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Memo

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Date:	August 8, 2019
To:	Beth Callahan, Project Manager, Maine Department of Environmental Protection
From:	Elizabeth M. Ransom, P.G. Ransom Consulting, Inc.
Subject:	Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine L-28319-26-A-N, Review Comments
Project No.:	171.05027

This memo provides responses to the Technical Review Memorandum from Karem Gungor to Beth Callahan dated June 25, 2019. For clarity, the entire comment from the technical memorandum has been copied below and italicized. Responses are in regular text, and on the attached plans and figures as referenced below.

1. Building 1, 2, and 3 constitute most of the development footprint. The applicant proposes to over excavate some of building areas for replacing the unsuitable native soil with imported common borrow. What are the anticipated excavation depths for the buildings? According to the plans, approximately 80,000-sf of building area can be excavated/disturbed at a given time. Depending on the elevation of the seasonal groundwater table, significant volume of water may need to be removed from the foundation trenches. Considering the site-specific soil/groundwater information, please discuss the adequacy of the proposed edge drain system (Detail A15 in Sheet CE502) for dewatering the foundation trenches.

The geotechnical investigation undertaken for the project by Ransom Consulting indicates the following general subsurface profile in the area of the site:

- Forest duff/topsoil
- Silt and sand
- Stiff clay
- Soft clay
- Very soft clay
- Till
- Weathered bedrock/bedrock

The majority of the profile consists of glaciomarine clay soils of the Presumpscot Formation. These typically exhibit very limited hydraulic conductivity. The report indicates that groundwater is perched above the clay substratum, with the latter presenting an impervious restrictive layer that significantly limits infiltration. Previous studies on Presumpscot clays have attributed an average hydraulic conductivity throughout the series of 2.2 x 10-6cm/sec (Brainard

and Hebson[1]). Therefore, we anticipate that groundwater flow through these soils will be very limited.

We infer from the general geomorphology of the area that groundwater flow across the site is likely in a generally south-southwest direction towards the Little River (impounded as Reservoir Number One).

The very soft clay layer observed in the Presumpscot Formation is problematic from a site development perspective as it will consolidate under loading from fill or surcharging causing settlement in fill areas and foundation subgrades. Therefore, it is proposed that this layer (and the unsuitable overburden material) will be removed to the elevation of competent glacial till and be replaced with imported Granular Borrow. The elevations to which the site will be excavated in order to achieve this are summarized in the tables below:

TABLE 1 – OVERBURDEN EXCAVATION – BUILDING 1: MODULES 1, 2, 3

BORING NO.	GROUND ELEVATION	DEPTH TO TILL	EXCAVATION ELEVATION
B301	70	16	54
B110	69	15	54
B302	69	15	54
B304	67	13	54
B305	68	15	53
B307	62	11	51
B311	64	20	54

The area under the northern building will need to be excavated to an average elevation of 54 feet to remove the very soft clay layer.

TABLE 2 – OVERBURDEN EXCAVATION – CENTRAL CORRIDOR

BORING NO.	GROUND ELEVATION	DEPTH TO TILL	EXCAVATION ELEVATION
B108	64	8	52
B109	65	14	54
B306	63	10	53
B309	61	8	53
B310	60	17	43
B314	66	20	46

The area under the central corridor will need to be excavated to an average elevation of 53/54 feet to remove the very soft clay layer.

[1] Brainard, Edward C, Hebson, Charles S., Hydrogeology of Presumpscot Lay-Silt Using Isotopes, Geological Society of Maine Bulletin 4- Selected Papers on the Hydrogeology of Maine, 1996

TABLE 3 – OVERBURDEN EXCAVATION – BUILDING 2: MODULES 4, 5, 6

BORING NO.	GROUND ELEVATION	DEPTH TO TILL	EXCAVATION ELEVATION
B107	60	18	42
B104	61	15	46
B111	57	15	42
B105	60	12	48
B106	58	12	46
B103	56	12	44
B102	57	12	45
B313	55	20	35

The area under the southern building will need to be excavated to an average elevation of 43 feet to remove the very soft clay layer.

From previous experience working in similar soil conditions, we anticipate that the perched groundwater and surface runoff will contribute the vast majority of the anticipated dewatering load at the site during major earthwork activities and have designed an interceptor trench and drain at the northern side of the site (outside the excavation area) to intercept and divert this flow around the work area. The elevation of the northern perimeter drain has been set at or below the bottom of the proposed excavation to ensure that the majority of surface and groundwater flow is diverted and will not impact the construction area. In addition, diversion culverts have been designed within the drainageways that cross the site to maintain groundwater flow along these natural pathways. Observation and maintenance of these diversion BMPs will be essential to limiting the inflow of surface and groundwater into adjacent excavation areas during construction.

The proposed edge drains are designed to work in conjunction with the temporary sediment basins that have been designed for the project. This will allow a degree of redundancy in the drainage system and provide alternative outlets for dewatering discharge should this be necessary due to higher than anticipated flows. In general, the sediment basins will take the bulk of the load during initial disturbance of contributing areas, and the edge drains will begin to receive discharge once the excavation reaches lower elevations that cannot easily be directed to the basins without pumping.

The edge drains within the major excavation area will provide a localized drainage outlet for any groundwater seeps encountered in the exposed clay layers, and any rainfall falling directly on the excavated area. We anticipate that groundwater flow from the clay subgrade soils will be limited by the low hydraulic conductivity of these soils. For example, an excavation 15 feet deep, with approximate dimensions of 200’ x 400’ equates to an exposed surface area of approximately 18,000 sf. Applying an average hydraulic conductivity rate of 2.2×10^{-6}cm/sec, gives an anticipated outflow of 0.02cfs.

It is acknowledged that there may be occasional sand seams within the clay strata that exhibit significantly higher hydraulic conductivity, and these can contribute substantially higher localized outflow rates. Preliminary excavations at the site will be monitored to identify such features and determine whether additional, localized dewatering BMPs (such as temporary sumps and pumping) are warranted.

During periods of heavy rainfall, it is possible that the edge drains will have insufficient capacity to keep up with the surface flow from the contributing excavated areas. In these conditions it is anticipated that excavation operations will be suspended temporarily to allow the site to drain.

The major excavation work to remove the overburden will be rapidly followed by stabilization of the subgrade till material with a geotextile separation fabric and the addition of imported Granular Borrow. The Granular Borrow material will allow surface water to infiltrate and drain towards the edge drains, providing filtration of suspended sediments, and as the layer becomes deeper a considerable volume of storage in the pore space of the imported material. This storage will attenuate the peak flow to the drains, which will continue to underdrain large areas of the site upon completion of the fill activity. Cross sections of the edge drain system can be seen on the attached drawing CE502 (**Attachment A**).

In summary, we feel that the edge drains, when coupled with the surface and groundwater BMPs will provide adequate drainage to support the proposed excavation activities at the site. Upon completion of the excavation and replacement of the clay material with Granular Borrow, these drains will continue to function as underdrains throughout the excavation areas, effectively lowering adjacent groundwater and allowing excavation (or construction) of foundations and utilities in the overlying fill section.

2. Please provide information on the material stockpiling areas. Will the stabilized area southeast (Building 2 footprint) used for material (soil, aggregate) stockpiling?

We do not anticipate major stockpiling of soils at the site, although some specialized imported materials may be stockpiled within the designated laydown area. The major earthwork activities at the site will require the removal of overburden (topsoil and clay) from the site and replacement of this material with Granular Borrow. These activities will take place concurrently, with the unsuitable native soils being removed from the site and replacement material being placed as soon as the subgrade preparation has taken place. Some interim storage may be required during periods where trucks are unavailable, or subgrade preparation is not adequately synchronized with material import. However, the general method of work will not require large on-site soil stockpiles, or long-term storage of earthwork materials.

3. The phasing plans show a network of excavation drains which uses the existing drainageways and daylights into plunge pools. My understanding is that this proposed drain system will be permanent. However, other plans (e.g. grading plans) do not show the excavation drain outfalls. Why?

The plunge pools and drainage outlets for the excavation drains are shown on the updated site grading plans included with this submission (**Attachment B**).

4. Please state which best management practices will be used to minimize the risk of turbid water entering the perforated edge drains during their installation.

The edge drains will be constructed in a stone and sand blanket to provide filtration of water prior to discharge. It should be noted that as the fill activity progresses, the imported Granular Borrow placed adjacent to and over the drains will provide additional filtration of fines prior to entering the pipe.

5. Will the access roadways which are expanded as the construction phases progress have gravel subbase at a minimum? Since several utility trenches will be excavated on these roads, pavement of these roads may need to be postponed towards the end of each phase.

Yes. As stated above, portions of the site will be excavated to an elevation significantly below the subgrade of the proposed roadways and filled with Granular Borrow. All roadways will receive gravel subbase at a minimum. If necessary due to site conditions, a geotextile fabric and/or sacrificial stone surface layer may be added to strengthen the roads during construction.

6. How will the effective treatment areas of the proposed temporary sediment basins change over time? Once the excavation starts for the building pads and the utility trenches are excavated, conveying construction runoff to the basins can be a challenge. Please show the approximate treatment areas of the basins on the plans and discuss how the runoff will be conveyed to these basins.

As stated above, portions of the site, including those beneath the proposed building pads will be excavated to elevations significantly lower than the proposed foundation grades and filled with imported Granular Borrow. Once this activity is complete, we anticipate that groundwater will be lowered to an elevation close to that of the edge drains at the bottom of the overburden excavation and therefore will not interfere with foundation or utility construction. The possible exception to this is at the eastern end of the central corridor, where some ledge removal will be required to install the deep utilities. There will also be limited surface runoff from the site due to the depth of Granular Borrow and the high infiltration rate and storage capacity of this material. Therefore, the temporary sediment basins are designed primarily to treat eroded granular material, runoff from impervious surfaces and potential runoff from upstream contributing areas during winter conditions. There may also be isolated areas of the site (deep utility excavations) where groundwater is encountered and needs to be pumped and treated to provide dry working conditions.

7. A slope drain can be necessary for the southern fill slopes which will be constructed during Phase 2. The drain can discharge into Sediment Basin #4.

We have added a detail for a slope drain to sheet CE505 and shown slope drains on plan sheet CE504 in the area suggested (**Attachment A**).

8. Comments on the temporary sediment basins:

a. Please show approximate drainage area of each basin and provide a narrative on how these areas will change during the construction. For instance, excavated building footprints will have a lower elevation than the basins. Will the surface runoff be diverted from these excavated areas into the basins?

For design purposes (and runoff and routing and sedimentation calculations), we assumed the worst case scenario (i.e. the entire area of the work phase associated with each sediment basin will drain to it, regardless of condition). This will require some temporary runoff diversions and temporary sediment sumps and pumping from some of the over-excavated areas. In practice, we anticipate that once excavation and replacement of unsuitable soils has begun, large areas of the ongoing fill operations will drain through the recently placed Granular Borrow and into the edge drains that were constructed during excavation. These are designed to operate in conjunction with the sediment basins to provide a degree of redundancy in the construction drainage system and allow flexibility in the routing of dewatering flows to match site conditions. The areas

draining to each of the basins are summarized in the table below, with notes describing how the areas will change over time.

BASIN NO.	DRAINAGE AREA	NARRATIVE DESCRIPTION
3	18/1C WORK AREA	Temporary Sediment Basin 3 will be the first to be constructed during Phase 1B of the work. This basin will accept runoff from the earthwork operations during Phase 1B, and Phase 1C. During the initial part of Phase 1B, the excavated area will drain directly into the basin. Diversion BMPs will be used to direct runoff from upstream areas around the main excavation and into the basin for treatment. As the excavation of the building footprint approaches the target elevation of 53 feet, any excess dewatering will be undertaken using sumps and pumping to the basin for treatment. During Phase 1C of the earthwork operations the area directly to the north of the basin will drain directly to the basin. A temporary sump and pump will be required to capture the areas to the east of the subcatchment during the initial disturbance (this area slopes towards the drainage feature at the east of 1C). As the excavation and fill operation progresses to the east, the surface grades will direct runoff towards the south. A diversion BMP will be installed along the downslope side of the roadway to direct surface drainage towards the basin for treatment.
2	1D WORK AREA	Temporary Sediment Basin 2 will be the second to be constructed during Phase 1B of the project and is intended to provide treatment for areas disturbed during Phase 1D of the earthwork operations. During initial disturbance, the areas to the north of the basin will drain directly to the basin. As the excavated and fill operations proceed, any excess water in the work area will be directed to the basin using sumps and pumping. As the fill operations proceed, grades in the area will be raised such that surface flow can again be directed to the basin for treatment. Diversion BMPs will be placed along the downslope side of the road to assist in directing runoff from the east side of the catchment area.
1	2 A/B WORK AREA	Temporary Sediment Basin 1 will be the third to be constructed during Phase 1B of the project but is intended to provide treatment for areas disturbed during Phase 1E of the earthwork operations. During initial disturbance, the areas directly to the north of the basin will drain directly to the basin. There will be some areas at the south side of the work area where even the initial grades are too low to allow for surface drainage directly to the basin. During initial disturbance of this area runoff will be directed to a sump located at the low area at the east side of the catchment and pumped to the basin for treatment. As the excavation and fill operations proceed, any excess water in the work area will be directed to the basin using temporary sumps and pumping. As the fill operations proceed, grades in the area will be raised such that surface flow can again be directed to the basin once again for treatment. Diversion BMPs will be placed along the downslope side of the road to assist in directing runoff from the east side of the catchment area.

BASIN NO.	DRAINAGE AREA	NARRATIVE DESCRIPTION
4	60	Temporary Sediment Basin will be constructed during Phase 2A of the project and will provide treatment from disturbed areas in the Phase 2A and Phase 2B work areas during major earthwork operations. During initial disturbance, the areas directly to the north of the basin will drain directly to the basin. There will be some areas at the west side of the work area where even the initial grades are too low to allow for surface drainage directly to the basin (the areas around the drainage feature towards the west side of the Phase 2A work area). During initial disturbance of this area runoff will be directed to a sump located at the low area at the east side of the catchment and pumped to the basin for treatment. As the excavation and fill operations proceed, any excess water in the work area will be directed to the basin using temporary sumps and pumping. As the fill operations proceed, grades in the area will be raised such that surface flow can be directed to the basin for treatment. Diversion BMPs will be placed along the downslope side of the road to assist in directing runoff from the west side of the catchment area. During Phase 2B the majority of the disturbed area will drain directly to the basin. As the excavation of the building footprint approaches the target elevation of 43 feet, any excess dewatering will be undertaken using sumps and pumping to the basin for treatment. As the fill operations continue, grades will be raised allowing excess surface water to drain to the basin once again without pumping.

b. Will the basins be used for dewatering purposes?

Yes, the basins will be used for treatment of dewatering outflow in addition to direct surface drainage from upstream areas. Please see the description of the sediment basin function in the response to a. above.

c. Please discuss the possibility of groundwater seepage into the basins. Is it possible for the seasonally high-water table elevation exceed the gravel bench elevation?

We consider this unlikely given the elevation of the diversion measures that will be in place prior to construction of the basins. These are intended to intercept and divert groundwater and surface flow from upstream areas of the site and will result in a lowering of the perched groundwater condition currently observed at the site. In addition to the diversion BMPs, the excavation edge drains within the building footprint areas will also provide groundwater relief.

d. Please equip each basin with a staff gauge to monitor the drawdown time.

A staff gauge has been added to the basin details on sheets CE503 and CE504 (**Attachment A**).

e. The modeling results indicate that the detention times of the basins are less than 3 h for the one-yr 24-h storm. Higher detention times may be necessary to improve the sediment removal efficiency. I recommend a valve on each basin's outlet pipe to have the operational flexibility of adjusting the outflow rates.

Agreed, a detail for an outflow valve has been added on detail sheet CE505. The locations of the valves are shown on sheets CE503 and CE504 (**Attachment A**).

9. Will there be designated areas for concrete washout area or other construction activities that may result in unauthorized discharges? Please discuss.

Yes, there will be designated concrete washout areas throughout the site. The exact location of these will be determined by construction scheduling. A detail has been added to sheet CE505 (**Attachment A**).

10. Challenging (e.g. silty) soils which will be disturbed during the construction need to be tested at the beginning of each construction phase for the selection of the most effective flocculant. Solid flocculant blocks can be used in tandem with the temporary sediment basins and/or powder flocculants can be applied directly on the bare soil. Please elaborate on the use of the flocculants in the ESC notes.

The Applicant is willing to consider the use of flocculants to aid in sediment removal, if these can be shown to be effective based on the soil types present at the site. Previous experience with these measures at the Maine General Hospital site in Augusta was not positive. Trials of flocculants staged by a local supplier, both in basins and flumes were abandoned after proving ineffective in aiding the removal of silt/clay fines suspended in construction runoff. We recommend soil testing, as suggested, and limited field trials of flocculants to determine whether these will offer a significant benefit before deploying them at the site.

11. Figure 10: Was "GSF9" mislabeled? Is it supposed to be "GSF 4"?

Yes, the figure was mislabeled. Please see attached revision (**Attachment C**).

12. Please review the designs of the proposed stormwater detention measures: drawdown or release time of the channel protection volume needs to be no less than 24h and no more than 48 h for each measure. This can be achieved by using flow restricting orifices or valves. For instance, the proposed grassed underdrained soil filters do not appear to have any flow restricting device on their outlets (see Sheet CQ-501).

The underdrain piping from the filter systems will include a flow restricting orifice on the discharge into the manhole. The detail sheets have been revised to include this and the tables on the detail sheets have been provided with the size of each device (**Attachment D**). Calculations for orifice sizing have been included as attachments to this response (**Attachments E, F & G**).

13. More information is necessary for the proposed subsurface sand filter (SSF) systems:

a. The applicant must demonstrate that all the conditions given in the Department's proprietary system approval letter for the proposed pre-treatment row are met. The Department's proprietary system approval letters can be accessed from

https://www.maine.gov/dep/land/stormwatr/stormwaterbmps/

The Subsurface Sand Filter Sizing chart that was included in the calculations in Appendix A (page 1B) of the Stormwater Management Plan has been revised to include the pre-treatment row sizing (**Attachment H**). Additionally, details on Sheet CQ-502 (**Attachment D**) have been revised to discuss the access and cleanout ports as well as the geotextile specifications. It should be noted that the subsurface sand filters are treating roof runoff only and therefore expect very little sediment in the isolator row.

b. A descriptive profile drawing including the SSF and associated manholes which will control the inflow to and outflow from the SSF. Weir and orifice details need to be presented.

Details have been added to show inlet and outlet control structures. A table has been provided with elevations of the weir and flow restricting orifice details (**Attachment D**).

14. Sheet CO-501:

a. Please propose a comprehensive engineering oversight language for all the proposed structural stormwater treatment measures. An example is provided below:

"The applicant shall retain the services of a professional engineer to inspect the construction and stabilization of the structural stormwater treatment measures to be built as part of the project. If necessary, the inspecting engineer will interpret the construction plans for the contractor. Once all stormwater treatment structures are constructed and stabilized, the inspecting engineer will notify the department in writing within 30 days to state that the structures have been completed. Accompanying the engineer's notification must be a copy of the test results for any soil fill, aggregate, rocks and the specifications of any geosynthetics used in the construction of the structural treatment measures and a log of the engineer's inspections giving the date of each inspection, the time of each inspection, and the items inspected on each visit."

"General Notes for Stormwater Systems Construction" have been added to plan CQ-503 (**Attachment D**).

15. Pre-development Model

Sheet CW-102: Only northwestern portion of Subcatchment 11 appears to drain into PT6 analysis point. Remaining portion of Subcatchment 11 appears to drain into the stream reach modeled as S9-2 reach. Therefore, the subcatchment can be divided into two separate subcatchments and routed as such.

The subcatchments have been redefined (**Attachment I**) and the *HydroCAD* model adjusted (**Attachments J & K**). Subcatchment 11 drains to Stream 9 which includes the analysis point PT-6 (for offsite flow) as well as the remaining stream reach S9-2. Therefore, this will not significantly impact the discharge of the stream through the existing culvert under Route 1.

16. Post-development Model

Sheet CW-104: Only northwestern portion of Subcatchment 11 appears to drain into PT6 analysis point. Remaining portion of Subcatchment 11 appears to drain into the stream reach modeled as S9-2 reach. Therefore, the subcatchment can be divided into two separate subcatchments and routed as such.

Please review the routing diagram:

Subcatchment 43 and Pond SSF 43 appear not to be routed to an analysis point.

Subcatchment 28 and Reach 28 appear not to be routed to an analysis point.

See response above for CW-102 as same applies for CW-104 (**Attachment I**). Subcatchment 43 and SSF 43 have been revised to be routed to DMH 19 and then to DMH 20. Subcatchment 28 has been revised to be routed to an analysis point below the dam (**Attachment L**). The pre-development model has also been revised to reflect this additional analysis point.

17. Please discuss the potential impact (e.g. channel erosion, incision) of the post-development flow diversion on Stream 9 at and around PT6.

The diversion of the offsite stormwater to PT6 provides little increase in flow at that analysis point due to additional off-site area being drained to that location. The channel being used for diversion is being constructed at a slope of 0.005 feet per foot and will be utilizing stone check dams. There will not be appreciable erosion caused by the channel. In addition, it should be noted that while there is minimal increase in flow to analysis point 6 due to the additional area draining to that location, there is less area contributing further downstream in Stream 9. Comparison of pre- and post- development flows at PT 9 illustrate this point.

18. The applicant analyzed the proposed storm drains for their capacity to handle the 10-yr 24-h peak flows in the post-development HydroCAD (see the catch basins and manholes modeled as HydroCAD "ponds"). The analysis results need to be tabulated showing the flow capacity of each pipe and its 10-yr peak flow and submitted with a narrative summarizing the results.

The Stormwater Management Plan has been revised to include a section on piping capacity with narrative and a table showing the piping sizing for a 10-year, 24-hour storm event (**Attachment M**). In the course of providing calculations, we revised the tables for structures and piping that were included in Appendix B of the Stormwater Management Plan (**Attachment N**).

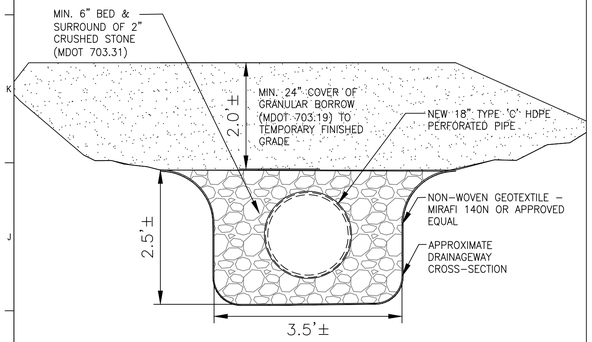
19. Sheet CG-201: Please demonstrate that the proposed culvert can pass the 25-yr, 24-hour storm.

The proposed culvert can pass the 25-year, 24-hour storm; please refer to **Attachment O**.

ATTACHMENT A

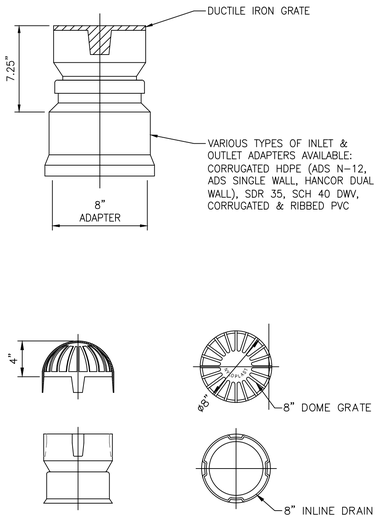
Updated Erosion and Sediment Control Detail Drawings CE502 – CE505

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments



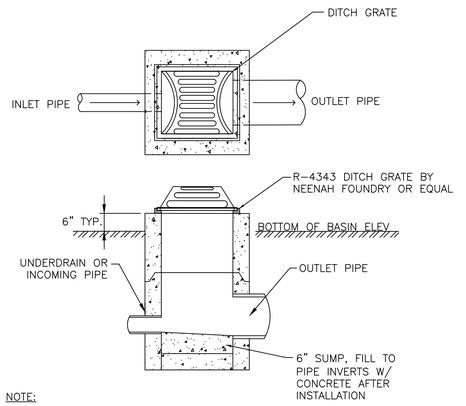
ESC-1 BYPASS CULVERT

NOT TO SCALE



ESC-4 IN-LINE DRAIN INLET

NOT TO SCALE

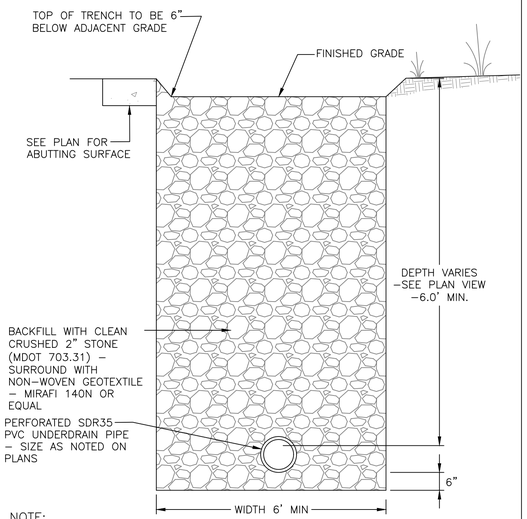


NOTE:

INVERT & RIM ELEVATIONS & PIPE GEOMETRY VARY PER OUTLET STRUCTURE. REFER TO DRAINAGE STRUCTURE TABLE

ESC-6 TYPE 'F DITCH GRATE CATCH BASIN

NOT TO SCALE

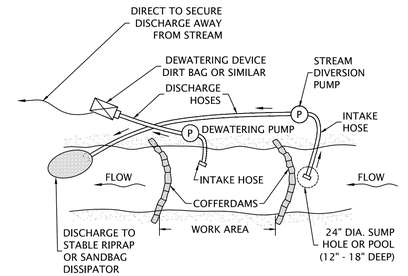


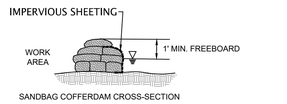
NOTE:

BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

ESC-7 RUNOFF DIVERSION TRENCH

NOT TO SCALE

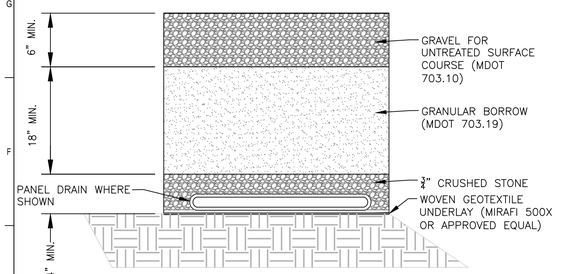




A TEMPORARY STREAM DIVERSION FOR A SHORT DURATION CONSTRUCTION PROJECT PROVIDES A DRY WORKING ENVIRONMENT WHILE MAINTAINING THE STREAM FLOW. A MORE PERMANENT AND ENGINEERED STRUCTURE WILL BE NEEDED FOR CROSSINGS OVER LARGE STREAM OR FOR A LONG CONSTRUCTION PERIOD (GREATER THAN 3 MONTHS). WEATHER REPORTS NEED TO BE MONITORED DAILY TO PREPARE THE PROJECT FOR ANTICIPATED STORM EVENTS. WORK WITH AN ENGINEER FOR DESIGN AND CONSTRUCTION GUIDANCE.

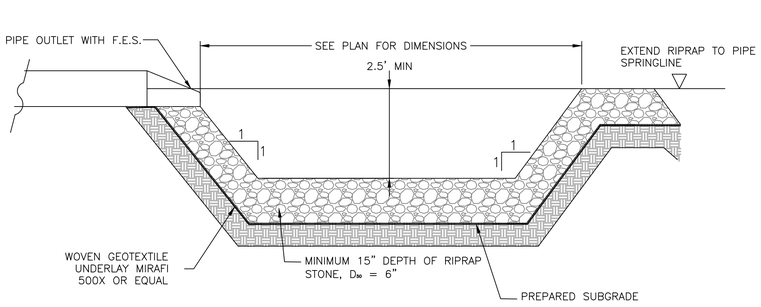
ESC-9 TEMPORARY STREAM DIVERSION

NOT TO SCALE



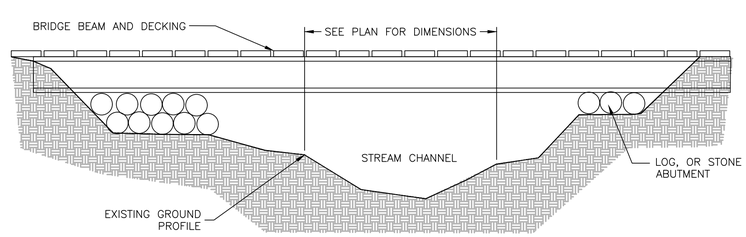
ESC-2 STABILIZED LAYDOWN PAD

NOT TO SCALE



ESC-5 RIPRAP PLUNGE POOL OUTLET

NOT TO SCALE

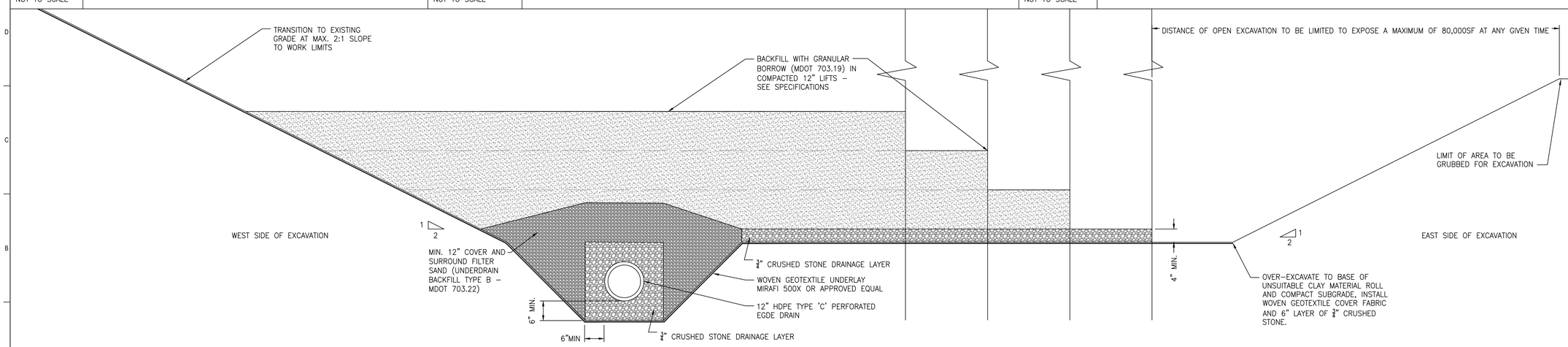


NOTE:

THIS IS A DELEGATED DESIGN ITEM. THE CONTRACTOR SHALL PRODUCE AND SUBMIT STAMPED ENGINEERING DESIGN DRAWINGS,, BASED ON FIELD CONDITIONS, FOR REVIEW PRIOR TO INSTALLATION.

ESC-8 TEMPORARY BRIDGE SCHEMATIC

NOT TO SCALE



ESC-3 OVER-EXCAVATION AND STABILIZATION OF BUILDING PAD

NOT TO SCALE

NOT TO SCALE

REV	DESCRIPTION	DATE
1	PER MDEP REVIEW COMMENTS	7-18-19
0	ISSUED FOR PERMIT	5-14-19

ISSUED FOR PERMIT
5-14-19

CURRENT ISSUE STATUS:

TRUE NORTH:

STATE OF MAINE
ANDREW D. JOHNSTON
NO. 9994
9-18-19
LICENSED
PROFESSIONAL ENGINEER

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ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

Ransom Consulting Engineers and Scientists
400 Commercial Street, Suite 400
Portland, Maine 04101

NORDIC AQUAFARMS
285 NORTHPORT AVENUE

BELFAST, MAINE

EROSION & SEDIMENT CONTROL DETAILS

SHEET TITLE:

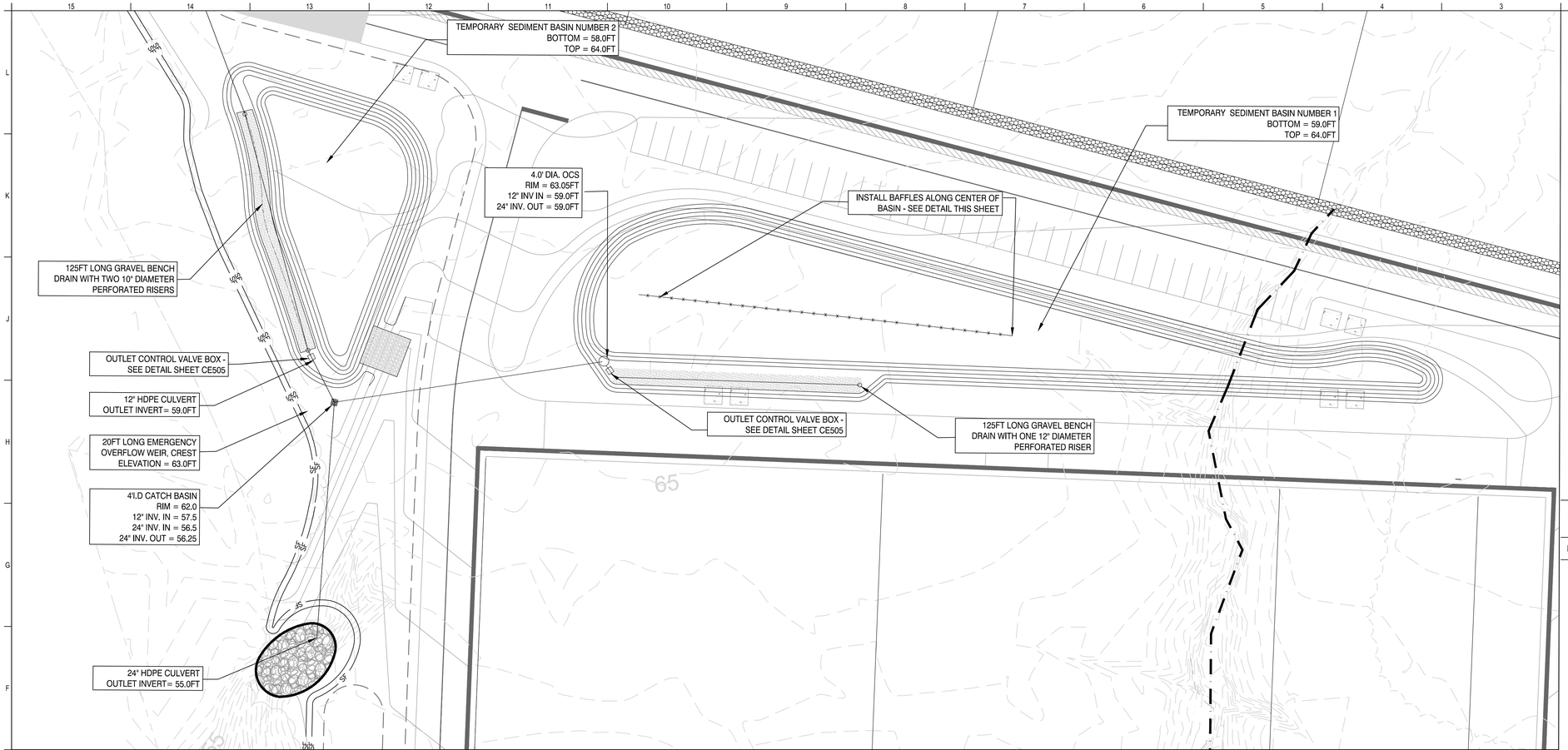
0 1/2" 1" 2" 3"

SCALE: AS SHOWN

PROJECT MANAGER:	ADB	PROJECT NO:	18076
A/E OF RECORD:			
JOB CAPTAIN:	SP		
DRAWN BY:	WSM		
SMRT FILE:	CE501-18076	SHEET No.	CE502

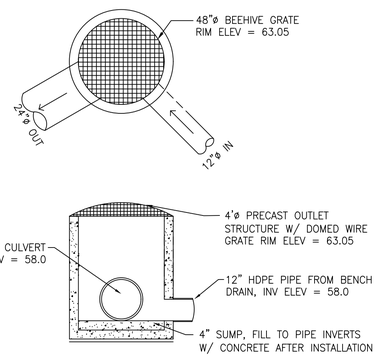
NOT FOR CONSTRUCTION

24x36



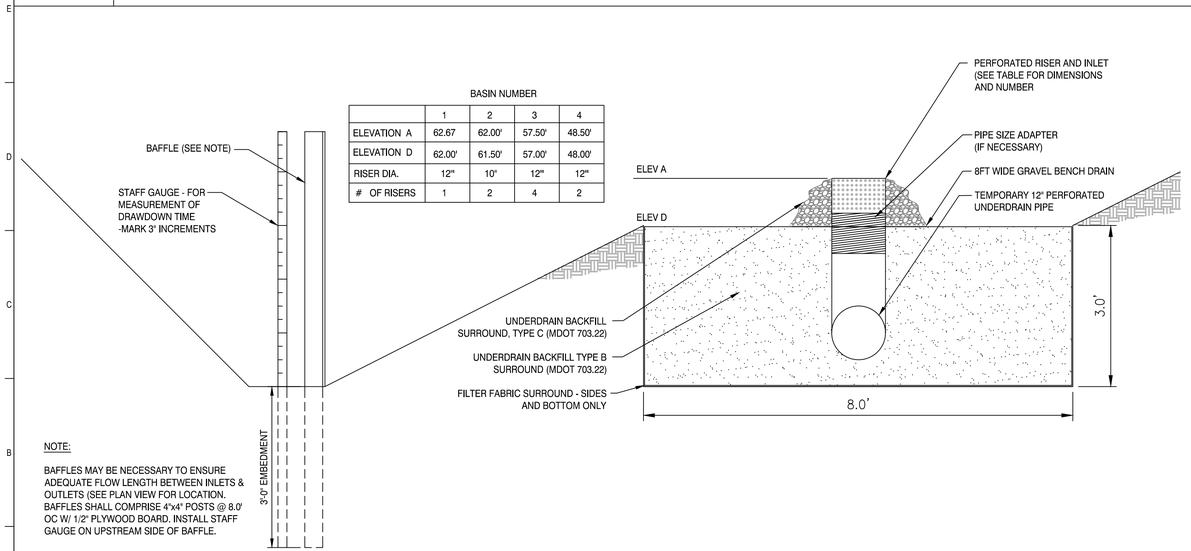
ESC–10 | SEDIMENT BASIN 1 AND SEDIMENT BASIN 2 PLAN VIEW

1"=30'



ESC–12 | SEDIMENT BASIN OUTLET CONTROL STRUCTURE

NOT TO SCALE



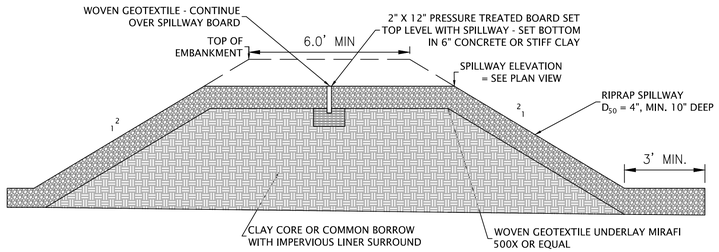
	1	2	3	4
ELEVATION A	62.67	62.00'	57.50'	48.50'
ELEVATION D	62.00'	61.50'	57.00'	48.00'
RISER DIA.	12"	10"	12"	12"
# OF RISERS	1	2	4	2

NOTE:

BAFFLES MAY BE NECESSARY TO ENSURE ADEQUATE FLOW LENGTH BETWEEN INLETS & OUTLETS (SEE PLAN VIEW FOR LOCATION. BAFFLES SHALL COMPRISE 4'x4" POSTS @ 8.0' OC W/ 1/2" PLYWOOD BOARD. INSTALL STAFF GAUGE ON UPSTREAM SIDE OF BAFFLE.

ESC–11 | SEDIMENT BASIN GRAVEL BENCH DRAIN OUTLET

NOT TO SCALE



ESC–13 | SEDIMENT BASIN EMERGENCY OVERFLOW WEIR

NOT TO SCALE

REV	DESCRIPTION	DATE
1	PER MDEP REVIEW COMMENTS	7-18-19
0	ISSUED FOR PERMIT	5-14-19

ISSUED FOR PERMIT
5-14-19

CURRENT ISSUE STATUS:

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NORDIC AQUAFARMS
285 NORTHPORT AVENUE

BELFAST, MAINE

EROSION & SEDIMENT CONTROL DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE: AS SHOWN

PROJECT MANAGER:	ADB
A/E OF RECORD:	
JOB CAPTAIN:	SP
DRAWN BY:	WSM
SMRT FILE:	CE501-18076

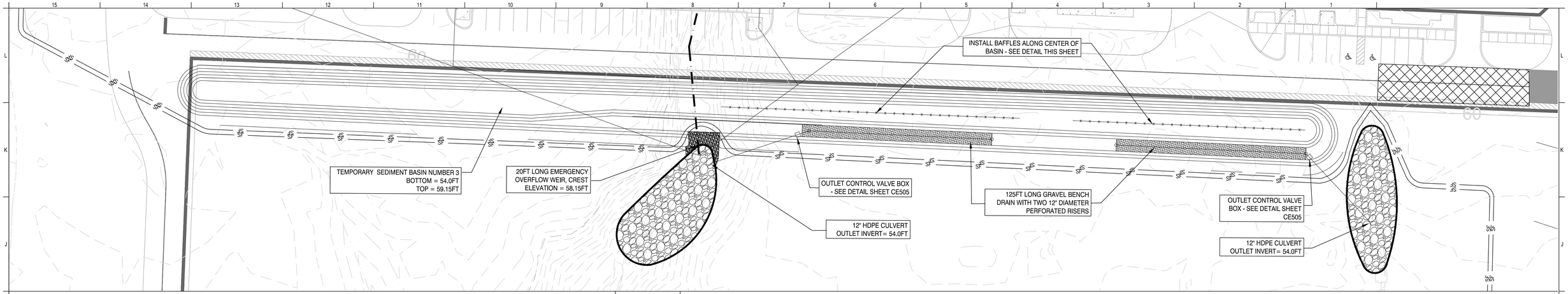
PROJECT NO: 18076

CE503

SHEET No.

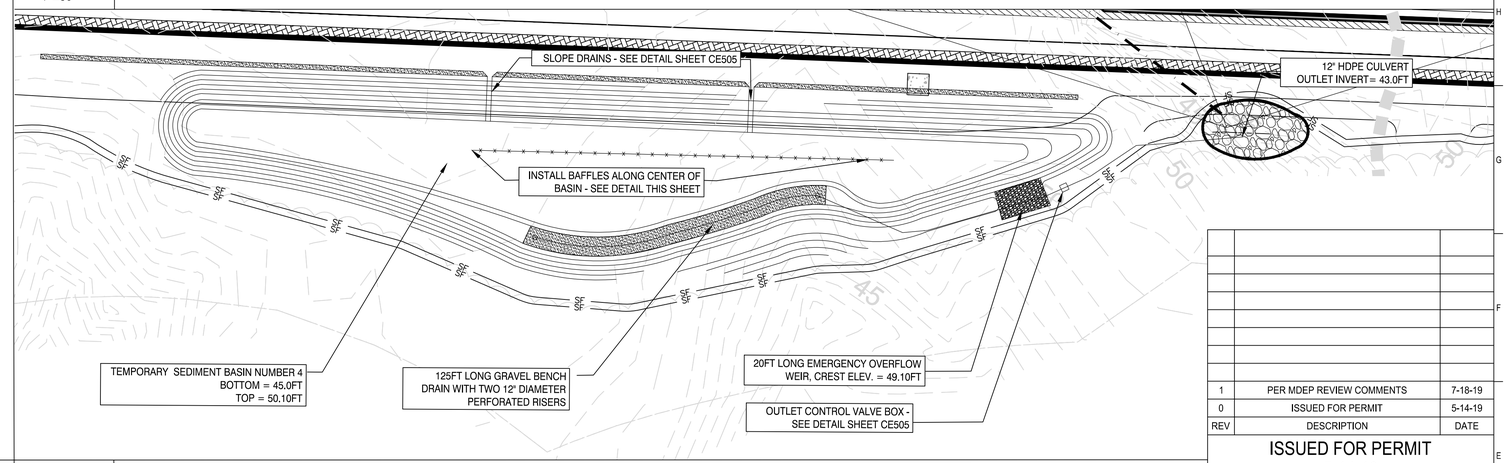
NOT FOR CONSTRUCTION

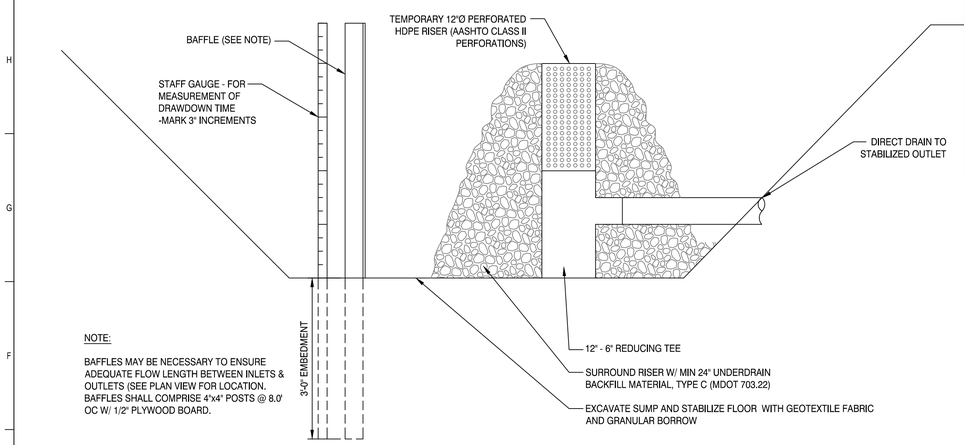
24x36



ESC–16 | SEDIMENT BASIN 3 PLAN VIEW

1"=30'





NOTE:

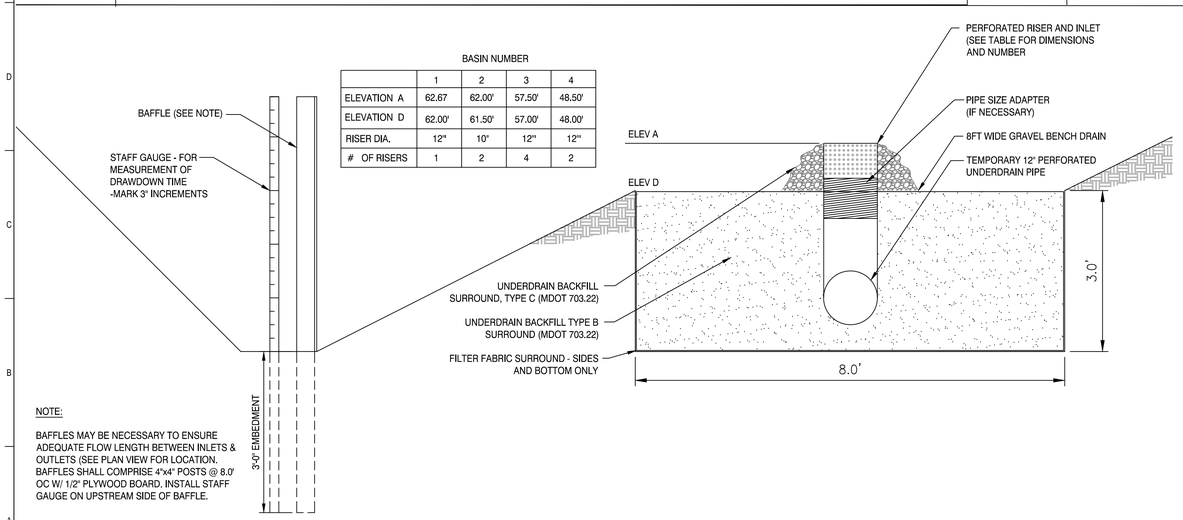
BAFFLES MAY BE NECESSARY TO ENSURE ADEQUATE FLOW LENGTH BETWEEN INLETS & OUTLETS (SEE PLAN VIEW FOR LOCATION. BAFFLES SHALL COMPRISE 4"x4" POSTS @ 8.0' OC W/ 1/2" PLYWOOD BOARD.

ESC–14 | TEMPORARY SEDIMENT SUMP OUTLET

NOT TO SCALE | FOR CONTRACTOR USE AT LOCATIONS TO BE DETERMINED DURING CONSTRUCTION FOR SMALL DE–WATERING AREAS (LESS THAN 10,000SF)

ESC–17 | SEDIMENT BASIN 4 PLAN VIEW

1"=30'

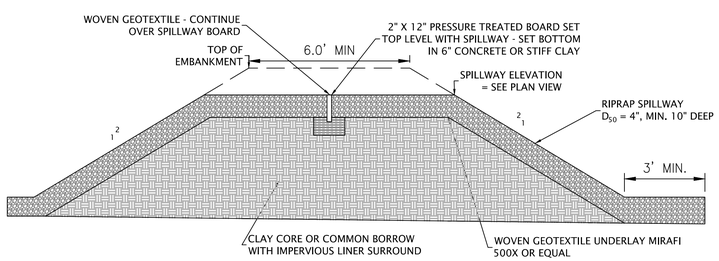


NOTE:

BAFFLES MAY BE NECESSARY TO ENSURE ADEQUATE FLOW LENGTH BETWEEN INLETS & OUTLETS (SEE PLAN VIEW FOR LOCATION. BAFFLES SHALL COMPRISE 4"x4" POSTS @ 8.0' OC W/ 1/2" PLYWOOD BOARD. INSTALL STAFF GAUGE ON UPSTREAM SIDE OF BAFFLE.

ESC–15 | SEDIMENT BASIN GRAVEL BENCH DRAIN OUTLET

NOT TO SCALE | SEE PLAN VIEW THIS SHEET FOR LOCATIONS AND LENGTHS



ESC–19 | SEDIMENT BASIN EMERGENCY OVERFLOW WEIR

NOT TO SCALE | SEE PLAN VIEW THIS SHEET FOR LOCATIONS AND LENGTHS

REV	DESCRIPTION	DATE
1	PER MDEP REVIEW COMMENTS	7-18-19
0	ISSUED FOR PERMIT	5-14-19

ISSUED FOR PERMIT
5-14-19
CURRENT ISSUE STATUS:

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NORDIC AQUAFARMS
285 NORTHPORT AVENUE

BELFAST, MAINE

EROSION & SEDIMENT
CONTROL DETAILS

SHEET TITLE:

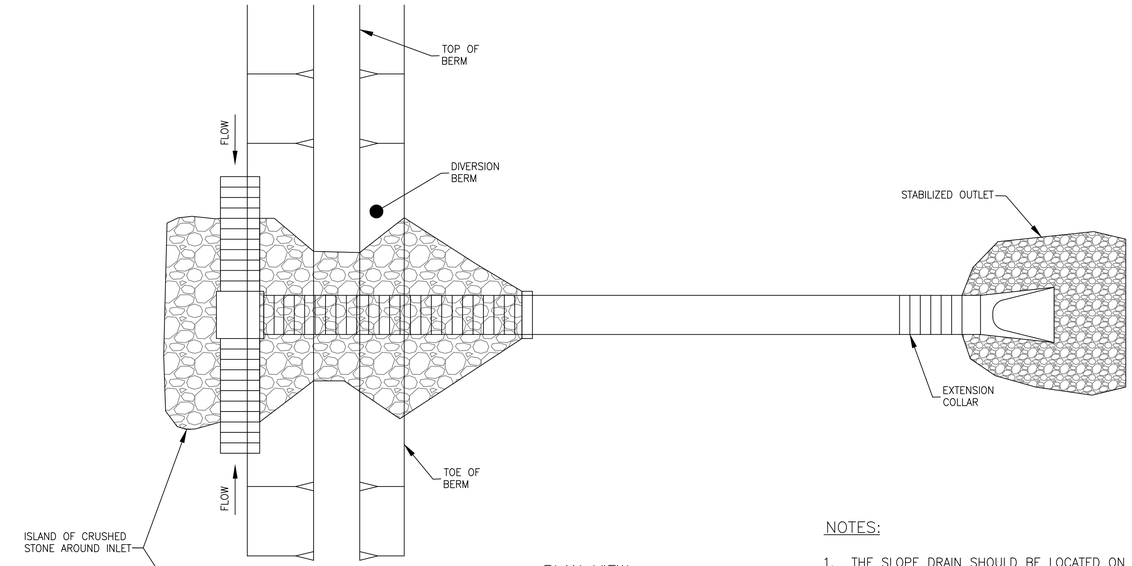
0 1/2" 1" 2" 3"

SCALE: AS SHOWN

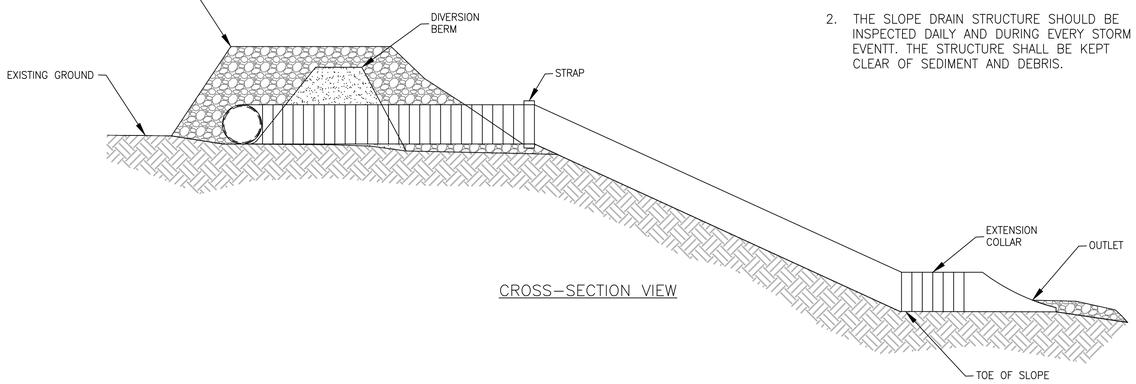
PROJECT MANAGER:	ADB	PROJECT NO:	18076
A/E OF RECORD:			
JOB CAPTAIN:	SP		
DRAWN BY:	WSM		
SMRT FILE:	CE501-18076	SHEET No.	CE504

NOT FOR CONSTRUCTION

24x36



PLAN VIEW



CROSS–SECTION VIEW

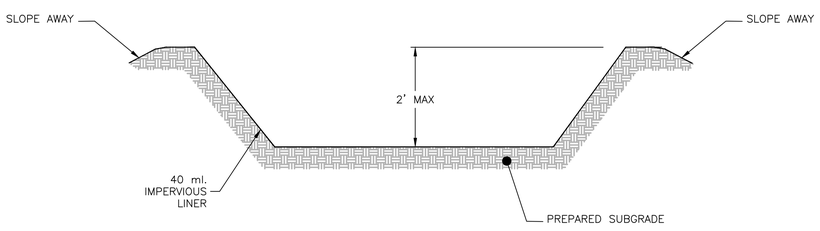
NOTES:

1. THE SLOPE DRAIN SHOULD BE LOCATED ON UNDISTURBED SOIL OR WELL COMPACTED FILL. UPON STABILIZATION OF THE SLOPE, A TEMPORARY SLOPE DRAIN SHALL BE REMOVED.
2. THE SLOPE DRAIN STRUCTURE SHOULD BE INSPECTED DAILY AND DURING EVERY STORM EVENTT. THE STRUCTURE SHALL BE KEPT CLEAR OF SEDIMENT AND DEBRIS.

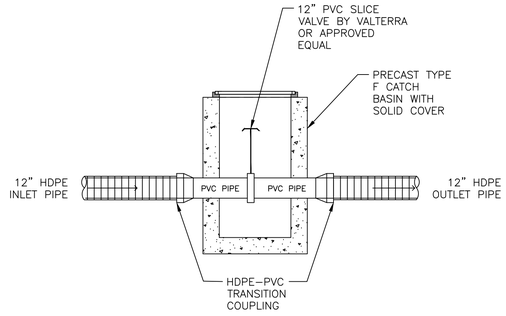
ESC–20	TEMPORARY SLOPE DRAIN
NOT TO SCALE	

NOTES:

1. ALL CONCRETE WASHOUT AREAS SHALL BE INSPECTED WEEKLY AND AFTER RAIN EVENTS.
2. DIMENSIONS OF WASHOUT AREAS TO WILL VARY ACCORDING TO ANTICIPATED LOADING
3. CONCRETE WASHOUT AREAS SHALL BE FENCED WHEN UNATENDED.



ESC–21	CONCRETE WASHOUT AREA
NOT TO SCALE	



ESC–22	SEDIMENT BASIN OUTLET VALVE BOX
NOT TO SCALE	

REV	DESCRIPTION	DATE
1	PER MDEP REVIEW COMMENTS	7-18-19
0	ISSUED FOR PERMIT	5-14-19

ISSUED FOR PERMIT
5-14-19
CURRENT ISSUE STATUS:

TRUE NORTH:

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Portland, Maine 04101

NORDIC AQUAFARMS
285 NORTHPORT AVENUE
BELFAST, MAINE

EROSION & SEDIMENT CONTROL DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"
SCALE: AS SHOWN

PROJECT MANAGER:	ADB	PROJECT NO:	18076
A/E OF RECORD:			
JOB CAPTAIN:	SP		
DRAWN BY:	WSM		
SMRT FILE:	CE501-18076	SHEET No.	CE505

NOT FOR CONSTRUCTION

24x36

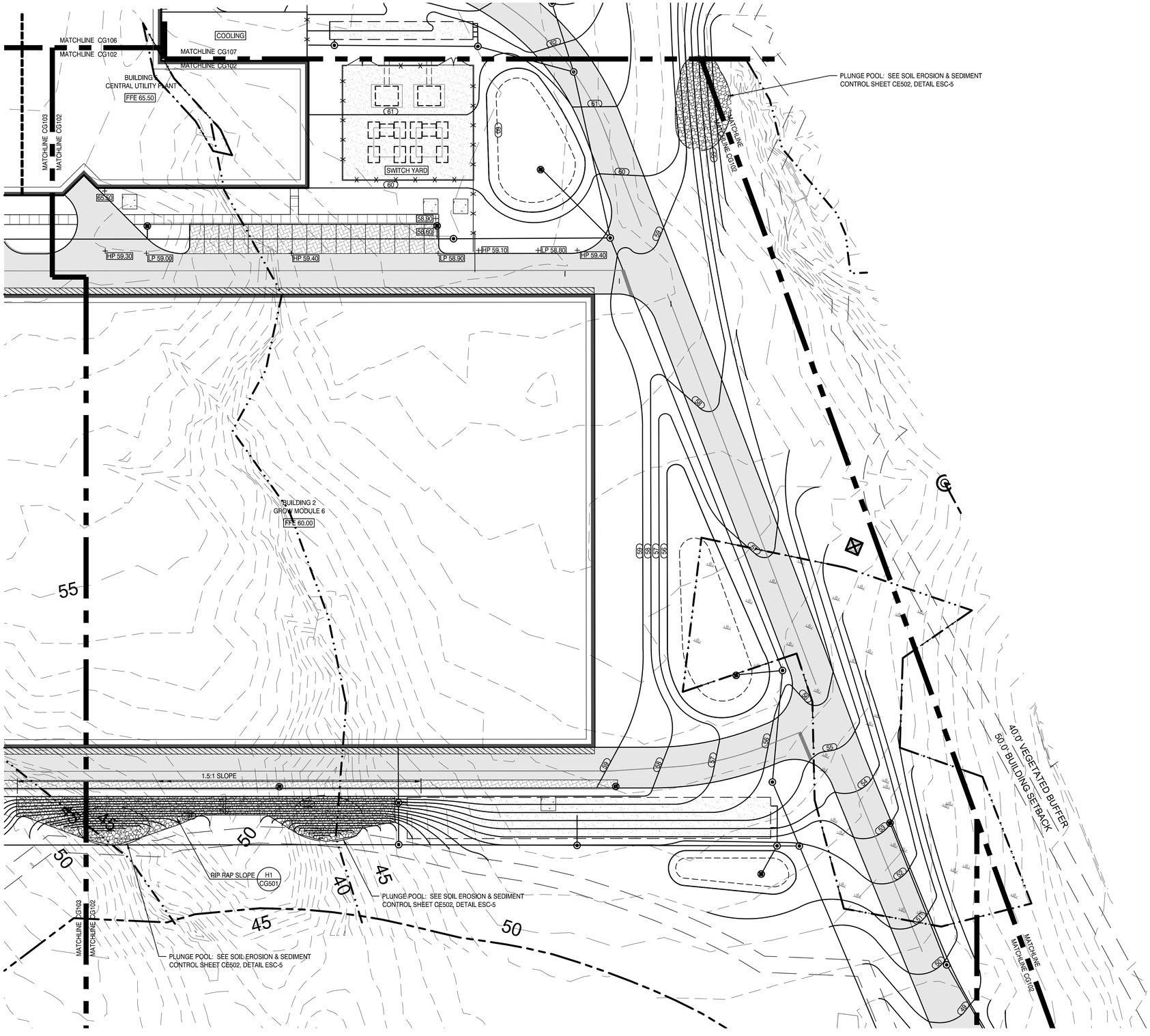
ATTACHMENT B

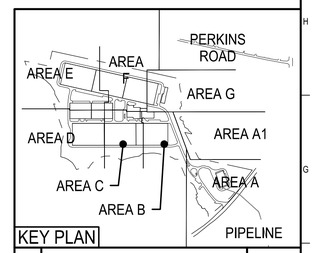
Updated Gradings Plans CG102 & CG104

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

NOTE:

SEE CS- DRAWING SERIES FOR STORMWATER SYSTEM INFORMATION.





KEY PLAN

REV	DESCRIPTION	DATE
2	RESPONSE TO ADDITIONAL DEP QUESTIONS	7-25-19
1	REISSUED FOR PERMIT	7-03-19
0	ISSUED FOR PERMIT	5-14-19

RESPONSE TO DEP
7-25-19

CURRENT ISSUE STATUS:

TRUE NORTH:

LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1857
STATE OF MAINE
7/25/19

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Portland, Maine 04101

NORDIC AQUAFARMS
285 NORTHPORT AVENUE

BELFAST, MAINE

GRADING PLAN
AREA B

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	ADB	PROJECT NO:	18076
A/E OF RECORD:			
JOB CAPTAIN:	SP	CG102	
DRAWN BY:	WSM		
SMRT FILE:	CG102-18076	SHEET No.	

NOT FOR CONSTRUCTION

24x36

MATCHLINE CG105
MATCHLINE CG104

PLUNGE POOL: SEE SOIL EROSION & SEDIMENT CONTROL SHEET CE502, DETAIL ESC-5

BUILDING 3
SMOLT PHASE 2
FFE 60.00

BUILDING 3
SMOLT PHASE 1
FFE 60.00

MATCHLINE CG104
MATCHLINE CG103

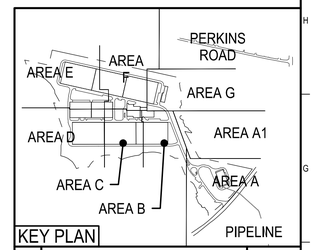
BUILDING 2
GROW MODULE 4
FFE 60.00

PLUNGE POOL: SEE SOIL EROSION & SEDIMENT CONTROL SHEET CE502, DETAIL ESC-5

40.0' VEGETATED BUFFER
50.0' BUILDING SETBACK

NOTE:

SEE CS- DRAWING SERIES FOR STORMWATER SYSTEM INFORMATION.



KEY PLAN

REV	DESCRIPTION	DATE
2	RESPONSE TO ADDITIONAL DEP QUESTIONS	7-25-19
1	REISSUED FOR PERMIT	7-03-19
0	ISSUED FOR PERMIT	5-14-19

RESPONSE TO DEP
7-25-19

CURRENT ISSUE STATUS:

TRUE NORTH

LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1857
STATE OF MAINE
7/25/19

TRUE NORTH:

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Portland, Maine 04101

NORDIC AQUAFARMS
285 NORTHPORT AVENUE

BELFAST, MAINE

GRADING PLAN
AREA D

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	ADB	PROJECT NO:	18076
A/E OF RECORD:			
JOB CAPTAIN:	SP		
DRAWN BY:	WSM		
SMRT FILE:	CG104-18076	SHEET No.	CG104

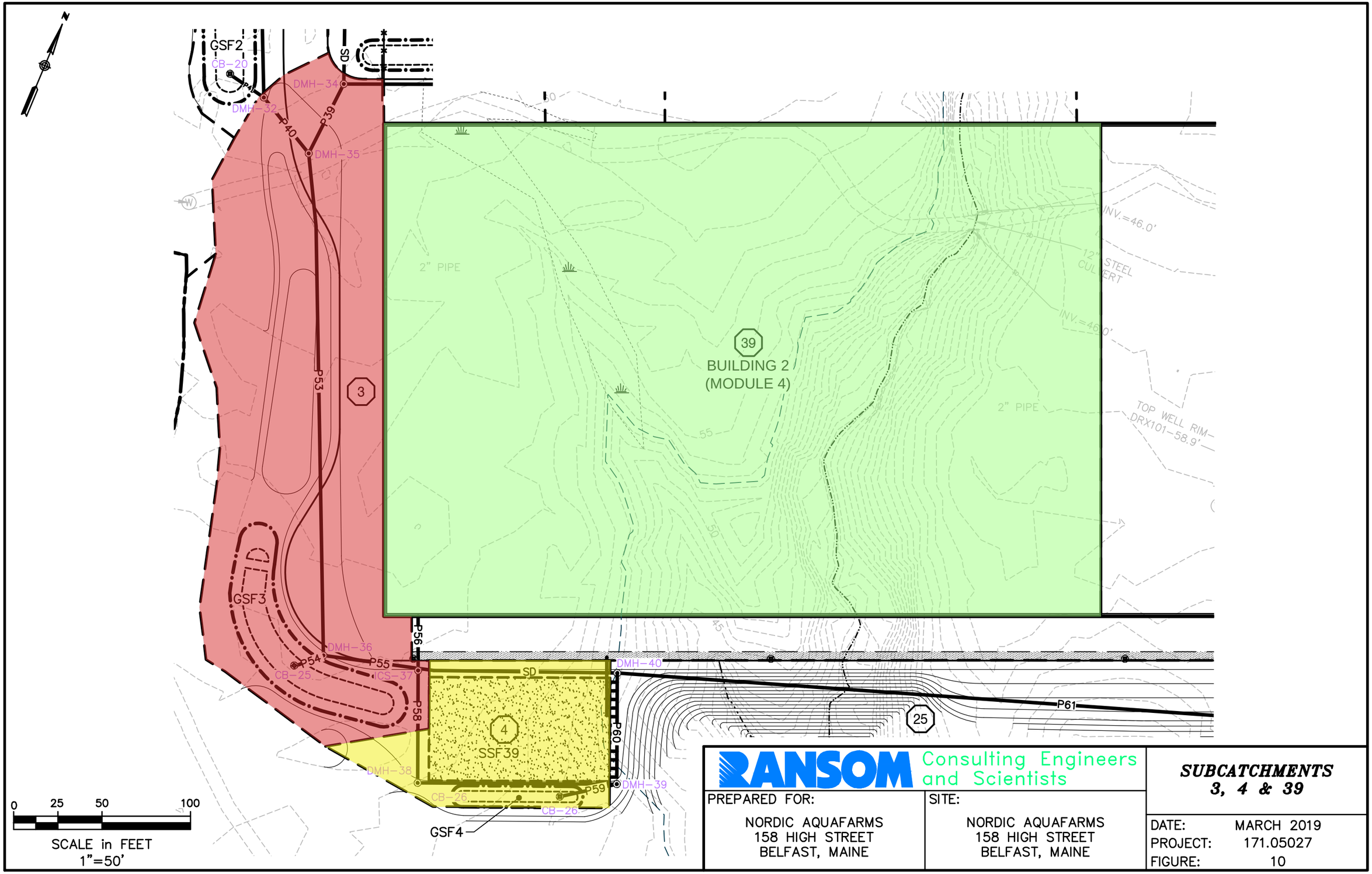
NOT FOR CONSTRUCTION

24x36

ATTACHMENT C

Updated Figure 10 – Subcatchments 3, 4 & 39

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments



RANSOM Consulting Engineers and Scientists

PREPARED FOR:	SITE:
NORDIC AQUAFARMS 158 HIGH STREET BELFAST, MAINE	NORDIC AQUAFARMS 158 HIGH STREET BELFAST, MAINE

SUBCATCHMENTS 3, 4 & 39

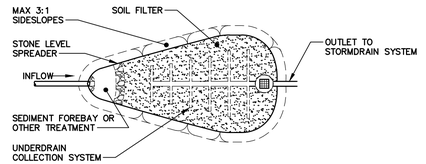
DATE: MARCH 2019
PROJECT: 171.05027
FIGURE: 10

ATTACHMENT D

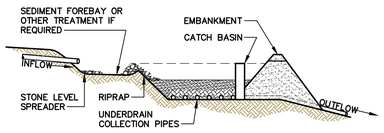
Updated Stormwater Systems Construction Detail Drawings CQ501-CQ503

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

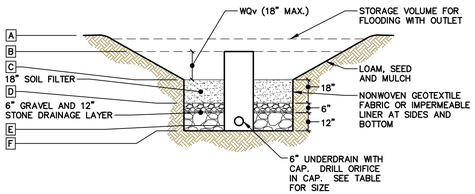
Ransom Consulting, Inc.
Project 171.05027.008



PLAN VIEW



CROSS-SECTION

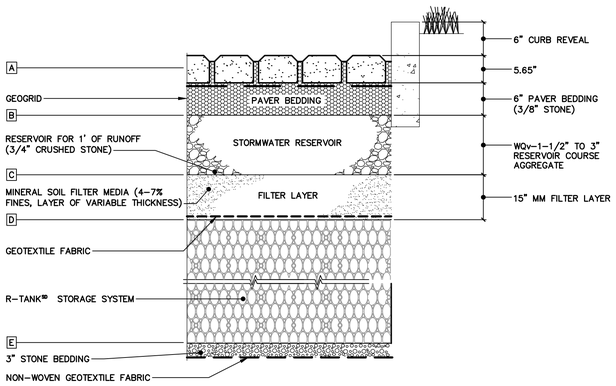


Grassed Underdrained Soil Filter Elevations (ft)

GSF	1A	1B	2	3	4	5	6	7	8	9	11	12	13	15	16	18A	18B	24
A	68.00	67.50	59.00	57.00	56.00	55.00	50.00	56.00	58.50	64.00	63.00	62.50	63.00	65.00	65.00	58.00	58.00	42.00
B	66.30	66.90	57.60	55.75	55.10	54.60	48.20	54.70	57.60	62.95	62.00	61.90	62.00	63.70	64.40	57.40	57.90	40.60
C	65.75	65.50	56.75	54.75	54.50	54.00	47.50	54.00	56.50	62.00	61.00	61.00	61.00	63.50	63.50	57.00	57.00	39.75
D	64.25	64.00	55.25	53.25	53.00	52.50	46.00	52.50	55.00	60.50	59.50	59.50	59.50	62.00	62.00	55.50	55.50	38.25
E	63.00	62.75	54.00	52.00	51.75	51.25	44.75	51.25	53.75	59.25	58.25	58.25	58.25	60.75	60.75	54.25	54.25	37.00
F	62.75	62.50	53.75	51.75	51.50	51.00	44.50	51.00	53.50	59.00	58.00	58.00	58.00	60.50	60.50	54.00	54.00	36.75
Orifice Size (in)	0.5	0.5	0.6	0.6	0.3	0.3	0.4	0.6	0.8	0.6	0.7	0.4	0.8	0.3	0.5	0.4	0.3	0.6

GRASSED UNDERDRAIN SOIL FILTER

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016

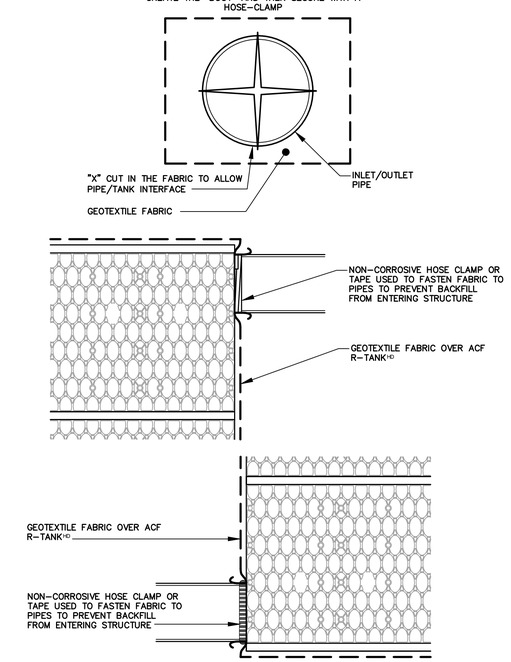


Manmade Pervious Paver Elevations (ft)

MPP	10	14	19	21	22	26	30	50
A	65.40	60.25	58.90	58.80	58.82	38.29	35.00	58.65
B	64.43	59.28	57.93	57.83	57.85	37.32	34.03	57.68
C	63.53	58.28	57.13	56.78	57.10	36.67	33.03	56.63
D	62.28	57.03	55.88	55.53	55.85	35.42	31.78	55.38
E	61.48	56.23	55.08	54.73	55.05	34.62	30.98	54.58
F	61.23	55.98	54.83	54.48	54.80	34.37	30.73	54.33
Orifice Size (in)	0.7	0.4	0.4	0.3	0.4	0.2	0.6	0.6

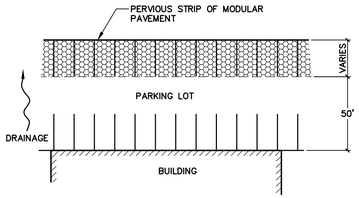
MANMADE PERVIOUS PAVERS CROSS-SECTION

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016



R-TANK^{SD} TYPICAL TANK INLET/OUTLET

SCALE: N.T.S. SOURCE: 151.06094 LAST UPDATED: 04/2019

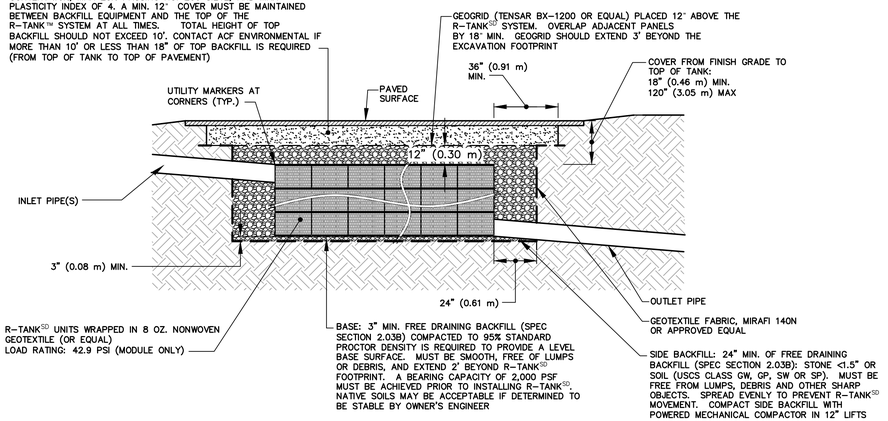


MANMADE PERVIOUS PAVERS-PLAN VIEW

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016

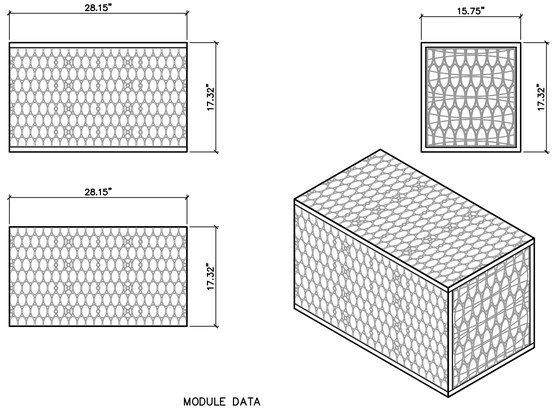
TOTAL COVER: 18" MINIMUM AND 120" MAXIMUM. FIRST 12" MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B): STONE <1.5" OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT<10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12" COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 10'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 10' OR LESS THAN 18" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT)

NOTES:
- FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK^{SD} MODULE SHEET
- INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF H20 LOADING PER THE 1983, 13TH EDITION OF THE AMERICAN ASSOCIATION OF STATE, HIGHWAY AND TRAFFIC OFFICIALS (AASHTO) STANDARD SPECIFICATIONS
- PRE-TREATMENT STRUCTURES NOT SHOWN



R-TANK^{SD}-HS-20 LOADS

SCALE: N.T.S. SOURCE: 151.06094 LAST UPDATED: 04/2019

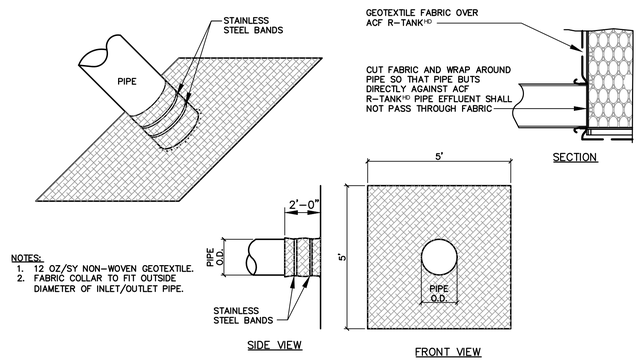


MODULE DATA

GEOMETRY:	LENGTH = 28.15 IN. (715 MM) WIDTH = 15.75 IN. (400 MM) HEIGHT = 17.32 IN. (440 MM) STORAGE VOLUME = 4.22 CF (119 L) VOID INTERNAL VOLUME: 95% VOID SURFACE AREA: 90%	LOAD RATING: MATERIAL:	40 PSI, (MODULE ONLY) HS25, (WITH ACF COVER SYSTEM) 85% RECYCLED POLYPROPYLENE

R-TANK^{SD}-SINGLE MODULE DETAIL

SCALE: N.T.S. SOURCE: 151.06094 LAST UPDATED: 04/2019



FABRIC PIPE BOOT FOR R-TANK^{SD}

SCALE: N.T.S. SOURCE: 151.06094 LAST UPDATED: 04/2019

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NORDIC AQUAFARMS
MULTIPHASE PROJECT

158 HIGH STREET, BELFAST, MAINE

CONSTRUCTION DETAILS

PROJECT MANAGER: MPM
PROJECT NO: 171.05027
DRAWN BY: JAR

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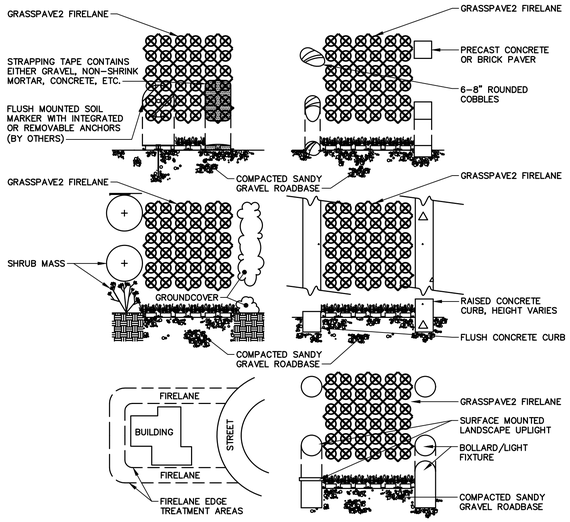
8/7/2019 1:43 PM171.05027D.DWG

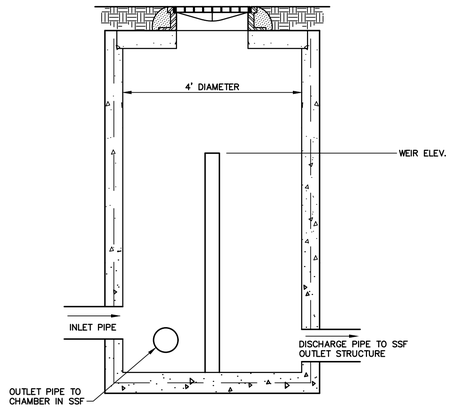
24x36



NOTE:
THIS DETAIL IS SCHEMATIC IN NATURE. DESIGNER SHALL SPECIFY SPACING AND DESIGN OF EDGE TREATMENTS. SPACING WILL VARY WITH TURF TYPE, SLOPE, FIRE DEPARTMENT REQUIREMENTS, ETC.

