------------------------|-------------------------------|
| Scenario: PROPOSED CONDITIONS | Bottom Clip |
| From Node: POND | Default: 0.00 ft |
| To Node: CONTROL STRUCTURE | Op Table: |
| Link Count: 1 | Ref Node: |
| Flow Direction: Both | Top Clip |
| Damping: 0.0000 ft | Default: 0.00 ft |
| Weir Type: Sharp Crested Vertical | Op Table: |
| Geometry Type: Circular | Ref Node: |
| Invert: 66.25 ft | Discharge Coefficients |
| Control Elevation: 66.25 ft | Weir Default: 2.800 |
| Max Depth: 6.00 ft | Weir Table: |
| | Orifice Default: 0.600 |

Orifice Table:

Comment:

Weir Link: CONTROL STRUCTURE SLOT

| | | |
|--------------------|------------------------|------------------------|
| Scenario: | PROPOSED CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | CONTROL STRUCTURE | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Sharp Crested Vertical | Op Table: |
| Geometry Type: | Rectangular | Ref Node: |
| Invert: | 63.75 ft | Discharge Coefficients |
| Control Elevation: | 63.75 ft | Weir Default: 2.800 |
| Max Depth: | 2.50 ft | Weir Table: |
| Max Width: | 6.50 ft | Orifice Default: 0.600 |
| Fillet: | 0.00 ft | Orifice Table: |

Comment:

Weir Link: EMERGENCY SPILLWAY

| | | |
|--------------------|---------------------|------------------------|
| Scenario: | PROPOSED CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | CONCRETE SWALE | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Paved Road Vertical | Op Table: |
| Geometry Type: | Irregular | Ref Node: |
| Invert: | 66.34 ft | Discharge Coefficients |
| Control Elevation: | 66.34 ft | Weir Default: 2.800 |
| Cross Section: | X-0010W | Weir Table: |
| | | Orifice Default: 0.600 |
| | | Orifice Table: |

Comment:

Pipe Link: P-0001

| | Upstream | Downstream |
|-------------|------------|---------------------|
| Scenario: | PROPOSED | Invert: 62.50 ft |
| | CONDITIONS | Manning's N: 0.0120 |
| From Node: | I-0001 | Geometry: Circular |
| To Node: | POND | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip |

Proposed Conditions Input Report

| | | | | | |
|-----------------|-----------|--------------|---------|--------------|---------|
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 56.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 1.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0002 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 64.20 ft | Invert: 63.60 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0002 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0001 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | |
| Length: | 28.00 ft | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0003 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 68.43 ft | Invert: 63.80 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0003 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0004 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | |
| Length: | 356.00 ft | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0004 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 63.11 ft | Invert: 62.23 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0004 | Geometry: Circular | Geometry: Circular |
| To Node: | POND | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 60.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 1.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

| Pipe Link: P-0005 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 75.00 ft | Invert: 68.93 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0005 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0003 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 262.36 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

| Pipe Link: P-0006 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 96.00 ft | Invert: 94.48 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0006 | Geometry: Circular | Geometry: Circular |
| To Node: | MH-0001 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 76.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |

| | | | | | |
|-----------------|----------|--------------|---------|--------------|---------|
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

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| Comment: |
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| Pipe Link: P-0007 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 96.88 ft | Invert: 96.34 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0007 | Geometry: Circular | Geometry: Circular |
| To Node: I-0006 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 32.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

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| Comment: |
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| Pipe Link: P-0008 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 102.00 ft | Invert: 99.42 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0008 | Geometry: Circular | Geometry: Circular |
| To Node: I-0007 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 172.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

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| Comment: |
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| Pipe Link: P-0009 | Upstream | Downstream |
|--------------------|------------------|------------------|
| Scenario: PROPOSED | Invert: 93.20 ft | Invert: 90.32 ft |

| | | | |
|-----------------|------------|---------------------|---------------------|
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0009 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0010 | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 192.38 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

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|-------------------|------------|---------------------|---------------------|
| Pipe Link: P-0010 | | Upstream | Downstream |
| Scenario: | PROPOSED | Invert: 87.00 ft | Invert: 85.44 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0010 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0011 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 104.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

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|-------------------|------------|---------------------|---------------------|
| Pipe Link: P-0011 | | Upstream | Downstream |
| Scenario: | PROPOSED | Invert: 85.06 ft | Invert: 71.14 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0011 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0012 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 392.31 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |

| | | | |
|----------------|----------|--------------|-----------|
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: | 0.0000 |
| | | Manning's N: | 0.0000 |

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| Comment: |
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| Pipe Link: P-0012 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 68.32 ft | Invert: 64.58 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0012 | Geometry: Circular | Geometry: Circular |
| To Node: MH-0002 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 208.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

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| Comment: |
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| Pipe Link: P-0013 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 65.50 ft | Invert: 65.22 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0013 | Geometry: Circular | Geometry: Circular |
| To Node: I-0014 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 28.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

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| Comment: |
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| Pipe Link: P-0014 | Upstream | Downstream |
|--------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 62.05 ft | Invert: 61.87 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: I-0014 | Geometry: Circular | Geometry: Circular |

| | | | | | |
|-----------------|-----------|--------------|---------|--------------|---------|
| To Node: | POND | Max Depth: | 3.00 ft | Max Depth: | 3.00 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 | Op Table: | | Op Table: | |
| Length: | 152.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 1.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Comment: | | | | | |

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|-------------------|------------|--------------------|----------|--------------------|----------|
| Pipe Link: P-0015 | | Upstream | | Downstream | |
| Scenario: | PROPOSED | Invert: | 70.74 ft | Invert: | 68.82 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | I-0015 | Geometry: Circular | | Geometry: Circular | |
| To Node: | I-0012 | Max Depth: | 2.00 ft | Max Depth: | 2.00 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 | Op Table: | | Op Table: | |
| Length: | 128.98 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Comment: | | | | | |

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|-------------------|------------|--------------------|----------|--------------------|----------|
| Pipe Link: P-0016 | | Upstream | | Downstream | |
| Scenario: | PROPOSED | Invert: | 71.58 ft | Invert: | 71.30 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | I-0016 | Geometry: Circular | | Geometry: Circular | |
| To Node: | I-0015 | Max Depth: | 1.50 ft | Max Depth: | 1.50 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 | Op Table: | | Op Table: | |
| Length: | 28.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

| Pipe Link: P-0017 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 89.00 ft | Invert: 87.60 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0017 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0010 | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 140.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0018 | | Upstream | Downstream |
|-------------------|------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 63.77 ft | Invert: 63.33 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | I-0018 | Geometry: Circular | Geometry: Circular |
| To Node: | POND | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 20.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 1.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: P-0020 | | Upstream | Downstream |
|-------------------|----------------|---------------------|---------------------|
| Scenario: | PROPOSED | Invert: 58.62 ft | Invert: 58.43 ft |
| | CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | CONTROL | Geometry: Circular | Geometry: Circular |
| | STRUCTURE | Max Depth: 1.50 ft | Max Depth: 1.50 ft |
| To Node: | CONCRETE SWALE | Bottom Clip | |

| | | | | | |
|-----------------|-----------|--------------|---------|--------------|---------|
| Link Count: | 1 | Default: | 0.00 ft | Default: | 0.00 ft |
| Flow Direction: | Both | Op Table: | | Op Table: | |
| Damping: | 0.0000 ft | Ref Node: | | Ref Node: | |
| Length: | 63.56 ft | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| FHWA Code: | 1 | Top Clip | | | |
| Entr Loss Coef: | 0.50 | Default: | 0.00 ft | Default: | 0.00 ft |
| Exit Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Loss Coef: | 0.00 | Ref Node: | | Ref Node: | |
| Bend Location: | 0.00 dec | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Energy Switch: | Energy | | | | |

Comment:

| | | | | | |
|-------------------|----------------|--------------------|------------|--------------|----------|
| Pipe Link: P-0021 | | Upstream | Downstream | | |
| Scenario: | PROPOSED | Invert: | 60.25 ft | Invert: | 61.45 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | CONTROL | Geometry: Circular | | | |
| | STRUCTURE | Max Depth: | 3.00 ft | Max Depth: | 3.00 ft |
| To Node: | CONCRETE SWALE | Bottom Clip | | | |
| Link Count: | 1 | Default: | 0.00 ft | Default: | 0.00 ft |
| Flow Direction: | Both | Op Table: | | Op Table: | |
| Damping: | 0.0000 ft | Ref Node: | | Ref Node: | |
| Length: | 26.96 ft | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| FHWA Code: | 1 | Top Clip | | | |
| Entr Loss Coef: | 0.50 | Default: | 0.00 ft | Default: | 0.00 ft |
| Exit Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Loss Coef: | 0.00 | Ref Node: | | Ref Node: | |
| Bend Location: | 0.00 dec | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Energy Switch: | Energy | | | | |

Comment:

| | | | | | |
|--------------------|----------------|--------------------|------------|--------------|----------|
| Pipe Link: P-RISER | | Upstream | Downstream | | |
| Scenario: | PROPOSED | Invert: | 56.10 ft | Invert: | 55.44 ft |
| | CONDITIONS | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| From Node: | P-RISER | Geometry: Circular | | | |
| To Node: | CONCRETE SWALE | Max Depth: | 1.50 ft | Max Depth: | 1.50 ft |
| Link Count: | 1 | Bottom Clip | | | |
| Flow Direction: | Both | Default: | 0.00 ft | Default: | 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | | Op Table: | |
| Length: | 122.00 ft | Ref Node: | | Ref Node: | |
| FHWA Code: | 1 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | | | |
| Exit Loss Coef: | 0.00 | Default: | 0.00 ft | Default: | 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | | Op Table: | |
| Bend Location: | 0.00 dec | Ref Node: | | Ref Node: | |
| Energy Switch: | Energy | Manning's N: | 0.0000 | Manning's N: | 0.0000 |

Comment:

Weir Link: P-RISER INITIAL DISCHARGE

| | | |
|--------------------|------------------------|------------------------|
| Scenario: | PROPOSED CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | P-RISER | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Sharp Crested Vertical | Op Table: |
| Geometry Type: | Circular | Ref Node: |
| Invert: | 62.25 ft | Discharge Coefficients |
| Control Elevation: | 62.25 ft | Weir Default: 2.800 |
| Max Depth: | 1.25 ft | Weir Table: |
| | | Orifice Default: 0.600 |
| | | Orifice Table: |

Comment:

Weir Link: P-RISER RIM WEIR

| | | |
|--------------------|---------------------|------------------------|
| Scenario: | PROPOSED CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | P-RISER | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Horizontal | Op Table: |
| Geometry Type: | Rectangular | Ref Node: |
| Invert: | 66.50 ft | Discharge Coefficients |
| Control Elevation: | 66.50 ft | Weir Default: 2.800 |
| Max Depth: | 3.08 ft | Weir Table: |
| Max Width: | 4.08 ft | Orifice Default: 0.600 |
| Fillet: | 0.00 ft | Orifice Table: |

Comment:

Weir Link: P-RISER SECOND DISCHARGE

| | | |
|-----------------|------------------------|------------------|
| Scenario: | PROPOSED CONDITIONS | Bottom Clip |
| From Node: | POND | Default: 0.00 ft |
| To Node: | P-RISER | Op Table: |
| Link Count: | 1 | Ref Node: |
| Flow Direction: | Both | Top Clip |
| Damping: | 0.0000 ft | Default: 0.00 ft |
| Weir Type: | Sharp Crested Vertical | Op Table: |

Geometry Type: Circular
 Invert: 62.25 ft
 Control Elevation: 62.25 ft
 Max Depth: 0.83 ft

Ref Node:
 Discharge Coefficients
 Weir Default: 2.800
 Weir Table:
 Orifice Default: 0.600
 Orifice Table:

Comment:

| Pipe Link: PH-0001 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 94.00 ft | Invert: 84.42 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: MH-0001 | Geometry: Circular | Geometry: Circular |
| To Node: MH-0003 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 252.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: PH-0002 | Upstream | Downstream |
|-------------------------|---------------------|---------------------|
| Scenario: PROPOSED | Invert: 64.45 ft | Invert: 62.51 ft |
| CONDITIONS | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: MH-0002 | Geometry: Circular | Geometry: Circular |
| To Node: I-0014 | Max Depth: 2.50 ft | Max Depth: 2.50 ft |
| Link Count: 1 | Bottom Clip | |
| Flow Direction: Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: 0.0000 ft | Op Table: | Op Table: |
| Length: 108.00 ft | Ref Node: | Ref Node: |
| FHWA Code: 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: 0.50 | Top Clip | |
| Exit Loss Coef: 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: 0.00 | Op Table: | Op Table: |
| Bend Location: 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |

Comment:

| Pipe Link: PH-0003 | | Upstream | Downstream |
|--------------------|---------------------|---------------------|---------------------|
| Scenario: | PROPOSED CONDITIONS | Invert: 84.15 ft | Invert: 76.49 ft |
| | | Manning's N: 0.0120 | Manning's N: 0.0120 |
| From Node: | MH-0003 | Geometry: Circular | Geometry: Circular |
| To Node: | I-0005 | Max Depth: 2.00 ft | Max Depth: 2.00 ft |
| Link Count: | 1 | Bottom Clip | |
| Flow Direction: | Both | Default: 0.00 ft | Default: 0.00 ft |
| Damping: | 0.0000 ft | Op Table: | Op Table: |
| Length: | 196.00 ft | Ref Node: | Ref Node: |
| FHWA Code: | 1 | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Entr Loss Coef: | 0.50 | Top Clip | |
| Exit Loss Coef: | 0.00 | Default: 0.00 ft | Default: 0.00 ft |
| Bend Loss Coef: | 0.00 | Op Table: | Op Table: |
| Bend Location: | 0.00 dec | Ref Node: | Ref Node: |
| Energy Switch: | Energy | Manning's N: 0.0000 | Manning's N: 0.0000 |
| Comment: | | | |

| Rating Curve Link: POND BOTTOM FILTER | | | | |
|---------------------------------------|---------------------|--------------|---------------|---------------|
| Scenario: | PROPOSED CONDITIONS | | | |
| From Node: | POND | | | |
| To Node: | P-RISER | | | |
| Link Count: | 1 | | | |
| Flow Direction: | Positive | | | |
| Table | Elev On [ft] | Elev On Node | Elev Off [ft] | Elev Off Node |
| RC-0010 | 59.00 | POND | 59.00 | POND |
| Comment: | | | | |

| Simulation: 025YR-001HR | | | | |
|-------------------------|----------------------|--------------------------|-------------------|-----------|
| Scenario: | PROPOSED CONDITIONS | | | |
| Run Date/Time: | 1/26/2023 5:05:36 PM | | | |
| Program Version: | ICPR4 4.07.08 | | | |
| General | | | | |
| Run Mode: | Normal | | | |
| | Year | Month | Day | Hour [hr] |
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |
| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] | |
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 | |
| Max Calculation Time: | | 30.0000 | | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-1 |
| | Rainfall Amount: 3.70 in |
| Edge Length Option: Automatic | Storm Duration: 1.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |

Min Node Srf Area 100 ft2
 (2D):
 Energy Switch (2D): Energy

Min Node Srf Area 100 ft2
 (1D):
 Energy Switch (1D): Energy

Comment:

Simulation: 025YR-002HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:05:39 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Lookup Tables

Boundary Stage Set:

Reference ET Folder:
Unit Hydrograph
Folder:

Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-2 |
| | Rainfall Amount: 4.80 in |
| Edge Length Option: Automatic | Storm Duration: 2.0000 hr |
| | |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area 100 ft2 | Min Node Srf Area 100 ft2 |
| (2D): | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-004HR

Scenario: PROPOSED CONDITIONS
Run Date/Time: 1/26/2023 5:05:45 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-----------------------|-----------------|-----------------------------|-------------------|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 12.0000 |
| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] | |
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 | |

Max Calculation Time: 30.0000

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

| | |
|-------------------------------|------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight 0.5 dec | |
| Fact: | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Global |
| | Opt: |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-4 |
| | Rainfall Amount: 5.92 in |
| Edge Length Option: Automatic | Storm Duration: 4.0000 hr |

Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area 100 ft2
 (2D):
 Energy Switch (2D): Energy

Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area 100 ft2
 (1D):
 Energy Switch (1D): Energy

Comment:

Simulation: 025YR-008HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:05:54 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 24.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

| Resources | Lookup Tables |
|-------------------------|------------------------|
| Rainfall Folder: | Boundary Stage Set: |
| Reference ET Folder: | Extern Hydrograph Set: |
| Unit Hydrograph Folder: | Curve Number Set: |
| | Green-Ampt Set: |
| | Vertical Layers Set: |
| | Impervious Set: |
| | Roughness Set: |
| | Crop Coef Set: |
| | Fillable Porosity Set: |
| | Conductivity Set: |
| | Leakage Set: |

Tolerances & Options

| | |
|---------------------------------|---------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight Fact: 0.5 dec | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Opt: Global |
| | OF Region Rain Opt: Global |
| Max dZ: 1.0000 ft | Rainfall Name: ~FDOT-8 |
| Link Optimizer Tol: 0.0001 ft | Rainfall Amount: 7.44 in |
| Edge Length Option: Automatic | Storm Duration: 8.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 025YR-024HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:06:06 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |

| | Hydrology [sec] | Surface Hydraulics | Groundwater [sec] |
|--|-----------------|--------------------|-------------------|
| | | | |

| | [sec] | | |
|-----------------------|---------|---------|----------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-24

| | |
|---------------------------------|---------------------------------|
| Edge Length Option: Automatic | Rainfall Amount: 10.80 in |
| | Storm Duration: 24.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| | |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-001HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:06:25 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 4.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

| Resources | Lookup Tables |
|-------------------------|------------------------|
| Rainfall Folder: | Boundary Stage Set: |
| Reference ET Folder: | Extern Hydrograph Set: |
| Unit Hydrograph Folder: | Curve Number Set: |
| | Green-Ampt Set: |
| | Vertical Layers Set: |
| | Impervious Set: |
| | Roughness Set: |
| | Crop Coef Set: |
| | Fillable Porosity Set: |
| | Conductivity Set: |
| | Leakage Set: |

Tolerances & Options

| | |
|---------------------------------|---------------------------------|
| Time Marching: SAOR | IA Recovery Time: 24.0000 hr |
| Max Iterations: 6 | ET for Manual Basins: False |
| Over-Relax Weight Fact: 0.5 dec | |
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Opt: Global |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-1 |
| Edge Length Option: Automatic | Rainfall Amount: 4.50 in |
| | Storm Duration: 1.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-002HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:06:34 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 8.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|-----------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:

| | |
|---------------------------------|---------------------------------|
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-2 |
| Edge Length Option: Automatic | Rainfall Amount: 6.00 in |
| | Storm Duration: 2.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| | (1D): |
| Energy Switch (2D): Energy | Energy Switch (1D): Energy |

Comment:

Simulation: 100YR-004HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:06:47 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 12.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight: 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area: 100 ft2
(2D):
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain: Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-4
Rainfall Amount: 7.52 in
Storm Duration: 4.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area: 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simulation: 100YR-008HR

Scenario: PROPOSED CONDITIONS
Run Date/Time: 1/26/2023 5:07:06 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

Year Month Day Hour [hr]

Start Time: 0 0 0 0.0000
 End Time: 0 0 0 24.0000

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight 0.5 dec
 Fact:

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False

| | |
|---------------------------------|---------------------------------|
| dZ Tolerance: 0.0010 ft | Smp/Man Basin Rain Opt: Global |
| Max dZ: 1.0000 ft | OF Region Rain Opt: Global |
| Link Optimizer Tol: 0.0001 ft | Rainfall Name: ~FDOT-8 |
| Edge Length Option: Automatic | Rainfall Amount: 9.44 in |
| | Storm Duration: 8.0000 hr |
| Dflt Damping (2D): 0.0050 ft | Dflt Damping (1D): 0.0050 ft |
| Min Node Srf Area (2D): 100 ft2 | Min Node Srf Area (1D): 100 ft2 |
| | Energy Switch (1D): Energy |
| Energy Switch (2D): Energy | |

Comment:

Simulation: 100YR-024HR

Scenario: PROPOSED CONDITIONS
 Run Date/Time: 1/26/2023 5:07:21 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|-------------|------|-------|-----|-----------|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 48.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] | Groundwater [sec] |
|-----------------------|-----------------|--------------------------|-------------------|
| Min Calculation Time: | 60.0000 | 0.1000 | 900.0000 |
| Max Calculation Time: | | 30.0000 | |

Output Time Increments

Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

Groundwater

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|------|-------|-----|-----------|----------------------|
| 0 | 0 | 0 | 0.0000 | 60.0000 |

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight 0.5 dec
Fact:
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area 100 ft2
(2D):
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Global
Opt:
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-24
Rainfall Amount: 13.44 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0001 | 025YR-00 1HR | 1.83 | 0.7000 | 3.70 | 1.45 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 2HR | 1.80 | 0.8667 | 4.80 | 2.29 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 4HR | 1.23 | 2.5167 | 5.92 | 3.22 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-00 8HR | 1.57 | 4.0167 | 7.44 | 4.55 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 025YR-02 4HR | 0.58 | 12.0000 | 10.80 | 7.65 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 1HR | 2.56 | 0.6833 | 4.50 | 2.06 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 2HR | 2.59 | 0.8667 | 6.00 | 3.29 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 4HR | 1.76 | 2.0667 | 7.52 | 4.62 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-00 8HR | 2.14 | 4.0000 | 9.44 | 6.37 | 0.6380 | 75.0 | 0.00 | 0.00 |
| B-0001 | 100YR-02 4HR | 0.76 | 12.0000 | 13.44 | 10.16 | 0.6380 | 75.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0002 | 025YR-00 1HR | 10.30 | 0.9667 | 3.70 | 0.86 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 2HR | 10.88 | 1.1500 | 4.80 | 1.52 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 4HR | 10.12 | 2.6833 | 5.92 | 2.30 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-00 8HR | 12.85 | 4.1500 | 7.44 | 3.45 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 025YR-02 4HR | 5.35 | 12.1000 | 10.80 | 6.27 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 1HR | 15.74 | 0.9500 | 4.50 | 1.33 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 2HR | 17.07 | 1.1167 | 6.00 | 2.36 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 4HR | 15.00 | 2.6500 | 7.52 | 3.52 | 7.1390 | 65.0 | 0.00 | 0.00 |
| B-0002 | 100YR-00 8HR | 18.74 | 4.1333 | 9.44 | 5.10 | 7.1390 | 65.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0002 | 100YR-02 4HR | 7.32 | 12.0833 | 13.44 | 8.63 | 7.1390 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0003 | 025YR-00 1HR | 17.64 | 1.0667 | 3.70 | 1.32 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 2HR | 18.67 | 1.2500 | 4.80 | 2.13 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 4HR | 17.02 | 2.7167 | 5.92 | 3.03 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-00 8HR | 20.57 | 4.2167 | 7.44 | 4.33 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 025YR-02 4HR | 8.49 | 12.1500 | 10.80 | 7.37 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 1HR | 25.23 | 1.0500 | 4.50 | 1.90 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 2HR | 27.33 | 1.2333 | 6.00 | 3.09 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 4HR | 24.19 | 2.6667 | 7.52 | 4.40 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-00 8HR | 28.76 | 4.2000 | 9.44 | 6.12 | 9.9320 | 73.0 | 0.00 | 0.00 |
| B-0003 | 100YR-02 4HR | 11.23 | 12.1500 | 13.44 | 9.85 | 9.9320 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0004 | 025YR-00 1HR | 1.42 | 0.6833 | 3.70 | 0.58 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 2HR | 1.49 | 0.8500 | 4.80 | 1.12 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 4HR | 1.12 | 2.5167 | 5.92 | 1.79 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-00 8HR | 1.52 | 4.0167 | 7.44 | 2.82 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 025YR-02 4HR | 0.59 | 12.0000 | 10.80 | 5.42 | 0.8710 | 59.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0004 | 100YR-00 1HR | 2.29 | 0.6667 | 4.50 | 0.96 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 2HR | 2.45 | 0.8333 | 6.00 | 1.84 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 4HR | 1.70 | 2.5167 | 7.52 | 2.88 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-00 8HR | 2.25 | 4.0000 | 9.44 | 4.33 | 0.8710 | 59.0 | 0.00 | 0.00 |
| B-0004 | 100YR-02 4HR | 0.82 | 12.0000 | 13.44 | 7.65 | 0.8710 | 59.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0005 | 025YR-00 1HR | 4.07 | 0.6833 | 3.70 | 1.32 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 2HR | 3.89 | 0.8667 | 4.80 | 2.13 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 4HR | 2.45 | 2.0667 | 5.92 | 3.03 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-00 8HR | 3.10 | 4.0167 | 7.44 | 4.33 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 025YR-02 4HR | 1.14 | 12.0000 | 10.80 | 7.37 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 1HR | 5.77 | 0.6833 | 4.50 | 1.90 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 2HR | 5.62 | 0.8500 | 6.00 | 3.10 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 4HR | 3.54 | 2.0667 | 7.52 | 4.40 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-00 8HR | 4.25 | 4.0167 | 9.44 | 6.12 | 1.2840 | 73.0 | 0.00 | 0.00 |
| B-0005 | 100YR-02 4HR | 1.50 | 12.0000 | 13.44 | 9.86 | 1.2840 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0006 | 025YR-00 1HR | 3.75 | 0.7000 | 3.70 | 1.32 | 1.2100 | 73.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0006 | 025YR-00 2HR | 3.60 | 0.8833 | 4.80 | 2.13 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-00 4HR | 2.29 | 2.0833 | 5.92 | 3.03 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-00 8HR | 2.91 | 4.0167 | 7.44 | 4.32 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 025YR-02 4HR | 1.07 | 12.0167 | 10.80 | 7.36 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 1HR | 5.32 | 0.6833 | 4.50 | 1.90 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 2HR | 5.21 | 0.8667 | 6.00 | 3.09 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 4HR | 3.31 | 2.0667 | 7.52 | 4.39 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-00 8HR | 3.99 | 4.0167 | 9.44 | 6.11 | 1.2100 | 73.0 | 0.00 | 0.00 |
| B-0006 | 100YR-02 4HR | 1.41 | 12.0000 | 13.44 | 9.85 | 1.2100 | 73.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0007 | 025YR-00 1HR | 9.55 | 1.1833 | 3.70 | 0.90 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 2HR | 11.38 | 1.4667 | 4.80 | 1.60 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 4HR | 13.78 | 3.1000 | 5.92 | 2.39 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-00 8HR | 16.04 | 4.3833 | 7.44 | 3.56 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 025YR-02 4HR | 8.59 | 12.3333 | 10.80 | 6.41 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 1HR | 14.56 | 1.1667 | 4.50 | 1.38 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 2HR | 17.65 | 1.4333 | 6.00 | 2.45 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 4HR | 20.54 | 3.0333 | 7.52 | 3.63 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-00 8HR | 23.74 | 4.3667 | 9.44 | 5.23 | 12.7470 | 66.0 | 0.00 | 0.00 |
| B-0007 | 100YR-02 4HR | 11.79 | 12.3167 | 13.44 | 8.79 | 12.7470 | 66.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0008 | 025YR-00 1HR | 7.56 | 1.0667 | 3.70 | 0.86 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 2HR | 8.55 | 1.2833 | 4.80 | 1.53 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 4HR | 9.87 | 2.8833 | 5.92 | 2.30 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-00 8HR | 11.91 | 4.2667 | 7.44 | 3.46 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 025YR-02 4HR | 5.95 | 12.2167 | 10.80 | 6.27 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 1HR | 11.61 | 1.0500 | 4.50 | 1.33 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 2HR | 13.43 | 1.2667 | 6.00 | 2.36 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 4HR | 14.85 | 2.8167 | 7.52 | 3.52 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-00 8HR | 17.67 | 4.2500 | 9.44 | 5.10 | 8.6110 | 65.0 | 0.00 | 0.00 |
| B-0008 | 100YR-02 4HR | 8.18 | 12.2000 | 13.44 | 8.63 | 8.6110 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0009 | 025YR-00 1HR | 10.25 | 0.8833 | 3.70 | 1.20 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 2HR | 10.22 | 1.0333 | 4.80 | 1.97 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 4HR | 7.99 | 2.6000 | 5.92 | 2.84 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-00 8HR | 10.14 | 4.0833 | 7.44 | 4.10 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 025YR-02 4HR | 3.95 | 12.0500 | 10.80 | 7.10 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 1HR | 14.81 | 0.8667 | 4.50 | 1.75 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 2HR | 15.15 | 1.0167 | 6.00 | 2.90 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 4HR | 11.35 | 2.5667 | 7.52 | 4.17 | 4.6530 | 71.0 | 0.00 | 0.00 |
| B-0009 | 100YR-00 8HR | 14.20 | 4.0833 | 9.44 | 5.86 | 4.6530 | 71.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0009 | 100YR-02 4HR | 5.26 | 12.0500 | 13.44 | 9.56 | 4.6530 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0010 | 025YR-00 1HR | 3.56 | 0.9000 | 3.70 | 1.20 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 2HR | 3.57 | 1.0667 | 4.80 | 1.97 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 4HR | 2.87 | 2.6167 | 5.92 | 2.84 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-00 8HR | 3.62 | 4.1000 | 7.44 | 4.10 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 025YR-02 4HR | 1.42 | 12.0667 | 10.80 | 7.10 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 1HR | 5.15 | 0.8833 | 4.50 | 1.75 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 2HR | 5.30 | 1.0500 | 6.00 | 2.90 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 4HR | 4.08 | 2.5833 | 7.52 | 4.17 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-00 8HR | 5.08 | 4.0833 | 9.44 | 5.86 | 1.6790 | 71.0 | 0.00 | 0.00 |
| B-0010 | 100YR-02 4HR | 1.89 | 12.0500 | 13.44 | 9.55 | 1.6790 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0011 | 025YR-00 1HR | 10.48 | 0.8667 | 3.70 | 1.26 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 2HR | 10.36 | 1.0167 | 4.80 | 2.05 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 4HR | 7.87 | 2.5833 | 5.92 | 2.93 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-00 8HR | 9.98 | 4.0833 | 7.44 | 4.22 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 025YR-02 4HR | 3.85 | 12.0500 | 10.80 | 7.23 | 4.4563 | 72.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0011 | 100YR-00 1HR | 15.02 | 0.8500 | 4.50 | 1.82 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 2HR | 15.24 | 1.0167 | 6.00 | 3.00 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 4HR | 11.14 | 2.2500 | 7.52 | 4.28 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-00 8HR | 13.89 | 4.0667 | 9.44 | 5.99 | 4.4563 | 72.0 | 0.00 | 0.00 |
| B-0011 | 100YR-02 4HR | 5.10 | 12.0333 | 13.44 | 9.71 | 4.4563 | 72.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0012 | 025YR-00 1HR | 2.61 | 0.6333 | 3.70 | 0.86 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 2HR | 2.58 | 0.8000 | 4.80 | 1.52 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 4HR | 1.67 | 2.5000 | 5.92 | 2.30 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-00 8HR | 2.22 | 4.0000 | 7.44 | 3.45 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 025YR-02 4HR | 0.83 | 12.0000 | 10.80 | 6.27 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 1HR | 3.95 | 0.6167 | 4.50 | 1.33 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 2HR | 3.97 | 0.8000 | 6.00 | 2.35 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 4HR | 2.46 | 2.0167 | 7.52 | 3.52 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-00 8HR | 3.16 | 4.0000 | 9.44 | 5.10 | 1.0670 | 65.0 | 0.00 | 0.00 |
| B-0012 | 100YR-02 4HR | 1.13 | 12.0000 | 13.44 | 8.62 | 1.0670 | 65.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0013 | 025YR-00 1HR | 11.64 | 0.7500 | 3.70 | 0.97 | 5.1800 | 67.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0013 | 025YR-00 2HR | 11.62 | 0.9167 | 4.80 | 1.67 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-00 4HR | 8.25 | 2.5500 | 5.92 | 2.47 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-00 8HR | 10.84 | 4.0333 | 7.44 | 3.67 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 025YR-02 4HR | 4.14 | 12.0167 | 10.80 | 6.54 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 1HR | 17.31 | 0.7333 | 4.50 | 1.47 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 2HR | 17.72 | 0.9000 | 6.00 | 2.53 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 4HR | 11.94 | 2.1167 | 7.52 | 3.73 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-00 8HR | 15.38 | 4.0333 | 9.44 | 5.35 | 5.1800 | 67.0 | 0.00 | 0.00 |
| B-0013 | 100YR-02 4HR | 5.59 | 12.0167 | 13.44 | 8.94 | 5.1800 | 67.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0014 | 025YR-00 1HR | 1.20 | 0.6833 | 3.70 | 0.53 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 2HR | 1.27 | 0.8500 | 4.80 | 1.06 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 4HR | 0.97 | 2.5167 | 5.92 | 1.71 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-00 8HR | 1.32 | 4.0000 | 7.44 | 2.72 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 025YR-02 4HR | 0.51 | 12.0000 | 10.80 | 5.28 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 1HR | 1.98 | 0.6500 | 4.50 | 0.91 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 2HR | 2.13 | 0.8333 | 6.00 | 1.76 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 4HR | 1.48 | 2.5167 | 7.52 | 2.77 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-00 8HR | 1.98 | 4.0000 | 9.44 | 4.20 | 0.7780 | 58.0 | 0.00 | 0.00 |
| B-0014 | 100YR-02 4HR | 0.72 | 12.0000 | 13.44 | 7.49 | 0.7780 | 58.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0015 | 025YR-00 1HR | 4.84 | 0.7500 | 3.70 | 0.76 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 2HR | 4.94 | 0.9167 | 4.80 | 1.39 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 4HR | 3.74 | 2.5500 | 5.92 | 2.12 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-00 8HR | 4.97 | 4.0333 | 7.44 | 3.24 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 025YR-02 4HR | 1.93 | 12.0167 | 10.80 | 5.99 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 1HR | 7.47 | 0.7333 | 4.50 | 1.20 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 2HR | 7.85 | 0.9000 | 6.00 | 2.18 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 4HR | 5.51 | 2.5333 | 7.52 | 3.30 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-00 8HR | 7.22 | 4.0333 | 9.44 | 4.84 | 2.6190 | 63.0 | 0.00 | 0.00 |
| B-0015 | 100YR-02 4HR | 2.66 | 12.0167 | 13.44 | 8.31 | 2.6190 | 63.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0016 | 025YR-00 1HR | 3.26 | 0.8333 | 3.70 | 0.71 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 2HR | 3.35 | 0.9833 | 4.80 | 1.32 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 4HR | 2.86 | 2.5833 | 5.92 | 2.04 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-00 8HR | 3.77 | 4.0667 | 7.44 | 3.13 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 025YR-02 4HR | 1.51 | 12.0333 | 10.80 | 5.85 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 1HR | 5.11 | 0.8167 | 4.50 | 1.14 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 2HR | 5.43 | 0.9667 | 6.00 | 2.09 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 4HR | 4.28 | 2.5667 | 7.52 | 3.19 | 2.1190 | 62.0 | 0.00 | 0.00 |
| B-0016 | 100YR-00 8HR | 5.55 | 4.0667 | 9.44 | 4.71 | 2.1190 | 62.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0016 | 100YR-02 4HR | 2.10 | 12.0333 | 13.44 | 8.15 | 2.1190 | 62.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0017 | 025YR-00 1HR | 3.77 | 0.7833 | 3.70 | 1.20 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 2HR | 3.69 | 0.9333 | 4.80 | 1.97 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 4HR | 2.56 | 2.5500 | 5.92 | 2.84 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-00 8HR | 3.32 | 4.0500 | 7.44 | 4.10 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 025YR-02 4HR | 1.25 | 12.0167 | 10.80 | 7.10 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 1HR | 5.43 | 0.7667 | 4.50 | 1.75 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 2HR | 5.45 | 0.9333 | 6.00 | 2.90 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 4HR | 3.71 | 2.1333 | 7.52 | 4.17 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-00 8HR | 4.62 | 4.0333 | 9.44 | 5.86 | 1.4650 | 71.0 | 0.00 | 0.00 |
| B-0017 | 100YR-02 4HR | 1.67 | 12.0167 | 13.44 | 9.56 | 1.4650 | 71.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0018 | 025YR-00 1HR | 6.85 | 0.9833 | 3.70 | 0.71 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 2HR | 7.40 | 1.1667 | 4.80 | 1.32 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 4HR | 7.28 | 2.7000 | 5.92 | 2.04 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-00 8HR | 9.32 | 4.1500 | 7.44 | 3.13 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 025YR-02 4HR | 3.98 | 12.1000 | 10.80 | 5.85 | 5.6790 | 62.0 | 0.00 | 0.00 |

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| B-0018 | 100YR-00 1HR | 10.82 | 0.9667 | 4.50 | 1.14 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 2HR | 11.98 | 1.1333 | 6.00 | 2.09 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 4HR | 11.03 | 2.6667 | 7.52 | 3.20 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-00 8HR | 13.88 | 4.1500 | 9.44 | 4.71 | 5.6790 | 62.0 | 0.00 | 0.00 |
| B-0018 | 100YR-02 4HR | 5.52 | 12.1000 | 13.44 | 8.15 | 5.6790 | 62.0 | 0.00 | 0.00 |

Simple Basin Runoff Summary [PROPOSED CONDITIONS]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|------------|-----------------|----------------|------------------------|---------------------|-------------------|-----------|-------------------------|----------|--------|
| POND BASIN | 025YR-00 1HR | 10.29 | 0.6667 | 3.70 | 1.58 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 2HR | 10.11 | 0.8500 | 4.80 | 2.45 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 4HR | 6.80 | 2.0500 | 5.92 | 3.40 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-00 8HR | 8.48 | 4.0000 | 7.44 | 4.75 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 025YR-02 4HR | 3.11 | 12.0000 | 10.80 | 7.88 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 1HR | 14.23 | 0.6500 | 4.50 | 2.21 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 2HR | 14.30 | 0.8333 | 6.00 | 3.47 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 4HR | 9.61 | 2.0500 | 7.52 | 4.83 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-00 8HR | 11.45 | 4.0000 | 9.44 | 6.60 | 3.3250 | 77.0 | 0.00 | 0.00 |
| POND BASIN | 100YR-02 4HR | 4.04 | 12.0000 | 13.44 | 10.40 | 3.3250 | 77.0 | 0.00 | 0.00 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|----------------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONCRETE SWALE | 025YR-001HR | 59.89 | 58.91 | 0.0005 | 11.53 | 9.12 | 0 | 4.0023 | 0.3239 | 1.8453 | 0.0041 |
| CONCRETE SWALE | 025YR-002HR | 59.89 | 59.40 | 0.0004 | 37.68 | 9.12 | 0 | 8.0022 | 0.2888 | 2.1711 | 0.0041 |
| CONCRETE SWALE | 025YR-004HR | 59.89 | 59.88 | 0.0010 | 65.59 | 9.12 | 0 | 11.9997 | 0.6492 | 3.3885 | 0.0041 |
| CONCRETE SWALE | 025YR-008HR | 59.89 | 59.88 | 0.0010 | 74.52 | 9.12 | 0 | 12.0012 | 0.6492 | 5.0275 | 0.0041 |
| CONCRETE SWALE | 025YR-024HR | 59.89 | 59.88 | 0.0010 | 49.41 | 9.12 | 0 | 11.9998 | 0.6492 | 12.5139 | 0.0041 |
| CONCRETE SWALE | 100YR-001HR | 59.89 | 58.91 | 0.0004 | 32.92 | 9.12 | 0 | 4.0004 | 0.2888 | 1.5531 | 0.0041 |
| CONCRETE SWALE | 100YR-002HR | 59.89 | 59.40 | 0.0004 | 74.37 | 9.12 | 0 | 8.0022 | 7.9563 | 1.9303 | 0.0041 |
| CONCRETE SWALE | 100YR-004HR | 59.89 | 59.88 | 0.0010 | 116.97 | 9.12 | 0 | 12.0013 | 0.6492 | 3.2038 | 0.0041 |
| CONCRETE SWALE | 100YR-008HR | 59.89 | 59.88 | 0.0010 | 131.62 | 9.12 | 0 | 11.9998 | 0.6492 | 4.5161 | 0.0041 |
| CONCRETE SWALE | 100YR-024HR | 59.89 | 59.88 | 0.0010 | 70.06 | 9.12 | 0 | 11.9997 | 0.6492 | 12.3667 | 0.0041 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|----------------|-------------|--------------------|---------------------|----------------------------------|
| CONCRETE SWALE | 025YR-001HR | 104652 | 266 | 104386 |
| CONCRETE SWALE | 025YR-002HR | 341850 | 289 | 341561 |
| CONCRETE SWALE | 025YR-004HR | 598407 | 335 | 598072 |
| CONCRETE SWALE | 025YR-008HR | 1023528 | 323 | 1023205 |
| CONCRETE SWALE | 025YR-024HR | 1820101 | 394 | 1819707 |
| CONCRETE SWALE | 100YR-001HR | 214334 | 249 | 214085 |
| CONCRETE SWALE | 100YR-002HR | 576201 | 284 | 575917 |
| CONCRETE SWALE | 100YR-004HR | 941901 | 326 | 941575 |