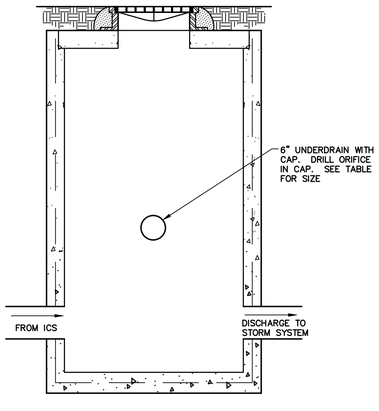
GRASSPAVE2 FIRELANE BY INVISIBLE STRUCTURES, INC.

SCALE: N.T.S. SOURCE: INVISIBLE STRUCTURES, INC. LAST UPDATED: 05/2019



SSF INLET CONTROL STRUCTURE

SCALE: N.T.S.



SSF OUTLET MANHOLE

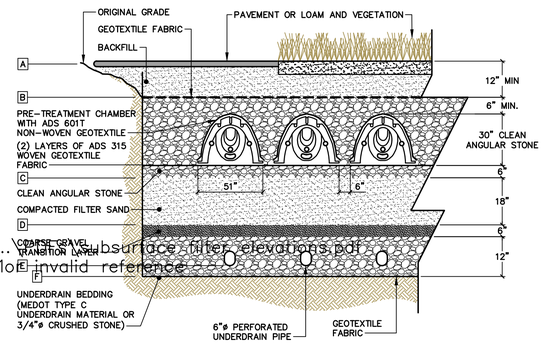
SCALE: N.T.S.

		SSF Inlet Control Structure							SSF Outlet Manhole						
		ICS Inlet		To SSF		Weir	ICS Discharge		From ICS		Underdrain from SSF			Discharge Pipe	
Filter	WQv (cf)	Pipe diam. (in.)	Pipe elev. (ft.)	Pipe diam. (in)	Pipe elev. (ft.)	Top Elev. (ft.)	Pipe diam. (in)	Pipe elev. (ft.)	Pipe diam. (in.)	Pipe elev. (ft.)	Pipe diam. (in)	Pipe elev. (ft.)	Orifice diam.	Pipe diam. (in)	Pipe elev. (ft.)
SSF 36	9380	18	64.60	12	63.15	66.16	18	63.50	18	59.87	6	60.55	1.2	18	59.84
SSF 37	9380	18	62.15	12	62.00	64.18	18	61.70	18	57.73	6	58.60	1.2	18	57.71
SSF 38	9380	18	60.95	12	60.75	62.95	18	60.70	24	54.61	6	57.37	1.2	24	54.59
SSF 39	9380	18	52.50	12	52.80	55.00	18	52.50	18	50.92	6	49.42	1.2	18	50.90
SSF 40	9380	18	53.50	12	52.80	55.37	18	52.20	30	46.21	6	49.42	1.2	30	46.19
SSF 41	9380	18	47.50	12	46.80	49.00	18	46.20	36	42.35	6	43.42	1.2	36	42.33
SSF 42	1000	8	58.85	8	58.15	60.50	8	58.00	8	57.39	6	55.52	0.4	12	55.40
SSF 43	1582	12	57.82	8	57.81	60.25	12	57.80	12	56.97	6	54.50	0.5	12	54.48

SSF	36	37	38	39	40	41	42	43
A	68.10	66.68	65.45	57.00	57.00	51.00	63.00	61.90
B	66.27	64.85	63.62	55.67	55.67	49.67	61.67	60.90
C	62.77	61.35	60.12	52.17	52.17	46.17	58.17	57.40
D	61.27	59.85	58.62	50.67	50.67	44.67	56.67	55.90
E	60.02	58.60	57.37	49.42	49.42	43.42	55.42	54.65
F	59.77	58.35	57.12	49.17	49.17	43.17	55.17	54.40
Size	5 rows x 31 chambers	2 rows x 72 chambers	2 rows x 72 chambers	12 rows x 15 chambers	4 rows x 39 chambers	5 rows x 31 chambers	3 rows x 6 chambers	2 rows x 12 chambers

SSF ELEVATIONS

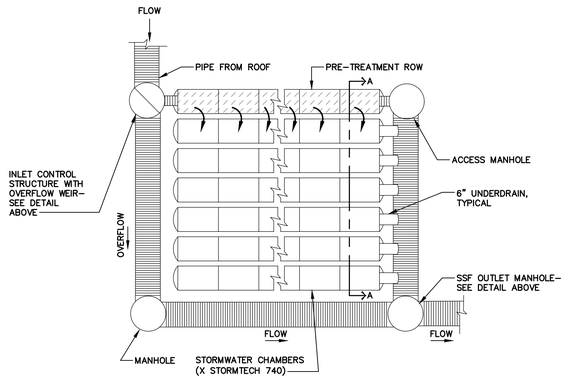
SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 08/2019



SUBSURFACE SAND FILTER - SECTION A-A

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016

File: ..\..\subsurface filter elevations.pdf
Missing or invalid reference



PRETREATMENT ROW - PLAN VIEW

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016

1. ACCESS STRUCTURES SHALL BE PROVIDED ON THE PRE-TREATMENT ROW OF EACH SYSTEM AT 50 FOOT INTERVALS.
2. WHEN MULTIPLE PRE-TREATMENT ROWS ARE REQUIRED, ACCESS STRUCTURES SHALL BE PROVIDED AT THE BEGINNING, END AND AT 50 FOOT INTERVALS ALONG THE ROW.

SUBSURFACE SAND FILTER NOTES

SCALE: N.T.S.

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PROJECT MANAGER: MPM PROJECT NO: 171.05027
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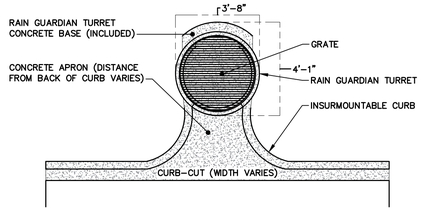
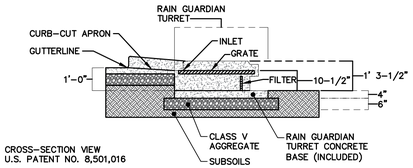


PLAN VIEW
U.S. PATENT NO. 8,501,016



CROSS-SECTION VIEW
U.S. PATENT NO. 8,501,016

SPECIFICATIONS:

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS).
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4 PERCENT TO 8 PERCENT BY VOLUME).
3. MANUFACTURED AND DESIGNED TO ASTM C858.
4. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
5. SOIL UNDER BASE TO BE COMPACTED TO 95 PERCENT STANDARD PROCTOR.
6. TWO-PIECE LIGHT-DUTY GALVANIZED GRATE (34.5 LBS/PIECE) FOR 541 LB CONCENTRATED LOAD OR 309 LB/SQFT UNIFORM LOAD.
7. TWO-PIECE HEAVY-DUTY GALVANIZED GRATE (77.5 LBS/PIECE) FOR 2,456 LB CONCENTRATED LOAD OR 1,404 LB/SQFT UNIFORM LOAD.
8. USE EXPANSION JOINT MATERIAL BETWEEN TURRET AND BIORETENTION INLET.

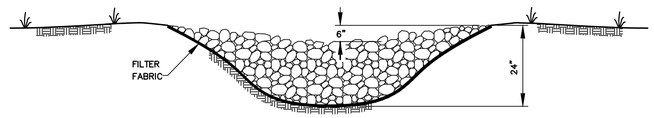
RAIN GUARDIAN - TURRET - TYPICAL DETAIL

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016

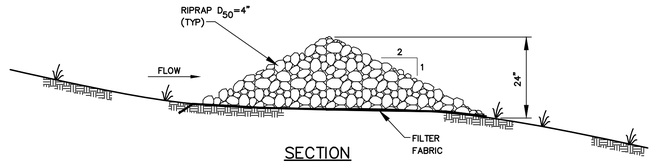
1. THE APPLICANT SHALL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE STRUCTURAL STORMWATER TREATMENT MEASURES TO BE BUILT AS PART OF THE PROJECT. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPET THE CONSTRUCTION PLANS FOR THE CONTRACTOR.
2. ONCE ALL STORMWATER TREATMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30-DAYS TO STATE THE STRUCTURES HAVE BEEN COMPLETED.
3. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A COPY OF THE TEST RESULTS FOR ANY SOIL FILL, AGGREGATE, ROCKS AND THE SPCIFICATIONS OF ANY GEOSYNTHETICS USED IN THE CONSTRUCTION OF THE STRUCTURAL TREATMENT MEASURES AND A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INPSECTION, THE TIME OF THE INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT.

GENERAL NOTES FOR STORMWATER SYSTEMS CONSTRUCTION

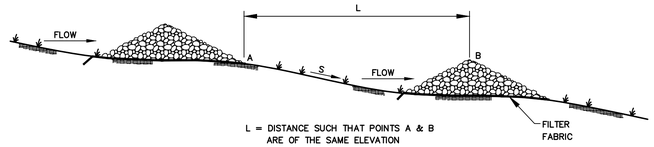
SCALE: N.T.S.



ELEVATION



SECTION



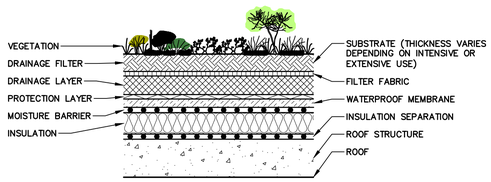
L = DISTANCE SUCH THAT POINTS A & B ARE OF THE SAME ELEVATION

S = SLOPE

S (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

STONE CHECK DAM

SCALE: N.T.S. SOURCE: MDEP LAST UPDATED: 05/2016



GROWING MEDIUM: THE VEGETATION SUPPORT COURSE SHOULD ACCOMMODATE A DENSE ROOT STOCK AND HAVE ALL THE PHYSICAL, CHEMICAL, AND BIOLOGICAL PROPERTIES NEEDED FOR PLANT GROWTH. AVAILABLE MATERIALS INCLUDE:

- SOIL MIXTURES – IMPROVED TOP AND UNDERLYING SOIL.
- AGGREGATE MIXTURES – MINERAL AGGREGATE MIXTURES WITH HIGH OR LOW ORGANIC CONTENT OR WITH AN OPEN-PORE GRANULAR STRUCTURE WITH NO ORGANIC CONTENT.
- SUBSTRATE BOARDS – BOARDS MADE FROM MODIFIED FOAM MATERIALS OR MINERAL FIBERS.
- VEGETATION MATTING – MATTING WITH MINERAL/ORGANIC AGGREGATE MIXTURES. THE ORGANIC CONTENT OF THE VEGETATION SUPPORT COURSE SHOULD BE AS SHOWN ON TABLE 7.6.1.

TABLE 7.6.1 – GROWING MEDIUM		
TYPE OF GREENING	SUBSTRATE DENSITY	ORGANIC CONTENT
INTENSIVE GREENING	<0.8 >0.8	<12% BY MASS <6% BY MASS
EXTENSIVE GREENING		
MULTIPLE-COURSE CONSTRUCTION	<0.8 >0.8	<8% BY MASS <6% BY MASS
SINGLE-COURSE CONSTRUCTION	N/A	<4% BY MASS
THE LANDSCAPING AND LANDSCAPE DEVELOPMENT RESEARCH SOCIETY E.V.-FLL		

VEGETATED ROOF CROSS-SECTION

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NORDIC AQUAFARMS
MULTIPHASE PROJECT

158 HIGH STREET, BELFAST, MAINE

CONSTRUCTION DETAILS

PROJECT MANAGER: MPM
PROJECT NO: 171.05027
DRAWN BY: JAR

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24x36

ATTACHMENT E

Grassed Underdrain Filter Orifice Sizing

(Update to Appendix A of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

Grassed Underdrain Filter #1A

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 903 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 1598 SF

h = 0.57 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.21 \text{ sq. in.}$$

Diam = **0.51** in

Grassed Underdrain Filter #1B

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1085 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 773 SF

h = 1.40 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.16 \text{ sq. in.}$$

Diam = **0.45** in

Grassed Underdrain Filter #2

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1279 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 1503 SF

h = 0.85 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.002 \text{ sf} = 0.24 \text{ sq. in.}$$

Diam = **0.55** in

Grassed Underdrain Filter #3

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1608 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 1610 SF

h = 1.00 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.002 \text{ sf} = 0.28 \text{ sq. in.}$$

Diam = **0.60** in

Grassed Underdrain Filter #4

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 282 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 457 SF

h = 0.62 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.000 \text{ sf} = 0.06 \text{ sq. in.}$$

Diam = **0.28** in

Grassed Underdrain Filter #5

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 360 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 600 SF

h = 0.60 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.08 \text{ sq. in.}$$

Diam = **0.32** in

Grassed Underdrain Filter #6

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 690 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 1004 SF

h = 0.69 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.14 \text{ sq. in.}$$

Diam = **0.43** in

Grassed Underdrain Filter #7

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1404 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 2037 SF

h = 0.69 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.002 \text{ sf} = 0.29 \text{ sq. in.}$$

Diam = **0.61** in

Grassed Underdrain Filter #8

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2789 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.02 \text{ cfs}$$

surface area of filter = 2601 SF

h = 1.07 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.003 \text{ sf} = 0.47 \text{ sq. in.}$$

Diam = **0.77** in

Grassed Underdrain Filter #9

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1832 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 1905 SF

h = 0.96 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.002 \text{ sf} = 0.32 \text{ sq. in.}$$

Diam = **0.64** in

Grassed Underdrain Filter #11

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2233 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 2198 SF

h = 1.02 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.003 \text{ sf} = 0.38 \text{ sq. in.}$$

Diam = **0.70** in

Grassed Underdrain Filter #12

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 805 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} = 0.00 \text{ cfs}$$

surface area of filter = 887 SF

h = 0.91 ft

$$A = \frac{Q}{C \sqrt{2gh}}$$

A = 0.001 sf = 0.15 sq. in.

Diam = **0.43** in

Grassed Underdrain Filter #13

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2554 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 2501 SF

h = 1.02 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.003 \text{ sf} = 0.44 \text{ sq. in.}$$

Diam = **0.75** in

Grassed Underdrain Filter #15

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 121 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 599 SF

h = 0.20 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.000 \text{ sf} = 0.05 \text{ sq. in.}$$

Diam = **0.24** in

Grassed Underdrain Filter #16

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 762 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 1001 SF

h = 0.76 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.15 \text{ sq. in.}$$

Diam = **0.44** in

Grassed Underdrain Filter #18A

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 341 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 912 SF

h = 0.37 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.001 \text{ sf} = 0.10 \text{ sq. in.}$$

Diam = **0.35** in

Grassed Underdrain Filter #18B

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 252 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 294 SF

h = 0.86 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.000 \text{ sf} = 0.05 \text{ sq. in.}$$

Diam = **0.24** in

Grassed Underdrain Filter #24

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1222 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 1401 SF

h = 0.87 ft

$$A = \frac{Q}{C \sqrt{2gh}} \qquad A = 0.002 \text{ sf} = 0.23 \text{ sq. in.}$$

Diam = **0.54** in

ATTACHMENT F

Subsurface Sand Filter Orifice Sizing

(Update to Appendix A of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

SUBSURFACE SAND FILTER #36

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.05 \text{ cfs}$$

surface area of filter = 5635 SF

h = 2.41 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.007 \text{ sf} = 1.04 \text{ sq. in.}$$

Diam = **1.15** in

SUBSURFACE SAND FILTER #37

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 5635 SF

h = 1.66 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.022 \text{ sf} = 3.20 \text{ sq. in.}$$

Diam = **2.02** in

SUBSURFACE SAND FILTER #38

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 5666 SF

h = 1.66 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.022 \text{ sf} = 3.21 \text{ sq. in.}$$

Diam = **2.02** in

SUBSURFACE SAND FILTER #39

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 5974 SF

h = 1.57 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.023 \text{ sf} = 3.29 \text{ sq. in.}$$

Diam = **2.05** in

SUBSURFACE SAND FILTER #40

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 5742 SF

h = 1.63 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.022 \text{ sf} = 3.23 \text{ sq. in.}$$

Diam = **2.03** in

SUBSURFACE SAND FILTER #41

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 9380 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 5635 SF

h = 1.66 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.022 \text{ sf} = 3.20 \text{ sq. in.}$$

Diam = **2.02** in

SUBSURFACE SAND FILTER #42

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1000 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 711 SF

h = 1.41 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.024 \text{ sf} = 3.48 \text{ sq. in.}$$

Diam = **2.11** in

SUBSURFACE SAND FILTER #43

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1582 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.14 \text{ cfs}$$

surface area of filter = 967 SF

h = 1.64 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.022 \text{ sf} = 3.23 \text{ sq. in.}$$

Diam = **2.03** in

ATTACHMENT G

Manmade Pervious Pavers Orifice Sizing

(Update to Appendix A of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

PERVIOUS PAVEMENT #10

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2578 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 7509 SF

h = 1.84 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.002 \text{ sf} = 0.33 \text{ sq. in.}$$

Diam = **0.65** in

PERVIOUS PAVEMENT #14

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 755 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 1868 SF

h = 1.90 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.001 \text{ sf} = 0.09 \text{ sq. in.}$$

Diam = **0.35** in

PERVIOUS PAVEMENT #19

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 1018 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 3240 SF

h = 1.81 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.001 \text{ sf} = 0.13 \text{ sq. in.}$$

Diam = **0.41** in

PERVIOUS PAVEMENT #21

Orifice Equation $Q = CA\sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 751 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 1620 SF

h = 1.96 ft

$$A = \frac{Q}{C\sqrt{2gh}} \quad A = 0.001 \text{ sf} = 0.09 \text{ sq. in.}$$

Diam = **0.34** in

PERVIOUS PAVEMENT #22

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 967 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 3240 SF

h = 1.80 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.001 \text{ sf} = 0.12 \text{ sq. in.}$$

Diam = **0.40** in

PERVIOUS PAVEMENT #26

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 318 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.00 \text{ cfs}$$

surface area of filter = 1296 SF

h = 1.75 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.000 \text{ sf} = 0.04 \text{ sq. in.}$$

Diam = **0.23** in

PERVIOUS PAVEMENT #30

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2276 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 5720 SF

h = 1.90 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.002 \text{ sf} = 0.29 \text{ sq. in.}$$

Diam = **0.60** in

PERVIOUS PAVEMENT #50

Orifice Equation $Q = CA \sqrt{2gh}$

Q = Rate of Discharge (cfs)
A = Orifice Area (sf)
G = Gravitational Constant (32.2 fps2)
h = Depth of water above the flow line (center) of the orifice (ft)
C = Orifice coefficient (usually assumed = 0.6)

Average discharge rate required to drawdown the treatment volume in a desired amount of time is:

$$Q = \frac{TV}{2tCF}$$

T = Treatment Volume (cf)
t = Recovery Time (hrs)
CF = Conversion Factor = 3600 sec/hr

TV = 2514 cf
t = 24 hr

$$Q = \frac{TV}{2tCF} \quad 0.01 \text{ cfs}$$

surface area of filter = 6035 SF

h = 1.92 ft

$$A = \frac{Q}{C \sqrt{2gh}} \quad A = 0.002 \text{ sf} = 0.31 \text{ sq. in.}$$

Diam = **0.63** in

ATTACHMENT H

Updated Subsurface Sand Filter Sizing Chart

(Update to Appendix A of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

Subsurface Sandfilter Chambers

Subcatchment	Subsurface Sand Filter	Total Treated Impervious Area (sq. ft)	WQ Volume (cf)	Req'd Filter Surface Area (sf)	Prop. Filter Surface Area (sq. ft)	Dimensions (length x width)		Rows x Chambers	Isolator Row			
									1-yr, 24-hr flow (cfs)	SC-740 flow rate (cfs)	Chambers Req'd	Chambers Provided
36	B1M1 - SSF 36	112560	9380	5628	5635	223.16	25.25	5 x 31	5.82	0.2	29	31
37	B1M2 - SSF 37	112560	9380	5628	5666	515.08	11.00	2 x 72	5.82	0.2	29	72
38	B1M3 - SSF 38	112560	9380	5628	5666	515.08	11.00	2 x 72	5.82	0.2	29	72
39	B2M4 - SSF 39	112560	9380	5628	6365	108.80	58.50	12 x 15	5.82	0.2	29	30
40	B2M5 - SSF 40	112560	9380	5628	5742	280.12	20.50	4 x 39	5.82	0.2	29	39
41	B2M6 - SSF 41	112560	9380	5628	5635	223.16	25.25	5 x 31	5.82	0.2	29	31
42	B6 (Oxygen) - SSF 42	12000	1000	600	711	45.16	15.75	3 x 6	0.62	0.2	3	6
43	B5 (Generator + Processing) - SSF 43	18983	1582	949	967	87.88	11.00	2 x 12	0.98	0.2	5	12

References:

https://www.maine.gov/dep/land/stormwater/stormwaterbmps/vol3/chapter7_3.pdf

https://www.stormtech.com/product/sc740.html

Note: 2 isolator rows required for SSF 39.

ATTACHMENT I

Updated Pre- and Post-Development Watershed Plans CW102 & CW104

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

MATCH LINE

MATCH LINE

24" CULVERT UNDER PERKINS ROAD

L=16' S=0.187

L=419' S=0.01

L=97' S=0.1

REACH S9-1 L=483' S=0.014 STREAM

L=96' S=0.088

L=357' S=0.034

REACH S9-2 L=1580' S=0.02 STREAM

L=100' S=0.04

L=170' S=0.01

L=115' S=0.05

L=355' S=0.01

L=97' S=0.07

L=75' S=0.053

L=210' S=0.043

L=127' S=0.02

L=115' S=0.02

L=45' S=0.02

L=90' S=0.09

L=86' S=0.12

L=21' S=0.03

L=100' S=0.05

L=130' S=0.015

L=253' S=0.02

L=55' S=0.3

L=58' S=0.017

L=43' S=0.07

L=152' S=0.024

L=14' S=0.10

18" CONC. BOX CULVERT - 3'x2'

REACH S9-3 L=364' S=0.02 STREAM

35" CONC. CULVERT

12" CONC. CULVERT

2" DRAIN

3" PVC DRAIN

12" CMP

BELFAST

NORTHPORT

NORTHPORT AVENUE (U.S. ROUTE 1)

PT1 PT5 PT6 PT7 PT8 PT9 PT10

OS

LEGEND

- SUBCATCHMENT BOUNDARY
- 9 — SUBCATCHMENT ID
- A — FLOW LINE BREAK POINTS
- HYDRAULIC FLOW LINE
- PT — ANALYSIS POINT

NOTE

OFF-SITE TOPOGRAPHY PROVIDED BY LIDAR SURVEY. CONTOURS ARE AT 2' INTERVALS.

RANSOM Consulting Engineers and Scientists

WOODARD & CURRAN

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

REV	DESCRIPTION	DATE
1	PER DEP COMMENTS	7-26-19
0	ISSUED FOR PERMIT	5-14-19

ISSUED FOR PERMIT
5-14-19

CURRENT ISSUE STATUS:

TRUE NORTH

TRUE NORTH:

SMRT Architects and Engineers
144 Fore Street
Portland, Maine 04104
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SMRT

NORDIC AQUAFARMS MULTIPHASE PROJECT

158 HIGH STREET, BELFAST, MAINE

POST-DEVELOPMENT WATERSHED PLAN - ON-SITE AREAS

0 60 120 240

SCALE in FEET
1"=120'

PROJECT MANAGER: MPM | PROJECT NO: 171.05027

DRAWN BY: JAR

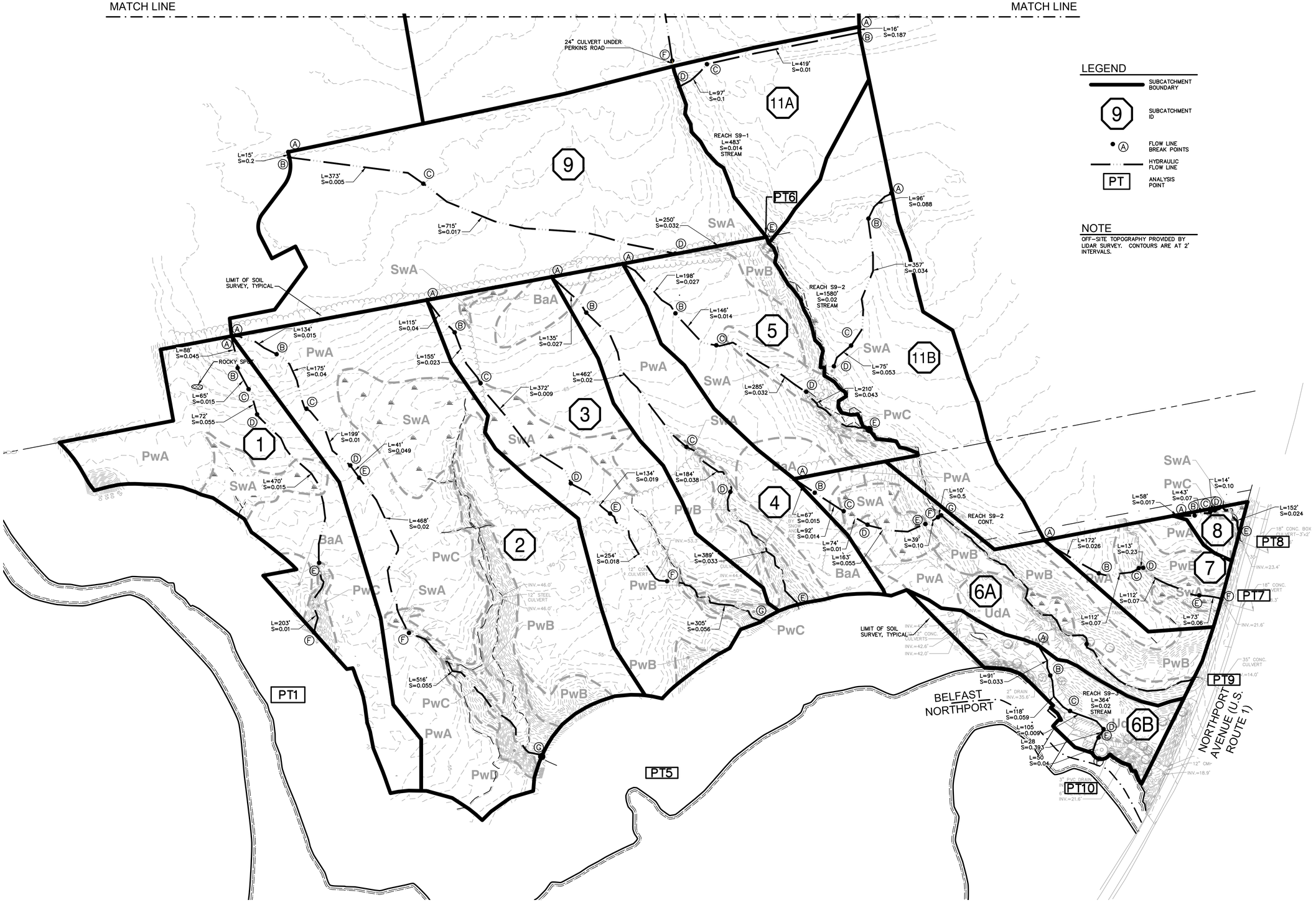
CW-104

NOT FOR CONSTRUCTION

24x36

MATCH LINE

MATCH LINE



LEGEND

- SUBCATCHMENT BOUNDARY
- 9 — SUBCATCHMENT ID
- A — FLOW LINE BREAK POINTS
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NOTE

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NORDIC AQUAFARMS MULTIPHASE PROJECT

158 HIGH STREET, BELFAST, MAINE

PRE-DEVELOPMENT WATERSHED PLAN - ON-SITE AREAS

0 60 120 240
SCALE in FEET
1"=120'

PROJECT MANAGER: MPM
PROJECT NO: 171.05027
DRAWN BY: JAR

CW-102

NOT FOR CONSTRUCTION

24X36

ATTACHMENT J

Subcatchment Calculation Revisions

(Update to Appendix D of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

RANSOM
Consulting, Inc.

Byfield, Massachusetts 978-465-1822
Providence, Rhode Island 401-433-2160
Portsmouth, New Hampshire 603-436-1490
Portland, Maine 207-772-2891
Hamilton, New Jersey 609-584-0090

PROJECT NO. 171.05027 SITE
SHEET NO. OF
CALCULATED BY MPM DATE 7/22/19
CHECKED BY DATE
SCALE N/A

Revision to Subcatchments per MEDEP comments 7/3/19

Subcatchment 11 can be broken out in to two Subcatchments - one w/ flow to Stream 9 getting routed through PT6 - the other into Stream 9 below PT6

Total Area of Sub 11: 513,527 per HydroCAD model

118437 sf impervious
237,621 sf Good woods HSG C/D
157,469 sf >75% grass, HSG C/D

11A 192,533 sf total

Same Tc

113681 impervious
*33806 Good woods
*45046 >75% grass

*measurement from google earth

11B 320814 sf total

*4756 impervious

203815 good woods
112423 >75% grass

TC path A-B Sheet flow ~~Fold/grass short~~ woods, light underbrush
l=96' S= 8.5'/96 = 0.088 ft/ft.

B-C shallow grass field
l=357' S= 12'/357' = 0.034 ft/ft

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Hamilton, New Jersey 609-584-0090

PROJECT NO. 171.05007 SITE NAP
SHEET NO. ____ OF ____
CALCULATED BY MPM DATE 7/22/19
CHECKED BY ____ DATE ____
SCALE N/A

C-D | shallow light underbrush good woods

$\lambda = 75'$ $S = 4'/75' = 0.053$

Subcatchment 6 can be broken into 2 sub areas The first discharges to Stream 9 and the other to the little River

Original 6 342649 sf

Impervious = 34971
gravel = 7818

Woods HSG C = 153260
>75% grass HSG C = 62587
>75% grass HSG D = 51,989

Woods HSG D = 32024

6A to stream 9

Total: 250551 sf

Use same Tc

Impervious 10965 sf
gravel 7818 sf

Woods D 9624 sf
Woods C 139667 sf
grass D 19893 sf
grass C 62587 sf

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Portland, Maine 207-772-2891
Hamilton, New Jersey 609-584-0090

PROJECT NO. 171.05027 SITE NAF
SHEET NO. ____ OF ____
CALCULATED BY MPM DATE 7/22/19
CHECKED BY ____ DATE ____
SCALE N/A

GB to Little River

Total: 92095 sf
Impervious 24006 sf

Woods D = 922 + 9183 + 3945
= 22400 sf

Woods C = 13593 sf

grass D = 32096

Tc path

A-B l = 91 ft. on pavement
S = 3'/91' = 0.033

Calculated Tc = 3 min B-C l = 118 ft. on pavement
use direct S = 7'/118' = 0.059
entry of 6 min C-D l = 105' on pavement
S = 1'/105' = 0.009

D-E l = 29' on short grass
S = (29' - 18')/29' = 0.393

E-F l = 50' on short grass
S = (18 - 16)/50' = 0.04'

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Portsmouth, New Hampshire 603-436-1490
Portland, Maine 207-772-2891
Hamilton, New Jersey 609-584-0090

PROJECT NO. 171.05027 SITE NAF
SHEET NO. ____ OF ____
CALCULATED BY MPM DATE 7/24/19
CHECKED BY ____ DATE ____
SCALE N/A

Revisions ~~to~~ Pre/Post Table

PT6 (analysis Pt @ offsite meets Stream 9)

	Pre	Post	
2	12.98	13.60	↑ 5%
10	28.03	29.52	↑ 5%
25	40.98	43.27	↑ 6%
→ 100	65.36	72.78	↑ 11%

~~Next~~ Point down on Stream 9

	Pre	Post	
2	18.94	16.60	↓ 12%
10	42.09	37.10	↓ 12%
25	62.20	54.93	↓ 12%
100	105.40	93.40	↓ 9%

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Portland, Maine 207-772-2891
Hamilton, New Jersey 609-584-0090

PROJECT NO. 171.05027 SITE NAF
SHEET NO. ____ OF ____
CALCULATED BY MPM DATE 7/24/19
CHECKED BY ____ DATE ____
SCALE N/A

PT 9 - Culvert @ Rt 1 on Stream 9

	Pre	Post	
2	18.90	17.48	↓
10	42.01	39.09	↓
25	62.08	58.20	↓
100	105.24	99.48	↓

PT 10 - Little River

	Pre	Post	
2	3.14	3.16	—
10	5.77	5.52	↓
25	7.88	7.37	↓
100	12.16	11.08	↓

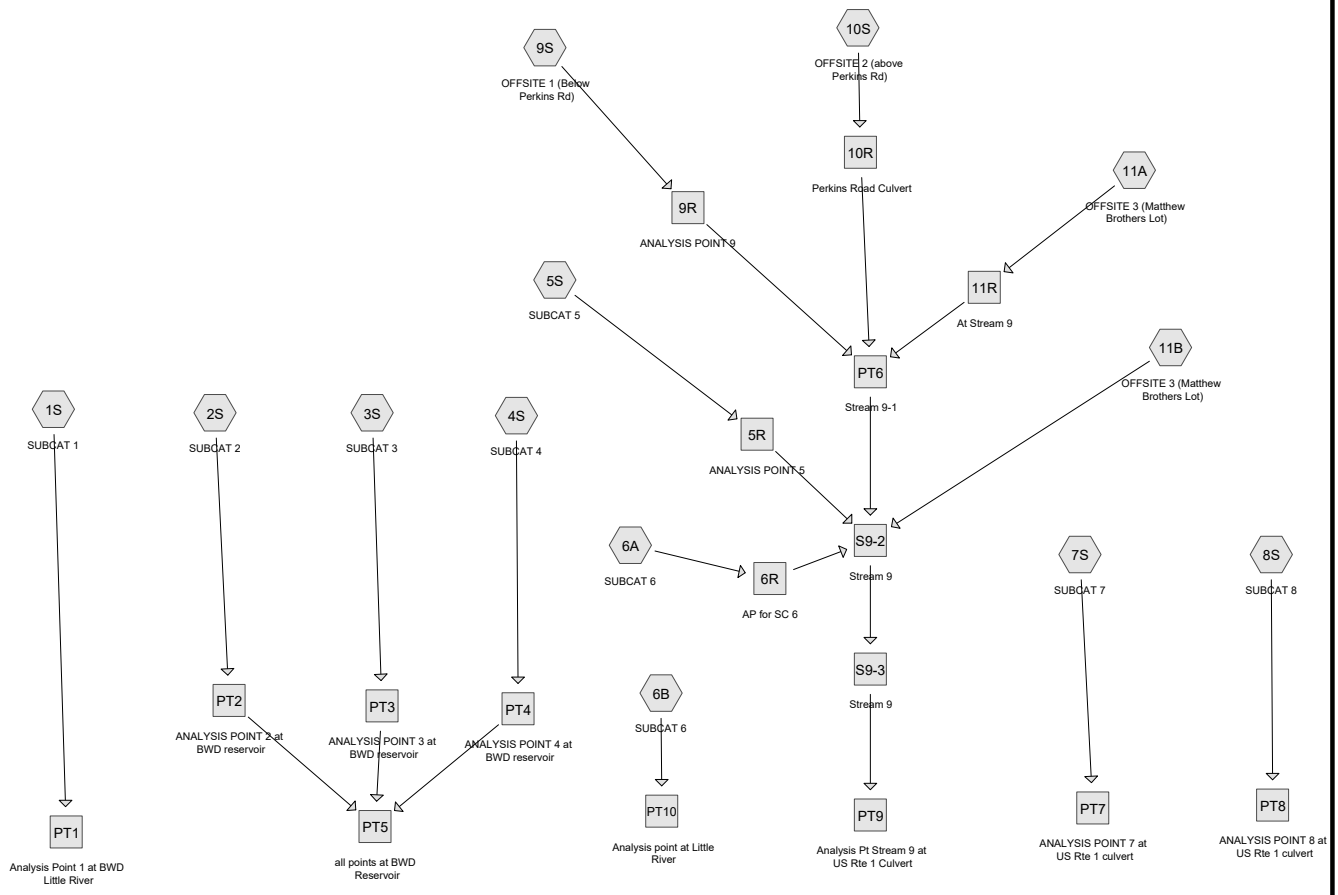
ATTACHMENT K

Updated Pre-Development HydroCAD Model

(Update to Appendix D of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008



Subcat Reach Pond Link

Routing Diagram for pre conditions

Prepared by HP Inc., Printed 7/25/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.034	74	>75% Grass cover, Good, HSG C (3S, 4S, 5S, 9S)
59.543	74	>75% Grass cover, Good, HSG C/D (2S, 3S, 4S, 5S, 6A, 7S, 8S, 9S, 10S, 11A, 11B)
1.194	80	>75% Grass cover, Good, HSG D (6A, 6B)
0.179	96	Gravel (6A)
0.088	94	Gravel roads, HSG C/D (9S)
5.074	98	Impervious (6A, 6B, 9S, 10S, 11A, 11B)
4.979	70	Woods, Good, HSG C (1S, 3S, 4S)
41.529	70	Woods, Good, HSG C/D (1S, 2S, 4S, 6A, 6B, 7S, 8S, 10S, 11A, 11B)
0.735	77	Woods, Good, HSG D (6A, 6B)
116.354	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
109.172	HSG C	1S, 2S, 3S, 4S, 5S, 6A, 6B, 7S, 8S, 9S, 10S, 11A, 11B
1.929	HSG D	6A, 6B
5.253	Other	6A, 6B, 9S, 10S, 11A, 11B
116.354		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	62.577	1.194	0.000	63.770	>75% Grass cover, Good	2S, 3S, 4S, 5S, 6A, 6B, 7S, 8S, 9S, 10S, 11A, 11B
0.000	0.000	0.000	0.000	0.179	0.179	Gravel	6A
0.000	0.000	0.088	0.000	0.000	0.088	Gravel roads	9S
0.000	0.000	0.000	0.000	5.074	5.074	Impervious	6A, 6B, 9S, 10S, 11A, 11B
0.000	0.000	46.507	0.735	0.000	47.243	Woods, Good	1S, 2S, 3S, 4S, 6A, 6B, 7S, 8S, 10S, 11A, 11B
0.000	**0.000**	**109.172**	**1.929**	**5.253**	**116.354**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	10R	75.50	75.00	25.0	0.0200	0.013	24.0	0.0	0.0
2	PT7	21.60	18.30	83.0	0.0398	0.013	18.0	0.0	0.0
3	PT8	23.40	18.60	76.0	0.0632	0.011	36.0	24.0	0.0
4	PT9	20.00	14.00	93.0	0.0645	0.011	36.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SUBCAT1 Runoff Area=316,158 sf 0.00% Impervious Runoff Depth>0.58"
Flow Length=898' Tc=57.7 min CN=70 Runoff=1.92 cfs 0.348 af

Subcatchment2S: SUBCAT2 Runoff Area=692,288 sf 0.00% Impervious Runoff Depth>0.56"
Flow Length=1,533' Tc=101.5 min CN=70 Runoff=2.92 cfs 0.741 af

Subcatchment3S: SUBCAT3 Runoff Area=391,117 sf 0.00% Impervious Runoff Depth>0.66"
Flow Length=1,335' Tc=48.7 min CN=72 Runoff=3.11 cfs 0.495 af

Subcatchment4S: SUBCAT4 Runoff Area=254,691 sf 0.00% Impervious Runoff Depth>0.67"
Flow Length=1,170' Tc=30.2 min CN=72 Runoff=2.58 cfs 0.326 af

Subcatchment5S: SUBCAT5 Runoff Area=231,278 sf 0.00% Impervious Runoff Depth>0.76"
Flow Length=839' Tc=31.3 min CN=74 Runoff=2.69 cfs 0.335 af

Subcatchment6A: SUBCAT6 Runoff Area=250,554 sf 4.38% Impervious Runoff Depth>0.75"
Flow Length=445' Tc=41.6 min CN=74 Runoff=2.54 cfs 0.362 af

Subcatchment6B: SUBCAT6 Runoff Area=92,095 sf 26.07% Impervious Runoff Depth>1.20"
Tc=6.0 min CN=82 Runoff=3.14 cfs 0.212 af

Subcatchment7S: SUBCAT7 Runoff Area=96,383 sf 0.00% Impervious Runoff Depth>0.57"
Flow Length=541' Tc=64.7 min CN=70 Runoff=0.55 cfs 0.106 af

Subcatchment8S: SUBCAT8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth>0.62"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.13 cfs 0.018 af

Subcatchment9S: OFFSITE 1 (Below Runoff Area=570,508 sf 4.47% Impervious Runoff Depth>0.80"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=6.75 cfs 0.878 af

Subcatchment10S: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth>0.73"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=10.03 cfs 2.307 af

Subcatchment11A: OFFSITE 3 (Matthew Runoff Area=192,533 sf 59.04% Impervious Runoff Depth>1.54"
Flow Length=532' Tc=6.8 min CN=87 Runoff=8.21 cfs 0.568 af

Subcatchment11B: OFFSITE 3 (Matthew Runoff Area=320,814 sf 1.43% Impervious Runoff Depth>0.67"
Flow Length=528' Tc=18.9 min CN=72 Runoff=3.94 cfs 0.412 af

Reach 5R: ANALYSISPOINT 5 Inflow=2.69 cfs 0.335 af
Outflow=2.69 cfs 0.335 af

Reach 6R: AP for SC 6 Inflow=2.54 cfs 0.362 af
Outflow=2.54 cfs 0.362 af

Reach 9R: ANALYSISPOINT 9 Inflow=6.75 cfs 0.878 af
Outflow=6.75 cfs 0.878 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=0.77' Max Vel=9.01 fps Inflow=10.03 cfs 2.307 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=10.03 cfs 2.307 af

Reach 11R: At Stream 9 Inflow=8.21 cfs 0.568 af
Outflow=8.21 cfs 0.568 af

Reach PT1: Analysis Point 1 at BWD Little River Inflow=1.92 cfs 0.348 af
Outflow=1.92 cfs 0.348 af

Reach PT10: Analysis point at Little River Inflow=3.14 cfs 0.212 af
Outflow=3.14 cfs 0.212 af

Reach PT2: ANALYSIS POINT 2 at BWD reservoir Inflow=2.92 cfs 0.741 af
Outflow=2.92 cfs 0.741 af

Reach PT3: ANALYSIS POINT 3 at BWD reservoir Inflow=3.11 cfs 0.495 af
Outflow=3.11 cfs 0.495 af

Reach PT4: ANALYSIS POINT 4 at BWD reservoir Inflow=2.58 cfs 0.326 af
Outflow=2.58 cfs 0.326 af

Reach PT5: all points at BWD Reservoir Inflow=6.18 cfs 1.561 af
Outflow=6.18 cfs 1.561 af

Reach PT6: Stream 9-1 Avg. Flow Depth=0.58' Max Vel=3.62 fps Inflow=12.99 cfs 3.753 af
n=0.030 L=483.0' S=0.0145 '/' Capacity=535.88 cfs Outflow=12.98 cfs 3.738 af

Reach PT7: ANALYSIS POINT 7 at US Avg. Flow Depth=0.17' Max Vel=5.08 fps Inflow=0.55 cfs 0.106 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=0.55 cfs 0.106 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.02' Max Vel=2.48 fps Inflow=0.13 cfs 0.018 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.13 cfs 0.018 af

Reach PT9: Analysis Pt Stream 9 at Avg. Flow Depth=0.62' Max Vel=17.81 fps Inflow=18.90 cfs 4.788 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=18.90 cfs 4.787 af

Reach S9-2: Stream 9 Avg. Flow Depth=0.63' Max Vel=4.79 fps Inflow=19.17 cfs 4.848 af
n=0.030 L=1,580.0' S=0.0233 '/' Capacity=161.21 cfs Outflow=18.94 cfs 4.800 af

Reach S9-3: Stream 9 Avg. Flow Depth=0.64' Max Vel=4.32 fps Inflow=18.94 cfs 4.800 af
n=0.030 L=364.0' S=0.0199 '/' Capacity=177.67 cfs Outflow=18.90 cfs 4.788 af

Total Runoff Area = 116.354 ac Runoff Volume = 7.107 af Average Runoff Depth = 0.73"
95.64% Pervious = 111.280 ac 4.36% Impervious = 5.074 ac

Summary for Subcatchment 1S: SUBCAT 1

Runoff = 1.92 cfs @ 12.89 hrs, Volume= 0.348 af, Depth> 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	303,390	70	Woods, Good, HSG C/D
	12,768	70	Woods, Good, HSG C
	316,158	70	Weighted Average
	316,158		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6	88	0.0450	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
3.5	65	0.0150	0.31		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.0	72	0.0550	0.59		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
25.6	470	0.0150	0.31		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
1.0	203	0.1000	3.41	13.64	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
57.7	898	Total			

Summary for Subcatchment 2S: SUBCAT 2

Runoff = 2.92 cfs @ 13.53 hrs, Volume= 0.741 af, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	653,559	70	Woods, Good, HSG C/D
*	38,729	74	>75% Grass cover, Good, HSG C/D
	692,288	70	Weighted Average
	692,288		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7	134	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.8	175	0.0400	0.50		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
13.3	199	0.0100	0.25		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.2	41	0.0490	0.55		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
22.1	468	0.0200	0.35		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
3.4	516	0.0550	2.53	10.11	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
101.5	1,533	Total			

Summary for Subcatchment 3S: SUBCAT 3

Runoff = 3.11 cfs @ 12.74 hrs, Volume= 0.495 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	205,588	74	>75% Grass cover, Good, HSG C/D
	22,290	74	>75% Grass cover, Good, HSG C
	163,239	70	Woods, Good, HSG C
	391,117	72	Weighted Average
	391,117		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	115	0.0400	0.10		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
3.4	155	0.0230	0.76		**Shallow Concentrated Flow, b-c** Woodland Kv= 5.0 fps
9.3	372	0.0090	0.66		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
2.3	134	0.0190	0.96		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	254	0.0180	0.34		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
2.0	305	0.0560	2.55	10.21	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
48.7	1,335	Total			

Summary for Subcatchment 4S: SUBCAT 4

Runoff = 2.58 cfs @ 12.48 hrs, Volume= 0.326 af, Depth> 0.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	130,853	74	>75% Grass cover, Good, HSG C/D
	26,033	74	>75% Grass cover, Good, HSG C
	40,857	70	Woods, Good, HSG C
*	56,948	70	Woods, Good, HSG C/D
	254,691	72	Weighted Average
	254,691		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	135	0.0270	0.13		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
7.8	462	0.0200	0.99		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	184	0.0380	1.36		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
3.3	389	0.0330	1.96	7.83	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
30.2	1,170	Total			

Summary for Subcatchment 5S: SUBCAT 5

Runoff = 2.69 cfs @ 12.49 hrs, Volume= 0.335 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	156,287	74	>75% Grass cover, Good, HSG C/D
	74,991	74	>75% Grass cover, Good, HSG C
	231,278	74	Weighted Average
	231,278		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	198	0.0270	0.14		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
2.9	146	0.0140	0.83		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
3.8	285	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.6	210	0.0430	2.24	8.94	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
31.3	839	Total			

Summary for Subcatchment 6A: SUBCAT 6

Runoff = 2.54 cfs @ 12.63 hrs, Volume= 0.362 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	139,667	70	Woods, Good, HSG C/D
*	62,587	74	>75% Grass cover, Good, HSG C/D
	19,893	80	>75% Grass cover, Good, HSG D
*	7,818	96	Gravel
*	10,965	98	Impervious
	9,624	77	Woods, Good, HSG D
	250,554	74	Weighted Average
	239,589		95.62% Pervious Area
	10,965		4.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.2	92	0.0140	0.30		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
1.8	74	0.0100	0.70		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.7	163	0.0550	1.64		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
0.8	39	0.1000	0.79		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
0.1	10	0.5000	1.77		**Shallow Concentrated Flow, f-g** Forest w/Heavy Litter Kv= 2.5 fps
41.6	445	Total			

Summary for Subcatchment 6B: SUBCAT 6

Runoff = 3.14 cfs @ 12.10 hrs, Volume= 0.212 af, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	13,593	70	Woods, Good, HSG C/D
	32,096	80	>75% Grass cover, Good, HSG D
*	24,006	98	Impervious
	22,400	77	Woods, Good, HSG D
	92,095	82	Weighted Average
	68,089		73.93% Pervious Area
	24,006		26.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 7S: SUBCAT 7

Runoff = 0.55 cfs @ 12.99 hrs, Volume= 0.106 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	93,505	70	Woods, Good, HSG C/D
*	2,878	74	>75% Grass cover, Good, HSG C/D
	96,383	70	Weighted Average
	96,383		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.6	172	0.0260	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.8	112	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	13	0.2300	1.20		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.6	171	0.0300	0.43		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
64.7	541	Total			

Summary for Subcatchment 8S: SUBCAT 8

Runoff = 0.13 cfs @ 12.55 hrs, Volume= 0.018 af, Depth> 0.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 9S: OFFSITE 1 (Below Perkins Rd)

Runoff = 6.75 cfs @ 12.53 hrs, Volume= 0.878 af, Depth> 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	8,857	74	>75% Grass cover, Good, HSG C
	570,508	75	Weighted Average
	544,995		95.53% Pervious Area
	25,513		4.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Subcatchment 10S: OFFSITE 2 (above Perkins Rd)

Runoff = 10.03 cfs @ 13.35 hrs, Volume= 2.307 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment 11A: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 8.21 cfs @ 12.10 hrs, Volume= 0.568 af, Depth> 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment 11B: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 3.94 cfs @ 12.30 hrs, Volume= 0.412 af, Depth> 0.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Reach 5R: ANALYSIS POINT 5

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.309 ac, 0.00% Impervious, Inflow Depth > 0.76" for 2-year event
Inflow = 2.69 cfs @ 12.49 hrs, Volume= 0.335 af
Outflow = 2.69 cfs @ 12.49 hrs, Volume= 0.335 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 6R: AP for SC 6

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.752 ac, 4.38% Impervious, Inflow Depth > 0.75" for 2-year event
Inflow = 2.54 cfs @ 12.63 hrs, Volume= 0.362 af
Outflow = 2.54 cfs @ 12.63 hrs, Volume= 0.362 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: ANALYSIS POINT 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.097 ac, 4.47% Impervious, Inflow Depth > 0.80" for 2-year event
Inflow = 6.75 cfs @ 12.53 hrs, Volume= 0.878 af
Outflow = 6.75 cfs @ 12.53 hrs, Volume= 0.878 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Perkins Road Culvert

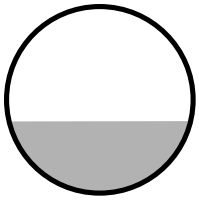
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth > 0.73" for 2-year event
Inflow = 10.03 cfs @ 13.35 hrs, Volume= 2.307 af
Outflow = 10.03 cfs @ 13.36 hrs, Volume= 2.307 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Max. Velocity= 9.01 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.80 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 13.35 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: At Stream 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth > 1.54" for 2-year event
Inflow = 8.21 cfs @ 12.10 hrs, Volume= 0.568 af
Outflow = 8.21 cfs @ 12.10 hrs, Volume= 0.568 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT1: Analysis Point 1 at BWD Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.258 ac, 0.00% Impervious, Inflow Depth > 0.58" for 2-year event
Inflow = 1.92 cfs @ 12.89 hrs, Volume= 0.348 af
Outflow = 1.92 cfs @ 12.89 hrs, Volume= 0.348 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT10: Analysis point at Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.114 ac, 26.07% Impervious, Inflow Depth > 1.20" for 2-year event
Inflow = 3.14 cfs @ 12.10 hrs, Volume= 0.212 af
Outflow = 3.14 cfs @ 12.10 hrs, Volume= 0.212 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 15.893 ac, 0.00% Impervious, Inflow Depth > 0.56" for 2-year event
Inflow = 2.92 cfs @ 13.53 hrs, Volume= 0.741 af
Outflow = 2.92 cfs @ 13.53 hrs, Volume= 0.741 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT3: ANALYSIS POINT 3 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.979 ac, 0.00% Impervious, Inflow Depth > 0.66" for 2-year event
Inflow = 3.11 cfs @ 12.74 hrs, Volume= 0.495 af
Outflow = 3.11 cfs @ 12.74 hrs, Volume= 0.495 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT4: ANALYSIS POINT 4 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.847 ac, 0.00% Impervious, Inflow Depth > 0.67" for 2-year event
Inflow = 2.58 cfs @ 12.48 hrs, Volume= 0.326 af
Outflow = 2.58 cfs @ 12.48 hrs, Volume= 0.326 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT5: all points at BWD Reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 30.718 ac, 0.00% Impervious, Inflow Depth > 0.61" for 2-year event
Inflow = 6.18 cfs @ 12.74 hrs, Volume= 1.561 af
Outflow = 6.18 cfs @ 12.74 hrs, Volume= 1.561 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT6: Stream 9-1

Inflow Area = 55.281 ac, 7.54% Impervious, Inflow Depth > 0.81" for 2-year event
Inflow = 12.99 cfs @ 13.21 hrs, Volume= 3.753 af
Outflow = 12.98 cfs @ 13.28 hrs, Volume= 3.738 af, Atten= 0%, Lag= 4.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.62 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 4.1 min

Peak Storage= 1,733 cf @ 13.25 hrs
Average Depth at Peak Storage= 0.58'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 535.88 cfs

5.00' x 4.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

Summary for Reach PT7: ANALYSIS POINT 7 at US Rte 1 culvert

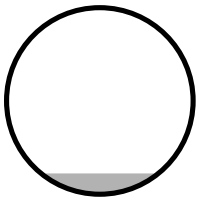
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.213 ac, 0.00% Impervious, Inflow Depth > 0.57" for 2-year event
Inflow = 0.55 cfs @ 12.99 hrs, Volume= 0.106 af
Outflow = 0.55 cfs @ 13.00 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.08 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.22 fps, Avg. Travel Time= 0.4 min

Peak Storage= 9 cf @ 12.99 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Rte 1 culvert

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth > 0.62" for 2-year event
Inflow = 0.13 cfs @ 12.55 hrs, Volume= 0.018 af
Outflow = 0.13 cfs @ 12.57 hrs, Volume= 0.018 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.48 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 0.5 min

Peak Storage= 4 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

Summary for Reach PT9: Analysis Pt Stream 9 at US Rte 1 Culvert

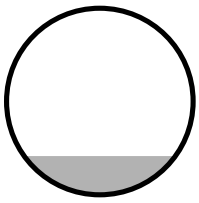
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach S9-3 OUTLET depth by 0.04' @ 19.95 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 0.78" for 2-year event
Inflow = 18.90 cfs @ 12.74 hrs, Volume= 4.788 af
Outflow = 18.90 cfs @ 12.74 hrs, Volume= 4.787 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.81 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 9.74 fps, Avg. Travel Time= 0.2 min

Peak Storage= 99 cf @ 12.74 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

[62] Hint: Exceeded Reach PT6 OUTLET depth by 0.09' @ 12.55 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 0.79" for 2-year event
Inflow = 19.17 cfs @ 12.54 hrs, Volume= 4.848 af
Outflow = 18.94 cfs @ 12.69 hrs, Volume= 4.800 af, Atten= 1%, Lag= 9.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.79 fps, Min. Travel Time= 5.5 min
Avg. Velocity = 2.43 fps, Avg. Travel Time= 10.9 min

Peak Storage= 6,249 cf @ 12.60 hrs
Average Depth at Peak Storage= 0.63'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 161.21 cfs

5.00' x 2.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

Summary for Reach S9-3: Stream 9

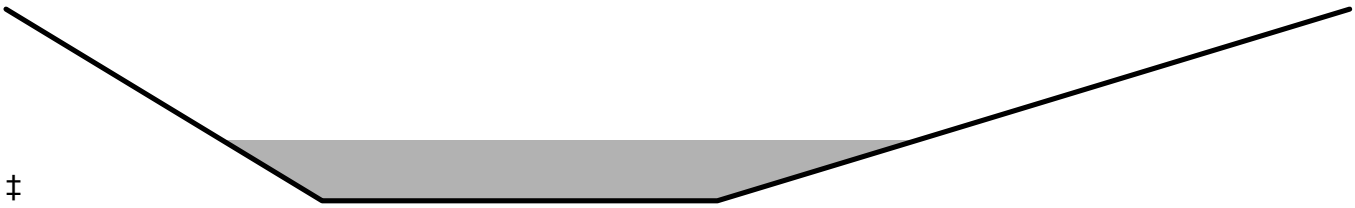
[62] Hint: Exceeded Reach S9-2 OUTLET depth by 0.03' @ 14.05 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 0.78" for 2-year event
Inflow = 18.94 cfs @ 12.69 hrs, Volume= 4.800 af
Outflow = 18.90 cfs @ 12.74 hrs, Volume= 4.788 af, Atten= 0%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.32 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 2.23 fps, Avg. Travel Time= 2.7 min

Peak Storage= 1,597 cf @ 12.71 hrs
Average Depth at Peak Storage= 0.64'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 177.67 cfs

5.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



‡

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SUBCAT1 Runoff Area=316,158 sf 0.00% Impervious Runoff Depth>1.31"
Flow Length=898' Tc=57.7 min CN=70 Runoff=4.77 cfs 0.792 af

Subcatchment2S: SUBCAT2 Runoff Area=692,288 sf 0.00% Impervious Runoff Depth>1.28"
Flow Length=1,533' Tc=101.5 min CN=70 Runoff=7.25 cfs 1.695 af

Subcatchment3S: SUBCAT3 Runoff Area=391,117 sf 0.00% Impervious Runoff Depth>1.44"
Flow Length=1,335' Tc=48.7 min CN=72 Runoff=7.24 cfs 1.081 af

Subcatchment4S: SUBCAT4 Runoff Area=254,691 sf 0.00% Impervious Runoff Depth>1.46"
Flow Length=1,170' Tc=30.2 min CN=72 Runoff=6.00 cfs 0.710 af

Subcatchment5S: SUBCAT5 Runoff Area=231,278 sf 0.00% Impervious Runoff Depth>1.59"
Flow Length=839' Tc=31.3 min CN=74 Runoff=5.90 cfs 0.704 af

Subcatchment6A: SUBCAT6 Runoff Area=250,554 sf 4.38% Impervious Runoff Depth>1.58"
Flow Length=445' Tc=41.6 min CN=74 Runoff=5.56 cfs 0.760 af

Subcatchment6B: SUBCAT6 Runoff Area=92,095 sf 26.07% Impervious Runoff Depth>2.22"
Tc=6.0 min CN=82 Runoff=5.77 cfs 0.390 af

Subcatchment7S: SUBCAT7 Runoff Area=96,383 sf 0.00% Impervious Runoff Depth>1.30"
Flow Length=541' Tc=64.7 min CN=70 Runoff=1.36 cfs 0.241 af

Subcatchment8S: SUBCAT8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth>1.39"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.31 cfs 0.040 af

Subcatchment9S: OFFSITE 1 (Below Runoff Area=570,508 sf 4.47% Impervious Runoff Depth>1.66"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=14.44 cfs 1.811 af

Subcatchment10S: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth>1.55"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=22.26 cfs 4.868 af

Subcatchment11A: OFFSITE 3 (Matthew Runoff Area=192,533 sf 59.04% Impervious Runoff Depth>2.65"
Flow Length=532' Tc=6.8 min CN=87 Runoff=13.88 cfs 0.976 af

Subcatchment11B: OFFSITE 3 (Matthew Runoff Area=320,814 sf 1.43% Impervious Runoff Depth>1.46"
Flow Length=528' Tc=18.9 min CN=72 Runoff=9.20 cfs 0.898 af

Reach 5R: ANALYSISPOINT 5 Inflow=5.90 cfs 0.704 af
Outflow=5.90 cfs 0.704 af

Reach 6R: AP for SC 6 Inflow=5.56 cfs 0.760 af
Outflow=5.56 cfs 0.760 af

Reach 9R: ANALYSISPOINT 9 Inflow=14.44 cfs 1.811 af
Outflow=14.44 cfs 1.811 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=1.23' Max Vel=11.00 fps Inflow=22.26 cfs 4.868 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=22.25 cfs 4.868 af

Reach 11R: At Stream 9 Inflow=13.88 cfs 0.976 af
Outflow=13.88 cfs 0.976 af

Reach PT1: Analysis Point 1 at BWD Little River Inflow=4.77 cfs 0.792 af
Outflow=4.77 cfs 0.792 af

Reach PT10: Analysis point at Little River Inflow=5.77 cfs 0.390 af
Outflow=5.77 cfs 0.390 af

Reach PT2: ANALYSIS POINT 2 at BWD reservoir Inflow=7.25 cfs 1.695 af
Outflow=7.25 cfs 1.695 af

Reach PT3: ANALYSIS POINT 3 at BWD reservoir Inflow=7.24 cfs 1.081 af
Outflow=7.24 cfs 1.081 af

Reach PT4: ANALYSIS POINT 4 at BWD reservoir Inflow=6.00 cfs 0.710 af
Outflow=6.00 cfs 0.710 af

Reach PT5: all points at BWD Reservoir Inflow=14.99 cfs 3.485 af
Outflow=14.99 cfs 3.485 af

Reach PT6: Stream 9-1 Avg. Flow Depth=0.90' Max Vel=4.60 fps Inflow=28.06 cfs 7.655 af
n=0.030 L=483.0' S=0.0145 '/' Capacity=535.88 cfs Outflow=28.03 cfs 7.635 af

Reach PT7: ANALYSIS POINT 7 at US Avg. Flow Depth=0.26' Max Vel=6.67 fps Inflow=1.36 cfs 0.241 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=1.36 cfs 0.240 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.03' Max Vel=3.45 fps Inflow=0.31 cfs 0.040 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.31 cfs 0.040 af

Reach PT9: Analysis Pt Stream 9 at Avg. Flow Depth=0.93' Max Vel=22.41 fps Inflow=42.02 cfs 9.913 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=42.01 cfs 9.912 af

Reach S9-2: Stream 9 Avg. Flow Depth=0.99' Max Vel=6.13 fps Inflow=42.45 cfs 9.997 af
n=0.030 L=1,580.0' S=0.0233 '/' Capacity=161.21 cfs Outflow=42.09 cfs 9.930 af

Reach S9-3: Stream 9 Avg. Flow Depth=0.97' Max Vel=5.45 fps Inflow=42.09 cfs 9.930 af
n=0.030 L=364.0' S=0.0199 '/' Capacity=177.67 cfs Outflow=42.02 cfs 9.913 af

Total Runoff Area = 116.354 ac Runoff Volume = 14.965 af Average Runoff Depth = 1.54"
95.64% Pervious = 111.280 ac 4.36% Impervious = 5.074 ac

Summary for Subcatchment 1S: SUBCAT 1

Runoff = 4.77 cfs @ 12.83 hrs, Volume= 0.792 af, Depth> 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	303,390	70	Woods, Good, HSG C/D
	12,768	70	Woods, Good, HSG C
	316,158	70	Weighted Average
	316,158		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6	88	0.0450	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
3.5	65	0.0150	0.31		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.0	72	0.0550	0.59		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
25.6	470	0.0150	0.31		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
1.0	203	0.1000	3.41	13.64	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
57.7	898	Total			

Summary for Subcatchment 2S: SUBCAT 2

Runoff = 7.25 cfs @ 13.43 hrs, Volume= 1.695 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	653,559	70	Woods, Good, HSG C/D
*	38,729	74	>75% Grass cover, Good, HSG C/D
	692,288	70	Weighted Average
	692,288		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7	134	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.8	175	0.0400	0.50		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
13.3	199	0.0100	0.25		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.2	41	0.0490	0.55		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
22.1	468	0.0200	0.35		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
3.4	516	0.0550	2.53	10.11	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
101.5	1,533	Total			

Summary for Subcatchment 3S: SUBCAT 3

Runoff = 7.24 cfs @ 12.70 hrs, Volume= 1.081 af, Depth> 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	205,588	74	>75% Grass cover, Good, HSG C/D
	22,290	74	>75% Grass cover, Good, HSG C
	163,239	70	Woods, Good, HSG C
	391,117	72	Weighted Average
	391,117		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	115	0.0400	0.10		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
3.4	155	0.0230	0.76		**Shallow Concentrated Flow, b-c** Woodland Kv= 5.0 fps
9.3	372	0.0090	0.66		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
2.3	134	0.0190	0.96		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	254	0.0180	0.34		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
2.0	305	0.0560	2.55	10.21	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
48.7	1,335	Total			

Summary for Subcatchment 4S: SUBCAT 4

Runoff = 6.00 cfs @ 12.45 hrs, Volume= 0.710 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	130,853	74	>75% Grass cover, Good, HSG C/D
	26,033	74	>75% Grass cover, Good, HSG C
	40,857	70	Woods, Good, HSG C
*	56,948	70	Woods, Good, HSG C/D
	254,691	72	Weighted Average
	254,691		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	135	0.0270	0.13		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
7.8	462	0.0200	0.99		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	184	0.0380	1.36		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
3.3	389	0.0330	1.96	7.83	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
30.2	1,170	Total			

Summary for Subcatchment 5S: SUBCAT 5

Runoff = 5.90 cfs @ 12.46 hrs, Volume= 0.704 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	156,287	74	>75% Grass cover, Good, HSG C/D
	74,991	74	>75% Grass cover, Good, HSG C
	231,278	74	Weighted Average
	231,278		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	198	0.0270	0.14		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
2.9	146	0.0140	0.83		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
3.8	285	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.6	210	0.0430	2.24	8.94	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
31.3	839	Total			

Summary for Subcatchment 6A: SUBCAT 6

Runoff = 5.56 cfs @ 12.60 hrs, Volume= 0.760 af, Depth> 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	139,667	70	Woods, Good, HSG C/D
*	62,587	74	>75% Grass cover, Good, HSG C/D
	19,893	80	>75% Grass cover, Good, HSG D
*	7,818	96	Gravel
*	10,965	98	Impervious
	9,624	77	Woods, Good, HSG D
	250,554	74	Weighted Average
	239,589		95.62% Pervious Area
	10,965		4.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.2	92	0.0140	0.30		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
1.8	74	0.0100	0.70		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.7	163	0.0550	1.64		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
0.8	39	0.1000	0.79		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
0.1	10	0.5000	1.77		**Shallow Concentrated Flow, f-g** Forest w/Heavy Litter Kv= 2.5 fps
41.6	445	Total			

Summary for Subcatchment 6B: SUBCAT 6

Runoff = 5.77 cfs @ 12.09 hrs, Volume= 0.390 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	13,593	70	Woods, Good, HSG C/D
	32,096	80	>75% Grass cover, Good, HSG D
*	24,006	98	Impervious
	22,400	77	Woods, Good, HSG D
	92,095	82	Weighted Average
	68,089		73.93% Pervious Area
	24,006		26.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 7S: SUBCAT 7

Runoff = 1.36 cfs @ 12.92 hrs, Volume= 0.241 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	93,505	70	Woods, Good, HSG C/D
*	2,878	74	>75% Grass cover, Good, HSG C/D
	96,383	70	Weighted Average
	96,383		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.6	172	0.0260	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.8	112	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	13	0.2300	1.20		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.6	171	0.0300	0.43		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
64.7	541	Total			

Summary for Subcatchment 8S: SUBCAT 8

Runoff = 0.31 cfs @ 12.52 hrs, Volume= 0.040 af, Depth> 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 9S: OFFSITE 1 (Below Perkins Rd)

Runoff = 14.44 cfs @ 12.51 hrs, Volume= 1.811 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	8,857	74	>75% Grass cover, Good, HSG C
	570,508	75	Weighted Average
	544,995		95.53% Pervious Area
	25,513		4.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Subcatchment 10S: OFFSITE 2 (above Perkins Rd)

Runoff = 22.26 cfs @ 13.30 hrs, Volume= 4.868 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment 11A: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 13.88 cfs @ 12.10 hrs, Volume= 0.976 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment 11B: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 9.20 cfs @ 12.28 hrs, Volume= 0.898 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Reach 5R: ANALYSIS POINT 5

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.309 ac, 0.00% Impervious, Inflow Depth > 1.59" for 10-year event
Inflow = 5.90 cfs @ 12.46 hrs, Volume= 0.704 af
Outflow = 5.90 cfs @ 12.46 hrs, Volume= 0.704 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 6R: AP for SC 6

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.752 ac, 4.38% Impervious, Inflow Depth > 1.58" for 10-year event
Inflow = 5.56 cfs @ 12.60 hrs, Volume= 0.760 af
Outflow = 5.56 cfs @ 12.60 hrs, Volume= 0.760 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: ANALYSIS POINT 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.097 ac, 4.47% Impervious, Inflow Depth > 1.66" for 10-year event
Inflow = 14.44 cfs @ 12.51 hrs, Volume= 1.811 af
Outflow = 14.44 cfs @ 12.51 hrs, Volume= 1.811 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Perkins Road Culvert

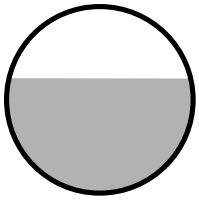
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth > 1.55" for 10-year event
Inflow = 22.26 cfs @ 13.30 hrs, Volume= 4.868 af
Outflow = 22.25 cfs @ 13.30 hrs, Volume= 4.868 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Max. Velocity= 11.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.58 fps, Avg. Travel Time= 0.1 min

Peak Storage= 51 cf @ 13.30 hrs
Average Depth at Peak Storage= 1.23'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: At Stream 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth > 2.65" for 10-year event
Inflow = 13.88 cfs @ 12.10 hrs, Volume= 0.976 af
Outflow = 13.88 cfs @ 12.10 hrs, Volume= 0.976 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT1: Analysis Point 1 at BWD Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.258 ac, 0.00% Impervious, Inflow Depth > 1.31" for 10-year event
Inflow = 4.77 cfs @ 12.83 hrs, Volume= 0.792 af
Outflow = 4.77 cfs @ 12.83 hrs, Volume= 0.792 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT10: Analysis point at Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.114 ac, 26.07% Impervious, Inflow Depth > 2.22" for 10-year event
Inflow = 5.77 cfs @ 12.09 hrs, Volume= 0.390 af
Outflow = 5.77 cfs @ 12.09 hrs, Volume= 0.390 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 15.893 ac, 0.00% Impervious, Inflow Depth > 1.28" for 10-year event
Inflow = 7.25 cfs @ 13.43 hrs, Volume= 1.695 af
Outflow = 7.25 cfs @ 13.43 hrs, Volume= 1.695 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT3: ANALYSIS POINT 3 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.979 ac, 0.00% Impervious, Inflow Depth > 1.44" for 10-year event
Inflow = 7.24 cfs @ 12.70 hrs, Volume= 1.081 af
Outflow = 7.24 cfs @ 12.70 hrs, Volume= 1.081 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT4: ANALYSIS POINT 4 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.847 ac, 0.00% Impervious, Inflow Depth > 1.46" for 10-year event
Inflow = 6.00 cfs @ 12.45 hrs, Volume= 0.710 af
Outflow = 6.00 cfs @ 12.45 hrs, Volume= 0.710 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT5: all points at BWD Reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 30.718 ac, 0.00% Impervious, Inflow Depth > 1.36" for 10-year event
Inflow = 14.99 cfs @ 12.70 hrs, Volume= 3.485 af
Outflow = 14.99 cfs @ 12.70 hrs, Volume= 3.485 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT6: Stream 9-1

Inflow Area = 55.281 ac, 7.54% Impervious, Inflow Depth > 1.66" for 10-year event
Inflow = 28.06 cfs @ 13.10 hrs, Volume= 7.655 af
Outflow = 28.03 cfs @ 13.15 hrs, Volume= 7.635 af, Atten= 0%, Lag= 3.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.60 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 2.29 fps, Avg. Travel Time= 3.5 min