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|----------------|-------------|--------------------|---------------------|----------------------------------|
| CONCRETE SWALE | 100YR-008HR | 1485123 | 313 | 1484810 |
| CONCRETE SWALE | 100YR-024HR | 2477342 | 372 | 2476969 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|--------------------------|-----------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONTR OL STRUCTURE | 025YR-0 01HR | 66.30 | 58.91 | 0.0003 | 0.01 | 0.00 | 100 | 4.0023 | 3.8265 | 1.9420 | 0.0000 |
| CONTR OL STRUCTURE | 025YR-0 02HR | 66.30 | 62.33 | 0.0010 | 18.99 | 18.99 | 100 | 2.1703 | 1.7043 | 2.1703 | 2.1721 |
| CONTR OL STRUCTURE | 025YR-0 04HR | 66.30 | 63.79 | 0.0010 | 45.74 | 45.74 | 100 | 3.3874 | 2.7174 | 3.3877 | 3.3885 |
| CONTR OL STRUCTURE | 025YR-0 08HR | 66.30 | 64.12 | -0.0010 | 54.48 | 54.48 | 100 | 5.0323 | 7.0267 | 5.0331 | 5.0347 |
| CONTR OL STRUCTURE | 025YR-0 24HR | 66.30 | 63.13 | -0.0010 | 31.52 | 31.52 | 100 | 12.5060 | 22.2715 | 12.5056 | 12.5069 |
| CONTR OL STRUCTURE | 100YR-0 01HR | 66.30 | 61.92 | -0.0010 | 14.70 | 14.70 | 100 | 1.5501 | 2.7925 | 1.5480 | 1.5515 |
| CONTR OL STRUCTURE | 100YR-0 02HR | 66.30 | 64.10 | 0.0011 | 53.91 | 53.91 | 100 | 1.9303 | 1.2910 | 1.9305 | 1.9313 |
| CONTR OL STRUCTURE | 100YR-0 04HR | 66.30 | 65.56 | 0.0011 | 85.32 | 85.32 | 100 | 3.2029 | 2.3841 | 3.1987 | 3.2046 |
| CONTR OL STRUCTURE | 100YR-0 08HR | 66.30 | 65.76 | 0.0012 | 87.64 | 87.64 | 100 | 4.5164 | 3.8018 | 4.5153 | 4.5167 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-------------------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| CONTROL STRUCTURE | 100YR-024HR | 66.30 | 64.00 | 0.0010 | 51.21 | 51.21 | 100 | 12.3614 | 10.9857 | 12.3614 | 12.3618 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-------------------|-------------|---------------------------------|----------------------------------|---|
| CONTROL STRUCTURE | 025YR-001HR | 29 | 0 | 29 |
| CONTROL STRUCTURE | 025YR-002HR | 74146 | 74067 | 79 |
| CONTROL STRUCTURE | 025YR-004HR | 235697 | 235569 | 127 |
| CONTROL STRUCTURE | 025YR-008HR | 436055 | 436050 | 5 |
| CONTROL STRUCTURE | 025YR-024HR | 676475 | 676467 | 8 |
| CONTROL STRUCTURE | 100YR-001HR | 47146 | 47115 | 31 |
| CONTROL STRUCTURE | 100YR-002HR | 265346 | 265266 | 80 |
| CONTROL STRUCTURE | 100YR-004HR | 520503 | 520374 | 129 |
| CONTROL STRUCTURE | 100YR-008HR | 792294 | 792286 | 8 |
| CONTROL STRUCTURE | 100YR-024HR | 1207494 | 1207490 | 4 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0001 | 025YR-001HR | 68.21 | 65.31 | 0.0010 | 11.30 | 11.30 | 100 | 0.9518 | 0.3278 | 0.9503 | 0.9499 |
| I-0001 | 025YR-002HR | 68.21 | 65.40 | -0.0010 | 12.06 | 12.06 | 100 | 1.1289 | 2.5384 | 1.1234 | 1.1243 |
| I-0001 | 025YR-004HR | 68.21 | 65.78 | 0.0014 | 11.20 | 11.20 | 100 | 3.2617 | 4.0844 | 2.6356 | 2.6364 |
| I-0001 | 025YR-008HR | 68.21 | 66.04 | -0.0015 | 14.15 | 14.15 | 100 | 4.9423 | 6.1325 | 4.1020 | 4.1019 |
| I-0001 | 025YR-024HR | 68.21 | 65.27 | 0.0010 | 5.92 | 5.90 | 100 | 12.3939 | 13.0628 | 12.0658 | 12.0676 |
| I-0001 | 100YR-001HR | 68.21 | 65.99 | -0.0010 | 17.20 | 17.19 | 100 | 0.9374 | 1.7576 | 0.9346 | 0.9374 |
| I-0001 | 100YR-002HR | 68.21 | 66.22 | 0.0013 | 18.78 | 18.77 | 100 | 1.1082 | 2.6140 | 1.1035 | 1.1082 |
| I-0001 | 100YR-0 | 68.21 | 67.28 | 0.0016 | 16.46 | 16.34 | 100 | 3.0777 | 4.4525 | 2.5193 | 2.6027 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 04HR | | | | | | | | | | |
| I-0001 | 100YR-008HR | 68.21 | 67.89 | -0.0018 | 20.46 | 20.34 | 100 | 4.2547 | 6.7166 | 4.0904 | 4.1001 |
| I-0001 | 100YR-024HR | 68.21 | 65.96 | 0.0012 | 8.21 | 8.07 | 100 | 12.2476 | 14.5816 | 12.0718 | 12.0730 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0001 | 025YR-001HR | 25682 | 25682 | 0 |
| I-0001 | 025YR-002HR | 44845 | 44845 | 1 |
| I-0001 | 025YR-004HR | 67053 | 67026 | 27 |
| I-0001 | 025YR-008HR | 100064 | 100042 | 23 |
| I-0001 | 025YR-024HR | 180091 | 180196 | -105 |
| I-0001 | 100YR-001HR | 39320 | 39319 | 1 |
| I-0001 | 100YR-002HR | 68719 | 68690 | 29 |
| I-0001 | 100YR-004HR | 101879 | 101858 | 22 |
| I-0001 | 100YR-008HR | 146881 | 146875 | 6 |
| I-0001 | 100YR-024HR | 247098 | 247150 | -52 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0002 | 025YR-001HR | 68.21 | 65.92 | -0.0009 | 10.30 | 10.30 | 100 | 0.9684 | 2.2848 | 0.9667 | 0.9684 |
| I-0002 | 025YR-002HR | 68.21 | 65.98 | -0.0009 | 10.88 | 10.88 | 100 | 1.1505 | 2.6062 | 1.1500 | 1.1490 |
| I-0002 | 025YR-004HR | 68.21 | 65.90 | -0.0014 | 10.12 | 10.12 | 100 | 2.6838 | 4.0844 | 2.6833 | 2.6746 |
| I-0002 | 025YR-008HR | 68.21 | 66.20 | 0.0015 | 12.85 | 12.85 | 100 | 4.1513 | 6.1315 | 4.1500 | 4.1511 |
| I-0002 | 025YR-024HR | 68.21 | 65.34 | 0.0010 | 5.35 | 5.35 | 100 | 12.0979 | 13.0323 | 12.0998 | 12.0979 |
| I-0002 | 100YR-001HR | 68.21 | 66.53 | -0.0006 | 15.74 | 15.73 | 100 | 0.9529 | 0.0239 | 0.9500 | 0.9529 |
| I-0002 | 100YR-002HR | 68.21 | 66.69 | -0.0012 | 17.07 | 17.06 | 100 | 1.1216 | 2.6642 | 1.1167 | 1.1221 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0002 | 100YR-004HR | 68.21 | 67.47 | -0.0014 | 15.00 | 14.91 | 100 | 3.0586 | 4.4525 | 2.6500 | 2.6507 |
| I-0002 | 100YR-008HR | 68.21 | 68.29 | 0.0017 | 18.74 | 18.64 | 100 | 4.2337 | 6.7166 | 4.1333 | 4.1403 |
| I-0002 | 100YR-024HR | 68.21 | 66.02 | -0.0011 | 7.32 | 7.47 | 100 | 12.2248 | 14.5816 | 12.0835 | 12.0718 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0002 | 025YR-001HR | 22309 | 22326 | -17 |
| I-0002 | 025YR-002HR | 39515 | 39532 | -17 |
| I-0002 | 025YR-004HR | 59544 | 59589 | -46 |
| I-0002 | 025YR-008HR | 89485 | 89523 | -37 |
| I-0002 | 025YR-024HR | 162472 | 162384 | 88 |
| I-0002 | 100YR-001HR | 34542 | 34559 | -17 |
| I-0002 | 100YR-002HR | 61049 | 61098 | -48 |
| I-0002 | 100YR-004HR | 91129 | 91172 | -43 |
| I-0002 | 100YR-008HR | 132091 | 132117 | -27 |
| I-0002 | 100YR-024HR | 223605 | 223575 | 30 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0003 | 025YR-001HR | 74.96 | 72.15 | -0.0010 | 35.34 | 35.34 | 693 | 1.0727 | 1.5051 | 1.0668 | 1.0754 |
| I-0003 | 025YR-002HR | 74.96 | 72.78 | -0.0010 | 40.40 | 40.40 | 693 | 1.3031 | 2.0402 | 1.3000 | 1.3033 |
| I-0003 | 025YR-004HR | 74.96 | 73.16 | -0.0010 | 43.10 | 43.10 | 693 | 2.8601 | 3.2552 | 2.8581 | 2.8625 |
| I-0003 | 025YR-008HR | 74.96 | 74.70 | -0.0010 | 50.97 | 50.97 | 691 | 4.2227 | 4.4422 | 4.2167 | 4.2339 |
| I-0003 | 025YR-024HR | 74.96 | 71.13 | -0.0010 | 24.83 | 24.83 | 690 | 12.1216 | 27.1071 | 12.1178 | 12.1226 |
| I-0003 | 100YR-001HR | 74.96 | 75.05 | 0.0010 | 52.15 | 52.11 | 694 | 1.0741 | 0.8713 | 1.0666 | 1.0730 |
| I-0003 | 100YR-0 | 74.96 | 78.84 | -0.0010 | 60.68 | 60.66 | 694 | 1.3063 | 1.9366 | 1.2939 | 1.3050 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 02HR | | | | | | | | | | |
| I-0003 | 100YR-004HR | 74.96 | 79.90 | -0.0010 | 62.61 | 62.58 | 694 | 2.9145 | 3.4900 | 2.8287 | 2.8229 |
| I-0003 | 100YR-008HR | 74.96 | 83.99 | 0.0010 | 70.88 | 70.82 | 691 | 4.3199 | 3.6905 | 4.2834 | 4.2887 |
| I-0003 | 100YR-024HR | 74.96 | 71.96 | -0.0010 | 33.62 | 33.62 | 691 | 12.1166 | 12.4888 | 12.1159 | 12.1181 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0003 | 025YR-001HR | 127803 | 127696 | 107 |
| I-0003 | 025YR-002HR | 217597 | 217589 | 8 |
| I-0003 | 025YR-004HR | 318914 | 318883 | 31 |
| I-0003 | 025YR-008HR | 467941 | 467907 | 34 |
| I-0003 | 025YR-024HR | 825234 | 825252 | -18 |
| I-0003 | 100YR-001HR | 190855 | 190719 | 135 |
| I-0003 | 100YR-002HR | 326409 | 326343 | 66 |
| I-0003 | 100YR-004HR | 476057 | 475995 | 62 |
| I-0003 | 100YR-008HR | 677207 | 677177 | 30 |
| I-0003 | 100YR-024HR | 1121145 | 1121147 | -2 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0004 | 025YR-001HR | 68.85 | 66.84 | -0.0010 | 35.45 | 35.44 | 505 | 1.0718 | 1.4658 | 1.0683 | 1.0719 |
| I-0004 | 025YR-002HR | 68.85 | 67.54 | -0.0010 | 40.97 | 40.97 | 505 | 1.3060 | 2.0424 | 1.3024 | 1.3062 |
| I-0004 | 025YR-004HR | 68.85 | 67.96 | 0.0010 | 43.94 | 43.94 | 506 | 2.8692 | 2.0211 | 2.8676 | 2.8692 |
| I-0004 | 025YR-008HR | 68.85 | 69.18 | 0.0010 | 51.67 | 51.66 | 505 | 4.2149 | 3.7740 | 4.2107 | 4.2150 |
| I-0004 | 025YR-024HR | 68.85 | 65.96 | 0.0010 | 25.34 | 25.27 | 505 | 12.3156 | 5.7116 | 12.0952 | 12.1065 |
| I-0004 | 100YR-001HR | 68.85 | 69.28 | 0.0011 | 52.27 | 52.27 | 505 | 1.0745 | 0.7227 | 1.0698 | 1.0745 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0004 | 100YR-002HR | 68.85 | 71.02 | 0.0013 | 61.51 | 61.51 | 505 | 1.3082 | 0.8247 | 1.3023 | 1.3082 |
| I-0004 | 100YR-004HR | 68.85 | 71.68 | -0.0010 | 63.81 | 63.80 | 506 | 3.0000 | 3.8235 | 2.8229 | 2.8213 |
| I-0004 | 100YR-008HR | 68.85 | 73.36 | 0.0010 | 71.77 | 71.73 | 505 | 4.3498 | 3.5734 | 4.2847 | 4.2685 |
| I-0004 | 100YR-024HR | 68.85 | 67.23 | 0.0010 | 34.34 | 34.32 | 506 | 12.1957 | 11.6666 | 12.0894 | 12.0926 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0004 | 025YR-001HR | 129520 | 129428 | 92 |
| I-0004 | 025YR-002HR | 221143 | 221096 | 47 |
| I-0004 | 025YR-004HR | 324542 | 324442 | 100 |
| I-0004 | 025YR-008HR | 476820 | 476733 | 87 |
| I-0004 | 025YR-024HR | 842386 | 842378 | 7 |
| I-0004 | 100YR-001HR | 193763 | 193632 | 131 |
| I-0004 | 100YR-002HR | 332163 | 332045 | 117 |
| I-0004 | 100YR-004HR | 485090 | 484978 | 112 |
| I-0004 | 100YR-008HR | 690853 | 690765 | 88 |
| I-0004 | 100YR-024HR | 1145338 | 1145288 | 51 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0005 | 025YR-001HR | 82.25 | 77.58 | 0.0009 | 17.72 | 17.71 | 438 | 1.0811 | 0.3278 | 1.0760 | 1.0817 |
| I-0005 | 025YR-002HR | 82.25 | 78.29 | -0.0010 | 22.14 | 22.14 | 438 | 1.3821 | 5.7700 | 1.3772 | 1.3826 |
| I-0005 | 025YR-004HR | 82.25 | 79.23 | -0.0010 | 26.87 | 26.87 | 438 | 3.0340 | 7.5232 | 3.0326 | 3.0340 |
| I-0005 | 025YR-008HR | 82.25 | 80.06 | -0.0010 | 30.49 | 30.49 | 438 | 4.3132 | 5.0631 | 4.3076 | 4.3134 |
| I-0005 | 025YR-024HR | 82.25 | 77.40 | -0.0010 | 16.35 | 16.35 | 438 | 12.1086 | 27.0345 | 12.1008 | 12.1036 |
| I-0005 | 100YR-0 | 82.25 | 79.25 | 0.0010 | 26.96 | 26.96 | 438 | 1.0877 | 0.3054 | 1.0790 | 1.0877 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 01HR | | | | | | | | | | |
| I-0005 | 100YR-002HR | 82.25 | 84.79 | -0.0010 | 34.10 | 34.30 | 438 | 1.3285 | 1.4557 | 1.3570 | 1.3943 |
| I-0005 | 100YR-004HR | 82.25 | 87.99 | -0.0010 | 39.75 | 39.83 | 438 | 2.9670 | 3.3332 | 3.0168 | 3.0487 |
| I-0005 | 100YR-008HR | 82.25 | 93.67 | -0.0011 | 44.01 | 44.30 | 438 | 4.3815 | 4.9193 | 4.4937 | 4.5238 |
| I-0005 | 100YR-024HR | 82.25 | 78.34 | -0.0010 | 22.40 | 22.40 | 438 | 12.1038 | 27.1709 | 12.0991 | 12.1044 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0005 | 025YR-001HR | 80293 | 80268 | 25 |
| I-0005 | 025YR-002HR | 140806 | 140849 | -43 |
| I-0005 | 025YR-004HR | 209691 | 209744 | -53 |
| I-0005 | 025YR-008HR | 311969 | 312002 | -33 |
| I-0005 | 025YR-024HR | 559521 | 559534 | -12 |
| I-0005 | 100YR-001HR | 122458 | 122381 | 76 |
| I-0005 | 100YR-002HR | 214828 | 214846 | -19 |
| I-0005 | 100YR-004HR | 317546 | 317592 | -46 |
| I-0005 | 100YR-008HR | 456671 | 456691 | -20 |
| I-0005 | 100YR-024HR | 765856 | 765867 | -11 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0006 | 025YR-001HR | 103.32 | 98.52 | 0.0010 | 17.23 | 17.23 | 107 | 1.1082 | 0.4111 | 1.1049 | 1.1091 |
| I-0006 | 025YR-002HR | 103.32 | 99.08 | -0.0008 | 20.88 | 20.88 | 107 | 1.3882 | 5.6537 | 1.3860 | 1.3895 |
| I-0006 | 025YR-004HR | 103.32 | 99.88 | -0.0009 | 25.17 | 25.17 | 107 | 3.0356 | 7.4063 | 3.0332 | 3.0380 |
| I-0006 | 025YR-008HR | 103.32 | 100.73 | -0.0010 | 29.09 | 29.09 | 107 | 4.3200 | 5.0493 | 4.3177 | 4.3201 |
| I-0006 | 025YR-024HR | 103.32 | 98.29 | -0.0009 | 15.34 | 15.34 | 107 | 12.1965 | 26.9264 | 12.1943 | 12.1954 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0006 | 100YR-001HR | 103.32 | 100.12 | -0.0009 | 26.34 | 26.34 | 107 | 1.1047 | 1.6489 | 1.1007 | 1.1050 |
| I-0006 | 100YR-002HR | 103.32 | 101.67 | -0.0009 | 32.36 | 32.34 | 107 | 1.3665 | 2.0230 | 1.3522 | 1.3622 |
| I-0006 | 100YR-004HR | 103.32 | 103.80 | -0.0009 | 37.38 | 37.38 | 107 | 2.9995 | 3.7722 | 2.9785 | 2.9944 |
| I-0006 | 100YR-008HR | 103.32 | 113.20 | -0.0010 | 42.20 | 42.03 | 107 | 4.4159 | 5.6284 | 4.3515 | 4.4022 |
| I-0006 | 100YR-024HR | 103.32 | 99.11 | 0.0010 | 21.05 | 21.05 | 107 | 12.1743 | 5.0391 | 12.1691 | 12.1774 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0006 | 025YR-001HR | 74292 | 74263 | 29 |
| I-0006 | 025YR-002HR | 130894 | 130894 | 1 |
| I-0006 | 025YR-004HR | 195579 | 195578 | 0 |
| I-0006 | 025YR-008HR | 291803 | 291802 | 0 |
| I-0006 | 025YR-024HR | 525153 | 525152 | 0 |
| I-0006 | 100YR-001HR | 113791 | 113756 | 35 |
| I-0006 | 100YR-002HR | 200413 | 200413 | 0 |
| I-0006 | 100YR-004HR | 297057 | 297057 | 0 |
| I-0006 | 100YR-008HR | 428151 | 428151 | 0 |
| I-0006 | 100YR-024HR | 719900 | 719899 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0007 | 025YR-001HR | 103.62 | 99.34 | -0.0009 | 16.79 | 16.79 | 187 | 1.1343 | 2.4044 | 1.1305 | 1.1347 |
| I-0007 | 025YR-002HR | 103.62 | 99.76 | -0.0008 | 19.68 | 19.68 | 187 | 1.4047 | 5.6064 | 1.4001 | 1.4056 |
| I-0007 | 025YR-004HR | 103.62 | 100.61 | -0.0010 | 23.57 | 23.58 | 186 | 3.0406 | 7.3580 | 3.0500 | 3.0745 |
| I-0007 | 025YR-008HR | 103.62 | 101.75 | -0.0010 | 27.73 | 27.73 | 186 | 4.3225 | 5.0428 | 4.3247 | 4.3339 |
| I-0007 | 025YR-0 | 103.62 | 99.07 | -0.0010 | 14.51 | 14.51 | 182 | 12.2690 | 26.8733 | 12.2724 | 12.2678 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 24HR | | | | | | | | | | |
| I-0007 | 100YR-001HR | 103.62 | 100.99 | -0.0010 | 25.68 | 25.70 | 187 | 1.1092 | 1.6521 | 1.1166 | 1.1251 |
| I-0007 | 100YR-002HR | 103.62 | 102.91 | -0.0010 | 30.65 | 30.64 | 186 | 1.3682 | 1.9951 | 1.3572 | 1.3703 |
| I-0007 | 100YR-004HR | 103.62 | 105.44 | -0.0010 | 35.19 | 35.18 | 186 | 2.9956 | 3.6032 | 2.9648 | 2.9834 |
| I-0007 | 100YR-008HR | 103.62 | 115.35 | 0.0010 | 40.72 | 40.44 | 185 | 4.4131 | 4.0834 | 4.3333 | 4.3683 |
| I-0007 | 100YR-024HR | 103.62 | 99.80 | 0.0010 | 19.93 | 19.93 | 182 | 12.2593 | 5.0215 | 12.2506 | 12.2602 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0007 | 025YR-001HR | 68561 | 68505 | 56 |
| I-0007 | 025YR-002HR | 121580 | 121552 | 29 |
| I-0007 | 025YR-004HR | 182316 | 182289 | 27 |
| I-0007 | 025YR-008HR | 272839 | 272820 | 19 |
| I-0007 | 025YR-024HR | 492816 | 492808 | 8 |
| I-0007 | 100YR-001HR | 105519 | 105456 | 63 |
| I-0007 | 100YR-002HR | 186868 | 186832 | 36 |
| I-0007 | 100YR-004HR | 277801 | 277766 | 34 |
| I-0007 | 100YR-008HR | 401328 | 401307 | 21 |
| I-0007 | 100YR-024HR | 676658 | 676650 | 8 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0008 | 025YR-001HR | 106.00 | 103.41 | -0.0009 | 7.56 | 7.56 | 170 | 1.0669 | 3.8296 | 1.0666 | 1.0659 |
| I-0008 | 025YR-002HR | 106.00 | 103.52 | -0.0008 | 8.55 | 8.55 | 170 | 1.2959 | 4.6194 | 1.2834 | 1.2959 |
| I-0008 | 025YR-004HR | 106.00 | 103.67 | -0.0009 | 9.87 | 9.86 | 170 | 2.8906 | 6.3801 | 2.8834 | 2.8780 |
| I-0008 | 025YR-008HR | 106.00 | 103.90 | -0.0008 | 11.91 | 11.91 | 170 | 4.2672 | 10.2663 | 4.2666 | 4.2667 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0008 | 025YR-024HR | 106.00 | 103.22 | 0.0009 | 5.95 | 5.95 | 170 | 12.2178 | 5.2292 | 12.2167 | 12.2117 |
| I-0008 | 100YR-001HR | 106.00 | 103.87 | -0.0008 | 11.61 | 11.61 | 170 | 1.0512 | 3.8999 | 1.0500 | 1.0509 |
| I-0008 | 100YR-002HR | 106.00 | 104.07 | -0.0008 | 13.43 | 13.43 | 170 | 1.2675 | 4.7173 | 1.2666 | 1.2658 |
| I-0008 | 100YR-004HR | 106.00 | 106.22 | -0.0010 | 14.85 | 14.76 | 170 | 2.9847 | 6.4895 | 2.8167 | 2.8539 |
| I-0008 | 100YR-008HR | 106.00 | 116.37 | 0.0011 | 17.67 | 17.09 | 170 | 4.4092 | 4.0834 | 4.2500 | 4.2894 |
| I-0008 | 100YR-024HR | 106.00 | 103.48 | 0.0009 | 8.18 | 8.18 | 170 | 12.2015 | 4.4430 | 12.1998 | 12.1993 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0008 | 025YR-001HR | 26919 | 26912 | 8 |
| I-0008 | 025YR-002HR | 47691 | 47689 | 2 |
| I-0008 | 025YR-004HR | 71863 | 71862 | 1 |
| I-0008 | 025YR-008HR | 108000 | 107994 | 5 |
| I-0008 | 025YR-024HR | 196088 | 196086 | 2 |
| I-0008 | 100YR-001HR | 41680 | 41673 | 8 |
| I-0008 | 100YR-002HR | 73680 | 73673 | 8 |
| I-0008 | 100YR-004HR | 109983 | 109977 | 7 |
| I-0008 | 100YR-008HR | 159420 | 159412 | 8 |
| I-0008 | 100YR-024HR | 269868 | 269868 | 1 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0009 | 025YR-001HR | 100.10 | 95.53 | -0.0010 | 10.25 | 10.24 | 151 | 0.8852 | 2.0258 | 0.8833 | 0.8852 |
| I-0009 | 025YR-002HR | 100.10 | 95.52 | 0.0007 | 10.22 | 10.21 | 151 | 1.0460 | 0.4728 | 1.0334 | 1.0471 |
| I-0009 | 025YR-004HR | 100.10 | 95.01 | -0.0006 | 7.99 | 7.99 | 151 | 2.6012 | 3.3135 | 2.6000 | 2.6024 |
| I-0009 | 025YR-0 | 100.10 | 95.50 | -0.0010 | 10.14 | 10.13 | 151 | 4.0948 | 8.7840 | 4.0833 | 4.0955 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|--------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 08HR | | | | | | | | | | |
| I-0009 | 025YR-0 24HR | 100.10 | 94.30 | -0.0009 | 3.95 | 3.95 | 143 | 12.0531 | 24.6643 | 12.0504 | 12.0522 |
| I-0009 | 100YR-0 01HR | 100.10 | 97.78 | 0.0010 | 14.81 | 14.68 | 151 | 0.8940 | 0.8262 | 0.8667 | 0.9020 |
| I-0009 | 100YR-0 02HR | 100.10 | 98.32 | 0.0010 | 15.15 | 15.04 | 151 | 1.0561 | 0.9637 | 1.0167 | 1.0638 |
| I-0009 | 100YR-0 04HR | 100.10 | 95.83 | 0.0006 | 11.35 | 11.34 | 151 | 2.5722 | 1.1458 | 2.5667 | 2.5732 |
| I-0009 | 100YR-0 08HR | 100.10 | 96.96 | -0.0009 | 14.20 | 14.16 | 151 | 4.1038 | 8.8351 | 4.0833 | 4.1131 |
| I-0009 | 100YR-0 24HR | 100.10 | 94.53 | -0.0008 | 5.26 | 5.26 | 143 | 12.0505 | 24.7077 | 12.0496 | 12.0505 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0009 | 025YR-001HR | 20188 | 20187 | 1 |
| I-0009 | 025YR-002HR | 33278 | 33276 | 1 |
| I-0009 | 025YR-004HR | 47964 | 47964 | 0 |
| I-0009 | 025YR-008HR | 69324 | 69323 | 1 |
| I-0009 | 025YR-024HR | 119885 | 119884 | 1 |
| I-0009 | 100YR-001HR | 29552 | 29552 | 1 |
| I-0009 | 100YR-002HR | 49053 | 49052 | 1 |
| I-0009 | 100YR-004HR | 70482 | 70483 | 0 |
| I-0009 | 100YR-008HR | 99018 | 99019 | 0 |
| I-0009 | 100YR-024HR | 161388 | 161388 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|--------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0010 | 025YR-0 01HR | 95.40 | 90.16 | -0.0010 | 17.12 | 17.11 | 346 | 0.8853 | 0.9535 | 0.8768 | 0.8894 |
| I-0010 | 025YR-0 02HR | 95.40 | 90.12 | 0.0010 | 17.07 | 17.06 | 346 | 1.0448 | 0.9322 | 1.0372 | 1.0471 |
| I-0010 | 025YR-0 04HR | 95.40 | 89.07 | 0.0007 | 13.41 | 13.41 | 345 | 2.5899 | 1.2758 | 2.5872 | 2.5852 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0010 | 025YR-008HR | 95.40 | 90.03 | -0.0010 | 17.01 | 17.00 | 346 | 4.0987 | 4.1938 | 4.0872 | 4.0976 |
| I-0010 | 025YR-024HR | 95.40 | 88.30 | -0.0009 | 6.62 | 6.62 | 345 | 12.0580 | 24.7514 | 12.0522 | 12.0571 |
| I-0010 | 100YR-001HR | 95.40 | 94.05 | 0.0010 | 24.40 | 24.42 | 346 | 0.8897 | 0.6929 | 0.8834 | 0.9029 |
| I-0010 | 100YR-002HR | 95.40 | 94.40 | 0.0010 | 25.01 | 25.02 | 346 | 1.0524 | 0.7907 | 1.0466 | 1.0641 |
| I-0010 | 100YR-004HR | 95.40 | 90.93 | 0.0010 | 19.02 | 19.02 | 345 | 2.5803 | 1.9805 | 2.5692 | 2.5822 |
| I-0010 | 100YR-008HR | 95.40 | 93.48 | 0.0010 | 23.73 | 23.73 | 346 | 4.1009 | 3.4623 | 4.0910 | 4.1072 |
| I-0010 | 100YR-024HR | 95.40 | 88.55 | -0.0009 | 8.81 | 8.81 | 345 | 12.0542 | 24.7940 | 12.0375 | 12.0590 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0010 | 025YR-001HR | 33827 | 33778 | 49 |
| I-0010 | 025YR-002HR | 55761 | 55729 | 32 |
| I-0010 | 025YR-004HR | 80373 | 80354 | 19 |
| I-0010 | 025YR-008HR | 116165 | 116151 | 14 |
| I-0010 | 025YR-024HR | 200889 | 200884 | 5 |
| I-0010 | 100YR-001HR | 49519 | 49464 | 55 |
| I-0010 | 100YR-002HR | 82197 | 82163 | 34 |
| I-0010 | 100YR-004HR | 118107 | 118083 | 24 |
| I-0010 | 100YR-008HR | 165925 | 165907 | 18 |
| I-0010 | 100YR-024HR | 270437 | 270432 | 6 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0011 | 025YR-001HR | 91.20 | 89.42 | 0.0010 | 27.54 | 27.53 | 488 | 0.8845 | 0.6745 | 0.8801 | 0.8845 |
| I-0011 | 025YR-002HR | 91.20 | 89.39 | -0.0010 | 27.38 | 27.38 | 487 | 1.0441 | 1.2149 | 1.0386 | 1.0442 |
| I-0011 | 025YR-0 | 91.20 | 88.19 | -0.0010 | 21.28 | 21.28 | 486 | 2.5917 | 3.2549 | 2.5852 | 2.5918 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 04HR | | | | | | | | | | |
| I-0011 | 025YR-008HR | 91.20 | 89.30 | -0.0010 | 26.97 | 26.97 | 486 | 4.0987 | 4.2532 | 4.0918 | 4.0987 |
| I-0011 | 025YR-024HR | 91.20 | 86.79 | -0.0010 | 10.47 | 10.47 | 486 | 12.0685 | 12.3283 | 12.0571 | 12.0676 |
| I-0011 | 100YR-001HR | 91.20 | 92.55 | 0.0010 | 39.19 | 39.17 | 488 | 0.8871 | 0.6476 | 0.8803 | 0.8871 |
| I-0011 | 100YR-002HR | 91.20 | 92.83 | 0.0010 | 40.05 | 40.03 | 487 | 1.0502 | 0.7462 | 1.0400 | 1.0502 |
| I-0011 | 100YR-004HR | 91.20 | 90.02 | 0.0010 | 30.11 | 30.10 | 487 | 2.5784 | 1.8872 | 2.5717 | 2.5785 |
| I-0011 | 100YR-008HR | 91.20 | 92.06 | 0.0010 | 37.58 | 37.58 | 486 | 4.0990 | 3.4059 | 4.0901 | 4.0990 |
| I-0011 | 100YR-024HR | 91.20 | 87.18 | -0.0010 | 13.92 | 13.92 | 486 | 12.0505 | 12.3064 | 12.0437 | 12.0496 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0011 | 025YR-001HR | 54099 | 54097 | 3 |
| I-0011 | 025YR-002HR | 88876 | 88874 | 3 |
| I-0011 | 025YR-004HR | 127812 | 127811 | 1 |
| I-0011 | 025YR-008HR | 184336 | 184336 | 0 |
| I-0011 | 025YR-024HR | 317919 | 317919 | 0 |
| I-0011 | 100YR-001HR | 78970 | 78968 | 2 |
| I-0011 | 100YR-002HR | 130679 | 130677 | 2 |
| I-0011 | 100YR-004HR | 187390 | 187390 | 0 |
| I-0011 | 100YR-008HR | 262808 | 262808 | 0 |
| I-0011 | 100YR-024HR | 427446 | 427447 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0012 | 025YR-001HR | 76.50 | 72.12 | -0.0010 | 36.06 | 36.06 | 757 | 0.8533 | 2.2210 | 0.8506 | 0.8538 |
| I-0012 | 025YR-002HR | 76.50 | 72.15 | -0.0010 | 36.28 | 36.27 | 757 | 1.0209 | 2.2980 | 1.0151 | 1.0214 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0012 | 025YR-004HR | 76.50 | 71.40 | -0.0009 | 29.37 | 29.37 | 757 | 2.5532 | 3.2552 | 2.5491 | 2.5537 |
| I-0012 | 025YR-008HR | 76.50 | 72.29 | -0.0010 | 37.47 | 37.47 | 757 | 4.0507 | 5.2791 | 4.0465 | 4.0510 |
| I-0012 | 025YR-024HR | 76.50 | 70.20 | -0.0010 | 14.71 | 14.71 | 756 | 12.0369 | 12.2316 | 12.0257 | 12.0354 |
| I-0012 | 100YR-001HR | 76.50 | 74.47 | 0.0009 | 51.98 | 52.02 | 757 | 0.8520 | 0.6300 | 0.8507 | 0.8669 |
| I-0012 | 100YR-002HR | 76.50 | 75.07 | 0.0009 | 53.74 | 53.78 | 757 | 1.0192 | 0.7705 | 1.0243 | 1.0290 |
| I-0012 | 100YR-004HR | 76.50 | 72.91 | 0.0008 | 42.16 | 42.16 | 757 | 2.5402 | 1.7521 | 2.5334 | 2.5402 |
| I-0012 | 100YR-008HR | 76.50 | 75.82 | -0.0009 | 52.52 | 52.37 | 756 | 4.0826 | 4.2788 | 4.0500 | 4.0615 |
| I-0012 | 100YR-024HR | 76.50 | 70.61 | -0.0010 | 19.77 | 19.76 | 755 | 12.0333 | 12.2318 | 12.0164 | 12.0286 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0012 | 025YR-001HR | 70141 | 70031 | 110 |
| I-0012 | 025YR-002HR | 118099 | 118005 | 94 |
| I-0012 | 025YR-004HR | 172596 | 172552 | 45 |
| I-0012 | 025YR-008HR | 252614 | 252552 | 62 |
| I-0012 | 025YR-024HR | 444116 | 444116 | 0 |
| I-0012 | 100YR-001HR | 104353 | 104138 | 215 |
| I-0012 | 100YR-002HR | 176636 | 176495 | 141 |
| I-0012 | 100YR-004HR | 256967 | 256850 | 117 |
| I-0012 | 100YR-008HR | 364815 | 364668 | 147 |
| I-0012 | 100YR-024HR | 602530 | 602529 | 1 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0013 | 025YR-001HR | 68.39 | 67.37 | 0.0010 | 11.64 | 11.63 | 100 | 0.7544 | 0.4361 | 0.7500 | 0.7542 |
| I-0013 | 025YR-0 | 68.39 | 67.37 | 0.0010 | 11.62 | 11.61 | 100 | 0.9177 | 0.4728 | 0.9167 | 0.9177 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 02HR | | | | | | | | | | |
| I-0013 | 025YR-004HR | 68.39 | 66.99 | 0.0008 | 8.25 | 8.25 | 100 | 2.5516 | 1.2476 | 2.5500 | 2.5493 |
| I-0013 | 025YR-008HR | 68.39 | 67.28 | -0.0010 | 10.84 | 10.84 | 100 | 4.0353 | 8.2101 | 4.0333 | 4.0343 |
| I-0013 | 025YR-024HR | 68.39 | 66.49 | -0.0010 | 4.14 | 4.14 | 100 | 12.0194 | 24.2343 | 12.0166 | 12.0166 |
| I-0013 | 100YR-001HR | 68.39 | 68.76 | -0.0010 | 17.31 | 17.07 | 100 | 0.8163 | 0.9218 | 0.7333 | 0.7419 |
| I-0013 | 100YR-002HR | 68.39 | 68.97 | 0.0010 | 17.72 | 17.54 | 100 | 0.9670 | 0.4013 | 0.9000 | 0.9059 |
| I-0013 | 100YR-004HR | 68.39 | 68.11 | 0.0009 | 11.94 | 11.94 | 100 | 2.6824 | 1.1288 | 2.1166 | 2.1122 |
| I-0013 | 100YR-008HR | 68.39 | 69.98 | -0.0007 | 15.38 | 15.20 | 100 | 4.0927 | 7.1736 | 4.0333 | 4.0365 |
| I-0013 | 100YR-024HR | 68.39 | 66.68 | -0.0010 | 5.59 | 5.59 | 100 | 12.0183 | 24.1546 | 12.0164 | 12.0155 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|-----------|-------------|--------------------|---------------------|----------------------------------|
| I-0013 | 025YR-001HR | 18164 | 18163 | 0 |
| I-0013 | 025YR-002HR | 31351 | 31350 | 1 |
| I-0013 | 025YR-004HR | 46502 | 46502 | 0 |
| I-0013 | 025YR-008HR | 68933 | 68933 | 0 |
| I-0013 | 025YR-024HR | 123046 | 123045 | 1 |
| I-0013 | 100YR-001HR | 27560 | 27560 | 0 |
| I-0013 | 100YR-002HR | 47635 | 47635 | 0 |
| I-0013 | 100YR-004HR | 70159 | 70160 | -1 |
| I-0013 | 100YR-008HR | 100590 | 100591 | -1 |
| I-0013 | 100YR-024HR | 168045 | 168045 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0014 | 025YR-001HR | 68.39 | 66.67 | 0.0010 | 47.57 | 47.57 | 611 | 0.8262 | 0.6028 | 0.8230 | 0.8263 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0014 | 025YR-002HR | 68.39 | 66.67 | 0.0010 | 47.64 | 47.64 | 610 | 0.9828 | 0.7692 | 0.9795 | 0.9828 |
| I-0014 | 025YR-004HR | 68.39 | 66.01 | 0.0010 | 38.56 | 38.56 | 609 | 3.1023 | 1.3436 | 2.5494 | 2.5520 |
| I-0014 | 025YR-008HR | 68.39 | 66.81 | 0.0010 | 49.54 | 49.71 | 609 | 4.0308 | 3.1981 | 4.0415 | 4.0413 |
| I-0014 | 025YR-024HR | 68.39 | 65.39 | -0.0010 | 19.35 | 19.33 | 585 | 12.2117 | 26.5655 | 12.0318 | 12.0325 |
| I-0014 | 100YR-001HR | 68.39 | 68.44 | 0.0011 | 68.60 | 68.58 | 611 | 0.8217 | 0.6135 | 0.8168 | 0.8217 |
| I-0014 | 100YR-002HR | 68.39 | 68.63 | 0.0010 | 70.51 | 70.50 | 611 | 0.9818 | 0.7216 | 0.9781 | 0.9819 |
| I-0014 | 100YR-004HR | 68.39 | 67.98 | 0.0010 | 55.22 | 55.09 | 609 | 2.7135 | 1.2425 | 2.5411 | 2.5443 |
| I-0014 | 100YR-008HR | 68.39 | 69.71 | 0.0010 | 69.21 | 69.07 | 607 | 4.1014 | 3.1832 | 4.0500 | 4.0519 |
| I-0014 | 100YR-024HR | 68.39 | 66.22 | -0.0010 | 26.06 | 26.05 | 575 | 12.0960 | 17.3339 | 12.0210 | 12.0235 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0014 | 025YR-001HR | 89679 | 88825 | 855 |
| I-0014 | 025YR-002HR | 152338 | 151509 | 829 |
| I-0014 | 025YR-004HR | 223819 | 223005 | 815 |
| I-0014 | 025YR-008HR | 329098 | 328282 | 816 |
| I-0014 | 025YR-024HR | 582072 | 581783 | 289 |
| I-0014 | 100YR-001HR | 134237 | 133164 | 1072 |
| I-0014 | 100YR-002HR | 229041 | 228171 | 869 |
| I-0014 | 100YR-004HR | 334787 | 333933 | 853 |
| I-0014 | 100YR-008HR | 477054 | 476218 | 836 |
| I-0014 | 100YR-024HR | 791717 | 791452 | 265 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0015 | 025YR-0 | 74.55 | 72.27 | -0.0009 | 7.88 | 7.88 | 149 | 0.8480 | 0.9288 | 0.7897 | 0.7925 |