Peak Storage= 2,946 cf @ 13.12 hrs
Average Depth at Peak Storage= 0.90'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 535.88 cfs

5.00' x 4.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

Summary for Reach PT7: ANALYSIS POINT 7 at US Rte 1 culvert

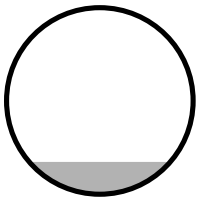
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.213 ac, 0.00% Impervious, Inflow Depth > 1.30" for 10-year event
Inflow = 1.36 cfs @ 12.92 hrs, Volume= 0.241 af
Outflow = 1.36 cfs @ 12.93 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.67 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.80 fps, Avg. Travel Time= 0.4 min

Peak Storage= 17 cf @ 12.92 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Rte 1 culvert

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth > 1.39" for 10-year event
Inflow = 0.31 cfs @ 12.52 hrs, Volume= 0.040 af
Outflow = 0.31 cfs @ 12.53 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.45 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.53 fps, Avg. Travel Time= 0.5 min

Peak Storage= 7 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

Summary for Reach PT9: Analysis Pt Stream 9 at US Rte 1 Culvert

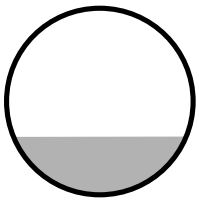
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach S9-3 OUTLET depth by 0.03' @ 11.10 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 1.61" for 10-year event
Inflow = 42.02 cfs @ 12.67 hrs, Volume= 9.913 af
Outflow = 42.01 cfs @ 12.67 hrs, Volume= 9.912 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 22.41 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 11.18 fps, Avg. Travel Time= 0.1 min

Peak Storage= 174 cf @ 12.67 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

[62] Hint: Exceeded Reach PT6 OUTLET depth by 0.14' @ 12.30 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 1.63" for 10-year event
Inflow = 42.45 cfs @ 12.51 hrs, Volume= 9.997 af
Outflow = 42.09 cfs @ 12.64 hrs, Volume= 9.930 af, Atten= 1%, Lag= 7.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 4.3 min
Avg. Velocity = 2.83 fps, Avg. Travel Time= 9.3 min

Peak Storage= 10,868 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.99'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 161.21 cfs

5.00' x 2.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

Summary for Reach S9-3: Stream 9

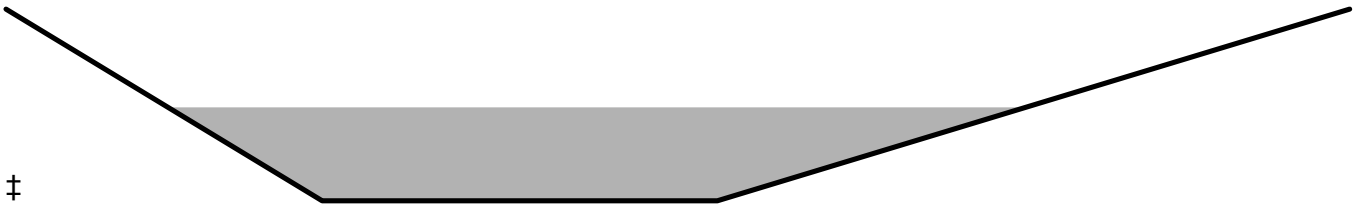
[62] Hint: Exceeded Reach S9-2 OUTLET depth by 0.03' @ 14.05 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 1.62" for 10-year event
Inflow = 42.09 cfs @ 12.64 hrs, Volume= 9.930 af
Outflow = 42.02 cfs @ 12.67 hrs, Volume= 9.913 af, Atten= 0%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.45 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 2.59 fps, Avg. Travel Time= 2.3 min

Peak Storage= 2,808 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.97'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 177.67 cfs

5.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SUBCAT1 Runoff Area=316,158 sf 0.00% Impervious Runoff Depth>1.97"
Flow Length=898' Tc=57.7 min CN=70 Runoff=7.33 cfs 1.193 af

Subcatchment2S: SUBCAT2 Runoff Area=692,288 sf 0.00% Impervious Runoff Depth>1.93"
Flow Length=1,533' Tc=101.5 min CN=70 Runoff=11.16 cfs 2.559 af

Subcatchment3S: SUBCAT3 Runoff Area=391,117 sf 0.00% Impervious Runoff Depth>2.14"
Flow Length=1,335' Tc=48.7 min CN=72 Runoff=10.85 cfs 1.601 af

Subcatchment4S: SUBCAT4 Runoff Area=254,691 sf 0.00% Impervious Runoff Depth>2.16"
Flow Length=1,170' Tc=30.2 min CN=72 Runoff=8.98 cfs 1.051 af

Subcatchment5S: SUBCAT5 Runoff Area=231,278 sf 0.00% Impervious Runoff Depth>2.32"
Flow Length=839' Tc=31.3 min CN=74 Runoff=8.65 cfs 1.026 af

Subcatchment6A: SUBCAT6 Runoff Area=250,554 sf 4.38% Impervious Runoff Depth>2.31"
Flow Length=445' Tc=41.6 min CN=74 Runoff=8.16 cfs 1.108 af

Subcatchment6B: SUBCAT6 Runoff Area=92,095 sf 26.07% Impervious Runoff Depth>3.05"
Tc=6.0 min CN=82 Runoff=7.88 cfs 0.538 af

Subcatchment7S: SUBCAT7 Runoff Area=96,383 sf 0.00% Impervious Runoff Depth>1.97"
Flow Length=541' Tc=64.7 min CN=70 Runoff=2.09 cfs 0.363 af

Subcatchment8S: SUBCAT8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth>2.07"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.48 cfs 0.059 af

Subcatchment9S: OFFSITE 1 (Below Runoff Area=570,508 sf 4.47% Impervious Runoff Depth>2.40"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=20.97 cfs 2.620 af

Subcatchment10S: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth>2.26"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=32.78 cfs 7.112 af

Subcatchment11A: OFFSITE 3 (Matthew Runoff Area=192,533 sf 59.04% Impervious Runoff Depth>3.54"
Flow Length=532' Tc=6.8 min CN=87 Runoff=18.28 cfs 1.304 af

Subcatchment11B: OFFSITE 3 (Matthew Runoff Area=320,814 sf 1.43% Impervious Runoff Depth>2.17"
Flow Length=528' Tc=18.9 min CN=72 Runoff=13.84 cfs 1.329 af

Reach 5R: ANALYSISPOINT 5 Inflow=8.65 cfs 1.026 af
Outflow=8.65 cfs 1.026 af

Reach 6R: AP for SC 6 Inflow=8.16 cfs 1.108 af
Outflow=8.16 cfs 1.108 af

Reach 9R: ANALYSISPOINT 9 Inflow=20.97 cfs 2.620 af
Outflow=20.97 cfs 2.620 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=1.69' Max Vel=11.61 fps Inflow=32.78 cfs 7.112 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=32.77 cfs 7.112 af

Reach 11R: At Stream 9 Inflow=18.28 cfs 1.304 af
Outflow=18.28 cfs 1.304 af

Reach PT1: Analysis Point 1 at BWD Little River Inflow=7.33 cfs 1.193 af
Outflow=7.33 cfs 1.193 af

Reach PT10: Analysis point at Little River Inflow=7.88 cfs 0.538 af
Outflow=7.88 cfs 0.538 af

Reach PT2: ANALYSIS POINT 2 at BWD reservoir Inflow=11.16 cfs 2.559 af
Outflow=11.16 cfs 2.559 af

Reach PT3: ANALYSIS POINT 3 at BWD reservoir Inflow=10.85 cfs 1.601 af
Outflow=10.85 cfs 1.601 af

Reach PT4: ANALYSIS POINT 4 at BWD reservoir Inflow=8.98 cfs 1.051 af
Outflow=8.98 cfs 1.051 af

Reach PT5: all points at BWD Reservoir Inflow=22.88 cfs 5.211 af
Outflow=22.88 cfs 5.211 af

Reach PT6: Stream 9-1 Avg. Flow Depth=1.11' Max Vel=5.15 fps Inflow=41.02 cfs 11.036 af
n=0.030 L=483.0' S=0.0145 '/' Capacity=535.88 cfs Outflow=40.98 cfs 11.012 af

Reach PT7: ANALYSIS POINT 7 at US Avg. Flow Depth=0.32' Max Vel=7.57 fps Inflow=2.09 cfs 0.363 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=2.08 cfs 0.363 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.04' Max Vel=3.93 fps Inflow=0.48 cfs 0.059 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.48 cfs 0.059 af

Reach PT9: Analysis Pt Stream 9 at Avg. Flow Depth=1.15' Max Vel=24.98 fps Inflow=62.08 cfs 14.374 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=62.08 cfs 14.373 af

Reach S9-2: Stream 9 Avg. Flow Depth=1.22' Max Vel=6.87 fps Inflow=62.62 cfs 14.475 af
n=0.030 L=1,580.0' S=0.0233 '/' Capacity=161.21 cfs Outflow=62.20 cfs 14.395 af

Reach S9-3: Stream 9 Avg. Flow Depth=1.19' Max Vel=6.08 fps Inflow=62.20 cfs 14.395 af
n=0.030 L=364.0' S=0.0199 '/' Capacity=177.67 cfs Outflow=62.08 cfs 14.374 af

Total Runoff Area = 116.354 ac Runoff Volume = 21.864 af Average Runoff Depth = 2.25"
95.64% Pervious = 111.280 ac 4.36% Impervious = 5.074 ac

Summary for Subcatchment 1S: SUBCAT 1

Runoff = 7.33 cfs @ 12.81 hrs, Volume= 1.193 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	303,390	70	Woods, Good, HSG C/D
	12,768	70	Woods, Good, HSG C
	316,158	70	Weighted Average
	316,158		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6	88	0.0450	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
3.5	65	0.0150	0.31		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.0	72	0.0550	0.59		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
25.6	470	0.0150	0.31		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
1.0	203	0.1000	3.41	13.64	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
57.7	898	Total			

Summary for Subcatchment 2S: SUBCAT 2

Runoff = 11.16 cfs @ 13.41 hrs, Volume= 2.559 af, Depth> 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	653,559	70	Woods, Good, HSG C/D
*	38,729	74	>75% Grass cover, Good, HSG C/D
	692,288	70	Weighted Average
	692,288		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7	134	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.8	175	0.0400	0.50		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
13.3	199	0.0100	0.25		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.2	41	0.0490	0.55		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
22.1	468	0.0200	0.35		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
3.4	516	0.0550	2.53	10.11	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
101.5	1,533	Total			

Summary for Subcatchment 3S: SUBCAT 3

Runoff = 10.85 cfs @ 12.69 hrs, Volume= 1.601 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	205,588	74	>75% Grass cover, Good, HSG C/D
	22,290	74	>75% Grass cover, Good, HSG C
	163,239	70	Woods, Good, HSG C
	391,117	72	Weighted Average
	391,117		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	115	0.0400	0.10		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
3.4	155	0.0230	0.76		**Shallow Concentrated Flow, b-c** Woodland Kv= 5.0 fps
9.3	372	0.0090	0.66		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
2.3	134	0.0190	0.96		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	254	0.0180	0.34		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
2.0	305	0.0560	2.55	10.21	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
48.7	1,335	Total			

Summary for Subcatchment 4S: SUBCAT 4

Runoff = 8.98 cfs @ 12.43 hrs, Volume= 1.051 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	130,853	74	>75% Grass cover, Good, HSG C/D
	26,033	74	>75% Grass cover, Good, HSG C
	40,857	70	Woods, Good, HSG C
*	56,948	70	Woods, Good, HSG C/D
	254,691	72	Weighted Average
	254,691		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	135	0.0270	0.13		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
7.8	462	0.0200	0.99		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	184	0.0380	1.36		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
3.3	389	0.0330	1.96	7.83	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
30.2	1,170	Total			

Summary for Subcatchment 5S: SUBCAT 5

Runoff = 8.65 cfs @ 12.45 hrs, Volume= 1.026 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	156,287	74	>75% Grass cover, Good, HSG C/D
	74,991	74	>75% Grass cover, Good, HSG C
	231,278	74	Weighted Average
	231,278		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	198	0.0270	0.14		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
2.9	146	0.0140	0.83		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
3.8	285	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.6	210	0.0430	2.24	8.94	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
31.3	839	Total			

Summary for Subcatchment 6A: SUBCAT 6

Runoff = 8.16 cfs @ 12.59 hrs, Volume= 1.108 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	139,667	70	Woods, Good, HSG C/D
*	62,587	74	>75% Grass cover, Good, HSG C/D
	19,893	80	>75% Grass cover, Good, HSG D
*	7,818	96	Gravel
*	10,965	98	Impervious
	9,624	77	Woods, Good, HSG D
	250,554	74	Weighted Average
	239,589		95.62% Pervious Area
	10,965		4.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.2	92	0.0140	0.30		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
1.8	74	0.0100	0.70		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.7	163	0.0550	1.64		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
0.8	39	0.1000	0.79		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
0.1	10	0.5000	1.77		**Shallow Concentrated Flow, f-g** Forest w/Heavy Litter Kv= 2.5 fps
41.6	445	Total			

Summary for Subcatchment 6B: SUBCAT 6

Runoff = 7.88 cfs @ 12.09 hrs, Volume= 0.538 af, Depth> 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	13,593	70	Woods, Good, HSG C/D
	32,096	80	>75% Grass cover, Good, HSG D
*	24,006	98	Impervious
	22,400	77	Woods, Good, HSG D
	92,095	82	Weighted Average
	68,089		73.93% Pervious Area
	24,006		26.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 7S: SUBCAT 7

Runoff = 2.09 cfs @ 12.90 hrs, Volume= 0.363 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	93,505	70	Woods, Good, HSG C/D
*	2,878	74	>75% Grass cover, Good, HSG C/D
	96,383	70	Weighted Average
	96,383		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.6	172	0.0260	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.8	112	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	13	0.2300	1.20		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.6	171	0.0300	0.43		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
64.7	541	Total			

Summary for Subcatchment 8S: SUBCAT 8

Runoff = 0.48 cfs @ 12.50 hrs, Volume= 0.059 af, Depth> 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 9S: OFFSITE 1 (Below Perkins Rd)

Runoff = 20.97 cfs @ 12.50 hrs, Volume= 2.620 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	8,857	74	>75% Grass cover, Good, HSG C
	570,508	75	Weighted Average
	544,995		95.53% Pervious Area
	25,513		4.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Subcatchment 10S: OFFSITE 2 (above Perkins Rd)

Runoff = 32.78 cfs @ 13.29 hrs, Volume= 7.112 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment 11A: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 18.28 cfs @ 12.10 hrs, Volume= 1.304 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment 11B: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 13.84 cfs @ 12.27 hrs, Volume= 1.329 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Reach 5R: ANALYSIS POINT 5

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.309 ac, 0.00% Impervious, Inflow Depth > 2.32" for 25-year event
Inflow = 8.65 cfs @ 12.45 hrs, Volume= 1.026 af
Outflow = 8.65 cfs @ 12.45 hrs, Volume= 1.026 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 6R: AP for SC 6

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.752 ac, 4.38% Impervious, Inflow Depth > 2.31" for 25-year event
Inflow = 8.16 cfs @ 12.59 hrs, Volume= 1.108 af
Outflow = 8.16 cfs @ 12.59 hrs, Volume= 1.108 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: ANALYSIS POINT 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.097 ac, 4.47% Impervious, Inflow Depth > 2.40" for 25-year event
Inflow = 20.97 cfs @ 12.50 hrs, Volume= 2.620 af
Outflow = 20.97 cfs @ 12.50 hrs, Volume= 2.620 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Perkins Road Culvert

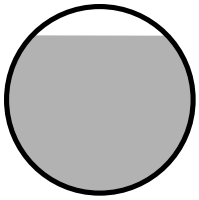
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 102% of Manning's capacity

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth > 2.26" for 25-year event
Inflow = 32.78 cfs @ 13.29 hrs, Volume= 7.112 af
Outflow = 32.77 cfs @ 13.29 hrs, Volume= 7.112 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Max. Velocity= 11.61 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.03 fps, Avg. Travel Time= 0.1 min

Peak Storage= 71 cf @ 13.29 hrs
Average Depth at Peak Storage= 1.69'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: At Stream 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth > 3.54" for 25-year event
Inflow = 18.28 cfs @ 12.10 hrs, Volume= 1.304 af
Outflow = 18.28 cfs @ 12.10 hrs, Volume= 1.304 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT1: Analysis Point 1 at BWD Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.258 ac, 0.00% Impervious, Inflow Depth > 1.97" for 25-year event
Inflow = 7.33 cfs @ 12.81 hrs, Volume= 1.193 af
Outflow = 7.33 cfs @ 12.81 hrs, Volume= 1.193 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT10: Analysis point at Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.114 ac, 26.07% Impervious, Inflow Depth > 3.05" for 25-year event
Inflow = 7.88 cfs @ 12.09 hrs, Volume= 0.538 af
Outflow = 7.88 cfs @ 12.09 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 15.893 ac, 0.00% Impervious, Inflow Depth > 1.93" for 25-year event
Inflow = 11.16 cfs @ 13.41 hrs, Volume= 2.559 af
Outflow = 11.16 cfs @ 13.41 hrs, Volume= 2.559 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT3: ANALYSIS POINT 3 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.979 ac, 0.00% Impervious, Inflow Depth > 2.14" for 25-year event
Inflow = 10.85 cfs @ 12.69 hrs, Volume= 1.601 af
Outflow = 10.85 cfs @ 12.69 hrs, Volume= 1.601 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT4: ANALYSIS POINT 4 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.847 ac, 0.00% Impervious, Inflow Depth > 2.16" for 25-year event
Inflow = 8.98 cfs @ 12.43 hrs, Volume= 1.051 af
Outflow = 8.98 cfs @ 12.43 hrs, Volume= 1.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT5: all points at BWD Reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 30.718 ac, 0.00% Impervious, Inflow Depth > 2.04" for 25-year event
Inflow = 22.88 cfs @ 12.68 hrs, Volume= 5.211 af
Outflow = 22.88 cfs @ 12.68 hrs, Volume= 5.211 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT6: Stream 9-1

Inflow Area = 55.281 ac, 7.54% Impervious, Inflow Depth > 2.40" for 25-year event
Inflow = 41.02 cfs @ 13.08 hrs, Volume= 11.036 af
Outflow = 40.98 cfs @ 13.12 hrs, Volume= 11.012 af, Atten= 0%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.15 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.47 fps, Avg. Travel Time= 3.3 min

Peak Storage= 3,848 cf @ 13.09 hrs
Average Depth at Peak Storage= 1.11'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 535.88 cfs

5.00' x 4.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

Summary for Reach PT7: ANALYSIS POINT 7 at US Rte 1 culvert

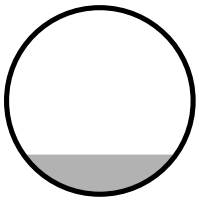
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.213 ac, 0.00% Impervious, Inflow Depth > 1.97" for 25-year event
Inflow = 2.09 cfs @ 12.90 hrs, Volume= 0.363 af
Outflow = 2.08 cfs @ 12.91 hrs, Volume= 0.363 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.57 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.12 fps, Avg. Travel Time= 0.3 min

Peak Storage= 23 cf @ 12.90 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Rte 1 culvert

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth > 2.07" for 25-year event
Inflow = 0.48 cfs @ 12.50 hrs, Volume= 0.059 af
Outflow = 0.48 cfs @ 12.51 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.93 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.58 fps, Avg. Travel Time= 0.5 min

Peak Storage= 9 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

Summary for Reach PT9: Analysis Pt Stream 9 at US Rte 1 Culvert

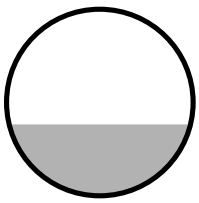
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach S9-3 OUTLET depth by 0.03' @ 10.35 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 2.34" for 25-year event
Inflow = 62.08 cfs @ 12.64 hrs, Volume= 14.374 af
Outflow = 62.08 cfs @ 12.64 hrs, Volume= 14.373 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 24.98 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 12.03 fps, Avg. Travel Time= 0.1 min

Peak Storage= 231 cf @ 12.64 hrs
Average Depth at Peak Storage= 1.15'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

[62] Hint: Exceeded Reach PT6 OUTLET depth by 0.18' @ 12.30 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 2.36" for 25-year event
Inflow = 62.62 cfs @ 12.50 hrs, Volume= 14.475 af
Outflow = 62.20 cfs @ 12.61 hrs, Volume= 14.395 af, Atten= 1%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.87 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 3.09 fps, Avg. Travel Time= 8.5 min

Peak Storage= 14,321 cf @ 12.55 hrs
Average Depth at Peak Storage= 1.22'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 161.21 cfs

5.00' x 2.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

Summary for Reach S9-3: Stream 9

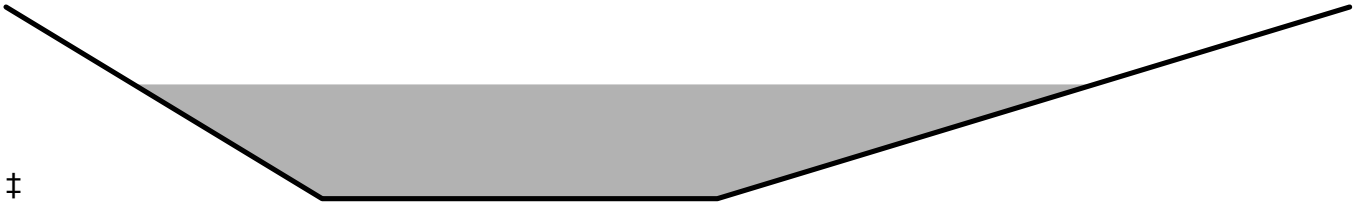
[62] Hint: Exceeded Reach S9-2 OUTLET depth by 0.02' @ 14.10 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 2.34" for 25-year event
Inflow = 62.20 cfs @ 12.61 hrs, Volume= 14.395 af
Outflow = 62.08 cfs @ 12.64 hrs, Volume= 14.374 af, Atten= 0%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.08 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 2.81 fps, Avg. Travel Time= 2.2 min

Peak Storage= 3,719 cf @ 12.62 hrs
Average Depth at Peak Storage= 1.19'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 177.67 cfs

5.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



‡

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SUBCAT 1 Runoff Area=316,158 sf 0.00% Impervious Runoff Depth>3.46"
Flow Length=898' Tc=57.7 min CN=70 Runoff=12.93 cfs 2.090 af

Subcatchment2S: SUBCAT 2 Runoff Area=692,288 sf 0.00% Impervious Runoff Depth>3.39"
Flow Length=1,533' Tc=101.5 min CN=70 Runoff=19.74 cfs 4.494 af

Subcatchment3S: SUBCAT 3 Runoff Area=391,117 sf 0.00% Impervious Runoff Depth>3.68"
Flow Length=1,335' Tc=48.7 min CN=72 Runoff=18.64 cfs 2.750 af

Subcatchment4S: SUBCAT 4 Runoff Area=254,691 sf 0.00% Impervious Runoff Depth>3.70"
Flow Length=1,170' Tc=30.2 min CN=72 Runoff=15.44 cfs 1.803 af

Subcatchment5S: SUBCAT 5 Runoff Area=231,278 sf 0.00% Impervious Runoff Depth>3.91"
Flow Length=839' Tc=31.3 min CN=74 Runoff=14.53 cfs 1.729 af

Subcatchment6A: SUBCAT 6 Runoff Area=250,554 sf 4.38% Impervious Runoff Depth>3.89"
Flow Length=445' Tc=41.6 min CN=74 Runoff=13.71 cfs 1.867 af

Subcatchment6B: SUBCAT 6 Runoff Area=92,095 sf 26.07% Impervious Runoff Depth>4.81"
Tc=6.0 min CN=82 Runoff=12.16 cfs 0.847 af

Subcatchment7S: SUBCAT 7 Runoff Area=96,383 sf 0.00% Impervious Runoff Depth>3.45"
Flow Length=541' Tc=64.7 min CN=70 Runoff=3.68 cfs 0.636 af

Subcatchment8S: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth>3.59"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.83 cfs 0.103 af

Subcatchment9S: OFFSITE 1 (Below Runoff Area=570,508 sf 4.47% Impervious Runoff Depth>4.01"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=34.83 cfs 4.375 af

Subcatchment10S: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth>3.82"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=55.26 cfs 12.013 af

Subcatchment11A: OFFSITE 3 (Matthew Runoff Area=192,533 sf 59.04% Impervious Runoff Depth>5.36"
Flow Length=532' Tc=6.8 min CN=87 Runoff=27.06 cfs 1.974 af

Subcatchment11B: OFFSITE 3 (Matthew Runoff Area=320,814 sf 1.43% Impervious Runoff Depth>3.71"
Flow Length=528' Tc=18.9 min CN=72 Runoff=23.78 cfs 2.280 af

Reach 5R: ANALYSISPOINT 5 Inflow=14.53 cfs 1.729 af
Outflow=14.53 cfs 1.729 af

Reach 6R: AP for SC 6 Inflow=13.71 cfs 1.867 af
Outflow=13.71 cfs 1.867 af

Reach 9R: ANALYSISPOINT 9 Inflow=34.83 cfs 4.375 af
Outflow=34.83 cfs 4.375 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=2.00' Max Vel=11.61 fps Inflow=55.26 cfs 12.013 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=31.99 cfs 12.014 af

Reach 11R: At Stream 9 Inflow=27.06 cfs 1.974 af
Outflow=27.06 cfs 1.974 af

Reach PT1: Analysis Point 1 at BWD Little River Inflow=12.93 cfs 2.090 af
Outflow=12.93 cfs 2.090 af

Reach PT10: Analysis point at Little River Inflow=12.16 cfs 0.847 af
Outflow=12.16 cfs 0.847 af

Reach PT2: ANALYSIS POINT 2 at BWD reservoir Inflow=19.74 cfs 4.494 af
Outflow=19.74 cfs 4.494 af

Reach PT3: ANALYSIS POINT 3 at BWD reservoir Inflow=18.64 cfs 2.750 af
Outflow=18.64 cfs 2.750 af

Reach PT4: ANALYSIS POINT 4 at BWD reservoir Inflow=15.44 cfs 1.803 af
Outflow=15.44 cfs 1.803 af

Reach PT5: all points at BWD Reservoir Inflow=40.15 cfs 9.047 af
Outflow=40.15 cfs 9.047 af

Reach PT6: Stream 9-1 Avg. Flow Depth=1.42' Max Vel=5.89 fps Inflow=65.87 cfs 18.363 af
n=0.030 L=483.0' S=0.0145 '/' Capacity=535.88 cfs Outflow=65.36 cfs 18.332 af

Reach PT7: ANALYSIS POINT 7 at US Avg. Flow Depth=0.43' Max Vel=8.92 fps Inflow=3.68 cfs 0.636 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=3.68 cfs 0.635 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.06' Max Vel=4.91 fps Inflow=0.83 cfs 0.103 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.83 cfs 0.103 af

Reach PT9: Analysis Pt Stream 9 at Avg. Flow Depth=1.55' Max Vel=28.68 fps Inflow=105.25 cfs 24.075 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=105.24 cfs 24.074 af

Reach S9-2: Stream 9 Avg. Flow Depth=1.61' Max Vel=7.97 fps Inflow=105.90 cfs 24.207 af
n=0.030 L=1,580.0' S=0.0233 '/' Capacity=161.21 cfs Outflow=105.40 cfs 24.102 af

Reach S9-3: Stream 9 Avg. Flow Depth=1.55' Max Vel=7.03 fps Inflow=105.40 cfs 24.102 af
n=0.030 L=364.0' S=0.0199 '/' Capacity=177.67 cfs Outflow=105.25 cfs 24.075 af

Total Runoff Area = 116.354 ac Runoff Volume = 36.961 af Average Runoff Depth = 3.81"
95.64% Pervious = 111.280 ac 4.36% Impervious = 5.074 ac

Summary for Subcatchment 1S: SUBCAT 1

Runoff = 12.93 cfs @ 12.78 hrs, Volume= 2.090 af, Depth> 3.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	303,390	70	Woods, Good, HSG C/D
	12,768	70	Woods, Good, HSG C
	316,158	70	Weighted Average
	316,158		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6	88	0.0450	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
3.5	65	0.0150	0.31		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.0	72	0.0550	0.59		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
25.6	470	0.0150	0.31		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
1.0	203	0.1000	3.41	13.64	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
57.7	898	Total			

Summary for Subcatchment 2S: SUBCAT 2

Runoff = 19.74 cfs @ 13.39 hrs, Volume= 4.494 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	653,559	70	Woods, Good, HSG C/D
*	38,729	74	>75% Grass cover, Good, HSG C/D
	692,288	70	Weighted Average
	692,288		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7	134	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.8	175	0.0400	0.50		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
13.3	199	0.0100	0.25		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.2	41	0.0490	0.55		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
22.1	468	0.0200	0.35		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
3.4	516	0.0550	2.53	10.11	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
101.5	1,533	Total			

Summary for Subcatchment 3S: SUBCAT 3

Runoff = 18.64 cfs @ 12.67 hrs, Volume= 2.750 af, Depth> 3.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	205,588	74	>75% Grass cover, Good, HSG C/D
	22,290	74	>75% Grass cover, Good, HSG C
	163,239	70	Woods, Good, HSG C
	391,117	72	Weighted Average
	391,117		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	115	0.0400	0.10		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
3.4	155	0.0230	0.76		**Shallow Concentrated Flow, b-c** Woodland Kv= 5.0 fps
9.3	372	0.0090	0.66		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
2.3	134	0.0190	0.96		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	254	0.0180	0.34		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
2.0	305	0.0560	2.55	10.21	**Trap/Vee/Rect Channel Flow, f-g** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
48.7	1,335	Total			

Summary for Subcatchment 4S: SUBCAT 4

Runoff = 15.44 cfs @ 12.42 hrs, Volume= 1.803 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	130,853	74	>75% Grass cover, Good, HSG C/D
	26,033	74	>75% Grass cover, Good, HSG C
	40,857	70	Woods, Good, HSG C
*	56,948	70	Woods, Good, HSG C/D
	254,691	72	Weighted Average
	254,691		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	135	0.0270	0.13		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
7.8	462	0.0200	0.99		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	184	0.0380	1.36		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
3.3	389	0.0330	1.96	7.83	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
30.2	1,170	Total			

Summary for Subcatchment 5S: SUBCAT 5

Runoff = 14.53 cfs @ 12.43 hrs, Volume= 1.729 af, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	156,287	74	>75% Grass cover, Good, HSG C/D
	74,991	74	>75% Grass cover, Good, HSG C
	231,278	74	Weighted Average
	231,278		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	198	0.0270	0.14		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
2.9	146	0.0140	0.83		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
3.8	285	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.6	210	0.0430	2.24	8.94	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
31.3	839	Total			

Summary for Subcatchment 6A: SUBCAT 6

Runoff = 13.71 cfs @ 12.57 hrs, Volume= 1.867 af, Depth> 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	139,667	70	Woods, Good, HSG C/D
*	62,587	74	>75% Grass cover, Good, HSG C/D
	19,893	80	>75% Grass cover, Good, HSG D
*	7,818	96	Gravel
*	10,965	98	Impervious
	9,624	77	Woods, Good, HSG D
	250,554	74	Weighted Average
	239,589		95.62% Pervious Area
	10,965		4.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.2	92	0.0140	0.30		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
1.8	74	0.0100	0.70		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
1.7	163	0.0550	1.64		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
0.8	39	0.1000	0.79		**Shallow Concentrated Flow, e-f** Forest w/Heavy Litter Kv= 2.5 fps
0.1	10	0.5000	1.77		**Shallow Concentrated Flow, f-g** Forest w/Heavy Litter Kv= 2.5 fps
41.6	445	Total			

Summary for Subcatchment 6B: SUBCAT 6

Runoff = 12.16 cfs @ 12.09 hrs, Volume= 0.847 af, Depth> 4.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	13,593	70	Woods, Good, HSG C/D
	32,096	80	>75% Grass cover, Good, HSG D
*	24,006	98	Impervious
	22,400	77	Woods, Good, HSG D
	92,095	82	Weighted Average
	68,089		73.93% Pervious Area
	24,006		26.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 7S: SUBCAT 7

Runoff = 3.68 cfs @ 12.88 hrs, Volume= 0.636 af, Depth> 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	93,505	70	Woods, Good, HSG C/D
*	2,878	74	>75% Grass cover, Good, HSG C/D
	96,383	70	Weighted Average
	96,383		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.6	172	0.0260	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.8	112	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	13	0.2300	1.20		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.6	171	0.0300	0.43		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, e-f** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage
64.7	541	Total			

Summary for Subcatchment 8S: SUBCAT 8

Runoff = 0.83 cfs @ 12.48 hrs, Volume= 0.103 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 9S: OFFSITE 1 (Below Perkins Rd)

Runoff = 34.83 cfs @ 12.48 hrs, Volume= 4.375 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	8,857	74	>75% Grass cover, Good, HSG C
	570,508	75	Weighted Average
	544,995		95.53% Pervious Area
	25,513		4.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Subcatchment 10S: OFFSITE 2 (above Perkins Rd)

Runoff = 55.26 cfs @ 13.28 hrs, Volume= 12.013 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment 11A: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 27.06 cfs @ 12.10 hrs, Volume= 1.974 af, Depth> 5.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment 11B: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 23.78 cfs @ 12.26 hrs, Volume= 2.280 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Reach 5R: ANALYSIS POINT 5

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.309 ac, 0.00% Impervious, Inflow Depth > 3.91" for 100-year event
Inflow = 14.53 cfs @ 12.43 hrs, Volume= 1.729 af
Outflow = 14.53 cfs @ 12.43 hrs, Volume= 1.729 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 6R: AP for SC 6

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.752 ac, 4.38% Impervious, Inflow Depth > 3.89" for 100-year event
Inflow = 13.71 cfs @ 12.57 hrs, Volume= 1.867 af
Outflow = 13.71 cfs @ 12.57 hrs, Volume= 1.867 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: ANALYSIS POINT 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.097 ac, 4.47% Impervious, Inflow Depth > 4.01" for 100-year event
Inflow = 34.83 cfs @ 12.48 hrs, Volume= 4.375 af
Outflow = 34.83 cfs @ 12.48 hrs, Volume= 4.375 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Perkins Road Culvert

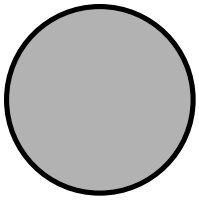
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 173% of Manning's capacity
[76] Warning: Detained 1.704 af (Pond w/culvert advised)

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth > 3.82" for 100-year event
Inflow = 55.26 cfs @ 13.28 hrs, Volume= 12.013 af
Outflow = 31.99 cfs @ 12.75 hrs, Volume= 12.014 af, Atten= 42%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Max. Velocity= 11.61 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.35 fps, Avg. Travel Time= 0.1 min

Peak Storage= 79 cf @ 12.70 hrs
Average Depth at Peak Storage= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: At Stream 9

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth > 5.36" for 100-year event
Inflow = 27.06 cfs @ 12.10 hrs, Volume= 1.974 af
Outflow = 27.06 cfs @ 12.10 hrs, Volume= 1.974 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT1: Analysis Point 1 at BWD Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.258 ac, 0.00% Impervious, Inflow Depth > 3.46" for 100-year event
Inflow = 12.93 cfs @ 12.78 hrs, Volume= 2.090 af
Outflow = 12.93 cfs @ 12.78 hrs, Volume= 2.090 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT10: Analysis point at Little River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.114 ac, 26.07% Impervious, Inflow Depth > 4.81" for 100-year event
Inflow = 12.16 cfs @ 12.09 hrs, Volume= 0.847 af
Outflow = 12.16 cfs @ 12.09 hrs, Volume= 0.847 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 15.893 ac, 0.00% Impervious, Inflow Depth > 3.39" for 100-year event
Inflow = 19.74 cfs @ 13.39 hrs, Volume= 4.494 af
Outflow = 19.74 cfs @ 13.39 hrs, Volume= 4.494 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT3: ANALYSIS POINT 3 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.979 ac, 0.00% Impervious, Inflow Depth > 3.68" for 100-year event
Inflow = 18.64 cfs @ 12.67 hrs, Volume= 2.750 af
Outflow = 18.64 cfs @ 12.67 hrs, Volume= 2.750 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT4: ANALYSIS POINT 4 at BWD reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.847 ac, 0.00% Impervious, Inflow Depth > 3.70" for 100-year event
Inflow = 15.44 cfs @ 12.42 hrs, Volume= 1.803 af
Outflow = 15.44 cfs @ 12.42 hrs, Volume= 1.803 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT5: all points at BWD Reservoir

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 30.718 ac, 0.00% Impervious, Inflow Depth > 3.53" for 100-year event
Inflow = 40.15 cfs @ 12.65 hrs, Volume= 9.047 af
Outflow = 40.15 cfs @ 12.65 hrs, Volume= 9.047 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach PT6: Stream 9-1

Inflow Area = 55.281 ac, 7.54% Impervious, Inflow Depth > 3.99" for 100-year event
Inflow = 65.87 cfs @ 12.63 hrs, Volume= 18.363 af
Outflow = 65.36 cfs @ 12.65 hrs, Volume= 18.332 af, Atten= 1%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.89 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 2.98 fps, Avg. Travel Time= 2.7 min

Peak Storage= 5,381 cf @ 12.64 hrs
Average Depth at Peak Storage= 1.42'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 535.88 cfs

5.00' x 4.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

Summary for Reach PT7: ANALYSIS POINT 7 at US Rte 1 culvert

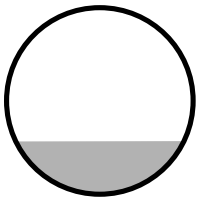
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.213 ac, 0.00% Impervious, Inflow Depth > 3.45" for 100-year event
Inflow = 3.68 cfs @ 12.88 hrs, Volume= 0.636 af
Outflow = 3.68 cfs @ 12.88 hrs, Volume= 0.635 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.92 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.60 fps, Avg. Travel Time= 0.3 min

Peak Storage= 34 cf @ 12.88 hrs
Average Depth at Peak Storage= 0.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Rte 1 culvert

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth > 3.59" for 100-year event
Inflow = 0.83 cfs @ 12.48 hrs, Volume= 0.103 af
Outflow = 0.83 cfs @ 12.49 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.91 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.66 fps, Avg. Travel Time= 0.5 min

Peak Storage= 13 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

Summary for Reach PT9: Analysis Pt Stream 9 at US Rte 1 Culvert

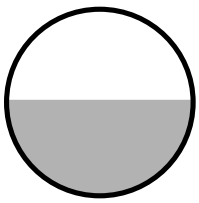
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach S9-3 OUTLET depth by 0.03' @ 9.10 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 3.92" for 100-year event
Inflow = 105.25 cfs @ 12.61 hrs, Volume= 24.075 af
Outflow = 105.24 cfs @ 12.61 hrs, Volume= 24.074 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 28.68 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 14.22 fps, Avg. Travel Time= 0.1 min

Peak Storage= 341 cf @ 12.61 hrs
Average Depth at Peak Storage= 1.55'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

[62] Hint: Exceeded Reach PT6 OUTLET depth by 0.24' @ 12.30 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 3.94" for 100-year event
Inflow = 105.90 cfs @ 12.49 hrs, Volume= 24.207 af
Outflow = 105.40 cfs @ 12.58 hrs, Volume= 24.102 af, Atten= 0%, Lag= 5.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.97 fps, Min. Travel Time= 3.3 min
Avg. Velocity = 3.74 fps, Avg. Travel Time= 7.0 min

Peak Storage= 20,897 cf @ 12.53 hrs
Average Depth at Peak Storage= 1.61'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 161.21 cfs

5.00' x 2.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

Summary for Reach S9-3: Stream 9

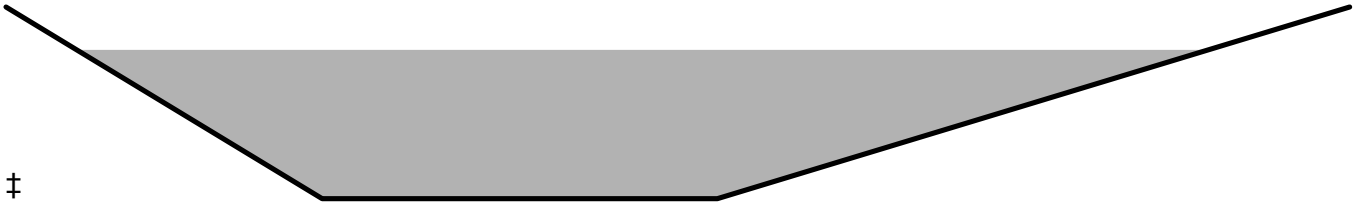
[62] Hint: Exceeded Reach S9-2 OUTLET depth by 0.12' @ 15.90 hrs

Inflow Area = 73.707 ac, 6.14% Impervious, Inflow Depth > 3.92" for 100-year event
Inflow = 105.40 cfs @ 12.58 hrs, Volume= 24.102 af
Outflow = 105.25 cfs @ 12.61 hrs, Volume= 24.075 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.03 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 3.37 fps, Avg. Travel Time= 1.8 min

Peak Storage= 5,458 cf @ 12.60 hrs
Average Depth at Peak Storage= 1.55'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 177.67 cfs

5.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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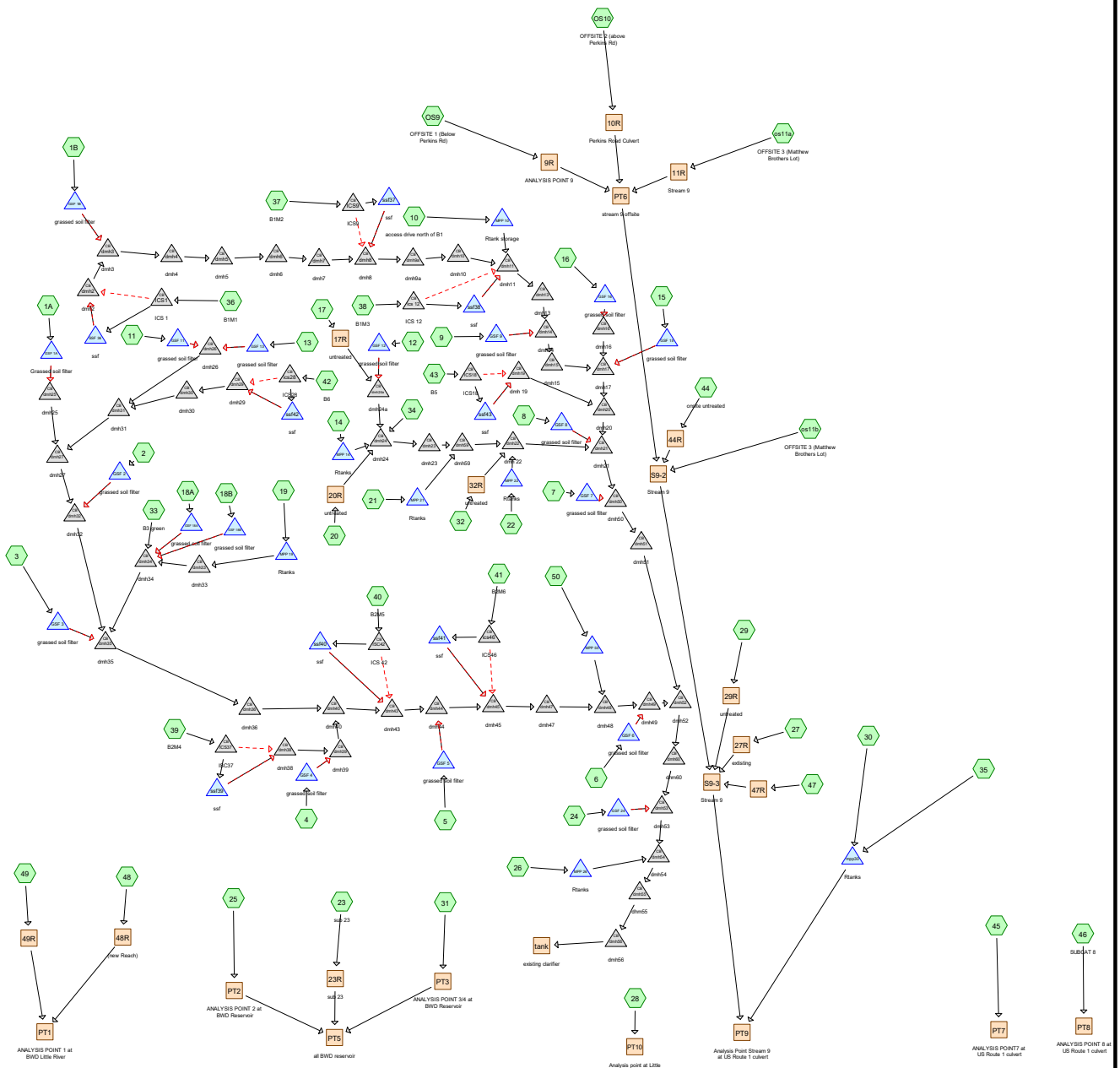
ATTACHMENT L

Updated Post-Development HydroCAD Model

(Update to Appendix E of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008



Routing Diagram for post conditions

Prepared by HP Inc., Printed 8/8/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.930	74	>75% Grass cover, Good, HSG C (1B, 2, 4, 5, 6, 7, 8, 12, 14, 23, OS9)
0.266	77	>75% Grass cover, Good, HSG C/D (1A)
52.064	74	>75% Grass cover, Good, HSG C/D (2, 3, 7, 9, 11, 13, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 25, 30, 31, 32, 44, 45, 46, 47, 48, 49, OS10, os11a, os11b, OS9)
1.458	80	>75% Grass cover, Good, HSG D (24, 28, 47)
0.088	94	Gravel roads, HSG C/D (OS9)
12.465	98	Impervious (1B, 2, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 32, 42, 43, 47, 49, 50, OS10, os11a, os11b, OS9)
0.301	98	Impervious, HSG C (3)
0.314	98	Impervious, HSG C/D (1A, 12)
0.143	98	Paved parking, HSG C (23)
15.504	98	Roof (36, 37, 38, 39, 40, 41)
1.952	70	Woods, Good, HSG C (23, 48, OS9)
23.761	70	Woods, Good, HSG C/D (3, 25, 31, 44, 45, 46, 47, 48, 49, OS10, os11a, os11b)
0.147	77	Woods, Good, HSG D (28)
0.249	79	Woods/grass comb., Good, HSG D (28)
0.111	98	penhouse/walks on roof (34)
0.414	98	penthouse (33)
0.096	98	penthouse/walks on roof (35)
0.110	74	vegetated roof (15)
2.891	61	vegetated roof (33, 34, 35)
116.264	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
82.818	HSG C	1A, 1B, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 23, 25, 30, 31, 32, 44, 45, 46, 47, 48, 49, OS10, os11a, os11b, OS9
1.854	HSG D	24, 28, 47
31.592	Other	1B, 2, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 47, 49, 50, OS10, os11a, os11b, OS9
116.264		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	56.260	1.458	0.000	57.718	>75% Grass cover, Good	1A, 1B, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 23, 24, 25, 28, 30, 31, 32, 44, 45, 46, 47, 48, 49, OS10, os11a, os11b, OS9
0.000	0.000	0.088	0.000	0.000	0.088	Gravel roads	OS9
0.000	0.000	0.615	0.000	12.465	13.080	Impervious	1A, 1B, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18A, 18B, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 32, 42, 43, 47, 49, 50, OS10, os11a, os11b,

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.143	0.000	0.000	0.143	Paved parking	23
0.000	0.000	0.000	0.000	15.504	15.504	Roof	36, 37, 38, 39, 40, 41
0.000	0.000	25.712	0.147	0.000	25.860	Woods, Good	3, 23, 25, 28, 31, 44, 45, 46, 47, 48, 49, OS10, os11a, os11b, OS9
0.000	0.000	0.000	0.249	0.000	0.249	Woods/grass comb., Good	28
0.000	0.000	0.000	0.000	0.111	0.111	penhouse/walks on roof	34
0.000	0.000	0.000	0.000	0.414	0.414	penthouse	33
0.000	0.000	0.000	0.000	0.096	0.096	penthouse/walks on roof	35
0.000	0.000	0.000	0.000	3.001	3.001	vegetated roof	15, 33, 34, 35
0.000	**0.000**	**82.818**	**1.854**	**31.592**	**116.264**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	10R	75.50	75.00	25.0	0.0200	0.013	24.0	0.0	0.0
2	PT7	21.60	18.30	83.0	0.0398	0.013	18.0	0.0	0.0
3	PT8	23.40	18.60	76.0	0.0632	0.011	36.0	24.0	0.0
4	PT9	20.00	14.00	93.0	0.0645	0.011	36.0	0.0	0.0
5	dmh10	54.59	53.56	206.0	0.0050	0.013	24.0	0.0	0.0
6	dmh11	53.54	53.12	84.0	0.0050	0.013	30.0	0.0	0.0
7	dmh13	53.10	52.09	201.0	0.0050	0.013	30.0	0.0	0.0
8	dmh14	52.07	51.95	23.0	0.0052	0.020	30.0	0.0	0.0
9	dmh15	51.95	51.50	90.0	0.0050	0.013	30.0	0.0	0.0
10	dmh16	60.50	58.00	198.0	0.0126	0.013	12.0	0.0	0.0
11	dmh17	51.48	51.30	35.0	0.0051	0.013	30.0	0.0	0.0
12	dmh19	54.48	53.89	59.0	0.0100	0.013	12.0	0.0	0.0
13	dmh2	63.00	61.50	100.0	0.0150	0.013	18.0	0.0	0.0
14	dmh20	51.28	50.78	100.0	0.0050	0.013	30.0	0.0	0.0
15	dmh21	50.76	46.00	281.0	0.0169	0.013	30.0	0.0	0.0
16	dmh22	51.50	51.03	93.0	0.0051	0.013	15.0	0.0	0.0
17	dmh23	55.19	54.50	138.0	0.0050	0.013	12.0	0.0	0.0
18	dmh24	56.10	55.92	72.0	0.0025	0.013	12.0	0.0	0.0
19	dmh24a	58.00	57.10	95.0	0.0095	0.013	8.0	0.0	0.0
20	dmh25	60.00	55.00	98.0	0.0510	0.013	12.0	0.0	0.0
21	dmh26	57.75	57.61	28.0	0.0050	0.020	12.0	0.0	0.0
22	dmh27	53.03	51.75	256.0	0.0050	0.013	12.0	0.0	0.0
23	dmh29	57.85	57.39	46.0	0.0100	0.013	8.0	0.0	0.0
24	dmh3	60.50	59.84	125.0	0.0053	0.013	24.0	0.0	0.0
25	dmh30	55.40	54.37	206.0	0.0050	0.013	12.0	0.0	0.0
26	dmh31	54.35	53.05	259.0	0.0050	0.013	12.0	0.0	0.0
27	dmh32	51.73	51.60	36.0	0.0036	0.013	12.0	0.0	0.0
28	dmh33	54.00	52.01	201.0	0.0099	0.013	12.0	0.0	0.0
29	dmh34	51.99	51.60	39.0	0.0100	0.013	12.0	0.0	0.0
30	dmh35	51.55	50.17	276.0	0.0050	0.013	18.0	0.0	0.0
31	dmh36	50.15	49.35	159.0	0.0050	0.013	18.0	0.0	0.0
32	dmh38	51.98	50.92	106.0	0.0100	0.013	18.0	0.0	0.0
33	dmh39	50.59	50.32	58.0	0.0047	0.013	18.0	0.0	0.0
34	dmh4	59.84	59.57	66.0	0.0041	0.013	24.0	0.0	0.0
35	dmh40	49.33	47.63	340.0	0.0050	0.013	24.0	0.0	0.0
36	dmh43	47.61	46.64	193.0	0.0050	0.013	24.0	0.0	0.0
37	dmh44	46.62	46.21	82.0	0.0050	0.013	30.0	0.0	0.0
38	dmh45	46.19	44.61	316.0	0.0050	0.013	30.0	0.0	0.0
39	dmh47	44.00	42.96	104.0	0.0100	0.013	30.0	0.0	0.0
40	dmh48	42.94	42.35	117.0	0.0050	0.013	30.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
41	dmh49	42.33	42.23	14.0	0.0071	0.013	36.0	0.0	0.0
42	dmh5	59.48	58.61	173.0	0.0050	0.013	24.0	0.0	0.0
43	dmh50	44.75	44.11	64.0	0.0100	0.013	30.0	0.0	0.0
44	dmh51	44.09	43.00	38.0	0.0287	0.013	30.0	0.0	0.0
45	dmh52	41.00	36.00	258.0	0.0194	0.013	42.0	0.0	0.0
46	dmh53	33.00	30.50	120.0	0.0208	0.013	42.0	0.0	0.0
47	dmh54	27.00	22.00	152.0	0.0329	0.013	42.0	0.0	0.0
48	dmh55	19.00	15.50	115.0	0.0304	0.013	42.0	0.0	0.0
49	dmh56	12.50	11.00	42.0	0.0357	0.013	42.0	0.0	0.0
50	dmh59	54.30	52.83	294.0	0.0050	0.013	12.0	0.0	0.0
51	dmh6	58.58	57.73	170.0	0.0050	0.020	24.0	0.0	0.0
52	dmh60	35.50	33.50	114.0	0.0175	0.013	42.0	0.0	0.0
53	dmh7	57.71	56.86	170.0	0.0050	0.013	24.0	0.0	0.0
54	dmh8	56.84	55.66	296.0	0.0040	0.013	24.0	0.0	0.0
55	dmh9a	55.64	54.61	206.0	0.0050	0.013	24.0	0.0	0.0
56	GSF 11	58.05	57.78	27.0	0.0100	0.013	8.0	0.0	0.0
57	GSF 12	58.20	58.10	21.0	0.0048	0.013	8.0	0.0	0.0
58	GSF 13	58.05	57.82	23.0	0.0100	0.013	8.0	0.0	0.0
59	GSF 15	60.70	60.52	18.0	0.0100	0.013	8.0	0.0	0.0
60	GSF 16	60.70	60.54	16.0	0.0100	0.013	8.0	0.0	0.0
61	GSF 18A	54.00	53.95	11.0	0.0045	0.013	8.0	0.0	0.0
62	GSF 18B	54.00	53.95	11.0	0.0045	0.013	8.0	0.0	0.0
63	GSF 1A	62.50	62.26	27.0	0.0089	0.013	8.0	0.0	0.0
64	GSF 1B	62.70	62.60	20.0	0.0050	0.013	8.0	0.0	0.0
65	GSF 2	53.95	53.76	19.0	0.0100	0.013	8.0	0.0	0.0
66	GSF 24	36.80	36.00	40.0	0.0200	0.013	8.0	0.0	0.0
67	GSF 3	51.95	51.81	14.0	0.0100	0.013	12.0	0.0	0.0
68	GSF 4	51.70	51.53	17.0	0.0100	0.013	8.0	0.0	0.0
69	GSF 5	51.00	50.95	5.0	0.0100	0.013	8.0	0.0	0.0
70	GSF 6	44.70	44.53	17.0	0.0100	0.013	8.0	0.0	0.0
71	GSF 7	51.00	50.48	26.0	0.0200	0.013	8.0	0.0	0.0
72	GSF 8	53.50	52.93	57.0	0.0100	0.013	8.0	0.0	0.0
73	GSF 9	59.00	57.92	54.0	0.0200	0.013	8.0	0.0	0.0
74	ics 12	60.70	60.15	4.0	0.1375	0.013	18.0	0.0	0.0
75	ics 12	60.75	60.72	5.0	0.0060	0.013	12.0	0.0	0.0
76	ICS1	63.37	63.27	23.0	0.0043	0.013	18.0	0.0	0.0
77	ICS1	63.37	63.37	5.0	0.0000	0.013	12.0	0.0	0.0
78	ICS18	57.81	57.80	5.0	0.0020	0.013	8.0	0.0	0.0
79	ICS18	57.80	56.96	84.0	0.0100	0.013	12.0	0.0	0.0
80	ics28	58.00	57.90	10.0	0.0100	0.013	8.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
81	ics28	58.15	58.12	5.0	0.0060	0.013	8.0	0.0	0.0
82	ICS37	52.50	52.00	51.0	0.0098	0.013	18.0	0.0	0.0
83	ICS37	52.80	52.75	5.0	0.0100	0.013	12.0	0.0	0.0
84	ics46	46.20	46.00	22.0	0.0091	0.013	18.0	0.0	0.0
85	ics46	46.80	46.75	5.0	0.0100	0.013	12.0	0.0	0.0
86	ICS9	61.70	61.00	14.0	0.0500	0.013	18.0	0.0	0.0
87	ICS9	62.00	61.65	5.0	0.0700	0.013	12.0	0.0	0.0
88	ISC42	52.20	51.88	16.0	0.0200	0.013	18.0	0.0	0.0
89	ISC42	52.80	52.75	5.0	0.0100	0.013	12.0	0.0	0.0
90	MPP 10	61.48	61.40	2.0	0.0400	0.013	8.0	0.0	0.0
91	MPP 14	56.23	56.12	21.0	0.0052	0.013	8.0	0.0	0.0
92	MPP 19	55.08	55.00	19.0	0.0042	0.013	6.0	0.0	0.0
93	MPP 21	54.73	54.73	2.0	0.0000	0.013	6.0	0.0	0.0
94	MPP 22	55.05	55.05	2.0	0.0000	0.013	6.0	0.0	0.0
95	MPP 26	34.62	34.34	8.0	0.0350	0.013	8.0	0.0	0.0
96	MPP 50	54.58	54.55	3.0	0.0100	0.013	8.0	0.0	0.0
97	mpp30	29.28	29.00	20.0	0.0140	0.013	18.0	0.0	0.0
98	SSF 36	64.31	64.31	5.0	0.0000	0.013	12.0	0.0	0.0
99	ssf37	62.89	62.89	5.0	0.0000	0.013	12.0	0.0	0.0
100	ssf38	61.66	61.66	5.0	0.0000	0.013	12.0	0.0	0.0
101	ssf39	53.71	53.71	5.0	0.0000	0.013	12.0	0.0	0.0
102	ssf40	53.71	53.71	5.0	0.0000	0.013	12.0	0.0	0.0
103	ssf41	47.71	47.71	5.0	0.0000	0.013	12.0	0.0	0.0
104	ssf42	60.05	60.06	5.0	-0.0020	0.013	8.0	0.0	0.0
105	ssf43	59.28	59.28	5.0	0.0000	0.013	8.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1A: Runoff Area=17,785 sf 34.88% Impervious Runoff Depth=0.15"
Tc=6.0 min CN=84 Runoff=0.05 cfs 0.005 af

Subcatchment 1B: Runoff Area=34,018 sf 20.08% Impervious Runoff Depth=0.07"
Tc=6.0 min CN=79 Runoff=0.02 cfs 0.005 af

Subcatchment 2: Runoff Area=31,049 sf 25.93% Impervious Runoff Depth=0.08"
Tc=6.0 min CN=80 Runoff=0.03 cfs 0.005 af

Subcatchment 3: Runoff Area=36,147 sf 36.22% Impervious Runoff Depth=0.11"
Tc=6.0 min CN=82 Runoff=0.06 cfs 0.008 af

Subcatchment 4: Runoff Area=8,448 sf 0.00% Impervious Runoff Depth=0.02"
Tc=6.0 min CN=74 Runoff=0.00 cfs 0.000 af

Subcatchment 5: Runoff Area=10,807 sf 0.00% Impervious Runoff Depth=0.02"
Tc=6.0 min CN=74 Runoff=0.00 cfs 0.000 af

Subcatchment 6: Runoff Area=13,985 sf 32.06% Impervious Runoff Depth=0.11"
Tc=6.0 min CN=82 Runoff=0.02 cfs 0.003 af

Subcatchment 7: Runoff Area=30,345 sf 25.86% Impervious Runoff Depth=0.08"
Tc=6.0 min CN=80 Runoff=0.03 cfs 0.005 af

Subcatchment 8: Runoff Area=45,551 sf 55.78% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=87 Runoff=0.23 cfs 0.020 af

Subcatchment 9: Runoff Area=28,191 sf 63.29% Impervious Runoff Depth=0.28"
Tc=6.0 min CN=89 Runoff=0.20 cfs 0.015 af

Subcatchment 10: access drive north of Runoff Area=30,932 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.63 cfs 0.047 af

Subcatchment 11: Runoff Area=43,174 sf 36.78% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=83 Runoff=0.09 cfs 0.011 af

Subcatchment 12: Runoff Area=12,920 sf 57.98% Impervious Runoff Depth=0.25"
Tc=6.0 min CN=88 Runoff=0.08 cfs 0.006 af

Subcatchment 13: Runoff Area=45,163 sf 46.46% Impervious Runoff Depth=0.17"
Tc=6.0 min CN=85 Runoff=0.16 cfs 0.015 af

Subcatchment 14: Runoff Area=9,378 sf 94.36% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=0.18 cfs 0.013 af

Subcatchment 15: Runoff Area=9,157 sf 1.92% Impervious Runoff Depth=0.02"
Tc=6.0 min CN=74 Runoff=0.00 cfs 0.000 af

Subcatchment 16: Runoff Area=15,110 sf 34.16% Impervious Runoff Depth=0.11"
Tc=6.0 min CN=82 Runoff=0.02 cfs 0.003 af

Subcatchment 17: Runoff Area=13,300 sf 85.11% Impervious Runoff Depth=0.50"
Tc=6.0 min CN=94 Runoff=0.18 cfs 0.013 af

Subcatchment 18A: Runoff Area=6,339 sf 40.91% Impervious Runoff Depth=0.15"
Tc=6.0 min CN=84 Runoff=0.02 cfs 0.002 af

Subcatchment 18B: Runoff Area=4,023 sf 58.36% Impervious Runoff Depth=0.25"
Tc=6.0 min CN=88 Runoff=0.02 cfs 0.002 af

Subcatchment 19: Runoff Area=13,711 sf 81.76% Impervious Runoff Depth=0.50"
Tc=6.0 min CN=94 Runoff=0.19 cfs 0.013 af

Subcatchment 20: Runoff Area=28,459 sf 73.83% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=92 Runoff=0.30 cfs 0.022 af

Subcatchment 21: Runoff Area=9,994 sf 83.66% Impervious Runoff Depth=0.50"
Tc=6.0 min CN=94 Runoff=0.14 cfs 0.010 af

Subcatchment 22: Runoff Area=13,511 sf 76.43% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=92 Runoff=0.14 cfs 0.010 af

Subcatchment 23: sub 23 Runoff Area=28,475 sf 21.95% Impervious Runoff Depth=0.06"
Tc=6.0 min CN=78 Runoff=0.01 cfs 0.003 af

Subcatchment 24: Runoff Area=18,261 sf 67.19% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=92 Runoff=0.19 cfs 0.014 af

Subcatchment 25: Runoff Area=118,223 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=438' Tc=67.0 min CN=71 Runoff=0.00 cfs 0.002 af

Subcatchment 26: Runoff Area=3,816 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 27: Runoff Area=4,262 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.006 af

Subcatchment 28: Runoff Area=79,698 sf 27.42% Impervious Runoff Depth=0.17"
Tc=6.0 min CN=85 Runoff=0.28 cfs 0.026 af

Subcatchment 29: Runoff Area=1,306 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.03 cfs 0.002 af

Subcatchment 30: Runoff Area=31,472 sf 77.98% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=93 Runoff=0.38 cfs 0.027 af

Subcatchment 31: Runoff Area=70,616 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=217' Tc=12.3 min CN=71 Runoff=0.00 cfs 0.001 af

Subcatchment 32: Runoff Area=4,677 sf 60.42% Impervious Runoff Depth=0.28"
Tc=6.0 min CN=89 Runoff=0.03 cfs 0.003 af

Subcatchment 33: B3 green Runoff Area=107,893 sf 16.71% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=67 Runoff=0.00 cfs 0.000 af

Subcatchment 34: Runoff Area=24,099 sf 20.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=68 Runoff=0.00 cfs 0.000 af

Subcatchment 35: Runoff Area=20,997 sf 20.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=68 Runoff=0.00 cfs 0.000 af

Subcatchment 36: B1M1 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 37: B1M2 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 38: B1M3 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 39: B2M4 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 40: B2M5 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 41: B2M6 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.30 cfs 0.170 af

Subcatchment 42: B6 Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.25 cfs 0.018 af

Subcatchment 43: B5 Runoff Area=18,983 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.39 cfs 0.029 af

Subcatchment 44: onsite untreated Runoff Area=159,363 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=574' Tc=18.8 min CN=71 Runoff=0.00 cfs 0.002 af

Subcatchment 45: Runoff Area=64,440 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=307' Tc=29.9 min CN=70 Runoff=0.00 cfs 0.001 af

Subcatchment 46: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.00 cfs 0.000 af

Subcatchment 47: Runoff Area=79,187 sf 6.00% Impervious Runoff Depth=0.03"
Flow Length=639' Tc=15.9 min CN=75 Runoff=0.01 cfs 0.005 af

Subcatchment 48: Runoff Area=40,183 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=377' Tc=54.0 min CN=70 Runoff=0.00 cfs 0.000 af

Subcatchment 49: Runoff Area=84,173 sf 0.65% Impervious Runoff Depth=0.00"
Flow Length=470' Tc=54.1 min CN=70 Runoff=0.00 cfs 0.001 af

Subcatchment 50: Runoff Area=30,173 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.62 cfs 0.046 af

Subcatchment OS10: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth=0.02"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=0.11 cfs 0.073 af

Subcatchment os11a: OFFSITE 3 Runoff Area=192,533 sf 59.04% Impervious Runoff Depth=0.22"
Flow Length=532' Tc=6.8 min CN=87 Runoff=0.96 cfs 0.082 af

Subcatchment os11b: OFFSITE 3 Runoff Area=320,814 sf 1.43% Impervious Runoff Depth=0.01"
Flow Length=528' Tc=18.9 min CN=72 Runoff=0.01 cfs 0.007 af

Subcatchment OS9: OFFSITE 1 (Below Runoff Area=702,010 sf 3.63% Impervious Runoff Depth=0.03"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=0.07 cfs 0.041 af

Reach 9R: ANALYSIS POINT 9 Inflow=0.07 cfs 0.041 af
Outflow=0.07 cfs 0.041 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=0.09' Max Vel=2.38 fps Inflow=0.11 cfs 0.073 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=0.11 cfs 0.073 af

Reach 11R: Stream 9 Inflow=0.96 cfs 0.082 af
Outflow=0.96 cfs 0.082 af

Reach 17R: untreated Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Reach 20R: untreated Inflow=0.30 cfs 0.022 af
Outflow=0.30 cfs 0.022 af

Reach 23R: sub 23 Inflow=0.01 cfs 0.003 af
Outflow=0.01 cfs 0.003 af

Reach 27R: extisting Inflow=0.09 cfs 0.006 af
Outflow=0.09 cfs 0.006 af

Reach 29R: untreated Inflow=0.03 cfs 0.002 af
Outflow=0.03 cfs 0.002 af

Reach 32R: untreated Inflow=0.03 cfs 0.003 af
Outflow=0.03 cfs 0.003 af

Reach 44R: Inflow=0.00 cfs 0.002 af
Outflow=0.00 cfs 0.002 af

Reach 47R: Inflow=0.01 cfs 0.005 af
Outflow=0.01 cfs 0.005 af

Reach 48R: (new Reach) Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 49R: Inflow=0.00 cfs 0.001 af
Outflow=0.00 cfs 0.001 af

Reach PT1: ANALYSIS POINT 1 at BWD Little River Inflow=0.00 cfs 0.001 af
Outflow=0.00 cfs 0.001 af

Reach PT10: Analysis point at Little River Inflow=0.28 cfs 0.026 af
Outflow=0.28 cfs 0.026 af

Reach PT2: ANALYSIS POINT 2 at BWD Reservoir Inflow=0.00 cfs 0.002 af
Outflow=0.00 cfs 0.002 af

Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir Inflow=0.00 cfs 0.001 af
Outflow=0.00 cfs 0.001 af

Reach PT5: all BWD reservoir Inflow=0.01 cfs 0.006 af
Outflow=0.01 cfs 0.006 af

Reach PT6: stream 9 offsite Avg. Flow Depth=0.13' Max Vel=1.10 fps Inflow=0.96 cfs 0.196 af
n=0.040 L=483.0' S=0.0145 '/' Capacity=401.91 cfs Outflow=0.74 cfs 0.196 af

Reach PT7: ANALYSIS POINT7 at US Avg. Flow Depth=0.00' Max Vel=1.05 fps Inflow=0.00 cfs 0.001 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=0.00 cfs 0.001 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.00' Max Vel=2.48 fps Inflow=0.00 cfs 0.000 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.00 cfs 0.000 af

Reach PT9: Analysis Point Stream 9 at Avg. Flow Depth=0.11' Max Vel=6.13 fps Inflow=0.54 cfs 0.246 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=0.54 cfs 0.246 af

Reach S9-2: Stream 9 Avg. Flow Depth=0.08' Max Vel=1.02 fps Inflow=0.74 cfs 0.206 af
n=0.040 L=1,580.0' S=0.0233 '/' Capacity=120.91 cfs Outflow=0.42 cfs 0.206 af

Reach S9-3: Stream 9 Avg. Flow Depth=0.08' Max Vel=1.06 fps Inflow=0.44 cfs 0.219 af
n=0.035 L=364.0' S=0.0199 '/' Capacity=152.29 cfs Outflow=0.43 cfs 0.219 af

Reach tank: existing clarifier Inflow=6.35 cfs 0.740 af
Outflow=6.35 cfs 0.740 af

Pond dmh10: dmh10 Peak Elev=55.49' Inflow=3.53 cfs 0.152 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=3.53 cfs 0.152 af

Pond dmh11: dmh11 Peak Elev=54.49' Inflow=4.17 cfs 0.319 af
30.0" Round Culvert n=0.013 L=84.0' S=0.0050 '/' Outflow=4.17 cfs 0.319 af

Pond dmh13: dmh13 Peak Elev=54.01' Inflow=4.17 cfs 0.319 af
30.0" Round Culvert n=0.013 L=201.0' S=0.0050 '/' Outflow=4.17 cfs 0.319 af

Pond dmh14: dmh14 Peak Elev=53.14' Inflow=4.17 cfs 0.333 af
30.0" Round Culvert n=0.020 L=23.0' S=0.0052 '/' Outflow=4.17 cfs 0.333 af

Pond dmh15: dmh15 Peak Elev=52.90' Inflow=4.17 cfs 0.333 af
30.0" Round Culvert n=0.013 L=90.0' S=0.0050 '/' Outflow=4.17 cfs 0.333 af

Pond dmh16: dmh16 Peak Elev=60.51' Inflow=0.00 cfs 0.003 af
12.0" Round Culvert n=0.013 L=198.0' S=0.0126 '/' Outflow=0.00 cfs 0.003 af

Pond dmh17: dmh17 Peak Elev=52.48' Inflow=4.17 cfs 0.337 af
30.0" Round Culvert n=0.013 L=35.0' S=0.0051 '/' Outflow=4.17 cfs 0.337 af

Pond dmh19: dmh 19 Peak Elev=54.53' Inflow=0.01 cfs 0.012 af
12.0" Round Culvert n=0.013 L=59.0' S=0.0100 '/' Outflow=0.01 cfs 0.012 af

Pond dmh2: dmh2 Peak Elev=63.71' Inflow=1.86 cfs 0.074 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0150 '/' Outflow=1.86 cfs 0.074 af

Pond dmh20: dmh20 Peak Elev=52.22' Inflow=4.17 cfs 0.349 af
30.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=4.17 cfs 0.349 af

Pond dmh21: dmh21 Peak Elev=51.73' Inflow=4.69 cfs 0.428 af
30.0" Round Culvert n=0.013 L=281.0' S=0.0169 '/' Outflow=4.69 cfs 0.428 af

Pond dmh22: dmh 22 Peak Elev=51.89' Inflow=0.52 cfs 0.060 af
15.0" Round Culvert n=0.013 L=93.0' S=0.0051 '/' Outflow=0.52 cfs 0.060 af

Pond dmh23: dmh23 Peak Elev=55.60' Inflow=0.48 cfs 0.049 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0050 '/' Outflow=0.48 cfs 0.049 af

Pond dmh24: dmh24 Peak Elev=56.57' Inflow=0.48 cfs 0.049 af
12.0" Round Culvert n=0.013 L=72.0' S=0.0025 '/' Outflow=0.48 cfs 0.049 af

Pond dmh24a: dmh24a Peak Elev=58.27' Inflow=0.18 cfs 0.019 af
8.0" Round Culvert n=0.013 L=95.0' S=0.0095 '/' Outflow=0.18 cfs 0.019 af

Pond dmh25: dmh25 Peak Elev=60.01' Inflow=0.00 cfs 0.005 af
12.0" Round Culvert n=0.013 L=98.0' S=0.0510 '/' Outflow=0.00 cfs 0.005 af

Pond dmh26: dmh26 Peak Elev=57.84' Inflow=0.02 cfs 0.025 af
12.0" Round Culvert n=0.020 L=28.0' S=0.0050 '/' Outflow=0.02 cfs 0.025 af

Pond dmh27: dmh27 Peak Elev=53.12' Inflow=0.03 cfs 0.036 af
12.0" Round Culvert n=0.013 L=256.0' S=0.0050 '/' Outflow=0.03 cfs 0.036 af

Pond dmh29: dmh29 Peak Elev=57.89' Inflow=0.01 cfs 0.006 af
8.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=0.01 cfs 0.006 af

Pond dmh3: dmh3 Peak Elev=61.14' Inflow=1.86 cfs 0.078 af
24.0" Round Culvert n=0.013 L=125.0' S=0.0053 '/' Outflow=1.86 cfs 0.078 af

Pond dmh30: dmh30 Peak Elev=55.43' Inflow=0.01 cfs 0.006 af
12.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=0.01 cfs 0.006 af

Pond dmh31: dmh31 Peak Elev=54.44' Inflow=0.02 cfs 0.031 af
12.0" Round Culvert n=0.013 L=259.0' S=0.0050 '/' Outflow=0.02 cfs 0.031 af

Pond dmh32: dmh32 Peak Elev=51.83' Inflow=0.03 cfs 0.041 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0036 '/' Outflow=0.03 cfs 0.041 af

Pond dmh33: dmh33 Peak Elev=54.02' Inflow=0.00 cfs 0.005 af
12.0" Round Culvert n=0.013 L=201.0' S=0.0099 '/' Outflow=0.00 cfs 0.005 af

Pond dmh34: dmh34 Peak Elev=52.01' Inflow=0.01 cfs 0.008 af
12.0" Round Culvert n=0.013 L=39.0' S=0.0100 '/' Outflow=0.01 cfs 0.008 af

Pond dmh35: dmh35 Peak Elev=51.65' Inflow=0.04 cfs 0.056 af
18.0" Round Culvert n=0.013 L=276.0' S=0.0050 '/' Outflow=0.04 cfs 0.056 af

Pond dmh36: dmh36 Peak Elev=50.25' Inflow=0.04 cfs 0.056 af
18.0" Round Culvert n=0.013 L=159.0' S=0.0050 '/' Outflow=0.04 cfs 0.056 af

Pond dmh38: dmh38 Peak Elev=52.10' Inflow=0.07 cfs 0.068 af
18.0" Round Culvert n=0.013 L=106.0' S=0.0100 '/' Outflow=0.07 cfs 0.068 af

Pond dmh39: dmh39 Peak Elev=50.73' Inflow=0.07 cfs 0.068 af
18.0" Round Culvert n=0.013 L=58.0' S=0.0047 '/' Outflow=0.07 cfs 0.068 af

Pond dmh4: dmh4 Peak Elev=60.54' Inflow=1.86 cfs 0.078 af
24.0" Round Culvert n=0.013 L=66.0' S=0.0041 '/' Outflow=1.86 cfs 0.078 af

Pond dmh40: dmh40 Peak Elev=49.49' Inflow=0.11 cfs 0.125 af
24.0" Round Culvert n=0.013 L=340.0' S=0.0050 '/' Outflow=0.11 cfs 0.125 af

Pond dmh43: dmh43 Peak Elev=47.80' Inflow=0.17 cfs 0.197 af
24.0" Round Culvert n=0.013 L=193.0' S=0.0050 '/' Outflow=0.17 cfs 0.197 af

Pond dmh44: dmh44 Peak Elev=46.81' Inflow=0.17 cfs 0.197 af
30.0" Round Culvert n=0.013 L=82.0' S=0.0050 '/' Outflow=0.17 cfs 0.197 af

Pond dmh45: dmh45 Peak Elev=46.75' Inflow=1.66 cfs 0.271 af
30.0" Round Culvert n=0.013 L=316.0' S=0.0050 '/' Outflow=1.66 cfs 0.271 af

Pond dmh47: dmh47 Peak Elev=44.56' Inflow=1.66 cfs 0.271 af
30.0" Round Culvert n=0.013 L=104.0' S=0.0100 '/' Outflow=1.66 cfs 0.271 af

Pond dmh48: dmh48 Peak Elev=43.51' Inflow=1.66 cfs 0.288 af
30.0" Round Culvert n=0.013 L=117.0' S=0.0050 '/' Outflow=1.66 cfs 0.288 af

Pond dmh49: dmh49 Peak Elev=42.91' Inflow=1.66 cfs 0.291 af
36.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=1.66 cfs 0.291 af

Pond dmh5: dmh5 Peak Elev=60.12' Inflow=1.86 cfs 0.078 af
24.0" Round Culvert n=0.013 L=173.0' S=0.0050 '/' Outflow=1.86 cfs 0.078 af

Pond dmh50: dmh50 Peak Elev=45.72' Inflow=4.69 cfs 0.432 af
30.0" Round Culvert n=0.013 L=64.0' S=0.0100 '/' Outflow=4.69 cfs 0.432 af

Pond dmh51: dmh51 Peak Elev=45.06' Inflow=4.69 cfs 0.432 af
30.0" Round Culvert n=0.013 L=38.0' S=0.0287 '/' Outflow=4.69 cfs 0.432 af

Pond dmh52: dmh52 Peak Elev=42.02' Inflow=6.35 cfs 0.723 af
42.0" Round Culvert n=0.013 L=258.0' S=0.0194 '/' Outflow=6.35 cfs 0.723 af

Pond dmh53: dmh53 Peak Elev=34.02' Inflow=6.35 cfs 0.737 af
42.0" Round Culvert n=0.013 L=120.0' S=0.0208 '/' Outflow=6.35 cfs 0.737 af

Pond dmh54: dmh54 Peak Elev=28.02' Inflow=6.35 cfs 0.740 af
42.0" Round Culvert n=0.013 L=152.0' S=0.0329 '/' Outflow=6.35 cfs 0.740 af

Pond dmh55: dhm55 Peak Elev=20.02' Inflow=6.35 cfs 0.740 af
42.0" Round Culvert n=0.013 L=115.0' S=0.0304 '/' Outflow=6.35 cfs 0.740 af

Pond dmh56: dmh56 Peak Elev=13.52' Inflow=6.35 cfs 0.740 af
42.0" Round Culvert n=0.013 L=42.0' S=0.0357 '/' Outflow=6.35 cfs 0.740 af

Pond dmh59: dmh59 Peak Elev=54.70' Inflow=0.48 cfs 0.055 af
12.0" Round Culvert n=0.013 L=294.0' S=0.0050 '/' Outflow=0.48 cfs 0.055 af

Pond dmh6: dmh6 Peak Elev=59.34' Inflow=1.86 cfs 0.078 af
24.0" Round Culvert n=0.020 L=170.0' S=0.0050 '/' Outflow=1.86 cfs 0.078 af

Pond dmh60: dhm60 Peak Elev=36.52' Inflow=6.35 cfs 0.723 af
42.0" Round Culvert n=0.013 L=114.0' S=0.0175 '/' Outflow=6.35 cfs 0.723 af

Pond dmh7: dmh7 Peak Elev=58.35' Inflow=1.86 cfs 0.078 af
24.0" Round Culvert n=0.013 L=170.0' S=0.0050 '/' Outflow=1.86 cfs 0.078 af

Pond dmh8: dmh8 Peak Elev=57.77' Inflow=3.53 cfs 0.152 af
24.0" Round Culvert n=0.013 L=296.0' S=0.0040 '/' Outflow=3.53 cfs 0.152 af

Pond dmh9a: dmh9a Peak Elev=56.54' Inflow=3.53 cfs 0.152 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=3.53 cfs 0.152 af

Pond GSF 11: grassed soil filter Peak Elev=58.53' Storage=255 cf Inflow=0.09 cfs 0.011 af
Primary=0.01 cfs 0.010 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.010 af

Pond GSF 12: grassed soil filter Peak Elev=58.72' Storage=172 cf Inflow=0.08 cfs 0.006 af
Primary=0.00 cfs 0.006 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.006 af

Pond GSF 13: grassed soil filter Peak Elev=58.59' Storage=352 cf Inflow=0.16 cfs 0.015 af
Primary=0.01 cfs 0.015 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.015 af

Pond GSF 15: grassed soil filter Peak Elev=60.79' Storage=13 cf Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond GSF 16: grassed soil filter Peak Elev=60.94' Storage=80 cf Inflow=0.02 cfs 0.003 af
Primary=0.00 cfs 0.003 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.003 af

Pond GSF 18A: grassed soil filter Peak Elev=54.38' Storage=50 cf Inflow=0.02 cfs 0.002 af
Primary=0.00 cfs 0.002 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.002 af

Pond GSF 18B: grassed soil filter Peak Elev=54.73' Storage=57 cf Inflow=0.02 cfs 0.002 af
Primary=0.00 cfs 0.002 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.002 af

Pond GSF 1A: Grassed soil filter Peak Elev=63.19' Storage=130 cf Inflow=0.05 cfs 0.005 af
Primary=0.00 cfs 0.005 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond GSF 1B: grassed soil filter Peak Elev=63.03' Storage=86 cf Inflow=0.02 cfs 0.005 af
Primary=0.00 cfs 0.004 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.004 af

Pond GSF 2: grassed soil filter Peak Elev=54.16' Storage=101 cf Inflow=0.03 cfs 0.005 af
Primary=0.00 cfs 0.005 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond GSF 24: grassed soil filter Peak Elev=37.67' Storage=381 cf Inflow=0.19 cfs 0.014 af
Primary=0.01 cfs 0.014 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.014 af

Pond GSF 3: grassed soil filter Peak Elev=52.27' Storage=181 cf Inflow=0.06 cfs 0.008 af
Primary=0.00 cfs 0.008 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.008 af

Pond GSF 4: grassed soil filter Peak Elev=51.78' Storage=7 cf Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond GSF 5: grassed soil filter Peak Elev=51.29' Storage=11 cf Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond GSF 6: grassed soil filter Peak Elev=44.92' Storage=74 cf Inflow=0.02 cfs 0.003 af
Primary=0.00 cfs 0.003 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.003 af

Pond GSF 7: grassed soil filter Peak Elev=51.37' Storage=109 cf Inflow=0.03 cfs 0.005 af
Primary=0.00 cfs 0.005 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond GSF 8: grassed soil filter Peak Elev=54.35' Storage=463 cf Inflow=0.23 cfs 0.020 af
Primary=0.01 cfs 0.019 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.019 af

Pond GSF 9: grassed soil filter Peak Elev=59.80' Storage=429 cf Inflow=0.20 cfs 0.015 af
Primary=0.01 cfs 0.014 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.014 af

Pond ics 12: ICS 12 Peak Elev=63.23' Inflow=2.30 cfs 0.170 af
Primary=1.66 cfs 0.031 af Secondary=0.64 cfs 0.139 af Outflow=2.30 cfs 0.170 af

Pond ICS1: ICS 1 Peak Elev=64.61' Inflow=2.30 cfs 0.170 af
Primary=0.43 cfs 0.125 af Secondary=1.86 cfs 0.045 af Outflow=2.30 cfs 0.170 af

Pond ICS18: ICS18 Peak Elev=58.83' Inflow=0.39 cfs 0.029 af
Primary=0.39 cfs 0.029 af Secondary=0.00 cfs 0.000 af Outflow=0.39 cfs 0.029 af

Pond ics28: ICS28 Peak Elev=58.66' Inflow=0.25 cfs 0.018 af
Primary=0.25 cfs 0.018 af Secondary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.018 af

Pond ICS37: ISC37 Peak Elev=53.79' Inflow=2.30 cfs 0.170 af
Primary=2.30 cfs 0.170 af Secondary=0.00 cfs 0.000 af Outflow=2.30 cfs 0.170 af

Pond ics46: ICS46 Peak Elev=49.28' Inflow=2.30 cfs 0.170 af
Primary=0.64 cfs 0.139 af Secondary=1.66 cfs 0.032 af Outflow=2.30 cfs 0.170 af

Pond ICS9: ICS9 Peak Elev=64.46' Inflow=2.30 cfs 0.170 af
Primary=0.64 cfs 0.139 af Secondary=1.66 cfs 0.032 af Outflow=2.30 cfs 0.170 af

Pond ISC42: ICS 42 Peak Elev=53.79' Inflow=2.30 cfs 0.170 af
Primary=2.30 cfs 0.170 af Secondary=0.00 cfs 0.000 af Outflow=2.30 cfs 0.170 af

Pond MPP 10: Rtank storage Peak Elev=61.54' Storage=0.028 af Inflow=0.63 cfs 0.047 af
8.0" Round Culvert x 6.00 n=0.013 L=2.0' S=0.0400 '/' Outflow=0.09 cfs 0.029 af

Pond MPP 14: Rtanks Peak Elev=56.30' Storage=314 cf Inflow=0.18 cfs 0.013 af
8.0" Round Culvert x 2.00 n=0.013 L=21.0' S=0.0052 '/' Outflow=0.02 cfs 0.008 af

Pond MPP 19: Rtanks Peak Elev=55.13' Storage=0.011 af Inflow=0.19 cfs 0.013 af
6.0" Round Culvert n=0.013 L=19.0' S=0.0042 '/' Outflow=0.00 cfs 0.005 af

Pond MPP 21: Rtanks Peak Elev=54.81' Storage=255 cf Inflow=0.14 cfs 0.010 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.01 cfs 0.006 af

Pond MPP 22: Rtanks Peak Elev=55.09' Storage=408 cf Inflow=0.14 cfs 0.010 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.00 cfs 0.002 af

Pond MPP 26: Rtanks Peak Elev=34.66' Storage=173 cf Inflow=0.08 cfs 0.006 af
8.0" Round Culvert n=0.013 L=8.0' S=0.0350 '/' Outflow=0.00 cfs 0.003 af

Pond MPP 50: Peak Elev=54.62' Storage=1,443 cf Inflow=0.62 cfs 0.046 af
8.0" Round Culvert x 7.00 n=0.013 L=3.0' S=0.0100 '/' Outflow=0.03 cfs 0.017 af

Pond mpp30: Rtanks Peak Elev=29.62' Storage=363 cf Inflow=0.38 cfs 0.027 af
Outflow=0.11 cfs 0.027 af

Pond SSF 36: ssf Peak Elev=62.79' Storage=4,244 cf Inflow=0.43 cfs 0.125 af
Primary=0.06 cfs 0.029 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.029 af

Pond ssf37: ssf Peak Elev=61.47' Storage=4,502 cf Inflow=0.64 cfs 0.139 af
Primary=0.06 cfs 0.042 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.042 af

Pond ssf38: ssf Peak Elev=57.98' Storage=1,372 cf Inflow=1.66 cfs 0.031 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond ssf39: ssf Peak Elev=52.59' Storage=5,520 cf Inflow=2.30 cfs 0.170 af
Primary=0.07 cfs 0.068 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.068 af

Pond ssf40: ssf Peak Elev=52.68' Storage=5,492 cf Inflow=2.30 cfs 0.170 af
Primary=0.07 cfs 0.072 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.072 af

Pond ssf41: ssf Peak Elev=46.30' Storage=4,493 cf Inflow=0.64 cfs 0.139 af
Primary=0.06 cfs 0.042 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.042 af

Pond ssf42: ssf Peak Elev=58.40' Storage=597 cf Inflow=0.25 cfs 0.018 af
Primary=0.01 cfs 0.006 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.006 af

Pond ssf43: ssf Peak Elev=57.91' Storage=921 cf Inflow=0.39 cfs 0.029 af
Primary=0.01 cfs 0.012 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.012 af

Total Runoff Area = 116.264 ac Runoff Volume = 1.651 af Average Runoff Depth = 0.17"
74.76% Pervious = 86.915 ac 25.24% Impervious = 29.349 ac

Summary for Subcatchment 1A:

Runoff = 0.05 cfs @ 12.12 hrs, Volume= 0.005 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	11,582	77	>75% Grass cover, Good, HSG C/D
*	6,203	98	Impervious, HSG C/D
	17,785	84	Weighted Average
	11,582		65.12% Pervious Area
	6,203		34.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 1B:

Runoff = 0.02 cfs @ 12.35 hrs, Volume= 0.005 af, Depth= 0.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	6,832	98	Impervious
	27,186	74	>75% Grass cover, Good, HSG C
	34,018	79	Weighted Average
	27,186		79.92% Pervious Area
	6,832		20.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 2:

Runoff = 0.03 cfs @ 12.32 hrs, Volume= 0.005 af, Depth= 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	8,052	98	Impervious
	5,300	74	>75% Grass cover, Good, HSG C
*	17,697	74	>75% Grass cover, Good, HSG C/D
	31,049	80	Weighted Average
	22,997		74.07% Pervious Area
	8,052		25.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 3:

Runoff = 0.06 cfs @ 12.14 hrs, Volume= 0.008 af, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	13,091	98	Impervious, HSG C
*	15,516	74	>75% Grass cover, Good, HSG C/D
*	7,540	70	Woods, Good, HSG C/D
	36,147	82	Weighted Average
	23,056		63.78% Pervious Area
	13,091		36.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 4:

Runoff = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
	8,448	74	>75% Grass cover, Good, HSG C
	8,448		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 5:

Runoff = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

Area (sf)	CN	Description
10,807	74	>75% Grass cover, Good, HSG C
10,807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 6:

Runoff = 0.02 cfs @ 12.14 hrs, Volume= 0.003 af, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	4,484	98	Impervious
*	9,501	74	>75% Grass cover, Good, HSG C
	13,985	82	Weighted Average
	9,501		67.94% Pervious Area
	4,484		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 7:

Runoff = 0.03 cfs @ 12.32 hrs, Volume= 0.005 af, Depth= 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	7,846	98	Impervious
	3,270	74	>75% Grass cover, Good, HSG C
*	19,229	74	>75% Grass cover, Good, HSG C/D
	30,345	80	Weighted Average
	22,499		74.14% Pervious Area
	7,846		25.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 8:

Runoff = 0.23 cfs @ 12.10 hrs, Volume= 0.020 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	25,409	98	Impervious
	20,142	74	>75% Grass cover, Good, HSG C
	45,551	87	Weighted Average
	20,142		44.22% Pervious Area
	25,409		55.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 9:

Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.015 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	10,348	74	>75% Grass cover, Good, HSG C/D
*	17,843	98	Impervious
	28,191	89	Weighted Average
	10,348		36.71% Pervious Area
	17,843		63.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 10: access drive north of B1

Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	30,932	98	Impervious
	30,932		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 11:

Runoff = 0.09 cfs @ 12.13 hrs, Volume= 0.011 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	15,881	98	Impervious
*	27,293	74	>75% Grass cover, Good, HSG C/D
	43,174	83	Weighted Average
	27,293		63.22% Pervious Area
	15,881		36.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 12:

Runoff = 0.08 cfs @ 12.10 hrs, Volume= 0.006 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	7,491	98	Impervious, HSG C/D
	5,429	74	>75% Grass cover, Good, HSG C
	12,920	88	Weighted Average
	5,429		42.02% Pervious Area
	7,491		57.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 13:

Runoff = 0.16 cfs @ 12.11 hrs, Volume= 0.015 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	20,981	98	Impervious
*	24,182	74	>75% Grass cover, Good, HSG C/D
	45,163	85	Weighted Average
	24,182		53.54% Pervious Area
	20,981		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 14:

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	8,849	98	Impervious
	529	74	>75% Grass cover, Good, HSG C
	9,378	97	Weighted Average
	529		5.64% Pervious Area
	8,849		94.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 15:

Runoff = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	176	98	Impervious
*	4,183	74	>75% Grass cover, Good, HSG C/D
*	4,798	74	vegetated roof
	9,157	74	Weighted Average
	8,981		98.08% Pervious Area
	176		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 16:

Runoff = 0.02 cfs @ 12.14 hrs, Volume= 0.003 af, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	5,161	98	Impervious
*	9,949	74	>75% Grass cover, Good, HSG C/D
	15,110	82	Weighted Average
	9,949		65.84% Pervious Area
	5,161		34.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 17:

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	11,320	98	Impervious
*	1,980	74	>75% Grass cover, Good, HSG C/D
	13,300	94	Weighted Average
	1,980		14.89% Pervious Area
	11,320		85.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18A:

Runoff = 0.02 cfs @ 12.12 hrs, Volume= 0.002 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	2,593	98	Impervious
*	3,746	74	>75% Grass cover, Good, HSG C/D
	6,339	84	Weighted Average
	3,746		59.09% Pervious Area
	2,593		40.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18B:

Runoff = 0.02 cfs @ 12.10 hrs, Volume= 0.002 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	2,348	98	Impervious
*	1,675	74	>75% Grass cover, Good, HSG C/D
	4,023	88	Weighted Average
	1,675		41.64% Pervious Area
	2,348		58.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 19:

Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	11,210	98	Impervious
*	2,501	74	>75% Grass cover, Good, HSG C/D
	13,711	94	Weighted Average
	2,501		18.24% Pervious Area
	11,210		81.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 20:

Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	21,010	98	Impervious
*	7,449	74	>75% Grass cover, Good, HSG C/D
	28,459	92	Weighted Average
	7,449		26.17% Pervious Area
	21,010		73.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 21:

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	8,361	98	Impervious
*	1,633	74	>75% Grass cover, Good, HSG C/D
	9,994	94	Weighted Average
	1,633		16.34% Pervious Area
	8,361		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 22:

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	10,326	98	Impervious
*	3,185	74	>75% Grass cover, Good, HSG C/D
	13,511	92	Weighted Average
	3,185		23.57% Pervious Area
	10,326		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 23: sub 23

Runoff = 0.01 cfs @ 12.39 hrs, Volume= 0.003 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

Area (sf)	CN	Description
6,249	98	Paved parking, HSG C
2,450	74	>75% Grass cover, Good, HSG C
10,135	74	>75% Grass cover, Good, HSG C
9,641	70	Woods, Good, HSG C
28,475	78	Weighted Average
22,226		78.05% Pervious Area
6,249		21.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct**

Summary for Subcatchment 24:

Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	12,270	98	Impervious
	5,991	80	>75% Grass cover, Good, HSG D
	18,261	92	Weighted Average
	5,991		32.81% Pervious Area
	12,270		67.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 25:

Runoff = 0.00 cfs @ 17.94 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	21,818	74	>75% Grass cover, Good, HSG C/D
*	96,405	70	Woods, Good, HSG C/D
	118,223	71	Weighted Average
	118,223		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.4	130	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
11.9	253	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	55	0.3000	1.37		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
67.0	438	Total			

Summary for Subcatchment 26:

Runoff = 0.08 cfs @ 12.08 hrs, Volume= 0.006 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	3,816	98	Impervious
	3,816		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 27:

Runoff = 0.09 cfs @ 12.08 hrs, Volume= 0.006 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	4,262	98	Impervious
	4,262		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 28:

Runoff = 0.28 cfs @ 12.11 hrs, Volume= 0.026 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	21,852	98	Impervious
	40,598	80	>75% Grass cover, Good, HSG D
	6,418	77	Woods, Good, HSG D
	10,830	79	Woods/grass comb., Good, HSG D
	79,698	85	Weighted Average
	57,846		72.58% Pervious Area
	21,852		27.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 29:

Runoff = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	1,306	98	Impervious
	1,306		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 30:

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.027 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	24,541	98	Impervious
*	6,931	74	>75% Grass cover, Good, HSG C/D
	31,472	93	Weighted Average
	6,931		22.02% Pervious Area
	24,541		77.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 31:

Runoff = 0.00 cfs @ 17.07 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	24,011	74	>75% Grass cover, Good, HSG C/D
*	46,605	70	Woods, Good, HSG C/D
	70,616	71	Weighted Average
	70,616		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0500	0.16		**Sheet Flow, a-b**
					Grass: Dense n= 0.240 P2= 2.90"
1.7	86	0.1200	0.87		**Shallow Concentrated Flow, b-c**
					Forest w/Heavy Litter Kv= 2.5 fps
0.2	31	0.0300	2.60		**Shallow Concentrated Flow, c-d**
					Grassed Waterway Kv= 15.0 fps
12.3	217	Total			

Summary for Subcatchment 32:

Runoff = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	2,826	98	Impervious
*	1,851	74	>75% Grass cover, Good, HSG C/D
	4,677	89	Weighted Average
	1,851		39.58% Pervious Area
	2,826		60.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 33: B3 green

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	89,860	61	vegetated roof
*	18,033	98	penthouse
	107,893	67	Weighted Average
	89,860		83.29% Pervious Area
	18,033		16.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 34:

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	19,279	61	vegetated roof
*	4,820	98	penhouse/walks on roof
	24,099	68	Weighted Average
	19,279		80.00% Pervious Area
	4,820		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 35:

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	16,797	61	vegetated roof
*	4,200	98	penthouse/walks on roof
	20,997	68	Weighted Average
	16,797		80.00% Pervious Area
	4,200		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 36: B1M1

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 37: B1M2

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 38: B1M3

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 39: B2M4

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 40: B2M5

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 41: B2M6

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 42: B6

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.018 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	12,000	98	Impervious
	12,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 43: B5

Runoff = 0.39 cfs @ 12.08 hrs, Volume= 0.029 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	18,983	98	Impervious
	18,983		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 44: onsite untreated

Runoff = 0.00 cfs @ 17.19 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	29,531	74	>75% Grass cover, Good, HSG C/D
*	129,832	70	Woods, Good, HSG C/D
	159,363	71	Weighted Average
	159,363		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	97	0.0620	0.25		**Sheet Flow, a-b** Grass: Short n= 0.150 P2= 2.90"
4.3	170	0.0090	0.66		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
1.3	97	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
6.8	210	0.0430	0.52		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
18.8	574	Total			

Summary for Subcatchment 45:

Runoff = 0.00 cfs @ 21.76 hrs, Volume= 0.001 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	5,799	74	>75% Grass cover, Good, HSG C/D
*	58,641	70	Woods, Good, HSG C/D
	64,440	70	Weighted Average
	64,440		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	79	0.0340	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.9	121	0.0800	0.71		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	34	0.0600	3.67		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage

29.9 307 Total

Summary for Subcatchment 46: SUBCAT 8

Runoff = 0.00 cfs @ 17.39 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 47:

Runoff = 0.01 cfs @ 13.94 hrs, Volume= 0.005 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
	16,941	80	>75% Grass cover, Good, HSG D
*	27,433	74	>75% Grass cover, Good, HSG C/D
*	30,061	70	Woods, Good, HSG C/D
*	4,752	98	Impervious
	79,187	75	Weighted Average
	74,435		94.00% Pervious Area
	4,752		6.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	102	0.0400	0.15		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
0.6	30	0.1000	0.79		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.6	100	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
3.2	407	0.0200	2.12		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
15.9	639	Total			

Summary for Subcatchment 48:

Runoff = 0.00 cfs @ 22.02 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	305	74	>75% Grass cover, Good, HSG C/D
*	36,887	70	Woods, Good, HSG C/D
	2,991	70	Woods, Good, HSG C
	40,183	70	Weighted Average
	40,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.6	127	0.0200	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.4	115	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	45	0.2000	1.12		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
0.3	90	0.0880	4.45		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
54.0	377	Total			

Summary for Subcatchment 49:

Runoff = 0.00 cfs @ 22.06 hrs, Volume= 0.001 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	2,923	74	>75% Grass cover, Good, HSG C/D
*	80,702	70	Woods, Good, HSG C/D
*	548	98	Impervious
	84,173	70	Weighted Average
	83,625		99.35% Pervious Area
	548		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.4	115	0.0500	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
23.7	355	0.0100	0.25		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
54.1	470	Total			

Summary for Subcatchment 50:

Runoff = 0.62 cfs @ 12.08 hrs, Volume= 0.046 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	30,173	98	Impervious
	30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment OS10: OFFSITE 2 (above Perkins Rd)

Runoff = 0.11 cfs @ 16.22 hrs, Volume= 0.073 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment os11a: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 0.96 cfs @ 12.11 hrs, Volume= 0.082 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment os11b: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 0.01 cfs @ 15.69 hrs, Volume= 0.007 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Subcatchment OS9: OFFSITE 1 (Below Perkins Rd)

Runoff = 0.07 cfs @ 14.78 hrs, Volume= 0.041 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	6,087	74	>75% Grass cover, Good, HSG C
	72,382	70	Woods, Good, HSG C
	61,890	74	>75% Grass cover, Good, HSG C
	702,010	75	Weighted Average
	676,497		96.37% Pervious Area
	25,513		3.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Reach 9R: ANALYSIS POINT 9

Inflow Area = 16.116 ac, 3.63% Impervious, Inflow Depth = 0.03" for 1-inch event
Inflow = 0.07 cfs @ 14.78 hrs, Volume= 0.041 af
Outflow = 0.07 cfs @ 14.78 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

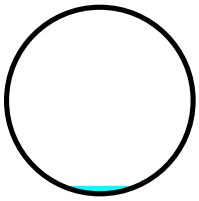
Summary for Reach 10R: Perkins Road Culvert

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth = 0.02" for 1-inch event
Inflow = 0.11 cfs @ 16.22 hrs, Volume= 0.073 af
Outflow = 0.11 cfs @ 16.22 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.38 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 16.22 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: Stream 9

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth = 0.22" for 1-inch event
Inflow = 0.96 cfs @ 12.11 hrs, Volume= 0.082 af
Outflow = 0.96 cfs @ 12.11 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 17R: untreated

Inflow Area = 0.305 ac, 85.11% Impervious, Inflow Depth = 0.50" for 1-inch event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 20R: untreated

Inflow Area = 0.653 ac, 73.83% Impervious, Inflow Depth = 0.40" for 1-inch event
Inflow = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af
Outflow = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 23R: sub 23

Inflow Area = 0.654 ac, 21.95% Impervious, Inflow Depth = 0.06" for 1-inch event
Inflow = 0.01 cfs @ 12.39 hrs, Volume= 0.003 af
Outflow = 0.01 cfs @ 12.39 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 27R: extisting

Inflow Area = 0.098 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.09 cfs @ 12.08 hrs, Volume= 0.006 af
Outflow = 0.09 cfs @ 12.08 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 29R: untreated

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af
Outflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 32R: untreated

Inflow Area = 0.107 ac, 60.42% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af
Outflow = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 44R:

Inflow Area = 3.658 ac, 0.00% Impervious, Inflow Depth = 0.01" for 1-inch event
Inflow = 0.00 cfs @ 17.19 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 17.19 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 47R:

Inflow Area = 1.818 ac, 6.00% Impervious, Inflow Depth = 0.03" for 1-inch event
Inflow = 0.01 cfs @ 13.94 hrs, Volume= 0.005 af
Outflow = 0.01 cfs @ 13.94 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 48R: (new Reach)

Inflow Area = 0.922 ac, 0.00% Impervious, Inflow Depth = 0.00" for 1-inch event
Inflow = 0.00 cfs @ 22.02 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 22.02 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 49R:

Inflow Area = 1.932 ac, 0.65% Impervious, Inflow Depth = 0.00" for 1-inch event
Inflow = 0.00 cfs @ 22.06 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 22.06 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT1: ANALYSIS POINT 1 at BWD Little River

Inflow Area = 2.855 ac, 0.44% Impervious, Inflow Depth = 0.00" for 1-inch event
Inflow = 0.00 cfs @ 22.06 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 22.06 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT10: Analysis point at Little River

Inflow Area = 1.830 ac, 27.42% Impervious, Inflow Depth = 0.17" for 1-inch event
Inflow = 0.28 cfs @ 12.11 hrs, Volume= 0.026 af
Outflow = 0.28 cfs @ 12.11 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD Reservoir

Inflow Area = 2.714 ac, 0.00% Impervious, Inflow Depth = 0.01" for 1-inch event
Inflow = 0.00 cfs @ 17.94 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 17.94 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir

Inflow Area = 1.621 ac, 0.00% Impervious, Inflow Depth = 0.01" for 1-inch event
Inflow = 0.00 cfs @ 17.07 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 17.07 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT5: all BWD reservoir

Inflow Area = 4.989 ac, 2.88% Impervious, Inflow Depth = 0.01" for 1-inch event
Inflow = 0.01 cfs @ 12.39 hrs, Volume= 0.006 af
Outflow = 0.01 cfs @ 12.39 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT6: stream 9 offsite

Inflow Area = 58.299 ac, 7.15% Impervious, Inflow Depth = 0.04" for 1-inch event
Inflow = 0.96 cfs @ 12.11 hrs, Volume= 0.196 af
Outflow = 0.74 cfs @ 12.19 hrs, Volume= 0.196 af, Atten= 23%, Lag= 4.8 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.10 fps, Min. Travel Time= 7.3 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 13.2 min

Peak Storage= 325 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 401.91 cfs

5.00' x 4.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

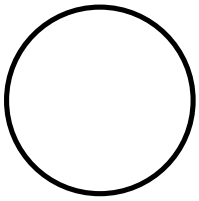
Summary for Reach PT7: ANALYSIS POINT7 at US Route 1 culvert

Inflow Area = 1.479 ac, 0.00% Impervious, Inflow Depth = 0.00" for 1-inch event
Inflow = 0.00 cfs @ 21.76 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 21.71 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.05 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.05 fps, Avg. Travel Time= 1.3 min

Peak Storage= 0 cf @ 21.71 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Route 1 culvert

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth = 0.01" for 1-inch event
Inflow = 0.00 cfs @ 17.39 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 17.40 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.48 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 0.5 min

Peak Storage= 0 cf @ 17.40 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

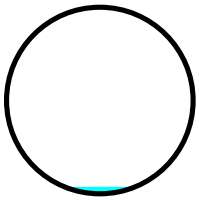
Summary for Reach PT9: Analysis Point Stream 9 at US Route 1 culvert

Inflow Area = 72.473 ac, 7.13% Impervious, Inflow Depth = 0.04" for 1-inch event
Inflow = 0.54 cfs @ 12.57 hrs, Volume= 0.246 af
Outflow = 0.54 cfs @ 12.57 hrs, Volume= 0.246 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.52 fps, Avg. Travel Time= 0.4 min

Peak Storage= 8 cf @ 12.57 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

Inflow Area = 69.323 ac, 6.16% Impervious, Inflow Depth = 0.04" for 1-inch event
Inflow = 0.74 cfs @ 12.19 hrs, Volume= 0.206 af
Outflow = 0.42 cfs @ 12.53 hrs, Volume= 0.206 af, Atten= 44%, Lag= 20.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.02 fps, Min. Travel Time= 25.8 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 43.3 min

Peak Storage= 645 cf @ 12.53 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 120.91 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

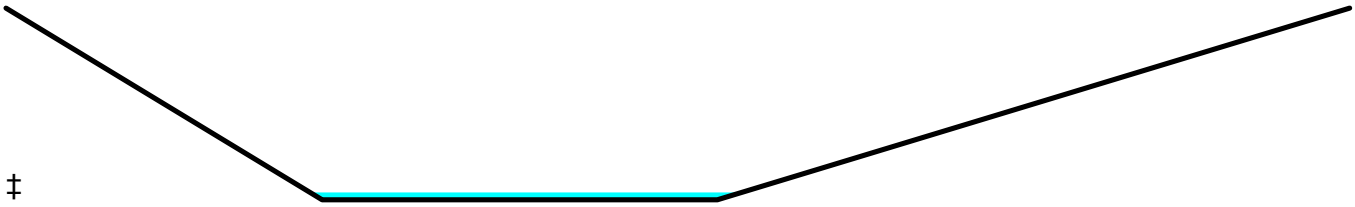
Summary for Reach S9-3: Stream 9

Inflow Area = 71.269 ac, 6.33% Impervious, Inflow Depth = 0.04" for 1-inch event
Inflow = 0.44 cfs @ 12.51 hrs, Volume= 0.219 af
Outflow = 0.43 cfs @ 12.58 hrs, Volume= 0.219 af, Atten= 2%, Lag= 4.3 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.06 fps, Min. Travel Time= 5.7 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 10.3 min

Peak Storage= 148 cf @ 12.58 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 152.29 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Summary for Reach tank: existing clarifier

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond dmh10: dmh10

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth = 0.31" for 1-inch event
Inflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af
Outflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.49' @ 12.08 hrs
Flood Elev= 65.54'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.59'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.59' / 53.56' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.51 cfs @ 12.08 hrs HW=55.49' (Free Discharge)
1=Culvert (Inlet Controls 3.51 cfs @ 2.55 fps)

Summary for Pond dmh11: dmh11

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth = 0.41" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.49' @ 12.09 hrs
Flood Elev= 65.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.54'	**30.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.54' / 53.12' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.15 cfs @ 12.09 hrs HW=54.49' (Free Discharge)
1=Culvert (Barrel Controls 4.15 cfs @ 3.60 fps)

Summary for Pond dmh13: dmh13

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth = 0.41" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.319 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.01' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.10'	**30.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.10' / 52.09' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.15 cfs @ 12.09 hrs HW=54.01' (Free Discharge)
↑**1=Culvert** (Inlet Controls 4.15 cfs @ 2.57 fps)

Summary for Pond dmh14: dmh14

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 0.40" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.14' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	52.07'	**30.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.07' / 51.95' S= 0.0052 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.15 cfs @ 12.09 hrs HW=53.14' (Free Discharge)
↑**1=Culvert** (Barrel Controls 4.15 cfs @ 3.05 fps)

Summary for Pond dmh15: dmh15

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 0.40" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.333 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.90' @ 12.09 hrs
Flood Elev= 64.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.95'	**30.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.95' / 51.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.15 cfs @ 12.09 hrs HW=52.90' (Free Discharge)
└**1=Culvert** (Barrel Controls 4.15 cfs @ 3.62 fps)

Summary for Pond dmh16: dmh16

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth > 0.11" for 1-inch event
Inflow = 0.00 cfs @ 18.87 hrs, Volume= 0.003 af
Outflow = 0.00 cfs @ 18.87 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 18.87 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.51' @ 18.87 hrs
Flood Elev= 64.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 58.00' S= 0.0126 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 18.87 hrs HW=60.51' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.47 fps)

Summary for Pond dmh17: dmh17

Inflow Area = 10.447 ac, 87.59% Impervious, Inflow Depth > 0.39" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.337 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.337 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.337 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.48' @ 12.09 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.48'	**30.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.48' / 51.30' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.15 cfs @ 12.09 hrs HW=52.48' (Free Discharge)
└**1=Culvert** (Barrel Controls 4.15 cfs @ 3.37 fps)

Summary for Pond dmh19: dmh 19

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 0.33" for 1-inch event
Inflow = 0.01 cfs @ 15.92 hrs, Volume= 0.012 af
Outflow = 0.01 cfs @ 15.92 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 15.92 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.53' @ 15.92 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.48'	**12.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.48' / 53.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 15.92 hrs HW=54.53' (Free Discharge)
1=Culvert (Inlet Controls 0.01 cfs @ 0.59 fps)

Summary for Pond dmh2: dmh2

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.34" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.074 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.71' @ 12.08 hrs
Flood Elev= 69.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.00' / 61.50' S= 0.0150 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=63.71' (Free Discharge)
1=Culvert (Inlet Controls 1.86 cfs @ 2.26 fps)

Summary for Pond dmh20: dmh20

Inflow Area = 10.883 ac, 88.09% Impervious, Inflow Depth > 0.38" for 1-inch event
Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.349 af
Outflow = 4.17 cfs @ 12.09 hrs, Volume= 0.349 af, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.09 hrs, Volume= 0.349 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 52.22' @ 12.09 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**30.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.28' / 50.78' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.16 cfs @ 12.09 hrs HW=52.22' (Free Discharge)
↑**1=Culvert** (Barrel Controls 4.16 cfs @ 3.65 fps)

Summary for Pond dmh21: dmh21

Inflow Area = 14.600 ac, 81.45% Impervious, Inflow Depth > 0.35" for 1-inch event
Inflow = 4.69 cfs @ 12.09 hrs, Volume= 0.428 af
Outflow = 4.69 cfs @ 12.09 hrs, Volume= 0.428 af, Atten= 0%, Lag= 0.0 min
Primary = 4.69 cfs @ 12.09 hrs, Volume= 0.428 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.73' @ 12.09 hrs
Flood Elev= 58.55'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.76'	**30.0" Round Culvert** L= 281.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.76' / 46.00' S= 0.0169 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.67 cfs @ 12.09 hrs HW=51.73' (Free Discharge)
↑**1=Culvert** (Inlet Controls 4.67 cfs @ 2.65 fps)

Summary for Pond dmh22: dmh 22

Inflow Area = 2.671 ac, 64.47% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 0.52 cfs @ 12.09 hrs, Volume= 0.060 af
Outflow = 0.52 cfs @ 12.09 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 12.09 hrs, Volume= 0.060 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.89' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.50'	**15.0" Round Culvert** L= 93.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.50' / 51.03' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.51 cfs @ 12.09 hrs HW=51.89' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.51 cfs @ 2.34 fps)

Summary for Pond dmh23: dmh23

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 0.29" for 1-inch event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af
Outflow = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min
Primary = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.60' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.19'	**12.0" Round Culvert** L= 138.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.19' / 54.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.48 cfs @ 12.09 hrs HW=55.60' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.48 cfs @ 2.38 fps)

Summary for Pond dmh24: dmh24

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 0.29" for 1-inch event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af
Outflow = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min
Primary = 0.48 cfs @ 12.09 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.57' @ 12.09 hrs
Flood Elev= 61.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.10'	**12.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.10' / 55.92' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.48 cfs @ 12.09 hrs HW=56.57' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.48 cfs @ 1.95 fps)

Summary for Pond dmh24a: dmh24a

Inflow Area = 0.602 ac, 71.74% Impervious, Inflow Depth > 0.37" for 1-inch event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Primary = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.27' @ 12.09 hrs
Flood Elev= 63.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0" Round Culvert** L= 95.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.10' S= 0.0095 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.18 cfs @ 12.09 hrs HW=58.27' (Free Discharge)
1=Culvert (Inlet Controls 0.18 cfs @ 1.39 fps)

Summary for Pond dmh25: dmh25

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth > 0.14" for 1-inch event
Inflow = 0.00 cfs @ 17.95 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 17.95 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 17.95 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.01' @ 17.95 hrs
Flood Elev= 67.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.00'	**12.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.00' / 55.00' S= 0.0510 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 17.95 hrs HW=60.01' (Free Discharge)
1=Culvert (Inlet Controls 0.00 cfs @ 0.28 fps)

Summary for Pond dmh26: dmh26

Inflow Area = 2.028 ac, 41.73% Impervious, Inflow Depth > 0.15" for 1-inch event
Inflow = 0.02 cfs @ 17.34 hrs, Volume= 0.025 af
Outflow = 0.02 cfs @ 17.34 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.02 cfs @ 17.34 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 57.84' @ 17.34 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.75'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.75' / 57.61' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 17.34 hrs HW=57.84' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.01 cfs @ 0.66 fps)

Summary for Pond dmh27: dmh27

Inflow Area = 2.712 ac, 46.62% Impervious, Inflow Depth > 0.16" for 1-inch event
Inflow = 0.03 cfs @ 17.30 hrs, Volume= 0.036 af
Outflow = 0.03 cfs @ 17.30 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.03 cfs @ 17.30 hrs, Volume= 0.036 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.12' @ 17.30 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.03'	**12.0" Round Culvert** L= 256.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.03' / 51.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.02 cfs @ 17.30 hrs HW=53.12' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.02 cfs @ 1.00 fps)

Summary for Pond dmh29: dmh29

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 0.26" for 1-inch event
Inflow = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af
Outflow = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.89' @ 16.00 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.85'	**8.0" Round Culvert** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.85' / 57.39' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 16.00 hrs HW=57.89' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.01 cfs @ 0.57 fps)

Summary for Pond dmh3: dmh3

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.14' @ 12.08 hrs
Flood Elev= 68.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**24.0" Round Culvert** L= 125.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 59.84' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.85 cfs @ 12.08 hrs HW=61.14' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.85 cfs @ 3.18 fps)

Summary for Pond dmh30: dmh30

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 0.26" for 1-inch event
Inflow = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af
Outflow = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.43' @ 16.00 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.40'	**12.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.40' / 54.37' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 16.00 hrs HW=55.43' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.51 fps)

Summary for Pond dmh31: dmh31

Inflow Area = 2.303 ac, 48.70% Impervious, Inflow Depth > 0.16" for 1-inch event
Inflow = 0.02 cfs @ 17.20 hrs, Volume= 0.031 af
Outflow = 0.02 cfs @ 17.20 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.02 cfs @ 17.20 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.44' @ 17.20 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.35'	**12.0" Round Culvert** L= 259.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.35' / 53.05' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.02 cfs @ 17.20 hrs HW=54.44' (Free Discharge)
1=Culvert (Barrel Controls 0.02 cfs @ 0.99 fps)

Summary for Pond dmh32: dmh32

Inflow Area = 3.424 ac, 42.31% Impervious, Inflow Depth > 0.14" for 1-inch event
Inflow = 0.03 cfs @ 17.39 hrs, Volume= 0.041 af
Outflow = 0.03 cfs @ 17.39 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.03 cfs @ 17.39 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.83' @ 17.39 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.73'	**12.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.73' / 51.60' S= 0.0036 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.03 cfs @ 17.39 hrs HW=51.83' (Free Discharge)
1=Culvert (Barrel Controls 0.03 cfs @ 0.93 fps)

Summary for Pond dmh33: dmh33

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth > 0.19" for 1-inch event
Inflow = 0.00 cfs @ 18.74 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 18.74 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 18.74 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.02' @ 18.74 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 52.01' S= 0.0099 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 18.74 hrs HW=54.02' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.00 cfs @ 0.52 fps)

Summary for Pond dmh34: dmh34

Inflow Area = 3.030 ac, 25.90% Impervious, Inflow Depth > 0.03" for 1-inch event
Inflow = 0.01 cfs @ 18.79 hrs, Volume= 0.008 af
Outflow = 0.01 cfs @ 18.79 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 18.79 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.01' @ 18.79 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.99'	**12.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.99' / 51.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 18.79 hrs HW=52.01' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.00 cfs @ 0.53 fps)

Summary for Pond dmh35: dmh35

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 0.09" for 1-inch event
Inflow = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af
Outflow = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Primary = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.65' @ 17.86 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.55'	**18.0" Round Culvert** L= 276.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.55' / 50.17' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.03 cfs @ 17.86 hrs HW=51.65' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.03 cfs @ 1.06 fps)

Summary for Pond dmh36: dmh36

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 0.09" for 1-inch event
Inflow = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af
Outflow = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Primary = 0.04 cfs @ 17.86 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.25' @ 17.86 hrs
Flood Elev= 53.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.15'	**18.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.15' / 49.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.04 cfs @ 17.86 hrs HW=50.25' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.04 cfs @ 1.10 fps)

Summary for Pond dmh38: dmh38

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.32" for 1-inch event
Inflow = 0.07 cfs @ 16.04 hrs, Volume= 0.068 af
Outflow = 0.07 cfs @ 16.04 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 16.04 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.10' @ 16.04 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.98'	**18.0" Round Culvert** L= 106.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.98' / 50.92' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.07 cfs @ 16.04 hrs HW=52.10' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.07 cfs @ 0.94 fps)

Summary for Pond dmh39: dmh39

Inflow Area = 2.778 ac, 93.02% Impervious, Inflow Depth = 0.30" for 1-inch event
Inflow = 0.07 cfs @ 16.26 hrs, Volume= 0.068 af
Outflow = 0.07 cfs @ 16.26 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 16.26 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.73' @ 16.26 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.59'	**18.0" Round Culvert** L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.59' / 50.32' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.06 cfs @ 16.26 hrs HW=50.73' (Free Discharge)
1=Culvert (Barrel Controls 0.06 cfs @ 1.24 fps)

Summary for Pond dmh4: dmh4

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.54' @ 12.08 hrs
Flood Elev= 68.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.84'	**24.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.84' / 59.57' S= 0.0041 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=60.53' (Free Discharge)
1=Culvert (Barrel Controls 1.86 cfs @ 2.86 fps)

Summary for Pond dmh40: dmh40

Inflow Area = 10.062 ac, 50.87% Impervious, Inflow Depth > 0.15" for 1-inch event
Inflow = 0.11 cfs @ 17.50 hrs, Volume= 0.125 af
Outflow = 0.11 cfs @ 17.50 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.0 min
Primary = 0.11 cfs @ 17.50 hrs, Volume= 0.125 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 49.49' @ 17.50 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.33'	**24.0" Round Culvert** L= 340.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.33' / 47.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.11 cfs @ 17.50 hrs HW=49.49' (Free Discharge)
1=Culvert (Barrel Controls 0.11 cfs @ 1.43 fps)

Summary for Pond dmh43: dmh43

Inflow Area = 12.646 ac, 60.91% Impervious, Inflow Depth > 0.19" for 1-inch event
Inflow = 0.17 cfs @ 17.34 hrs, Volume= 0.197 af
Outflow = 0.17 cfs @ 17.34 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min
Primary = 0.17 cfs @ 17.34 hrs, Volume= 0.197 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.80' @ 17.34 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.61'	**24.0" Round Culvert** L= 193.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.61' / 46.64' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.17 cfs @ 17.34 hrs HW=47.80' (Free Discharge)
1=Culvert (Barrel Controls 0.17 cfs @ 1.64 fps)

Summary for Pond dmh44: dmh44

Inflow Area = 12.894 ac, 59.74% Impervious, Inflow Depth > 0.18" for 1-inch event
Inflow = 0.17 cfs @ 17.38 hrs, Volume= 0.197 af
Outflow = 0.17 cfs @ 17.38 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min
Primary = 0.17 cfs @ 17.38 hrs, Volume= 0.197 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.81' @ 17.38 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.62'	**30.0" Round Culvert** L= 82.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.62' / 46.21' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=0.17 cfs @ 17.38 hrs HW=46.81' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.17 cfs @ 1.58 fps)

Summary for Pond dmh45: dmh45

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 0.21" for 1-inch event
Inflow = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af
Outflow = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.75' @ 12.08 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.19'	**30.0" Round Culvert** L= 316.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.19' / 44.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.65 cfs @ 12.08 hrs HW=46.75' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.65 cfs @ 2.01 fps)

Summary for Pond dmh47: dmh47

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 0.21" for 1-inch event
Inflow = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af
Outflow = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.08 hrs, Volume= 0.271 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 44.56' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**30.0" Round Culvert** L= 104.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.00' / 42.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.65 cfs @ 12.08 hrs HW=44.56' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.65 cfs @ 2.01 fps)

Summary for Pond dmh48: dmh48

Inflow Area = 16.171 ac, 67.89% Impervious, Inflow Depth > 0.21" for 1-inch event
Inflow = 1.66 cfs @ 12.08 hrs, Volume= 0.288 af
Outflow = 1.66 cfs @ 12.08 hrs, Volume= 0.288 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.08 hrs, Volume= 0.288 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 43.51' @ 12.08 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.94'	**30.0" Round Culvert** L= 117.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.94' / 42.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.65 cfs @ 12.08 hrs HW=43.51' (Free Discharge)
1=Culvert (Barrel Controls 1.65 cfs @ 2.97 fps)

Summary for Pond dmh49: dmh49

Inflow Area = 16.492 ac, 67.20% Impervious, Inflow Depth > 0.21" for 1-inch event
Inflow = 1.66 cfs @ 12.08 hrs, Volume= 0.291 af
Outflow = 1.66 cfs @ 12.08 hrs, Volume= 0.291 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.08 hrs, Volume= 0.291 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 42.91' @ 12.08 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.33'	**36.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.33' / 42.23' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=1.66 cfs @ 12.08 hrs HW=42.91' (Free Discharge)
1=Culvert (Barrel Controls 1.66 cfs @ 2.62 fps)

Summary for Pond dmh5: dmh5

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 60.12' @ 12.08 hrs
Flood Elev= 69.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.48'	**24.0" Round Culvert** L= 173.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.48' / 58.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.85 cfs @ 12.08 hrs HW=60.12' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.85 cfs @ 3.19 fps)

Summary for Pond dmh50: dmh50

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 0.34" for 1-inch event
Inflow = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af
Outflow = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min
Primary = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.72' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**30.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.75' / 44.11' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.67 cfs @ 12.09 hrs HW=45.72' (Free Discharge)
↑**1=Culvert** (Inlet Controls 4.67 cfs @ 2.65 fps)

Summary for Pond dmh51: dmh51

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 0.34" for 1-inch event
Inflow = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af
Outflow = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min
Primary = 4.69 cfs @ 12.09 hrs, Volume= 0.432 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.06' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.09'	**30.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.09' / 43.00' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=4.67 cfs @ 12.09 hrs HW=45.06' (Free Discharge)
1=Culvert (Inlet Controls 4.67 cfs @ 2.65 fps)

Summary for Pond dmh52: dmh52

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 42.02' @ 12.09 hrs
Flood Elev= 50.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**42.0" Round Culvert** L= 258.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 36.00' S= 0.0194 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.33 cfs @ 12.09 hrs HW=42.02' (Free Discharge)
1=Culvert (Inlet Controls 6.33 cfs @ 2.71 fps)

Summary for Pond dmh53: dmh53

Inflow Area = 32.207 ac, 72.77% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.737 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.737 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.737 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.02' @ 12.09 hrs
Flood Elev= 41.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**42.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 30.50' S= 0.0208 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.34 cfs @ 12.09 hrs HW=34.02' (Free Discharge)
1=Culvert (Inlet Controls 6.34 cfs @ 2.72 fps)

Summary for Pond dmh54: dmh54

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 28.02' @ 12.09 hrs
Flood Elev= 38.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**42.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.00' / 22.00' S= 0.0329 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.33 cfs @ 12.09 hrs HW=28.02' (Free Discharge)
1=Culvert (Inlet Controls 6.33 cfs @ 2.72 fps)

Summary for Pond dmh55: dhm55

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 20.02' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**42.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.00' / 15.50' S= 0.0304 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.33 cfs @ 12.09 hrs HW=20.02' (Free Discharge)
1=Culvert (Inlet Controls 6.33 cfs @ 2.71 fps)

Summary for Pond dmh56: dmh56

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.740 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 13.52' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**42.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.50' / 11.00' S= 0.0357 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.32 cfs @ 12.09 hrs HW=13.52' (Free Discharge)
↑**1=Culvert** (Inlet Controls 6.32 cfs @ 2.71 fps)

Summary for Pond dmh59: dmh59

Inflow Area = 2.253 ac, 63.02% Impervious, Inflow Depth > 0.29" for 1-inch event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 0.055 af
Outflow = 0.48 cfs @ 12.09 hrs, Volume= 0.055 af, Atten= 0%, Lag= 0.0 min
Primary = 0.48 cfs @ 12.09 hrs, Volume= 0.055 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.70' @ 12.09 hrs
Flood Elev= 59.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.30'	**12.0" Round Culvert** L= 294.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.30' / 52.83' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.48 cfs @ 12.09 hrs HW=54.70' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.48 cfs @ 2.43 fps)

Summary for Pond dmh6: dmh6

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.34' @ 12.08 hrs
Flood Elev= 68.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.58'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.58' / 57.73' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=59.34' (Free Discharge)
1=Culvert (Barrel Controls 1.86 cfs @ 2.50 fps)

Summary for Pond dmh60: dhm60

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 0.27" for 1-inch event
Inflow = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af
Outflow = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.09 hrs, Volume= 0.723 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 36.52' @ 12.09 hrs
Flood Elev= 44.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	**42.0" Round Culvert** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.50' / 33.50' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=6.34 cfs @ 12.09 hrs HW=36.52' (Free Discharge)
1=Culvert (Inlet Controls 6.34 cfs @ 2.72 fps)

Summary for Pond dmh7: dmh7

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.35' @ 12.08 hrs
Flood Elev= 67.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.71'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.71' / 56.86' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.85 cfs @ 12.08 hrs HW=58.35' (Free Discharge)
1=Culvert (Barrel Controls 1.85 cfs @ 3.19 fps)

Summary for Pond dmh8: dmh8

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth = 0.31" for 1-inch event
Inflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af
Outflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.77' @ 12.08 hrs
Flood Elev= 66.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.84'	**24.0" Round Culvert** L= 296.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.84' / 55.66' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.51 cfs @ 12.08 hrs HW=57.77' (Free Discharge)
1=Culvert (Barrel Controls 3.51 cfs @ 3.58 fps)

Summary for Pond dmh9a: dmh9a

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth = 0.31" for 1-inch event
Inflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af
Outflow = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 3.53 cfs @ 12.08 hrs, Volume= 0.152 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.54' @ 12.08 hrs
Flood Elev= 65.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.64'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.64' / 54.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.52 cfs @ 12.08 hrs HW=56.54' (Free Discharge)
1=Culvert (Inlet Controls 3.52 cfs @ 2.55 fps)

Summary for Pond GSF 11: grassed soil filter

Inflow Area = 0.991 ac, 36.78% Impervious, Inflow Depth = 0.13" for 1-inch event
Inflow = 0.09 cfs @ 12.13 hrs, Volume= 0.011 af
Outflow = 0.01 cfs @ 17.71 hrs, Volume= 0.010 af, Atten= 93%, Lag= 335.0 min
Primary = 0.01 cfs @ 17.71 hrs, Volume= 0.010 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 58.53' @ 17.71 hrs Surf.Area= 2,198 sf Storage= 255 cf
Flood Elev= 63.00' Surf.Area= 5,598 sf Storage= 7,213 cf

Plug-Flow detention time= 536.4 min calculated for 0.010 af (96% of inflow)
Center-of-Mass det. time= 517.3 min (1,435.3 - 918.0)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	5,560 cf	**gsf11 (Irregular)** Listed below (Recalc)
#2	58.24'	1,653 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,213 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,200	181.0	0	0	2,200
62.00	2,771	200.0	2,480	2,480	2,807
63.00	3,400	219.0	3,080	5,560	3,474

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,198	0.0	0	0
58.25	2,198	40.0	9	9
58.99	2,198	40.0	651	659
59.00	2,198	30.0	7	666
59.49	2,198	30.0	323	989
59.50	2,198	20.0	4	993
61.00	2,198	20.0	659	1,653

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.7" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.05' / 57.78' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**4.0" Vert. Orifice/Grate X 6.00** C= 0.600
#5	Device 3	62.50'	**25.7" Horiz. cb19 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 17.71 hrs HW=58.53' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 2.41 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
└─**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
└─**4=Orifice/Grate** (Controls 0.00 cfs)
└─**5=cb19 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 12: grassed soil filter

Inflow Area = 0.297 ac, 57.98% Impervious, Inflow Depth = 0.25" for 1-inch event
Inflow = 0.08 cfs @ 12.10 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 17.78 hrs, Volume= 0.006 af, Atten= 96%, Lag= 340.8 min
Primary = 0.00 cfs @ 17.78 hrs, Volume= 0.006 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.72' @ 17.78 hrs Surf.Area= 887 sf Storage= 172 cf
Flood Elev= 62.50' Surf.Area= 2,255 sf Storage= 2,348 cf

Plug-Flow detention time= 740.6 min calculated for 0.006 af (94% of inflow)
Center-of-Mass det. time= 710.3 min (1,587.4 - 877.1)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	1,681 cf	**gsf12 (Irregular)** Listed below (Recalc)
#2	58.24'	667 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,348 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	886	151.0	0	0	886
62.00	1,201	164.0	1,040	1,040	1,248
62.50	1,368	170.0	642	1,681	1,428

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	887	0.0	0	0
58.25	887	40.0	4	4
58.99	887	40.0	263	266
59.00	887	30.0	3	269
59.49	887	30.0	130	399
59.50	887	20.0	2	401
61.00	887	20.0	266	667

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.20'	**8.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.20' / 58.10' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	61.90'	**25.7" Horiz. cb15a beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.78 hrs HW=58.72' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 3.26 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb15a beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 13: grassed soil filter

Inflow Area = 1.037 ac, 46.46% Impervious, Inflow Depth = 0.17" for 1-inch event
Inflow = 0.16 cfs @ 12.11 hrs, Volume= 0.015 af
Outflow = 0.01 cfs @ 17.06 hrs, Volume= 0.015 af, Atten= 94%, Lag= 297.0 min
Primary = 0.01 cfs @ 17.06 hrs, Volume= 0.015 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.59' @ 17.06 hrs Surf.Area= 2,501 sf Storage= 352 cf
Flood Elev= 63.00' Surf.Area= 7,083 sf Storage= 8,909 cf

Plug-Flow detention time= 514.3 min calculated for 0.015 af (97% of inflow)
Center-of-Mass det. time= 497.9 min (1,398.1 - 900.2)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	7,028 cf	**gsf13 (Irregular)** Listed below (Recalc)
#2	58.24'	1,881 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,500	328.0	0	0	2,500
62.00	3,513	347.0	2,992	2,992	3,575
63.00	4,582	366.0	4,036	7,028	4,710

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,501	0.0	0	0
58.25	2,501	40.0	10	10
58.99	2,501	40.0	740	750
59.00	2,501	30.0	8	758
59.49	2,501	30.0	368	1,125
59.50	2,501	20.0	5	1,130
61.00	2,501	20.0	750	1,881

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900

			Inlet / Outlet Invert= 58.05' / 57.82' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**25.7" Horiz. cb18 beehive equiv** C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 17.06 hrs HW=58.59' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 2.67 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.06 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
↑—**4=cb18 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 15: grassed soil filter

Inflow Area = 0.210 ac, 1.92% Impervious, Inflow Depth = 0.02" for 1-inch event
Inflow = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af, Atten= 71%, Lag= 557.2 min
Primary = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.79' @ 24.07 hrs Surf.Area= 599 sf Storage= 13 cf
Flood Elev= 65.00' Surf.Area= 2,017 sf Storage= 1,939 cf

Plug-Flow detention time= 715.3 min calculated for 0.000 af (77% of inflow)
Center-of-Mass det. time= 632.3 min (1,691.4 - 1,059.1)

Volume	Invert	Avail.Storage	Storage Description
#1	63.50'	1,489 cf	**gsf15 (Irregular)** Listed below (Recalc)
#2	60.74'	450 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,939 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.50	600	168.0	0	0	600
64.00	858	177.0	363	363	862
65.00	1,418	196.0	1,126	1,489	1,456

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	599	0.0	0	0
60.75	599	40.0	2	2
61.49	599	40.0	177	180
61.50	599	30.0	2	181
61.99	599	30.0	88	270
62.00	599	20.0	1	271
63.50	599	20.0	180	450

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.52' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	63.70'	**25.7" Horiz. cb9 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 24.07 hrs HW=60.79' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.90 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.74' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
↑—**4=cb9 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 16: grassed soil filter

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth = 0.11" for 1-inch event
Inflow = 0.02 cfs @ 12.14 hrs, Volume= 0.003 af
Outflow = 0.00 cfs @ 18.87 hrs, Volume= 0.003 af, Atten= 93%, Lag= 403.7 min
Primary = 0.00 cfs @ 18.87 hrs, Volume= 0.003 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.94' @ 18.87 hrs Surf.Area= 1,001 sf Storage= 80 cf

Plug-Flow detention time= 601.1 min calculated for 0.003 af (95% of inflow)
Center-of-Mass det. time= 576.0 min (1,504.0 - 928.0)

Volume	Invert	Avail.Storage	Storage Description
#1	62.75'	4,054 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	60.74'	753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,806 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.75	1,000	215.0	0	0	1,000
63.00	1,165	220.0	270	270	1,181
64.00	1,858	241.0	1,498	1,768	1,986
65.00	2,741	270.0	2,285	4,054	3,192

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	1,001	0.0	0	0
60.75	1,001	40.0	4	4
61.49	1,001	40.0	296	300
61.50	1,001	30.0	3	303
61.99	1,001	30.0	147	450
62.00	1,001	20.0	2	452
63.50	1,001	20.0	300	753

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.54' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	64.40'	**25.7" Horiz. cb8 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 18.87 hrs HW=60.94' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 2.01 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.74' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb8 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 18A: grassed soil filter

Inflow Area = 0.146 ac, 40.91% Impervious, Inflow Depth = 0.15" for 1-inch event
Inflow = 0.02 cfs @ 12.12 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 19.88 hrs, Volume= 0.002 af, Atten= 95%, Lag= 465.6 min
Primary = 0.00 cfs @ 19.88 hrs, Volume= 0.002 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 19.88 hrs Surf.Area= 912 sf Storage= 50 cf

Plug-Flow detention time= 741.8 min calculated for 0.002 af (88% of inflow)
Center-of-Mass det. time= 688.2 min (1,597.0 - 908.8)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	1,183 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,868 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	900	183.0	0	0	900
58.00	1,490	202.0	1,183	1,183	1,513

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	912	0.0	0	0
54.25	912	40.0	4	4
54.99	912	40.0	270	274
55.00	912	30.0	3	276
55.49	912	30.0	134	410
55.50	912	20.0	2	412
57.00	912	20.0	274	686

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.40'	**25.7" Horiz. cb24 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 19.88 hrs HW=54.38' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 1.63 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.12 cfs potential flow)
↑—**4=cb24 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 18B: grassed soil filter

Inflow Area = 0.092 ac, 58.36% Impervious, Inflow Depth = 0.25" for 1-inch event
Inflow = 0.02 cfs @ 12.10 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 19.44 hrs, Volume= 0.002 af, Atten= 97%, Lag= 440.6 min
Primary = 0.00 cfs @ 19.44 hrs, Volume= 0.002 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.73' @ 19.44 hrs Surf.Area= 294 sf Storage= 57 cf

Plug-Flow detention time= 858.8 min calculated for 0.002 af (86% of inflow)
Center-of-Mass det. time= 795.1 min (1,672.2 - 877.1)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	430 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	221 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		651 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	290	88.0	0	0	290
58.00	587	107.0	430	430	601

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	294	0.0	0	0
54.25	294	40.0	1	1
54.99	294	40.0	87	88
55.00	294	30.0	1	89
55.49	294	30.0	43	132
55.50	294	20.0	1	133
57.00	294	20.0	88	221

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.90'	**25.7" Horiz. cb23 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 19.44 hrs HW=54.73' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 3.30 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.12 cfs potential flow)
↑—**4=cb23 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 1A: Grassed soil filter

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth = 0.15" for 1-inch event
Inflow = 0.05 cfs @ 12.12 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 17.95 hrs, Volume= 0.005 af, Atten= 94%, Lag= 350.0 min
Primary = 0.00 cfs @ 17.95 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 63.19' @ 17.95 hrs Surf.Area= 1,598 sf Storage= 130 cf
Flood Elev= 68.00' Surf.Area= 5,086 sf Storage= 6,753 cf

Plug-Flow detention time= 620.8 min calculated for 0.005 af (94% of inflow)
Center-of-Mass det. time= 591.5 min (1,500.4 - 908.8)

Volume	Invert	Avail.Storage	Storage Description
#1	65.75'	5,554 cf	**Grassed Underdrain Soil Filter (Irregular)** Listed below (Recalc)
#2	62.99'	1,198 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,753 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.75	1,600	234.0	0	0	1,600
66.00	1,775	239.0	422	422	1,797
67.00	2,525	261.0	2,139	2,561	2,708
68.00	3,488	286.0	2,994	5,554	3,830

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.99	1,598	0.0	0	0
63.00	1,598	40.0	6	6
63.74	1,598	40.0	473	479
63.75	1,598	30.0	5	484
64.24	1,598	30.0	235	719
64.25	1,598	20.0	3	722
65.74	1,598	20.0	476	1,198

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.99'	**2.400 in/hr Exfiltration over Surface area**
#3	Secondary	62.50'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.50' / 62.26' S= 0.0089 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.30'	**25.7" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.95 hrs HW=63.19' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 2.00 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.99' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.52 cfs potential flow)
└**4=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond GSF 1B: grassed soil filter

Inflow Area = 0.781 ac, 20.08% Impervious, Inflow Depth = 0.07" for 1-inch event
Inflow = 0.02 cfs @ 12.35 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 17.73 hrs, Volume= 0.004 af, Atten= 84%, Lag= 322.8 min
Primary = 0.00 cfs @ 17.73 hrs, Volume= 0.004 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 63.03' @ 17.73 hrs Surf.Area= 733 sf Storage= 86 cf
Flood Elev= 67.00' Surf.Area= 2,309 sf Storage= 1,826 cf

Plug-Flow detention time= 361.4 min calculated for 0.004 af (98% of inflow)
Center-of-Mass det. time= 354.0 min (1,317.9 - 963.9)

Volume	Invert	Avail.Storage	Storage Description
#1	65.50'	32,509 cf	**gsf1B (Irregular)** Listed below (Recalc)
#2	62.74'	545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		33,054 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.50	393	187.0	0	0	393
66.00	583	194.0	242	242	626
67.00	1,576	297.0	1,039	1,282	4,658
68.00	3,199	450.0	2,340	3,622	13,760
69.00	68,644	2,673.0	28,887	32,509	566,223

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.74	733	0.0	0	0
62.75	733	40.0	3	3
63.40	733	40.0	191	194
63.50	733	30.0	22	216
63.99	733	30.0	108	323
64.00	733	20.0	1	325
65.50	733	20.0	220	545

Device	Routing	Invert	Outlet Devices
#1	Primary	62.75'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	62.70'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.70' / 62.60' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.90'	**25.7" Horiz. CB16 beehive grate equiv dbl X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.73 hrs HW=63.03' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 2.47 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.74' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=CB16 beehive grate equiv dbl** (Controls 0.00 cfs)

Summary for Pond GSF 2: grassed soil filter

Inflow Area = 0.713 ac, 25.93% Impervious, Inflow Depth = 0.08" for 1-inch event
Inflow = 0.03 cfs @ 12.32 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 17.72 hrs, Volume= 0.005 af, Atten= 87%, Lag= 324.1 min
Primary = 0.00 cfs @ 17.72 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.16' @ 17.72 hrs Surf.Area= 1,503 sf Storage= 101 cf
Flood Elev= 59.00' Surf.Area= 4,991 sf Storage= 6,448 cf

Plug-Flow detention time= 425.2 min calculated for 0.005 af (97% of inflow)
Center-of-Mass det. time= 408.7 min (1,359.4 - 950.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.75'	5,317 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.99'	1,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,448 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.75	1,500	218.0	0	0	1,500
57.00	1,669	223.0	396	396	1,684
58.00	2,371	245.0	2,010	2,406	2,536
59.00	3,488	283.0	2,912	5,317	4,154

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.99	1,503	0.0	0	0
54.00	1,503	40.0	6	6
54.74	1,503	40.0	445	451
54.75	1,503	30.0	5	455
55.24	1,503	30.0	221	676
55.25	1,503	20.0	3	679
56.75	1,503	20.0	451	1,130

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.95'	**8.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.95' / 53.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb20 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.72 hrs HW=54.16' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 1.76 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=53.99' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb20 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 24: grassed soil filter

Inflow Area = 0.419 ac, 67.19% Impervious, Inflow Depth = 0.40" for 1-inch event
Inflow = 0.19 cfs @ 12.09 hrs, Volume= 0.014 af
Outflow = 0.01 cfs @ 16.16 hrs, Volume= 0.014 af, Atten= 96%, Lag= 243.8 min
Primary = 0.01 cfs @ 16.16 hrs, Volume= 0.014 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 37.67' @ 16.16 hrs Surf.Area= 1,401 sf Storage= 381 cf

Plug-Flow detention time= 643.7 min calculated for 0.014 af (97% of inflow)
Center-of-Mass det. time= 629.7 min (1,478.1 - 848.4)

Volume	Invert	Avail.Storage	Storage Description
#1	39.75'	4,479 cf	**gsf24 (Irregular)** Listed below (Recalc)
#2	36.99'	1,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		5,533 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.75	1,400	150.0	0	0	1,400
40.00	1,516	156.0	364	364	1,551
41.00	2,013	176.0	1,759	2,123	2,105
42.00	2,717	200.0	2,356	4,479	2,847

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.99	1,401	0.0	0	0
37.00	1,401	40.0	6	6
37.74	1,401	40.0	415	420
37.75	1,401	30.0	4	425
38.24	1,401	30.0	206	630
38.25	1,401	20.0	3	633
39.75	1,401	20.0	420	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	36.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	36.80'	**8.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 36.80' / 36.00' S= 0.0200 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4 Device 3 40.60' **25.7" Horiz. cb32 beehive equiv** C= 0.600
Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 16.16 hrs HW=37.67' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 3.86 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=36.99' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
↑—**4=cb32 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 3: grassed soil filter

Inflow Area = 0.830 ac, 36.22% Impervious, Inflow Depth = 0.11" for 1-inch event
Inflow = 0.06 cfs @ 12.14 hrs, Volume= 0.008 af
Outflow = 0.00 cfs @ 17.89 hrs, Volume= 0.008 af, Atten= 92%, Lag= 345.4 min
Primary = 0.00 cfs @ 17.89 hrs, Volume= 0.008 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 52.27' @ 17.89 hrs Surf.Area= 1,610 sf Storage= 181 cf
Flood Elev= 57.00' Surf.Area= 5,449 sf Storage= 7,083 cf

Plug-Flow detention time= 525.6 min calculated for 0.008 af (97% of inflow)
Center-of-Mass det. time= 509.7 min (1,437.7 - 928.0)

Volume	Invert	Avail.Storage	Storage Description
#1	54.75'	5,872 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	51.99'	1,211 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,083 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.75	1,600	268.0	0	0	1,600
55.00	1,804	274.0	425	425	1,868
56.00	2,657	295.0	2,217	2,642	2,860
57.00	3,839	332.0	3,230	5,872	4,733

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.99	1,610	0.0	0	0
52.00	1,610	40.0	6	6
52.74	1,610	40.0	477	483
52.75	1,610	30.0	5	488
53.24	1,610	30.0	237	725
53.25	1,610	20.0	3	728
54.75	1,610	20.0	483	1,211

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.95'	**12.0" Round Culvert**
			L= 14.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.95' / 51.81' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	55.75'	**25.7" Horiz. cb25 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.89 hrs HW=52.27' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 2.39 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.99' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.01 cfs potential flow)
↑—**4=cb25 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 4: grassed soil filter

Inflow Area = 0.194 ac, 0.00% Impervious, Inflow Depth = 0.02" for 1-inch event
Inflow = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 21.51 hrs, Volume= 0.000 af, Atten= 49%, Lag= 404.1 min
Primary = 0.00 cfs @ 21.51 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.78' @ 21.51 hrs Surf.Area= 457 sf Storage= 7 cf
Flood Elev= 56.00' Surf.Area= 1,431 sf Storage= 1,405 cf

Plug-Flow detention time= 366.1 min calculated for 0.000 af (89% of inflow)
Center-of-Mass det. time= 323.7 min (1,382.8 - 1,059.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	1,061 cf	**gsf4 (Irregular)** Listed below (Recalc)
#2	51.74'	344 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,405 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.50	457	163.0	0	0	457
55.00	623	169.0	269	269	636
56.00	974	182.0	792	1,061	1,039

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.74	457	0.0	0	0
51.75	457	40.0	2	2
52.49	457	40.0	135	137
52.50	457	30.0	1	138
52.99	457	30.0	67	206
53.00	457	20.0	1	207
54.50	457	20.0	137	344

Device	Routing	Invert	Outlet Devices
#1	Primary	51.75'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.70'	**8.0" Round Culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.70' / 51.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	55.10'	**25.7" Horiz. cb26 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 21.51 hrs HW=51.78' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.64 fps)
└─**2=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.74' (Free Discharge)
└─**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└─**4=cb26 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 5: grassed soil filter

Inflow Area = 0.248 ac, 0.00% Impervious, Inflow Depth = 0.02" for 1-inch event
Inflow = 0.00 cfs @ 14.78 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 23.33 hrs, Volume= 0.000 af, Atten= 55%, Lag= 513.2 min
Primary = 0.00 cfs @ 23.33 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.29' @ 23.33 hrs Surf.Area= 600 sf Storage= 11 cf
Flood Elev= 55.00' Surf.Area= 1,857 sf Storage= 1,360 cf

Plug-Flow detention time= 452.2 min calculated for 0.000 af (88% of inflow)
Center-of-Mass det. time= 406.5 min (1,465.6 - 1,059.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	908 cf	**gsf5 (Irregular)** Listed below (Recalc)
#2	51.24'	451 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,360 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	600	210.0	0	0	600
55.00	1,257	228.0	908	908	1,265

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	600	0.0	0	0
51.25	600	40.0	2	2
51.99	600	40.0	178	180
52.00	600	30.0	2	182
52.49	600	30.0	88	270
52.50	600	20.0	1	271
54.00	600	20.0	180	451

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.95' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.60'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 23.33 hrs HW=51.29' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.73 fps)
└**2=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.24' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.13 cfs potential flow)
└**4=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 6: grassed soil filter

Inflow Area = 0.321 ac, 32.06% Impervious, Inflow Depth = 0.11" for 1-inch event
Inflow = 0.02 cfs @ 12.14 hrs, Volume= 0.003 af
Outflow = 0.00 cfs @ 18.57 hrs, Volume= 0.003 af, Atten= 92%, Lag= 386.1 min
Primary = 0.00 cfs @ 18.57 hrs, Volume= 0.003 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 44.92' @ 18.57 hrs Surf.Area= 1,004 sf Storage= 74 cf
Flood Elev= 50.00' Surf.Area= 2,772 sf Storage= 4,107 cf

Plug-Flow detention time= 585.9 min calculated for 0.003 af (95% of inflow)
Center-of-Mass det. time= 560.4 min (1,488.4 - 928.0)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	3,352 cf	**gsf6 (Irregular)** Listed below (Recalc)
#2	44.74'	755 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
47.50	1,004	156.0	0	0	1,004
48.00	1,082	159.0	521	521	1,113
49.00	1,413	172.0	1,244	1,765	1,493
50.00	1,768	184.0	1,587	3,352	1,877

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.74	1,004	0.0	0	0
44.75	1,004	40.0	4	4
45.49	1,004	40.0	297	301
45.50	1,004	30.0	3	304
45.99	1,004	30.0	148	452
46.00	1,004	20.0	2	454
47.50	1,004	20.0	301	755

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	44.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	44.70'	**8.0" Round culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.70' / 44.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	48.20'	**4.0" Vert. Orifice X 6.00** C= 0.600
#5	Device 3	49.00'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 18.57 hrs HW=44.92' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 1.91 fps)
└─**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.74' (Free Discharge)
└─**3=culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└─**4=Orifice** (Controls 0.00 cfs)
└─**5=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 7: grassed soil filter

Inflow Area = 0.697 ac, 25.86% Impervious, Inflow Depth = 0.08" for 1-inch event
Inflow = 0.03 cfs @ 12.32 hrs, Volume= 0.005 af
Outflow = 0.00 cfs @ 18.58 hrs, Volume= 0.005 af, Atten= 88%, Lag= 375.5 min
Primary = 0.00 cfs @ 18.58 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 51.37' @ 18.58 hrs Surf.Area= 2,037 sf Storage= 109 cf
Flood Elev= 56.00' Surf.Area= 7,240 sf Storage= 8,558 cf

Plug-Flow detention time= 519.3 min calculated for 0.005 af (94% of inflow)
Center-of-Mass det. time= 490.4 min (1,441.2 - 950.8)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	7,026 cf	**gsf7 (Irregular)** Listed below (Recalc)
#2	51.24'	1,532 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,558 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	2,037	220.0	0	0	2,037
55.00	3,467	289.0	2,720	2,720	4,843
56.00	5,203	357.0	4,306	7,026	8,354