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| | 01HR | | | | | | | | | | |
| I-0015 | 025YR-002HR | 74.55 | 72.30 | -0.0007 | 8.08 | 8.08 | 148 | 1.0139 | 2.1896 | 0.9351 | 0.9389 |
| I-0015 | 025YR-004HR | 74.55 | 72.03 | -0.0006 | 6.58 | 6.58 | 148 | 2.5670 | 3.2168 | 2.5659 | 2.5650 |
| I-0015 | 025YR-008HR | 74.55 | 72.50 | 0.0009 | 8.71 | 8.71 | 149 | 4.0512 | 2.4627 | 4.0498 | 4.0543 |
| I-0015 | 025YR-024HR | 74.55 | 71.63 | 0.0009 | 3.44 | 3.44 | 149 | 12.0346 | 5.3456 | 12.0332 | 12.0273 |
| I-0015 | 100YR-001HR | 74.55 | 74.86 | -0.0010 | 11.94 | 11.66 | 149 | 0.8485 | 0.9181 | 0.7833 | 0.8042 |
| I-0015 | 100YR-002HR | 74.55 | 75.48 | 0.0009 | 12.67 | 12.32 | 148 | 1.0163 | 0.8166 | 0.9192 | 0.9187 |
| I-0015 | 100YR-004HR | 74.55 | 73.19 | 0.0007 | 9.79 | 9.81 | 148 | 2.5451 | 2.0149 | 2.5636 | 2.5682 |
| I-0015 | 100YR-008HR | 74.55 | 76.28 | -0.0010 | 12.56 | 12.51 | 149 | 4.0834 | 4.2448 | 4.0667 | 4.0845 |
| I-0015 | 100YR-024HR | 74.55 | 71.81 | 0.0010 | 4.75 | 4.75 | 149 | 12.0227 | 4.5888 | 12.0164 | 12.0227 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0015 | 025YR-001HR | 12716 | 12711 | 5 |
| I-0015 | 025YR-002HR | 23326 | 23322 | 4 |
| I-0015 | 025YR-004HR | 35890 | 35889 | 0 |
| I-0015 | 025YR-008HR | 54913 | 54909 | 5 |
| I-0015 | 025YR-024HR | 101925 | 101924 | 1 |
| I-0015 | 100YR-001HR | 20237 | 20225 | 12 |
| I-0015 | 100YR-002HR | 36841 | 36838 | 2 |
| I-0015 | 100YR-004HR | 55964 | 55963 | 1 |
| I-0015 | 100YR-008HR | 82278 | 82272 | 5 |
| I-0015 | 100YR-024HR | 141678 | 141677 | 1 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0016 | 025YR-001HR | 74.55 | 72.56 | -0.0005 | 3.26 | 3.26 | 100 | 0.8411 | 1.6364 | 0.8334 | 0.8390 |
| I-0016 | 025YR-002HR | 74.55 | 72.58 | -0.0004 | 3.35 | 3.35 | 100 | 0.9938 | 2.2315 | 0.9834 | 0.9938 |
| I-0016 | 025YR-004HR | 74.55 | 72.49 | 0.0004 | 2.86 | 2.86 | 100 | 2.5941 | 1.4308 | 2.5833 | 2.5898 |
| I-0016 | 025YR-008HR | 74.55 | 72.65 | 0.0008 | 3.77 | 3.77 | 100 | 4.0712 | 2.5979 | 4.0667 | 4.0689 |
| I-0016 | 025YR-024HR | 74.55 | 72.21 | 0.0010 | 1.51 | 1.51 | 100 | 12.0409 | 5.7632 | 12.0339 | 12.0409 |
| I-0016 | 100YR-001HR | 74.55 | 74.97 | -0.0010 | 5.11 | 5.10 | 100 | 0.8494 | 0.9181 | 0.8167 | 0.8687 |
| I-0016 | 100YR-002HR | 74.55 | 75.61 | 0.0009 | 5.43 | 5.33 | 100 | 1.0169 | 0.8169 | 0.9667 | 1.0302 |
| I-0016 | 100YR-004HR | 74.55 | 73.27 | 0.0005 | 4.28 | 4.32 | 100 | 2.5482 | 2.0929 | 2.5667 | 2.6024 |
| I-0016 | 100YR-008HR | 74.55 | 76.43 | -0.0010 | 5.55 | 5.62 | 100 | 4.0844 | 4.2448 | 4.0667 | 4.1196 |
| I-0016 | 100YR-024HR | 74.55 | 72.34 | 0.0010 | 2.10 | 2.10 | 100 | 12.0360 | 5.0559 | 12.0333 | 12.0367 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|-----------|-------------|--------------------|---------------------|----------------------------------|
| I-0016 | 025YR-001HR | 5483 | 5483 | 0 |
| I-0016 | 025YR-002HR | 10145 | 10145 | 0 |
| I-0016 | 025YR-004HR | 15689 | 15689 | 0 |
| I-0016 | 025YR-008HR | 24108 | 24108 | 0 |
| I-0016 | 025YR-024HR | 44982 | 44981 | 1 |
| I-0016 | 100YR-001HR | 8785 | 8785 | 0 |
| I-0016 | 100YR-002HR | 16109 | 16109 | 0 |
| I-0016 | 100YR-004HR | 24574 | 24574 | 0 |
| I-0016 | 100YR-008HR | 36250 | 36250 | 0 |
| I-0016 | 100YR-024HR | 62672 | 62672 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0017 | 025YR-001HR | 92.50 | 90.29 | -0.0010 | 3.77 | 3.77 | 105 | 0.8833 | 0.9326 | 0.7833 | 0.7836 |
| I-0017 | 025YR-002HR | 92.50 | 90.25 | -0.0009 | 3.69 | 3.69 | 105 | 1.0427 | 1.1204 | 0.9333 | 0.9390 |
| I-0017 | 025YR-004HR | 92.50 | 89.85 | 0.0005 | 2.56 | 2.56 | 105 | 2.5549 | 1.2476 | 2.5500 | 2.5531 |
| I-0017 | 025YR-008HR | 92.50 | 90.16 | -0.0007 | 3.32 | 3.27 | 105 | 4.0960 | 8.4175 | 4.0500 | 3.9890 |
| I-0017 | 025YR-024HR | 92.50 | 89.57 | -0.0010 | 1.25 | 1.25 | 103 | 12.0297 | 24.3317 | 12.0166 | 12.0201 |
| I-0017 | 100YR-001HR | 92.50 | 94.33 | -0.0010 | 5.43 | 4.90 | 105 | 0.8877 | 1.0162 | 0.7667 | 0.6869 |
| I-0017 | 100YR-002HR | 92.50 | 94.69 | 0.0010 | 5.45 | 4.94 | 105 | 1.0501 | 0.8729 | 0.9333 | 0.9638 |
| I-0017 | 100YR-004HR | 92.50 | 91.10 | -0.0009 | 3.71 | 3.60 | 105 | 2.5778 | 2.8330 | 2.1334 | 2.2106 |
| I-0017 | 100YR-008HR | 92.50 | 93.75 | -0.0010 | 4.62 | 4.53 | 105 | 4.0977 | 4.3104 | 4.0333 | 4.0577 |
| I-0017 | 100YR-024HR | 92.50 | 89.67 | -0.0010 | 1.67 | 1.67 | 105 | 12.0183 | 24.3680 | 12.0164 | 12.0164 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0017 | 025YR-001HR | 6357 | 6356 | 1 |
| I-0017 | 025YR-002HR | 10479 | 10478 | 1 |
| I-0017 | 025YR-004HR | 15104 | 15104 | 0 |
| I-0017 | 025YR-008HR | 21830 | 21830 | 0 |
| I-0017 | 025YR-024HR | 37752 | 37751 | 0 |
| I-0017 | 100YR-001HR | 9306 | 9305 | 1 |
| I-0017 | 100YR-002HR | 15447 | 15446 | 0 |
| I-0017 | 100YR-004HR | 22195 | 22195 | 0 |
| I-0017 | 100YR-008HR | 31181 | 31181 | 0 |
| I-0017 | 100YR-024HR | 50821 | 50821 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| I-0018 | 025YR-001HR | 66.67 | 65.37 | -0.0009 | 6.85 | 6.85 | 100 | 0.9843 | 2.2509 | 0.9833 | 0.9829 |
| I-0018 | 025YR-002HR | 66.67 | 65.47 | 0.0004 | 7.40 | 7.40 | 100 | 1.1670 | 0.9139 | 1.1666 | 1.1669 |
| I-0018 | 025YR-004HR | 66.67 | 65.84 | -0.0006 | 7.28 | 7.28 | 100 | 3.2415 | 5.4128 | 2.7000 | 2.6977 |
| I-0018 | 025YR-008HR | 66.67 | 66.09 | 0.0008 | 9.32 | 9.32 | 100 | 4.8823 | 2.5920 | 4.1501 | 4.1661 |
| I-0018 | 025YR-024HR | 66.67 | 65.30 | -0.0008 | 3.98 | 3.96 | 100 | 12.3628 | 24.8203 | 12.1008 | 12.1169 |
| I-0018 | 100YR-001HR | 66.67 | 66.25 | 0.0004 | 10.82 | 10.81 | 100 | 0.9692 | 0.8666 | 0.9667 | 0.9692 |
| I-0018 | 100YR-002HR | 66.67 | 66.58 | -0.0005 | 11.98 | 11.97 | 100 | 1.1411 | 2.7228 | 1.1333 | 1.1411 |
| I-0018 | 100YR-004HR | 66.67 | 67.45 | -0.0006 | 11.03 | 10.93 | 100 | 3.0831 | 5.6837 | 2.6666 | 2.6710 |
| I-0018 | 100YR-008HR | 66.67 | 68.27 | 0.0007 | 13.88 | 13.77 | 100 | 4.2411 | 2.3189 | 4.1500 | 4.1529 |
| I-0018 | 100YR-024HR | 66.67 | 66.02 | -0.0010 | 5.52 | 5.51 | 100 | 12.2341 | 24.8780 | 12.0997 | 12.1014 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| I-0018 | 025YR-001HR | 14696 | 14695 | 1 |
| I-0018 | 025YR-002HR | 27192 | 27191 | 1 |
| I-0018 | 025YR-004HR | 42050 | 42050 | 0 |
| I-0018 | 025YR-008HR | 64617 | 64616 | 1 |
| I-0018 | 025YR-024HR | 120565 | 120564 | 1 |
| I-0018 | 100YR-001HR | 23547 | 23546 | 1 |
| I-0018 | 100YR-002HR | 43177 | 43176 | 1 |
| I-0018 | 100YR-004HR | 65864 | 65864 | 0 |
| I-0018 | 100YR-008HR | 97160 | 97160 | 0 |
| I-0018 | 100YR-024HR | 167980 | 167980 | 0 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0001 | 025YR-001HR | 101.40 | 96.50 | -0.0009 | 17.23 | 17.23 | 320 | 1.1121 | 2.4178 | 1.1091 | 1.1137 |
| MH-0001 | 025YR-002HR | 101.40 | 97.06 | -0.0009 | 20.88 | 20.88 | 320 | 1.3940 | 5.5973 | 1.3895 | 1.3961 |
| MH-0001 | 025YR-004HR | 101.40 | 97.86 | -0.0010 | 25.17 | 25.17 | 320 | 3.0429 | 7.3505 | 3.0380 | 3.0447 |
| MH-0001 | 025YR-008HR | 101.40 | 98.71 | -0.0009 | 29.09 | 29.09 | 320 | 4.3260 | 11.1759 | 4.3201 | 4.3267 |
| MH-0001 | 025YR-024HR | 101.40 | 96.28 | -0.0008 | 15.34 | 15.34 | 320 | 12.2020 | 26.8211 | 12.1954 | 12.2020 |
| MH-0001 | 100YR-001HR | 101.40 | 98.10 | -0.0009 | 26.34 | 26.34 | 320 | 1.1103 | 1.6505 | 1.1050 | 1.1105 |
| MH-0001 | 100YR-002HR | 101.40 | 99.52 | -0.0010 | 32.34 | 32.34 | 320 | 1.3698 | 5.7093 | 1.3622 | 1.3704 |
| MH-0001 | 100YR-004HR | 101.40 | 100.94 | -0.0009 | 37.38 | 37.38 | 320 | 3.0027 | 3.7758 | 2.9944 | 3.0027 |
| MH-0001 | 100YR-008HR | 101.40 | 109.58 | -0.0010 | 42.03 | 42.08 | 320 | 4.4174 | 11.3200 | 4.4022 | 4.4560 |
| MH-0001 | 100YR-024HR | 101.40 | 97.09 | 0.0009 | 21.05 | 21.05 | 320 | 12.1820 | 5.0356 | 12.1774 | 12.1823 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| MH-0001 | 025YR-001HR | 74263 | 74216 | 46 |
| MH-0001 | 025YR-002HR | 130894 | 130891 | 3 |
| MH-0001 | 025YR-004HR | 195578 | 195577 | 2 |
| MH-0001 | 025YR-008HR | 291802 | 291801 | 1 |
| MH-0001 | 025YR-024HR | 525152 | 525152 | 1 |
| MH-0001 | 100YR-001HR | 113756 | 113694 | 62 |
| MH-0001 | 100YR-002HR | 200413 | 200410 | 3 |
| MH-0001 | 100YR-004HR | 297057 | 297055 | 2 |
| MH-0001 | 100YR-008HR | 428151 | 428150 | 1 |
| MH-0001 | 100YR-024HR | 719899 | 719899 | 1 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0002 | 025YR-001HR | 69.40 | 68.25 | 0.0010 | 36.06 | 36.05 | 380 | 0.8573 | 0.6780 | 0.8538 | 0.8574 |
| MH-0002 | 025YR-002HR | 69.40 | 68.28 | 0.0010 | 36.27 | 36.27 | 379 | 1.0248 | 0.8085 | 1.0214 | 1.0249 |
| MH-0002 | 025YR-004HR | 69.40 | 67.53 | -0.0009 | 29.37 | 29.37 | 379 | 2.5567 | 3.2549 | 2.5537 | 2.5578 |
| MH-0002 | 025YR-008HR | 69.40 | 68.42 | -0.0010 | 37.47 | 37.46 | 379 | 4.0540 | 5.2801 | 4.0510 | 4.0540 |
| MH-0002 | 025YR-024HR | 69.40 | 66.33 | -0.0010 | 14.71 | 14.71 | 378 | 12.0459 | 12.2304 | 12.0354 | 12.0459 |
| MH-0002 | 100YR-001HR | 69.40 | 70.76 | 0.0014 | 52.02 | 52.13 | 380 | 0.8402 | 0.6075 | 0.8669 | 0.8682 |
| MH-0002 | 100YR-002HR | 69.40 | 71.11 | 0.0010 | 53.78 | 53.85 | 380 | 1.0076 | 0.7081 | 1.0290 | 1.0285 |
| MH-0002 | 100YR-004HR | 69.40 | 69.42 | 0.0010 | 42.16 | 42.03 | 379 | 2.6422 | 1.7565 | 2.5402 | 2.5481 |
| MH-0002 | 100YR-008HR | 69.40 | 72.07 | 0.0010 | 52.37 | 52.27 | 379 | 4.0919 | 3.2870 | 4.0615 | 4.0719 |
| MH-0002 | 100YR-024HR | 69.40 | 66.74 | -0.0010 | 19.76 | 19.76 | 377 | 12.0398 | 25.0208 | 12.0286 | 12.0375 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| MH-0002 | 025YR-001HR | 70031 | 70005 | 26 |
| MH-0002 | 025YR-002HR | 118005 | 117989 | 16 |
| MH-0002 | 025YR-004HR | 172552 | 172489 | 63 |
| MH-0002 | 025YR-008HR | 252552 | 252491 | 62 |
| MH-0002 | 025YR-024HR | 444116 | 444119 | -3 |
| MH-0002 | 100YR-001HR | 104138 | 104118 | 21 |
| MH-0002 | 100YR-002HR | 176495 | 176436 | 59 |
| MH-0002 | 100YR-004HR | 256850 | 256794 | 56 |
| MH-0002 | 100YR-008HR | 364668 | 364603 | 64 |
| MH-0002 | 100YR-024HR | 602529 | 602523 | 6 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| MH-0003 | 025YR-001HR | 90.60 | 86.65 | 0.0009 | 17.23 | 17.23 | 428 | 1.1164 | 0.9123 | 1.1137 | 1.1172 |
| MH-0003 | 025YR-002HR | 90.60 | 87.21 | 0.0010 | 20.88 | 20.88 | 428 | 1.3981 | 1.0226 | 1.3961 | 1.3996 |
| MH-0003 | 025YR-004HR | 90.60 | 88.01 | -0.0008 | 25.17 | 25.17 | 427 | 3.0488 | 3.5778 | 3.0447 | 3.0491 |
| MH-0003 | 025YR-008HR | 90.60 | 88.86 | 0.0010 | 29.09 | 29.09 | 427 | 4.3316 | 3.6183 | 4.3267 | 4.3320 |
| MH-0003 | 025YR-024HR | 90.60 | 86.43 | 0.0008 | 15.34 | 15.34 | 426 | 12.2092 | 5.7061 | 12.2020 | 12.2080 |
| MH-0003 | 100YR-001HR | 90.60 | 88.25 | -0.0009 | 26.34 | 26.33 | 428 | 1.1164 | 1.6525 | 1.1105 | 1.1164 |
| MH-0003 | 100YR-002HR | 90.60 | 89.67 | -0.0009 | 32.34 | 32.34 | 428 | 1.3771 | 2.1582 | 1.3704 | 1.3772 |
| MH-0003 | 100YR-004HR | 90.60 | 93.64 | -0.0010 | 37.38 | 37.44 | 427 | 2.9812 | 3.1027 | 3.0027 | 3.0626 |
| MH-0003 | 100YR-008HR | 90.60 | 100.78 | 0.0012 | 42.08 | 42.29 | 427 | 4.4068 | 3.9857 | 4.4560 | 4.4979 |
| MH-0003 | 100YR-024HR | 90.60 | 87.24 | 0.0009 | 21.05 | 21.05 | 426 | 12.1886 | 5.0426 | 12.1823 | 12.1886 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| MH-0003 | 025YR-001HR | 74216 | 74144 | 73 |
| MH-0003 | 025YR-002HR | 130891 | 130878 | 13 |
| MH-0003 | 025YR-004HR | 195577 | 195568 | 8 |
| MH-0003 | 025YR-008HR | 291801 | 291796 | 5 |
| MH-0003 | 025YR-024HR | 525152 | 525150 | 2 |
| MH-0003 | 100YR-001HR | 113694 | 113600 | 95 |
| MH-0003 | 100YR-002HR | 200410 | 200396 | 14 |
| MH-0003 | 100YR-004HR | 297055 | 297046 | 9 |
| MH-0003 | 100YR-008HR | 428150 | 428145 | 5 |
| MH-0003 | 100YR-024HR | 719899 | 719897 | 2 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| P-RISER | 025YR-001HR | 66.30 | 60.24 | 0.0091 | 11.53 | 11.53 | 100 | 1.9032 | 0.0041 | 1.8380 | 1.8453 |
| P-RISER | 025YR-002HR | 66.30 | 62.85 | 0.0091 | 18.69 | 18.69 | 100 | 2.1986 | 0.0041 | 2.1582 | 2.1711 |
| P-RISER | 025YR-004HR | 66.30 | 63.53 | 0.0091 | 19.85 | 19.85 | 100 | 3.4099 | 0.0041 | 3.3553 | 3.3686 |
| P-RISER | 025YR-008HR | 66.30 | 63.82 | 0.0091 | 20.05 | 20.05 | 100 | 5.0821 | 0.0041 | 4.8888 | 4.9021 |
| P-RISER | 025YR-024HR | 66.30 | 63.63 | 0.0091 | 17.91 | 17.91 | 100 | 12.4324 | 0.0041 | 12.7418 | 12.7538 |
| P-RISER | 100YR-001HR | 66.30 | 62.57 | 0.0091 | 18.22 | 18.22 | 100 | 1.5754 | 0.0041 | 1.5480 | 1.5606 |
| P-RISER | 100YR-002HR | 66.30 | 63.65 | 0.0091 | 20.47 | 20.47 | 100 | 1.9528 | 0.0041 | 1.8968 | 1.9114 |
| P-RISER | 100YR-004HR | 66.30 | 65.25 | 0.0091 | 23.25 | 23.24 | 100 | 3.2084 | 0.0041 | 3.1895 | 3.2056 |
| P-RISER | 100YR-008HR | 66.30 | 66.51 | 0.0091 | 25.16 | 25.15 | 100 | 4.5194 | 0.0041 | 4.4844 | 4.5128 |
| P-RISER | 100YR-024HR | 66.30 | 64.07 | 0.0091 | 18.86 | 18.86 | 100 | 12.3204 | 0.0041 | 12.4372 | 12.4499 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft3] | Total Outflow [ft3] | Stored Volume (Flow Based) [ft3] |
|-----------|-------------|--------------------|---------------------|----------------------------------|
| P-RISER | 025YR-001HR | 104984 | 104652 | 332 |
| P-RISER | 025YR-002HR | 268143 | 267783 | 360 |
| P-RISER | 025YR-004HR | 363241 | 362837 | 404 |
| P-RISER | 025YR-008HR | 587725 | 587478 | 247 |
| P-RISER | 025YR-024HR | 1143872 | 1143634 | 239 |
| P-RISER | 100YR-001HR | 167614 | 167219 | 395 |
| P-RISER | 100YR-002HR | 311297 | 310936 | 361 |
| P-RISER | 100YR-004HR | 409037 | 408633 | 404 |
| P-RISER | 100YR-008HR | 645866 | 645618 | 248 |
| P-RISER | 100YR-024HR | 1270090 | 1269851 | 239 |