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	2,037	0.0	0	0
51.25	2,037	40.0	8	8
51.99	2,037	40.0	603	611
52.00	2,037	30.0	6	617
52.49	2,037	30.0	299	917
52.50	2,037	20.0	4	921
54.00	2,037	20.0	611	1,532

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round cb29** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.48' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.70'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 18.58 hrs HW=51.37' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 1.51 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.24' (Free Discharge)
↑—**3=cb29** (Passes 0.00 cfs of 0.15 cfs potential flow)
↑—**4=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 8: grassed soil filter

Inflow Area = 1.046 ac, 55.78% Impervious, Inflow Depth = 0.22" for 1-inch event
Inflow = 0.23 cfs @ 12.10 hrs, Volume= 0.020 af
Outflow = 0.01 cfs @ 16.39 hrs, Volume= 0.019 af, Atten= 95%, Lag= 257.2 min
Primary = 0.01 cfs @ 16.39 hrs, Volume= 0.019 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.35' @ 16.39 hrs Surf.Area= 1,905 sf Storage= 463 cf
Flood Elev= 58.50' Surf.Area= 5,815 sf Storage= 7,903 cf

Plug-Flow detention time= 495.5 min calculated for 0.019 af (98% of inflow)
Center-of-Mass det. time= 486.8 min (1,371.3 - 884.5)

Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	6,471 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.74'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,903 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.50	2,600	200.0	0	0	2,600
57.50	3,227	218.0	2,908	2,908	3,234
58.50	3,910	237.0	3,563	6,471	3,959

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.74	1,905	0.0	0	0
53.75	1,905	40.0	8	8
54.49	1,905	40.0	564	572
54.50	1,905	30.0	6	577
54.99	1,905	30.0	280	857
55.00	1,905	20.0	4	861
56.50	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	53.75'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.50'	**8.0" Round cb10 culvert** L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.50' / 52.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb10 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 16.39 hrs HW=54.35' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 3.62 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=53.74' (Free Discharge)
└─**3=cb10 culvert** (Passes 0.00 cfs of 0.15 cfs potential flow)
└─**4=cb10 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 9: grassed soil filter

Inflow Area = 0.647 ac, 63.29% Impervious, Inflow Depth = 0.28" for 1-inch event
Inflow = 0.20 cfs @ 12.10 hrs, Volume= 0.015 af
Outflow = 0.01 cfs @ 17.67 hrs, Volume= 0.014 af, Atten= 97%, Lag= 334.2 min
Primary = 0.01 cfs @ 17.67 hrs, Volume= 0.014 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.80' @ 17.67 hrs Surf.Area= 1,905 sf Storage= 429 cf
Flood Elev= 65.00' Surf.Area= 6,073 sf Storage= 8,972 cf

Plug-Flow detention time= 755.9 min calculated for 0.014 af (93% of inflow)
Center-of-Mass det. time= 721.3 min (1,591.2 - 869.9)

Volume	Invert	Avail.Storage	Storage Description
#1	62.50'	7,539 cf	**gsf9 (Irregular)** Listed below (Recalc)
#2	59.24'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,972 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.50	1,905	437.0	0	0	1,905
63.00	2,345	443.0	1,061	1,061	2,379
64.00	3,244	455.0	2,782	3,843	3,347
65.00	4,168	468.0	3,696	7,539	4,408

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.24	1,905	0.0	0	0
59.25	1,905	40.0	8	8
59.99	1,905	40.0	564	572
60.00	1,905	30.0	6	577
60.49	1,905	30.0	280	857
60.50	1,905	20.0	4	861
62.00	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	59.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	59.00'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 57.92' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.95'	**25.7" Horiz. cb6 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 17.67 hrs HW=59.80' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 3.50 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=59.24' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.15 cfs potential flow)
└**4=cb6 beehive equiv** (Controls 0.00 cfs)

Summary for Pond ics 12: ICS 12

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.08 hrs, Volume= 0.031 af
Secondary = 0.64 cfs @ 12.08 hrs, Volume= 0.139 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.23' @ 12.08 hrs
Flood Elev= 65.42'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.70'	**18.0" Round Culvert** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.15' S= 0.1375 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	62.95'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	60.75'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.75' / 60.72' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	60.75'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.65 cfs @ 12.08 hrs HW=63.23' (Free Discharge)
└**1=Culvert** (Passes 1.65 cfs of 8.95 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.65 cfs @ 1.49 fps)

Secondary OutFlow Max=0.64 cfs @ 12.08 hrs HW=63.23' (Free Discharge)
└**3=Culvert** (Passes 0.64 cfs of 4.20 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.64 cfs @ 7.32 fps)

Summary for Pond ICS1: ICS 1

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 12.08 hrs, Volume= 0.125 af
Secondary = 1.86 cfs @ 12.08 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.61' @ 12.08 hrs
Flood Elev= 69.38'

Device	Routing	Invert	Outlet Devices
#1	Secondary	63.37'	**18.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.27' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.31'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	63.37'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.37' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	63.37'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.43 cfs @ 12.08 hrs HW=64.61' (Free Discharge)
└**3=Culvert** (Passes 0.43 cfs of 2.38 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.43 cfs @ 4.98 fps)

Secondary OutFlow Max=1.85 cfs @ 12.08 hrs HW=64.61' (Free Discharge)
└**1=Culvert** (Passes 1.85 cfs of 3.92 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.85 cfs @ 1.56 fps)

Summary for Pond ICS18: ICS18

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 0.029 af
Outflow = 0.39 cfs @ 12.08 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min
Primary = 0.39 cfs @ 12.08 hrs, Volume= 0.029 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.83' @ 12.08 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.81'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.81' / 57.80' S= 0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	57.81'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 4	60.25'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	57.80'	**12.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.80' / 56.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.39 cfs @ 12.08 hrs HW=58.82' (Free Discharge)
↑—**1=Culvert** (Passes 0.39 cfs of 1.10 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.39 cfs @ 4.43 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=57.80' (Free Discharge)
↑—**4=Culvert** (Controls 0.00 cfs)
↑—**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond ics28: ICS28

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.018 af
Outflow = 0.25 cfs @ 12.08 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min
Primary = 0.25 cfs @ 12.08 hrs, Volume= 0.018 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.66' @ 12.08 hrs
Flood Elev= 63.95'

Device	Routing	Invert	Outlet Devices
#1	Secondary	58.00'	**8.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	60.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	58.15'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.15' / 58.12' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	58.15'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.24 cfs @ 12.08 hrs HW=58.66' (Free Discharge)
└**3=Culvert** (Passes 0.24 cfs of 0.44 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.24 cfs @ 2.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond ICS37: ISC37

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.79' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.50'	**18.0" Round Culvert** L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.50' / 52.00' S= 0.0098 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.29 cfs @ 12.08 hrs HW=53.79' (Free Discharge)
├**3=Culvert** (Barrel Controls 1.91 cfs @ 3.07 fps)
└**4=Orifice/Grate** (Orifice Controls 0.38 cfs @ 4.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=52.50' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond ics46: ICS46

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.08 hrs, Volume= 0.139 af
Secondary = 1.66 cfs @ 12.08 hrs, Volume= 0.032 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 49.28' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Secondary	46.20'	**18.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.20' / 46.00' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	49.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	46.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.80' / 46.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	46.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.64 cfs @ 12.08 hrs HW=49.28' (Free Discharge)
└**3=Culvert** (Passes 0.64 cfs of 4.20 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.64 cfs @ 7.32 fps)

Secondary OutFlow Max=1.65 cfs @ 12.08 hrs HW=49.28' (Free Discharge)
└**1=Culvert** (Passes 1.65 cfs of 10.24 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.65 cfs @ 1.49 fps)

Summary for Pond ICS9: ICS9

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.08 hrs, Volume= 0.139 af
Secondary = 1.66 cfs @ 12.08 hrs, Volume= 0.032 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.46' @ 12.08 hrs
Flood Elev= 66.76'

Device	Routing	Invert	Outlet Devices
#1	Secondary	61.70'	**18.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.18'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	62.00'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.00' / 61.65' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

#4 Device 3 62.00' **4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.64 cfs @ 12.08 hrs HW=64.46' (Free Discharge)
└**3=Culvert** (Passes 0.64 cfs of 4.18 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.64 cfs @ 7.29 fps)

Secondary OutFlow Max=1.65 cfs @ 12.08 hrs HW=64.46' (Free Discharge)
└**1=Culvert** (Passes 1.65 cfs of 9.51 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.65 cfs @ 1.50 fps)

Summary for Pond ISC42: ICS 42

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.79' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.20'	**18.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.20' / 51.88' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.37'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.29 cfs @ 12.08 hrs HW=53.79' (Free Discharge)
├**3=Culvert** (Barrel Controls 1.91 cfs @ 3.07 fps)
└**4=Orifice/Grate** (Orifice Controls 0.38 cfs @ 4.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=52.20' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond MPP 10: Rtank storage

Inflow Area = 0.710 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.63 cfs @ 12.08 hrs, Volume= 0.047 af
Outflow = 0.09 cfs @ 12.61 hrs, Volume= 0.029 af, Atten= 86%, Lag= 31.3 min
Primary = 0.09 cfs @ 12.61 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.54' @ 12.61 hrs Surf.Area= 0.179 ac Storage= 0.028 af

Plug-Flow detention time= 320.2 min calculated for 0.029 af (61% of inflow)
Center-of-Mass det. time= 218.3 min (1,006.2 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.23'	0.091 af	**6.25'W x 1,248.97'L x 1.94'H Field A** 0.347 af Overall - 0.118 af Embedded = 0.229 af x 40.0% Voids
#2A	61.48'	0.112 af	**ACF R-Tank HD 0.5** x 2128 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 4 Rows of 532 Chambers
		0.204 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.48'	**8.0" Round Culvert X 6.00** L= 2.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.48' / 61.40' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.09 cfs @ 12.61 hrs HW=61.54' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.09 cfs @ 0.85 fps)

Summary for Pond MPP 14: Rtanks

Inflow Area = 0.215 ac, 94.36% Impervious, Inflow Depth = 0.71" for 1-inch event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.02 cfs @ 12.71 hrs, Volume= 0.008 af, Atten= 88%, Lag= 37.5 min
Primary = 0.02 cfs @ 12.71 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.30' @ 12.71 hrs Surf.Area= 1,935 sf Storage= 314 cf
Flood Elev= 60.50' Surf.Area= 1,935 sf Storage= 2,354 cf

Plug-Flow detention time= 329.7 min calculated for 0.008 af (65% of inflow)
Center-of-Mass det. time= 230.5 min (1,033.0 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	55.98'	1,011 cf	**15.44'W x 125.33'L x 2.04'H Field A** 3,941 cf Overall - 1,413 cf Embedded = 2,528 cf x 40.0% Voids
#2A	56.23'	1,343 cf	**ACF R-Tank HD 0.5** x 583 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 11 Rows of 53 Chambers
		2,354 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	56.23'	**8.0" Round Culvert X 2.00** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.23' / 56.12' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.02 cfs @ 12.71 hrs HW=56.30' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.02 cfs @ 0.84 fps)

Summary for Pond MPP 19: Rtanks

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth = 0.50" for 1-inch event
Inflow = 0.19 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.00 cfs @ 18.74 hrs, Volume= 0.005 af, Atten= 98%, Lag= 399.0 min
Primary = 0.00 cfs @ 18.74 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.13' @ 18.74 hrs Surf.Area= 0.074 ac Storage= 0.011 af

Plug-Flow detention time= 773.7 min calculated for 0.005 af (37% of inflow)
Center-of-Mass det. time= 647.7 min (1,480.5 - 832.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.83'	0.033 af	**18.06'W x 179.28'L x 1.84'H Field A** 0.137 af Overall - 0.055 af Embedded = 0.082 af x 40.0% Voids
#2A	55.08'	0.052 af	**ACF R-Tank HD 0.5** x 988 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 76 Chambers
		0.085 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.08'	**6.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.08' / 55.00' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.00 cfs @ 18.74 hrs HW=55.13' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.60 fps)

Summary for Pond MPP 21: Rtanks

Inflow Area = 0.229 ac, 83.66% Impervious, Inflow Depth = 0.50" for 1-inch event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.01 cfs @ 14.30 hrs, Volume= 0.006 af, Atten= 94%, Lag= 132.6 min
Primary = 0.01 cfs @ 14.30 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.81' @ 14.30 hrs Surf.Area= 1,510 sf Storage= 255 cf

Plug-Flow detention time= 452.1 min calculated for 0.006 af (61% of inflow)
Center-of-Mass det. time= 343.3 min (1,176.1 - 832.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.48'	818 cf	**16.75'W x 90.14'L x 2.09'H Field A** 3,151 cf Overall - 1,105 cf Embedded = 2,046 cf x 40.0% Voids
#2A	54.73'	1,050 cf	**ACF R-Tank HD 0.5** x 456 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 38 Chambers
		1,868 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.73'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.73' / 54.73' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.01 cfs @ 14.30 hrs HW=54.81' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.01 cfs @ 0.67 fps)

Summary for Pond MPP 22: Rtanks

Inflow Area = 0.310 ac, 76.43% Impervious, Inflow Depth = 0.40" for 1-inch event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Atten= 99%, Lag= 714.6 min
Primary = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.09' @ 24.00 hrs Surf.Area= 3,003 sf Storage= 408 cf

Plug-Flow detention time= 925.2 min calculated for 0.002 af (24% of inflow)
Center-of-Mass det. time= 785.9 min (1,634.3 - 848.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.80'	1,262 cf	**16.75'W x 179.28'L x 1.79'H Field A** 5,367 cf Overall - 2,211 cf Embedded = 3,156 cf x 40.0% Voids
#2A	55.05'	2,100 cf	**ACF R-Tank HD 0.5** x 912 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 76 Chambers
		3,363 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.05'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.05' / 55.05' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.00 cfs @ 24.00 hrs HW=55.09' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.00 cfs @ 0.41 fps)

Summary for Pond MPP 26: Rtanks

Inflow Area = 0.088 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.08 cfs @ 12.08 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 14.12 hrs, Volume= 0.003 af, Atten= 95%, Lag= 122.1 min
Primary = 0.00 cfs @ 14.12 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.66' @ 14.12 hrs Surf.Area= 1,289 sf Storage= 173 cf

Plug-Flow detention time= 457.5 min calculated for 0.003 af (48% of inflow)
Center-of-Mass det. time= 340.7 min (1,128.6 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	34.37'	492 cf	**18.06'W x 71.37'L x 1.69'H Field A** 2,175 cf Overall - 945 cf Embedded = 1,230 cf x 40.0% Voids
#2A	34.62'	898 cf	**ACF R-Tank HD 0.5** x 390 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 30 Chambers
		1,390 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	34.62'	**8.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.62' / 34.34' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.00 cfs @ 14.12 hrs HW=34.66' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.00 cfs @ 0.52 fps)

Summary for Pond MPP 50:

Inflow Area = 0.693 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.62 cfs @ 12.08 hrs, Volume= 0.046 af
Outflow = 0.03 cfs @ 14.56 hrs, Volume= 0.017 af, Atten= 95%, Lag= 148.8 min
Primary = 0.03 cfs @ 14.56 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.62' @ 14.56 hrs Surf.Area= 5,946 sf Storage= 1,443 cf

Plug-Flow detention time= 462.0 min calculated for 0.017 af (37% of inflow)
Center-of-Mass det. time= 329.6 min (1,117.5 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.33'	2,878 cf	**4.94'W x 1,204.40'L x 1.84'H Field A** 10,925 cf Overall - 3,731 cf Embedded = 7,195 cf x 40.0% Voids
#2A	54.33'	3,544 cf	**ACF R-Tank HD 0.5** x 1539 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 3 Rows of 513 Chambers
		6,422 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.58'	**8.0" Round Culvert X 7.00** L= 3.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.58' / 54.55' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.03 cfs @ 14.56 hrs HW=54.62' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.03 cfs @ 0.73 fps)

Summary for Pond mpp30: Rtanks

Inflow Area = 1.205 ac, 54.78% Impervious, Inflow Depth = 0.27" for 1-inch event
Inflow = 0.38 cfs @ 12.09 hrs, Volume= 0.027 af
Outflow = 0.11 cfs @ 12.46 hrs, Volume= 0.027 af, Atten= 71%, Lag= 22.4 min
Primary = 0.11 cfs @ 12.46 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 29.62' @ 12.46 hrs Surf.Area= 2,103 sf Storage= 363 cf
Flood Elev= 31.78' Surf.Area= 9,089 sf Storage= 8,611 cf

Plug-Flow detention time= 67.7 min calculated for 0.027 af (100% of inflow)
Center-of-Mass det. time= 67.6 min (909.0 - 841.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	30.73'	4,011 cf	**8.56'W x 815.99'L x 2.04'H Field B** 14,234 cf Overall - 4,206 cf Embedded = 10,028 cf x 40.0% Voids
#2B	30.98'	3,995 cf	**ACF R-Tank HD 0.5** x 1735 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 5 Rows of 347 Chambers
#3C	29.28'	259 cf	**10.56'W x 74.72'L x 1.69'H Field C** 1,337 cf Overall - 689 cf Embedded = 648 cf x 40.0% Voids
#4C	29.53'	654 cf	**ACF R-Tank HD 1.0** x 155 Inside #3 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 5 Rows of 31 Chambers
#5D	29.28'	968 cf	**17.12'W x 76.72'L x 3.42'H Field D** 4,487 cf Overall - 2,066 cf Embedded = 2,420 cf x 40.0% Voids
#6D	29.53'	1,963 cf	**ACF R-Tank HD 1.5** x 310 Inside #5 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 10 Rows of 31 Chambers
		11,851 cf	Total Available Storage

Storage Group B created with Chamber Wizard
Storage Group C created with Chamber Wizard
Storage Group D created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	29.28'	**18.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.28' / 29.00' S= 0.0140 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	29.28'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	30.00'	**3.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.11 cfs @ 12.46 hrs HW=29.62' (Free Discharge)
└**1=Culvert** (Passes 0.00 cfs of 0.48 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.00 cfs)
└**2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 2.25 fps)

Summary for Pond SSF 36: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.58" for 1-inch event
Inflow = 0.43 cfs @ 12.08 hrs, Volume= 0.125 af
Outflow = 0.06 cfs @ 16.32 hrs, Volume= 0.029 af, Atten= 86%, Lag= 254.2 min
Primary = 0.06 cfs @ 16.32 hrs, Volume= 0.029 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 62.79' @ 16.32 hrs Surf.Area= 11,270 sf Storage= 4,244 cf
Flood Elev= 66.27' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 543.7 min calculated for 0.028 af (23% of inflow)
Center-of-Mass det. time= 319.7 min (1,129.9 - 810.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	62.77'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	63.27'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	60.02'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.02	5,635	0.0	0	0
60.03	5,635	40.0	23	23
60.76	5,635	40.0	1,645	1,668
60.77	5,635	30.0	17	1,685
61.26	5,635	30.0	828	2,513
61.27	5,635	20.0	11	2,524
62.76	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	60.02'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.02'	**1.500 in/hr Exfiltration over Surface area above 60.02'** Excluded Surface area = 5,635 sf
#3	Secondary	64.31'	**12.0" Round Culvert X 2.00** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 64.31' / 64.31' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.06 cfs @ 16.32 hrs HW=62.79' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 7.94 fps)
↑—**2=Exfiltration** (Passes 0.06 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.02' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf37: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.64" for 1-inch event
Inflow = 0.64 cfs @ 12.08 hrs, Volume= 0.139 af
Outflow = 0.06 cfs @ 16.23 hrs, Volume= 0.042 af, Atten= 90%, Lag= 248.6 min
Primary = 0.06 cfs @ 16.23 hrs, Volume= 0.042 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.47' @ 16.23 hrs Surf.Area= 11,332 sf Storage= 4,502 cf
Flood Elev= 64.85' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 461.0 min calculated for 0.042 af (30% of inflow)
Center-of-Mass det. time= 281.9 min (1,083.8 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.35'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	61.85'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	58.60'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.60	5,666	0.0	0	0
58.61	5,666	40.0	23	23
59.34	5,666	40.0	1,654	1,677
59.35	5,666	30.0	17	1,694
59.84	5,666	30.0	833	2,527
59.85	5,666	20.0	11	2,538
61.34	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	58.60'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.60'	**1.500 in/hr Exfiltration over Surface area above 58.60'** Excluded Surface area = 5,666 sf
#3	Secondary	62.89'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.89' / 62.89' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.06 cfs @ 16.23 hrs HW=61.47' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.09 fps)
↑—**2=Exfiltration** (Passes 0.06 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.60' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf38: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.15" for 1-inch event
Inflow = 1.66 cfs @ 12.08 hrs, Volume= 0.031 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.98' @ 12.46 hrs Surf.Area= 5,666 sf Storage= 1,372 cf
Flood Elev= 63.62' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1A	60.12'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	60.62'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	57.37'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.37	5,666	0.0	0	0
57.38	5,666	40.0	23	23
58.11	5,666	40.0	1,654	1,677
58.12	5,666	30.0	17	1,694
58.61	5,666	30.0	833	2,527
58.62	5,666	20.0	11	2,538
60.11	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	57.37'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	57.37'	**1.500 in/hr Exfiltration over Surface area above 57.37'** Excluded Surface area = 5,666 sf
#3	Secondary	61.66'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.66' / 61.66' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=57.37' (Free Discharge)
└**1=Orifice/Grate** (Controls 0.00 cfs)
└**2=Exfiltration** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=57.37' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf39: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 0.07 cfs @ 16.04 hrs, Volume= 0.068 af, Atten= 97%, Lag= 237.2 min
Primary = 0.07 cfs @ 16.04 hrs, Volume= 0.068 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.59' @ 16.04 hrs Surf.Area= 12,365 sf Storage= 5,520 cf
Flood Elev= 55.67' Surf.Area= 12,365 sf Storage= 18,385 cf

Plug-Flow detention time= 461.4 min calculated for 0.068 af (40% of inflow)
Center-of-Mass det. time= 333.9 min (1,121.7 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,625 cf	**58.50'W x 109.24'L x 3.50'H Field A** 22,367 cf Overall - 8,303 cf Embedded = 14,064 cf x 40.0% Voids
#2A	52.67'	8,303 cf	**ADS_StormTech SC-740** x 180 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 12 rows
#3	49.42'	4,457 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		18,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,974	0.0	0	0
49.43	5,974	40.0	24	24
50.16	5,974	40.0	1,744	1,768
50.17	5,974	30.0	18	1,786
50.66	5,974	30.0	878	2,664
50.67	5,974	20.0	12	2,676
52.16	5,974	20.0	1,780	4,457

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,974 sf
#3	Secondary	53.71'	**12.0" Round Culvert**

L= 5.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.07 cfs @ 16.04 hrs HW=52.59' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.50 fps)
└**2=Exfiltration** (Passes 0.07 cfs of 0.22 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=49.42' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf40: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 0.07 cfs @ 16.00 hrs, Volume= 0.072 af, Atten= 97%, Lag= 235.0 min
Primary = 0.07 cfs @ 16.00 hrs, Volume= 0.072 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.68' @ 16.00 hrs Surf.Area= 11,484 sf Storage= 5,492 cf
Flood Elev= 55.67' Surf.Area= 11,484 sf Storage= 16,630 cf

Plug-Flow detention time= 470.2 min calculated for 0.072 af (42% of inflow)
Center-of-Mass det. time= 346.3 min (1,134.2 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,168 cf	**20.50'W x 280.12'L x 3.50'H Field A** 20,099 cf Overall - 7,178 cf Embedded = 12,921 cf x 40.0% Voids
#2A	52.67'	7,178 cf	**ADS_StormTech SC-740** x 156 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
#3	49.42'	4,284 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,630 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,742	0.0	0	0
49.43	5,742	40.0	23	23
50.16	5,742	40.0	1,677	1,700
50.17	5,742	30.0	17	1,717
50.66	5,742	30.0	844	2,561
50.67	5,742	20.0	11	2,572
52.16	5,742	20.0	1,711	4,284

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,742 sf
#3	Secondary	53.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.07 cfs @ 16.00 hrs HW=52.68' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.63 fps)
↑—**2=Exfiltration** (Passes 0.07 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=49.42' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf41: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.64" for 1-inch event
Inflow = 0.64 cfs @ 12.08 hrs, Volume= 0.139 af
Outflow = 0.06 cfs @ 16.22 hrs, Volume= 0.042 af, Atten= 90%, Lag= 248.2 min
Primary = 0.06 cfs @ 16.22 hrs, Volume= 0.042 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.30' @ 16.22 hrs Surf.Area= 11,270 sf Storage= 4,493 cf
Flood Elev= 49.67' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 458.7 min calculated for 0.042 af (30% of inflow)
Center-of-Mass det. time= 281.0 min (1,082.9 - 801.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	46.17'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	46.67'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	43.42'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.42	5,635	0.0	0	0
43.43	5,635	40.0	23	23
44.16	5,635	40.0	1,645	1,668
44.17	5,635	30.0	17	1,685
44.66	5,635	30.0	828	2,513
44.67	5,635	20.0	11	2,524
46.16	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	43.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	43.42'	**1.500 in/hr Exfiltration over Surface area above 43.42'** Excluded Surface area = 5,635 sf
#3	Secondary	47.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.71' / 47.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.06 cfs @ 16.22 hrs HW=46.30' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.10 fps)
↑—**2=Exfiltration** (Passes 0.06 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.42' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf42: ssf

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.018 af
Outflow = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af, Atten= 97%, Lag= 234.8 min
Primary = 0.01 cfs @ 16.00 hrs, Volume= 0.006 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.40' @ 16.00 hrs Surf.Area= 1,422 sf Storage= 597 cf
Flood Elev= 61.67' Surf.Area= 1,422 sf Storage= 2,027 cf

Plug-Flow detention time= 429.0 min calculated for 0.006 af (33% of inflow)
Center-of-Mass det. time= 288.1 min (1,076.0 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	58.17'	662 cf	**15.75'W x 45.16'L x 3.50'H Field A** 2,489 cf Overall - 835 cf Embedded = 1,654 cf x 40.0% Voids
#2A	58.67'	835 cf	**ADS_StormTech SC-740** x 18 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 3 rows
#3	55.42'	530 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,027 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.42	711	0.0	0	0
55.43	711	40.0	3	3
56.16	711	40.0	208	210
56.17	711	30.0	2	213
56.66	711	30.0	105	317
56.67	711	20.0	1	319
58.16	711	20.0	212	530

Device	Routing	Invert	Outlet Devices
#1	Primary	55.42'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	55.42'	**1.500 in/hr Exfiltration over Surface area above 55.42'** Excluded Surface area = 711 sf
#3	Secondary	60.06'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.05' / 60.06' S= -0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 16.00 hrs HW=58.40' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.30 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=55.42' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf43: ssf

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 0.79" for 1-inch event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 0.029 af
Outflow = 0.01 cfs @ 15.92 hrs, Volume= 0.012 af, Atten= 97%, Lag= 230.3 min
Primary = 0.01 cfs @ 15.92 hrs, Volume= 0.012 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.91' @ 15.92 hrs Surf.Area= 1,934 sf Storage= 921 cf
Flood Elev= 60.90' Surf.Area= 1,934 sf Storage= 2,740 cf

Plug-Flow detention time= 458.2 min calculated for 0.012 af (42% of inflow)
Center-of-Mass det. time= 334.4 min (1,122.3 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.40'	910 cf	**11.00'W x 87.88'L x 3.50'H Field A** 3,383 cf Overall - 1,108 cf Embedded = 2,275 cf x 40.0% Voids
#2A	57.90'	1,108 cf	**ADS_StormTech SC-740** x 24 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	54.65'	721 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,740 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.65	967	0.0	0	0
54.66	967	40.0	4	4
55.39	967	40.0	282	286
55.40	967	30.0	3	289
55.89	967	30.0	142	431
55.90	967	20.0	2	433
57.39	967	20.0	288	721

Device	Routing	Invert	Outlet Devices
#1	Primary	54.65'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.65'	**1.500 in/hr Exfiltration over Surface area above 54.65'** Excluded Surface area = 967 sf
#3	Secondary	59.28'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.28' / 59.28' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 15.92 hrs HW=57.91' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.66 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.65' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1A: Runoff Area=17,785 sf 34.88% Impervious Runoff Depth=1.43"
Tc=6.0 min CN=84 Runoff=0.69 cfs 0.049 af

Subcatchment 1B: Runoff Area=34,018 sf 20.08% Impervious Runoff Depth=1.12"
Tc=6.0 min CN=79 Runoff=1.00 cfs 0.073 af

Subcatchment 2: Runoff Area=31,049 sf 25.93% Impervious Runoff Depth=1.18"
Tc=6.0 min CN=80 Runoff=0.96 cfs 0.070 af

Subcatchment 3: Runoff Area=36,147 sf 36.22% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=82 Runoff=1.26 cfs 0.090 af

Subcatchment 4: Runoff Area=8,448 sf 0.00% Impervious Runoff Depth=0.85"
Tc=6.0 min CN=74 Runoff=0.18 cfs 0.014 af

Subcatchment 5: Runoff Area=10,807 sf 0.00% Impervious Runoff Depth=0.85"
Tc=6.0 min CN=74 Runoff=0.23 cfs 0.017 af

Subcatchment 6: Runoff Area=13,985 sf 32.06% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=82 Runoff=0.49 cfs 0.035 af

Subcatchment 7: Runoff Area=30,345 sf 25.86% Impervious Runoff Depth=1.18"
Tc=6.0 min CN=80 Runoff=0.94 cfs 0.068 af

Subcatchment 8: Runoff Area=45,551 sf 55.78% Impervious Runoff Depth=1.65"
Tc=6.0 min CN=87 Runoff=2.03 cfs 0.144 af

Subcatchment 9: Runoff Area=28,191 sf 63.29% Impervious Runoff Depth=1.81"
Tc=6.0 min CN=89 Runoff=1.37 cfs 0.098 af

Subcatchment 10: access drive north of Runoff Area=30,932 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=1.99 cfs 0.158 af

Subcatchment 11: Runoff Area=43,174 sf 36.78% Impervious Runoff Depth=1.37"
Tc=6.0 min CN=83 Runoff=1.58 cfs 0.113 af

Subcatchment 12: Runoff Area=12,920 sf 57.98% Impervious Runoff Depth=1.73"
Tc=6.0 min CN=88 Runoff=0.60 cfs 0.043 af

Subcatchment 13: Runoff Area=45,163 sf 46.46% Impervious Runoff Depth=1.50"
Tc=6.0 min CN=85 Runoff=1.83 cfs 0.130 af

Subcatchment 14: Runoff Area=9,378 sf 94.36% Impervious Runoff Depth=2.56"
Tc=6.0 min CN=97 Runoff=0.59 cfs 0.046 af

Subcatchment 15: Runoff Area=9,157 sf 1.92% Impervious Runoff Depth=0.85"
Tc=6.0 min CN=74 Runoff=0.19 cfs 0.015 af

Subcatchment 16: Runoff Area=15,110 sf 34.16% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=82 Runoff=0.52 cfs 0.038 af

Subcatchment 17: Runoff Area=13,300 sf 85.11% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=94 Runoff=0.78 cfs 0.057 af

Subcatchment 18A: Runoff Area=6,339 sf 40.91% Impervious Runoff Depth=1.43"
Tc=6.0 min CN=84 Runoff=0.24 cfs 0.017 af

Subcatchment 18B: Runoff Area=4,023 sf 58.36% Impervious Runoff Depth=1.73"
Tc=6.0 min CN=88 Runoff=0.19 cfs 0.013 af

Subcatchment 19: Runoff Area=13,711 sf 81.76% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=94 Runoff=0.80 cfs 0.059 af

Subcatchment 20: Runoff Area=28,459 sf 73.83% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=92 Runoff=1.55 cfs 0.113 af

Subcatchment 21: Runoff Area=9,994 sf 83.66% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=94 Runoff=0.58 cfs 0.043 af

Subcatchment 22: Runoff Area=13,511 sf 76.43% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=92 Runoff=0.74 cfs 0.053 af

Subcatchment 23: sub 23 Runoff Area=28,475 sf 21.95% Impervious Runoff Depth=1.06"
Tc=6.0 min CN=78 Runoff=0.79 cfs 0.058 af

Subcatchment 24: Runoff Area=18,261 sf 67.19% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=92 Runoff=1.00 cfs 0.072 af

Subcatchment 25: Runoff Area=118,223 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=438' Tc=67.0 min CN=71 Runoff=0.71 cfs 0.159 af

Subcatchment 26: Runoff Area=3,816 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=0.25 cfs 0.019 af

Subcatchment 27: Runoff Area=4,262 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=0.27 cfs 0.022 af

Subcatchment 28: Runoff Area=79,698 sf 27.42% Impervious Runoff Depth=1.50"
Tc=6.0 min CN=85 Runoff=3.23 cfs 0.229 af

Subcatchment 29: Runoff Area=1,306 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.007 af

Subcatchment 30: Runoff Area=31,472 sf 77.98% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=93 Runoff=1.78 cfs 0.130 af

Subcatchment 31: Runoff Area=70,616 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=217' Tc=12.3 min CN=71 Runoff=0.94 cfs 0.095 af

Subcatchment 32: Runoff Area=4,677 sf 60.42% Impervious Runoff Depth=1.81"
Tc=6.0 min CN=89 Runoff=0.23 cfs 0.016 af

Subcatchment 33: B3 green Runoff Area=107,893 sf 16.71% Impervious Runoff Depth=0.54"
Tc=6.0 min CN=67 Runoff=1.21 cfs 0.111 af

Subcatchment 34: Runoff Area=24,099 sf 20.00% Impervious Runoff Depth=0.58"
Tc=6.0 min CN=68 Runoff=0.30 cfs 0.027 af

Subcatchment 35: Runoff Area=20,997 sf 20.00% Impervious Runoff Depth=0.58"
Tc=6.0 min CN=68 Runoff=0.26 cfs 0.023 af

Subcatchment 36: B1M1 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 37: B1M2 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 38: B1M3 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 39: B2M4 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 40: B2M5 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 41: B2M6 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=7.25 cfs 0.575 af

Subcatchment 42: B6 Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=0.77 cfs 0.061 af

Subcatchment 43: B5 Runoff Area=18,983 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=1.22 cfs 0.097 af

Subcatchment 44: onsite untreated Runoff Area=159,363 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=574' Tc=18.8 min CN=71 Runoff=1.81 cfs 0.214 af

Subcatchment 45: Runoff Area=64,440 sf 0.00% Impervious Runoff Depth=0.66"
Flow Length=307' Tc=29.9 min CN=70 Runoff=0.56 cfs 0.081 af

Subcatchment 46: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.13 cfs 0.020 af

Subcatchment 47: Runoff Area=79,187 sf 6.00% Impervious Runoff Depth=0.90"
Flow Length=639' Tc=15.9 min CN=75 Runoff=1.31 cfs 0.136 af

Subcatchment 48: Runoff Area=40,183 sf 0.00% Impervious Runoff Depth=0.66"
Flow Length=377' Tc=54.0 min CN=70 Runoff=0.25 cfs 0.051 af

Subcatchment 49: Runoff Area=84,173 sf 0.65% Impervious Runoff Depth=0.66"
Flow Length=470' Tc=54.1 min CN=70 Runoff=0.53 cfs 0.106 af

Subcatchment 50: Runoff Area=30,173 sf 100.00% Impervious Runoff Depth=2.67"
Tc=6.0 min CN=98 Runoff=1.94 cfs 0.154 af

Subcatchment OS10: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth=0.85"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=10.04 cfs 2.661 af

Subcatchment os11a: OFFSITE 3 Runoff Area=192,533 sf 59.04% Impervious Runoff Depth=1.65"
Flow Length=532' Tc=6.8 min CN=87 Runoff=8.33 cfs 0.609 af

Subcatchment os11b: OFFSITE 3 Runoff Area=320,814 sf 1.43% Impervious Runoff Depth=0.75"
Flow Length=528' Tc=18.9 min CN=72 Runoff=3.96 cfs 0.460 af

Subcatchment OS9: OFFSITE 1 (Below Runoff Area=702,010 sf 3.63% Impervious Runoff Depth=0.90"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=8.33 cfs 1.203 af

Reach 9R: ANALYSIS POINT 9 Inflow=8.33 cfs 1.203 af
Outflow=8.33 cfs 1.203 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=0.77' Max Vel=9.01 fps Inflow=10.04 cfs 2.661 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=10.04 cfs 2.661 af

Reach 11R: Stream 9 Inflow=8.33 cfs 0.609 af
Outflow=8.33 cfs 0.609 af

Reach 17R: untreated Inflow=0.78 cfs 0.057 af
Outflow=0.78 cfs 0.057 af

Reach 20R: untreated Inflow=1.55 cfs 0.113 af
Outflow=1.55 cfs 0.113 af

Reach 23R: sub 23 Inflow=0.79 cfs 0.058 af
Outflow=0.79 cfs 0.058 af

Reach 27R: extisting Inflow=0.27 cfs 0.022 af
Outflow=0.27 cfs 0.022 af

Reach 29R: untreated Inflow=0.08 cfs 0.007 af
Outflow=0.08 cfs 0.007 af

Reach 32R: untreated Inflow=0.23 cfs 0.016 af
Outflow=0.23 cfs 0.016 af

Reach 44R: Inflow=1.81 cfs 0.214 af
Outflow=1.81 cfs 0.214 af

Reach 47R: Inflow=1.31 cfs 0.136 af
Outflow=1.31 cfs 0.136 af

Reach 48R: (new Reach) Inflow=0.25 cfs 0.051 af
Outflow=0.25 cfs 0.051 af

Reach 49R: Inflow=0.53 cfs 0.106 af
Outflow=0.53 cfs 0.106 af

Reach PT1: ANALYSIS POINT 1 at BWD Little River Inflow=0.79 cfs 0.157 af
Outflow=0.79 cfs 0.157 af

Reach PT10: Analysis point at Little River Inflow=3.23 cfs 0.229 af
Outflow=3.23 cfs 0.229 af

Reach PT2: ANALYSIS POINT 2 at BWD Reservoir Inflow=0.71 cfs 0.159 af
Outflow=0.71 cfs 0.159 af

Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir Inflow=0.94 cfs 0.095 af
Outflow=0.94 cfs 0.095 af

Reach PT5: all BWD reservoir Inflow=1.58 cfs 0.312 af
Outflow=1.58 cfs 0.312 af

Reach PT6: stream 9 offsite Avg. Flow Depth=0.70' Max Vel=3.02 fps Inflow=13.63 cfs 4.472 af
n=0.040 L=483.0' S=0.0145 '/' Capacity=401.91 cfs Outflow=13.61 cfs 4.472 af

Reach PT7: ANALYSIS POINT7 at US Avg. Flow Depth=0.17' Max Vel=5.11 fps Inflow=0.56 cfs 0.081 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=0.56 cfs 0.081 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.02' Max Vel=2.48 fps Inflow=0.13 cfs 0.020 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.13 cfs 0.020 af

Reach PT9: Analysis Point Stream 9 Avg. Flow Depth=0.61' Max Vel=17.62 fps Inflow=18.22 cfs 5.464 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=18.22 cfs 5.464 af

Reach S9-2: Stream 9 Avg. Flow Depth=0.70' Max Vel=3.80 fps Inflow=17.22 cfs 5.147 af
n=0.040 L=1,580.0' S=0.0233 '/' Capacity=120.91 cfs Outflow=16.97 cfs 5.147 af

Reach S9-3: Stream 9 Avg. Flow Depth=0.67' Max Vel=3.80 fps Inflow=17.78 cfs 5.311 af
n=0.035 L=364.0' S=0.0199 '/' Capacity=152.29 cfs Outflow=17.76 cfs 5.311 af

Reach tank: existing clarifier Inflow=32.48 cfs 4.472 af
Outflow=32.48 cfs 4.472 af

Pond dmh10: dmh10 Peak Elev=56.86' Inflow=13.44 cfs 1.015 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=13.44 cfs 1.015 af

Pond dmh11: dmh11 Peak Elev=55.56' Inflow=14.98 cfs 1.632 af
30.0" Round Culvert n=0.013 L=84.0' S=0.0050 '/' Outflow=14.98 cfs 1.632 af

Pond dmh13: dmh13 Peak Elev=55.01' Inflow=14.98 cfs 1.632 af
30.0" Round Culvert n=0.013 L=201.0' S=0.0050 '/' Outflow=14.98 cfs 1.632 af

Pond dmh14: dmh14 Peak Elev=54.28' Inflow=15.00 cfs 1.707 af
30.0" Round Culvert n=0.020 L=23.0' S=0.0052 '/' Outflow=15.00 cfs 1.707 af

Pond dmh15: dmh15 Peak Elev=53.96' Inflow=15.00 cfs 1.707 af
30.0" Round Culvert n=0.013 L=90.0' S=0.0050 '/' Outflow=15.00 cfs 1.707 af

Pond dmh16: dmh16 Peak Elev=60.54' Inflow=0.01 cfs 0.019 af
12.0" Round Culvert n=0.013 L=198.0' S=0.0126 '/' Outflow=0.01 cfs 0.019 af

Pond dmh17: dmh17 Peak Elev=53.59' Inflow=15.00 cfs 1.732 af
30.0" Round Culvert n=0.013 L=35.0' S=0.0051 '/' Outflow=15.00 cfs 1.732 af

Pond dmh19: dmh 19 Peak Elev=54.92' Inflow=0.58 cfs 0.078 af
12.0" Round Culvert n=0.013 L=59.0' S=0.0100 '/' Outflow=0.58 cfs 0.078 af

Pond dmh2: dmh2 Peak Elev=64.77' Inflow=6.78 cfs 0.478 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0150 '/' Outflow=6.78 cfs 0.478 af

Pond dmh20: dmh20 Peak Elev=53.33' Inflow=15.59 cfs 1.810 af
30.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=15.59 cfs 1.810 af

Pond dmh21: dmh21 Peak Elev=53.03' Inflow=18.93 cfs 2.271 af
30.0" Round Culvert n=0.013 L=281.0' S=0.0169 '/' Outflow=18.93 cfs 2.271 af

Pond dmh22: dmh 22 Peak Elev=52.66' Inflow=3.33 cfs 0.362 af
15.0" Round Culvert n=0.013 L=93.0' S=0.0051 '/' Outflow=3.33 cfs 0.362 af

Pond dmh23: dmh23 Peak Elev=56.80' Inflow=2.88 cfs 0.261 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0050 '/' Outflow=2.88 cfs 0.261 af

Pond dmh24: dmh24 Peak Elev=57.79' Inflow=2.88 cfs 0.261 af
12.0" Round Culvert n=0.013 L=72.0' S=0.0025 '/' Outflow=2.88 cfs 0.261 af

Pond dmh24a: dmh24a Peak Elev=58.68' Inflow=0.78 cfs 0.081 af
8.0" Round Culvert n=0.013 L=95.0' S=0.0095 '/' Outflow=0.78 cfs 0.081 af

Pond dmh25: dmh25 Peak Elev=60.05' Inflow=0.01 cfs 0.031 af
12.0" Round Culvert n=0.013 L=98.0' S=0.0510 '/' Outflow=0.01 cfs 0.031 af

Pond dmh26: dmh26 Peak Elev=57.91' Inflow=0.06 cfs 0.161 af
12.0" Round Culvert n=0.020 L=28.0' S=0.0050 '/' Outflow=0.06 cfs 0.161 af

Pond dmh27: dmh27 Peak Elev=53.31' Inflow=0.24 cfs 0.237 af
12.0" Round Culvert n=0.013 L=256.0' S=0.0050 '/' Outflow=0.24 cfs 0.237 af

Pond dmh29: dmh29 Peak Elev=58.12' Inflow=0.18 cfs 0.045 af
8.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=0.18 cfs 0.045 af

Pond dmh3: dmh3 Peak Elev=61.84' Inflow=6.80 cfs 0.537 af
24.0" Round Culvert n=0.013 L=125.0' S=0.0053 '/' Outflow=6.80 cfs 0.537 af

Pond dmh30: dmh30 Peak Elev=55.64' Inflow=0.18 cfs 0.045 af
12.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=0.18 cfs 0.045 af

Pond dmh31: dmh31 Peak Elev=54.63' Inflow=0.23 cfs 0.206 af
12.0" Round Culvert n=0.013 L=259.0' S=0.0050 '/' Outflow=0.23 cfs 0.206 af

Pond dmh32: dmh32 Peak Elev=52.05' Inflow=0.26 cfs 0.287 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0036 '/' Outflow=0.26 cfs 0.287 af

Pond dmh33: dmh33 Peak Elev=54.23' Inflow=0.18 cfs 0.051 af
12.0" Round Culvert n=0.013 L=201.0' S=0.0099 '/' Outflow=0.18 cfs 0.051 af

Pond dmh34: dmh34 Peak Elev=52.68' Inflow=1.30 cfs 0.176 af
12.0" Round Culvert n=0.013 L=39.0' S=0.0100 '/' Outflow=1.30 cfs 0.176 af

Pond dmh35: dmh35 Peak Elev=52.18' Inflow=1.50 cfs 0.515 af
18.0" Round Culvert n=0.013 L=276.0' S=0.0050 '/' Outflow=1.50 cfs 0.515 af

Pond dmh36: dmh36 Peak Elev=50.79' Inflow=1.50 cfs 0.515 af
18.0" Round Culvert n=0.013 L=159.0' S=0.0050 '/' Outflow=1.50 cfs 0.515 af

Pond dmh38: dmh38 Peak Elev=52.80' Inflow=2.41 cfs 0.453 af
18.0" Round Culvert n=0.013 L=106.0' S=0.0100 '/' Outflow=2.41 cfs 0.453 af

Pond dmh39: dmh39 Peak Elev=51.47' Inflow=2.42 cfs 0.463 af
18.0" Round Culvert n=0.013 L=58.0' S=0.0047 '/' Outflow=2.42 cfs 0.463 af

Pond dmh4: dmh4 Peak Elev=61.29' Inflow=6.80 cfs 0.537 af
24.0" Round Culvert n=0.013 L=66.0' S=0.0041 '/' Outflow=6.80 cfs 0.537 af

Pond dmh40: dmh40 Peak Elev=50.28' Inflow=3.88 cfs 0.978 af
24.0" Round Culvert n=0.013 L=340.0' S=0.0050 '/' Outflow=3.88 cfs 0.978 af

Pond dmh43: dmh43 Peak Elev=48.83' Inflow=5.94 cfs 1.452 af
24.0" Round Culvert n=0.013 L=193.0' S=0.0050 '/' Outflow=5.94 cfs 1.452 af

Pond dmh44: dmh44 Peak Elev=47.78' Inflow=5.94 cfs 1.463 af
30.0" Round Culvert n=0.013 L=82.0' S=0.0050 '/' Outflow=5.94 cfs 1.463 af

Pond dmh45: dmh45 Peak Elev=47.90' Inflow=12.57 cfs 1.941 af
30.0" Round Culvert n=0.013 L=316.0' S=0.0050 '/' Outflow=12.57 cfs 1.941 af

Pond dmh47: dmh47 Peak Elev=45.71' Inflow=12.57 cfs 1.941 af
30.0" Round Culvert n=0.013 L=104.0' S=0.0100 '/' Outflow=12.57 cfs 1.941 af

Pond dmh48: dmh48 Peak Elev=44.78' Inflow=13.44 cfs 2.066 af
30.0" Round Culvert n=0.013 L=117.0' S=0.0050 '/' Outflow=13.44 cfs 2.066 af

Pond dmh49: dmh49 Peak Elev=44.17' Inflow=13.45 cfs 2.087 af
36.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=13.45 cfs 2.087 af

Pond dmh5: dmh5 Peak Elev=60.80' Inflow=6.80 cfs 0.537 af
24.0" Round Culvert n=0.013 L=173.0' S=0.0050 '/' Outflow=6.80 cfs 0.537 af

Pond dmh50: dmh50 Peak Elev=47.02' Inflow=18.94 cfs 2.316 af
30.0" Round Culvert n=0.013 L=64.0' S=0.0100 '/' Outflow=18.94 cfs 2.316 af

Pond dmh51: dmh51 Peak Elev=46.36' Inflow=18.94 cfs 2.316 af
30.0" Round Culvert n=0.013 L=38.0' S=0.0287 '/' Outflow=18.94 cfs 2.316 af

Pond dmh52: dmh52 Peak Elev=43.56' Inflow=32.39 cfs 4.404 af
42.0" Round Culvert n=0.013 L=258.0' S=0.0194 '/' Outflow=32.39 cfs 4.404 af

Pond dmh53: dmh53 Peak Elev=35.56' Inflow=32.40 cfs 4.455 af
42.0" Round Culvert n=0.013 L=120.0' S=0.0208 '/' Outflow=32.40 cfs 4.455 af

Pond dmh54: dmh54 Peak Elev=29.56' Inflow=32.48 cfs 4.472 af
42.0" Round Culvert n=0.013 L=152.0' S=0.0329 '/' Outflow=32.48 cfs 4.472 af

Pond dmh55: dhm55 Peak Elev=21.56' Inflow=32.48 cfs 4.472 af
42.0" Round Culvert n=0.013 L=115.0' S=0.0304 '/' Outflow=32.48 cfs 4.472 af

Pond dmh56: dmh56 Peak Elev=15.06' Inflow=32.48 cfs 4.472 af
42.0" Round Culvert n=0.013 L=42.0' S=0.0357 '/' Outflow=32.48 cfs 4.472 af

Pond dmh59: dmh59 Peak Elev=56.43' Inflow=3.04 cfs 0.300 af
12.0" Round Culvert n=0.013 L=294.0' S=0.0050 '/' Outflow=3.04 cfs 0.300 af

Pond dmh6: dmh6 Peak Elev=60.14' Inflow=6.80 cfs 0.537 af
24.0" Round Culvert n=0.020 L=170.0' S=0.0050 '/' Outflow=6.80 cfs 0.537 af

Pond dmh60: dhm60 Peak Elev=38.06' Inflow=32.39 cfs 4.404 af
42.0" Round Culvert n=0.013 L=114.0' S=0.0175 '/' Outflow=32.39 cfs 4.404 af

Pond dmh7: dmh7 Peak Elev=59.04' Inflow=6.80 cfs 0.537 af
24.0" Round Culvert n=0.013 L=170.0' S=0.0050 '/' Outflow=6.80 cfs 0.537 af

Pond dmh8: dmh8 Peak Elev=59.11' Inflow=13.44 cfs 1.015 af
24.0" Round Culvert n=0.013 L=296.0' S=0.0040 '/' Outflow=13.44 cfs 1.015 af

Pond dmh9a: dmh9a Peak Elev=57.91' Inflow=13.44 cfs 1.015 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=13.44 cfs 1.015 af

Pond GSF 11: grassed soil filter Peak Elev=61.90' Storage=3,855 cf Inflow=1.58 cfs 0.113 af
Primary=0.02 cfs 0.070 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.070 af

Pond GSF 12: grassed soil filter Peak Elev=61.83' Storage=1,506 cf Inflow=0.60 cfs 0.043 af
Primary=0.01 cfs 0.023 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.023 af

Pond GSF 13: grassed soil filter Peak Elev=61.84' Storage=4,317 cf Inflow=1.83 cfs 0.130 af
Primary=0.03 cfs 0.091 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.091 af

Pond GSF 15: grassed soil filter Peak Elev=63.69' Storage=571 cf Inflow=0.19 cfs 0.015 af
Primary=0.00 cfs 0.005 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond GSF 16: grassed soil filter Peak Elev=63.29' Storage=1,346 cf Inflow=0.52 cfs 0.038 af
Primary=0.01 cfs 0.019 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.019 af

Pond GSF 18A: grassed soil filter Peak Elev=56.58' Storage=609 cf Inflow=0.24 cfs 0.017 af
Primary=0.00 cfs 0.009 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.009 af

Pond GSF 18B: grassed soil filter Peak Elev=57.70' Storage=491 cf Inflow=0.19 cfs 0.013 af
Primary=0.00 cfs 0.006 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.006 af

Pond GSF 1A: Grassed soil filter Peak Elev=66.01' Storage=1,644 cf Inflow=0.69 cfs 0.049 af
Primary=0.01 cfs 0.031 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.031 af

Pond GSF 1B: grassed soil filter Peak Elev=66.91' Storage=1,691 cf Inflow=1.00 cfs 0.073 af
Primary=0.01 cfs 0.038 af Secondary=0.09 cfs 0.021 af Outflow=0.10 cfs 0.059 af

Pond GSF 2: grassed soil filter Peak Elev=57.43' Storage=2,302 cf Inflow=0.96 cfs 0.070 af
Primary=0.02 cfs 0.049 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.049 af

Pond GSF 24: grassed soil filter Peak Elev=40.59' Storage=2,393 cf Inflow=1.00 cfs 0.072 af
Primary=0.02 cfs 0.052 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.052 af

Pond GSF 3: grassed soil filter Peak Elev=55.71' Storage=3,125 cf Inflow=1.26 cfs 0.090 af
Primary=0.02 cfs 0.052 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.052 af

Pond GSF 4: grassed soil filter Peak Elev=54.68' Storage=430 cf Inflow=0.18 cfs 0.014 af
Primary=0.00 cfs 0.010 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.010 af

Pond GSF 5: grassed soil filter Peak Elev=54.21' Storage=591 cf Inflow=0.23 cfs 0.017 af
Primary=0.00 cfs 0.011 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.011 af

Pond GSF 6: grassed soil filter Peak Elev=47.92' Storage=1,194 cf Inflow=0.49 cfs 0.035 af
Primary=0.01 cfs 0.021 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.021 af

Pond GSF 7: grassed soil filter Peak Elev=54.33' Storage=2,274 cf Inflow=0.94 cfs 0.068 af
Primary=0.02 cfs 0.046 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.046 af

Pond GSF 8: grassed soil filter Peak Elev=57.61' Storage=4,684 cf Inflow=2.03 cfs 0.144 af
Primary=0.03 cfs 0.095 af Secondary=0.02 cfs 0.004 af Outflow=0.06 cfs 0.099 af

Pond GSF 9: grassed soil filter Peak Elev=62.98' Storage=2,449 cf Inflow=1.37 cfs 0.098 af
Primary=0.02 cfs 0.051 af Secondary=0.13 cfs 0.024 af Outflow=0.14 cfs 0.075 af

Pond ics 12: ICS 12 Peak Elev=63.60' Inflow=7.25 cfs 0.575 af
Primary=6.57 cfs 0.203 af Secondary=0.69 cfs 0.372 af Outflow=7.25 cfs 0.575 af

Pond ICS1: ICS 1 Peak Elev=65.18' Inflow=7.25 cfs 0.575 af
Primary=0.54 cfs 0.326 af Secondary=6.72 cfs 0.248 af Outflow=7.25 cfs 0.575 af

Pond ICS18: ICS18 Peak Elev=60.39' Inflow=1.22 cfs 0.097 af
Primary=0.65 cfs 0.091 af Secondary=0.57 cfs 0.006 af Outflow=1.22 cfs 0.097 af

Pond ics28: ICS28 Peak Elev=60.55' Inflow=0.77 cfs 0.061 af
Primary=0.63 cfs 0.060 af Secondary=0.14 cfs 0.001 af Outflow=0.77 cfs 0.061 af

Pond ICS37: ISC37 Peak Elev=55.34' Inflow=7.25 cfs 0.575 af
Primary=4.92 cfs 0.554 af Secondary=2.34 cfs 0.020 af Outflow=7.25 cfs 0.575 af

Pond ics46: ICS46 Peak Elev=49.65' Inflow=7.25 cfs 0.575 af
Primary=0.69 cfs 0.371 af Secondary=6.57 cfs 0.203 af Outflow=7.25 cfs 0.575 af

Pond ICS9: ICS9 Peak Elev=64.83' Inflow=7.25 cfs 0.575 af
Primary=0.69 cfs 0.371 af Secondary=6.57 cfs 0.204 af Outflow=7.25 cfs 0.575 af

Pond ISC42: ICS 42 Peak Elev=55.68' Inflow=7.25 cfs 0.575 af
Primary=5.30 cfs 0.560 af Secondary=1.96 cfs 0.015 af Outflow=7.25 cfs 0.575 af

Pond MPP 10: Rtank storage Peak Elev=61.72' Storage=0.055 af Inflow=1.99 cfs 0.158 af
8.0" Round Culvert x 6.00 n=0.013 L=2.0' S=0.0400 '/' Outflow=1.07 cfs 0.140 af

Pond MPP 14: Rtanks Peak Elev=56.51' Storage=680 cf Inflow=0.59 cfs 0.046 af
8.0" Round Culvert x 2.00 n=0.013 L=21.0' S=0.0052 '/' Outflow=0.33 cfs 0.041 af

Pond MPP 19: Rtanks Peak Elev=55.42' Storage=0.030 af Inflow=0.80 cfs 0.059 af
6.0" Round Culvert n=0.013 L=19.0' S=0.0042 '/' Outflow=0.18 cfs 0.051 af

Pond MPP 21: Rtanks Peak Elev=55.15' Storage=732 cf Inflow=0.58 cfs 0.043 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.24 cfs 0.039 af

Pond MPP 22: Rtanks Peak Elev=55.37' Storage=1,184 cf Inflow=0.74 cfs 0.053 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.15 cfs 0.045 af

Pond MPP 26: Rtanks Peak Elev=34.82' Storage=368 cf Inflow=0.25 cfs 0.019 af
8.0" Round Culvert n=0.013 L=8.0' S=0.0350 '/' Outflow=0.11 cfs 0.016 af

Pond MPP 50: Peak Elev=54.86' Storage=2,643 cf Inflow=1.94 cfs 0.154 af
8.0" Round Culvert x 7.00 n=0.013 L=3.0' S=0.0100 '/' Outflow=1.14 cfs 0.125 af

Pond mpp30: Rtanks Peak Elev=30.75' Storage=2,259 cf Inflow=2.03 cfs 0.153 af
Outflow=0.46 cfs 0.153 af

Pond SSF 36: ssf Peak Elev=64.38' Storage=10,399 cf Inflow=0.54 cfs 0.326 af
Primary=0.08 cfs 0.222 af Secondary=0.02 cfs 0.008 af Outflow=0.10 cfs 0.230 af

Pond ssf37: ssf Peak Elev=63.14' Storage=10,978 cf Inflow=0.69 cfs 0.371 af
Primary=0.08 cfs 0.224 af Secondary=0.14 cfs 0.051 af Outflow=0.22 cfs 0.274 af

Pond ssf38: ssf Peak Elev=61.35' Storage=8,618 cf Inflow=6.57 cfs 0.203 af
Primary=0.07 cfs 0.106 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.106 af

Pond ssf39: ssf Peak Elev=54.43' Storage=14,551 cf Inflow=4.92 cfs 0.554 af
Primary=0.08 cfs 0.230 af Secondary=1.04 cfs 0.202 af Outflow=1.12 cfs 0.432 af

Pond ssf40: ssf Peak Elev=54.63' Storage=13,917 cf Inflow=5.30 cfs 0.560 af
Primary=0.09 cfs 0.229 af Secondary=1.56 cfs 0.230 af Outflow=1.64 cfs 0.459 af

Pond ssf41: ssf Peak Elev=47.95' Storage=11,097 cf Inflow=0.69 cfs 0.371 af
Primary=0.08 cfs 0.227 af Secondary=0.12 cfs 0.048 af Outflow=0.20 cfs 0.274 af

Pond ssf42: ssf Peak Elev=60.37' Storage=1,579 cf Inflow=0.63 cfs 0.060 af
Primary=0.01 cfs 0.026 af Secondary=0.17 cfs 0.018 af Outflow=0.18 cfs 0.044 af

Pond ssf43: ssf Peak Elev=59.72' Storage=2,207 cf Inflow=0.65 cfs 0.091 af
Primary=0.01 cfs 0.041 af Secondary=0.31 cfs 0.031 af Outflow=0.33 cfs 0.072 af

Total Runoff Area = 116.264 ac Runoff Volume = 11.824 af Average Runoff Depth = 1.22"
74.76% Pervious = 86.915 ac 25.24% Impervious = 29.349 ac

Summary for Subcatchment 1A:

Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 1.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	11,582	77	>75% Grass cover, Good, HSG C/D
*	6,203	98	Impervious, HSG C/D
	17,785	84	Weighted Average
	11,582		65.12% Pervious Area
	6,203		34.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 1B:

Runoff = 1.00 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	6,832	98	Impervious
	27,186	74	>75% Grass cover, Good, HSG C
	34,018	79	Weighted Average
	27,186		79.92% Pervious Area
	6,832		20.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 2:

Runoff = 0.96 cfs @ 12.09 hrs, Volume= 0.070 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	8,052	98	Impervious
	5,300	74	>75% Grass cover, Good, HSG C
*	17,697	74	>75% Grass cover, Good, HSG C/D
	31,049	80	Weighted Average
	22,997		74.07% Pervious Area
	8,052		25.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 3:

Runoff = 1.26 cfs @ 12.09 hrs, Volume= 0.090 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	13,091	98	Impervious, HSG C
*	15,516	74	>75% Grass cover, Good, HSG C/D
*	7,540	70	Woods, Good, HSG C/D
	36,147	82	Weighted Average
	23,056		63.78% Pervious Area
	13,091		36.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 4:

Runoff = 0.18 cfs @ 12.10 hrs, Volume= 0.014 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

Area (sf)	CN	Description
8,448	74	>75% Grass cover, Good, HSG C
8,448		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 5:

Runoff = 0.23 cfs @ 12.10 hrs, Volume= 0.017 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

Area (sf)	CN	Description
10,807	74	>75% Grass cover, Good, HSG C
10,807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 6:

Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	4,484	98	Impervious
*	9,501	74	>75% Grass cover, Good, HSG C
	13,985	82	Weighted Average
	9,501		67.94% Pervious Area
	4,484		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 7:

Runoff = 0.94 cfs @ 12.09 hrs, Volume= 0.068 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	7,846	98	Impervious
	3,270	74	>75% Grass cover, Good, HSG C
*	19,229	74	>75% Grass cover, Good, HSG C/D
	30,345	80	Weighted Average
	22,499		74.14% Pervious Area
	7,846		25.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 8:

Runoff = 2.03 cfs @ 12.09 hrs, Volume= 0.144 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	25,409	98	Impervious
	20,142	74	>75% Grass cover, Good, HSG C
	45,551	87	Weighted Average
	20,142		44.22% Pervious Area
	25,409		55.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 9:

Runoff = 1.37 cfs @ 12.09 hrs, Volume= 0.098 af, Depth= 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	10,348	74	>75% Grass cover, Good, HSG C/D
*	17,843	98	Impervious
	28,191	89	Weighted Average
	10,348		36.71% Pervious Area
	17,843		63.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 10: access drive north of B1

Runoff = 1.99 cfs @ 12.08 hrs, Volume= 0.158 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	30,932	98	Impervious
	30,932		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 11:

Runoff = 1.58 cfs @ 12.09 hrs, Volume= 0.113 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	15,881	98	Impervious
*	27,293	74	>75% Grass cover, Good, HSG C/D
	43,174	83	Weighted Average
	27,293		63.22% Pervious Area
	15,881		36.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 12:

Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	7,491	98	Impervious, HSG C/D
	5,429	74	>75% Grass cover, Good, HSG C
	12,920	88	Weighted Average
	5,429		42.02% Pervious Area
	7,491		57.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 13:

Runoff = 1.83 cfs @ 12.09 hrs, Volume= 0.130 af, Depth= 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	20,981	98	Impervious
*	24,182	74	>75% Grass cover, Good, HSG C/D
	45,163	85	Weighted Average
	24,182		53.54% Pervious Area
	20,981		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 14:

Runoff = 0.59 cfs @ 12.08 hrs, Volume= 0.046 af, Depth= 2.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	8,849	98	Impervious
	529	74	>75% Grass cover, Good, HSG C
	9,378	97	Weighted Average
	529		5.64% Pervious Area
	8,849		94.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 15:

Runoff = 0.19 cfs @ 12.10 hrs, Volume= 0.015 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	176	98	Impervious
*	4,183	74	>75% Grass cover, Good, HSG C/D
*	4,798	74	vegetated roof
	9,157	74	Weighted Average
	8,981		98.08% Pervious Area
	176		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 16:

Runoff = 0.52 cfs @ 12.09 hrs, Volume= 0.038 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	5,161	98	Impervious
*	9,949	74	>75% Grass cover, Good, HSG C/D
	15,110	82	Weighted Average
	9,949		65.84% Pervious Area
	5,161		34.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 17:

Runoff = 0.78 cfs @ 12.09 hrs, Volume= 0.057 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	11,320	98	Impervious
*	1,980	74	>75% Grass cover, Good, HSG C/D
	13,300	94	Weighted Average
	1,980		14.89% Pervious Area
	11,320		85.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18A:

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 1.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	2,593	98	Impervious
*	3,746	74	>75% Grass cover, Good, HSG C/D
	6,339	84	Weighted Average
	3,746		59.09% Pervious Area
	2,593		40.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18B:

Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	2,348	98	Impervious
*	1,675	74	>75% Grass cover, Good, HSG C/D
	4,023	88	Weighted Average
	1,675		41.64% Pervious Area
	2,348		58.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 19:

Runoff = 0.80 cfs @ 12.09 hrs, Volume= 0.059 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	11,210	98	Impervious
*	2,501	74	>75% Grass cover, Good, HSG C/D
	13,711	94	Weighted Average
	2,501		18.24% Pervious Area
	11,210		81.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 20:

Runoff = 1.55 cfs @ 12.09 hrs, Volume= 0.113 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	21,010	98	Impervious
*	7,449	74	>75% Grass cover, Good, HSG C/D
	28,459	92	Weighted Average
	7,449		26.17% Pervious Area
	21,010		73.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 21:

Runoff = 0.58 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	8,361	98	Impervious
*	1,633	74	>75% Grass cover, Good, HSG C/D
	9,994	94	Weighted Average
	1,633		16.34% Pervious Area
	8,361		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 22:

Runoff = 0.74 cfs @ 12.09 hrs, Volume= 0.053 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	10,326	98	Impervious
*	3,185	74	>75% Grass cover, Good, HSG C/D
	13,511	92	Weighted Average
	3,185		23.57% Pervious Area
	10,326		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 23: sub 23

Runoff = 0.79 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

Area (sf)	CN	Description
6,249	98	Paved parking, HSG C
2,450	74	>75% Grass cover, Good, HSG C
10,135	74	>75% Grass cover, Good, HSG C
9,641	70	Woods, Good, HSG C
28,475	78	Weighted Average
22,226		78.05% Pervious Area
6,249		21.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct**

Summary for Subcatchment 24:

Runoff = 1.00 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	12,270	98	Impervious
	5,991	80	>75% Grass cover, Good, HSG D
	18,261	92	Weighted Average
	5,991		32.81% Pervious Area
	12,270		67.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 25:

Runoff = 0.71 cfs @ 13.03 hrs, Volume= 0.159 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	21,818	74	>75% Grass cover, Good, HSG C/D
*	96,405	70	Woods, Good, HSG C/D
	118,223	71	Weighted Average
	118,223		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.4	130	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
11.9	253	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	55	0.3000	1.37		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
67.0	438	Total			

Summary for Subcatchment 26:

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	3,816	98	Impervious
	3,816		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 27:

Runoff = 0.27 cfs @ 12.08 hrs, Volume= 0.022 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	4,262	98	Impervious
	4,262		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 28:

Runoff = 3.23 cfs @ 12.09 hrs, Volume= 0.229 af, Depth= 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	21,852	98	Impervious
	40,598	80	>75% Grass cover, Good, HSG D
	6,418	77	Woods, Good, HSG D
	10,830	79	Woods/grass comb., Good, HSG D
	79,698	85	Weighted Average
	57,846		72.58% Pervious Area
	21,852		27.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 29:

Runoff = 0.08 cfs @ 12.08 hrs, Volume= 0.007 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	1,306	98	Impervious
	1,306		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 30:

Runoff = 1.78 cfs @ 12.09 hrs, Volume= 0.130 af, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	24,541	98	Impervious
*	6,931	74	>75% Grass cover, Good, HSG C/D
	31,472	93	Weighted Average
	6,931		22.02% Pervious Area
	24,541		77.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 31:

Runoff = 0.94 cfs @ 12.19 hrs, Volume= 0.095 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	24,011	74	>75% Grass cover, Good, HSG C/D
*	46,605	70	Woods, Good, HSG C/D
	70,616	71	Weighted Average
	70,616		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0500	0.16		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
1.7	86	0.1200	0.87		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	31	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
12.3	217	Total			

Summary for Subcatchment 32:

Runoff = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af, Depth= 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	2,826	98	Impervious
*	1,851	74	>75% Grass cover, Good, HSG C/D
	4,677	89	Weighted Average
	1,851		39.58% Pervious Area
	2,826		60.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 33: B3 green

Runoff = 1.21 cfs @ 12.11 hrs, Volume= 0.111 af, Depth= 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	89,860	61	vegetated roof
*	18,033	98	penthouse
	107,893	67	Weighted Average
	89,860		83.29% Pervious Area
	18,033		16.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 34:

Runoff = 0.30 cfs @ 12.11 hrs, Volume= 0.027 af, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	19,279	61	vegetated roof
*	4,820	98	penhouse/walks on roof
	24,099	68	Weighted Average
	19,279		80.00% Pervious Area
	4,820		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 35:

Runoff = 0.26 cfs @ 12.11 hrs, Volume= 0.023 af, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	16,797	61	vegetated roof
*	4,200	98	penthouse/walks on roof
	20,997	68	Weighted Average
	16,797		80.00% Pervious Area
	4,200		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 36: B1M1

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 37: B1M2

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 38: B1M3

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 39: B2M4

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 40: B2M5

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 41: B2M6

Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 42: B6

Runoff = 0.77 cfs @ 12.08 hrs, Volume= 0.061 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	12,000	98	Impervious
	12,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 43: B5

Runoff = 1.22 cfs @ 12.08 hrs, Volume= 0.097 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	18,983	98	Impervious
	18,983		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 44: onsite untreated

Runoff = 1.81 cfs @ 12.30 hrs, Volume= 0.214 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	29,531	74	>75% Grass cover, Good, HSG C/D
*	129,832	70	Woods, Good, HSG C/D
	159,363	71	Weighted Average
	159,363		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	97	0.0620	0.25		**Sheet Flow, a-b** Grass: Short n= 0.150 P2= 2.90"
4.3	170	0.0090	0.66		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
1.3	97	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
6.8	210	0.0430	0.52		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
18.8	574	Total			

Summary for Subcatchment 45:

Runoff = 0.56 cfs @ 12.49 hrs, Volume= 0.081 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	5,799	74	>75% Grass cover, Good, HSG C/D
*	58,641	70	Woods, Good, HSG C/D
	64,440	70	Weighted Average
	64,440		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	79	0.0340	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.9	121	0.0800	0.71		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	34	0.0600	3.67		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage

29.9 307 Total

Summary for Subcatchment 46: SUBCAT 8

Runoff = 0.13 cfs @ 12.54 hrs, Volume= 0.020 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 47:

Runoff = 1.31 cfs @ 12.24 hrs, Volume= 0.136 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
	16,941	80	>75% Grass cover, Good, HSG D
*	27,433	74	>75% Grass cover, Good, HSG C/D
*	30,061	70	Woods, Good, HSG C/D
*	4,752	98	Impervious
	79,187	75	Weighted Average
	74,435		94.00% Pervious Area
	4,752		6.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	102	0.0400	0.15		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
0.6	30	0.1000	0.79		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.6	100	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
3.2	407	0.0200	2.12		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
15.9	639	Total			

Summary for Subcatchment 48:

Runoff = 0.25 cfs @ 12.84 hrs, Volume= 0.051 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	305	74	>75% Grass cover, Good, HSG C/D
*	36,887	70	Woods, Good, HSG C/D
	2,991	70	Woods, Good, HSG C
	40,183	70	Weighted Average
	40,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.6	127	0.0200	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.4	115	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	45	0.2000	1.12		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
0.3	90	0.0880	4.45		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
54.0	377	Total			

Summary for Subcatchment 49:

Runoff = 0.53 cfs @ 12.81 hrs, Volume= 0.106 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	2,923	74	>75% Grass cover, Good, HSG C/D
*	80,702	70	Woods, Good, HSG C/D
*	548	98	Impervious
	84,173	70	Weighted Average
	83,625		99.35% Pervious Area
	548		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.4	115	0.0500	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
23.7	355	0.0100	0.25		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
54.1	470	Total			

Summary for Subcatchment 50:

Runoff = 1.94 cfs @ 12.08 hrs, Volume= 0.154 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	30,173	98	Impervious
	30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment OS10: OFFSITE 2 (above Perkins Rd)

Runoff = 10.04 cfs @ 13.39 hrs, Volume= 2.661 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment os11a: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 8.33 cfs @ 12.10 hrs, Volume= 0.609 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment os11b: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 3.96 cfs @ 12.29 hrs, Volume= 0.460 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Subcatchment OS9: OFFSITE 1 (Below Perkins Rd)

Runoff = 8.33 cfs @ 12.52 hrs, Volume= 1.203 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=2.90"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	6,087	74	>75% Grass cover, Good, HSG C
	72,382	70	Woods, Good, HSG C
	61,890	74	>75% Grass cover, Good, HSG C
	702,010	75	Weighted Average
	676,497		96.37% Pervious Area
	25,513		3.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Reach 9R: ANALYSIS POINT 9

Inflow Area = 16.116 ac, 3.63% Impervious, Inflow Depth = 0.90" for 2-year event
Inflow = 8.33 cfs @ 12.52 hrs, Volume= 1.203 af
Outflow = 8.33 cfs @ 12.52 hrs, Volume= 1.203 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

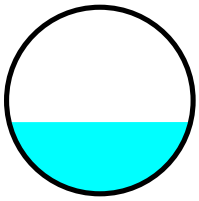
Summary for Reach 10R: Perkins Road Culvert

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth = 0.85" for 2-year event
Inflow = 10.04 cfs @ 13.39 hrs, Volume= 2.661 af
Outflow = 10.04 cfs @ 13.39 hrs, Volume= 2.661 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 9.01 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.45 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 13.39 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: Stream 9

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth = 1.65" for 2-year event
Inflow = 8.33 cfs @ 12.10 hrs, Volume= 0.609 af
Outflow = 8.33 cfs @ 12.10 hrs, Volume= 0.609 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 17R: untreated

Inflow Area = 0.305 ac, 85.11% Impervious, Inflow Depth = 2.25" for 2-year event
Inflow = 0.78 cfs @ 12.09 hrs, Volume= 0.057 af
Outflow = 0.78 cfs @ 12.09 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 20R: untreated

Inflow Area = 0.653 ac, 73.83% Impervious, Inflow Depth = 2.07" for 2-year event
Inflow = 1.55 cfs @ 12.09 hrs, Volume= 0.113 af
Outflow = 1.55 cfs @ 12.09 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 23R: sub 23

Inflow Area = 0.654 ac, 21.95% Impervious, Inflow Depth = 1.06" for 2-year event
Inflow = 0.79 cfs @ 12.09 hrs, Volume= 0.058 af
Outflow = 0.79 cfs @ 12.09 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 27R: extisting

Inflow Area = 0.098 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 0.27 cfs @ 12.08 hrs, Volume= 0.022 af
Outflow = 0.27 cfs @ 12.08 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 29R: untreated

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 0.08 cfs @ 12.08 hrs, Volume= 0.007 af
Outflow = 0.08 cfs @ 12.08 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 32R: untreated

Inflow Area = 0.107 ac, 60.42% Impervious, Inflow Depth = 1.81" for 2-year event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af
Outflow = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 44R:

Inflow Area = 3.658 ac, 0.00% Impervious, Inflow Depth = 0.70" for 2-year event
Inflow = 1.81 cfs @ 12.30 hrs, Volume= 0.214 af
Outflow = 1.81 cfs @ 12.30 hrs, Volume= 0.214 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 47R:

Inflow Area = 1.818 ac, 6.00% Impervious, Inflow Depth = 0.90" for 2-year event
Inflow = 1.31 cfs @ 12.24 hrs, Volume= 0.136 af
Outflow = 1.31 cfs @ 12.24 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 48R: (new Reach)

Inflow Area = 0.922 ac, 0.00% Impervious, Inflow Depth = 0.66" for 2-year event
Inflow = 0.25 cfs @ 12.84 hrs, Volume= 0.051 af
Outflow = 0.25 cfs @ 12.84 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 49R:

Inflow Area = 1.932 ac, 0.65% Impervious, Inflow Depth = 0.66" for 2-year event
Inflow = 0.53 cfs @ 12.81 hrs, Volume= 0.106 af
Outflow = 0.53 cfs @ 12.81 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT1: ANALYSIS POINT 1 at BWD Little River

Inflow Area = 2.855 ac, 0.44% Impervious, Inflow Depth = 0.66" for 2-year event
Inflow = 0.79 cfs @ 12.84 hrs, Volume= 0.157 af
Outflow = 0.79 cfs @ 12.84 hrs, Volume= 0.157 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT10: Analysis point at Little River

Inflow Area = 1.830 ac, 27.42% Impervious, Inflow Depth = 1.50" for 2-year event
Inflow = 3.23 cfs @ 12.09 hrs, Volume= 0.229 af
Outflow = 3.23 cfs @ 12.09 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD Reservoir

Inflow Area = 2.714 ac, 0.00% Impervious, Inflow Depth = 0.70" for 2-year event
Inflow = 0.71 cfs @ 13.03 hrs, Volume= 0.159 af
Outflow = 0.71 cfs @ 13.03 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir

Inflow Area = 1.621 ac, 0.00% Impervious, Inflow Depth = 0.70" for 2-year event
Inflow = 0.94 cfs @ 12.19 hrs, Volume= 0.095 af
Outflow = 0.94 cfs @ 12.19 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT5: all BWD reservoir

Inflow Area = 4.989 ac, 2.88% Impervious, Inflow Depth = 0.75" for 2-year event
Inflow = 1.58 cfs @ 12.15 hrs, Volume= 0.312 af
Outflow = 1.58 cfs @ 12.15 hrs, Volume= 0.312 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT6: stream 9 offsite

Inflow Area = 58.299 ac, 7.15% Impervious, Inflow Depth = 0.92" for 2-year event
Inflow = 13.63 cfs @ 13.08 hrs, Volume= 4.472 af
Outflow = 13.61 cfs @ 13.10 hrs, Volume= 4.472 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.02 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 1.34 fps, Avg. Travel Time= 6.0 min

Peak Storage= 2,180 cf @ 13.10 hrs
Average Depth at Peak Storage= 0.70'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 401.91 cfs

5.00' x 4.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

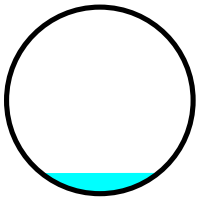
Summary for Reach PT7: ANALYSIS POINT7 at US Route 1 culvert

Inflow Area = 1.479 ac, 0.00% Impervious, Inflow Depth = 0.66" for 2-year event
Inflow = 0.56 cfs @ 12.49 hrs, Volume= 0.081 af
Outflow = 0.56 cfs @ 12.49 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.11 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.6 min

Peak Storage= 9 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Route 1 culvert

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth = 0.70" for 2-year event
Inflow = 0.13 cfs @ 12.54 hrs, Volume= 0.020 af
Outflow = 0.13 cfs @ 12.56 hrs, Volume= 0.020 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.48 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 0.5 min

Peak Storage= 4 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

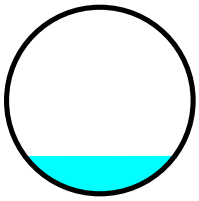
Summary for Reach PT9: Analysis Point Stream 9 at US Route 1 culvert

Inflow Area = 72.473 ac, 7.13% Impervious, Inflow Depth = 0.90" for 2-year event
Inflow = 18.22 cfs @ 12.55 hrs, Volume= 5.464 af
Outflow = 18.22 cfs @ 12.55 hrs, Volume= 5.464 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 17.62 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 6.27 fps, Avg. Travel Time= 0.2 min

Peak Storage= 96 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.61'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



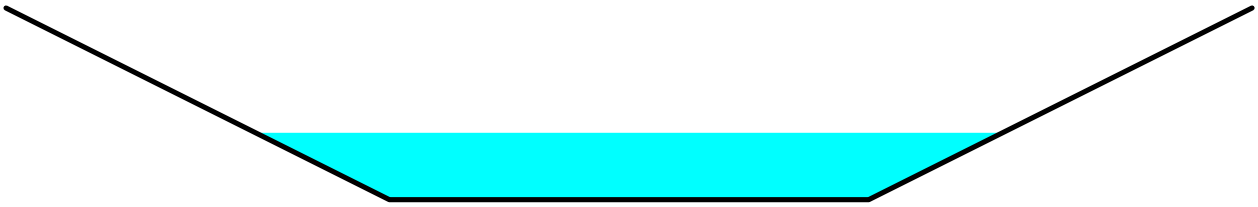
Summary for Reach S9-2: Stream 9

Inflow Area = 69.323 ac, 6.16% Impervious, Inflow Depth = 0.89" for 2-year event
Inflow = 17.22 cfs @ 12.48 hrs, Volume= 5.147 af
Outflow = 16.97 cfs @ 12.56 hrs, Volume= 5.147 af, Atten= 1%, Lag= 4.6 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.80 fps, Min. Travel Time= 6.9 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 19.4 min

Peak Storage= 7,054 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.70'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 120.91 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'



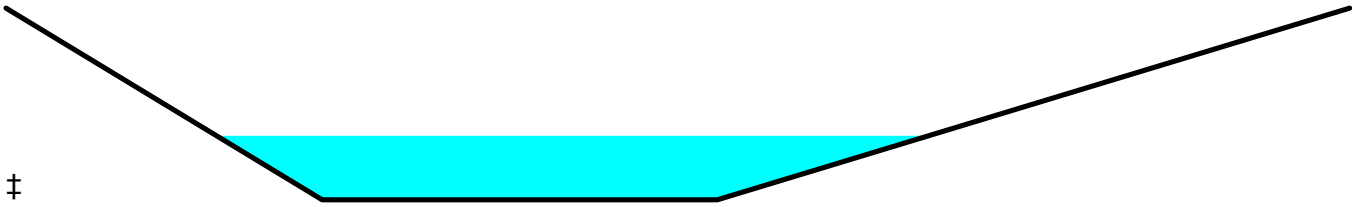
Summary for Reach S9-3: Stream 9

Inflow Area = 71.269 ac, 6.33% Impervious, Inflow Depth = 0.89" for 2-year event
Inflow = 17.78 cfs @ 12.53 hrs, Volume= 5.311 af
Outflow = 17.76 cfs @ 12.55 hrs, Volume= 5.311 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.80 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.21 fps, Avg. Travel Time= 5.0 min

Peak Storage= 1,700 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 152.29 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Summary for Reach tank: existing clarifier

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af
Outflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond dmh10: dmh10

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 2.05" for 2-year event
Inflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af
Outflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af, Atten= 0%, Lag= 0.0 min
Primary = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.86' @ 12.08 hrs
Flood Elev= 65.54'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.59'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.59' / 53.56' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.41 cfs @ 12.08 hrs HW=56.85' (Free Discharge)
1=Culvert (Inlet Controls 13.41 cfs @ 4.27 fps)

Summary for Pond dmh11: dmh11

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 2.12" for 2-year event
Inflow = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af
Outflow = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af, Atten= 0%, Lag= 0.0 min
Primary = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.56' @ 12.09 hrs
Flood Elev= 65.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.54'	**30.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.54' / 53.12' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=14.96 cfs @ 12.09 hrs HW=55.56' (Free Discharge)
1=Culvert (Barrel Controls 14.96 cfs @ 4.81 fps)

Summary for Pond dmh13: dmh13

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 2.12" for 2-year event
Inflow = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af
Outflow = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af, Atten= 0%, Lag= 0.0 min
Primary = 14.98 cfs @ 12.09 hrs, Volume= 1.632 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 55.01' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.10'	**30.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.10' / 52.09' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=14.96 cfs @ 12.09 hrs HW=55.01' (Free Discharge)
↑**1=Culvert** (Inlet Controls 14.96 cfs @ 3.72 fps)

Summary for Pond dmh14: dmh14

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 2.07" for 2-year event
Inflow = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af
Outflow = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af, Atten= 0%, Lag= 0.0 min
Primary = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.28' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	52.07'	**30.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.07' / 51.95' S= 0.0052 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 4.91 sf

Primary OutFlow Max=14.97 cfs @ 12.09 hrs HW=54.28' (Free Discharge)
↑**1=Culvert** (Barrel Controls 14.97 cfs @ 4.33 fps)

Summary for Pond dmh15: dmh15

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 2.07" for 2-year event
Inflow = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af
Outflow = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af, Atten= 0%, Lag= 0.0 min
Primary = 15.00 cfs @ 12.09 hrs, Volume= 1.707 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.96' @ 12.09 hrs
Flood Elev= 64.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.95'	**30.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.95' / 51.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=14.97 cfs @ 12.09 hrs HW=53.96' (Free Discharge)
1=Culvert (Barrel Controls 14.97 cfs @ 4.84 fps)

Summary for Pond dmh16: dmh16

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth > 0.67" for 2-year event
Inflow = 0.01 cfs @ 24.02 hrs, Volume= 0.019 af
Outflow = 0.01 cfs @ 24.02 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 24.02 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.54' @ 24.02 hrs
Flood Elev= 64.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 58.00' S= 0.0126 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 24.02 hrs HW=60.54' (Free Discharge)
1=Culvert (Inlet Controls 0.01 cfs @ 0.55 fps)

Summary for Pond dmh17: dmh17

Inflow Area = 10.447 ac, 87.59% Impervious, Inflow Depth > 1.99" for 2-year event
Inflow = 15.00 cfs @ 12.09 hrs, Volume= 1.732 af
Outflow = 15.00 cfs @ 12.09 hrs, Volume= 1.732 af, Atten= 0%, Lag= 0.0 min
Primary = 15.00 cfs @ 12.09 hrs, Volume= 1.732 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.59' @ 12.09 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.48'	**30.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.48' / 51.30' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=14.98 cfs @ 12.09 hrs HW=53.59' (Free Discharge)
1=Culvert (Barrel Controls 14.98 cfs @ 4.58 fps)

Summary for Pond dmh19: dmh 19

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth > 2.15" for 2-year event
Inflow = 0.58 cfs @ 12.08 hrs, Volume= 0.078 af
Outflow = 0.58 cfs @ 12.08 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 12.08 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.92' @ 12.08 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.48'	**12.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.48' / 53.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.58 cfs @ 12.08 hrs HW=54.92' (Free Discharge)
1=Culvert (Inlet Controls 0.58 cfs @ 1.77 fps)

Summary for Pond dmh2: dmh2

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.22" for 2-year event
Inflow = 6.78 cfs @ 12.08 hrs, Volume= 0.478 af
Outflow = 6.78 cfs @ 12.08 hrs, Volume= 0.478 af, Atten= 0%, Lag= 0.0 min
Primary = 6.78 cfs @ 12.08 hrs, Volume= 0.478 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.77' @ 12.08 hrs
Flood Elev= 69.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.00' / 61.50' S= 0.0150 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.77 cfs @ 12.08 hrs HW=64.77' (Free Discharge)
1=Culvert (Inlet Controls 6.77 cfs @ 3.83 fps)

Summary for Pond dmh20: dmh20

Inflow Area = 10.883 ac, 88.09% Impervious, Inflow Depth > 2.00" for 2-year event
Inflow = 15.59 cfs @ 12.09 hrs, Volume= 1.810 af
Outflow = 15.59 cfs @ 12.09 hrs, Volume= 1.810 af, Atten= 0%, Lag= 0.0 min
Primary = 15.59 cfs @ 12.09 hrs, Volume= 1.810 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 53.33' @ 12.09 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**30.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.28' / 50.78' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=15.56 cfs @ 12.09 hrs HW=53.33' (Free Discharge)
↑**1=Culvert** (Barrel Controls 15.56 cfs @ 4.92 fps)

Summary for Pond dmh21: dmh21

Inflow Area = 14.600 ac, 81.45% Impervious, Inflow Depth > 1.87" for 2-year event
Inflow = 18.93 cfs @ 12.09 hrs, Volume= 2.271 af
Outflow = 18.93 cfs @ 12.09 hrs, Volume= 2.271 af, Atten= 0%, Lag= 0.0 min
Primary = 18.93 cfs @ 12.09 hrs, Volume= 2.271 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.03' @ 12.09 hrs
Flood Elev= 58.55'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.76'	**30.0" Round Culvert** L= 281.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.76' / 46.00' S= 0.0169 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=18.91 cfs @ 12.09 hrs HW=53.02' (Free Discharge)
↑**1=Culvert** (Inlet Controls 18.91 cfs @ 4.05 fps)

Summary for Pond dmh22: dmh 22

Inflow Area = 2.671 ac, 64.47% Impervious, Inflow Depth > 1.63" for 2-year event
Inflow = 3.33 cfs @ 12.09 hrs, Volume= 0.362 af
Outflow = 3.33 cfs @ 12.09 hrs, Volume= 0.362 af, Atten= 0%, Lag= 0.0 min
Primary = 3.33 cfs @ 12.09 hrs, Volume= 0.362 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.66' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.50'	**15.0" Round Culvert** L= 93.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.50' / 51.03' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.32 cfs @ 12.09 hrs HW=52.65' (Free Discharge)
1=Culvert (Barrel Controls 3.32 cfs @ 3.66 fps)

Summary for Pond dmh23: dmh23

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 1.55" for 2-year event
Inflow = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af
Outflow = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.0 min
Primary = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.80' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.19'	**12.0" Round Culvert** L= 138.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.19' / 54.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.88 cfs @ 12.09 hrs HW=56.80' (Free Discharge)
1=Culvert (Barrel Controls 2.88 cfs @ 3.66 fps)

Summary for Pond dmh24: dmh24

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 1.55" for 2-year event
Inflow = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af
Outflow = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.0 min
Primary = 2.88 cfs @ 12.09 hrs, Volume= 0.261 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.79' @ 12.09 hrs
Flood Elev= 61.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.10'	**12.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.10' / 55.92' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.88 cfs @ 12.09 hrs HW=57.79' (Free Discharge)
1=Culvert (Barrel Controls 2.88 cfs @ 3.66 fps)

Summary for Pond dmh24a: dmh24a

Inflow Area = 0.602 ac, 71.74% Impervious, Inflow Depth > 1.61" for 2-year event
Inflow = 0.78 cfs @ 12.09 hrs, Volume= 0.081 af
Outflow = 0.78 cfs @ 12.09 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min
Primary = 0.78 cfs @ 12.09 hrs, Volume= 0.081 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.68' @ 12.09 hrs
Flood Elev= 63.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0" Round Culvert** L= 95.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.10' S= 0.0095 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.78 cfs @ 12.09 hrs HW=58.68' (Free Discharge)
1=Culvert (Inlet Controls 0.78 cfs @ 2.24 fps)

Summary for Pond dmh25: dmh25

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth > 0.92" for 2-year event
Inflow = 0.01 cfs @ 21.17 hrs, Volume= 0.031 af
Outflow = 0.01 cfs @ 21.17 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 21.17 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.05' @ 21.17 hrs
Flood Elev= 67.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.00'	**12.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.00' / 55.00' S= 0.0510 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 21.17 hrs HW=60.05' (Free Discharge)
1=Culvert (Inlet Controls 0.01 cfs @ 0.58 fps)

Summary for Pond dmh26: dmh26

Inflow Area = 2.028 ac, 41.73% Impervious, Inflow Depth > 0.95" for 2-year event
Inflow = 0.06 cfs @ 21.19 hrs, Volume= 0.161 af
Outflow = 0.06 cfs @ 21.19 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min
Primary = 0.06 cfs @ 21.19 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 57.91' @ 21.19 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.75'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.75' / 57.61' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.06 cfs @ 21.19 hrs HW=57.91' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.06 cfs @ 0.99 fps)

Summary for Pond dmh27: dmh27

Inflow Area = 2.712 ac, 46.62% Impervious, Inflow Depth > 1.05" for 2-year event
Inflow = 0.24 cfs @ 12.47 hrs, Volume= 0.237 af
Outflow = 0.24 cfs @ 12.47 hrs, Volume= 0.237 af, Atten= 0%, Lag= 0.0 min
Primary = 0.24 cfs @ 12.47 hrs, Volume= 0.237 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.31' @ 12.47 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.03'	**12.0" Round Culvert** L= 256.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.03' / 51.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.24 cfs @ 12.47 hrs HW=53.31' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.24 cfs @ 1.99 fps)

Summary for Pond dmh29: dmh29

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 1.96" for 2-year event
Inflow = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af
Outflow = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min
Primary = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.12' @ 12.47 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.85'	**8.0" Round Culvert** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.85' / 57.39' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.18 cfs @ 12.47 hrs HW=58.12' (Free Discharge)
1=Culvert (Inlet Controls 0.18 cfs @ 1.39 fps)

Summary for Pond dmh3: dmh3

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 1.91" for 2-year event
Inflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af
Outflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Primary = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.84' @ 12.08 hrs
Flood Elev= 68.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**24.0" Round Culvert** L= 125.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 59.84' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.78 cfs @ 12.08 hrs HW=61.84' (Free Discharge)
1=Culvert (Barrel Controls 6.78 cfs @ 4.31 fps)

Summary for Pond dmh30: dmh30

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 1.96" for 2-year event
Inflow = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af
Outflow = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min
Primary = 0.18 cfs @ 12.47 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.64' @ 12.47 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.40'	**12.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.40' / 54.37' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.18 cfs @ 12.47 hrs HW=55.64' (Free Discharge)
1=Culvert (Barrel Controls 0.18 cfs @ 1.83 fps)

Summary for Pond dmh31: dmh31

Inflow Area = 2.303 ac, 48.70% Impervious, Inflow Depth > 1.07" for 2-year event
Inflow = 0.23 cfs @ 12.47 hrs, Volume= 0.206 af
Outflow = 0.23 cfs @ 12.47 hrs, Volume= 0.206 af, Atten= 0%, Lag= 0.0 min
Primary = 0.23 cfs @ 12.47 hrs, Volume= 0.206 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.63' @ 12.47 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.35'	**12.0" Round Culvert** L= 259.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.35' / 53.05' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.23 cfs @ 12.47 hrs HW=54.63' (Free Discharge)
1=Culvert (Barrel Controls 0.23 cfs @ 1.98 fps)

Summary for Pond dmh32: dmh32

Inflow Area = 3.424 ac, 42.31% Impervious, Inflow Depth > 1.00" for 2-year event
Inflow = 0.26 cfs @ 12.47 hrs, Volume= 0.287 af
Outflow = 0.26 cfs @ 12.47 hrs, Volume= 0.287 af, Atten= 0%, Lag= 0.0 min
Primary = 0.26 cfs @ 12.47 hrs, Volume= 0.287 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.05' @ 12.47 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.73'	**12.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.73' / 51.60' S= 0.0036 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.26 cfs @ 12.47 hrs HW=52.05' (Free Discharge)
1=Culvert (Barrel Controls 0.26 cfs @ 1.77 fps)

Summary for Pond dmh33: dmh33

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth > 1.93" for 2-year event
Inflow = 0.18 cfs @ 12.50 hrs, Volume= 0.051 af
Outflow = 0.18 cfs @ 12.50 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min
Primary = 0.18 cfs @ 12.50 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.23' @ 12.50 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 52.01' S= 0.0099 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.17 cfs @ 12.50 hrs HW=54.23' (Free Discharge)
1=Culvert (Inlet Controls 0.17 cfs @ 1.29 fps)

Summary for Pond dmh34: dmh34

Inflow Area = 3.030 ac, 25.90% Impervious, Inflow Depth > 0.70" for 2-year event
Inflow = 1.30 cfs @ 12.11 hrs, Volume= 0.176 af
Outflow = 1.30 cfs @ 12.11 hrs, Volume= 0.176 af, Atten= 0%, Lag= 0.0 min
Primary = 1.30 cfs @ 12.11 hrs, Volume= 0.176 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.68' @ 12.11 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.99'	**12.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.99' / 51.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.30 cfs @ 12.11 hrs HW=52.68' (Free Discharge)
1=Culvert (Inlet Controls 1.30 cfs @ 2.24 fps)

Summary for Pond dmh35: dmh35

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 0.85" for 2-year event
Inflow = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af
Outflow = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af, Atten= 0%, Lag= 0.0 min
Primary = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.18' @ 12.10 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.55'	**18.0" Round Culvert** L= 276.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.55' / 50.17' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.50 cfs @ 12.10 hrs HW=52.18' (Free Discharge)
1=Culvert (Inlet Controls 1.50 cfs @ 2.13 fps)

Summary for Pond dmh36: dmh36

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 0.85" for 2-year event
Inflow = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af
Outflow = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af, Atten= 0%, Lag= 0.0 min
Primary = 1.50 cfs @ 12.10 hrs, Volume= 0.515 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.79' @ 12.10 hrs
Flood Elev= 53.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.15'	**18.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.15' / 49.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.50 cfs @ 12.10 hrs HW=50.79' (Free Discharge)
1=Culvert (Barrel Controls 1.50 cfs @ 3.10 fps)

Summary for Pond dmh38: dmh38

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 2.10" for 2-year event
Inflow = 2.41 cfs @ 12.08 hrs, Volume= 0.453 af
Outflow = 2.41 cfs @ 12.08 hrs, Volume= 0.453 af, Atten= 0%, Lag= 0.0 min
Primary = 2.41 cfs @ 12.08 hrs, Volume= 0.453 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.80' @ 12.08 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.98'	**18.0" Round Culvert** L= 106.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.98' / 50.92' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.40 cfs @ 12.08 hrs HW=52.80' (Free Discharge)
1=Culvert (Inlet Controls 2.40 cfs @ 2.43 fps)

Summary for Pond dmh39: dmh39

Inflow Area = 2.778 ac, 93.02% Impervious, Inflow Depth > 2.00" for 2-year event
Inflow = 2.42 cfs @ 12.08 hrs, Volume= 0.463 af
Outflow = 2.42 cfs @ 12.08 hrs, Volume= 0.463 af, Atten= 0%, Lag= 0.0 min
Primary = 2.42 cfs @ 12.08 hrs, Volume= 0.463 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.47' @ 12.08 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.59'	**18.0" Round Culvert** L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.59' / 50.32' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.40 cfs @ 12.08 hrs HW=51.47' (Free Discharge)
1=Culvert (Barrel Controls 2.40 cfs @ 3.20 fps)

Summary for Pond dmh4: dmh4

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 1.91" for 2-year event
Inflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af
Outflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Primary = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.29' @ 12.08 hrs
Flood Elev= 68.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.84'	**24.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.84' / 59.57' S= 0.0041 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.78 cfs @ 12.08 hrs HW=61.29' (Free Discharge)
1=Culvert (Barrel Controls 6.78 cfs @ 3.90 fps)

Summary for Pond dmh40: dmh40

Inflow Area = 10.062 ac, 50.87% Impervious, Inflow Depth > 1.17" for 2-year event
Inflow = 3.88 cfs @ 12.09 hrs, Volume= 0.978 af
Outflow = 3.88 cfs @ 12.09 hrs, Volume= 0.978 af, Atten= 0%, Lag= 0.0 min
Primary = 3.88 cfs @ 12.09 hrs, Volume= 0.978 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 50.28' @ 12.09 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.33'	**24.0" Round Culvert** L= 340.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.33' / 47.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.86 cfs @ 12.09 hrs HW=50.28' (Free Discharge)
↑**1=Culvert** (Inlet Controls 3.86 cfs @ 2.62 fps)

Summary for Pond dmh43: dmh43

Inflow Area = 12.646 ac, 60.91% Impervious, Inflow Depth > 1.38" for 2-year event
Inflow = 5.94 cfs @ 12.09 hrs, Volume= 1.452 af
Outflow = 5.94 cfs @ 12.09 hrs, Volume= 1.452 af, Atten= 0%, Lag= 0.0 min
Primary = 5.94 cfs @ 12.09 hrs, Volume= 1.452 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.83' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.61'	**24.0" Round Culvert** L= 193.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.61' / 46.64' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=5.91 cfs @ 12.09 hrs HW=48.82' (Free Discharge)
↑**1=Culvert** (Inlet Controls 5.91 cfs @ 2.96 fps)

Summary for Pond dmh44: dmh44

Inflow Area = 12.894 ac, 59.74% Impervious, Inflow Depth > 1.36" for 2-year event
Inflow = 5.94 cfs @ 12.09 hrs, Volume= 1.463 af
Outflow = 5.94 cfs @ 12.09 hrs, Volume= 1.463 af, Atten= 0%, Lag= 0.0 min
Primary = 5.94 cfs @ 12.09 hrs, Volume= 1.463 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.78' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.62'	**30.0" Round Culvert** L= 82.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.62' / 46.21' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=5.91 cfs @ 12.09 hrs HW=47.78' (Free Discharge)
└**1=Culvert** (Barrel Controls 5.91 cfs @ 3.89 fps)

Summary for Pond dmh45: dmh45

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 1.50" for 2-year event
Inflow = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af
Outflow = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af, Atten= 0%, Lag= 0.0 min
Primary = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.90' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.19'	**30.0" Round Culvert** L= 316.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.19' / 44.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=12.53 cfs @ 12.09 hrs HW=47.90' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.53 cfs @ 3.51 fps)

Summary for Pond dmh47: dmh47

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 1.50" for 2-year event
Inflow = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af
Outflow = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af, Atten= 0%, Lag= 0.0 min
Primary = 12.57 cfs @ 12.09 hrs, Volume= 1.941 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.71' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**30.0" Round Culvert** L= 104.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.00' / 42.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=12.53 cfs @ 12.09 hrs HW=45.71' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.53 cfs @ 3.51 fps)

Summary for Pond dmh48: dmh48

Inflow Area = 16.171 ac, 67.89% Impervious, Inflow Depth > 1.53" for 2-year event
Inflow = 13.44 cfs @ 12.09 hrs, Volume= 2.066 af
Outflow = 13.44 cfs @ 12.09 hrs, Volume= 2.066 af, Atten= 0%, Lag= 0.0 min
Primary = 13.44 cfs @ 12.09 hrs, Volume= 2.066 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 44.78' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.94'	**30.0" Round Culvert** L= 117.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.94' / 42.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=13.41 cfs @ 12.09 hrs HW=44.78' (Free Discharge)
1=Culvert (Barrel Controls 13.41 cfs @ 4.83 fps)

Summary for Pond dmh49: dmh49

Inflow Area = 16.492 ac, 67.20% Impervious, Inflow Depth > 1.52" for 2-year event
Inflow = 13.45 cfs @ 12.09 hrs, Volume= 2.087 af
Outflow = 13.45 cfs @ 12.09 hrs, Volume= 2.087 af, Atten= 0%, Lag= 0.0 min
Primary = 13.45 cfs @ 12.09 hrs, Volume= 2.087 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 44.17' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.33'	**36.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.33' / 42.23' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=13.41 cfs @ 12.09 hrs HW=44.17' (Free Discharge)
1=Culvert (Barrel Controls 13.41 cfs @ 4.23 fps)

Summary for Pond dmh5: dmh5

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 1.91" for 2-year event
Inflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af
Outflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Primary = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 60.80' @ 12.08 hrs
Flood Elev= 69.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.48'	**24.0" Round Culvert** L= 173.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.48' / 58.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.78 cfs @ 12.08 hrs HW=60.80' (Free Discharge)
↑**1=Culvert** (Barrel Controls 6.78 cfs @ 4.36 fps)

Summary for Pond dmh50: dmh50

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 1.82" for 2-year event
Inflow = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af
Outflow = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af, Atten= 0%, Lag= 0.0 min
Primary = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.02' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**30.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.75' / 44.11' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=18.93 cfs @ 12.09 hrs HW=47.02' (Free Discharge)
↑**1=Culvert** (Inlet Controls 18.93 cfs @ 4.05 fps)

Summary for Pond dmh51: dmh51

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 1.82" for 2-year event
Inflow = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af
Outflow = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af, Atten= 0%, Lag= 0.0 min
Primary = 18.94 cfs @ 12.09 hrs, Volume= 2.316 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.36' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.09'	**30.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.09' / 43.00' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=18.93 cfs @ 12.09 hrs HW=46.36' (Free Discharge)
1=Culvert (Inlet Controls 18.93 cfs @ 4.05 fps)

Summary for Pond dmh52: dmh52

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af
Outflow = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af, Atten= 0%, Lag= 0.0 min
Primary = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 43.56' @ 12.09 hrs
Flood Elev= 50.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**42.0" Round Culvert** L= 258.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 36.00' S= 0.0194 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.34 cfs @ 12.09 hrs HW=43.56' (Free Discharge)
1=Culvert (Inlet Controls 32.34 cfs @ 4.30 fps)

Summary for Pond dmh53: dmh53

Inflow Area = 32.207 ac, 72.77% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.40 cfs @ 12.09 hrs, Volume= 4.455 af
Outflow = 32.40 cfs @ 12.09 hrs, Volume= 4.455 af, Atten= 0%, Lag= 0.0 min
Primary = 32.40 cfs @ 12.09 hrs, Volume= 4.455 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 35.56' @ 12.09 hrs
Flood Elev= 41.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**42.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 30.50' S= 0.0208 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.35 cfs @ 12.09 hrs HW=35.56' (Free Discharge)
1=Culvert (Inlet Controls 32.35 cfs @ 4.30 fps)

Summary for Pond dmh54: dmh54

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af
Outflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af, Atten= 0%, Lag= 0.0 min
Primary = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 29.56' @ 12.09 hrs
Flood Elev= 38.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**42.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.00' / 22.00' S= 0.0329 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.43 cfs @ 12.09 hrs HW=29.56' (Free Discharge)
1=Culvert (Inlet Controls 32.43 cfs @ 4.30 fps)

Summary for Pond dmh55: dhm55

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af
Outflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af, Atten= 0%, Lag= 0.0 min
Primary = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 21.56' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**42.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.00' / 15.50' S= 0.0304 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.43 cfs @ 12.09 hrs HW=21.56' (Free Discharge)
1=Culvert (Inlet Controls 32.43 cfs @ 4.30 fps)

Summary for Pond dmh56: dmh56

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af
Outflow = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af, Atten= 0%, Lag= 0.0 min
Primary = 32.48 cfs @ 12.09 hrs, Volume= 4.472 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 15.06' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**42.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.50' / 11.00' S= 0.0357 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.43 cfs @ 12.09 hrs HW=15.06' (Free Discharge)
↑**1=Culvert** (Inlet Controls 32.43 cfs @ 4.30 fps)

Summary for Pond dmh59: dmh59

Inflow Area = 2.253 ac, 63.02% Impervious, Inflow Depth > 1.60" for 2-year event
Inflow = 3.04 cfs @ 12.09 hrs, Volume= 0.300 af
Outflow = 3.04 cfs @ 12.09 hrs, Volume= 0.300 af, Atten= 0%, Lag= 0.0 min
Primary = 3.04 cfs @ 12.09 hrs, Volume= 0.300 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.43' @ 12.09 hrs
Flood Elev= 59.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.30'	**12.0" Round Culvert** L= 294.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.30' / 52.83' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.04 cfs @ 12.09 hrs HW=56.42' (Free Discharge)
↑**1=Culvert** (Barrel Controls 3.04 cfs @ 3.87 fps)

Summary for Pond dmh6: dmh6

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 1.91" for 2-year event
Inflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af
Outflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Primary = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.14' @ 12.08 hrs
Flood Elev= 68.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.58'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.58' / 57.73' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.78 cfs @ 12.08 hrs HW=60.14' (Free Discharge)
1=Culvert (Barrel Controls 6.78 cfs @ 3.55 fps)

Summary for Pond dmh60: dhm60

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 1.66" for 2-year event
Inflow = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af
Outflow = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af, Atten= 0%, Lag= 0.0 min
Primary = 32.39 cfs @ 12.09 hrs, Volume= 4.404 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 38.06' @ 12.09 hrs
Flood Elev= 44.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	**42.0" Round Culvert** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.50' / 33.50' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=32.34 cfs @ 12.09 hrs HW=38.06' (Free Discharge)
1=Culvert (Inlet Controls 32.34 cfs @ 4.30 fps)

Summary for Pond dmh7: dmh7

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 1.91" for 2-year event
Inflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af
Outflow = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Primary = 6.80 cfs @ 12.08 hrs, Volume= 0.537 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.04' @ 12.08 hrs
Flood Elev= 67.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.71'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.71' / 56.86' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.78 cfs @ 12.08 hrs HW=59.04' (Free Discharge)
1=Culvert (Barrel Controls 6.78 cfs @ 4.35 fps)

Summary for Pond dmh8: dmh8

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 2.05" for 2-year event
Inflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af
Outflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af, Atten= 0%, Lag= 0.0 min
Primary = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.11' @ 12.08 hrs
Flood Elev= 66.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.84'	**24.0" Round Culvert** L= 296.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.84' / 55.66' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.41 cfs @ 12.08 hrs HW=59.10' (Free Discharge)
1=Culvert (Inlet Controls 13.41 cfs @ 4.27 fps)

Summary for Pond dmh9a: dmh9a

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 2.05" for 2-year event
Inflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af
Outflow = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af, Atten= 0%, Lag= 0.0 min
Primary = 13.44 cfs @ 12.08 hrs, Volume= 1.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.91' @ 12.08 hrs
Flood Elev= 65.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.64'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.64' / 54.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.41 cfs @ 12.08 hrs HW=57.90' (Free Discharge)
1=Culvert (Inlet Controls 13.41 cfs @ 4.27 fps)

Summary for Pond GSF 11: grassed soil filter

Inflow Area = 0.991 ac, 36.78% Impervious, Inflow Depth = 1.37" for 2-year event
Inflow = 1.58 cfs @ 12.09 hrs, Volume= 0.113 af
Outflow = 0.02 cfs @ 22.16 hrs, Volume= 0.070 af, Atten= 98%, Lag= 604.2 min
Primary = 0.02 cfs @ 22.16 hrs, Volume= 0.070 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 61.90' @ 22.16 hrs Surf.Area= 4,908 sf Storage= 3,855 cf
Flood Elev= 63.00' Surf.Area= 5,598 sf Storage= 7,213 cf

Plug-Flow detention time= 1,042.5 min calculated for 0.070 af (62% of inflow)
Center-of-Mass det. time= 933.0 min (1,770.7 - 837.7)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	5,560 cf	**gsf11 (Irregular)** Listed below (Recalc)
#2	58.24'	1,653 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,213 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,200	181.0	0	0	2,200
62.00	2,771	200.0	2,480	2,480	2,807
63.00	3,400	219.0	3,080	5,560	3,474

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,198	0.0	0	0
58.25	2,198	40.0	9	9
58.99	2,198	40.0	651	659
59.00	2,198	30.0	7	666
59.49	2,198	30.0	323	989
59.50	2,198	20.0	4	993
61.00	2,198	20.0	659	1,653

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.7" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.05' / 57.78' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**4.0" Vert. Orifice/Grate X 6.00** C= 0.600
#5	Device 3	62.50'	**25.7" Horiz. cb19 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 22.16 hrs HW=61.90' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.16 fps)
└─**2=Exfiltration** (Passes 0.02 cfs of 0.11 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
└─**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
└─**4=Orifice/Grate** (Controls 0.00 cfs)
└─**5=cb19 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 12: grassed soil filter

Inflow Area = 0.297 ac, 57.98% Impervious, Inflow Depth = 1.73" for 2-year event
Inflow = 0.60 cfs @ 12.09 hrs, Volume= 0.043 af
Outflow = 0.01 cfs @ 22.42 hrs, Volume= 0.023 af, Atten= 99%, Lag= 619.8 min
Primary = 0.01 cfs @ 22.42 hrs, Volume= 0.023 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.83' @ 22.42 hrs Surf.Area= 2,031 sf Storage= 1,506 cf
Flood Elev= 62.50' Surf.Area= 2,255 sf Storage= 2,348 cf

Plug-Flow detention time= 1,056.2 min calculated for 0.023 af (54% of inflow)
Center-of-Mass det. time= 945.0 min (1,764.2 - 819.2)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	1,681 cf	**gsf12 (Irregular)** Listed below (Recalc)
#2	58.24'	667 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,348 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	886	151.0	0	0	886
62.00	1,201	164.0	1,040	1,040	1,248
62.50	1,368	170.0	642	1,681	1,428

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	887	0.0	0	0
58.25	887	40.0	4	4
58.99	887	40.0	263	266
59.00	887	30.0	3	269
59.49	887	30.0	130	399
59.50	887	20.0	2	401
61.00	887	20.0	266	667

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.20'	**8.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.20' / 58.10' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	61.90'	**25.7" Horiz. cb15a beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 22.42 hrs HW=61.83' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.09 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb15a beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 13: grassed soil filter

Inflow Area = 1.037 ac, 46.46% Impervious, Inflow Depth = 1.50" for 2-year event
Inflow = 1.83 cfs @ 12.09 hrs, Volume= 0.130 af
Outflow = 0.03 cfs @ 20.36 hrs, Volume= 0.091 af, Atten= 98%, Lag= 496.3 min
Primary = 0.03 cfs @ 20.36 hrs, Volume= 0.091 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.84' @ 20.36 hrs Surf.Area= 5,838 sf Storage= 4,317 cf
Flood Elev= 63.00' Surf.Area= 7,083 sf Storage= 8,909 cf

Plug-Flow detention time= 1,027.9 min calculated for 0.091 af (70% of inflow)
Center-of-Mass det. time= 930.2 min (1,760.8 - 830.6)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	7,028 cf	**gsf13 (Irregular)** Listed below (Recalc)
#2	58.24'	1,881 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,500	328.0	0	0	2,500
62.00	3,513	347.0	2,992	2,992	3,575
63.00	4,582	366.0	4,036	7,028	4,710

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,501	0.0	0	0
58.25	2,501	40.0	10	10
58.99	2,501	40.0	740	750
59.00	2,501	30.0	8	758
59.49	2,501	30.0	368	1,125
59.50	2,501	20.0	5	1,130
61.00	2,501	20.0	750	1,881

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900

			Inlet / Outlet Invert= 58.05' / 57.82' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**25.7" Horiz. cb18 beehive equiv** C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 20.36 hrs HW=61.84' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.08 fps)
↑—**2=Exfiltration** (Passes 0.03 cfs of 0.14 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
↑—**4=cb18 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 15: grassed soil filter

Inflow Area = 0.210 ac, 1.92% Impervious, Inflow Depth = 0.85" for 2-year event
Inflow = 0.19 cfs @ 12.10 hrs, Volume= 0.015 af
Outflow = 0.00 cfs @ 24.08 hrs, Volume= 0.005 af, Atten= 99%, Lag= 719.0 min
Primary = 0.00 cfs @ 24.08 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.69' @ 24.08 hrs Surf.Area= 1,290 sf Storage= 571 cf
Flood Elev= 65.00' Surf.Area= 2,017 sf Storage= 1,939 cf

Plug-Flow detention time= 1,084.9 min calculated for 0.005 af (35% of inflow)
Center-of-Mass det. time= 941.4 min (1,809.9 - 868.5)

Volume	Invert	Avail.Storage	Storage Description
#1	63.50'	1,489 cf	**gsf15 (Irregular)** Listed below (Recalc)
#2	60.74'	450 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,939 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.50	600	168.0	0	0	600
64.00	858	177.0	363	363	862
65.00	1,418	196.0	1,126	1,489	1,456

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	599	0.0	0	0
60.75	599	40.0	2	2
61.49	599	40.0	177	180
61.50	599	30.0	2	181
61.99	599	30.0	88	270
62.00	599	20.0	1	271
63.50	599	20.0	180	450

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.52' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	63.70'	**25.7" Horiz. cb9 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 24.08 hrs HW=63.69' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.24 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.74' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
↑—**4=cb9 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 16: grassed soil filter

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth = 1.30" for 2-year event
Inflow = 0.52 cfs @ 12.09 hrs, Volume= 0.038 af
Outflow = 0.01 cfs @ 24.02 hrs, Volume= 0.019 af, Atten= 99%, Lag= 716.0 min
Primary = 0.01 cfs @ 24.02 hrs, Volume= 0.019 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.29' @ 24.02 hrs Surf.Area= 2,350 sf Storage= 1,346 cf

Plug-Flow detention time= 1,059.9 min calculated for 0.019 af (52% of inflow)
Center-of-Mass det. time= 939.7 min (1,780.8 - 841.1)

Volume	Invert	Avail.Storage	Storage Description
#1	62.75'	4,054 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	60.74'	753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,806 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.75	1,000	215.0	0	0	1,000
63.00	1,165	220.0	270	270	1,181
64.00	1,858	241.0	1,498	1,768	1,986
65.00	2,741	270.0	2,285	4,054	3,192

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	1,001	0.0	0	0
60.75	1,001	40.0	4	4
61.49	1,001	40.0	296	300
61.50	1,001	30.0	3	303
61.99	1,001	30.0	147	450
62.00	1,001	20.0	2	452
63.50	1,001	20.0	300	753

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.54' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	64.40'	**25.7" Horiz. cb8 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 24.02 hrs HW=63.29' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 7.65 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.74' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb8 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 18A: grassed soil filter

Inflow Area = 0.146 ac, 40.91% Impervious, Inflow Depth = 1.43" for 2-year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af
Outflow = 0.00 cfs @ 22.38 hrs, Volume= 0.009 af, Atten= 99%, Lag= 617.1 min
Primary = 0.00 cfs @ 22.38 hrs, Volume= 0.009 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.58' @ 22.38 hrs Surf.Area= 912 sf Storage= 609 cf

Plug-Flow detention time= 1,013.7 min calculated for 0.009 af (53% of inflow)
Center-of-Mass det. time= 897.6 min (1,731.8 - 834.2)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	1,183 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,868 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	900	183.0	0	0	900
58.00	1,490	202.0	1,183	1,183	1,513

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	912	0.0	0	0
54.25	912	40.0	4	4
54.99	912	40.0	270	274
55.00	912	30.0	3	276
55.49	912	30.0	134	410
55.50	912	20.0	2	412
57.00	912	20.0	274	686

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.40'	**25.7" Horiz. cb24 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 22.38 hrs HW=56.58' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 7.33 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.12 cfs potential flow)
↑—**4=cb24 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 18B: grassed soil filter

Inflow Area = 0.092 ac, 58.36% Impervious, Inflow Depth = 1.73" for 2-year event
Inflow = 0.19 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.00 cfs @ 24.04 hrs, Volume= 0.006 af, Atten= 99%, Lag= 716.8 min
Primary = 0.00 cfs @ 24.04 hrs, Volume= 0.006 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.70' @ 24.04 hrs Surf.Area= 782 sf Storage= 491 cf

Plug-Flow detention time= 1,071.2 min calculated for 0.006 af (43% of inflow)
Center-of-Mass det. time= 952.2 min (1,771.4 - 819.2)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	430 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	221 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		651 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	290	88.0	0	0	290
58.00	587	107.0	430	430	601

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	294	0.0	0	0
54.25	294	40.0	1	1
54.99	294	40.0	87	88
55.00	294	30.0	1	89
55.49	294	30.0	43	132
55.50	294	20.0	1	133
57.00	294	20.0	88	221

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.90'	**25.7" Horiz. cb23 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 24.04 hrs HW=57.70' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.94 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.12 cfs potential flow)
↑—**4=cb23 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 1A: Grassed soil filter

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth = 1.43" for 2-year event
Inflow = 0.69 cfs @ 12.09 hrs, Volume= 0.049 af
Outflow = 0.01 cfs @ 21.17 hrs, Volume= 0.031 af, Atten= 98%, Lag= 545.0 min
Primary = 0.01 cfs @ 21.17 hrs, Volume= 0.031 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.01' @ 21.17 hrs Surf.Area= 3,382 sf Storage= 1,644 cf
Flood Elev= 68.00' Surf.Area= 5,086 sf Storage= 6,753 cf

Plug-Flow detention time= 1,010.0 min calculated for 0.031 af (64% of inflow)
Center-of-Mass det. time= 904.0 min (1,738.2 - 834.2)

Volume	Invert	Avail.Storage	Storage Description
#1	65.75'	5,554 cf	**Grassed Underdrain Soil Filter (Irregular)** Listed below (Recalc)
#2	62.99'	1,198 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,753 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.75	1,600	234.0	0	0	1,600
66.00	1,775	239.0	422	422	1,797
67.00	2,525	261.0	2,139	2,561	2,708
68.00	3,488	286.0	2,994	5,554	3,830

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.99	1,598	0.0	0	0
63.00	1,598	40.0	6	6
63.74	1,598	40.0	473	479
63.75	1,598	30.0	5	484
64.24	1,598	30.0	235	719
64.25	1,598	20.0	3	722
65.74	1,598	20.0	476	1,198

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.99'	**2.400 in/hr Exfiltration over Surface area**
#3	Secondary	62.50'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.50' / 62.26' S= 0.0089 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.30'	**25.7" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 21.17 hrs HW=66.01' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.33 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.19 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.99' (Free Discharge)
└─**3=Culvert** (Passes 0.00 cfs of 0.52 cfs potential flow)
└─**4=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond GSF 1B: grassed soil filter

Inflow Area = 0.781 ac, 20.08% Impervious, Inflow Depth = 1.12" for 2-year event
Inflow = 1.00 cfs @ 12.09 hrs, Volume= 0.073 af
Outflow = 0.10 cfs @ 13.16 hrs, Volume= 0.059 af, Atten= 90%, Lag= 64.1 min
Primary = 0.01 cfs @ 13.16 hrs, Volume= 0.038 af
Secondary = 0.09 cfs @ 13.16 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.91' @ 13.16 hrs Surf.Area= 2,201 sf Storage= 1,691 cf
Flood Elev= 67.00' Surf.Area= 2,309 sf Storage= 1,826 cf

Plug-Flow detention time= 699.7 min calculated for 0.059 af (81% of inflow)
Center-of-Mass det. time= 621.7 min (1,473.0 - 851.3)

Volume	Invert	Avail.Storage	Storage Description
#1	65.50'	32,509 cf	**gsf1B (Irregular)** Listed below (Recalc)
#2	62.74'	545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		33,054 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.50	393	187.0	0	0	393
66.00	583	194.0	242	242	626
67.00	1,576	297.0	1,039	1,282	4,658
68.00	3,199	450.0	2,340	3,622	13,760
69.00	68,644	2,673.0	28,887	32,509	566,223

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.74	733	0.0	0	0
62.75	733	40.0	3	3
63.40	733	40.0	191	194
63.50	733	30.0	22	216
63.99	733	30.0	108	323
64.00	733	20.0	1	325
65.50	733	20.0	220	545

Device	Routing	Invert	Outlet Devices
#1	Primary	62.75'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	62.70'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.70' / 62.60' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.90'	**25.7" Horiz. CB16 beehive grate equiv dbl X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 13.16 hrs HW=66.91' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.80 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.05 cfs @ 13.16 hrs HW=66.91' (Free Discharge)
└**3=Culvert** (Passes 0.05 cfs of 2.61 cfs potential flow)
└**4=CB16 beehive grate equiv dbl** (Weir Controls 0.05 cfs @ 0.34 fps)

Summary for Pond GSF 2: grassed soil filter

Inflow Area = 0.713 ac, 25.93% Impervious, Inflow Depth = 1.18" for 2-year event
Inflow = 0.96 cfs @ 12.09 hrs, Volume= 0.070 af
Outflow = 0.02 cfs @ 21.48 hrs, Volume= 0.049 af, Atten= 98%, Lag= 563.1 min
Primary = 0.02 cfs @ 21.48 hrs, Volume= 0.049 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.43' @ 21.48 hrs Surf.Area= 3,458 sf Storage= 2,302 cf
Flood Elev= 59.00' Surf.Area= 4,991 sf Storage= 6,448 cf

Plug-Flow detention time= 1,016.9 min calculated for 0.049 af (71% of inflow)
Center-of-Mass det. time= 916.8 min (1,764.8 - 848.0)

Volume	Invert	Avail.Storage	Storage Description
#1	56.75'	5,317 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.99'	1,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,448 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.75	1,500	218.0	0	0	1,500
57.00	1,669	223.0	396	396	1,684
58.00	2,371	245.0	2,010	2,406	2,536
59.00	3,488	283.0	2,912	5,317	4,154

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.99	1,503	0.0	0	0
54.00	1,503	40.0	6	6
54.74	1,503	40.0	445	451
54.75	1,503	30.0	5	455
55.24	1,503	30.0	221	676
55.25	1,503	20.0	3	679
56.75	1,503	20.0	451	1,130

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.95'	**8.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.95' / 53.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb20 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 21.48 hrs HW=57.43' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 8.88 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=53.99' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
└**4=cb20 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 24: grassed soil filter

Inflow Area = 0.419 ac, 67.19% Impervious, Inflow Depth = 2.07" for 2-year event
Inflow = 1.00 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.02 cfs @ 18.38 hrs, Volume= 0.052 af, Atten= 98%, Lag= 377.3 min
Primary = 0.02 cfs @ 18.38 hrs, Volume= 0.052 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 40.59' @ 18.38 hrs Surf.Area= 3,201 sf Storage= 2,393 cf

Plug-Flow detention time= 1,023.2 min calculated for 0.052 af (72% of inflow)
Center-of-Mass det. time= 932.7 min (1,734.0 - 801.3)

Volume	Invert	Avail.Storage	Storage Description
#1	39.75'	4,479 cf	**gsf24 (Irregular)** Listed below (Recalc)
#2	36.99'	1,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		5,533 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.75	1,400	150.0	0	0	1,400
40.00	1,516	156.0	364	364	1,551
41.00	2,013	176.0	1,759	2,123	2,105
42.00	2,717	200.0	2,356	4,479	2,847

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.99	1,401	0.0	0	0
37.00	1,401	40.0	6	6
37.74	1,401	40.0	415	420
37.75	1,401	30.0	4	425
38.24	1,401	30.0	206	630
38.25	1,401	20.0	3	633
39.75	1,401	20.0	420	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	36.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	36.80'	**8.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 36.80' / 36.00' S= 0.0200 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4 Device 3 40.60' **25.7" Horiz. cb32 beehive equiv** C= 0.600
Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 18.38 hrs HW=40.59' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.09 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.07 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=36.99' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.10 cfs potential flow)
└**4=cb32 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 3: grassed soil filter

Inflow Area = 0.830 ac, 36.22% Impervious, Inflow Depth = 1.30" for 2-year event
Inflow = 1.26 cfs @ 12.09 hrs, Volume= 0.090 af
Outflow = 0.02 cfs @ 23.07 hrs, Volume= 0.052 af, Atten= 99%, Lag= 658.7 min
Primary = 0.02 cfs @ 23.07 hrs, Volume= 0.052 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 55.71' @ 23.07 hrs Surf.Area= 4,004 sf Storage= 3,125 cf
Flood Elev= 57.00' Surf.Area= 5,449 sf Storage= 7,083 cf

Plug-Flow detention time= 1,049.1 min calculated for 0.052 af (58% of inflow)
Center-of-Mass det. time= 934.3 min (1,775.4 - 841.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.75'	5,872 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	51.99'	1,211 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,083 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.75	1,600	268.0	0	0	1,600
55.00	1,804	274.0	425	425	1,868
56.00	2,657	295.0	2,217	2,642	2,860
57.00	3,839	332.0	3,230	5,872	4,733

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.99	1,610	0.0	0	0
52.00	1,610	40.0	6	6
52.74	1,610	40.0	477	483
52.75	1,610	30.0	5	488
53.24	1,610	30.0	237	725
53.25	1,610	20.0	3	728
54.75	1,610	20.0	483	1,211

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.95'	**12.0" Round Culvert**
			L= 14.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.95' / 51.81' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	55.75'	**25.7" Horiz. cb25 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 23.07 hrs HW=55.71' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.24 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.99' (Free Discharge)
└**3=Culvert** (Passes 0.00 cfs of 0.01 cfs potential flow)
└**4=cb25 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 4: grassed soil filter

Inflow Area = 0.194 ac, 0.00% Impervious, Inflow Depth = 0.85" for 2-year event
Inflow = 0.18 cfs @ 12.10 hrs, Volume= 0.014 af
Outflow = 0.00 cfs @ 21.28 hrs, Volume= 0.010 af, Atten= 98%, Lag= 551.0 min
Primary = 0.00 cfs @ 21.28 hrs, Volume= 0.010 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.68' @ 21.28 hrs Surf.Area= 970 sf Storage= 430 cf
Flood Elev= 56.00' Surf.Area= 1,431 sf Storage= 1,405 cf

Plug-Flow detention time= 930.8 min calculated for 0.010 af (75% of inflow)
Center-of-Mass det. time= 835.5 min (1,704.0 - 868.5)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	1,061 cf	**gsf4 (Irregular)** Listed below (Recalc)
#2	51.74'	344 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,405 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.50	457	163.0	0	0	457
55.00	623	169.0	269	269	636
56.00	974	182.0	792	1,061	1,039

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.74	457	0.0	0	0
51.75	457	40.0	2	2
52.49	457	40.0	135	137
52.50	457	30.0	1	138
52.99	457	30.0	67	206
53.00	457	20.0	1	207
54.50	457	20.0	137	344

Device	Routing	Invert	Outlet Devices
#1	Primary	51.75'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.70'	**8.0" Round Culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.70' / 51.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	55.10'	**25.7" Horiz. cb26 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 21.28 hrs HW=54.68' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.22 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.74' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
↑—**4=cb26 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 5: grassed soil filter

Inflow Area = 0.248 ac, 0.00% Impervious, Inflow Depth = 0.85" for 2-year event
Inflow = 0.23 cfs @ 12.10 hrs, Volume= 0.017 af
Outflow = 0.00 cfs @ 23.62 hrs, Volume= 0.011 af, Atten= 98%, Lag= 691.6 min
Primary = 0.00 cfs @ 23.62 hrs, Volume= 0.011 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.21' @ 23.62 hrs Surf.Area= 1,320 sf Storage= 591 cf
Flood Elev= 55.00' Surf.Area= 1,857 sf Storage= 1,360 cf

Plug-Flow detention time= 1,003.0 min calculated for 0.011 af (63% of inflow)
Center-of-Mass det. time= 884.7 min (1,753.2 - 868.5)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	908 cf	**gsf5 (Irregular)** Listed below (Recalc)
#2	51.24'	451 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,360 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	600	210.0	0	0	600
55.00	1,257	228.0	908	908	1,265

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	600	0.0	0	0
51.25	600	40.0	2	2
51.99	600	40.0	178	180
52.00	600	30.0	2	182
52.49	600	30.0	88	270
52.50	600	20.0	1	271
54.00	600	20.0	180	451

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.95' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.60'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 23.62 hrs HW=54.21' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.27 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.24' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.13 cfs potential flow)
↑—**4=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 6: grassed soil filter

Inflow Area = 0.321 ac, 32.06% Impervious, Inflow Depth = 1.30" for 2-year event
Inflow = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.01 cfs @ 22.51 hrs, Volume= 0.021 af, Atten= 98%, Lag= 625.1 min
Primary = 0.01 cfs @ 22.51 hrs, Volume= 0.021 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.92' @ 22.51 hrs Surf.Area= 2,074 sf Storage= 1,194 cf
Flood Elev= 50.00' Surf.Area= 2,772 sf Storage= 4,107 cf

Plug-Flow detention time= 1,037.5 min calculated for 0.021 af (61% of inflow)
Center-of-Mass det. time= 925.5 min (1,766.6 - 841.1)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	3,352 cf	**gsf6 (Irregular)** Listed below (Recalc)
#2	44.74'	755 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
47.50	1,004	156.0	0	0	1,004
48.00	1,082	159.0	521	521	1,113
49.00	1,413	172.0	1,244	1,765	1,493
50.00	1,768	184.0	1,587	3,352	1,877

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.74	1,004	0.0	0	0
44.75	1,004	40.0	4	4
45.49	1,004	40.0	297	301
45.50	1,004	30.0	3	304
45.99	1,004	30.0	148	452
46.00	1,004	20.0	2	454
47.50	1,004	20.0	301	755

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	44.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	44.70'	**8.0" Round culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.70' / 44.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	48.20'	**4.0" Vert. Orifice X 6.00** C= 0.600
#5	Device 3	49.00'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 22.51 hrs HW=47.92' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.56 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.74' (Free Discharge)
└─**3=culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
├─**4=Orifice** (Controls 0.00 cfs)
└─**5=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 7: grassed soil filter

Inflow Area = 0.697 ac, 25.86% Impervious, Inflow Depth = 1.18" for 2-year event
Inflow = 0.94 cfs @ 12.09 hrs, Volume= 0.068 af
Outflow = 0.02 cfs @ 21.81 hrs, Volume= 0.046 af, Atten= 98%, Lag= 582.8 min
Primary = 0.02 cfs @ 21.81 hrs, Volume= 0.046 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 54.33' @ 21.81 hrs Surf.Area= 4,504 sf Storage= 2,274 cf
Flood Elev= 56.00' Surf.Area= 7,240 sf Storage= 8,558 cf

Plug-Flow detention time= 1,006.0 min calculated for 0.046 af (67% of inflow)
Center-of-Mass det. time= 899.7 min (1,747.6 - 848.0)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	7,026 cf	**gsf7 (Irregular)** Listed below (Recalc)
#2	51.24'	1,532 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,558 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	2,037	220.0	0	0	2,037
55.00	3,467	289.0	2,720	2,720	4,843
56.00	5,203	357.0	4,306	7,026	8,354

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	2,037	0.0	0	0
51.25	2,037	40.0	8	8
51.99	2,037	40.0	603	611
52.00	2,037	30.0	6	617
52.49	2,037	30.0	299	917
52.50	2,037	20.0	4	921
54.00	2,037	20.0	611	1,532

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round cb29** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.48' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.70'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 21.81 hrs HW=54.33' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 8.42 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.24' (Free Discharge)
↑—**3=cb29** (Passes 0.00 cfs of 0.15 cfs potential flow)
↑—**4=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 8: grassed soil filter

Inflow Area = 1.046 ac, 55.78% Impervious, Inflow Depth = 1.65" for 2-year event
Inflow = 2.03 cfs @ 12.09 hrs, Volume= 0.144 af
Outflow = 0.06 cfs @ 16.84 hrs, Volume= 0.099 af, Atten= 97%, Lag= 285.4 min
Primary = 0.03 cfs @ 16.84 hrs, Volume= 0.095 af
Secondary = 0.02 cfs @ 16.84 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.61' @ 16.84 hrs Surf.Area= 5,201 sf Storage= 4,684 cf
Flood Elev= 58.50' Surf.Area= 5,815 sf Storage= 7,903 cf

Plug-Flow detention time= 1,001.3 min calculated for 0.099 af (69% of inflow)
Center-of-Mass det. time= 903.9 min (1,727.0 - 823.1)

Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	6,471 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.74'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,903 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.50	2,600	200.0	0	0	2,600
57.50	3,227	218.0	2,908	2,908	3,234
58.50	3,910	237.0	3,563	6,471	3,959

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.74	1,905	0.0	0	0
53.75	1,905	40.0	8	8
54.49	1,905	40.0	564	572
54.50	1,905	30.0	6	577
54.99	1,905	30.0	280	857
55.00	1,905	20.0	4	861
56.50	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	53.75'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.50'	**8.0" Round cb10 culvert** L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.50' / 52.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb10 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 16.84 hrs HW=57.61' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.41 fps)
└─**2=Exfiltration** (Passes 0.03 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=0.01 cfs @ 16.84 hrs HW=57.61' (Free Discharge)
└─**3=cb10 culvert** (Passes 0.01 cfs of 2.52 cfs potential flow)
└─**4=cb10 beehive equiv** (Weir Controls 0.01 cfs @ 0.24 fps)

Summary for Pond GSF 9: grassed soil filter

Inflow Area = 0.647 ac, 63.29% Impervious, Inflow Depth = 1.81" for 2-year event
Inflow = 1.37 cfs @ 12.09 hrs, Volume= 0.098 af
Outflow = 0.14 cfs @ 12.90 hrs, Volume= 0.075 af, Atten= 89%, Lag= 49.0 min
Primary = 0.02 cfs @ 12.90 hrs, Volume= 0.051 af
Secondary = 0.13 cfs @ 12.90 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.98' @ 12.90 hrs Surf.Area= 4,233 sf Storage= 2,449 cf
Flood Elev= 65.00' Surf.Area= 6,073 sf Storage= 8,972 cf

Plug-Flow detention time= 715.6 min calculated for 0.075 af (77% of inflow)
Center-of-Mass det. time= 632.5 min (1,447.6 - 815.1)

Volume	Invert	Avail.Storage	Storage Description
#1	62.50'	7,539 cf	**gsf9 (Irregular)** Listed below (Recalc)
#2	59.24'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,972 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.50	1,905	437.0	0	0	1,905
63.00	2,345	443.0	1,061	1,061	2,379
64.00	3,244	455.0	2,782	3,843	3,347
65.00	4,168	468.0	3,696	7,539	4,408

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.24	1,905	0.0	0	0
59.25	1,905	40.0	8	8
59.99	1,905	40.0	564	572
60.00	1,905	30.0	6	577
60.49	1,905	30.0	280	857
60.50	1,905	20.0	4	861
62.00	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	59.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	59.00'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 57.92' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.95'	**25.7" Horiz. cb6 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.90 hrs HW=62.98' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.27 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=0.12 cfs @ 12.90 hrs HW=62.98' (Free Discharge)
└**3=Culvert** (Passes 0.12 cfs of 2.53 cfs potential flow)
└**4=cb6 beehive equiv** (Weir Controls 0.12 cfs @ 0.58 fps)

Summary for Pond ics 12: ICS 12

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 6.57 cfs @ 12.08 hrs, Volume= 0.203 af
Secondary = 0.69 cfs @ 12.08 hrs, Volume= 0.372 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.60' @ 12.08 hrs
Flood Elev= 65.42'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.70'	**18.0" Round Culvert** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.15' S= 0.1375 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	62.95'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	60.75'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.75' / 60.72' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	60.75'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=6.55 cfs @ 12.08 hrs HW=63.60' (Free Discharge)
└**1=Culvert** (Passes 6.55 cfs of 9.85 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 6.55 cfs @ 2.52 fps)

Secondary OutFlow Max=0.69 cfs @ 12.08 hrs HW=63.60' (Free Discharge)
└**3=Culvert** (Passes 0.69 cfs of 4.58 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.69 cfs @ 7.89 fps)

Summary for Pond ICS1: ICS 1

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 0.54 cfs @ 12.08 hrs, Volume= 0.326 af
Secondary = 6.72 cfs @ 12.08 hrs, Volume= 0.248 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.18' @ 12.08 hrs
Flood Elev= 69.38'

Device	Routing	Invert	Outlet Devices
#1	Secondary	63.37'	**18.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.27' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.31'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	63.37'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.37' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	63.37'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.54 cfs @ 12.08 hrs HW=65.18' (Free Discharge)
└**3=Culvert** (Passes 0.54 cfs of 3.41 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.54 cfs @ 6.17 fps)

Secondary OutFlow Max=6.71 cfs @ 12.08 hrs HW=65.18' (Free Discharge)
└**1=Culvert** (Barrel Controls 6.71 cfs @ 3.99 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 6.71 cfs of 10.70 cfs potential flow)

Summary for Pond ICS18: ICS18

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 1.22 cfs @ 12.08 hrs, Volume= 0.097 af
Outflow = 1.22 cfs @ 12.08 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 0.65 cfs @ 12.08 hrs, Volume= 0.091 af
Secondary = 0.57 cfs @ 12.08 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.39' @ 12.08 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.81'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.81' / 57.80' S= 0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	57.81'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 4	60.25'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	57.80'	**12.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.80' / 56.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.65 cfs @ 12.08 hrs HW=60.39' (Free Discharge)
↑—**1=Culvert** (Passes 0.65 cfs of 1.99 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.65 cfs @ 7.47 fps)

Secondary OutFlow Max=0.56 cfs @ 12.08 hrs HW=60.39' (Free Discharge)
↑—**4=Culvert** (Passes 0.56 cfs of 4.31 cfs potential flow)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 0.56 cfs @ 1.03 fps)

Summary for Pond ics28: ICS28

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 0.77 cfs @ 12.08 hrs, Volume= 0.061 af
Outflow = 0.77 cfs @ 12.08 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min
Primary = 0.63 cfs @ 12.08 hrs, Volume= 0.060 af
Secondary = 0.14 cfs @ 12.08 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.55' @ 12.08 hrs
Flood Elev= 63.95'

Device	Routing	Invert	Outlet Devices
#1	Secondary	58.00'	**8.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	60.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	58.15'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.15' / 58.12' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	58.15'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.63 cfs @ 12.08 hrs HW=60.55' (Free Discharge)
└**3=Culvert** (Passes 0.63 cfs of 1.91 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.63 cfs @ 7.20 fps)

Secondary OutFlow Max=0.14 cfs @ 12.08 hrs HW=60.55' (Free Discharge)
└**1=Culvert** (Passes 0.14 cfs of 1.98 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.65 fps)

Summary for Pond ICS37: ISC37

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 4.92 cfs @ 12.08 hrs, Volume= 0.554 af
Secondary = 2.34 cfs @ 12.08 hrs, Volume= 0.020 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.34' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.50'	**18.0" Round Culvert** L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.50' / 52.00' S= 0.0098 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.92 cfs @ 12.08 hrs HW=55.34' (Free Discharge)
├**3=Culvert** (Inlet Controls 4.27 cfs @ 5.43 fps)
└**4=Orifice/Grate** (Orifice Controls 0.65 cfs @ 7.42 fps)

Secondary OutFlow Max=2.32 cfs @ 12.08 hrs HW=55.34' (Free Discharge)
└**1=Culvert** (Passes 2.32 cfs of 9.72 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 2.32 cfs @ 1.69 fps)

Summary for Pond ics46: ICS46

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 0.69 cfs @ 12.08 hrs, Volume= 0.371 af
Secondary = 6.57 cfs @ 12.08 hrs, Volume= 0.203 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 49.65' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Secondary	46.20'	**18.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.20' / 46.00' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	49.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	46.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.80' / 46.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	46.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.69 cfs @ 12.08 hrs HW=49.65' (Free Discharge)
└**3=Culvert** (Passes 0.69 cfs of 4.58 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.69 cfs @ 7.89 fps)

Secondary OutFlow Max=6.55 cfs @ 12.08 hrs HW=49.65' (Free Discharge)
└**1=Culvert** (Passes 6.55 cfs of 11.04 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 6.55 cfs @ 2.52 fps)

Summary for Pond ICS9: ICS9

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 0.69 cfs @ 12.08 hrs, Volume= 0.371 af
Secondary = 6.57 cfs @ 12.08 hrs, Volume= 0.204 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.83' @ 12.08 hrs
Flood Elev= 66.76'

Device	Routing	Invert	Outlet Devices
#1	Secondary	61.70'	**18.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.18'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	62.00'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.00' / 61.65' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

#4 Device 3 62.00' **4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.69 cfs @ 12.08 hrs HW=64.83' (Free Discharge)
└**3=Culvert** (Passes 0.69 cfs of 4.56 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.69 cfs @ 7.86 fps)

Secondary OutFlow Max=6.55 cfs @ 12.08 hrs HW=64.83' (Free Discharge)
└**1=Culvert** (Passes 6.55 cfs of 10.36 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 6.55 cfs @ 2.52 fps)

Summary for Pond ISC42: ICS 42

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af
Outflow = 7.25 cfs @ 12.08 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 5.30 cfs @ 12.08 hrs, Volume= 0.560 af
Secondary = 1.96 cfs @ 12.08 hrs, Volume= 0.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.68' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.20'	**18.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.20' / 51.88' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.37'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.29 cfs @ 12.08 hrs HW=55.68' (Free Discharge)
└**3=Culvert** (Inlet Controls 4.60 cfs @ 5.86 fps)
└**4=Orifice/Grate** (Orifice Controls 0.69 cfs @ 7.93 fps)

Secondary OutFlow Max=1.94 cfs @ 12.08 hrs HW=55.68' (Free Discharge)
└**1=Culvert** (Passes 1.94 cfs of 11.09 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.94 cfs @ 1.59 fps)

Summary for Pond MPP 10: Rtank storage

Inflow Area = 0.710 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 1.99 cfs @ 12.08 hrs, Volume= 0.158 af
Outflow = 1.07 cfs @ 12.21 hrs, Volume= 0.140 af, Atten= 46%, Lag= 7.4 min
Primary = 1.07 cfs @ 12.21 hrs, Volume= 0.140 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.72' @ 12.21 hrs Surf.Area= 0.179 ac Storage= 0.055 af

Plug-Flow detention time= 158.5 min calculated for 0.140 af (88% of inflow)
Center-of-Mass det. time= 104.0 min (862.5 - 758.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.23'	0.091 af	**6.25'W x 1,248.97'L x 1.94'H Field A** 0.347 af Overall - 0.118 af Embedded = 0.229 af x 40.0% Voids
#2A	61.48'	0.112 af	**ACF R-Tank HD 0.5** x 2128 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 4 Rows of 532 Chambers
		0.204 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.48'	**8.0" Round Culvert X 6.00** L= 2.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.48' / 61.40' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.07 cfs @ 12.21 hrs HW=61.72' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.07 cfs @ 2.31 fps)

Summary for Pond MPP 14: Rtanks

Inflow Area = 0.215 ac, 94.36% Impervious, Inflow Depth = 2.56" for 2-year event
Inflow = 0.59 cfs @ 12.08 hrs, Volume= 0.046 af
Outflow = 0.33 cfs @ 12.20 hrs, Volume= 0.041 af, Atten= 45%, Lag= 7.2 min
Primary = 0.33 cfs @ 12.20 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.51' @ 12.20 hrs Surf.Area= 1,935 sf Storage= 680 cf
Flood Elev= 60.50' Surf.Area= 1,935 sf Storage= 2,354 cf

Plug-Flow detention time= 148.3 min calculated for 0.041 af (90% of inflow)
Center-of-Mass det. time= 100.5 min (869.1 - 768.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	55.98'	1,011 cf	**15.44'W x 125.33'L x 2.04'H Field A** 3,941 cf Overall - 1,413 cf Embedded = 2,528 cf x 40.0% Voids
#2A	56.23'	1,343 cf	**ACF R-Tank HD 0.5** x 583 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 11 Rows of 53 Chambers
		2,354 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	56.23'	**8.0" Round Culvert X 2.00** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.23' / 56.12' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.33 cfs @ 12.20 hrs HW=56.51' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.33 cfs @ 1.76 fps)

Summary for Pond MPP 19: Rtanks

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth = 2.25" for 2-year event
Inflow = 0.80 cfs @ 12.09 hrs, Volume= 0.059 af
Outflow = 0.18 cfs @ 12.50 hrs, Volume= 0.051 af, Atten= 78%, Lag= 24.7 min
Primary = 0.18 cfs @ 12.50 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.42' @ 12.50 hrs Surf.Area= 0.074 ac Storage= 0.030 af

Plug-Flow detention time= 262.2 min calculated for 0.051 af (86% of inflow)
Center-of-Mass det. time= 200.4 min (990.8 - 790.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.83'	0.033 af	**18.06'W x 179.28'L x 1.84'H Field A** 0.137 af Overall - 0.055 af Embedded = 0.082 af x 40.0% Voids
#2A	55.08'	0.052 af	**ACF R-Tank HD 0.5** x 988 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 76 Chambers
		0.085 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.08'	**6.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.08' / 55.00' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.18 cfs @ 12.50 hrs HW=55.42' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.18 cfs @ 1.77 fps)

Summary for Pond MPP 21: Rtanks

Inflow Area = 0.229 ac, 83.66% Impervious, Inflow Depth = 2.25" for 2-year event
Inflow = 0.58 cfs @ 12.09 hrs, Volume= 0.043 af
Outflow = 0.24 cfs @ 12.30 hrs, Volume= 0.039 af, Atten= 59%, Lag= 12.7 min
Primary = 0.24 cfs @ 12.30 hrs, Volume= 0.039 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.15' @ 12.30 hrs Surf.Area= 1,510 sf Storage= 732 cf

Plug-Flow detention time= 161.6 min calculated for 0.039 af (91% of inflow)
Center-of-Mass det. time= 117.8 min (908.1 - 790.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.48'	818 cf	**16.75'W x 90.14'L x 2.09'H Field A** 3,151 cf Overall - 1,105 cf Embedded = 2,046 cf x 40.0% Voids
#2A	54.73'	1,050 cf	**ACF R-Tank HD 0.5** x 456 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 38 Chambers
		1,868 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.73'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.73' / 54.73' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.24 cfs @ 12.30 hrs HW=55.15' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.24 cfs @ 1.83 fps)

Summary for Pond MPP 22: Rtanks

Inflow Area = 0.310 ac, 76.43% Impervious, Inflow Depth = 2.07" for 2-year event
Inflow = 0.74 cfs @ 12.09 hrs, Volume= 0.053 af
Outflow = 0.15 cfs @ 12.52 hrs, Volume= 0.045 af, Atten= 80%, Lag= 26.0 min
Primary = 0.15 cfs @ 12.52 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.37' @ 12.52 hrs Surf.Area= 3,003 sf Storage= 1,184 cf

Plug-Flow detention time= 266.5 min calculated for 0.045 af (85% of inflow)
Center-of-Mass det. time= 202.0 min (1,003.4 - 801.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.80'	1,262 cf	**16.75'W x 179.28'L x 1.79'H Field A** 5,367 cf Overall - 2,211 cf Embedded = 3,156 cf x 40.0% Voids
#2A	55.05'	2,100 cf	**ACF R-Tank HD 0.5** x 912 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 76 Chambers
		3,363 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.05'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.05' / 55.05' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.15 cfs @ 12.52 hrs HW=55.37' (Free Discharge)
1=Culvert (Barrel Controls 0.15 cfs @ 1.59 fps)

Summary for Pond MPP 26: Rtanks

Inflow Area = 0.088 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.11 cfs @ 12.26 hrs, Volume= 0.016 af, Atten= 55%, Lag= 10.4 min
Primary = 0.11 cfs @ 12.26 hrs, Volume= 0.016 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.82' @ 12.26 hrs Surf.Area= 1,289 sf Storage= 368 cf

Plug-Flow detention time= 203.6 min calculated for 0.016 af (84% of inflow)
Center-of-Mass det. time= 138.0 min (896.5 - 758.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	34.37'	492 cf	**18.06'W x 71.37'L x 1.69'H Field A** 2,175 cf Overall - 945 cf Embedded = 1,230 cf x 40.0% Voids
#2A	34.62'	898 cf	**ACF R-Tank HD 0.5** x 390 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 30 Chambers
		1,390 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	34.62'	**8.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.62' / 34.34' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.11 cfs @ 12.26 hrs HW=34.82' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.11 cfs @ 1.21 fps)

Summary for Pond MPP 50:

Inflow Area = 0.693 ac,100.00% Impervious, Inflow Depth = 2.67" for 2-year event
Inflow = 1.94 cfs @ 12.08 hrs, Volume= 0.154 af
Outflow = 1.14 cfs @ 12.19 hrs, Volume= 0.125 af, Atten= 41%, Lag= 6.4 min
Primary = 1.14 cfs @ 12.19 hrs, Volume= 0.125 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.86' @ 12.19 hrs Surf.Area= 5,946 sf Storage= 2,643 cf

Plug-Flow detention time= 183.3 min calculated for 0.125 af (81% of inflow)
Center-of-Mass det. time= 110.3 min (868.8 - 758.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.33'	2,878 cf	**4.94'W x 1,204.40'L x 1.84'H Field A** 10,925 cf Overall - 3,731 cf Embedded = 7,195 cf x 40.0% Voids
#2A	54.33'	3,544 cf	**ACF R-Tank HD 0.5** x 1539 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 3 Rows of 513 Chambers
		6,422 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.58'	**8.0" Round Culvert X 7.00** L= 3.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.58' / 54.55' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.14 cfs @ 12.19 hrs HW=54.86' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.14 cfs @ 1.73 fps)

Summary for Pond mpp30: Rtanks

Inflow Area = 1.205 ac, 54.78% Impervious, Inflow Depth = 1.53" for 2-year event
Inflow = 2.03 cfs @ 12.09 hrs, Volume= 0.153 af
Outflow = 0.46 cfs @ 12.51 hrs, Volume= 0.153 af, Atten= 77%, Lag= 25.3 min
Primary = 0.46 cfs @ 12.51 hrs, Volume= 0.153 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 30.75' @ 12.51 hrs Surf.Area= 9,089 sf Storage= 2,259 cf
Flood Elev= 31.78' Surf.Area= 9,089 sf Storage= 8,611 cf

Plug-Flow detention time= 71.6 min calculated for 0.153 af (100% of inflow)
Center-of-Mass det. time= 71.8 min (882.4 - 810.6)

Volume	Invert	Avail.Storage	Storage Description
#1B	30.73'	4,011 cf	**8.56'W x 815.99'L x 2.04'H Field B** 14,234 cf Overall - 4,206 cf Embedded = 10,028 cf x 40.0% Voids
#2B	30.98'	3,995 cf	**ACF R-Tank HD 0.5** x 1735 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 5 Rows of 347 Chambers
#3C	29.28'	259 cf	**10.56'W x 74.72'L x 1.69'H Field C** 1,337 cf Overall - 689 cf Embedded = 648 cf x 40.0% Voids
#4C	29.53'	654 cf	**ACF R-Tank HD 1.0** x 155 Inside #3 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 5 Rows of 31 Chambers
#5D	29.28'	968 cf	**17.12'W x 76.72'L x 3.42'H Field D** 4,487 cf Overall - 2,066 cf Embedded = 2,420 cf x 40.0% Voids
#6D	29.53'	1,963 cf	**ACF R-Tank HD 1.5** x 310 Inside #5 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 10 Rows of 31 Chambers
		11,851 cf	Total Available Storage

Storage Group B created with Chamber Wizard
Storage Group C created with Chamber Wizard
Storage Group D created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	29.28'	**18.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.28' / 29.00' S= 0.0140 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	29.28'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	30.00'	**3.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.46 cfs @ 12.51 hrs HW=30.75' (Free Discharge)
└**1=Culvert** (Passes 0.19 cfs of 5.74 cfs potential flow)
└**3=Orifice/Grate** (Orifice Controls 0.19 cfs @ 3.81 fps)
└**2=Orifice/Grate** (Orifice Controls 0.27 cfs @ 5.59 fps)

Summary for Pond SSF 36: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 1.52" for 2-year event
Inflow = 0.54 cfs @ 12.08 hrs, Volume= 0.326 af
Outflow = 0.10 cfs @ 19.97 hrs, Volume= 0.230 af, Atten= 82%, Lag= 473.1 min
Primary = 0.08 cfs @ 19.97 hrs, Volume= 0.222 af
Secondary = 0.02 cfs @ 19.97 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 64.38' @ 19.97 hrs Surf.Area= 11,270 sf Storage= 10,399 cf
Flood Elev= 66.27' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 1,057.2 min calculated for 0.230 af (70% of inflow)
Center-of-Mass det. time= 924.0 min (1,706.8 - 782.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	62.77'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	63.27'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	60.02'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.02	5,635	0.0	0	0
60.03	5,635	40.0	23	23
60.76	5,635	40.0	1,645	1,668
60.77	5,635	30.0	17	1,685
61.26	5,635	30.0	828	2,513
61.27	5,635	20.0	11	2,524
62.76	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	60.02'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.02'	**1.500 in/hr Exfiltration over Surface area above 60.02'** Excluded Surface area = 5,635 sf
#3	Secondary	64.31'	**12.0" Round Culvert X 2.00** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 64.31' / 64.31' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 19.97 hrs HW=64.38' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.00 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.02 cfs @ 19.97 hrs HW=64.38' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.02 cfs @ 0.55 fps)

Summary for Pond ssf37: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 1.72" for 2-year event
Inflow = 0.69 cfs @ 12.08 hrs, Volume= 0.371 af
Outflow = 0.22 cfs @ 15.85 hrs, Volume= 0.274 af, Atten= 68%, Lag= 226.1 min
Primary = 0.08 cfs @ 15.85 hrs, Volume= 0.224 af
Secondary = 0.14 cfs @ 15.85 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.14' @ 15.85 hrs Surf.Area= 11,332 sf Storage= 10,978 cf
Flood Elev= 64.85' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 928.5 min calculated for 0.274 af (74% of inflow)
Center-of-Mass det. time= 814.3 min (1,590.7 - 776.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.35'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	61.85'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	58.60'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.60	5,666	0.0	0	0
58.61	5,666	40.0	23	23
59.34	5,666	40.0	1,654	1,677
59.35	5,666	30.0	17	1,694
59.84	5,666	30.0	833	2,527
59.85	5,666	20.0	11	2,538
61.34	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	58.60'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.60'	**1.500 in/hr Exfiltration over Surface area above 58.60'** Excluded Surface area = 5,666 sf
#3	Secondary	62.89'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.89' / 62.89' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 15.85 hrs HW=63.14' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.20 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.13 cfs @ 15.85 hrs HW=63.14' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.13 cfs @ 1.31 fps)

Summary for Pond ssf38: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 0.94" for 2-year event
Inflow = 6.57 cfs @ 12.08 hrs, Volume= 0.203 af
Outflow = 0.07 cfs @ 12.90 hrs, Volume= 0.106 af, Atten= 99%, Lag= 49.1 min
Primary = 0.07 cfs @ 12.90 hrs, Volume= 0.106 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.35' @ 12.90 hrs Surf.Area= 11,332 sf Storage= 8,618 cf
Flood Elev= 63.62' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 546.5 min calculated for 0.106 af (52% of inflow)
Center-of-Mass det. time= 536.4 min (1,262.3 - 725.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	60.12'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	60.62'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	57.37'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.37	5,666	0.0	0	0
57.38	5,666	40.0	23	23
58.11	5,666	40.0	1,654	1,677
58.12	5,666	30.0	17	1,694
58.61	5,666	30.0	833	2,527
58.62	5,666	20.0	11	2,538
60.11	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	57.37'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	57.37'	**1.500 in/hr Exfiltration over Surface area above 57.37'** Excluded Surface area = 5,666 sf
#3	Secondary	61.66'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.66' / 61.66' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.07 cfs @ 12.90 hrs HW=61.35' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 9.54 fps)
└**2=Exfiltration** (Passes 0.07 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=57.37' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)

Summary for Pond ssf39: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.57" for 2-year event
Inflow = 4.92 cfs @ 12.08 hrs, Volume= 0.554 af
Outflow = 1.12 cfs @ 12.56 hrs, Volume= 0.432 af, Atten= 77%, Lag= 28.7 min
Primary = 0.08 cfs @ 12.56 hrs, Volume= 0.230 af
Secondary = 1.04 cfs @ 12.56 hrs, Volume= 0.202 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.43' @ 12.56 hrs Surf.Area= 12,365 sf Storage= 14,551 cf
Flood Elev= 55.67' Surf.Area= 12,365 sf Storage= 18,385 cf

Plug-Flow detention time= 655.6 min calculated for 0.432 af (78% of inflow)
Center-of-Mass det. time= 573.9 min (1,333.6 - 759.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,625 cf	**58.50'W x 109.24'L x 3.50'H Field A** 22,367 cf Overall - 8,303 cf Embedded = 14,064 cf x 40.0% Voids
#2A	52.67'	8,303 cf	**ADS_StormTech SC-740** x 180 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 12 rows
#3	49.42'	4,457 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		18,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,974	0.0	0	0
49.43	5,974	40.0	24	24
50.16	5,974	40.0	1,744	1,768
50.17	5,974	30.0	18	1,786
50.66	5,974	30.0	878	2,664
50.67	5,974	20.0	12	2,676
52.16	5,974	20.0	1,780	4,457

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,974 sf
#3	Secondary	53.71'	**12.0" Round Culvert**

L= 5.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 12.56 hrs HW=54.43' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.73 fps)
└**2=Exfiltration** (Passes 0.08 cfs of 0.22 cfs potential flow)

Secondary OutFlow Max=1.04 cfs @ 12.56 hrs HW=54.43' (Free Discharge)
└**3=Culvert** (Barrel Controls 1.04 cfs @ 2.38 fps)

Summary for Pond ssf40: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.60" for 2-year event
Inflow = 5.30 cfs @ 12.08 hrs, Volume= 0.560 af
Outflow = 1.64 cfs @ 12.48 hrs, Volume= 0.459 af, Atten= 69%, Lag= 23.7 min
Primary = 0.09 cfs @ 12.48 hrs, Volume= 0.229 af
Secondary = 1.56 cfs @ 12.48 hrs, Volume= 0.230 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.63' @ 12.48 hrs Surf.Area= 11,484 sf Storage= 13,917 cf
Flood Elev= 55.67' Surf.Area= 11,484 sf Storage= 16,630 cf

Plug-Flow detention time= 602.1 min calculated for 0.459 af (82% of inflow)
Center-of-Mass det. time= 529.6 min (1,289.0 - 759.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,168 cf	**20.50'W x 280.12'L x 3.50'H Field A** 20,099 cf Overall - 7,178 cf Embedded = 12,921 cf x 40.0% Voids
#2A	52.67'	7,178 cf	**ADS_StormTech SC-740** x 156 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
#3	49.42'	4,284 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,630 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,742	0.0	0	0
49.43	5,742	40.0	23	23
50.16	5,742	40.0	1,677	1,700
50.17	5,742	30.0	17	1,717
50.66	5,742	30.0	844	2,561
50.67	5,742	20.0	11	2,572
52.16	5,742	20.0	1,711	4,284

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,742 sf
#3	Secondary	53.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.48 hrs HW=54.63' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.09 cfs @ 10.94 fps)
└**2=Exfiltration** (Passes 0.09 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=1.56 cfs @ 12.48 hrs HW=54.63' (Free Discharge)
└**3=Culvert** (Barrel Controls 1.56 cfs @ 2.70 fps)

Summary for Pond ssf41: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 1.73" for 2-year event
Inflow = 0.69 cfs @ 12.08 hrs, Volume= 0.371 af
Outflow = 0.20 cfs @ 15.98 hrs, Volume= 0.274 af, Atten= 70%, Lag= 234.0 min
Primary = 0.08 cfs @ 15.98 hrs, Volume= 0.227 af
Secondary = 0.12 cfs @ 15.98 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.95' @ 15.98 hrs Surf.Area= 11,270 sf Storage= 11,097 cf
Flood Elev= 49.67' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 950.4 min calculated for 0.274 af (74% of inflow)
Center-of-Mass det. time= 836.2 min (1,612.6 - 776.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	46.17'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	46.67'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	43.42'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.42	5,635	0.0	0	0
43.43	5,635	40.0	23	23
44.16	5,635	40.0	1,645	1,668
44.17	5,635	30.0	17	1,685
44.66	5,635	30.0	828	2,513
44.67	5,635	20.0	11	2,524
46.16	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	43.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	43.42'	**1.500 in/hr Exfiltration over Surface area above 43.42'** Excluded Surface area = 5,635 sf
#3	Secondary	47.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.71' / 47.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 15.98 hrs HW=47.95' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.19 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.12 cfs @ 15.98 hrs HW=47.95' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.12 cfs @ 1.28 fps)

Summary for Pond ssf42: ssf

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 2.63" for 2-year event
Inflow = 0.63 cfs @ 12.08 hrs, Volume= 0.060 af
Outflow = 0.18 cfs @ 12.47 hrs, Volume= 0.044 af, Atten= 71%, Lag= 23.2 min
Primary = 0.01 cfs @ 12.47 hrs, Volume= 0.026 af
Secondary = 0.17 cfs @ 12.47 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.37' @ 12.47 hrs Surf.Area= 1,422 sf Storage= 1,579 cf
Flood Elev= 61.67' Surf.Area= 1,422 sf Storage= 2,027 cf

Plug-Flow detention time= 707.1 min calculated for 0.044 af (73% of inflow)
Center-of-Mass det. time= 617.4 min (1,376.4 - 759.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	58.17'	662 cf	**15.75'W x 45.16'L x 3.50'H Field A** 2,489 cf Overall - 835 cf Embedded = 1,654 cf x 40.0% Voids
#2A	58.67'	835 cf	**ADS_StormTech SC-740** x 18 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 3 rows
#3	55.42'	530 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,027 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.42	711	0.0	0	0
55.43	711	40.0	3	3
56.16	711	40.0	208	210
56.17	711	30.0	2	213
56.66	711	30.0	105	317
56.67	711	20.0	1	319
58.16	711	20.0	212	530

Device	Routing	Invert	Outlet Devices
#1	Primary	55.42'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	55.42'	**1.500 in/hr Exfiltration over Surface area above 55.42'** Excluded Surface area = 711 sf
#3	Secondary	60.06'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.05' / 60.06' S= -0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 12.47 hrs HW=60.37' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.70 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.17 cfs @ 12.47 hrs HW=60.37' (Free Discharge)
└**3=Culvert** (Barrel Controls 0.17 cfs @ 1.51 fps)

Summary for Pond ssf43: ssf

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 2.50" for 2-year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 0.091 af
Outflow = 0.33 cfs @ 12.43 hrs, Volume= 0.072 af, Atten= 50%, Lag= 21.0 min
Primary = 0.01 cfs @ 12.43 hrs, Volume= 0.041 af
Secondary = 0.31 cfs @ 12.43 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.72' @ 12.43 hrs Surf.Area= 1,934 sf Storage= 2,207 cf
Flood Elev= 60.90' Surf.Area= 1,934 sf Storage= 2,740 cf

Plug-Flow detention time= 663.2 min calculated for 0.072 af (79% of inflow)
Center-of-Mass det. time= 582.4 min (1,343.1 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.40'	910 cf	**11.00'W x 87.88'L x 3.50'H Field A** 3,383 cf Overall - 1,108 cf Embedded = 2,275 cf x 40.0% Voids
#2A	57.90'	1,108 cf	**ADS_StormTech SC-740** x 24 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	54.65'	721 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,740 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.65	967	0.0	0	0
54.66	967	40.0	4	4
55.39	967	40.0	282	286
55.40	967	30.0	3	289
55.89	967	30.0	142	431
55.90	967	20.0	2	433
57.39	967	20.0	288	721

Device	Routing	Invert	Outlet Devices
#1	Primary	54.65'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.65'	**1.500 in/hr Exfiltration over Surface area above 54.65'** Excluded Surface area = 967 sf
#3	Secondary	59.28'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.28' / 59.28' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 12.43 hrs HW=59.72' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.82 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.31 cfs @ 12.43 hrs HW=59.72' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.31 cfs @ 1.81 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1A: Runoff Area=17,785 sf 34.88% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=84 Runoff=1.22 cfs 0.087 af

Subcatchment 1B: Runoff Area=34,018 sf 20.08% Impervious Runoff Depth=2.13"
Tc=6.0 min CN=79 Runoff=1.95 cfs 0.138 af

Subcatchment 2: Runoff Area=31,049 sf 25.93% Impervious Runoff Depth=2.21"
Tc=6.0 min CN=80 Runoff=1.85 cfs 0.131 af

Subcatchment 3: Runoff Area=36,147 sf 36.22% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=82 Runoff=2.31 cfs 0.164 af

Subcatchment 4: Runoff Area=8,448 sf 0.00% Impervious Runoff Depth=1.74"
Tc=6.0 min CN=74 Runoff=0.39 cfs 0.028 af

Subcatchment 5: Runoff Area=10,807 sf 0.00% Impervious Runoff Depth=1.74"
Tc=6.0 min CN=74 Runoff=0.50 cfs 0.036 af

Subcatchment 6: Runoff Area=13,985 sf 32.06% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=82 Runoff=0.89 cfs 0.064 af

Subcatchment 7: Runoff Area=30,345 sf 25.86% Impervious Runoff Depth=2.21"
Tc=6.0 min CN=80 Runoff=1.80 cfs 0.128 af

Subcatchment 8: Runoff Area=45,551 sf 55.78% Impervious Runoff Depth=2.82"
Tc=6.0 min CN=87 Runoff=3.42 cfs 0.246 af

Subcatchment 9: Runoff Area=28,191 sf 63.29% Impervious Runoff Depth=3.01"
Tc=6.0 min CN=89 Runoff=2.24 cfs 0.162 af

Subcatchment 10: access drive north of Runoff Area=30,932 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=2.91 cfs 0.235 af

Subcatchment 11: Runoff Area=43,174 sf 36.78% Impervious Runoff Depth=2.46"
Tc=6.0 min CN=83 Runoff=2.86 cfs 0.203 af

Subcatchment 12: Runoff Area=12,920 sf 57.98% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=88 Runoff=1.00 cfs 0.072 af

Subcatchment 13: Runoff Area=45,163 sf 46.46% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=85 Runoff=3.19 cfs 0.228 af

Subcatchment 14: Runoff Area=9,378 sf 94.36% Impervious Runoff Depth=3.85"
Tc=6.0 min CN=97 Runoff=0.87 cfs 0.069 af

Subcatchment 15: Runoff Area=9,157 sf 1.92% Impervious Runoff Depth=1.74"
Tc=6.0 min CN=74 Runoff=0.42 cfs 0.031 af

Subcatchment 16: Runoff Area=15,110 sf 34.16% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=82 Runoff=0.97 cfs 0.069 af

Subcatchment 17: Runoff Area=13,300 sf 85.11% Impervious Runoff Depth=3.52"
Tc=6.0 min CN=94 Runoff=1.19 cfs 0.090 af

Subcatchment 18A: Runoff Area=6,339 sf 40.91% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=84 Runoff=0.43 cfs 0.031 af

Subcatchment 18B: Runoff Area=4,023 sf 58.36% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=88 Runoff=0.31 cfs 0.022 af

Subcatchment 19: Runoff Area=13,711 sf 81.76% Impervious Runoff Depth=3.52"
Tc=6.0 min CN=94 Runoff=1.22 cfs 0.092 af

Subcatchment 20: Runoff Area=28,459 sf 73.83% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=92 Runoff=2.44 cfs 0.180 af

Subcatchment 21: Runoff Area=9,994 sf 83.66% Impervious Runoff Depth=3.52"
Tc=6.0 min CN=94 Runoff=0.89 cfs 0.067 af

Subcatchment 22: Runoff Area=13,511 sf 76.43% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=92 Runoff=1.16 cfs 0.086 af

Subcatchment 23: sub 23 Runoff Area=28,475 sf 21.95% Impervious Runoff Depth=2.05"
Tc=6.0 min CN=78 Runoff=1.57 cfs 0.112 af

Subcatchment 24: Runoff Area=18,261 sf 67.19% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=92 Runoff=1.56 cfs 0.116 af

Subcatchment 25: Runoff Area=118,223 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=438' Tc=67.0 min CN=71 Runoff=1.72 cfs 0.347 af

Subcatchment 26: Runoff Area=3,816 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 27: Runoff Area=4,262 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=0.40 cfs 0.032 af

Subcatchment 28: Runoff Area=79,698 sf 27.42% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=85 Runoff=5.64 cfs 0.402 af

Subcatchment 29: Runoff Area=1,306 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=0.12 cfs 0.010 af

Subcatchment 30: Runoff Area=31,472 sf 77.98% Impervious Runoff Depth=3.41"
Tc=6.0 min CN=93 Runoff=2.75 cfs 0.206 af

Subcatchment 31: Runoff Area=70,616 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=217' Tc=12.3 min CN=71 Runoff=2.28 cfs 0.207 af

Subcatchment 32: Runoff Area=4,677 sf 60.42% Impervious Runoff Depth=3.01"
Tc=6.0 min CN=89 Runoff=0.37 cfs 0.027 af

Subcatchment 33: B3 green Runoff Area=107,893 sf 16.71% Impervious Runoff Depth=1.27"
Tc=6.0 min CN=67 Runoff=3.44 cfs 0.262 af

Subcatchment 34: Runoff Area=24,099 sf 20.00% Impervious Runoff Depth=1.33"
Tc=6.0 min CN=68 Runoff=0.82 cfs 0.061 af

Subcatchment 35: Runoff Area=20,997 sf 20.00% Impervious Runoff Depth=1.33"
Tc=6.0 min CN=68 Runoff=0.71 cfs 0.054 af

Subcatchment 36: B1M1 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 37: B1M2 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 38: B1M3 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 39: B2M4 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 40: B2M5 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 41: B2M6 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=10.59 cfs 0.854 af

Subcatchment 42: B6 Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=1.13 cfs 0.091 af

Subcatchment 43: B5 Runoff Area=18,983 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=1.79 cfs 0.144 af

Subcatchment 44: onsite untreated Runoff Area=159,363 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=574' Tc=18.8 min CN=71 Runoff=4.37 cfs 0.467 af

Subcatchment 45: Runoff Area=64,440 sf 0.00% Impervious Runoff Depth=1.46"
Flow Length=307' Tc=29.9 min CN=70 Runoff=1.38 cfs 0.181 af

Subcatchment 46: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.31 cfs 0.044 af

Subcatchment 47: Runoff Area=79,187 sf 6.00% Impervious Runoff Depth=1.82"
Flow Length=639' Tc=15.9 min CN=75 Runoff=2.82 cfs 0.275 af

Subcatchment 48: Runoff Area=40,183 sf 0.00% Impervious Runoff Depth=1.46"
Flow Length=377' Tc=54.0 min CN=70 Runoff=0.63 cfs 0.113 af

Subcatchment 49: Runoff Area=84,173 sf 0.65% Impervious Runoff Depth=1.46"
Flow Length=470' Tc=54.1 min CN=70 Runoff=1.32 cfs 0.236 af

Subcatchment 50: Runoff Area=30,173 sf 100.00% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=98 Runoff=2.84 cfs 0.229 af

Subcatchment OS10: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth=1.74"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=22.29 cfs 5.490 af

Subcatchment os11a: OFFSITE 3 Runoff Area=192,533 sf 59.04% Impervious Runoff Depth=2.82"
Flow Length=532' Tc=6.8 min CN=87 Runoff=14.08 cfs 1.039 af

Subcatchment os11b: OFFSITE 3 Runoff Area=320,814 sf 1.43% Impervious Runoff Depth=1.60"
Flow Length=528' Tc=18.9 min CN=72 Runoff=9.24 cfs 0.983 af

Subcatchment OS9: OFFSITE 1 (Below Runoff Area=702,010 sf 3.63% Impervious Runoff Depth=1.82"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=17.80 cfs 2.442 af

Reach 9R: ANALYSIS POINT 9 Inflow=17.80 cfs 2.442 af
Outflow=17.80 cfs 2.442 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=1.23' Max Vel=11.01 fps Inflow=22.29 cfs 5.490 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=22.29 cfs 5.490 af

Reach 11R: Stream 9 Inflow=14.08 cfs 1.039 af
Outflow=14.08 cfs 1.039 af

Reach 17R: untreated Inflow=1.19 cfs 0.090 af
Outflow=1.19 cfs 0.090 af

Reach 20R: untreated Inflow=2.44 cfs 0.180 af
Outflow=2.44 cfs 0.180 af

Reach 23R: sub 23 Inflow=1.57 cfs 0.112 af
Outflow=1.57 cfs 0.112 af

Reach 27R: extisting Inflow=0.40 cfs 0.032 af
Outflow=0.40 cfs 0.032 af

Reach 29R: untreated Inflow=0.12 cfs 0.010 af
Outflow=0.12 cfs 0.010 af

Reach 32R: untreated Inflow=0.37 cfs 0.027 af
Outflow=0.37 cfs 0.027 af

Reach 44R: Inflow=4.37 cfs 0.467 af
Outflow=4.37 cfs 0.467 af

Reach 47R: Inflow=2.82 cfs 0.275 af
Outflow=2.82 cfs 0.275 af

Reach 48R: (new Reach) Inflow=0.63 cfs 0.113 af
Outflow=0.63 cfs 0.113 af

Reach 49R: Inflow=1.32 cfs 0.236 af
Outflow=1.32 cfs 0.236 af

Reach PT1: ANALYSIS POINT 1 at BWD Little River Inflow=1.96 cfs 0.348 af
Outflow=1.96 cfs 0.348 af

Reach PT10: Analysis point at Little River Inflow=5.64 cfs 0.402 af
Outflow=5.64 cfs 0.402 af

Reach PT2: ANALYSIS POINT 2 at BWD Reservoir Inflow=1.72 cfs 0.347 af
Outflow=1.72 cfs 0.347 af

Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir Inflow=2.28 cfs 0.207 af
Outflow=2.28 cfs 0.207 af

Reach PT5: all BWD reservoir Inflow=3.74 cfs 0.665 af
Outflow=3.74 cfs 0.665 af

Reach PT6: stream 9 offsite Avg. Flow Depth=1.08' Max Vel=3.81 fps Inflow=29.56 cfs 8.971 af
n=0.040 L=483.0' S=0.0145 '/' Capacity=401.91 cfs Outflow=29.54 cfs 8.971 af

Reach PT7: ANALYSIS POINT7 at US Avg. Flow Depth=0.26' Max Vel=6.70 fps Inflow=1.38 cfs 0.181 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=1.38 cfs 0.181 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.03' Max Vel=3.45 fps Inflow=0.31 cfs 0.044 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.31 cfs 0.044 af

Reach PT9: Analysis Point Stream 9 Avg. Flow Depth=0.91' Max Vel=22.13 fps Inflow=40.14 cfs 10.998 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=40.14 cfs 10.998 af

Reach S9-2: Stream 9 Avg. Flow Depth=1.09' Max Vel=4.85 fps Inflow=38.22 cfs 10.421 af
n=0.040 L=1,580.0' S=0.0233 '/' Capacity=120.91 cfs Outflow=37.88 cfs 10.421 af

Reach S9-3: Stream 9 Avg. Flow Depth=1.02' Max Vel=4.80 fps Inflow=39.61 cfs 10.739 af
n=0.035 L=364.0' S=0.0199 '/' Capacity=152.29 cfs Outflow=39.59 cfs 10.739 af

Reach tank: existing clarifier Inflow=59.88 cfs 7.518 af
Outflow=59.88 cfs 7.518 af

Pond dmh10: dmh10 Peak Elev=58.38' Inflow=19.94 cfs 1.636 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=19.94 cfs 1.636 af

Pond dmh11: dmh11 Peak Elev=56.18' Inflow=22.03 cfs 2.609 af
30.0" Round Culvert n=0.013 L=84.0' S=0.0050 '/' Outflow=22.03 cfs 2.609 af

Pond dmh13: dmh13 Peak Elev=55.74' Inflow=22.03 cfs 2.609 af
30.0" Round Culvert n=0.013 L=201.0' S=0.0050 '/' Outflow=22.03 cfs 2.609 af

Pond dmh14: dmh14 Peak Elev=54.99' Inflow=22.26 cfs 2.749 af
30.0" Round Culvert n=0.020 L=23.0' S=0.0052 '/' Outflow=22.26 cfs 2.749 af

Pond dmh15: dmh15 Peak Elev=54.62' Inflow=22.26 cfs 2.749 af
30.0" Round Culvert n=0.013 L=90.0' S=0.0050 '/' Outflow=22.26 cfs 2.749 af

Pond dmh16: dmh16 Peak Elev=60.54' Inflow=0.01 cfs 0.023 af
12.0" Round Culvert n=0.013 L=198.0' S=0.0126 '/' Outflow=0.01 cfs 0.023 af

Pond dmh17: dmh17 Peak Elev=54.25' Inflow=22.27 cfs 2.792 af
30.0" Round Culvert n=0.013 L=35.0' S=0.0051 '/' Outflow=22.27 cfs 2.792 af

Pond dmh19: dmh 19 Peak Elev=55.28' Inflow=1.62 cfs 0.124 af
12.0" Round Culvert n=0.013 L=59.0' S=0.0100 '/' Outflow=1.62 cfs 0.124 af

Pond dmh2: dmh2 Peak Elev=65.95' Inflow=9.97 cfs 0.756 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0150 '/' Outflow=9.97 cfs 0.756 af

Pond dmh20: dmh20 Peak Elev=54.17' Inflow=23.90 cfs 2.917 af
30.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=23.90 cfs 2.917 af

Pond dmh21: dmh21 Peak Elev=54.54' Inflow=29.67 cfs 3.731 af
30.0" Round Culvert n=0.013 L=281.0' S=0.0169 '/' Outflow=29.67 cfs 3.731 af

Pond dmh22: dmh 22 Peak Elev=53.66' Inflow=5.74 cfs 0.615 af
15.0" Round Culvert n=0.013 L=93.0' S=0.0051 '/' Outflow=5.74 cfs 0.615 af

Pond dmh23: dmh23 Peak Elev=59.20' Inflow=4.86 cfs 0.447 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0050 '/' Outflow=4.86 cfs 0.447 af

Pond dmh24: dmh24 Peak Elev=59.39' Inflow=4.86 cfs 0.447 af
12.0" Round Culvert n=0.013 L=72.0' S=0.0025 '/' Outflow=4.86 cfs 0.447 af

Pond dmh24a: dmh24a Peak Elev=59.14' Inflow=1.19 cfs 0.140 af
8.0" Round Culvert n=0.013 L=95.0' S=0.0095 '/' Outflow=1.19 cfs 0.140 af

Pond dmh25: dmh25 Peak Elev=60.19' Inflow=0.12 cfs 0.059 af
12.0" Round Culvert n=0.013 L=98.0' S=0.0510 '/' Outflow=0.12 cfs 0.059 af

Pond dmh26: dmh26 Peak Elev=58.51' Inflow=1.10 cfs 0.330 af
12.0" Round Culvert n=0.020 L=28.0' S=0.0050 '/' Outflow=1.10 cfs 0.330 af

Pond dmh27: dmh27 Peak Elev=53.76' Inflow=1.40 cfs 0.464 af
12.0" Round Culvert n=0.013 L=256.0' S=0.0050 '/' Outflow=1.40 cfs 0.464 af

Pond dmh29: dmh29 Peak Elev=58.58' Inflow=0.83 cfs 0.074 af
8.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=0.83 cfs 0.074 af

Pond dmh3: dmh3 Peak Elev=62.21' Inflow=9.98 cfs 0.880 af
24.0" Round Culvert n=0.013 L=125.0' S=0.0053 '/' Outflow=9.98 cfs 0.880 af

Pond dmh30: dmh30 Peak Elev=55.94' Inflow=0.83 cfs 0.074 af
12.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=0.83 cfs 0.074 af

Pond dmh31: dmh31 Peak Elev=55.08' Inflow=1.39 cfs 0.405 af
12.0" Round Culvert n=0.013 L=259.0' S=0.0050 '/' Outflow=1.39 cfs 0.405 af

Pond dmh32: dmh32 Peak Elev=52.72' Inflow=1.84 cfs 0.567 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0036 '/' Outflow=1.84 cfs 0.567 af

Pond dmh33: dmh33 Peak Elev=54.33' Inflow=0.35 cfs 0.084 af
12.0" Round Culvert n=0.013 L=201.0' S=0.0099 '/' Outflow=0.35 cfs 0.084 af

Pond dmh34: dmh34 Peak Elev=54.01' Inflow=3.68 cfs 0.372 af
12.0" Round Culvert n=0.013 L=39.0' S=0.0100 '/' Outflow=3.68 cfs 0.372 af

Pond dmh35: dmh35 Peak Elev=52.78' Inflow=4.61 cfs 1.064 af
18.0" Round Culvert n=0.013 L=276.0' S=0.0050 '/' Outflow=4.61 cfs 1.064 af

Pond dmh36: dmh36 Peak Elev=51.38' Inflow=4.61 cfs 1.064 af
18.0" Round Culvert n=0.013 L=159.0' S=0.0050 '/' Outflow=4.61 cfs 1.064 af

Pond dmh38: dmh38 Peak Elev=53.75' Inflow=6.77 cfs 0.727 af
18.0" Round Culvert n=0.013 L=106.0' S=0.0100 '/' Outflow=6.77 cfs 0.727 af

Pond dmh39: dmh39 Peak Elev=52.36' Inflow=6.77 cfs 0.748 af
18.0" Round Culvert n=0.013 L=58.0' S=0.0047 '/' Outflow=6.77 cfs 0.748 af

Pond dmh4: dmh4 Peak Elev=61.69' Inflow=9.98 cfs 0.880 af
24.0" Round Culvert n=0.013 L=66.0' S=0.0041 '/' Outflow=9.98 cfs 0.880 af

Pond dmh40: dmh40 Peak Elev=51.22' Inflow=11.35 cfs 1.813 af
24.0" Round Culvert n=0.013 L=340.0' S=0.0050 '/' Outflow=11.35 cfs 1.813 af

Pond dmh43: dmh43 Peak Elev=51.04' Inflow=18.60 cfs 2.562 af
24.0" Round Culvert n=0.013 L=193.0' S=0.0050 '/' Outflow=18.60 cfs 2.562 af

Pond dmh44: dmh44 Peak Elev=48.96' Inflow=18.60 cfs 2.585 af
30.0" Round Culvert n=0.013 L=82.0' S=0.0050 '/' Outflow=18.60 cfs 2.585 af

Pond dmh45: dmh45 Peak Elev=49.78' Inflow=28.52 cfs 3.338 af
30.0" Round Culvert n=0.013 L=316.0' S=0.0050 '/' Outflow=28.52 cfs 3.338 af

Pond dmh47: dmh47 Peak Elev=47.59' Inflow=28.52 cfs 3.338 af
30.0" Round Culvert n=0.013 L=104.0' S=0.0100 '/' Outflow=28.52 cfs 3.338 af

Pond dmh48: dmh48 Peak Elev=46.78' Inflow=30.03 cfs 3.538 af
30.0" Round Culvert n=0.013 L=117.0' S=0.0050 '/' Outflow=30.03 cfs 3.538 af

Pond dmh49: dmh49 Peak Elev=45.34' Inflow=30.04 cfs 3.582 af
36.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=30.04 cfs 3.582 af

Pond dmh5: dmh5 Peak Elev=61.18' Inflow=9.98 cfs 0.880 af
24.0" Round Culvert n=0.013 L=173.0' S=0.0050 '/' Outflow=9.98 cfs 0.880 af

Pond dmh50: dmh50 Peak Elev=48.53' Inflow=29.68 cfs 3.817 af
30.0" Round Culvert n=0.013 L=64.0' S=0.0100 '/' Outflow=29.68 cfs 3.817 af

Pond dmh51: dmh51 Peak Elev=47.87' Inflow=29.68 cfs 3.817 af
30.0" Round Culvert n=0.013 L=38.0' S=0.0287 '/' Outflow=29.68 cfs 3.817 af

Pond dmh52: dmh52 Peak Elev=45.42' Inflow=59.72 cfs 7.398 af
42.0" Round Culvert n=0.013 L=258.0' S=0.0194 '/' Outflow=59.72 cfs 7.398 af

Pond dmh53: dmh53 Peak Elev=37.42' Inflow=59.73 cfs 7.492 af
42.0" Round Culvert n=0.013 L=120.0' S=0.0208 '/' Outflow=59.73 cfs 7.492 af

Pond dmh54: dmh54 Peak Elev=31.43' Inflow=59.88 cfs 7.518 af
42.0" Round Culvert n=0.013 L=152.0' S=0.0329 '/' Outflow=59.88 cfs 7.518 af

Pond dmh55: dhm55 Peak Elev=23.43' Inflow=59.88 cfs 7.518 af
42.0" Round Culvert n=0.013 L=115.0' S=0.0304 '/' Outflow=59.88 cfs 7.518 af

Pond dmh56: dmh56 Peak Elev=16.93' Inflow=59.88 cfs 7.518 af
42.0" Round Culvert n=0.013 L=42.0' S=0.0357 '/' Outflow=59.88 cfs 7.518 af

Pond dmh59: dmh59 Peak Elev=61.31' Inflow=5.17 cfs 0.510 af
12.0" Round Culvert n=0.013 L=294.0' S=0.0050 '/' Outflow=5.17 cfs 0.510 af

Pond dmh6: dmh6 Peak Elev=60.61' Inflow=9.98 cfs 0.880 af
24.0" Round Culvert n=0.020 L=170.0' S=0.0050 '/' Outflow=9.98 cfs 0.880 af

Pond dmh60: dhm60 Peak Elev=39.92' Inflow=59.72 cfs 7.398 af
42.0" Round Culvert n=0.013 L=114.0' S=0.0175 '/' Outflow=59.72 cfs 7.398 af

Pond dmh7: dmh7 Peak Elev=59.41' Inflow=9.98 cfs 0.880 af
24.0" Round Culvert n=0.013 L=170.0' S=0.0050 '/' Outflow=9.98 cfs 0.880 af

Pond dmh8: dmh8 Peak Elev=61.16' Inflow=19.94 cfs 1.636 af
24.0" Round Culvert n=0.013 L=296.0' S=0.0040 '/' Outflow=19.94 cfs 1.636 af

Pond dmh9a: dmh9a Peak Elev=59.43' Inflow=19.94 cfs 1.636 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=19.94 cfs 1.636 af

Pond GSF 11: grassed soil filter Peak Elev=62.18' Storage=4,648 cf Inflow=2.86 cfs 0.203 af
Primary=0.03 cfs 0.073 af Secondary=0.43 cfs 0.081 af Outflow=0.45 cfs 0.154 af

Pond GSF 12: grassed soil filter Peak Elev=61.95' Storage=1,651 cf Inflow=1.00 cfs 0.072 af
Primary=0.01 cfs 0.024 af Secondary=0.28 cfs 0.027 af Outflow=0.29 cfs 0.051 af

Pond GSF 13: grassed soil filter Peak Elev=62.09' Storage=5,204 cf Inflow=3.19 cfs 0.228 af
Primary=0.03 cfs 0.096 af Secondary=0.63 cfs 0.080 af Outflow=0.66 cfs 0.176 af

Pond GSF 15: grassed soil filter Peak Elev=63.73' Storage=600 cf Inflow=0.42 cfs 0.031 af
Primary=0.00 cfs 0.005 af Secondary=0.12 cfs 0.015 af Outflow=0.12 cfs 0.021 af

Pond GSF 16: grassed soil filter Peak Elev=64.07' Storage=2,644 cf Inflow=0.97 cfs 0.069 af
Primary=0.01 cfs 0.023 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.023 af

Pond GSF 18A: grassed soil filter Peak Elev=57.40' Storage=1,090 cf Inflow=0.43 cfs 0.031 af
Primary=0.00 cfs 0.012 af Secondary=0.01 cfs 0.002 af Outflow=0.01 cfs 0.014 af

Pond GSF 18B: grassed soil filter Peak Elev=57.91' Storage=599 cf Inflow=0.31 cfs 0.022 af
Primary=0.00 cfs 0.006 af Secondary=0.03 cfs 0.007 af Outflow=0.03 cfs 0.013 af

Pond GSF 1A: Grassed soil filter Peak Elev=66.32' Storage=2,229 cf Inflow=1.22 cfs 0.087 af
Primary=0.01 cfs 0.035 af Secondary=0.11 cfs 0.024 af Outflow=0.12 cfs 0.059 af

Pond GSF 1B: grassed soil filter Peak Elev=67.00' Storage=1,830 cf Inflow=1.95 cfs 0.138 af
Primary=0.01 cfs 0.039 af Secondary=1.45 cfs 0.085 af Outflow=1.46 cfs 0.125 af

Pond GSF 2: grassed soil filter Peak Elev=57.67' Storage=2,793 cf Inflow=1.85 cfs 0.131 af
Primary=0.02 cfs 0.052 af Secondary=0.42 cfs 0.051 af Outflow=0.44 cfs 0.104 af

Pond GSF 24: grassed soil filter Peak Elev=40.68' Storage=2,561 cf Inflow=1.56 cfs 0.116 af
Primary=0.02 cfs 0.054 af Secondary=0.53 cfs 0.040 af Outflow=0.54 cfs 0.093 af

Pond GSF 3: grassed soil filter Peak Elev=55.84' Storage=3,447 cf Inflow=2.31 cfs 0.164 af
Primary=0.02 cfs 0.054 af Secondary=0.63 cfs 0.071 af Outflow=0.65 cfs 0.125 af

Pond GSF 4: grassed soil filter Peak Elev=55.11' Storage=683 cf Inflow=0.39 cfs 0.028 af
Primary=0.00 cfs 0.013 af Secondary=0.03 cfs 0.008 af Outflow=0.04 cfs 0.021 af

Pond GSF 5: grassed soil filter Peak Elev=54.61' Storage=927 cf Inflow=0.50 cfs 0.036 af
Primary=0.00 cfs 0.013 af Secondary=0.04 cfs 0.011 af Outflow=0.04 cfs 0.023 af

Pond GSF 6: grassed soil filter Peak Elev=48.27' Storage=1,583 cf Inflow=0.89 cfs 0.064 af
Primary=0.01 cfs 0.023 af Secondary=0.08 cfs 0.021 af Outflow=0.09 cfs 0.044 af

Pond GSF 7: grassed soil filter Peak Elev=54.73' Storage=3,371 cf Inflow=1.80 cfs 0.128 af
Primary=0.02 cfs 0.052 af Secondary=0.13 cfs 0.034 af Outflow=0.15 cfs 0.086 af

Pond GSF 8: grassed soil filter Peak Elev=57.74' Storage=5,118 cf Inflow=3.42 cfs 0.246 af
Primary=0.03 cfs 0.098 af Secondary=1.10 cfs 0.101 af Outflow=1.13 cfs 0.200 af

Pond GSF 9: grassed soil filter Peak Elev=63.11' Storage=2,757 cf Inflow=2.24 cfs 0.162 af
Primary=0.02 cfs 0.052 af Secondary=1.42 cfs 0.087 af Outflow=1.44 cfs 0.140 af

Pond ics 12: ICS 12 Peak Elev=63.78' Inflow=10.59 cfs 0.854 af
Primary=9.88 cfs 0.352 af Secondary=0.71 cfs 0.501 af Outflow=10.59 cfs 0.854 af

Pond ICS1: ICS 1 Peak Elev=66.29' Inflow=10.59 cfs 0.854 af
Primary=0.70 cfs 0.421 af Secondary=9.90 cfs 0.432 af Outflow=10.59 cfs 0.854 af

Pond ICS18: ICS18 Peak Elev=60.46' Inflow=1.79 cfs 0.144 af
Primary=0.66 cfs 0.127 af Secondary=1.12 cfs 0.017 af Outflow=1.79 cfs 0.144 af

Pond ics28: ICS28 Peak Elev=60.62' Inflow=1.13 cfs 0.091 af
Primary=0.64 cfs 0.086 af Secondary=0.49 cfs 0.005 af Outflow=1.13 cfs 0.091 af

Pond ICS37: ISC37 Peak Elev=55.58' Inflow=10.59 cfs 0.854 af
Primary=5.19 cfs 0.787 af Secondary=5.41 cfs 0.067 af Outflow=10.59 cfs 0.854 af

Pond ics46: ICS46 Peak Elev=49.82' Inflow=10.59 cfs 0.854 af
Primary=0.71 cfs 0.501 af Secondary=9.88 cfs 0.353 af Outflow=10.59 cfs 0.854 af

Pond ICS9: ICS9 Peak Elev=65.00' Inflow=10.59 cfs 0.854 af
Primary=0.71 cfs 0.500 af Secondary=9.88 cfs 0.353 af Outflow=10.59 cfs 0.854 af

Pond ISC42: ICS 42 Peak Elev=55.92' Inflow=10.59 cfs 0.854 af
Primary=5.56 cfs 0.796 af Secondary=5.03 cfs 0.057 af Outflow=10.59 cfs 0.854 af

Pond MPP 10: Rtank storage Peak Elev=61.80' Storage=0.067 af Inflow=2.91 cfs 0.235 af
8.0" Round Culvert x 6.00 n=0.013 L=2.0' S=0.0400 '/' Outflow=1.69 cfs 0.216 af

Pond MPP 14: Rtanks Peak Elev=56.59' Storage=829 cf Inflow=0.87 cfs 0.069 af
8.0" Round Culvert x 2.00 n=0.013 L=21.0' S=0.0052 '/' Outflow=0.53 cfs 0.065 af

Pond MPP 19: Rtanks Peak Elev=55.60' Storage=0.043 af Inflow=1.22 cfs 0.092 af
6.0" Round Culvert n=0.013 L=19.0' S=0.0042 '/' Outflow=0.35 cfs 0.084 af

Pond MPP 21: Rtanks Peak Elev=55.33' Storage=972 cf Inflow=0.89 cfs 0.067 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.40 cfs 0.064 af

Pond MPP 22: Rtanks Peak Elev=55.57' Storage=1,716 cf Inflow=1.16 cfs 0.086 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.33 cfs 0.077 af

Pond MPP 26: Rtanks Peak Elev=34.89' Storage=448 cf Inflow=0.36 cfs 0.029 af
8.0" Round Culvert n=0.013 L=8.0' S=0.0350 '/' Outflow=0.19 cfs 0.026 af

Pond MPP 50: Peak Elev=54.95' Storage=3,076 cf Inflow=2.84 cfs 0.229 af
8.0" Round Culvert x 7.00 n=0.013 L=3.0' S=0.0100 '/' Outflow=1.85 cfs 0.200 af

Pond mpp30: Rtanks Peak Elev=31.13' Storage=4,276 cf Inflow=3.46 cfs 0.259 af
Outflow=0.55 cfs 0.259 af

Pond SSF 36: ssf Peak Elev=64.54' Storage=11,075 cf Inflow=0.70 cfs 0.421 af
Primary=0.08 cfs 0.235 af Secondary=0.24 cfs 0.088 af Outflow=0.32 cfs 0.323 af

Pond ssf37: ssf Peak Elev=63.34' Storage=11,768 cf Inflow=0.71 cfs 0.500 af
Primary=0.08 cfs 0.237 af Secondary=0.43 cfs 0.165 af Outflow=0.51 cfs 0.402 af

Pond ssf38: ssf Peak Elev=62.45' Storage=13,019 cf Inflow=9.88 cfs 0.352 af
Primary=0.08 cfs 0.162 af Secondary=1.20 cfs 0.093 af Outflow=1.29 cfs 0.255 af

Pond ssf39: ssf Peak Elev=55.20' Storage=17,179 cf Inflow=5.19 cfs 0.787 af
Primary=0.09 cfs 0.240 af Secondary=2.97 cfs 0.420 af Outflow=3.06 cfs 0.661 af

Pond ssf40: ssf Peak Elev=55.52' Storage=16,286 cf Inflow=5.56 cfs 0.796 af
Primary=0.09 cfs 0.239 af Secondary=3.42 cfs 0.453 af Outflow=3.51 cfs 0.692 af

Pond ssf41: ssf Peak Elev=48.15' Storage=11,933 cf Inflow=0.71 cfs 0.501 af
Primary=0.08 cfs 0.238 af Secondary=0.42 cfs 0.162 af Outflow=0.50 cfs 0.400 af

Pond ssf42: ssf Peak Elev=60.66' Storage=1,707 cf Inflow=0.64 cfs 0.086 af
Primary=0.01 cfs 0.027 af Secondary=0.55 cfs 0.042 af Outflow=0.56 cfs 0.069 af

Pond ssf43: ssf Peak Elev=59.93' Storage=2,330 cf Inflow=0.66 cfs 0.127 af
Primary=0.02 cfs 0.042 af Secondary=0.61 cfs 0.065 af Outflow=0.63 cfs 0.108 af

Total Runoff Area = 116.264 ac Runoff Volume = 21.379 af Average Runoff Depth = 2.21"
74.76% Pervious = 86.915 ac 25.24% Impervious = 29.349 ac

Summary for Subcatchment 1A:

Runoff = 1.22 cfs @ 12.09 hrs, Volume= 0.087 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	11,582	77	>75% Grass cover, Good, HSG C/D
*	6,203	98	Impervious, HSG C/D
	17,785	84	Weighted Average
	11,582		65.12% Pervious Area
	6,203		34.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 1B:

Runoff = 1.95 cfs @ 12.09 hrs, Volume= 0.138 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	6,832	98	Impervious
	27,186	74	>75% Grass cover, Good, HSG C
	34,018	79	Weighted Average
	27,186		79.92% Pervious Area
	6,832		20.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 2:

Runoff = 1.85 cfs @ 12.09 hrs, Volume= 0.131 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	8,052	98	Impervious
	5,300	74	>75% Grass cover, Good, HSG C
*	17,697	74	>75% Grass cover, Good, HSG C/D
	31,049	80	Weighted Average
	22,997		74.07% Pervious Area
	8,052		25.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 3:

Runoff = 2.31 cfs @ 12.09 hrs, Volume= 0.164 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	13,091	98	Impervious, HSG C
*	15,516	74	>75% Grass cover, Good, HSG C/D
*	7,540	70	Woods, Good, HSG C/D
	36,147	82	Weighted Average
	23,056		63.78% Pervious Area
	13,091		36.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 4:

Runoff = 0.39 cfs @ 12.09 hrs, Volume= 0.028 af, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
	8,448	74	>75% Grass cover, Good, HSG C
	8,448		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 5:

Runoff = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

Area (sf)	CN	Description
10,807	74	>75% Grass cover, Good, HSG C
10,807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 6:

Runoff = 0.89 cfs @ 12.09 hrs, Volume= 0.064 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	4,484	98	Impervious
*	9,501	74	>75% Grass cover, Good, HSG C
	13,985	82	Weighted Average
	9,501		67.94% Pervious Area
	4,484		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 7:

Runoff = 1.80 cfs @ 12.09 hrs, Volume= 0.128 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	7,846	98	Impervious
	3,270	74	>75% Grass cover, Good, HSG C
*	19,229	74	>75% Grass cover, Good, HSG C/D
	30,345	80	Weighted Average
	22,499		74.14% Pervious Area
	7,846		25.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 8:

Runoff = 3.42 cfs @ 12.09 hrs, Volume= 0.246 af, Depth= 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	25,409	98	Impervious
	20,142	74	>75% Grass cover, Good, HSG C
	45,551	87	Weighted Average
	20,142		44.22% Pervious Area
	25,409		55.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 9:

Runoff = 2.24 cfs @ 12.09 hrs, Volume= 0.162 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	10,348	74	>75% Grass cover, Good, HSG C/D
*	17,843	98	Impervious
	28,191	89	Weighted Average
	10,348		36.71% Pervious Area
	17,843		63.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 10: access drive north of B1

Runoff = 2.91 cfs @ 12.08 hrs, Volume= 0.235 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	30,932	98	Impervious
	30,932		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 11:

Runoff = 2.86 cfs @ 12.09 hrs, Volume= 0.203 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	15,881	98	Impervious
*	27,293	74	>75% Grass cover, Good, HSG C/D
	43,174	83	Weighted Average
	27,293		63.22% Pervious Area
	15,881		36.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 12:

Runoff = 1.00 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	7,491	98	Impervious, HSG C/D
	5,429	74	>75% Grass cover, Good, HSG C
	12,920	88	Weighted Average
	5,429		42.02% Pervious Area
	7,491		57.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 13:

Runoff = 3.19 cfs @ 12.09 hrs, Volume= 0.228 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	20,981	98	Impervious
*	24,182	74	>75% Grass cover, Good, HSG C/D
	45,163	85	Weighted Average
	24,182		53.54% Pervious Area
	20,981		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 14:

Runoff = 0.87 cfs @ 12.08 hrs, Volume= 0.069 af, Depth= 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	8,849	98	Impervious
	529	74	>75% Grass cover, Good, HSG C
	9,378	97	Weighted Average
	529		5.64% Pervious Area
	8,849		94.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 15:

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.031 af, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	176	98	Impervious
*	4,183	74	>75% Grass cover, Good, HSG C/D
*	4,798	74	vegetated roof
	9,157	74	Weighted Average
	8,981		98.08% Pervious Area
	176		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 16:

Runoff = 0.97 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	5,161	98	Impervious
*	9,949	74	>75% Grass cover, Good, HSG C/D
	15,110	82	Weighted Average
	9,949		65.84% Pervious Area
	5,161		34.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 17:

Runoff = 1.19 cfs @ 12.08 hrs, Volume= 0.090 af, Depth= 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	11,320	98	Impervious
*	1,980	74	>75% Grass cover, Good, HSG C/D
	13,300	94	Weighted Average
	1,980		14.89% Pervious Area
	11,320		85.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18A:

Runoff = 0.43 cfs @ 12.09 hrs, Volume= 0.031 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	2,593	98	Impervious
*	3,746	74	>75% Grass cover, Good, HSG C/D
	6,339	84	Weighted Average
	3,746		59.09% Pervious Area
	2,593		40.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18B:

Runoff = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af, Depth= 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	2,348	98	Impervious
*	1,675	74	>75% Grass cover, Good, HSG C/D
	4,023	88	Weighted Average
	1,675		41.64% Pervious Area
	2,348		58.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 19:

Runoff = 1.22 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	11,210	98	Impervious
*	2,501	74	>75% Grass cover, Good, HSG C/D
	13,711	94	Weighted Average
	2,501		18.24% Pervious Area
	11,210		81.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 20:

Runoff = 2.44 cfs @ 12.08 hrs, Volume= 0.180 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	21,010	98	Impervious
*	7,449	74	>75% Grass cover, Good, HSG C/D
	28,459	92	Weighted Average
	7,449		26.17% Pervious Area
	21,010		73.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 21:

Runoff = 0.89 cfs @ 12.08 hrs, Volume= 0.067 af, Depth= 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	8,361	98	Impervious
*	1,633	74	>75% Grass cover, Good, HSG C/D
	9,994	94	Weighted Average
	1,633		16.34% Pervious Area
	8,361		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 22:

Runoff = 1.16 cfs @ 12.08 hrs, Volume= 0.086 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	10,326	98	Impervious
*	3,185	74	>75% Grass cover, Good, HSG C/D
	13,511	92	Weighted Average
	3,185		23.57% Pervious Area
	10,326		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 23: sub 23

Runoff = 1.57 cfs @ 12.09 hrs, Volume= 0.112 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

Area (sf)	CN	Description
6,249	98	Paved parking, HSG C
2,450	74	>75% Grass cover, Good, HSG C
10,135	74	>75% Grass cover, Good, HSG C
9,641	70	Woods, Good, HSG C
28,475	78	Weighted Average
22,226		78.05% Pervious Area
6,249		21.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct**

Summary for Subcatchment 24:

Runoff = 1.56 cfs @ 12.08 hrs, Volume= 0.116 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	12,270	98	Impervious
	5,991	80	>75% Grass cover, Good, HSG D
	18,261	92	Weighted Average
	5,991		32.81% Pervious Area
	12,270		67.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 25:

Runoff = 1.72 cfs @ 12.95 hrs, Volume= 0.347 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	21,818	74	>75% Grass cover, Good, HSG C/D
*	96,405	70	Woods, Good, HSG C/D
	118,223	71	Weighted Average
	118,223		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.4	130	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
11.9	253	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	55	0.3000	1.37		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
67.0	438	Total			

Summary for Subcatchment 26:

Runoff = 0.36 cfs @ 12.08 hrs, Volume= 0.029 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	3,816	98	Impervious
	3,816		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 27:

Runoff = 0.40 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	4,262	98	Impervious
	4,262		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 28:

Runoff = 5.64 cfs @ 12.09 hrs, Volume= 0.402 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	21,852	98	Impervious
	40,598	80	>75% Grass cover, Good, HSG D
	6,418	77	Woods, Good, HSG D
	10,830	79	Woods/grass comb., Good, HSG D
	79,698	85	Weighted Average
	57,846		72.58% Pervious Area
	21,852		27.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 29:

Runoff = 0.12 cfs @ 12.08 hrs, Volume= 0.010 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	1,306	98	Impervious
	1,306		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 30:

Runoff = 2.75 cfs @ 12.08 hrs, Volume= 0.206 af, Depth= 3.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	24,541	98	Impervious
*	6,931	74	>75% Grass cover, Good, HSG C/D
	31,472	93	Weighted Average
	6,931		22.02% Pervious Area
	24,541		77.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 31:

Runoff = 2.28 cfs @ 12.18 hrs, Volume= 0.207 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	24,011	74	>75% Grass cover, Good, HSG C/D
*	46,605	70	Woods, Good, HSG C/D
	70,616	71	Weighted Average
	70,616		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0500	0.16		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
1.7	86	0.1200	0.87		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	31	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
12.3	217	Total			

Summary for Subcatchment 32:

Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	2,826	98	Impervious
*	1,851	74	>75% Grass cover, Good, HSG C/D
	4,677	89	Weighted Average
	1,851		39.58% Pervious Area
	2,826		60.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 33: B3 green

Runoff = 3.44 cfs @ 12.10 hrs, Volume= 0.262 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	89,860	61	vegetated roof
*	18,033	98	penthouse
	107,893	67	Weighted Average
	89,860		83.29% Pervious Area
	18,033		16.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 34:

Runoff = 0.82 cfs @ 12.10 hrs, Volume= 0.061 af, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	19,279	61	vegetated roof
*	4,820	98	penthouse/walks on roof
	24,099	68	Weighted Average
	19,279		80.00% Pervious Area
	4,820		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 35:

Runoff = 0.71 cfs @ 12.10 hrs, Volume= 0.054 af, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	16,797	61	vegetated roof
*	4,200	98	penthouse/walks on roof
	20,997	68	Weighted Average
	16,797		80.00% Pervious Area
	4,200		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 36: B1M1

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 37: B1M2

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 38: B1M3

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 39: B2M4

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 40: B2M5

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 41: B2M6

Runoff = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 42: B6

Runoff = 1.13 cfs @ 12.08 hrs, Volume= 0.091 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	12,000	98	Impervious
	12,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 43: B5

Runoff = 1.79 cfs @ 12.08 hrs, Volume= 0.144 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	18,983	98	Impervious
	18,983		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 44: onsite untreated

Runoff = 4.37 cfs @ 12.27 hrs, Volume= 0.467 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	29,531	74	>75% Grass cover, Good, HSG C/D
*	129,832	70	Woods, Good, HSG C/D
	159,363	71	Weighted Average
	159,363		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	97	0.0620	0.25		**Sheet Flow, a-b** Grass: Short n= 0.150 P2= 2.90"
4.3	170	0.0090	0.66		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
1.3	97	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
6.8	210	0.0430	0.52		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
18.8	574	Total			

Summary for Subcatchment 45:

Runoff = 1.38 cfs @ 12.46 hrs, Volume= 0.181 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	5,799	74	>75% Grass cover, Good, HSG C/D
*	58,641	70	Woods, Good, HSG C/D
	64,440	70	Weighted Average
	64,440		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	79	0.0340	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.9	121	0.0800	0.71		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	34	0.0600	3.67		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage

29.9 307 Total

Summary for Subcatchment 46: SUBCAT 8

Runoff = 0.31 cfs @ 12.53 hrs, Volume= 0.044 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 47:

Runoff = 2.82 cfs @ 12.23 hrs, Volume= 0.275 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
	16,941	80	>75% Grass cover, Good, HSG D
*	27,433	74	>75% Grass cover, Good, HSG C/D
*	30,061	70	Woods, Good, HSG C/D
*	4,752	98	Impervious
	79,187	75	Weighted Average
	74,435		94.00% Pervious Area
	4,752		6.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	102	0.0400	0.15		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
0.6	30	0.1000	0.79		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.6	100	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
3.2	407	0.0200	2.12		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
15.9	639	Total			

Summary for Subcatchment 48:

Runoff = 0.63 cfs @ 12.78 hrs, Volume= 0.113 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	305	74	>75% Grass cover, Good, HSG C/D
*	36,887	70	Woods, Good, HSG C/D
	2,991	70	Woods, Good, HSG C
	40,183	70	Weighted Average
	40,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.6	127	0.0200	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.4	115	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	45	0.2000	1.12		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
0.3	90	0.0880	4.45		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
54.0	377	Total			

Summary for Subcatchment 49:

Runoff = 1.32 cfs @ 12.80 hrs, Volume= 0.236 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	2,923	74	>75% Grass cover, Good, HSG C/D
*	80,702	70	Woods, Good, HSG C/D
*	548	98	Impervious
	84,173	70	Weighted Average
	83,625		99.35% Pervious Area
	548		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.4	115	0.0500	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
23.7	355	0.0100	0.25		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
54.1	470	Total			

Summary for Subcatchment 50:

Runoff = 2.84 cfs @ 12.08 hrs, Volume= 0.229 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	30,173	98	Impervious
	30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment OS10: OFFSITE 2 (above Perkins Rd)

Runoff = 22.29 cfs @ 13.29 hrs, Volume= 5.490 af, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment os11a: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 14.08 cfs @ 12.10 hrs, Volume= 1.039 af, Depth= 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment os11b: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 9.24 cfs @ 12.28 hrs, Volume= 0.983 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Subcatchment OS9: OFFSITE 1 (Below Perkins Rd)

Runoff = 17.80 cfs @ 12.52 hrs, Volume= 2.442 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	6,087	74	>75% Grass cover, Good, HSG C
	72,382	70	Woods, Good, HSG C
	61,890	74	>75% Grass cover, Good, HSG C
	702,010	75	Weighted Average
	676,497		96.37% Pervious Area
	25,513		3.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Reach 9R: ANALYSIS POINT 9

Inflow Area = 16.116 ac, 3.63% Impervious, Inflow Depth = 1.82" for 10-year event
Inflow = 17.80 cfs @ 12.52 hrs, Volume= 2.442 af
Outflow = 17.80 cfs @ 12.52 hrs, Volume= 2.442 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

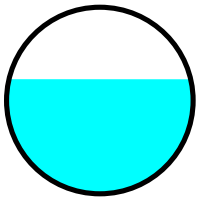
Summary for Reach 10R: Perkins Road Culvert

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth = 1.74" for 10-year event
Inflow = 22.29 cfs @ 13.29 hrs, Volume= 5.490 af
Outflow = 22.29 cfs @ 13.29 hrs, Volume= 5.490 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 11.01 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.21 fps, Avg. Travel Time= 0.1 min

Peak Storage= 51 cf @ 13.29 hrs
Average Depth at Peak Storage= 1.23'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: Stream 9

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth = 2.82" for 10-year event
Inflow = 14.08 cfs @ 12.10 hrs, Volume= 1.039 af
Outflow = 14.08 cfs @ 12.10 hrs, Volume= 1.039 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 17R: untreated

Inflow Area = 0.305 ac, 85.11% Impervious, Inflow Depth = 3.52" for 10-year event
Inflow = 1.19 cfs @ 12.08 hrs, Volume= 0.090 af
Outflow = 1.19 cfs @ 12.08 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 20R: untreated

Inflow Area = 0.653 ac, 73.83% Impervious, Inflow Depth = 3.31" for 10-year event
Inflow = 2.44 cfs @ 12.08 hrs, Volume= 0.180 af
Outflow = 2.44 cfs @ 12.08 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 23R: sub 23

Inflow Area = 0.654 ac, 21.95% Impervious, Inflow Depth = 2.05" for 10-year event
Inflow = 1.57 cfs @ 12.09 hrs, Volume= 0.112 af
Outflow = 1.57 cfs @ 12.09 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 27R: extisting

Inflow Area = 0.098 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 0.40 cfs @ 12.08 hrs, Volume= 0.032 af
Outflow = 0.40 cfs @ 12.08 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 29R: untreated

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 0.12 cfs @ 12.08 hrs, Volume= 0.010 af
Outflow = 0.12 cfs @ 12.08 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 32R: untreated

Inflow Area = 0.107 ac, 60.42% Impervious, Inflow Depth = 3.01" for 10-year event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af
Outflow = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 44R:

Inflow Area = 3.658 ac, 0.00% Impervious, Inflow Depth = 1.53" for 10-year event
Inflow = 4.37 cfs @ 12.27 hrs, Volume= 0.467 af
Outflow = 4.37 cfs @ 12.27 hrs, Volume= 0.467 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 47R:

Inflow Area = 1.818 ac, 6.00% Impervious, Inflow Depth = 1.82" for 10-year event
Inflow = 2.82 cfs @ 12.23 hrs, Volume= 0.275 af
Outflow = 2.82 cfs @ 12.23 hrs, Volume= 0.275 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 48R: (new Reach)

Inflow Area = 0.922 ac, 0.00% Impervious, Inflow Depth = 1.46" for 10-year event
Inflow = 0.63 cfs @ 12.78 hrs, Volume= 0.113 af
Outflow = 0.63 cfs @ 12.78 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 49R:

Inflow Area = 1.932 ac, 0.65% Impervious, Inflow Depth = 1.46" for 10-year event
Inflow = 1.32 cfs @ 12.80 hrs, Volume= 0.236 af
Outflow = 1.32 cfs @ 12.80 hrs, Volume= 0.236 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT1: ANALYSIS POINT 1 at BWD Little River

Inflow Area = 2.855 ac, 0.44% Impervious, Inflow Depth = 1.46" for 10-year event
Inflow = 1.96 cfs @ 12.80 hrs, Volume= 0.348 af
Outflow = 1.96 cfs @ 12.80 hrs, Volume= 0.348 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT10: Analysis point at Little River

Inflow Area = 1.830 ac, 27.42% Impervious, Inflow Depth = 2.64" for 10-year event
Inflow = 5.64 cfs @ 12.09 hrs, Volume= 0.402 af
Outflow = 5.64 cfs @ 12.09 hrs, Volume= 0.402 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD Reservoir

Inflow Area = 2.714 ac, 0.00% Impervious, Inflow Depth = 1.53" for 10-year event
Inflow = 1.72 cfs @ 12.95 hrs, Volume= 0.347 af
Outflow = 1.72 cfs @ 12.95 hrs, Volume= 0.347 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir

Inflow Area = 1.621 ac, 0.00% Impervious, Inflow Depth = 1.53" for 10-year event
Inflow = 2.28 cfs @ 12.18 hrs, Volume= 0.207 af
Outflow = 2.28 cfs @ 12.18 hrs, Volume= 0.207 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT5: all BWD reservoir

Inflow Area = 4.989 ac, 2.88% Impervious, Inflow Depth = 1.60" for 10-year event
Inflow = 3.74 cfs @ 12.14 hrs, Volume= 0.665 af
Outflow = 3.74 cfs @ 12.14 hrs, Volume= 0.665 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT6: stream 9 offsite

Inflow Area = 58.299 ac, 7.15% Impervious, Inflow Depth = 1.85" for 10-year event
Inflow = 29.56 cfs @ 12.98 hrs, Volume= 8.971 af
Outflow = 29.54 cfs @ 12.99 hrs, Volume= 8.971 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.81 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 1.57 fps, Avg. Travel Time= 5.1 min

Peak Storage= 3,741 cf @ 12.99 hrs
Average Depth at Peak Storage= 1.08'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 401.91 cfs

5.00' x 4.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

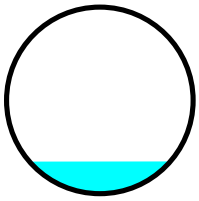
Summary for Reach PT7: ANALYSIS POINT7 at US Route 1 culvert

Inflow Area = 1.479 ac, 0.00% Impervious, Inflow Depth = 1.46" for 10-year event
Inflow = 1.38 cfs @ 12.46 hrs, Volume= 0.181 af
Outflow = 1.38 cfs @ 12.46 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.70 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.93 fps, Avg. Travel Time= 0.5 min

Peak Storage= 17 cf @ 12.46 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Route 1 culvert

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth = 1.53" for 10-year event
Inflow = 0.31 cfs @ 12.53 hrs, Volume= 0.044 af
Outflow = 0.31 cfs @ 12.53 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 3.45 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.51 fps, Avg. Travel Time= 0.5 min

Peak Storage= 7 cf @ 12.53 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

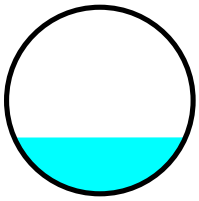
Summary for Reach PT9: Analysis Point Stream 9 at US Route 1 culvert

Inflow Area = 72.473 ac, 7.13% Impervious, Inflow Depth = 1.82" for 10-year event
Inflow = 40.14 cfs @ 12.50 hrs, Volume= 10.998 af
Outflow = 40.14 cfs @ 12.50 hrs, Volume= 10.998 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 22.13 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 7.37 fps, Avg. Travel Time= 0.2 min

Peak Storage= 169 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.91'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

Inflow Area = 69.323 ac, 6.16% Impervious, Inflow Depth = 1.80" for 10-year event
Inflow = 38.22 cfs @ 12.45 hrs, Volume= 10.421 af
Outflow = 37.88 cfs @ 12.52 hrs, Volume= 10.421 af, Atten= 1%, Lag= 4.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.85 fps, Min. Travel Time= 5.4 min
Avg. Velocity = 1.61 fps, Avg. Travel Time= 16.4 min

Peak Storage= 12,344 cf @ 12.52 hrs
Average Depth at Peak Storage= 1.09'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 120.91 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

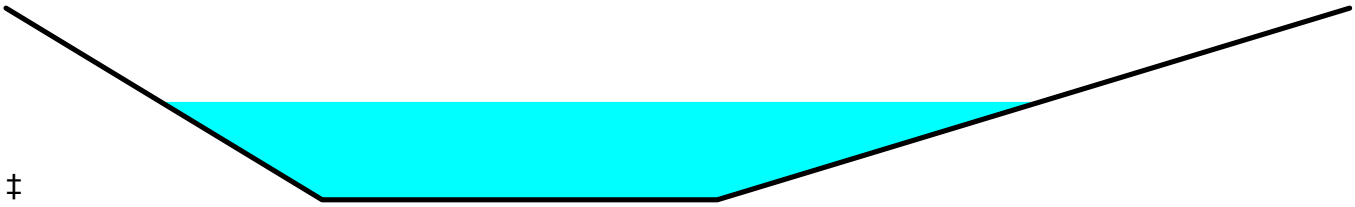
Summary for Reach S9-3: Stream 9

Inflow Area = 71.269 ac, 6.33% Impervious, Inflow Depth = 1.81" for 10-year event
Inflow = 39.61 cfs @ 12.49 hrs, Volume= 10.739 af
Outflow = 39.59 cfs @ 12.50 hrs, Volume= 10.739 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.80 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.45 fps, Avg. Travel Time= 4.2 min

Peak Storage= 3,002 cf @ 12.50 hrs
Average Depth at Peak Storage= 1.02'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 152.29 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Summary for Reach tank: existing clarifier

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af
Outflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond dmh10: dmh10

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 3.30" for 10-year event
Inflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af
Outflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af, Atten= 0%, Lag= 0.0 min
Primary = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.38' @ 12.08 hrs
Flood Elev= 65.54'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.59'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.59' / 53.56' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.91 cfs @ 12.08 hrs HW=58.37' (Free Discharge)
1=Culvert (Inlet Controls 19.91 cfs @ 6.34 fps)

Summary for Pond dmh11: dmh11

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 3.39" for 10-year event
Inflow = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af
Outflow = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af, Atten= 0%, Lag= 0.0 min
Primary = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.18' @ 12.09 hrs
Flood Elev= 65.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.54'	**30.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.54' / 53.12' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=22.00 cfs @ 12.09 hrs HW=56.18' (Free Discharge)
1=Culvert (Barrel Controls 22.00 cfs @ 5.28 fps)

Summary for Pond dmh13: dmh13

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 3.39" for 10-year event
Inflow = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af
Outflow = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af, Atten= 0%, Lag= 0.0 min
Primary = 22.03 cfs @ 12.09 hrs, Volume= 2.609 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 55.74' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.10'	**30.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.10' / 52.09' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=22.00 cfs @ 12.09 hrs HW=55.74' (Free Discharge)
↑**1=Culvert** (Inlet Controls 22.00 cfs @ 4.48 fps)

Summary for Pond dmh14: dmh14

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 3.34" for 10-year event
Inflow = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af
Outflow = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af, Atten= 0%, Lag= 0.0 min
Primary = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.99' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	52.07'	**30.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.07' / 51.95' S= 0.0052 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 4.91 sf

Primary OutFlow Max=22.28 cfs @ 12.09 hrs HW=54.99' (Free Discharge)
↑**1=Culvert** (Barrel Controls 22.28 cfs @ 4.89 fps)

Summary for Pond dmh15: dmh15

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 3.34" for 10-year event
Inflow = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af
Outflow = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af, Atten= 0%, Lag= 0.0 min
Primary = 22.26 cfs @ 12.09 hrs, Volume= 2.749 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.62' @ 12.09 hrs
Flood Elev= 64.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.95'	**30.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.95' / 51.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=22.27 cfs @ 12.09 hrs HW=54.62' (Free Discharge)
1=Culvert (Inlet Controls 22.27 cfs @ 4.54 fps)

Summary for Pond dmh16: dmh16

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth > 0.78" for 10-year event
Inflow = 0.01 cfs @ 24.07 hrs, Volume= 0.023 af
Outflow = 0.01 cfs @ 24.07 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.01 cfs @ 24.07 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.54' @ 24.07 hrs
Flood Elev= 64.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 58.00' S= 0.0126 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 24.07 hrs HW=60.54' (Free Discharge)
1=Culvert (Inlet Controls 0.01 cfs @ 0.56 fps)

Summary for Pond dmh17: dmh17

Inflow Area = 10.447 ac, 87.59% Impervious, Inflow Depth > 3.21" for 10-year event
Inflow = 22.27 cfs @ 12.09 hrs, Volume= 2.792 af
Outflow = 22.27 cfs @ 12.09 hrs, Volume= 2.792 af, Atten= 0%, Lag= 0.0 min
Primary = 22.27 cfs @ 12.09 hrs, Volume= 2.792 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.25' @ 12.09 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.48'	**30.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.48' / 51.30' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=22.27 cfs @ 12.09 hrs HW=54.25' (Free Discharge)
1=Culvert (Barrel Controls 22.27 cfs @ 5.11 fps)

Summary for Pond dmh19: dmh 19

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth > 3.43" for 10-year event
Inflow = 1.62 cfs @ 12.09 hrs, Volume= 0.124 af
Outflow = 1.62 cfs @ 12.09 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.0 min
Primary = 1.62 cfs @ 12.09 hrs, Volume= 0.124 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.28' @ 12.09 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.48'	**12.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.48' / 53.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.62 cfs @ 12.09 hrs HW=55.28' (Free Discharge)
1=Culvert (Inlet Controls 1.62 cfs @ 2.40 fps)

Summary for Pond dmh2: dmh2

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 3.51" for 10-year event
Inflow = 9.97 cfs @ 12.08 hrs, Volume= 0.756 af
Outflow = 9.97 cfs @ 12.08 hrs, Volume= 0.756 af, Atten= 0%, Lag= 0.0 min
Primary = 9.97 cfs @ 12.08 hrs, Volume= 0.756 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.95' @ 12.08 hrs
Flood Elev= 69.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.00' / 61.50' S= 0.0150 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=9.95 cfs @ 12.08 hrs HW=65.94' (Free Discharge)
1=Culvert (Inlet Controls 9.95 cfs @ 5.63 fps)

Summary for Pond dmh20: dmh20

Inflow Area = 10.883 ac, 88.09% Impervious, Inflow Depth > 3.22" for 10-year event
Inflow = 23.90 cfs @ 12.09 hrs, Volume= 2.917 af
Outflow = 23.90 cfs @ 12.09 hrs, Volume= 2.917 af, Atten= 0%, Lag= 0.0 min
Primary = 23.90 cfs @ 12.09 hrs, Volume= 2.917 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.17' @ 12.09 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**30.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.28' / 50.78' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=23.87 cfs @ 12.09 hrs HW=54.17' (Free Discharge)
↑**1=Culvert** (Inlet Controls 23.87 cfs @ 4.86 fps)

Summary for Pond dmh21: dmh21

Inflow Area = 14.600 ac, 81.45% Impervious, Inflow Depth > 3.07" for 10-year event
Inflow = 29.67 cfs @ 12.09 hrs, Volume= 3.731 af
Outflow = 29.67 cfs @ 12.09 hrs, Volume= 3.731 af, Atten= 0%, Lag= 0.0 min
Primary = 29.67 cfs @ 12.09 hrs, Volume= 3.731 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.54' @ 12.09 hrs
Flood Elev= 58.55'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.76'	**30.0" Round Culvert** L= 281.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.76' / 46.00' S= 0.0169 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=29.63 cfs @ 12.09 hrs HW=54.53' (Free Discharge)
↑**1=Culvert** (Inlet Controls 29.63 cfs @ 6.04 fps)