Node Max Conditions w/ Times [PROPOSED CONDITIONS]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
|-----------|----------|--------------------|----------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft ²] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|-----------|-------------|--------------------|----------------|--------------------------|------------------------|-------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| POND | 025YR-001HR | 67.00 | 63.43 | 0.0010 | 100.41 | 11.53 | 65122 | 1.8380 | 0.8503 | 0.8895 | 1.8380 |
| POND | 025YR-002HR | 67.00 | 64.78 | 0.0010 | 106.66 | 37.68 | 72423 | 2.1699 | 1.0036 | 1.0789 | 2.1691 |
| POND | 025YR-004HR | 67.00 | 65.60 | 0.0010 | 105.22 | 65.59 | 77163 | 3.3877 | 2.0010 | 2.5919 | 3.3863 |
| POND | 025YR-008HR | 67.00 | 65.88 | 0.0010 | 130.72 | 74.52 | 78759 | 5.0323 | 2.9456 | 4.0644 | 5.0275 |
| POND | 025YR-024HR | 67.00 | 65.19 | -0.0010 | 57.38 | 49.41 | 74788 | 12.5056 | 30.8102 | 12.0504 | 12.5123 |
| POND | 100YR-001HR | 67.00 | 64.62 | 0.0008 | 148.69 | 32.92 | 71650 | 1.5480 | 0.9072 | 0.8818 | 1.5480 |
| POND | 100YR-002HR | 67.00 | 65.86 | -0.0010 | 161.63 | 74.37 | 78652 | 1.9303 | 7.3754 | 1.0696 | 1.9288 |
| POND | 100YR-004HR | 67.00 | 66.73 | 0.0010 | 152.55 | 116.97 | 84809 | 3.2021 | 1.8650 | 2.5670 | 3.1990 |
| POND | 100YR-008HR | 67.00 | 66.92 | -0.0010 | 182.76 | 131.62 | 86187 | 4.5160 | 18.0254 | 4.0596 | 4.5144 |
| POND | 100YR-024HR | 67.00 | 65.77 | 0.0010 | 77.76 | 70.06 | 78151 | 12.3614 | 7.2744 | 12.0360 | 12.3650 |

Node Mass Balance Condensed [PROPOSED CONDITIONS]

| Node Name | Sim Name | Total Inflow [ft ³] | Total Outflow [ft ³] | Stored Volume (Flow Based) [ft ³] |
|-----------|-------------|---------------------------------|----------------------------------|---|
| POND | 025YR-001HR | 277669 | 104747 | 172922 |
| POND | 025YR-002HR | 474229 | 342000 | 132230 |
| POND | 025YR-004HR | 697585 | 598603 | 98982 |
| POND | 025YR-008HR | 1027044 | 1023458 | 3586 |
| POND | 025YR-024HR | 1819977 | 1819953 | 24 |
| POND | 100YR-001HR | 416287 | 214511 | 201776 |
| POND | 100YR-002HR | 713986 | 576359 | 137627 |
| POND | 100YR-004HR | 1044879 | 942108 | 102771 |
| POND | 100YR-008HR | 1490629 | 1485065 | 5564 |
| POND | 100YR-024HR | 2477363 | 2477212 | 151 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------|-------------------------------|-------------------------------|
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------|-------------------------------|-------------------------------|

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE RIM | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 04HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 08HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 025YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 100YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE RIM | 100YR-0 04HR | 1.74 | 0.00 | 0.00 | 1.65 | 1.65 | 3.2022 | 0.0000 | 2.9439 | 3.2022 | 3.2022 |
| CONTR OL STRUCTURE RIM | 100YR-0 08HR | 3.45 | 0.00 | 0.00 | 1.98 | 1.98 | 4.5161 | 0.0000 | 5.3187 | 4.5161 | 4.5161 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE RIM | 100YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|----------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE SLOT | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CONTR OL STRUCTURE SLOT | 025YR-0 02HR | 18.99 | 0.00 | -0.01 | 2.84 | 2.84 | 2.1703 | 0.0000 | 2.4940 | 2.1707 | 2.1707 |
| CONTR OL STRUCTURE SLOT | 025YR-0 04HR | 45.74 | 0.00 | 0.02 | 3.80 | 3.80 | 3.3877 | 0.0000 | 3.0819 | 3.3882 | 3.3882 |
| CONTR OL STRUCTURE SLOT | 025YR-0 08HR | 54.48 | 0.00 | -0.02 | 3.94 | 3.94 | 5.0331 | 0.0000 | 5.7027 | 5.0354 | 5.0354 |
| CONTR OL STRUCTURE SLOT | 025YR-0 24HR | 31.52 | 0.00 | 0.02 | 3.36 | 3.36 | 12.5056 | 0.0000 | 12.1075 | 12.5056 | 12.5056 |
| CONTR OL STRUCTURE SLOT | 100YR-0 01HR | 14.70 | 0.00 | -0.01 | 2.61 | 2.61 | 1.5480 | 0.0000 | 1.7555 | 1.5482 | 1.5482 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|----------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| CONTR OL STRUCTURE SLOT | 100YR-0 02HR | 53.91 | 0.00 | -0.02 | 3.94 | 3.94 | 1.9305 | 0.0000 | 2.7014 | 1.9309 | 1.9309 |
| CONTR OL STRUCTURE SLOT | 100YR-0 04HR | 83.58 | 0.00 | 0.02 | 5.14 | 5.14 | 3.1985 | 0.0000 | 2.8485 | 3.1985 | 3.1985 |
| CONTR OL STRUCTURE SLOT | 100YR-0 08HR | 84.19 | 0.00 | -0.02 | 5.18 | 5.18 | 4.4966 | 0.0000 | 6.1498 | 4.4966 | 4.4966 |
| CONTR OL STRUCTURE SLOT | 100YR-0 24HR | 51.21 | 0.00 | 0.02 | 3.90 | 3.90 | 12.3614 | 0.0000 | 12.0642 | 12.3622 | 12.3622 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| EMERGE NCY SPILLW AY | 025YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW AY | 025YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW AY | 025YR-0 04HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW | 025YR-0 08HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| AY | | | | | | | | | | | |
| EMERGE NCY SPILLW AY | 025YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW AY | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW AY | 100YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| EMERGE NCY SPILLW AY | 100YR-0 04HR | 8.41 | 0.00 | 0.01 | 1.55 | 1.55 | 3.2022 | 0.0000 | 2.9439 | 3.2022 | 3.2022 |
| EMERGE NCY SPILLW AY | 100YR-0 08HR | 18.83 | 0.00 | 0.00 | 1.90 | 1.90 | 4.5161 | 0.0000 | 4.2917 | 4.5161 | 4.5161 |
| EMERGE NCY SPILLW AY | 100YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0001 | 025YR-0 01HR | 11.30 | 0.00 | -0.01 | 3.75 | 9.40 | 0.9499 | 0.0000 | 0.3949 | 0.9545 | 0.9500 |
| P-0001 | 025YR-0 02HR | 12.06 | 0.00 | 0.67 | 3.89 | 9.56 | 1.1243 | 0.0000 | 2.5648 | 1.1349 | 1.1361 |
| P-0001 | 025YR-0 04HR | 11.20 | 0.00 | 0.78 | 3.73 | 9.32 | 2.6364 | 0.0000 | 4.4382 | 2.6417 | 2.5149 |
| P-0001 | 025YR-0 08HR | 14.15 | 0.00 | 0.39 | 4.50 | 9.96 | 4.1019 | 0.0000 | 8.3707 | 4.1019 | 4.0693 |
| P-0001 | 025YR-0 24HR | 5.90 | 0.00 | -0.45 | 2.82 | 6.67 | 12.0676 | 0.0000 | 21.2371 | 11.3667 | 10.3698 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0001 | 100YR-001HR | 17.19 | 0.00 | 0.78 | 5.47 | 10.47 | 0.9374 | 0.0000 | 1.7835 | 0.9374 | 0.9374 |
| P-0001 | 100YR-002HR | 18.77 | 0.00 | -0.77 | 5.98 | 10.70 | 1.1082 | 0.0000 | 2.7144 | 1.1082 | 1.1126 |
| P-0001 | 100YR-004HR | 16.34 | 0.00 | -0.65 | 5.20 | 10.27 | 2.6027 | 0.0000 | 4.5321 | 2.6027 | 2.3538 |
| P-0001 | 100YR-008HR | 20.34 | 0.00 | -0.91 | 6.48 | 10.48 | 4.1001 | 0.0000 | 8.5056 | 4.1001 | 3.7743 |
| P-0001 | 100YR-024HR | 8.07 | 0.00 | -0.25 | 2.71 | 6.82 | 12.0730 | 0.0000 | 15.6918 | 10.1990 | 9.2060 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0002 | 025YR-001HR | 10.30 | 0.00 | -0.01 | 3.59 | 6.38 | 0.9684 | 0.0000 | 0.4658 | 0.9705 | 1.4652 |
| P-0002 | 025YR-002HR | 10.88 | 0.00 | 0.04 | 3.68 | 8.98 | 1.1490 | 0.0000 | 2.6057 | 1.1531 | 1.5181 |
| P-0002 | 025YR-004HR | 10.12 | 0.00 | 4.43 | 3.56 | 5.34 | 2.6746 | 0.0000 | 3.9503 | 2.6884 | 1.6226 |
| P-0002 | 025YR-008HR | 12.85 | 0.00 | -5.67 | 4.09 | 6.34 | 4.1511 | 0.0000 | 6.1272 | 4.1511 | 3.2073 |
| P-0002 | 025YR-024HR | 5.35 | 0.00 | 1.25 | 2.89 | 7.82 | 12.0979 | 0.0000 | 12.9317 | 12.1075 | 11.4318 |
| P-0002 | 100YR-001HR | 15.73 | 0.00 | 0.01 | 5.01 | 7.92 | 0.9529 | 0.0000 | 2.3380 | 0.9529 | 1.3826 |
| P-0002 | 100YR-002HR | 17.06 | 0.00 | 3.47 | 5.43 | 5.43 | 1.1221 | 2.6052 | 2.4704 | 1.1221 | 1.1221 |
| P-0002 | 100YR-004HR | 14.91 | 0.00 | -3.23 | 4.74 | 4.74 | 2.6507 | 4.4439 | 4.5054 | 2.6507 | 2.6507 |
| P-0002 | 100YR-008HR | 18.64 | 0.00 | 5.41 | 5.93 | 7.16 | 4.1403 | 0.0000 | 6.7692 | 4.1403 | 3.1367 |
| P-0002 | 100YR-024HR | 7.47 | 0.00 | 2.29 | 3.04 | 7.55 | 12.0718 | 0.0000 | 14.5816 | 11.3834 | 10.2914 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link | Sim | Max | Min | Min/Max | Max Us | Max Ds | Time to | Time to | Time to | Time to | Time to |
|------|-----|-----|-----|---------|--------|--------|---------|---------|---------|---------|---------|
|------|-----|-----|-----|---------|--------|--------|---------|---------|---------|---------|---------|

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0003 | 025YR-001HR | 35.34 | 0.00 | -0.02 | 7.20 | 10.65 | 1.0754 | 0.0000 | 1.4362 | 1.0754 | 1.2932 |
| P-0003 | 025YR-002HR | 40.40 | 0.00 | -0.02 | 8.23 | 10.63 | 1.3033 | 0.0000 | 2.1943 | 1.3033 | 1.8865 |
| P-0003 | 025YR-004HR | 43.10 | 0.00 | 0.02 | 8.78 | 10.61 | 2.8625 | 0.0000 | 2.0179 | 2.8625 | 2.1578 |
| P-0003 | 025YR-008HR | 50.97 | 0.00 | 0.02 | 10.38 | 10.60 | 4.2339 | 0.0000 | 3.4944 | 4.2339 | 3.6100 |
| P-0003 | 025YR-024HR | 24.83 | 0.00 | -0.02 | 5.06 | 10.27 | 12.1226 | 0.0000 | 3.9112 | 12.1226 | 12.1339 |
| P-0003 | 100YR-001HR | 52.11 | 0.00 | -0.02 | 10.62 | 10.65 | 1.0730 | 0.0000 | 1.5134 | 1.0730 | 1.4849 |
| P-0003 | 100YR-002HR | 60.66 | 0.00 | -0.02 | 12.36 | 12.36 | 1.3050 | 0.0000 | 0.3812 | 1.3050 | 1.3050 |
| P-0003 | 100YR-004HR | 62.58 | 0.00 | 0.02 | 12.75 | 12.75 | 2.8229 | 0.0000 | 1.8007 | 2.8229 | 2.8229 |
| P-0003 | 100YR-008HR | 70.82 | 0.00 | -0.02 | 14.43 | 14.43 | 4.2887 | 0.0000 | 1.8399 | 4.2887 | 4.2887 |
| P-0003 | 100YR-024HR | 33.62 | 0.00 | -0.02 | 6.85 | 10.43 | 12.1181 | 0.0000 | 3.3746 | 12.1181 | 11.2613 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0004 | 025YR-001HR | 35.44 | 0.00 | -0.02 | 7.22 | 11.71 | 1.0719 | 0.0000 | 1.4521 | 1.0719 | 1.0790 |
| P-0004 | 025YR-002HR | 40.97 | 0.00 | -0.02 | 8.35 | 12.07 | 1.3062 | 0.0000 | 2.1943 | 1.3062 | 1.3088 |
| P-0004 | 025YR-004HR | 43.94 | 0.00 | 0.02 | 8.95 | 12.21 | 2.8692 | 0.0000 | 2.0212 | 2.8692 | 2.7649 |
| P-0004 | 025YR-008HR | 51.66 | 0.00 | 0.02 | 10.53 | 12.47 | 4.2150 | 0.0000 | 3.5064 | 4.2150 | 4.1087 |
| P-0004 | 025YR-024HR | 25.27 | 0.00 | -0.02 | 5.15 | 9.03 | 12.1065 | 0.0000 | 3.9802 | 12.1065 | 10.1802 |
| P-0004 | 100YR-001HR | 52.27 | 0.00 | -0.02 | 10.65 | 12.48 | 1.0745 | 0.0000 | 1.7050 | 1.0745 | 1.0081 |
| P-0004 | 100YR-002HR | 61.51 | 0.00 | -0.02 | 12.53 | 12.84 | 1.3082 | 0.0000 | 0.4174 | 1.3082 | 1.2953 |
| P-0004 | 100YR-004HR | 63.80 | 0.00 | 0.02 | 13.00 | 13.00 | 2.8213 | 0.0000 | 1.8193 | 2.8213 | 2.8213 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 04HR | | | | | | | | | | |
| P-0004 | 100YR-0 08HR | 71.73 | 0.00 | -0.02 | 14.61 | 14.61 | 4.2685 | 0.0000 | 1.8891 | 4.2685 | 4.2685 |
| P-0004 | 100YR-0 24HR | 34.32 | 0.00 | -0.02 | 6.99 | 9.33 | 12.0926 | 0.0000 | 3.4369 | 12.0926 | 9.0145 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0005 | 025YR-0 01HR | 17.71 | 0.00 | -0.01 | 5.64 | 10.73 | 1.0817 | 0.0000 | 0.3919 | 1.0817 | 0.7744 |
| P-0005 | 025YR-0 02HR | 22.14 | 0.00 | -0.01 | 7.05 | 11.06 | 1.3826 | 0.0000 | 0.4085 | 1.3826 | 2.2266 |
| P-0005 | 025YR-0 04HR | 26.87 | 0.00 | -0.01 | 8.55 | 11.27 | 3.0340 | 0.0000 | 1.1432 | 3.0340 | 3.9216 |
| P-0005 | 025YR-0 08HR | 30.49 | 0.00 | -0.01 | 9.70 | 11.34 | 4.3134 | 0.0000 | 2.0734 | 4.3134 | 5.8229 |
| P-0005 | 025YR-0 24HR | 16.35 | 0.00 | -0.01 | 5.21 | 11.10 | 12.1036 | 0.0000 | 4.1997 | 12.1036 | 13.2422 |
| P-0005 | 100YR-0 01HR | 26.96 | 0.00 | -0.01 | 8.58 | 11.19 | 1.0877 | 0.0000 | 0.3627 | 1.0877 | 0.6720 |
| P-0005 | 100YR-0 02HR | 34.30 | 0.00 | -0.01 | 10.92 | 11.35 | 1.3943 | 0.0000 | 0.3536 | 1.3943 | 2.4803 |
| P-0005 | 100YR-0 04HR | 39.83 | 0.00 | -0.01 | 12.68 | 12.68 | 3.0487 | 0.0000 | 1.0231 | 3.0487 | 3.0487 |
| P-0005 | 100YR-0 08HR | 44.30 | 0.00 | -0.01 | 14.10 | 14.10 | 4.5238 | 0.0000 | 1.8297 | 4.5238 | 4.5238 |
| P-0005 | 100YR-0 24HR | 22.40 | 0.00 | -0.01 | 7.13 | 11.14 | 12.1044 | 0.0000 | 3.5136 | 12.1044 | 16.2041 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0006 | 025YR-0 | 17.23 | 0.00 | -0.01 | 5.49 | 10.83 | 1.1091 | 0.0000 | 0.3984 | 1.1091 | 0.9798 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 01HR | | | | | | | | | | |
| P-0006 | 025YR-0 02HR | 20.88 | 0.00 | -0.01 | 6.65 | 10.84 | 1.3895 | 0.0000 | 0.4175 | 1.3895 | 1.0655 |
| P-0006 | 025YR-0 04HR | 25.17 | 0.00 | -0.01 | 8.01 | 10.83 | 3.0380 | 0.0000 | 1.1547 | 3.0380 | 2.2454 |
| P-0006 | 025YR-0 08HR | 29.09 | 0.00 | -0.01 | 9.26 | 10.83 | 4.3201 | 0.0000 | 2.1172 | 4.3201 | 3.6692 |
| P-0006 | 025YR-0 24HR | 15.34 | 0.00 | -0.01 | 4.88 | 10.70 | 12.1954 | 0.0000 | 4.7137 | 12.1954 | 12.2080 |
| P-0006 | 100YR-0 01HR | 26.34 | 0.00 | -0.01 | 8.38 | 10.85 | 1.1050 | 0.0000 | 0.3692 | 1.1050 | 0.7771 |
| P-0006 | 100YR-0 02HR | 32.34 | 0.00 | -0.01 | 10.29 | 10.85 | 1.3622 | 0.0000 | 0.3617 | 1.3622 | 0.8734 |
| P-0006 | 100YR-0 04HR | 37.38 | 0.00 | -0.01 | 11.90 | 11.90 | 2.9944 | 0.0000 | 1.0363 | 2.9944 | 2.9944 |
| P-0006 | 100YR-0 08HR | 42.03 | 0.00 | -0.01 | 13.38 | 13.38 | 4.4022 | 0.0000 | 1.8607 | 4.4022 | 4.4022 |
| P-0006 | 100YR-0 24HR | 21.05 | 0.00 | -0.01 | 6.70 | 10.82 | 12.1774 | 0.0000 | 3.9374 | 12.1774 | 14.6084 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0007 | 025YR-0 01HR | 16.79 | 0.00 | -0.01 | 5.34 | 9.92 | 1.1347 | 0.0000 | 0.4659 | 1.1347 | 1.3234 |
| P-0007 | 025YR-0 02HR | 19.68 | 0.00 | 0.01 | 6.26 | 9.89 | 1.4056 | 0.0000 | 5.6055 | 1.4056 | 2.1524 |
| P-0007 | 025YR-0 04HR | 23.58 | 0.00 | -0.01 | 7.51 | 9.89 | 3.0745 | 0.0000 | 1.3550 | 3.0745 | 3.9262 |
| P-0007 | 025YR-0 08HR | 27.73 | 0.00 | 0.01 | 8.83 | 9.86 | 4.3339 | 0.0000 | 11.2119 | 4.3339 | 5.8463 |
| P-0007 | 025YR-0 24HR | 14.51 | 0.00 | 0.01 | 4.62 | 9.81 | 12.2678 | 0.0000 | 26.8722 | 12.2678 | 12.5558 |
| P-0007 | 100YR-0 01HR | 25.70 | 0.00 | -0.01 | 8.18 | 9.93 | 1.1251 | 0.0000 | 0.4296 | 1.1251 | 1.5978 |
| P-0007 | 100YR-0 02HR | 30.64 | 0.00 | 0.01 | 9.75 | 9.93 | 1.3703 | 0.0000 | 5.7108 | 1.3703 | 2.5145 |
| P-0007 | 100YR-0 04HR | 35.18 | 0.00 | 0.01 | 11.20 | 11.20 | 2.9834 | 0.0000 | 7.4678 | 2.9834 | 2.9834 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0007 | 100YR-008HR | 40.44 | 0.00 | 0.01 | 12.87 | 12.87 | 4.3683 | 0.0000 | 11.3445 | 4.3683 | 4.3683 |
| P-0007 | 100YR-024HR | 19.93 | 0.00 | 0.01 | 6.34 | 9.81 | 12.2602 | 0.0000 | 27.0093 | 12.2602 | 15.6506 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0008 | 025YR-001HR | 7.56 | 0.00 | -0.02 | 3.20 | 7.96 | 1.0659 | 0.0000 | 0.4785 | 1.0699 | 1.0699 |
| P-0008 | 025YR-002HR | 8.55 | 0.00 | 0.02 | 3.33 | 8.23 | 1.2959 | 0.0000 | 4.6186 | 1.3037 | 1.2909 |
| P-0008 | 025YR-004HR | 9.86 | 0.00 | -0.02 | 3.52 | 8.56 | 2.8780 | 0.0000 | 1.3953 | 2.9059 | 2.9157 |
| P-0008 | 025YR-008HR | 11.91 | 0.00 | 0.02 | 3.86 | 8.80 | 4.2667 | 0.0000 | 10.2646 | 4.2701 | 4.0671 |
| P-0008 | 025YR-024HR | 5.95 | 0.00 | 0.01 | 2.97 | 7.44 | 12.2117 | 0.0000 | 25.9437 | 12.2267 | 12.2279 |
| P-0008 | 100YR-001HR | 11.61 | 0.00 | -0.02 | 3.80 | 8.94 | 1.0509 | 0.0000 | 0.4403 | 1.0534 | 1.0542 |
| P-0008 | 100YR-002HR | 13.43 | 0.00 | -0.02 | 4.27 | 9.05 | 1.2658 | 0.0000 | 0.4822 | 1.2658 | 1.0963 |
| P-0008 | 100YR-004HR | 14.76 | 0.00 | -0.02 | 4.70 | 8.86 | 2.8539 | 0.0000 | 1.2532 | 2.8539 | 2.2765 |
| P-0008 | 100YR-008HR | 17.09 | 0.00 | 0.02 | 5.44 | 8.87 | 4.2894 | 0.0000 | 10.3970 | 4.2894 | 3.7097 |
| P-0008 | 100YR-024HR | 8.18 | 0.00 | 0.02 | 3.28 | 8.13 | 12.1993 | 0.0000 | 26.0800 | 12.2119 | 12.1998 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0009 | 025YR-001HR | 10.24 | 0.00 | 0.01 | 5.80 | 7.49 | 0.8852 | 0.0000 | 2.0212 | 0.8852 | 1.1361 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0009 | 025YR-0 02HR | 10.21 | 0.00 | 0.01 | 5.78 | 7.49 | 1.0471 | 0.0000 | 2.9241 | 1.0471 | 1.4555 |
| P-0009 | 025YR-0 04HR | 7.99 | 0.00 | 0.01 | 4.52 | 7.49 | 2.6024 | 0.0000 | 4.7930 | 2.6024 | 3.1865 |
| P-0009 | 025YR-0 08HR | 10.13 | 0.00 | -0.01 | 5.74 | 7.49 | 4.0955 | 0.0000 | 2.1564 | 4.0955 | 4.5104 |
| P-0009 | 025YR-0 24HR | 3.95 | 0.00 | -0.01 | 2.84 | 6.78 | 12.0522 | 0.0000 | 4.2318 | 12.0658 | 12.0736 |
| P-0009 | 100YR-0 01HR | 14.68 | 0.00 | 0.01 | 8.31 | 8.90 | 0.9020 | 0.0000 | 2.0597 | 0.9020 | 0.7486 |
| P-0009 | 100YR-0 02HR | 15.04 | 0.00 | 0.01 | 8.51 | 8.90 | 1.0638 | 0.0000 | 2.9756 | 1.0638 | 0.8826 |
| P-0009 | 100YR-0 04HR | 11.34 | 0.00 | -0.01 | 6.42 | 8.78 | 2.5732 | 0.0000 | 1.0871 | 2.5732 | 2.5849 |
| P-0009 | 100YR-0 08HR | 14.16 | 0.00 | -0.01 | 8.02 | 8.90 | 4.1131 | 0.0000 | 1.9125 | 4.1131 | 3.7403 |
| P-0009 | 100YR-0 24HR | 5.26 | 0.00 | -0.01 | 3.17 | 7.33 | 12.0505 | 0.0000 | 3.6065 | 12.0552 | 12.0620 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0010 | 025YR-0 01HR | 17.11 | 0.00 | 0.01 | 5.45 | 7.31 | 0.8894 | 0.0000 | 2.0934 | 0.8894 | 0.6038 |
| P-0010 | 025YR-0 02HR | 17.06 | 0.00 | 0.02 | 5.43 | 7.10 | 1.0471 | 0.0000 | 3.0028 | 1.0471 | 0.6975 |
| P-0010 | 025YR-0 04HR | 13.41 | 0.00 | 0.02 | 4.27 | 6.85 | 2.5852 | 0.0000 | 4.8774 | 2.5852 | 1.6730 |
| P-0010 | 025YR-0 08HR | 17.00 | 0.00 | 0.02 | 5.41 | 6.97 | 4.0976 | 0.0000 | 8.8676 | 4.0976 | 3.2199 |
| P-0010 | 025YR-0 24HR | 6.62 | 0.00 | -0.02 | 3.07 | 6.81 | 12.0571 | 0.0000 | 4.1291 | 12.0621 | 14.7199 |
| P-0010 | 100YR-0 01HR | 24.42 | 0.00 | 0.02 | 7.77 | 7.77 | 0.9029 | 0.0000 | 2.1314 | 0.9029 | 0.9029 |
| P-0010 | 100YR-0 02HR | 25.02 | 0.00 | 0.02 | 7.97 | 7.97 | 1.0641 | 0.0000 | 3.0528 | 1.0641 | 1.0641 |
| P-0010 | 100YR-0 04HR | 19.02 | 0.00 | 0.02 | 6.05 | 6.85 | 2.5822 | 0.0000 | 4.9290 | 2.5822 | 1.4727 |
| P-0010 | 100YR-0 | 23.73 | 0.00 | -0.02 | 7.55 | 7.55 | 4.1072 | 0.0000 | 1.8994 | 4.1072 | 4.1072 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 08HR | | | | | | | | | | |
| P-0010 | 100YR-0 24HR | 8.81 | 0.00 | -0.02 | 3.37 | 6.79 | 12.0590 | 0.0000 | 3.5379 | 12.0631 | 16.3600 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0011 | 025YR-0 01HR | 27.53 | 0.00 | -0.01 | 8.76 | 15.34 | 0.8845 | 0.0000 | 1.1371 | 0.8845 | 0.8877 |
| P-0011 | 025YR-0 02HR | 27.38 | 0.00 | 0.01 | 8.71 | 15.32 | 1.0442 | 0.0000 | 0.8059 | 1.0442 | 1.0442 |
| P-0011 | 025YR-0 04HR | 21.28 | 0.00 | -0.01 | 6.77 | 14.40 | 2.5918 | 0.0000 | 3.2786 | 2.5918 | 2.6002 |
| P-0011 | 025YR-0 08HR | 26.97 | 0.00 | -0.01 | 8.59 | 15.26 | 4.0987 | 0.0000 | 5.2828 | 4.0987 | 4.1010 |
| P-0011 | 025YR-0 24HR | 10.47 | 0.00 | -0.01 | 3.63 | 11.89 | 12.0676 | 0.0000 | 12.2758 | 12.0752 | 12.0761 |
| P-0011 | 100YR-0 01HR | 39.17 | 0.00 | 0.01 | 12.47 | 16.13 | 0.8871 | 0.0000 | 0.6051 | 0.8871 | 1.0009 |
| P-0011 | 100YR-0 02HR | 40.03 | 0.00 | 0.01 | 12.74 | 15.98 | 1.0502 | 0.0000 | 0.7081 | 1.0502 | 1.2259 |
| P-0011 | 100YR-0 04HR | 30.10 | 0.00 | 0.01 | 9.58 | 15.66 | 2.5785 | 0.0000 | 1.7522 | 2.5785 | 2.5883 |
| P-0011 | 100YR-0 08HR | 37.58 | 0.00 | 0.01 | 11.96 | 15.86 | 4.0990 | 0.0000 | 3.2911 | 4.0990 | 4.2790 |
| P-0011 | 100YR-0 24HR | 13.92 | 0.00 | -0.01 | 4.43 | 12.86 | 12.0496 | 0.0000 | 12.2804 | 12.0496 | 12.0653 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0012 | 025YR-0 01HR | 36.06 | 0.00 | -0.02 | 7.35 | 11.36 | 0.8538 | 0.0000 | 1.1640 | 0.8538 | 0.6779 |
| P-0012 | 025YR-0 | 36.27 | 0.00 | 0.02 | 7.39 | 11.34 | 1.0214 | 0.0000 | 3.1565 | 1.0214 | 0.8066 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 02HR | | | | | | | | | | |
| P-0012 | 025YR-0 04HR | 29.37 | 0.00 | -0.02 | 5.98 | 11.26 | 2.5537 | 0.0000 | 3.2456 | 2.5537 | 1.9815 |
| P-0012 | 025YR-0 08HR | 37.47 | 0.00 | -0.02 | 7.63 | 11.27 | 4.0510 | 0.0000 | 5.2740 | 4.0510 | 3.4528 |
| P-0012 | 025YR-0 24HR | 14.71 | 0.00 | -0.02 | 3.71 | 10.05 | 12.0354 | 0.0000 | 12.2977 | 12.0477 | 12.0377 |
| P-0012 | 100YR-0 01HR | 52.02 | 0.00 | 0.02 | 10.60 | 11.42 | 0.8669 | 0.0000 | 2.2529 | 0.8669 | 0.6074 |
| P-0012 | 100YR-0 02HR | 53.78 | 0.00 | 0.02 | 10.96 | 11.37 | 1.0290 | 0.0000 | 3.2026 | 1.0290 | 0.7081 |
| P-0012 | 100YR-0 04HR | 42.16 | 0.00 | 0.02 | 8.59 | 11.29 | 2.5402 | 0.0000 | 5.0845 | 2.5402 | 1.7532 |
| P-0012 | 100YR-0 08HR | 52.37 | 0.00 | -0.02 | 10.67 | 11.30 | 4.0615 | 0.0000 | 1.9204 | 4.0615 | 3.2838 |
| P-0012 | 100YR-0 24HR | 19.76 | 0.00 | -0.02 | 4.19 | 10.90 | 12.0286 | 0.0000 | 12.2326 | 12.0375 | 12.0398 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0013 | 025YR-0 01HR | 11.63 | 0.00 | 0.02 | 3.81 | 7.48 | 0.7542 | 0.0000 | 1.5328 | 0.7567 | 0.6752 |
| P-0013 | 025YR-0 02HR | 11.61 | 0.00 | 0.02 | 3.80 | 7.30 | 0.9177 | 0.0000 | 2.5336 | 0.9181 | 0.8076 |
| P-0013 | 025YR-0 04HR | 8.25 | 0.00 | 0.02 | 3.29 | 6.84 | 2.5493 | 0.0000 | 4.4622 | 2.5554 | 2.0242 |
| P-0013 | 025YR-0 08HR | 10.84 | 0.00 | -0.02 | 3.67 | 6.89 | 4.0343 | 0.0000 | 2.2356 | 4.0379 | 3.4805 |
| P-0013 | 025YR-0 24HR | 4.14 | 0.00 | -0.02 | 2.67 | 5.81 | 12.0166 | 0.0000 | 4.6825 | 12.0273 | 12.0325 |
| P-0013 | 100YR-0 01HR | 17.07 | 0.00 | -0.02 | 5.43 | 7.73 | 0.7419 | 0.0000 | 0.9481 | 0.7419 | 0.6005 |
| P-0013 | 100YR-0 02HR | 17.54 | 0.00 | -0.02 | 5.58 | 7.41 | 0.9059 | 0.0000 | 1.2299 | 0.9059 | 0.7065 |
| P-0013 | 100YR-0 04HR | 11.94 | 0.00 | 0.02 | 3.87 | 7.01 | 2.1122 | 0.0000 | 4.4966 | 2.1179 | 1.7663 |
| P-0013 | 100YR-0 08HR | 15.20 | 0.00 | -0.02 | 4.84 | 7.16 | 4.0365 | 0.0000 | 1.9963 | 4.0365 | 3.2883 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0013 | 100YR-0 24HR | 5.59 | 0.00 | -0.02 | 2.91 | 6.01 | 12.0155 | 0.0000 | 3.9389 | 12.0227 | 11.1872 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0014 | 025YR-0 01HR | 47.57 | 0.00 | -0.26 | 6.73 | 8.38 | 0.8263 | 0.0000 | 1.0022 | 0.8263 | 0.8263 |
| P-0014 | 025YR-0 02HR | 47.64 | 0.00 | -0.23 | 6.74 | 8.39 | 0.9828 | 0.0000 | 2.5065 | 0.9828 | 0.9828 |
| P-0014 | 025YR-0 04HR | 38.56 | 0.00 | 0.99 | 5.45 | 7.62 | 2.5520 | 0.0000 | 4.3569 | 2.5520 | 2.5035 |
| P-0014 | 025YR-0 08HR | 49.71 | 0.00 | 0.14 | 7.03 | 8.54 | 4.0413 | 0.0000 | 3.8839 | 4.0413 | 4.0299 |
| P-0014 | 025YR-0 24HR | 19.33 | 0.00 | 0.31 | 2.82 | 4.75 | 12.0325 | 0.0000 | 24.5153 | 10.4149 | 9.9482 |
| P-0014 | 100YR-0 01HR | 68.58 | 0.00 | -0.20 | 9.70 | 10.40 | 0.8217 | 0.0000 | 1.7570 | 0.8217 | 0.8487 |
| P-0014 | 100YR-0 02HR | 70.50 | 0.00 | -1.43 | 9.97 | 10.62 | 0.9819 | 0.0000 | 2.6863 | 0.9819 | 0.9819 |
| P-0014 | 100YR-0 04HR | 55.09 | 0.00 | -1.45 | 7.79 | 9.03 | 2.5443 | 0.0000 | 4.5181 | 2.5443 | 2.3046 |
| P-0014 | 100YR-0 08HR | 69.07 | 0.00 | 0.15 | 9.77 | 9.83 | 4.0519 | 0.0000 | 3.5294 | 4.0519 | 3.7809 |
| P-0014 | 100YR-0 24HR | 26.05 | 0.00 | -0.25 | 3.69 | 5.07 | 12.0235 | 0.0000 | 24.6831 | 12.0235 | 8.9072 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0015 | 025YR-0 01HR | 7.88 | 0.00 | 0.02 | 3.24 | 5.24 | 0.7925 | 0.0000 | 1.6627 | 0.7998 | 0.5494 |
| P-0015 | 025YR-0 02HR | 8.08 | 0.00 | 0.02 | 3.27 | 4.52 | 0.9389 | 0.0000 | 2.6248 | 0.9437 | 0.6194 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0015 | 025YR-004HR | 6.58 | 0.00 | 0.02 | 3.06 | 3.89 | 2.5650 | 0.0000 | 4.5350 | 2.5702 | 4.1395 |
| P-0015 | 025YR-008HR | 8.71 | 0.00 | 0.02 | 3.28 | 4.20 | 4.0543 | 0.0000 | 8.5373 | 3.9013 | 7.4511 |
| P-0015 | 025YR-024HR | 3.44 | 0.00 | 0.01 | 2.55 | 4.30 | 12.0273 | 0.0000 | 24.4557 | 12.0409 | 21.4105 |
| P-0015 | 100YR-001HR | 11.66 | 0.00 | 0.02 | 3.71 | 5.44 | 0.8042 | 0.0000 | 1.7078 | 0.8042 | 0.5078 |
| P-0015 | 100YR-002HR | 12.32 | 0.00 | 0.02 | 3.92 | 4.70 | 0.9187 | 0.0000 | 2.6711 | 0.9187 | 0.5494 |
| P-0015 | 100YR-004HR | 9.81 | 0.00 | 0.02 | 3.29 | 3.67 | 2.5682 | 0.0000 | 4.5808 | 1.9800 | 1.3109 |
| P-0015 | 100YR-008HR | 12.51 | 0.00 | 0.02 | 3.98 | 3.98 | 4.0845 | 0.0000 | 8.5802 | 4.0845 | 4.0845 |
| P-0015 | 100YR-024HR | 4.75 | 0.00 | 0.01 | 2.79 | 4.28 | 12.0227 | 0.0000 | 24.4912 | 12.0383 | 22.2050 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0016 | 025YR-001HR | 3.26 | 0.00 | 0.01 | 2.66 | 4.67 | 0.8390 | 0.0000 | 1.6346 | 0.8460 | 1.0693 |
| P-0016 | 025YR-002HR | 3.35 | 0.00 | 0.01 | 2.69 | 4.41 | 0.9938 | 0.0000 | 2.5858 | 0.9987 | 1.6140 |
| P-0016 | 025YR-004HR | 2.86 | 0.00 | 0.01 | 2.56 | 4.53 | 2.5898 | 0.0000 | 4.4899 | 2.6036 | 3.2666 |
| P-0016 | 025YR-008HR | 3.77 | 0.00 | 0.01 | 2.79 | 4.47 | 4.0689 | 0.0000 | 8.4918 | 4.0764 | 5.1880 |
| P-0016 | 025YR-024HR | 1.51 | 0.00 | 0.01 | 2.15 | 4.40 | 12.0409 | 0.0000 | 24.4046 | 12.0531 | 12.1893 |
| P-0016 | 100YR-001HR | 5.10 | 0.00 | 0.01 | 2.88 | 4.76 | 0.8687 | 0.0000 | 1.6814 | 0.8687 | 1.1271 |
| P-0016 | 100YR-002HR | 5.33 | 0.00 | -0.02 | 3.02 | 4.43 | 1.0302 | 0.0000 | 0.7939 | 1.0302 | 1.9139 |
| P-0016 | 100YR-004HR | 4.32 | 0.00 | 0.01 | 2.83 | 4.45 | 2.6024 | 0.0000 | 4.5385 | 2.7538 | 3.4530 |
| P-0016 | 100YR-008HR | 5.62 | 0.00 | 0.01 | 3.18 | 4.52 | 4.1196 | 0.0000 | 8.5373 | 4.1196 | 5.3054 |
| P-0016 | 100YR-024HR | 2.10 | 0.00 | -0.01 | 2.35 | 4.37 | 12.0367 | 0.0000 | 5.0539 | 12.0398 | 15.1345 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|----------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 24HR | | | | | | | | | | |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0017 | 025YR-0 01HR | 3.77 | 0.00 | 0.01 | 2.79 | 5.00 | 0.7836 | 0.0000 | 1.5558 | 0.7875 | 0.6134 |
| P-0017 | 025YR-0 02HR | 3.69 | 0.00 | 0.01 | 2.77 | 4.69 | 0.9390 | 0.0000 | 2.5104 | 0.9471 | 0.7104 |
| P-0017 | 025YR-0 04HR | 2.56 | 0.00 | 0.01 | 2.48 | 4.17 | 2.5531 | 0.0000 | 4.4179 | 2.5646 | 1.6855 |
| P-0017 | 025YR-0 08HR | 3.27 | 0.00 | -0.01 | 2.67 | 4.24 | 3.9890 | 0.0000 | 2.2059 | 3.9890 | 3.2237 |
| P-0017 | 025YR-0 24HR | 1.25 | 0.00 | -0.01 | 2.04 | 3.75 | 12.0201 | 0.0000 | 4.9199 | 12.0425 | 10.3616 |
| P-0017 | 100YR-0 01HR | 4.90 | 0.00 | 0.01 | 3.07 | 5.17 | 0.6869 | 0.0000 | 1.5900 | 0.6869 | 0.5663 |
| P-0017 | 100YR-0 02HR | 4.94 | 0.00 | 0.01 | 2.97 | 4.80 | 0.9638 | 0.0000 | 2.5489 | 0.8125 | 0.6315 |
| P-0017 | 100YR-0 04HR | 3.60 | 0.00 | 0.01 | 2.73 | 4.18 | 2.2106 | 0.0000 | 4.4569 | 2.0239 | 1.4875 |
| P-0017 | 100YR-0 08HR | 4.53 | 0.00 | -0.01 | 2.76 | 3.79 | 4.0577 | 0.0000 | 1.9614 | 3.5056 | 2.8576 |
| P-0017 | 100YR-0 24HR | 1.67 | 0.00 | -0.01 | 2.20 | 3.67 | 12.0164 | 0.0000 | 4.0149 | 12.0295 | 8.7229 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0018 | 025YR-0 01HR | 6.85 | 0.00 | -0.01 | 3.87 | 9.05 | 0.9829 | 0.0000 | 0.4946 | 0.9829 | 0.9866 |
| P-0018 | 025YR-0 02HR | 7.40 | 0.00 | -0.01 | 4.19 | 9.24 | 1.1669 | 0.0000 | 0.5748 | 1.1669 | 1.1702 |
| P-0018 | 025YR-0 | 7.28 | 0.00 | -0.01 | 4.12 | 9.16 | 2.6977 | 0.0000 | 1.4413 | 2.6977 | 2.7827 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| | 04HR | | | | | | | | | | |
| P-0018 | 025YR-0 08HR | 9.32 | 0.00 | 0.01 | 5.27 | 9.78 | 4.1661 | 0.0000 | 8.9515 | 4.1661 | 4.1418 |
| P-0018 | 025YR-0 24HR | 3.96 | 0.00 | 0.01 | 2.75 | 7.07 | 12.1169 | 0.0000 | 24.8177 | 11.5643 | 11.0698 |
| P-0018 | 100YR-0 01HR | 10.81 | 0.00 | -0.01 | 6.12 | 10.13 | 0.9692 | 0.0000 | 0.4546 | 0.9692 | 0.9718 |
| P-0018 | 100YR-0 02HR | 11.97 | 0.00 | -0.01 | 6.77 | 10.36 | 1.1411 | 0.0000 | 0.5036 | 1.1411 | 1.1411 |
| P-0018 | 100YR-0 04HR | 10.93 | 0.00 | -0.01 | 6.19 | 10.05 | 2.6710 | 0.0000 | 1.2901 | 2.6710 | 2.4158 |
| P-0018 | 100YR-0 08HR | 13.77 | 0.00 | -0.02 | 7.79 | 10.28 | 4.1529 | 0.0000 | 8.4995 | 4.1529 | 3.8289 |
| P-0018 | 100YR-0 24HR | 5.51 | 0.00 | 0.01 | 3.12 | 6.92 | 12.1014 | 0.0000 | 24.8761 | 12.1014 | 9.8728 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0020 | 025YR-0 01HR | 0.00 | -0.01 | 0.00 | -0.02 | -0.07 | 0.0000 | 1.9420 | 1.9686 | 2.0077 | 2.4074 |
| P-0020 | 025YR-0 02HR | 14.59 | 0.00 | 0.01 | 8.25 | 8.48 | 2.1721 | 3.7049 | 1.6650 | 2.1721 | 2.1721 |
| P-0020 | 025YR-0 04HR | 18.07 | -0.01 | -0.01 | 10.23 | 10.51 | 3.3885 | 1.9419 | 5.4936 | 3.3885 | 3.3885 |
| P-0020 | 025YR-0 08HR | 18.79 | -0.01 | -0.42 | 10.63 | 10.93 | 5.0347 | 1.9437 | 8.8151 | 5.0347 | 5.0347 |
| P-0020 | 025YR-0 24HR | 16.58 | -0.01 | 0.09 | 9.38 | 9.64 | 12.5069 | 1.9481 | 10.7435 | 12.5069 | 12.5069 |
| P-0020 | 100YR-0 01HR | 13.42 | 0.00 | -0.01 | 7.60 | 7.80 | 1.5515 | 2.9776 | 1.1293 | 1.5515 | 1.5515 |
| P-0020 | 100YR-0 02HR | 18.75 | 0.00 | -0.01 | 10.61 | 10.90 | 1.9313 | 4.1015 | 1.1829 | 1.9313 | 1.9313 |
| P-0020 | 100YR-0 04HR | 21.59 | -0.01 | -0.02 | 12.22 | 12.55 | 3.2046 | 1.9421 | 5.8268 | 3.2046 | 3.2046 |
| P-0020 | 100YR-0 08HR | 21.95 | -0.01 | -0.37 | 12.42 | 12.76 | 4.5167 | 1.9420 | 9.1131 | 4.5167 | 4.5167 |
| P-0020 | 100YR-0 24HR | 18.53 | -0.01 | 0.05 | 10.49 | 10.78 | 12.3618 | 1.9481 | 9.5436 | 12.3618 | 12.3766 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-0021 | 025YR-001HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-0021 | 025YR-002HR | 4.40 | 0.00 | 0.01 | 0.84 | 3.85 | 2.1721 | 0.0000 | 1.9657 | 2.1721 | 2.1740 |
| P-0021 | 025YR-004HR | 27.67 | 0.00 | 0.03 | 3.91 | 6.69 | 3.3885 | 0.0000 | 3.0852 | 3.3885 | 3.3895 |
| P-0021 | 025YR-008HR | 35.69 | 0.00 | 0.02 | 5.05 | 7.37 | 5.0347 | 0.0000 | 4.4114 | 5.0347 | 5.0354 |
| P-0021 | 025YR-024HR | 14.93 | 0.00 | 0.02 | 2.14 | 5.46 | 12.5069 | 0.0000 | 12.1169 | 12.5069 | 12.5087 |
| P-0021 | 100YR-001HR | 1.28 | 0.00 | 0.00 | 0.32 | 2.77 | 1.5515 | 0.0000 | 1.7570 | 1.5523 | 1.5608 |
| P-0021 | 100YR-002HR | 35.16 | 0.00 | -0.02 | 4.97 | 7.33 | 1.9313 | 0.0000 | 2.7017 | 1.9313 | 1.9322 |
| P-0021 | 100YR-004HR | 63.73 | 0.00 | 0.03 | 9.02 | 9.41 | 3.2046 | 0.0000 | 2.8500 | 3.2046 | 3.2055 |
| P-0021 | 100YR-008HR | 65.68 | 0.00 | -0.02 | 9.29 | 9.58 | 4.5167 | 0.0000 | 6.0609 | 4.5167 | 4.5201 |
| P-0021 | 100YR-024HR | 32.68 | 0.00 | 0.02 | 4.62 | 7.12 | 12.3618 | 0.0000 | 11.8157 | 12.3618 | 12.3641 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-RISER | 025YR-001HR | 11.53 | -9.12 | 0.28 | 6.52 | 6.52 | 1.8453 | 0.0041 | 0.3925 | 1.8453 | 1.8453 |
| P-RISER | 025YR-002HR | 18.69 | -9.12 | 0.28 | 10.57 | 10.57 | 2.1711 | 0.0041 | 0.3750 | 2.1711 | 2.1711 |
| P-RISER | 025YR-004HR | 19.85 | -9.12 | 0.28 | 11.23 | 11.23 | 3.3686 | 0.0041 | 1.1515 | 3.3686 | 3.3686 |
| P-RISER | 025YR-008HR | 20.05 | -9.12 | 0.28 | 11.34 | 11.34 | 4.9021 | 0.0041 | 2.2541 | 4.9021 | 4.9021 |
| P-RISER | 025YR-024HR | 17.91 | -9.12 | 0.28 | 10.14 | 10.14 | 12.7538 | 0.0041 | 4.7798 | 12.7538 | 12.7538 |
| P-RISER | 100YR-001HR | 18.22 | -9.12 | 0.28 | 10.31 | 10.31 | 1.5606 | 0.0041 | 0.3472 | 1.5606 | 1.5606 |
| P-RISER | 100YR-002HR | 20.47 | -9.12 | 0.28 | 11.58 | 11.58 | 1.9114 | 0.0041 | 0.3399 | 1.9114 | 1.9114 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-RISER | 100YR-0 04HR | 23.24 | -9.12 | 0.28 | 13.15 | 13.15 | 3.2056 | 0.0041 | 1.1071 | 3.2056 | 3.2056 |
| P-RISER | 100YR-0 08HR | 25.15 | -9.12 | 0.28 | 14.23 | 14.23 | 4.5128 | 0.0041 | 1.9258 | 4.5128 | 4.5128 |
| P-RISER | 100YR-0 24HR | 18.86 | -9.12 | 0.28 | 10.67 | 10.67 | 12.4499 | 0.0041 | 3.9830 | 12.4499 | 12.4499 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-------------------------------------|-----------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-RISER INITIAL DISCHARGE | 025YR-0 01HR | 3.47 | 0.00 | 0.00 | 2.89 | 2.89 | 1.8380 | 0.0000 | 3.1609 | 1.8385 | 1.8385 |
| P-RISER INITIAL DISCHARGE | 025YR-0 02HR | 8.15 | 0.00 | 0.00 | 6.64 | 6.64 | 2.1703 | 0.0000 | 1.4185 | 2.1703 | 2.1703 |
| P-RISER INITIAL DISCHARGE | 025YR-0 04HR | 8.50 | 0.00 | 0.01 | 6.92 | 6.92 | 3.3201 | 0.0000 | 2.5199 | 3.3201 | 3.3201 |
| P-RISER INITIAL DISCHARGE | 025YR-0 08HR | 8.48 | 0.00 | 0.01 | 6.91 | 6.91 | 4.7884 | 0.0000 | 3.9183 | 4.7884 | 4.7884 |
| P-RISER INITIAL DISCHARGE | 025YR-0 24HR | 7.58 | 0.00 | 0.00 | 6.18 | 6.18 | 17.8955 | 0.0000 | 10.4946 | 17.8955 | 17.8955 |
| P-RISER INITIAL DISCHARGE | 100YR-0 01HR | 7.79 | 0.00 | 0.00 | 6.35 | 6.35 | 1.5480 | 0.0000 | 2.9504 | 1.5480 | 1.5480 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| RGE | | | | | | | | | | | |
| P-RISER INITIAL DISCHARGE | 100YR-002HR | 8.78 | 0.00 | 0.00 | 7.15 | 7.15 | 1.8600 | 0.0000 | 4.0842 | 1.8600 | 1.8600 |
| P-RISER INITIAL DISCHARGE | 100YR-004HR | 8.99 | 0.00 | 0.01 | 7.33 | 7.33 | 2.9224 | 0.0000 | 2.2203 | 2.9224 | 2.9224 |
| P-RISER INITIAL DISCHARGE | 100YR-008HR | 8.89 | 0.00 | 0.00 | 7.24 | 7.24 | 4.1843 | 0.0000 | 3.6497 | 4.1843 | 4.1843 |
| P-RISER INITIAL DISCHARGE | 100YR-024HR | 7.89 | 0.00 | 0.00 | 6.43 | 6.43 | 19.4387 | 0.0000 | 9.2998 | 19.4387 | 19.4387 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|------------------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-RISER RIM WEIR | 025YR-001HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM WEIR | 025YR-002HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM WEIR | 025YR-004HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM WEIR | 025YR-008HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM | 025YR-024HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| WEIR | | | | | | | | | | | |
| P-RISER RIM WEIR | 100YR-0 01HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM WEIR | 100YR-0 02HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| P-RISER RIM WEIR | 100YR-0 04HR | 4.35 | 0.00 | 0.00 | 1.33 | 1.33 | 3.2022 | 0.0000 | 3.0168 | 3.2022 | 3.2022 |
| P-RISER RIM WEIR | 100YR-0 08HR | 11.00 | 0.00 | 0.00 | 1.82 | 1.82 | 4.5145 | 0.0000 | 4.2917 | 4.4995 | 4.4995 |
| P-RISER RIM WEIR | 100YR-0 24HR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|--------------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| P-RISER SECOND DISCHARGE | 025YR-0 01HR | 2.29 | 0.00 | 0.00 | 4.20 | 4.20 | 1.8380 | 0.0000 | 2.5343 | 1.8380 | 1.8380 |
| P-RISER SECOND DISCHARGE | 025YR-0 02HR | 3.70 | 0.00 | 0.00 | 6.79 | 6.79 | 1.9144 | 0.0000 | 1.3229 | 1.9144 | 1.9144 |
| P-RISER SECOND DISCHARGE | 025YR-0 04HR | 3.78 | 0.00 | 0.00 | 6.92 | 6.92 | 3.3201 | 0.0000 | 2.4389 | 3.3201 | 3.3201 |
| P-RISER | 025YR-0 | 3.77 | 0.00 | 0.00 | 6.91 | 6.91 | 4.7884 | 0.0000 | 3.8491 | 4.7884 | 4.7884 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|--------------------------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| SECOND DISCHARGE | 08HR | | | | | | | | | | |
| P-RISER SECOND DISCHARGE | 025YR-024HR | 3.51 | 0.00 | 0.00 | 6.44 | 6.44 | 19.3734 | 0.0000 | 10.1600 | 19.3734 | 19.3734 |
| P-RISER SECOND DISCHARGE | 100YR-001HR | 3.67 | 0.00 | 0.00 | 6.72 | 6.72 | 1.5480 | 0.0000 | 3.8467 | 1.5480 | 1.5480 |
| P-RISER SECOND DISCHARGE | 100YR-002HR | 3.90 | 0.00 | 0.00 | 7.15 | 7.15 | 1.8600 | 0.0000 | 4.9327 | 1.8600 | 1.8600 |
| P-RISER SECOND DISCHARGE | 100YR-004HR | 4.00 | 0.00 | 0.00 | 7.33 | 7.33 | 2.9224 | 0.0000 | 2.1622 | 2.9224 | 2.9224 |
| P-RISER SECOND DISCHARGE | 100YR-008HR | 3.95 | 0.00 | 0.00 | 7.24 | 7.24 | 4.1843 | 0.0000 | 3.5911 | 4.1843 | 4.1843 |
| P-RISER SECOND DISCHARGE | 100YR-024HR | 3.59 | 0.00 | 0.00 | 6.59 | 6.59 | 20.5948 | 0.0000 | 8.9983 | 20.5948 | 20.5948 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0001 | 025YR-001HR | 17.23 | 0.00 | -0.01 | 5.49 | 13.34 | 1.1137 | 0.0000 | 2.4478 | 1.1137 | 0.9121 |
| PH-0001 | 025YR-002HR | 20.88 | 0.00 | -0.01 | 6.65 | 13.36 | 1.3961 | 0.0000 | 2.4720 | 1.3961 | 1.0223 |
| PH-0001 | 025YR-004HR | 25.17 | 0.00 | -0.01 | 8.01 | 13.33 | 3.0447 | 0.0000 | 1.1865 | 3.0447 | 2.1785 |
| PH-0001 | 025YR-008HR | 29.09 | 0.00 | 0.01 | 9.26 | 13.34 | 4.3267 | 0.0000 | 3.5693 | 4.3267 | 3.6180 |
| PH-0001 | 025YR-024HR | 15.34 | 0.00 | -0.01 | 4.88 | 13.28 | 12.2020 | 0.0000 | 4.7681 | 12.2020 | 11.8090 |
| PH-0001 | 100YR-001HR | 26.34 | 0.00 | -0.01 | 8.38 | 13.42 | 1.1105 | 0.0000 | 1.6528 | 1.1105 | 0.7547 |
| PH-0001 | 100YR-002HR | 32.34 | 0.00 | -0.01 | 10.29 | 13.44 | 1.3704 | 0.0000 | 0.3885 | 1.3704 | 0.8543 |
| PH-0001 | 100YR-004HR | 37.38 | 0.00 | 0.01 | 11.90 | 13.37 | 3.0027 | 0.0000 | 1.8805 | 3.0027 | 1.9238 |
| PH-0001 | 100YR-008HR | 42.08 | 0.00 | -0.01 | 13.39 | 13.39 | 4.4560 | 0.0000 | 1.9018 | 4.4560 | 4.4560 |
| PH-0001 | 100YR-024HR | 21.05 | 0.00 | -0.01 | 6.70 | 13.28 | 12.1823 | 0.0000 | 3.9969 | 12.1823 | 10.8077 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0002 | 025YR-001HR | 36.05 | 0.00 | 0.02 | 7.34 | 10.42 | 0.8574 | 0.0000 | 0.6782 | 0.8574 | 1.1596 |
| PH-0002 | 025YR-002HR | 36.27 | 0.00 | 0.02 | 7.39 | 8.01 | 1.0249 | 0.0000 | 0.8090 | 1.0249 | 0.6623 |
| PH-0002 | 025YR-004HR | 29.37 | 0.00 | -0.02 | 5.98 | 8.59 | 2.5578 | 0.0000 | 3.2519 | 2.5578 | 1.6614 |
| PH-0002 | 025YR-008HR | 37.46 | 0.00 | -0.02 | 7.63 | 8.47 | 4.0540 | 0.0000 | 5.2740 | 4.0540 | 3.1694 |
| PH-0002 | 025YR-024HR | 14.71 | 0.00 | -0.02 | 3.71 | 9.00 | 12.0459 | 0.0000 | 12.2977 | 12.0522 | 10.5821 |
| PH-0002 | 100YR-001HR | 52.13 | 0.00 | 0.02 | 10.62 | 11.41 | 0.8682 | 0.0000 | 0.6075 | 0.8682 | 1.1438 |
| PH-0002 | 100YR-002HR | 53.85 | 0.00 | 0.28 | 10.97 | 10.97 | 1.0285 | 0.0000 | 2.6827 | 1.0285 | 1.0285 |

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0002 | 100YR-004HR | 42.03 | 0.00 | 0.18 | 8.56 | 8.60 | 2.5481 | 0.0000 | 4.5181 | 2.5481 | 1.4710 |
| PH-0002 | 100YR-008HR | 52.27 | 0.00 | 0.02 | 10.65 | 10.65 | 4.0719 | 0.0000 | 3.2872 | 4.0719 | 4.0719 |
| PH-0002 | 100YR-024HR | 19.76 | 0.00 | -0.02 | 4.19 | 8.89 | 12.0375 | 0.0000 | 12.2968 | 12.0437 | 9.3820 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|-----------|-------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| PH-0003 | 025YR-001HR | 17.23 | 0.00 | 0.01 | 5.48 | 14.12 | 1.1172 | 0.0000 | 0.9123 | 1.1172 | 1.1221 |
| PH-0003 | 025YR-002HR | 20.88 | 0.00 | -0.01 | 6.65 | 14.85 | 1.3996 | 0.0000 | 2.4720 | 1.3996 | 1.4080 |
| PH-0003 | 025YR-004HR | 25.17 | 0.00 | 0.01 | 8.01 | 15.03 | 3.0491 | 0.0000 | 2.1787 | 3.0491 | 3.4429 |
| PH-0003 | 025YR-008HR | 29.09 | 0.00 | 0.01 | 9.26 | 15.03 | 4.3320 | 0.0000 | 3.6183 | 4.3320 | 5.2502 |
| PH-0003 | 025YR-024HR | 15.34 | 0.00 | -0.01 | 4.88 | 13.68 | 12.2080 | 0.0000 | 4.8163 | 12.2080 | 12.2092 |
| PH-0003 | 100YR-001HR | 26.33 | 0.00 | -0.01 | 8.38 | 15.12 | 1.1164 | 0.0000 | 1.6528 | 1.1164 | 1.3343 |
| PH-0003 | 100YR-002HR | 32.34 | 0.00 | 0.01 | 10.29 | 15.07 | 1.3772 | 0.0000 | 0.8551 | 1.3772 | 2.1512 |
| PH-0003 | 100YR-004HR | 37.44 | 0.00 | 0.01 | 11.92 | 15.07 | 3.0626 | 0.0000 | 1.9241 | 3.0626 | 3.9019 |
| PH-0003 | 100YR-008HR | 42.29 | 0.00 | 0.01 | 13.46 | 15.02 | 4.4979 | 0.0000 | 3.4025 | 4.4979 | 5.7835 |
| PH-0003 | 100YR-024HR | 21.05 | 0.00 | -0.01 | 6.70 | 14.88 | 12.1886 | 0.0000 | 4.0487 | 12.1886 | 12.1886 |

Link Min/Max Conditions with Times [PROPOSED CONDITIONS]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---------------------|--------------|----------------|----------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------------|-------------------------------|
| POND BOTTO M FILTER | 025YR-0 01HR | 5.77 | 0.00 | -2.08 | 0.00 | 0.00 | 1.8380 | 0.0000 | 0.3437 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-0 02HR | 6.90 | 0.00 | -2.08 | 0.00 | 0.00 | 2.1703 | 0.0000 | 0.3826 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-0 04HR | 7.58 | 0.00 | -2.08 | 0.00 | 0.00 | 3.3877 | 0.0000 | 0.9766 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-0 08HR | 7.81 | 0.00 | -2.08 | 0.00 | 0.00 | 5.0331 | 0.0000 | 1.7588 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 025YR-0 24HR | 7.24 | 0.00 | -2.08 | 0.00 | 0.00 | 12.5056 | 0.0000 | 39.5244 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 01HR | 6.76 | 0.00 | -2.08 | 0.00 | 0.00 | 1.5480 | 0.0000 | 0.3184 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 02HR | 7.80 | 0.00 | -2.08 | 0.00 | 0.00 | 1.9305 | 0.0000 | 0.3503 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 04HR | 8.52 | 0.00 | -2.08 | 0.00 | 0.00 | 3.2022 | 0.0000 | 0.9353 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 08HR | 8.69 | 0.00 | -2.08 | 0.00 | 0.00 | 4.5161 | 0.0000 | 1.7285 | 0.0000 | 0.0000 |
| POND BOTTO M FILTER | 100YR-0 24HR | 7.73 | 0.00 | -2.08 | 0.00 | 0.00 | 12.3614 | 0.0000 | 39.8719 | 0.0000 | 0.0000 |

G. Report of Geotechnical Exploration



Geotech Report

Summary

Project Info

Pond

Borings

Lab

Appendix



Since 1976

Geotechnical Engineering

Construction Materials Testing

Drilling Services

Hwy 297A and Hwy 97 Stormwater Pond

Escambia County, Florida

LMJ File #: 22-336

November 4, 2022

Prepared for

Mr. Steven White, PE



MOTT
MACDONALD

steven.white@mottmac.com

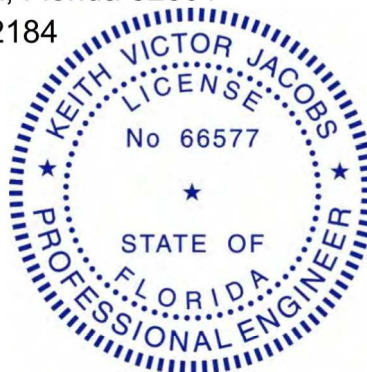
Prepared by

Larry M. Jacobs & Associates, Inc.

328 East Gadsden Street, Pensacola, Florida 32501

Florida Certificate of Authorization #2184

Keith V. Jacobs, PE
Principal Engineer
FL Reg. #66577



Digitally signed
by Keith V
Jacobs
Date: 2022.11.04
15:17:23 -05'00'

This document has been electronically signed and sealed by Keith V. Jacobs (license # 66577) on November 4, 2022. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

Subsurface Conditions

- ▼ The borings encountered slightly silty sand in the upper 2 feet over silty sand to 6-8.3 feet underlain by clayey sand/sandy clay to 23 feet over sandy clay and silty clayey sand to the bottom of the borings at 26 feet.
- ▼ The borings were loose and very loose in the upper 2 feet, medium dense to 6-8.3 feet, loose/stiff to 23 feet, and medium dense and soft to the bottom of the borings at 26 feet.
- ▼ Groundwater was recorded by the driller at 17 and 18.5 feet below grade at the time of drilling, which was following a rainy period.
- ▼ Two weeks after drilling the original boring, groundwater was recorded in the piezometer installed in S-2 at 16 feet 2 inches below the ground surface.
- ▼ Groundwater levels will vary with the amount of local rainfall and changes in site drainage characteristics and may be different at other times.

General Comments

- ▼ The borings encountered poorly draining silty fine sand soils at the planned pond bottom elevation to about 6-8.3 feet below existing grade where very poorly draining clayey sand and sandy clay was encountered to 23 feet.
- ▼ These are poor conditions for stormwater recovery, and we understand that the existing pond has a bottom filter installed.
- ▼ The expanded pond would need to rely on the existing bottom filter to recover, or the bottom filter may need to be expanded into the new pond bottom if the existing filter is not sufficient for recovery.
- ▼ The pond expansion is planned to be bermed on the sides, and we recommend placing this berm roughly 2 feet below grade on the medium dense silty sand soils.
- ▼ The pond berm should be constructing using a clayey silty sand core to prevent seepage of stormwater through the berm.

Note: *The above summary is an overview of the report and should not be used by itself for planning, design, and/or construction. See the relevant sections for further details.*



Project and Site Description

The site is located at the northwest corner of the intersection of Hwy 297A and Hwy 97 in Escambia County, Florida. At the time of drilling, the site was wooded, and paths were cleared to the boring locations using machinery. We understand that the project includes an expansion of the existing Glenmoor Trail Subdivision stormwater pond to the south. Based on the provided information, the pond expansion is planned to have a top elevation of 67 feet and bottom elevation of 61 feet. Existing grades in the expansion area slope from 65 feet on the north end down to 60 feet at the southeast corner. We understand that the existing pond has a bottom filter, and most of the Google Earth® historical imagery shows water in the bottom of the pond adjacent to the bottom filter, which we understand is a sump at elevation 60 feet.

Subsurface Exploration

Our exploration included two Standard Penetration Test (SPT) borings drilled to 26 feet. The borings were drilled using a truck mounted drill rig and were advanced between sampling using solid stem flight auger. One Shelby tube sample was taken from a bore hole drilled adjacent to boring S-2 for laboratory permeability testing. A piezometer was installed in boring S-2 to record a stabilized groundwater level. The subsurface conditions encountered in the borings can be found on the boring logs [here](#).

The above information is the basis of our recommendations. If the information in this section changes or is incorrect, our office should be notified, and changes to our report may be needed.



General Comments

- ▼ The borings encountered mostly poorly draining silty fine sand at the planned pond bottom elevation to about 6-8.3 feet below existing grade where very poorly draining clayey sand and sandy clay was encountered to 23 feet.
- ▼ These are poor conditions for stormwater recovery, and we understand that the existing pond has a bottom filter installed for recovery.
- ▼ The expanded pond would need to rely on the existing bottom filter to recover, or the bottom filter may need to be expanded into the new pond bottom if the existing filter is not sufficient for recovery.

Pond Berm Recommendations

- ▼ The pond expansion is planned to be bermed on the sides, and we recommend placing this berm roughly 2 feet below grade on the firm silty sand soils to provide a better bearing surface, and to help cut-off any flow under the berm in the upper slightly silty sand soils.
- ▼ The soils encountered at 2 feet in the borings may be suitable for constructing the berm directly on firm, undisturbed soils. This would need to be verified by LMJ at the time of construction by probing.
- ▼ Loose areas under the berm identified during probing would need to be compacted to a minimum of 95% of the Modified Proctor Test (ASTM D1557) density, and compaction would need to be verified using in-place nuclear density testing.
- ▼ We would recommend excavating down to the firm soils using a smooth bucket or “butter” bar as a bucket with teeth will disturb and loosen naturally firm soils.
- ▼ The pond berm should be constructed using a clayey silty sand core to prevent seepage of stormwater through the berm.
- ▼ The core material should have a minimum of 20% passing a #200 sieve and enough clay to roll into a thin ($\frac{1}{8}$ to $\frac{1}{4}$ -inch) snake (moisture content can be adjusted as needed to roll).
- ▼ We recommend that the clay core have 2H:1V slopes minimum. The berm should have 3H:1V side slopes minimum. Silty sand soils could be placed on the outside of the core, or the core material could be used to construct the entire berm.
- ▼ The clay core and berm slopes should be compacted in 6-inch lifts to a minimum of 100% of the Standard Proctor density (ASTM D698). Thicker lifts could be approved by the GER if the contractor can demonstrate that compaction is achieved for the full lift thickness.
- ▼ Compaction of the top of subgrade under the berm should be verified using in-place nuclear density testing at a minimum frequency of one test per 75 linear foot of berm.
- ▼ Compaction of fill for the berm and clayey core should be tested at the same frequency on each 12-inch increment of fill placed.



Pond Berm Recommendations (Continued)

- ▼ The clayey sand core would be best compacted using a sheepfoot roller, and silty sand soils are best compacted using a rubber-tired roller.
- ▼ We note that vibratory rollers are not as effective for the soil types recommended for the berm/core. Vibratory rollers could be used to compact silty sand under the berm if needed.
- ▼ Large vibratory rollers can damage/disturb nearby structures, and we do not recommend using large vibratory rollers near (within 50 feet) existing structures.
- ▼ We recommend that LMJ be onsite during earthwork to verify that suitable soils are being used for constructing the clay core and to verify proper compaction.
- ▼ Note that the soils encountered in the borings and those recommended for the berm retain excess moisture, drain slowly, and are difficult to dry and compact if they are too wet.
- ▼ These soil types will be temporarily unworkable until dried, and wet soils should be disked/plowed in good weather to speed up drying times.
- ▼ We recommend selecting a contractor for this project that is prepared to moisture condition and has proper equipment and methods to dry wet soils to prevent unnecessary delays or costs to the project.

Pond Design Parameters

Our recommended parameters for the design of the stormwater pond are summarized in the table below. Note that the Shelby tube sample encountered a sand pocket at the bottom, and sand was not encountered in any of the split spoon samples, and this was accounted for in our recommended design parameters. The clayey sand and sandy clay encountered in the borings beginning at 7-8.3 feet should be considered the bottom of the aquifer for pond design. The parameters below do not include a factor of safety, and appropriate safety factors should be used for the pond design.

Pond Design Parameters Summary

| Saturated Vertical Hydraulic Conductivity (K _{vs}) (ft/day) | Saturated Horizontal Hydraulic Conductivity (K _{hs}) (ft/day) | ESHWT* Elevation ¹ (ft) | Bottom of Aquifer Elevation ¹ (ft) | Fillable Porosity |
|---|---|------------------------------------|---|-------------------|
| 0.15 | 0.30 | 41 | 56 | 0.25 |

*ESHWT = Estimated Seasonal High Water Table

¹Elevation estimated from provided topographic data



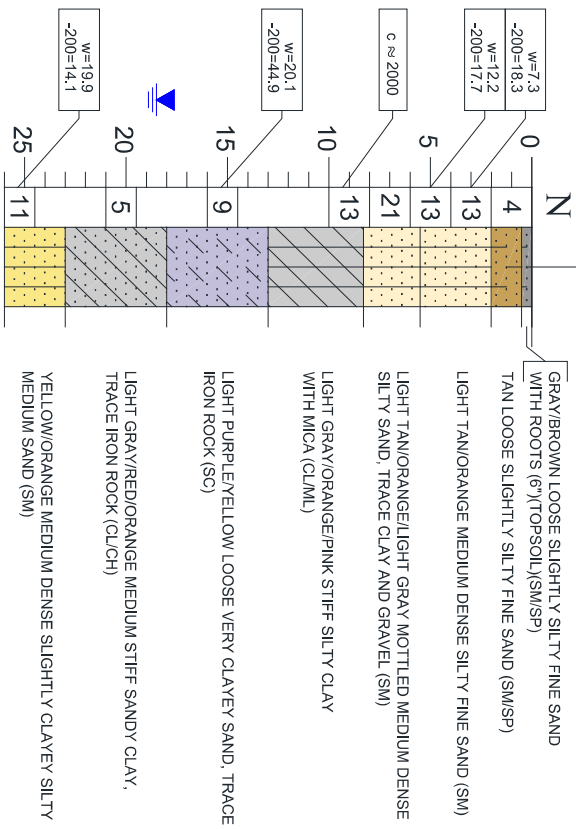
Boring Locations



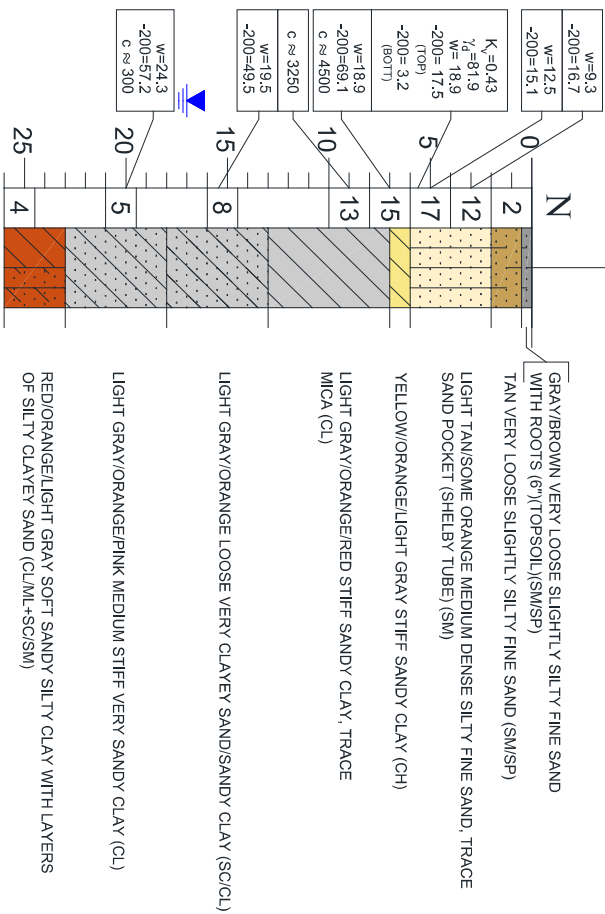
STANDARD PENETRATION TEST BORING
ALL BORING LOCATIONS ARE APPROXIMATE



S-1
09-28-22



S-2
09-28-22



NOTE: SHELBY TUBE SAMPLE TAKEN FROM 4-6 FT IN OFFSET BOREHOLE



Test Results

Laboratory testing for this project included wash #200 sieve and natural moisture content tests run on the spilt spoon samples to assist in soil classification and to evaluate and document soil properties. These results are noted on the boring logs next to the sample tested. Laboratory testing also included one falling head permeability test run on the Shelby tube sample, and these results are summarized below.

Permeability Test Results

| Boring | Sample Depth (ft) | Soil Description | Dry Unit Weight (pcf) | Saturated Vertical Hydraulic Conductivity (Kvs) (ft/day) | % Fines |
|--------|-------------------|---|-----------------------|--|---------------------------|
| S-2 | 5-6 | Light Tan/Orange Silty Fine Sand and White Sand | 83.1 | 0.43 | 17.5 (top) 3.2 (bott.) |

The Shelby tube sample had 8 inches of white sand in the bottom on a 12-inch specimen. The % Fines of the top and bottom of the sample are shown below. Pictures of the top and bottom (tested portion) of the sample are shown below.



Basis of Recommendations

Recommendations rendered herein are based on assumed and/or design information available at the time of this report, the subsurface conditions encountered in the test borings, generally accepted geotechnical engineering principles and practices, and our experience with similar soil and groundwater conditions. Should final project information or existing conditions differ from the information used in this report, or should any soil conditions not discussed in this report be encountered during construction, our office should be notified and retained so that this report can be modified as needed. LMJ should be provided the final plans and specifications for review to determine if any changes to our report are needed based on the final design and that our recommendations have been properly interpreted.

This report and any correspondence are intended for the exclusive use of our client for the specific application to the project discussed. LMJ is not responsible for the interpretations, conclusions, or recommendations made by others based on the information in this report.

Regardless of the care exercised in performing a Geotechnical Exploration, the possibility always exists that soil and/or groundwater conditions will differ from those encountered at the specific boring locations. In addition, construction operations may alter the soil conditions. Therefore, it is recommended that a representative from LMJ be involved during the construction phases discussed in this report.

Test Methods

Standard Penetration Test

The Standard Penetration Test (SPT) consists of driving a 2-inch diameter split spoon sampler into the ground using a 140-pound hammer dropped 30 inches. The number of blows required to drive the sampler one foot (after seating it 6 inches) is referred to as the blow count or “N” value and represents the relative density of subsurface soils. “N” values can be found on the boring logs. The borings were drilled in general accordance with ASTM D1586 using truck mounted drill rigs and were drilled using solid-stem flight auger. Each sample was removed from the sampler, classified in the field by the driller, and packaged for visual classification by our engineering staff and laboratory testing.

Other Test Methods

Wash #200 Sieve (ASTM D1140), Moisture Content (ASTM D2216) and Falling Head Permeability (ASTM D5856).

Appendix

Summary

Project Info

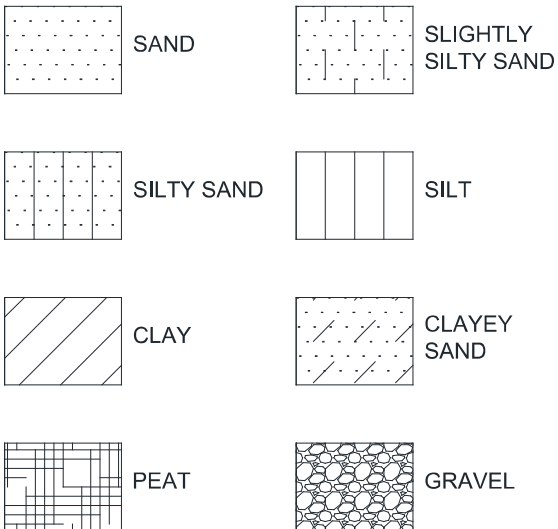
Pond

Borings

Lab

Appendix

LEGEND



NOTES

- 1) SPT BORINGS PERFORMED IN GENERAL ACCORDANCE WITH ASTM D1586
- 2) SUBSURFACE CONDITIONS ARE AT BORING LOCATIONS AND ACTUAL CONDITIONS BETWEEN BORINGS MAY VARY
- 3) ALL CLASSIFICATIONS ARE BASED ON VISUAL EXAMINATION UNLESS ACCOMPANIED BY LABORATORY TEST RESULTS
- 4) BOUNDARIES BETWEEN SOIL LAYERS SHOULD BE CONSIDERED APPROXIMATE AS THE ACTUAL TRANSITION MAY BE GRADUAL
- 5) DEPTH OF BORING IS BELOW EXISTING GRADE AT TIME OF DRILLING
- 6) ELEVATIONS, IF SHOWN, WERE ESTIMATED FROM PROVIDED TOPOGRAPHIC SURVEY
- 7) COLORS USED FOR BORING HATCHING MAY NOT REPRESENT THE ACTUAL SOIL COLORS

GNE

GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING

N

STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT

N_A

STANDARD PENETRATION RESISTANCE USING AUTOHAMMER



ENCOUNTERED GROUNDWATER LEVEL



ENCOUNTERED PERCHED WATER LEVEL

50/2"

NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SPLIT SPOON SAMPLER A SPECIFIC DISTANCE (2) INCHES

HW

SPLIT SPOON SAMPLE ADVANCED UNDER WEIGHT OF ROD AND HAMMER

HA

HAND AUGER



SHELBY TUBE SAMPLER

W

NATURAL MOISTURE CONTENT (%)

-200

FINES PASSING #200 SIEVE (%)

O.C.

ORGANIC CONTENT (%)

LL

LIQUID LIMIT

PL

PLASTIC LIMIT

LI

LIQUIDITY INDEX

$C \approx$

APPROXIMATE COHESION VALUE (PSF) BASED ON POCKET PENETROMETER READINGS

K_v

SATURATED VERTICAL HYDRAULIC CONDUCTIVITY (FT/DAY)

γ_d

DRY UNIT WEIGHT (PCF)

γ_m

ESTIMATED MOIST UNIT WEIGHT (PCF)

γ_b

ESTIMATED BUOYANT UNIT WEIGHT (PCF)

ϕ

ESTIMATED ANGLE OF INTERNAL FRICTION (DEGREES)

SAFETY HAMMER

GRANULAR SOILS

| SPT BLOWS/FOOT (N) | RELATIVE DENSITY |
|--------------------|------------------|
| 0-3 | VERY LOOSE |
| 4-10 | LOOSE |
| 11-30 | MEDIUM DENSE |
| 31-50 | DENSE |
| > 50 | VERY DENSE |

COHESIVE SOILS

| SPT BLOWS/FOOT (N) | RELATIVE DENSITY |
|--------------------|------------------|
| 0-1 | VERY SOFT |
| 2-4 | SOFT |
| 5-8 | MEDIUM STIFF |
| 9-15 | STIFF |
| 16-30 | VERY STIFF |
| > 30 | HARD |

AUTOMATIC HAMMER

GRANULAR SOILS

| SPT BLOWS/FOOT (N) | RELATIVE DENSITY |
|--------------------|------------------|
| 0-2 | VERY LOOSE |
| 3-8 | LOOSE |
| 9-24 | MEDIUM DENSE |
| 25-40 | DENSE |
| > 40 | VERY DENSE |

COHESIVE SOILS

| SPT BLOWS/FOOT (N) | RELATIVE DENSITY |
|--------------------|------------------|
| <1 | VERY SOFT |
| 1-3 | SOFT |
| 4-6 | MEDIUM STIFF |
| 7-12 | STIFF |
| 13-24 | VERY STIFF |
| > 24 | HARD |



H. Pond Bottom Filter Design and Recovery Calculations

Standard Pond Bottom Filter Design and Recovery Calculations

JOB NAME: Eleven Mile Creek Basin Stormwater Pond at Hwy 297A and Hwy 97

HMM #: 502101061

DATE: 1/25/2023

DRAWDOWN WORKSHEET FOR TYPE Vb UNDERDRAIN

(Sand Underdrain Constructed in Pond or Ditch Bottom)

(Using Darcy's Law for Flow Through Porous Material)

| E Elevation (NGVD) | h Total Head (ft) | dh Incr. Head (ft) | V Total Volume (cu. ft.) | dV Incr. Volume (cu. ft.) | Lavg Avg. Flow Length (ft) | Hydraulic Gradient $i=h/L_{avg}$ | Area of Filter $A=L \times w$ (sq. ft.) | Darcy Flow $Q=KiA$ (cu. ft./hr.) | Avg. Flow ($Q1+Q2$)/2 (cu. ft./hr.) | dT Incr. Time (hr) | Total Time (hr) |
|--------------------------|----------------------------|-----------------------------|-----------------------------------|------------------------------------|-------------------------------------|--|--|---|---|-----------------------------|-----------------------|
| 67.00 | 10.5 | | 486543 | | 2.00 | 5.250 | 3000 | 31500 | | | 0.00 |
| | | 0.7 | | 58979 | | | | | 30450 | 1.94 | |
| 66.30 | 9.8 | | 427564 | | 2.00 | 4.900 | 3000 | 29400 | | | 1.94 |
| | | 0.3 | | 282103 | | | | | 23325 | 12.09 | |
| 66.00 | 9.5 | | 403374 | | 2.00 | 4.750 | 3000 | 28500 | | | 14.03 |
| | | 1 | | 76570 | | | | | 27000 | 2.84 | |
| 65.00 | 8.5 | | 326804 | | 2.00 | 4.250 | 3000 | 25500 | | | 16.87 |
| | | 1 | | 70814 | | | | | 24000 | 2.95 | |
| 64.00 | 7.5 | | 255990 | | 2.00 | 3.750 | 3000 | 22500 | | | 19.82 |
| | | 1 | | 65164 | | | | | 21000 | 3.10 | |
| 63.00 | 6.5 | | 190826 | | 2.00 | 3.250 | 3000 | 19500 | | | 22.92 |
| | | 0.75 | | 190826 | | | | | 13500 | 14.14 | |
| 62.25 | 5.8 | | 145461 | | 2.00 | 2.875 | 3000 | 17250 | | | 37.06 |
| | | 0.25 | | 14434 | | | | | 16875 | 0.86 | |
| 62.00 | 5.5 | | 131027 | | 2.00 | 2.750 | 3000 | 16500 | | | 37.91 |
| | | 1 | | 50447 | | | | | 15000 | 3.36 | |
| 61.00 | 4.5 | | 80580 | | 2.00 | 2.250 | 3000 | 13500 | | | 41.27 |
| | | 1 | | 42130 | | | | | 12000 | 3.5108 | |
| 60.00 | 3.5 | | 38450 | | 2 | 1.75 | 3000 | 10500 | | | 44.785 |
| | | 1 | | 38450 | | | | | 9000 | 4.2722 | |
| 59.00 | 2.5 | | 0 | | 2 | 1.25 | 3000 | 7500 | | | 49.058 |

Assumed Length L= 50 * Hydraulic Conductivity K= 2 Pond Bottom Elev. 59 Thickness of Media 2
 Filter Width = 60 Underdrain Flowline Elev. 56.5 Outlet Pipe Diam.(in) 12

* Hydraulic Conductivity Express in Units of ft./hr.

Biosorption Activated Media (BAM) Pond Bottom Filter Design and Recovery Calculations

| BAM Pond Bottom Filter Build | | |
|------------------------------|-----------------------------|--|
| | Layer thickness "h" (in) | Vertical Hydraulic Conductivity "Kv" (in/hr) |
| Sand | 12 | 24 |
| CTS* | 12 | 10 |
| CTS Pervious* | 12 | 15 |
| #57 Stone | 6 | 50 |

* filter build is either CTS or CTS Pervious

Determine Filter Effective Vertical Hydraulic Conductivity

$$\text{Filter } K_{v_{\text{eff}}} = \frac{h_1+h_2+h_3}{(h_1/K_{v1})+(h_2/K_{v2})+(h_3/K_{v3})}$$

| BAM Type | $K_{v_{\text{eff}}}$ (in/hr) | $K_{v_{\text{eff}}}$ (ft/hr) |
|--------------|---------------------------------|---------------------------------|
| CTS | 16.484 | 1.374 |
| CTS Pervious | 21.127 | 1.761 |

JOB NAME: Eleven Mile Creek Basin Stormwater Pond at Hwy 297A and Hwy 97
HMM #: 502101061
DATE: 1/25/2023

DRAWDOWN WORKSHEET FOR TYPE Vb UNDERDRAIN
(Sand Underdrain Constructed in Pond or Ditch Bottom)
(Using Darcy's Law for Flow Through Porous Material)

| E Elevation (NGVD) | h Total Head (ft) | dh Incr. Head (ft) | V Total Volume (cu. ft.) | dV Incr. Volume (cu. ft.) | Lavg Avg. Flow Length (ft) | Hydraulic Gradient <i>i=h/Lavg</i> | Area of Filter <i>A=Lxw</i> (sq. ft.) | Darcy Flow <i>Q=KiA</i> (cu. ft./hr.) | Avg. Flow (<i>Q1+Q2</i>)/2 (cu. ft./hr.) | dT Incr. Time (hr) | Total Time (hr) |
|--------------------------|----------------------------|-----------------------------|-----------------------------------|------------------------------------|-------------------------------------|--|--|--|--|-----------------------------|-----------------------|
| 67.00 | 10.5 | | 486543 | | 2.50 | 4.200 | 4320 | 31933 | | | 0.00 |
| | | 0.7 | | 58979 | | | | | 30869 | 1.91 | |
| 66.30 | 9.8 | | 427564 | | 2.50 | 3.920 | 4320 | 29805 | | | 1.91 |
| | | 0.3 | | 282103 | | | | | 23646 | 11.93 | |
| 66.00 | 9.5 | | 403374 | | 2.50 | 3.800 | 4320 | 28892 | | | 13.84 |
| | | 1 | | 76570 | | | | | 27372 | 2.80 | |
| 65.00 | 8.5 | | 326804 | | 2.50 | 3.400 | 4320 | 25851 | | | 16.64 |
| | | 1 | | 70814 | | | | | 24330 | 2.91 | |
| 64.00 | 7.5 | | 255990 | | 2.50 | 3.000 | 4320 | 22810 | | | 19.55 |
| | | 1 | | 65164 | | | | | 21289 | 3.06 | |
| 63.00 | 6.5 | | 190826 | | 2.50 | 2.600 | 4320 | 19768 | | | 22.61 |
| | | 0.75 | | 190826 | | | | | 13686 | 13.94 | |
| 62.25 | 5.8 | | 145461 | | 2.50 | 2.300 | 4320 | 17487 | | | 36.55 |
| | | 0.25 | | 14434 | | | | | 17107 | 0.84 | |
| 62.00 | 5.5 | | 131027 | | 2.50 | 2.200 | 4320 | 16727 | | | 37.40 |
| | | 1 | | 50447 | | | | | 15206 | 3.32 | |
| 61.00 | 4.5 | | 80580 | | 2.50 | 1.800 | 4320 | 13686 | | | 40.71 |
| | | 1 | | 42130 | | | | | 12165.12 | 3.4632 | |
| 60.00 | 3.5 | | 38450 | | 2.5 | 1.4 | 4320 | 10644.5 | | | 44.178 |
| | | 1 | | 38450 | | | | | 9123.84 | 4.2142 | |
| 59.00 | 2.5 | | 0 | | 2.5 | 1 | 4320 | 7603.2 | | | 48.392 |

Assumed Length L= 60 * Hydraulic Conductivity K: 1.76 Pond Bottom Elev. 59 Thickness of Media 2.5
 Filter Width = 72 Underdrain Flowline Elev. 56.5 Outlet Pipe Diam.(in 12
 * Hydraulic Conductivity Express in Units of ft./hr.