Summary for Pond dmh22: dmh 22

Inflow Area = 2.671 ac, 64.47% Impervious, Inflow Depth > 2.76" for 10-year event
Inflow = 5.74 cfs @ 12.09 hrs, Volume= 0.615 af
Outflow = 5.74 cfs @ 12.09 hrs, Volume= 0.615 af, Atten= 0%, Lag= 0.0 min
Primary = 5.74 cfs @ 12.09 hrs, Volume= 0.615 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.66' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.50'	**15.0" Round Culvert** L= 93.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.50' / 51.03' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.73 cfs @ 12.09 hrs HW=53.66' (Free Discharge)
1=Culvert (Barrel Controls 5.73 cfs @ 4.67 fps)

Summary for Pond dmh23: dmh23

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 2.65" for 10-year event
Inflow = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af
Outflow = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af, Atten= 0%, Lag= 0.0 min
Primary = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.20' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.19'	**12.0" Round Culvert** L= 138.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.19' / 54.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.86 cfs @ 12.09 hrs HW=59.20' (Free Discharge)
1=Culvert (Barrel Controls 4.86 cfs @ 6.18 fps)

Summary for Pond dmh24: dmh24

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 2.65" for 10-year event
Inflow = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af
Outflow = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af, Atten= 0%, Lag= 0.0 min
Primary = 4.86 cfs @ 12.09 hrs, Volume= 0.447 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.39' @ 12.09 hrs
Flood Elev= 61.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.10'	**12.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.10' / 55.92' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.86 cfs @ 12.09 hrs HW=59.39' (Free Discharge)
1=Culvert (Barrel Controls 4.86 cfs @ 6.18 fps)

Summary for Pond dmh24a: dmh24a

Inflow Area = 0.602 ac, 71.74% Impervious, Inflow Depth > 2.80" for 10-year event
Inflow = 1.19 cfs @ 12.08 hrs, Volume= 0.140 af
Outflow = 1.19 cfs @ 12.08 hrs, Volume= 0.140 af, Atten= 0%, Lag= 0.0 min
Primary = 1.19 cfs @ 12.08 hrs, Volume= 0.140 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.14' @ 12.08 hrs
Flood Elev= 63.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0" Round Culvert** L= 95.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.10' S= 0.0095 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.19 cfs @ 12.08 hrs HW=59.14' (Free Discharge)
1=Culvert (Inlet Controls 1.19 cfs @ 3.41 fps)

Summary for Pond dmh25: dmh25

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth > 1.74" for 10-year event
Inflow = 0.12 cfs @ 12.98 hrs, Volume= 0.059 af
Outflow = 0.12 cfs @ 12.98 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min
Primary = 0.12 cfs @ 12.98 hrs, Volume= 0.059 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.19' @ 12.98 hrs
Flood Elev= 67.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.00'	**12.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.00' / 55.00' S= 0.0510 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.12 cfs @ 12.98 hrs HW=60.19' (Free Discharge)
1=Culvert (Inlet Controls 0.12 cfs @ 1.16 fps)

Summary for Pond dmh26: dmh26

Inflow Area = 2.028 ac, 41.73% Impervious, Inflow Depth > 1.95" for 10-year event
Inflow = 1.10 cfs @ 12.54 hrs, Volume= 0.330 af
Outflow = 1.10 cfs @ 12.54 hrs, Volume= 0.330 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.54 hrs, Volume= 0.330 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 58.51' @ 12.54 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.75'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.75' / 57.61' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.10 cfs @ 12.54 hrs HW=58.51' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.10 cfs @ 2.37 fps)

Summary for Pond dmh27: dmh27

Inflow Area = 2.712 ac, 46.62% Impervious, Inflow Depth > 2.05" for 10-year event
Inflow = 1.40 cfs @ 12.52 hrs, Volume= 0.464 af
Outflow = 1.40 cfs @ 12.52 hrs, Volume= 0.464 af, Atten= 0%, Lag= 0.0 min
Primary = 1.40 cfs @ 12.52 hrs, Volume= 0.464 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.76' @ 12.52 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.03'	**12.0" Round Culvert** L= 256.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.03' / 51.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.40 cfs @ 12.52 hrs HW=53.76' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.40 cfs @ 3.17 fps)

Summary for Pond dmh29: dmh29

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 3.24" for 10-year event
Inflow = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af
Outflow = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
Primary = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.58' @ 12.10 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.85'	**8.0" Round Culvert** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.85' / 57.39' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.83 cfs @ 12.10 hrs HW=58.58' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.83 cfs @ 2.38 fps)

Summary for Pond dmh3: dmh3

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af
Outflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min
Primary = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.21' @ 12.08 hrs
Flood Elev= 68.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**24.0" Round Culvert** L= 125.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 59.84' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.97 cfs @ 12.08 hrs HW=62.21' (Free Discharge)
└**1=Culvert** (Barrel Controls 9.97 cfs @ 4.68 fps)

Summary for Pond dmh30: dmh30

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 3.24" for 10-year event
Inflow = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af
Outflow = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
Primary = 0.83 cfs @ 12.10 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.94' @ 12.10 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.40'	**12.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.40' / 54.37' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.83 cfs @ 12.10 hrs HW=55.94' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.83 cfs @ 2.77 fps)

Summary for Pond dmh31: dmh31

Inflow Area = 2.303 ac, 48.70% Impervious, Inflow Depth > 2.11" for 10-year event
Inflow = 1.39 cfs @ 12.52 hrs, Volume= 0.405 af
Outflow = 1.39 cfs @ 12.52 hrs, Volume= 0.405 af, Atten= 0%, Lag= 0.0 min
Primary = 1.39 cfs @ 12.52 hrs, Volume= 0.405 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.08' @ 12.52 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.35'	**12.0" Round Culvert** L= 259.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.35' / 53.05' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.39 cfs @ 12.52 hrs HW=55.08' (Free Discharge)
1=Culvert (Barrel Controls 1.39 cfs @ 3.17 fps)

Summary for Pond dmh32: dmh32

Inflow Area = 3.424 ac, 42.31% Impervious, Inflow Depth > 1.99" for 10-year event
Inflow = 1.84 cfs @ 12.52 hrs, Volume= 0.567 af
Outflow = 1.84 cfs @ 12.52 hrs, Volume= 0.567 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 12.52 hrs, Volume= 0.567 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.72' @ 12.52 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.73'	**12.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.73' / 51.60' S= 0.0036 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.84 cfs @ 12.52 hrs HW=52.72' (Free Discharge)
1=Culvert (Barrel Controls 1.84 cfs @ 2.95 fps)

Summary for Pond dmh33: dmh33

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth > 3.19" for 10-year event
Inflow = 0.35 cfs @ 12.42 hrs, Volume= 0.084 af
Outflow = 0.35 cfs @ 12.42 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min
Primary = 0.35 cfs @ 12.42 hrs, Volume= 0.084 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.33' @ 12.42 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 52.01' S= 0.0099 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.35 cfs @ 12.42 hrs HW=54.33' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.35 cfs @ 1.54 fps)

Summary for Pond dmh34: dmh34

Inflow Area = 3.030 ac, 25.90% Impervious, Inflow Depth > 1.48" for 10-year event
Inflow = 3.68 cfs @ 12.10 hrs, Volume= 0.372 af
Outflow = 3.68 cfs @ 12.10 hrs, Volume= 0.372 af, Atten= 0%, Lag= 0.0 min
Primary = 3.68 cfs @ 12.10 hrs, Volume= 0.372 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.01' @ 12.10 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.99'	**12.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.99' / 51.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.68 cfs @ 12.10 hrs HW=54.01' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 3.68 cfs @ 4.68 fps)

Summary for Pond dmh35: dmh35

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 1.75" for 10-year event
Inflow = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af
Outflow = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af, Atten= 0%, Lag= 0.0 min
Primary = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.78' @ 12.10 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.55'	**18.0" Round Culvert** L= 276.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.55' / 50.17' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=4.61 cfs @ 12.10 hrs HW=52.78' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.61 cfs @ 2.98 fps)

Summary for Pond dmh36: dmh36

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 1.75" for 10-year event
Inflow = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af
Outflow = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af, Atten= 0%, Lag= 0.0 min
Primary = 4.61 cfs @ 12.10 hrs, Volume= 1.064 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.38' @ 12.10 hrs
Flood Elev= 53.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.15'	**18.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.15' / 49.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=4.61 cfs @ 12.10 hrs HW=51.38' (Free Discharge)
└**1=Culvert** (Barrel Controls 4.61 cfs @ 4.03 fps)

Summary for Pond dmh38: dmh38

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 3.38" for 10-year event
Inflow = 6.77 cfs @ 12.09 hrs, Volume= 0.727 af
Outflow = 6.77 cfs @ 12.09 hrs, Volume= 0.727 af, Atten= 0%, Lag= 0.0 min
Primary = 6.77 cfs @ 12.09 hrs, Volume= 0.727 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.75' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.98'	**18.0" Round Culvert** L= 106.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.98' / 50.92' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.77 cfs @ 12.09 hrs HW=53.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 6.77 cfs @ 3.83 fps)

Summary for Pond dmh39: dmh39

Inflow Area = 2.778 ac, 93.02% Impervious, Inflow Depth > 3.23" for 10-year event
Inflow = 6.77 cfs @ 12.09 hrs, Volume= 0.748 af
Outflow = 6.77 cfs @ 12.09 hrs, Volume= 0.748 af, Atten= 0%, Lag= 0.0 min
Primary = 6.77 cfs @ 12.09 hrs, Volume= 0.748 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.36' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.59'	**18.0" Round Culvert** L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.59' / 50.32' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.77 cfs @ 12.09 hrs HW=52.36' (Free Discharge)
1=Culvert (Barrel Controls 6.77 cfs @ 4.10 fps)

Summary for Pond dmh4: dmh4

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af
Outflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min
Primary = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.69' @ 12.08 hrs
Flood Elev= 68.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.84'	**24.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.84' / 59.57' S= 0.0041 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.96 cfs @ 12.08 hrs HW=61.69' (Free Discharge)
1=Culvert (Barrel Controls 9.96 cfs @ 4.29 fps)

Summary for Pond dmh40: dmh40

Inflow Area = 10.062 ac, 50.87% Impervious, Inflow Depth > 2.16" for 10-year event
Inflow = 11.35 cfs @ 12.09 hrs, Volume= 1.813 af
Outflow = 11.35 cfs @ 12.09 hrs, Volume= 1.813 af, Atten= 0%, Lag= 0.0 min
Primary = 11.35 cfs @ 12.09 hrs, Volume= 1.813 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 51.22' @ 12.09 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.33'	**24.0" Round Culvert** L= 340.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.33' / 47.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=11.34 cfs @ 12.09 hrs HW=51.22' (Free Discharge)
↑**1=Culvert** (Inlet Controls 11.34 cfs @ 3.69 fps)

Summary for Pond dmh43: dmh43

Inflow Area = 12.646 ac, 60.91% Impervious, Inflow Depth > 2.43" for 10-year event
Inflow = 18.60 cfs @ 12.09 hrs, Volume= 2.562 af
Outflow = 18.60 cfs @ 12.09 hrs, Volume= 2.562 af, Atten= 0%, Lag= 0.0 min
Primary = 18.60 cfs @ 12.09 hrs, Volume= 2.562 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.04' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.61'	**24.0" Round Culvert** L= 193.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.61' / 46.64' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=18.57 cfs @ 12.09 hrs HW=51.03' (Free Discharge)
↑**1=Culvert** (Inlet Controls 18.57 cfs @ 5.91 fps)

Summary for Pond dmh44: dmh44

Inflow Area = 12.894 ac, 59.74% Impervious, Inflow Depth > 2.41" for 10-year event
Inflow = 18.60 cfs @ 12.09 hrs, Volume= 2.585 af
Outflow = 18.60 cfs @ 12.09 hrs, Volume= 2.585 af, Atten= 0%, Lag= 0.0 min
Primary = 18.60 cfs @ 12.09 hrs, Volume= 2.585 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.96' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.62'	**30.0" Round Culvert** L= 82.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.62' / 46.21' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=18.58 cfs @ 12.09 hrs HW=48.96' (Free Discharge)
1=Culvert (Barrel Controls 18.58 cfs @ 5.06 fps)

Summary for Pond dmh45: dmh45

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 2.59" for 10-year event
Inflow = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af
Outflow = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af, Atten= 0%, Lag= 0.0 min
Primary = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 49.78' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.19'	**30.0" Round Culvert** L= 316.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.19' / 44.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=28.51 cfs @ 12.09 hrs HW=49.77' (Free Discharge)
1=Culvert (Inlet Controls 28.51 cfs @ 5.81 fps)

Summary for Pond dmh47: dmh47

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 2.59" for 10-year event
Inflow = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af
Outflow = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af, Atten= 0%, Lag= 0.0 min
Primary = 28.52 cfs @ 12.09 hrs, Volume= 3.338 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.59' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**30.0" Round Culvert** L= 104.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.00' / 42.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=28.51 cfs @ 12.09 hrs HW=47.58' (Free Discharge)
1=Culvert (Inlet Controls 28.51 cfs @ 5.81 fps)

Summary for Pond dmh48: dmh48

Inflow Area = 16.171 ac, 67.89% Impervious, Inflow Depth > 2.63" for 10-year event
Inflow = 30.03 cfs @ 12.09 hrs, Volume= 3.538 af
Outflow = 30.03 cfs @ 12.09 hrs, Volume= 3.538 af, Atten= 0%, Lag= 0.0 min
Primary = 30.03 cfs @ 12.09 hrs, Volume= 3.538 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.78' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.94'	**30.0" Round Culvert** L= 117.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.94' / 42.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=30.01 cfs @ 12.09 hrs HW=46.78' (Free Discharge)
1=Culvert (Inlet Controls 30.01 cfs @ 6.11 fps)

Summary for Pond dmh49: dmh49

Inflow Area = 16.492 ac, 67.20% Impervious, Inflow Depth > 2.61" for 10-year event
Inflow = 30.04 cfs @ 12.09 hrs, Volume= 3.582 af
Outflow = 30.04 cfs @ 12.09 hrs, Volume= 3.582 af, Atten= 0%, Lag= 0.0 min
Primary = 30.04 cfs @ 12.09 hrs, Volume= 3.582 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.34' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.33'	**36.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.33' / 42.23' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=30.02 cfs @ 12.09 hrs HW=45.34' (Free Discharge)
1=Culvert (Barrel Controls 30.02 cfs @ 5.27 fps)

Summary for Pond dmh5: dmh5

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af
Outflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min
Primary = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 61.18' @ 12.08 hrs
Flood Elev= 69.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.48'	**24.0" Round Culvert** L= 173.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.48' / 58.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.97 cfs @ 12.08 hrs HW=61.18' (Free Discharge)
↑**1=Culvert** (Inlet Controls 9.97 cfs @ 3.50 fps)

Summary for Pond dmh50: dmh50

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 2.99" for 10-year event
Inflow = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af
Outflow = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af, Atten= 0%, Lag= 0.0 min
Primary = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.53' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**30.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.75' / 44.11' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=29.65 cfs @ 12.09 hrs HW=48.52' (Free Discharge)
↑**1=Culvert** (Inlet Controls 29.65 cfs @ 6.04 fps)

Summary for Pond dmh51: dmh51

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 2.99" for 10-year event
Inflow = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af
Outflow = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af, Atten= 0%, Lag= 0.0 min
Primary = 29.68 cfs @ 12.09 hrs, Volume= 3.817 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.87' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.09'	**30.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.09' / 43.00' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=29.65 cfs @ 12.09 hrs HW=47.86' (Free Discharge)
1=Culvert (Inlet Controls 29.65 cfs @ 6.04 fps)

Summary for Pond dmh52: dmh52

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af
Outflow = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af, Atten= 0%, Lag= 0.0 min
Primary = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.42' @ 12.09 hrs
Flood Elev= 50.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**42.0" Round Culvert** L= 258.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 36.00' S= 0.0194 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.66 cfs @ 12.09 hrs HW=45.41' (Free Discharge)
1=Culvert (Inlet Controls 59.66 cfs @ 6.20 fps)

Summary for Pond dmh53: dmh53

Inflow Area = 32.207 ac, 72.77% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.73 cfs @ 12.09 hrs, Volume= 7.492 af
Outflow = 59.73 cfs @ 12.09 hrs, Volume= 7.492 af, Atten= 0%, Lag= 0.0 min
Primary = 59.73 cfs @ 12.09 hrs, Volume= 7.492 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 37.42' @ 12.09 hrs
Flood Elev= 41.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**42.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 30.50' S= 0.0208 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.68 cfs @ 12.09 hrs HW=37.41' (Free Discharge)
1=Culvert (Inlet Controls 59.68 cfs @ 6.20 fps)

Summary for Pond dmh54: dmh54

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af
Outflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af, Atten= 0%, Lag= 0.0 min
Primary = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 31.43' @ 12.09 hrs
Flood Elev= 38.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**42.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.00' / 22.00' S= 0.0329 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.82 cfs @ 12.09 hrs HW=31.43' (Free Discharge)
1=Culvert (Inlet Controls 59.82 cfs @ 6.22 fps)

Summary for Pond dmh55: dhm55

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af
Outflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af, Atten= 0%, Lag= 0.0 min
Primary = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 23.43' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**42.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.00' / 15.50' S= 0.0304 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.82 cfs @ 12.09 hrs HW=23.43' (Free Discharge)
1=Culvert (Inlet Controls 59.82 cfs @ 6.22 fps)

Summary for Pond dmh56: dmh56

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af
Outflow = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af, Atten= 0%, Lag= 0.0 min
Primary = 59.88 cfs @ 12.09 hrs, Volume= 7.518 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 16.93' @ 12.09 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**42.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.50' / 11.00' S= 0.0357 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.82 cfs @ 12.09 hrs HW=16.93' (Free Discharge)
↑**1=Culvert** (Inlet Controls 59.82 cfs @ 6.22 fps)

Summary for Pond dmh59: dmh59

Inflow Area = 2.253 ac, 63.02% Impervious, Inflow Depth > 2.72" for 10-year event
Inflow = 5.17 cfs @ 12.09 hrs, Volume= 0.510 af
Outflow = 5.17 cfs @ 12.09 hrs, Volume= 0.510 af, Atten= 0%, Lag= 0.0 min
Primary = 5.17 cfs @ 12.09 hrs, Volume= 0.510 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.31' @ 12.09 hrs
Flood Elev= 59.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.30'	**12.0" Round Culvert** L= 294.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.30' / 52.83' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.16 cfs @ 12.09 hrs HW=61.29' (Free Discharge)
↑**1=Culvert** (Barrel Controls 5.16 cfs @ 6.57 fps)

Summary for Pond dmh6: dmh6

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af
Outflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min
Primary = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.61' @ 12.08 hrs
Flood Elev= 68.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.58'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.58' / 57.73' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.97 cfs @ 12.08 hrs HW=60.61' (Free Discharge)
1=Culvert (Barrel Controls 9.97 cfs @ 3.89 fps)

Summary for Pond dmh60: dhm60

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 2.79" for 10-year event
Inflow = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af
Outflow = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af, Atten= 0%, Lag= 0.0 min
Primary = 59.72 cfs @ 12.09 hrs, Volume= 7.398 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 39.92' @ 12.09 hrs
Flood Elev= 44.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	**42.0" Round Culvert** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.50' / 33.50' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=59.66 cfs @ 12.09 hrs HW=39.91' (Free Discharge)
1=Culvert (Inlet Controls 59.66 cfs @ 6.20 fps)

Summary for Pond dmh7: dmh7

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af
Outflow = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min
Primary = 9.98 cfs @ 12.08 hrs, Volume= 0.880 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.41' @ 12.08 hrs
Flood Elev= 67.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.71'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.71' / 56.86' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.97 cfs @ 12.08 hrs HW=59.41' (Free Discharge)
1=Culvert (Inlet Controls 9.97 cfs @ 3.50 fps)

Summary for Pond dmh8: dmh8

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 3.30" for 10-year event
Inflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af
Outflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af, Atten= 0%, Lag= 0.0 min
Primary = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.16' @ 12.08 hrs
Flood Elev= 66.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.84'	**24.0" Round Culvert** L= 296.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.84' / 55.66' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.91 cfs @ 12.08 hrs HW=61.15' (Free Discharge)
1=Culvert (Barrel Controls 19.91 cfs @ 6.34 fps)

Summary for Pond dmh9a: dmh9a

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 3.30" for 10-year event
Inflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af
Outflow = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af, Atten= 0%, Lag= 0.0 min
Primary = 19.94 cfs @ 12.08 hrs, Volume= 1.636 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.43' @ 12.08 hrs
Flood Elev= 65.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.64'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.64' / 54.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.91 cfs @ 12.08 hrs HW=59.42' (Free Discharge)
1=Culvert (Inlet Controls 19.91 cfs @ 6.34 fps)

Summary for Pond GSF 11: grassed soil filter

Inflow Area = 0.991 ac, 36.78% Impervious, Inflow Depth = 2.46" for 10-year event
Inflow = 2.86 cfs @ 12.09 hrs, Volume= 0.203 af
Outflow = 0.45 cfs @ 12.59 hrs, Volume= 0.154 af, Atten= 84%, Lag= 29.9 min
Primary = 0.03 cfs @ 12.59 hrs, Volume= 0.073 af
Secondary = 0.43 cfs @ 12.59 hrs, Volume= 0.081 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 62.18' @ 12.59 hrs Surf.Area= 5,079 sf Storage= 4,648 cf
Flood Elev= 63.00' Surf.Area= 5,598 sf Storage= 7,213 cf

Plug-Flow detention time= 572.7 min calculated for 0.154 af (76% of inflow)
Center-of-Mass det. time= 486.7 min (1,307.4 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	5,560 cf	**gsf11 (Irregular)** Listed below (Recalc)
#2	58.24'	1,653 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,213 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,200	181.0	0	0	2,200
62.00	2,771	200.0	2,480	2,480	2,807
63.00	3,400	219.0	3,080	5,560	3,474

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,198	0.0	0	0
58.25	2,198	40.0	9	9
58.99	2,198	40.0	651	659
59.00	2,198	30.0	7	666
59.49	2,198	30.0	323	989
59.50	2,198	20.0	4	993
61.00	2,198	20.0	659	1,653

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.7" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.05' / 57.78' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**4.0" Vert. Orifice/Grate X 6.00** C= 0.600
#5	Device 3	62.50'	**25.7" Horiz. cb19 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.59 hrs HW=62.18' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.51 fps)
└─**2=Exfiltration** (Passes 0.03 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=0.43 cfs @ 12.59 hrs HW=62.18' (Free Discharge)
└─**3=Culvert** (Passes 0.43 cfs of 2.59 cfs potential flow)
└─**4=Orifice/Grate** (Orifice Controls 0.43 cfs @ 1.45 fps)
└─**5=cb19 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 12: grassed soil filter

Inflow Area = 0.297 ac, 57.98% Impervious, Inflow Depth = 2.92" for 10-year event
Inflow = 1.00 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.29 cfs @ 12.43 hrs, Volume= 0.051 af, Atten= 71%, Lag= 20.8 min
Primary = 0.01 cfs @ 12.43 hrs, Volume= 0.024 af
Secondary = 0.28 cfs @ 12.43 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.95' @ 12.43 hrs Surf.Area= 2,072 sf Storage= 1,651 cf
Flood Elev= 62.50' Surf.Area= 2,255 sf Storage= 2,348 cf

Plug-Flow detention time= 576.3 min calculated for 0.051 af (70% of inflow)
Center-of-Mass det. time= 483.6 min (1,287.9 - 804.3)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	1,681 cf	**gsf12 (Irregular)** Listed below (Recalc)
#2	58.24'	667 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,348 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	886	151.0	0	0	886
62.00	1,201	164.0	1,040	1,040	1,248
62.50	1,368	170.0	642	1,681	1,428

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	887	0.0	0	0
58.25	887	40.0	4	4
58.99	887	40.0	263	266
59.00	887	30.0	3	269
59.49	887	30.0	130	399
59.50	887	20.0	2	401
61.00	887	20.0	266	667

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.20'	**8.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.20' / 58.10' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	61.90'	**25.7" Horiz. cb15a beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.43 hrs HW=61.95' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.24 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.27 cfs @ 12.43 hrs HW=61.95' (Free Discharge)
└**3=Culvert** (Passes 0.27 cfs of 2.45 cfs potential flow)
└**4=cb15a beehive equiv** (Weir Controls 0.27 cfs @ 0.75 fps)

Summary for Pond GSF 13: grassed soil filter

Inflow Area = 1.037 ac, 46.46% Impervious, Inflow Depth = 2.64" for 10-year event
Inflow = 3.19 cfs @ 12.09 hrs, Volume= 0.228 af
Outflow = 0.66 cfs @ 12.52 hrs, Volume= 0.176 af, Atten= 79%, Lag= 26.1 min
Primary = 0.03 cfs @ 12.52 hrs, Volume= 0.096 af
Secondary = 0.63 cfs @ 12.52 hrs, Volume= 0.080 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.09' @ 12.52 hrs Surf.Area= 6,107 sf Storage= 5,204 cf
Flood Elev= 63.00' Surf.Area= 7,083 sf Storage= 8,909 cf

Plug-Flow detention time= 614.2 min calculated for 0.176 af (77% of inflow)
Center-of-Mass det. time= 532.0 min (1,346.5 - 814.5)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	7,028 cf	**gsf13 (Irregular)** Listed below (Recalc)
#2	58.24'	1,881 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,500	328.0	0	0	2,500
62.00	3,513	347.0	2,992	2,992	3,575
63.00	4,582	366.0	4,036	7,028	4,710

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,501	0.0	0	0
58.25	2,501	40.0	10	10
58.99	2,501	40.0	740	750
59.00	2,501	30.0	8	758
59.49	2,501	30.0	368	1,125
59.50	2,501	20.0	5	1,130
61.00	2,501	20.0	750	1,881

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900

			Inlet / Outlet Invert= 58.05' / 57.82' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**25.7" Horiz. cb18 beehive equiv** C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.52 hrs HW=62.09' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.40 fps)
↑—**2=Exfiltration** (Passes 0.03 cfs of 0.14 cfs potential flow)

Secondary OutFlow Max=0.62 cfs @ 12.52 hrs HW=62.09' (Free Discharge)
↑—**3=Culvert** (Passes 0.62 cfs of 2.56 cfs potential flow)
↑—**4=cb18 beehive equiv** (Weir Controls 0.62 cfs @ 1.00 fps)

Summary for Pond GSF 15: grassed soil filter

Inflow Area = 0.210 ac, 1.92% Impervious, Inflow Depth = 1.74" for 10-year event
Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.031 af
Outflow = 0.12 cfs @ 12.48 hrs, Volume= 0.021 af, Atten= 72%, Lag= 23.6 min
Primary = 0.00 cfs @ 12.48 hrs, Volume= 0.005 af
Secondary = 0.12 cfs @ 12.48 hrs, Volume= 0.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.73' @ 12.48 hrs Surf.Area= 1,311 sf Storage= 600 cf
Flood Elev= 65.00' Surf.Area= 2,017 sf Storage= 1,939 cf

Plug-Flow detention time= 408.3 min calculated for 0.021 af (68% of inflow)
Center-of-Mass det. time= 304.2 min (1,150.6 - 846.3)

Volume	Invert	Avail.Storage	Storage Description
#1	63.50'	1,489 cf	**gsf15 (Irregular)** Listed below (Recalc)
#2	60.74'	450 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,939 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.50	600	168.0	0	0	600
64.00	858	177.0	363	363	862
65.00	1,418	196.0	1,126	1,489	1,456

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	599	0.0	0	0
60.75	599	40.0	2	2
61.49	599	40.0	177	180
61.50	599	30.0	2	181
61.99	599	30.0	88	270
62.00	599	20.0	1	271
63.50	599	20.0	180	450

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.52' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	63.70'	**25.7" Horiz. cb9 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.48 hrs HW=63.73' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.30 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.11 cfs @ 12.48 hrs HW=63.73' (Free Discharge)
↑—**3=Culvert** (Passes 0.11 cfs of 2.18 cfs potential flow)
↑—**4=cb9 beehive equiv** (Weir Controls 0.11 cfs @ 0.55 fps)

Summary for Pond GSF 16: grassed soil filter

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth = 2.37" for 10-year event
Inflow = 0.97 cfs @ 12.09 hrs, Volume= 0.069 af
Outflow = 0.01 cfs @ 24.07 hrs, Volume= 0.023 af, Atten= 99%, Lag= 718.7 min
Primary = 0.01 cfs @ 24.07 hrs, Volume= 0.023 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.07' @ 24.07 hrs Surf.Area= 2,911 sf Storage= 2,644 cf

Plug-Flow detention time= 1,076.0 min calculated for 0.023 af (33% of inflow)
Center-of-Mass det. time= 947.6 min (1,771.3 - 823.7)

Volume	Invert	Avail.Storage	Storage Description
#1	62.75'	4,054 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	60.74'	753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,806 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.75	1,000	215.0	0	0	1,000
63.00	1,165	220.0	270	270	1,181
64.00	1,858	241.0	1,498	1,768	1,986
65.00	2,741	270.0	2,285	4,054	3,192

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	1,001	0.0	0	0
60.75	1,001	40.0	4	4
61.49	1,001	40.0	296	300
61.50	1,001	30.0	3	303
61.99	1,001	30.0	147	450
62.00	1,001	20.0	2	452
63.50	1,001	20.0	300	753

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.54' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	64.40'	**25.7" Horiz. cb8 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 24.07 hrs HW=64.07' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.74 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.07 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=60.74' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
↑—**4=cb8 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 18A: grassed soil filter

Inflow Area = 0.146 ac, 40.91% Impervious, Inflow Depth = 2.55" for 10-year event
Inflow = 0.43 cfs @ 12.09 hrs, Volume= 0.031 af
Outflow = 0.01 cfs @ 17.50 hrs, Volume= 0.014 af, Atten= 98%, Lag= 324.7 min
Primary = 0.00 cfs @ 17.50 hrs, Volume= 0.012 af
Secondary = 0.01 cfs @ 17.50 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.40' @ 17.50 hrs Surf.Area= 2,031 sf Storage= 1,090 cf

Plug-Flow detention time= 1,006.9 min calculated for 0.014 af (45% of inflow)
Center-of-Mass det. time= 889.4 min (1,707.0 - 817.6)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	1,183 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,868 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	900	183.0	0	0	900
58.00	1,490	202.0	1,183	1,183	1,513

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	912	0.0	0	0
54.25	912	40.0	4	4
54.99	912	40.0	270	274
55.00	912	30.0	3	276
55.49	912	30.0	134	410
55.50	912	20.0	2	412
57.00	912	20.0	274	686

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.40'	**25.7" Horiz. cb24 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 17.50 hrs HW=57.40' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.53 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 17.50 hrs HW=57.40' (Free Discharge)
↑—**3=Culvert** (Passes 0.00 cfs of 2.32 cfs potential flow)
↑—**4=cb24 beehive equiv** (Weir Controls 0.00 cfs @ 0.12 fps)

Summary for Pond GSF 18B: grassed soil filter

Inflow Area = 0.092 ac, 58.36% Impervious, Inflow Depth = 2.92" for 10-year event
Inflow = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af
Outflow = 0.03 cfs @ 12.85 hrs, Volume= 0.013 af, Atten= 89%, Lag= 45.5 min
Primary = 0.00 cfs @ 12.85 hrs, Volume= 0.006 af
Secondary = 0.03 cfs @ 12.85 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.91' @ 12.85 hrs Surf.Area= 850 sf Storage= 599 cf

Plug-Flow detention time= 629.9 min calculated for 0.013 af (56% of inflow)
Center-of-Mass det. time= 523.2 min (1,327.5 - 804.3)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	430 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	221 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		651 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	290	88.0	0	0	290
58.00	587	107.0	430	430	601

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	294	0.0	0	0
54.25	294	40.0	1	1
54.99	294	40.0	87	88
55.00	294	30.0	1	89
55.49	294	30.0	43	132
55.50	294	20.0	1	133
57.00	294	20.0	88	221

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.90'	**25.7" Horiz. cb23 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.85 hrs HW=57.91' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.20 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.02 cfs @ 12.85 hrs HW=57.91' (Free Discharge)
↑—**3=Culvert** (Passes 0.02 cfs of 2.51 cfs potential flow)
↑—**4=cb23 beehive equiv** (Weir Controls 0.02 cfs @ 0.31 fps)

Summary for Pond GSF 1A: Grassed soil filter

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth = 2.55" for 10-year event
Inflow = 1.22 cfs @ 12.09 hrs, Volume= 0.087 af
Outflow = 0.12 cfs @ 12.98 hrs, Volume= 0.059 af, Atten= 90%, Lag= 53.5 min
Primary = 0.01 cfs @ 12.98 hrs, Volume= 0.035 af
Secondary = 0.11 cfs @ 12.98 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.32' @ 12.98 hrs Surf.Area= 3,601 sf Storage= 2,229 cf
Flood Elev= 68.00' Surf.Area= 5,086 sf Storage= 6,753 cf

Plug-Flow detention time= 699.1 min calculated for 0.059 af (68% of inflow)
Center-of-Mass det. time= 601.5 min (1,419.1 - 817.6)

Volume	Invert	Avail.Storage	Storage Description
#1	65.75'	5,554 cf	**Grassed Underdrain Soil Filter (Irregular)** Listed below (Recalc)
#2	62.99'	1,198 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,753 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.75	1,600	234.0	0	0	1,600
66.00	1,775	239.0	422	422	1,797
67.00	2,525	261.0	2,139	2,561	2,708
68.00	3,488	286.0	2,994	5,554	3,830

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.99	1,598	0.0	0	0
63.00	1,598	40.0	6	6
63.74	1,598	40.0	473	479
63.75	1,598	30.0	5	484
64.24	1,598	30.0	235	719
64.25	1,598	20.0	3	722
65.74	1,598	20.0	476	1,198

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.99'	**2.400 in/hr Exfiltration over Surface area**
#3	Secondary	62.50'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.50' / 62.26' S= 0.0089 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.30'	**25.7" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.98 hrs HW=66.32' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.75 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.08 cfs @ 12.98 hrs HW=66.32' (Free Discharge)
└─**3=Culvert** (Passes 0.08 cfs of 2.48 cfs potential flow)
└─**4=Orifice/Grate** (Weir Controls 0.08 cfs @ 0.49 fps)

Summary for Pond GSF 1B: grassed soil filter

Inflow Area = 0.781 ac, 20.08% Impervious, Inflow Depth = 2.13" for 10-year event
Inflow = 1.95 cfs @ 12.09 hrs, Volume= 0.138 af
Outflow = 1.46 cfs @ 12.16 hrs, Volume= 0.125 af, Atten= 25%, Lag= 4.3 min
Primary = 0.01 cfs @ 12.16 hrs, Volume= 0.039 af
Secondary = 1.45 cfs @ 12.16 hrs, Volume= 0.085 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 67.00' @ 12.16 hrs Surf.Area= 2,312 sf Storage= 1,830 cf
Flood Elev= 67.00' Surf.Area= 2,309 sf Storage= 1,826 cf

Plug-Flow detention time= 349.9 min calculated for 0.125 af (90% of inflow)
Center-of-Mass det. time= 301.4 min (1,133.8 - 832.4)

Volume	Invert	Avail.Storage	Storage Description
#1	65.50'	32,509 cf	**gsf1B (Irregular)** Listed below (Recalc)
#2	62.74'	545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		33,054 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.50	393	187.0	0	0	393
66.00	583	194.0	242	242	626
67.00	1,576	297.0	1,039	1,282	4,658
68.00	3,199	450.0	2,340	3,622	13,760
69.00	68,644	2,673.0	28,887	32,509	566,223

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.74	733	0.0	0	0
62.75	733	40.0	3	3
63.40	733	40.0	191	194
63.50	733	30.0	22	216
63.99	733	30.0	108	323
64.00	733	20.0	1	325
65.50	733	20.0	220	545

Device	Routing	Invert	Outlet Devices
#1	Primary	62.75'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	62.70'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.70' / 62.60' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.90'	**25.7" Horiz. CB16 beehive grate equiv dbl X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.16 hrs HW=67.00' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.90 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=1.44 cfs @ 12.16 hrs HW=67.00' (Free Discharge)
└**3=Culvert** (Passes 1.44 cfs of 2.64 cfs potential flow)
└**4=CB16 beehive grate equiv dbl** (Weir Controls 1.44 cfs @ 1.05 fps)

Summary for Pond GSF 2: grassed soil filter

Inflow Area = 0.713 ac, 25.93% Impervious, Inflow Depth = 2.21" for 10-year event
Inflow = 1.85 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 0.44 cfs @ 12.50 hrs, Volume= 0.104 af, Atten= 76%, Lag= 24.9 min
Primary = 0.02 cfs @ 12.50 hrs, Volume= 0.052 af
Secondary = 0.42 cfs @ 12.50 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.67' @ 12.50 hrs Surf.Area= 3,628 sf Storage= 2,793 cf
Flood Elev= 59.00' Surf.Area= 4,991 sf Storage= 6,448 cf

Plug-Flow detention time= 576.2 min calculated for 0.104 af (79% of inflow)
Center-of-Mass det. time= 496.1 min (1,325.7 - 829.6)

Volume	Invert	Avail.Storage	Storage Description
#1	56.75'	5,317 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.99'	1,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,448 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.75	1,500	218.0	0	0	1,500
57.00	1,669	223.0	396	396	1,684
58.00	2,371	245.0	2,010	2,406	2,536
59.00	3,488	283.0	2,912	5,317	4,154

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.99	1,503	0.0	0	0
54.00	1,503	40.0	6	6
54.74	1,503	40.0	445	451
54.75	1,503	30.0	5	455
55.24	1,503	30.0	221	676
55.25	1,503	20.0	3	679
56.75	1,503	20.0	451	1,130

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.95'	**8.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.95' / 53.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb20 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.50 hrs HW=57.67' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.19 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=0.40 cfs @ 12.50 hrs HW=57.67' (Free Discharge)
└**3=Culvert** (Passes 0.40 cfs of 2.44 cfs potential flow)
└**4=cb20 beehive equiv** (Weir Controls 0.40 cfs @ 0.86 fps)

Summary for Pond GSF 24: grassed soil filter

Inflow Area = 0.419 ac, 67.19% Impervious, Inflow Depth = 3.31" for 10-year event
Inflow = 1.56 cfs @ 12.08 hrs, Volume= 0.116 af
Outflow = 0.54 cfs @ 12.36 hrs, Volume= 0.093 af, Atten= 65%, Lag= 16.4 min
Primary = 0.02 cfs @ 12.36 hrs, Volume= 0.054 af
Secondary = 0.53 cfs @ 12.36 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 40.68' @ 12.36 hrs Surf.Area= 3,248 sf Storage= 2,561 cf

Plug-Flow detention time= 620.8 min calculated for 0.093 af (81% of inflow)
Center-of-Mass det. time= 547.1 min (1,335.5 - 788.3)

Volume	Invert	Avail.Storage	Storage Description
#1	39.75'	4,479 cf	**gsf24 (Irregular)** Listed below (Recalc)
#2	36.99'	1,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		5,533 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.75	1,400	150.0	0	0	1,400
40.00	1,516	156.0	364	364	1,551
41.00	2,013	176.0	1,759	2,123	2,105
42.00	2,717	200.0	2,356	4,479	2,847

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.99	1,401	0.0	0	0
37.00	1,401	40.0	6	6
37.74	1,401	40.0	415	420
37.75	1,401	30.0	4	425
38.24	1,401	30.0	206	630
38.25	1,401	20.0	3	633
39.75	1,401	20.0	420	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	36.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	36.80'	**8.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 36.80' / 36.00' S= 0.0200 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4 Device 3 40.60' **25.7" Horiz. cb32 beehive equiv** C= 0.600
Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.36 hrs HW=40.68' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.21 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=0.51 cfs @ 12.36 hrs HW=40.68' (Free Discharge)
└**3=Culvert** (Passes 0.51 cfs of 2.50 cfs potential flow)
└**4=cb32 beehive equiv** (Weir Controls 0.51 cfs @ 0.93 fps)

Summary for Pond GSF 3: grassed soil filter

Inflow Area = 0.830 ac, 36.22% Impervious, Inflow Depth = 2.37" for 10-year event
Inflow = 2.31 cfs @ 12.09 hrs, Volume= 0.164 af
Outflow = 0.65 cfs @ 12.46 hrs, Volume= 0.125 af, Atten= 72%, Lag= 22.1 min
Primary = 0.02 cfs @ 12.46 hrs, Volume= 0.054 af
Secondary = 0.63 cfs @ 12.46 hrs, Volume= 0.071 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 55.84' @ 12.46 hrs Surf.Area= 4,122 sf Storage= 3,447 cf
Flood Elev= 57.00' Surf.Area= 5,449 sf Storage= 7,083 cf

Plug-Flow detention time= 525.4 min calculated for 0.125 af (76% of inflow)
Center-of-Mass det. time= 439.3 min (1,263.0 - 823.7)

Volume	Invert	Avail.Storage	Storage Description
#1	54.75'	5,872 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	51.99'	1,211 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,083 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.75	1,600	268.0	0	0	1,600
55.00	1,804	274.0	425	425	1,868
56.00	2,657	295.0	2,217	2,642	2,860
57.00	3,839	332.0	3,230	5,872	4,733

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.99	1,610	0.0	0	0
52.00	1,610	40.0	6	6
52.74	1,610	40.0	477	483
52.75	1,610	30.0	5	488
53.24	1,610	30.0	237	725
53.25	1,610	20.0	3	728
54.75	1,610	20.0	483	1,211

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.95'	**12.0" Round Culvert**
			L= 14.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.95' / 51.81' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	55.75'	**25.7" Horiz. cb25 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.46 hrs HW=55.84' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.41 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=0.62 cfs @ 12.46 hrs HW=55.84' (Free Discharge)
↑—**3=Culvert** (Passes 0.62 cfs of 5.50 cfs potential flow)
↑—**4=cb25 beehive equiv** (Weir Controls 0.62 cfs @ 1.00 fps)

Summary for Pond GSF 4: grassed soil filter

Inflow Area = 0.194 ac, 0.00% Impervious, Inflow Depth = 1.74" for 10-year event
Inflow = 0.39 cfs @ 12.09 hrs, Volume= 0.028 af
Outflow = 0.04 cfs @ 13.19 hrs, Volume= 0.021 af, Atten= 90%, Lag= 65.9 min
Primary = 0.00 cfs @ 13.19 hrs, Volume= 0.013 af
Secondary = 0.03 cfs @ 13.19 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.11' @ 13.19 hrs Surf.Area= 1,115 sf Storage= 683 cf
Flood Elev= 56.00' Surf.Area= 1,431 sf Storage= 1,405 cf

Plug-Flow detention time= 693.2 min calculated for 0.021 af (74% of inflow)
Center-of-Mass det. time= 599.5 min (1,445.8 - 846.3)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	1,061 cf	**gsf4 (Irregular)** Listed below (Recalc)
#2	51.74'	344 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,405 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.50	457	163.0	0	0	457
55.00	623	169.0	269	269	636
56.00	974	182.0	792	1,061	1,039

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.74	457	0.0	0	0
51.75	457	40.0	2	2
52.49	457	40.0	135	137
52.50	457	30.0	1	138
52.99	457	30.0	67	206
53.00	457	20.0	1	207
54.50	457	20.0	137	344

Device	Routing	Invert	Outlet Devices
#1	Primary	51.75'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.70'	**8.0" Round Culvert**
			L= 17.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.70' / 51.53' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	55.10'	**25.7" Horiz. cb26 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 13.19 hrs HW=55.11' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.81 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.02 cfs @ 13.19 hrs HW=55.11' (Free Discharge)
↑—**3=Culvert** (Passes 0.02 cfs of 2.33 cfs potential flow)
↑—**4=cb26 beehive equiv** (Weir Controls 0.02 cfs @ 0.33 fps)

Summary for Pond GSF 5: grassed soil filter

Inflow Area = 0.248 ac, 0.00% Impervious, Inflow Depth = 1.74" for 10-year event
Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af
Outflow = 0.04 cfs @ 13.59 hrs, Volume= 0.023 af, Atten= 91%, Lag= 89.6 min
Primary = 0.00 cfs @ 13.59 hrs, Volume= 0.013 af
Secondary = 0.04 cfs @ 13.59 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.61' @ 13.59 hrs Surf.Area= 1,573 sf Storage= 927 cf
Flood Elev= 55.00' Surf.Area= 1,857 sf Storage= 1,360 cf

Plug-Flow detention time= 679.3 min calculated for 0.023 af (65% of inflow)
Center-of-Mass det. time= 570.4 min (1,416.7 - 846.3)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	908 cf	**gsf5 (Irregular)** Listed below (Recalc)
#2	51.24'	451 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,360 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	600	210.0	0	0	600
55.00	1,257	228.0	908	908	1,265

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	600	0.0	0	0
51.25	600	40.0	2	2
51.99	600	40.0	178	180
52.00	600	30.0	2	182
52.49	600	30.0	88	270
52.50	600	20.0	1	271
54.00	600	20.0	180	451

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.95' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.60'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 13.59 hrs HW=54.61' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.81 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=0.03 cfs @ 13.59 hrs HW=54.61' (Free Discharge)
↑—**3=Culvert** (Passes 0.03 cfs of 2.40 cfs potential flow)
↑—**4=cb beehive equiv** (Weir Controls 0.03 cfs @ 0.35 fps)

Summary for Pond GSF 6: grassed soil filter

Inflow Area = 0.321 ac, 32.06% Impervious, Inflow Depth = 2.37" for 10-year event
Inflow = 0.89 cfs @ 12.09 hrs, Volume= 0.064 af
Outflow = 0.09 cfs @ 12.98 hrs, Volume= 0.044 af, Atten= 90%, Lag= 53.7 min
Primary = 0.01 cfs @ 12.98 hrs, Volume= 0.023 af
Secondary = 0.08 cfs @ 12.98 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.27' @ 12.98 hrs Surf.Area= 2,172 sf Storage= 1,583 cf
Flood Elev= 50.00' Surf.Area= 2,772 sf Storage= 4,107 cf

Plug-Flow detention time= 642.2 min calculated for 0.044 af (69% of inflow)
Center-of-Mass det. time= 544.4 min (1,368.1 - 823.7)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	3,352 cf	**gsf6 (Irregular)** Listed below (Recalc)
#2	44.74'	755 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
47.50	1,004	156.0	0	0	1,004
48.00	1,082	159.0	521	521	1,113
49.00	1,413	172.0	1,244	1,765	1,493
50.00	1,768	184.0	1,587	3,352	1,877

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.74	1,004	0.0	0	0
44.75	1,004	40.0	4	4
45.49	1,004	40.0	297	301
45.50	1,004	30.0	3	304
45.99	1,004	30.0	148	452
46.00	1,004	20.0	2	454
47.50	1,004	20.0	301	755

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	44.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	44.70'	**8.0" Round culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.70' / 44.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	48.20'	**4.0" Vert. Orifice X 6.00** C= 0.600
#5	Device 3	49.00'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.98 hrs HW=48.27' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.02 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.08 cfs @ 12.98 hrs HW=48.27' (Free Discharge)
└─**3=culvert** (Passes 0.08 cfs of 2.39 cfs potential flow)
└─**4=Orifice** (Orifice Controls 0.08 cfs @ 0.92 fps)
└─**5=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 7: grassed soil filter

Inflow Area = 0.697 ac, 25.86% Impervious, Inflow Depth = 2.21" for 10-year event
Inflow = 1.80 cfs @ 12.09 hrs, Volume= 0.128 af
Outflow = 0.15 cfs @ 13.46 hrs, Volume= 0.086 af, Atten= 92%, Lag= 82.0 min
Primary = 0.02 cfs @ 13.46 hrs, Volume= 0.052 af
Secondary = 0.13 cfs @ 13.46 hrs, Volume= 0.034 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 54.73' @ 13.46 hrs Surf.Area= 5,079 sf Storage= 3,371 cf
Flood Elev= 56.00' Surf.Area= 7,240 sf Storage= 8,558 cf

Plug-Flow detention time= 713.1 min calculated for 0.086 af (67% of inflow)
Center-of-Mass det. time= 611.9 min (1,441.5 - 829.6)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	7,026 cf	**gsf7 (Irregular)** Listed below (Recalc)
#2	51.24'	1,532 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,558 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	2,037	220.0	0	0	2,037
55.00	3,467	289.0	2,720	2,720	4,843
56.00	5,203	357.0	4,306	7,026	8,354

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	2,037	0.0	0	0
51.25	2,037	40.0	8	8
51.99	2,037	40.0	603	611
52.00	2,037	30.0	6	617
52.49	2,037	30.0	299	917
52.50	2,037	20.0	4	921
54.00	2,037	20.0	611	1,532

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round cb29** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.48' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.70'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 13.46 hrs HW=54.73' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 8.95 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=0.11 cfs @ 13.46 hrs HW=54.73' (Free Discharge)
↑—**3=cb29** (Passes 0.11 cfs of 2.45 cfs potential flow)
↑—**4=cb beehive equiv** (Weir Controls 0.11 cfs @ 0.56 fps)

Summary for Pond GSF 8: grassed soil filter

Inflow Area = 1.046 ac, 55.78% Impervious, Inflow Depth = 2.82" for 10-year event
Inflow = 3.42 cfs @ 12.09 hrs, Volume= 0.246 af
Outflow = 1.13 cfs @ 12.39 hrs, Volume= 0.200 af, Atten= 67%, Lag= 18.2 min
Primary = 0.03 cfs @ 12.39 hrs, Volume= 0.098 af
Secondary = 1.10 cfs @ 12.39 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.74' @ 12.39 hrs Surf.Area= 5,287 sf Storage= 5,118 cf
Flood Elev= 58.50' Surf.Area= 5,815 sf Storage= 7,903 cf

Plug-Flow detention time= 549.3 min calculated for 0.200 af (81% of inflow)
Center-of-Mass det. time= 475.8 min (1,283.6 - 807.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	6,471 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.74'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,903 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.50	2,600	200.0	0	0	2,600
57.50	3,227	218.0	2,908	2,908	3,234
58.50	3,910	237.0	3,563	6,471	3,959

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.74	1,905	0.0	0	0
53.75	1,905	40.0	8	8
54.49	1,905	40.0	564	572
54.50	1,905	30.0	6	577
54.99	1,905	30.0	280	857
55.00	1,905	20.0	4	861
56.50	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	53.75'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.50'	**8.0" Round cb10 culvert** L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.50' / 52.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb10 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.39 hrs HW=57.74' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.57 fps)
└**2=Exfiltration** (Passes 0.03 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=1.10 cfs @ 12.39 hrs HW=57.74' (Free Discharge)
└**3=cb10 culvert** (Passes 1.10 cfs of 2.56 cfs potential flow)
└**4=cb10 beehive equiv** (Weir Controls 1.10 cfs @ 1.20 fps)

Summary for Pond GSF 9: grassed soil filter

Inflow Area = 0.647 ac, 63.29% Impervious, Inflow Depth = 3.01" for 10-year event
Inflow = 2.24 cfs @ 12.09 hrs, Volume= 0.162 af
Outflow = 1.44 cfs @ 12.18 hrs, Volume= 0.140 af, Atten= 36%, Lag= 5.6 min
Primary = 0.02 cfs @ 12.18 hrs, Volume= 0.052 af
Secondary = 1.42 cfs @ 12.18 hrs, Volume= 0.087 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.11' @ 12.18 hrs Surf.Area= 4,342 sf Storage= 2,757 cf
Flood Elev= 65.00' Surf.Area= 6,073 sf Storage= 8,972 cf

Plug-Flow detention time= 415.7 min calculated for 0.140 af (86% of inflow)
Center-of-Mass det. time= 354.5 min (1,155.1 - 800.7)

Volume	Invert	Avail.Storage	Storage Description
#1	62.50'	7,539 cf	**gsf9 (Irregular)** Listed below (Recalc)
#2	59.24'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,972 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.50	1,905	437.0	0	0	1,905
63.00	2,345	443.0	1,061	1,061	2,379
64.00	3,244	455.0	2,782	3,843	3,347
65.00	4,168	468.0	3,696	7,539	4,408

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.24	1,905	0.0	0	0
59.25	1,905	40.0	8	8
59.99	1,905	40.0	564	572
60.00	1,905	30.0	6	577
60.49	1,905	30.0	280	857
60.50	1,905	20.0	4	861
62.00	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	59.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	59.00'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 57.92' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.95'	**25.7" Horiz. cb6 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.18 hrs HW=63.11' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.43 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=1.41 cfs @ 12.18 hrs HW=63.11' (Free Discharge)
└**3=Culvert** (Passes 1.41 cfs of 2.58 cfs potential flow)
└**4=cb6 beehive equiv** (Weir Controls 1.41 cfs @ 1.31 fps)

Summary for Pond ics 12: ICS 12

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 9.88 cfs @ 12.08 hrs, Volume= 0.352 af
Secondary = 0.71 cfs @ 12.08 hrs, Volume= 0.501 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.78' @ 12.08 hrs
Flood Elev= 65.42'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.70'	**18.0" Round Culvert** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.15' S= 0.1375 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	62.95'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	60.75'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.75' / 60.72' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	60.75'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=9.92 cfs @ 12.08 hrs HW=63.78' (Free Discharge)
└**1=Culvert** (Passes 9.92 cfs of 10.24 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 9.92 cfs @ 3.00 fps)

Secondary OutFlow Max=0.71 cfs @ 12.08 hrs HW=63.78' (Free Discharge)
└**3=Culvert** (Passes 0.71 cfs of 4.74 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.71 cfs @ 8.14 fps)

Summary for Pond ICS1: ICS 1

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 0.70 cfs @ 12.08 hrs, Volume= 0.421 af
Secondary = 9.90 cfs @ 12.08 hrs, Volume= 0.432 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.29' @ 12.08 hrs
Flood Elev= 69.38'

Device	Routing	Invert	Outlet Devices
#1	Secondary	63.37'	**18.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.27' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.31'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	63.37'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.37' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	63.37'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.70 cfs @ 12.08 hrs HW=66.28' (Free Discharge)
└**3=Culvert** (Passes 0.70 cfs of 4.64 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.70 cfs @ 7.98 fps)

Secondary OutFlow Max=9.88 cfs @ 12.08 hrs HW=66.28' (Free Discharge)
└**1=Culvert** (Inlet Controls 9.88 cfs @ 5.59 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 9.88 cfs of 36.80 cfs potential flow)

Summary for Pond ICS18: ICS18

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 1.79 cfs @ 12.08 hrs, Volume= 0.144 af
Outflow = 1.79 cfs @ 12.08 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min
Primary = 0.66 cfs @ 12.08 hrs, Volume= 0.127 af
Secondary = 1.12 cfs @ 12.08 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.46' @ 12.08 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.81'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.81' / 57.80' S= 0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	57.81'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 4	60.25'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	57.80'	**12.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.80' / 56.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.66 cfs @ 12.08 hrs HW=60.46' (Free Discharge)
↑—**1=Culvert** (Passes 0.66 cfs of 2.02 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.66 cfs @ 7.59 fps)

Secondary OutFlow Max=1.12 cfs @ 12.08 hrs HW=60.46' (Free Discharge)
↑—**4=Culvert** (Passes 1.12 cfs of 4.39 cfs potential flow)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 1.12 cfs @ 1.30 fps)

Summary for Pond ics28: ICS28

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 1.13 cfs @ 12.08 hrs, Volume= 0.091 af
Outflow = 1.13 cfs @ 12.08 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.08 hrs, Volume= 0.086 af
Secondary = 0.49 cfs @ 12.08 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.62' @ 12.08 hrs
Flood Elev= 63.95'

Device	Routing	Invert	Outlet Devices
#1	Secondary	58.00'	**8.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	60.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	58.15'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.15' / 58.12' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	58.15'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.64 cfs @ 12.08 hrs HW=60.62' (Free Discharge)
└**3=Culvert** (Passes 0.64 cfs of 1.94 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.64 cfs @ 7.31 fps)

Secondary OutFlow Max=0.49 cfs @ 12.08 hrs HW=60.62' (Free Discharge)
└**1=Culvert** (Passes 0.49 cfs of 2.01 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.49 cfs @ 0.98 fps)

Summary for Pond ICS37: ISC37

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 5.19 cfs @ 12.08 hrs, Volume= 0.787 af
Secondary = 5.41 cfs @ 12.08 hrs, Volume= 0.067 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.58' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.50'	**18.0" Round Culvert** L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.50' / 52.00' S= 0.0098 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.19 cfs @ 12.08 hrs HW=55.58' (Free Discharge)
├**3=Culvert** (Inlet Controls 4.51 cfs @ 5.74 fps)
└**4=Orifice/Grate** (Orifice Controls 0.68 cfs @ 7.78 fps)

Secondary OutFlow Max=5.38 cfs @ 12.08 hrs HW=55.58' (Free Discharge)
└**1=Culvert** (Passes 5.38 cfs of 10.25 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 5.38 cfs @ 2.33 fps)

Summary for Pond ics46: ICS46

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 0.71 cfs @ 12.08 hrs, Volume= 0.501 af
Secondary = 9.88 cfs @ 12.08 hrs, Volume= 0.353 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 49.82' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Secondary	46.20'	**18.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.20' / 46.00' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	49.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	46.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.80' / 46.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	46.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.71 cfs @ 12.08 hrs HW=49.82' (Free Discharge)
└**3=Culvert** (Passes 0.71 cfs of 4.74 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.71 cfs @ 8.14 fps)

Secondary OutFlow Max=9.87 cfs @ 12.08 hrs HW=49.82' (Free Discharge)
└**1=Culvert** (Passes 9.87 cfs of 11.39 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 9.87 cfs @ 3.00 fps)

Summary for Pond ICS9: ICS9

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 0.71 cfs @ 12.08 hrs, Volume= 0.500 af
Secondary = 9.88 cfs @ 12.08 hrs, Volume= 0.353 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.00' @ 12.08 hrs
Flood Elev= 66.76'

Device	Routing	Invert	Outlet Devices
#1	Secondary	61.70'	**18.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.18'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	62.00'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.00' / 61.65' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

#4 Device 3 62.00' **4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.71 cfs @ 12.08 hrs HW=65.00' (Free Discharge)
└**3=Culvert** (Passes 0.71 cfs of 4.72 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.71 cfs @ 8.11 fps)

Secondary OutFlow Max=9.86 cfs @ 12.08 hrs HW=65.00' (Free Discharge)
└**1=Culvert** (Passes 9.86 cfs of 10.73 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 9.86 cfs @ 3.00 fps)

Summary for Pond ISC42: ICS 42

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af
Outflow = 10.59 cfs @ 12.08 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min
Primary = 5.56 cfs @ 12.08 hrs, Volume= 0.796 af
Secondary = 5.03 cfs @ 12.08 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.92' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.20'	**18.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.20' / 51.88' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.37'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.56 cfs @ 12.08 hrs HW=55.92' (Free Discharge)
├**3=Culvert** (Inlet Controls 4.84 cfs @ 6.16 fps)
└**4=Orifice/Grate** (Orifice Controls 0.72 cfs @ 8.28 fps)

Secondary OutFlow Max=5.01 cfs @ 12.08 hrs HW=55.92' (Free Discharge)
└**1=Culvert** (Passes 5.01 cfs of 11.58 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 5.01 cfs @ 2.26 fps)

Summary for Pond MPP 10: Rtank storage

Inflow Area = 0.710 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 2.91 cfs @ 12.08 hrs, Volume= 0.235 af
Outflow = 1.69 cfs @ 12.19 hrs, Volume= 0.216 af, Atten= 42%, Lag= 6.5 min
Primary = 1.69 cfs @ 12.19 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.80' @ 12.19 hrs Surf.Area= 0.179 ac Storage= 0.067 af

Plug-Flow detention time= 128.1 min calculated for 0.216 af (92% of inflow)
Center-of-Mass det. time= 86.7 min (837.8 - 751.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.23'	0.091 af	**6.25'W x 1,248.97'L x 1.94'H Field A** 0.347 af Overall - 0.118 af Embedded = 0.229 af x 40.0% Voids
#2A	61.48'	0.112 af	**ACF R-Tank HD 0.5** x 2128 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 4 Rows of 532 Chambers
		0.204 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.48'	**8.0" Round Culvert X 6.00** L= 2.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.48' / 61.40' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.69 cfs @ 12.19 hrs HW=61.80' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.69 cfs @ 2.50 fps)

Summary for Pond MPP 14: Rtanks

Inflow Area = 0.215 ac, 94.36% Impervious, Inflow Depth = 3.85" for 10-year event
Inflow = 0.87 cfs @ 12.08 hrs, Volume= 0.069 af
Outflow = 0.53 cfs @ 12.18 hrs, Volume= 0.065 af, Atten= 39%, Lag= 6.1 min
Primary = 0.53 cfs @ 12.18 hrs, Volume= 0.065 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.59' @ 12.18 hrs Surf.Area= 1,935 sf Storage= 829 cf
Flood Elev= 60.50' Surf.Area= 1,935 sf Storage= 2,354 cf

Plug-Flow detention time= 118.5 min calculated for 0.065 af (94% of inflow)
Center-of-Mass det. time= 83.2 min (842.7 - 759.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	55.98'	1,011 cf	**15.44'W x 125.33'L x 2.04'H Field A** 3,941 cf Overall - 1,413 cf Embedded = 2,528 cf x 40.0% Voids
#2A	56.23'	1,343 cf	**ACF R-Tank HD 0.5** x 583 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 11 Rows of 53 Chambers
		2,354 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	56.23'	**8.0" Round Culvert X 2.00** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.23' / 56.12' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.53 cfs @ 12.18 hrs HW=56.59' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.53 cfs @ 1.99 fps)

Summary for Pond MPP 19: Rtanks

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth = 3.52" for 10-year event
Inflow = 1.22 cfs @ 12.08 hrs, Volume= 0.092 af
Outflow = 0.35 cfs @ 12.42 hrs, Volume= 0.084 af, Atten= 72%, Lag= 20.3 min
Primary = 0.35 cfs @ 12.42 hrs, Volume= 0.084 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.60' @ 12.42 hrs Surf.Area= 0.074 ac Storage= 0.043 af

Plug-Flow detention time= 207.1 min calculated for 0.084 af (91% of inflow)
Center-of-Mass det. time= 161.3 min (939.8 - 778.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.83'	0.033 af	**18.06'W x 179.28'L x 1.84'H Field A** 0.137 af Overall - 0.055 af Embedded = 0.082 af x 40.0% Voids
#2A	55.08'	0.052 af	**ACF R-Tank HD 0.5** x 988 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 76 Chambers
		0.085 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.08'	**6.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.08' / 55.00' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.35 cfs @ 12.42 hrs HW=55.60' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.35 cfs @ 2.10 fps)

Summary for Pond MPP 21: Rtanks

Inflow Area = 0.229 ac, 83.66% Impervious, Inflow Depth = 3.52" for 10-year event
Inflow = 0.89 cfs @ 12.08 hrs, Volume= 0.067 af
Outflow = 0.40 cfs @ 12.26 hrs, Volume= 0.064 af, Atten= 55%, Lag= 10.3 min
Primary = 0.40 cfs @ 12.26 hrs, Volume= 0.064 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.33' @ 12.26 hrs Surf.Area= 1,510 sf Storage= 972 cf

Plug-Flow detention time= 126.6 min calculated for 0.064 af (94% of inflow)
Center-of-Mass det. time= 95.6 min (874.1 - 778.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.48'	818 cf	**16.75'W x 90.14'L x 2.09'H Field A** 3,151 cf Overall - 1,105 cf Embedded = 2,046 cf x 40.0% Voids
#2A	54.73'	1,050 cf	**ACF R-Tank HD 0.5** x 456 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 38 Chambers
		1,868 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.73'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.73' / 54.73' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.40 cfs @ 12.26 hrs HW=55.33' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.40 cfs @ 2.18 fps)

Summary for Pond MPP 22: Rtanks

Inflow Area = 0.310 ac, 76.43% Impervious, Inflow Depth = 3.31" for 10-year event
Inflow = 1.16 cfs @ 12.08 hrs, Volume= 0.086 af
Outflow = 0.33 cfs @ 12.42 hrs, Volume= 0.077 af, Atten= 71%, Lag= 20.3 min
Primary = 0.33 cfs @ 12.42 hrs, Volume= 0.077 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.57' @ 12.42 hrs Surf.Area= 3,003 sf Storage= 1,716 cf

Plug-Flow detention time= 204.8 min calculated for 0.077 af (90% of inflow)
Center-of-Mass det. time= 158.2 min (946.5 - 788.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.80'	1,262 cf	**16.75'W x 179.28'L x 1.79'H Field A** 5,367 cf Overall - 2,211 cf Embedded = 3,156 cf x 40.0% Voids
#2A	55.05'	2,100 cf	**ACF R-Tank HD 0.5** x 912 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 76 Chambers
		3,363 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.05'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.05' / 55.05' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.33 cfs @ 12.42 hrs HW=55.57' (Free Discharge)
1=Culvert (Barrel Controls 0.33 cfs @ 2.03 fps)

Summary for Pond MPP 26: Rtanks

Inflow Area = 0.088 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 0.029 af
Outflow = 0.19 cfs @ 12.21 hrs, Volume= 0.026 af, Atten= 48%, Lag= 7.9 min
Primary = 0.19 cfs @ 12.21 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.89' @ 12.21 hrs Surf.Area= 1,289 sf Storage= 448 cf

Plug-Flow detention time= 165.2 min calculated for 0.026 af (89% of inflow)
Center-of-Mass det. time= 114.1 min (865.1 - 751.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	34.37'	492 cf	**18.06'W x 71.37'L x 1.69'H Field A** 2,175 cf Overall - 945 cf Embedded = 1,230 cf x 40.0% Voids
#2A	34.62'	898 cf	**ACF R-Tank HD 0.5** x 390 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 30 Chambers
		1,390 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	34.62'	**8.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.62' / 34.34' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.19 cfs @ 12.21 hrs HW=34.89' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.19 cfs @ 1.40 fps)

Summary for Pond MPP 50:

Inflow Area = 0.693 ac,100.00% Impervious, Inflow Depth = 3.96" for 10-year event
Inflow = 2.84 cfs @ 12.08 hrs, Volume= 0.229 af
Outflow = 1.85 cfs @ 12.17 hrs, Volume= 0.200 af, Atten= 35%, Lag= 5.4 min
Primary = 1.85 cfs @ 12.17 hrs, Volume= 0.200 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.95' @ 12.17 hrs Surf.Area= 5,946 sf Storage= 3,076 cf

Plug-Flow detention time= 149.5 min calculated for 0.200 af (87% of inflow)
Center-of-Mass det. time= 91.4 min (842.4 - 751.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.33'	2,878 cf	**4.94'W x 1,204.40'L x 1.84'H Field A** 10,925 cf Overall - 3,731 cf Embedded = 7,195 cf x 40.0% Voids
#2A	54.33'	3,544 cf	**ACF R-Tank HD 0.5** x 1539 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 3 Rows of 513 Chambers
		6,422 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.58'	**8.0" Round Culvert X 7.00** L= 3.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.58' / 54.55' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.84 cfs @ 12.17 hrs HW=54.95' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.84 cfs @ 1.94 fps)

Summary for Pond mpp30: Rtanks

Inflow Area = 1.205 ac, 54.78% Impervious, Inflow Depth = 2.58" for 10-year event
Inflow = 3.46 cfs @ 12.09 hrs, Volume= 0.259 af
Outflow = 0.55 cfs @ 12.58 hrs, Volume= 0.259 af, Atten= 84%, Lag= 29.6 min
Primary = 0.55 cfs @ 12.58 hrs, Volume= 0.259 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 31.13' @ 12.58 hrs Surf.Area= 9,089 sf Storage= 4,276 cf
Flood Elev= 31.78' Surf.Area= 9,089 sf Storage= 8,611 cf

Plug-Flow detention time= 87.6 min calculated for 0.259 af (100% of inflow)
Center-of-Mass det. time= 87.8 min (887.9 - 800.1)

Volume	Invert	Avail.Storage	Storage Description
#1B	30.73'	4,011 cf	**8.56'W x 815.99'L x 2.04'H Field B** 14,234 cf Overall - 4,206 cf Embedded = 10,028 cf x 40.0% Voids
#2B	30.98'	3,995 cf	**ACF R-Tank HD 0.5** x 1735 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 5 Rows of 347 Chambers
#3C	29.28'	259 cf	**10.56'W x 74.72'L x 1.69'H Field C** 1,337 cf Overall - 689 cf Embedded = 648 cf x 40.0% Voids
#4C	29.53'	654 cf	**ACF R-Tank HD 1.0** x 155 Inside #3 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 5 Rows of 31 Chambers
#5D	29.28'	968 cf	**17.12'W x 76.72'L x 3.42'H Field D** 4,487 cf Overall - 2,066 cf Embedded = 2,420 cf x 40.0% Voids
#6D	29.53'	1,963 cf	**ACF R-Tank HD 1.5** x 310 Inside #5 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 10 Rows of 31 Chambers
		11,851 cf	Total Available Storage

Storage Group B created with Chamber Wizard
Storage Group C created with Chamber Wizard
Storage Group D created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	29.28'	**18.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.28' / 29.00' S= 0.0140 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	29.28'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	30.00'	**3.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.55 cfs @ 12.58 hrs HW=31.13' (Free Discharge)
└**1=Culvert** (Passes 0.24 cfs of 7.04 cfs potential flow)
└**3=Orifice/Grate** (Orifice Controls 0.24 cfs @ 4.82 fps)
└**2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 6.32 fps)

Summary for Pond SSF 36: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 1.96" for 10-year event
Inflow = 0.70 cfs @ 12.08 hrs, Volume= 0.421 af
Outflow = 0.32 cfs @ 15.82 hrs, Volume= 0.323 af, Atten= 54%, Lag= 224.1 min
Primary = 0.08 cfs @ 15.82 hrs, Volume= 0.235 af
Secondary = 0.24 cfs @ 15.82 hrs, Volume= 0.088 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 64.54' @ 15.82 hrs Surf.Area= 11,270 sf Storage= 11,075 cf
Flood Elev= 66.27' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 867.7 min calculated for 0.323 af (77% of inflow)
Center-of-Mass det. time= 747.3 min (1,523.2 - 775.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	62.77'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	63.27'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	60.02'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.02	5,635	0.0	0	0
60.03	5,635	40.0	23	23
60.76	5,635	40.0	1,645	1,668
60.77	5,635	30.0	17	1,685
61.26	5,635	30.0	828	2,513
61.27	5,635	20.0	11	2,524
62.76	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	60.02'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.02'	**1.500 in/hr Exfiltration over Surface area above 60.02'** Excluded Surface area = 5,635 sf
#3	Secondary	64.31'	**12.0" Round Culvert X 2.00** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 64.31' / 64.31' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 15.82 hrs HW=64.54' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.19 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.23 cfs @ 15.82 hrs HW=64.54' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.23 cfs @ 1.26 fps)

Summary for Pond ssf37: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.32" for 10-year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 0.500 af
Outflow = 0.51 cfs @ 14.26 hrs, Volume= 0.402 af, Atten= 27%, Lag= 130.8 min
Primary = 0.08 cfs @ 14.26 hrs, Volume= 0.237 af
Secondary = 0.43 cfs @ 14.26 hrs, Volume= 0.165 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.34' @ 14.26 hrs Surf.Area= 11,332 sf Storage= 11,768 cf
Flood Elev= 64.85' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 726.9 min calculated for 0.402 af (80% of inflow)
Center-of-Mass det. time= 628.5 min (1,397.2 - 768.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.35'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	61.85'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	58.60'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.60	5,666	0.0	0	0
58.61	5,666	40.0	23	23
59.34	5,666	40.0	1,654	1,677
59.35	5,666	30.0	17	1,694
59.84	5,666	30.0	833	2,527
59.85	5,666	20.0	11	2,538
61.34	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	58.60'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.60'	**1.500 in/hr Exfiltration over Surface area above 58.60'** Excluded Surface area = 5,666 sf
#3	Secondary	62.89'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.89' / 62.89' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 14.26 hrs HW=63.34' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.43 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.43 cfs @ 14.26 hrs HW=63.34' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.43 cfs @ 1.85 fps)

Summary for Pond ssf38: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 1.64" for 10-year event
Inflow = 9.88 cfs @ 12.08 hrs, Volume= 0.352 af
Outflow = 1.29 cfs @ 12.53 hrs, Volume= 0.255 af, Atten= 87%, Lag= 26.7 min
Primary = 0.08 cfs @ 12.53 hrs, Volume= 0.162 af
Secondary = 1.20 cfs @ 12.53 hrs, Volume= 0.093 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.45' @ 12.53 hrs Surf.Area= 11,332 sf Storage= 13,019 cf
Flood Elev= 63.62' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 518.3 min calculated for 0.255 af (72% of inflow)
Center-of-Mass det. time= 509.3 min (1,235.3 - 726.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	60.12'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	60.62'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	57.37'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.37	5,666	0.0	0	0
57.38	5,666	40.0	23	23
58.11	5,666	40.0	1,654	1,677
58.12	5,666	30.0	17	1,694
58.61	5,666	30.0	833	2,527
58.62	5,666	20.0	11	2,538
60.11	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	57.37'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	57.37'	**1.500 in/hr Exfiltration over Surface area above 57.37'** Excluded Surface area = 5,666 sf
#3	Secondary	61.66'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.66' / 61.66' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 12.53 hrs HW=62.45' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.79 fps)
└**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=1.20 cfs @ 12.53 hrs HW=62.45' (Free Discharge)
└**3=Culvert** (Barrel Controls 1.20 cfs @ 2.49 fps)

Summary for Pond ssf39: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.65" for 10-year event
Inflow = 5.19 cfs @ 12.08 hrs, Volume= 0.787 af
Outflow = 3.06 cfs @ 12.41 hrs, Volume= 0.661 af, Atten= 41%, Lag= 19.5 min
Primary = 0.09 cfs @ 12.41 hrs, Volume= 0.240 af
Secondary = 2.97 cfs @ 12.41 hrs, Volume= 0.420 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.20' @ 12.41 hrs Surf.Area= 12,365 sf Storage= 17,179 cf
Flood Elev= 55.67' Surf.Area= 12,365 sf Storage= 18,385 cf

Plug-Flow detention time= 478.7 min calculated for 0.660 af (84% of inflow)
Center-of-Mass det. time= 408.6 min (1,161.8 - 753.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,625 cf	**58.50'W x 109.24'L x 3.50'H Field A** 22,367 cf Overall - 8,303 cf Embedded = 14,064 cf x 40.0% Voids
#2A	52.67'	8,303 cf	**ADS_StormTech SC-740** x 180 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 12 rows
#3	49.42'	4,457 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		18,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,974	0.0	0	0
49.43	5,974	40.0	24	24
50.16	5,974	40.0	1,744	1,768
50.17	5,974	30.0	18	1,786
50.66	5,974	30.0	878	2,664
50.67	5,974	20.0	12	2,676
52.16	5,974	20.0	1,780	4,457

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,974 sf
#3	Secondary	53.71'	**12.0" Round Culvert**

L= 5.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.41 hrs HW=55.20' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.09 cfs @ 11.52 fps)
└**2=Exfiltration** (Passes 0.09 cfs of 0.22 cfs potential flow)

Secondary OutFlow Max=2.97 cfs @ 12.41 hrs HW=55.20' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.97 cfs @ 3.78 fps)

Summary for Pond ssf40: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.70" for 10-year event
Inflow = 5.56 cfs @ 12.08 hrs, Volume= 0.796 af
Outflow = 3.51 cfs @ 12.36 hrs, Volume= 0.692 af, Atten= 37%, Lag= 16.8 min
Primary = 0.09 cfs @ 12.36 hrs, Volume= 0.239 af
Secondary = 3.42 cfs @ 12.36 hrs, Volume= 0.453 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.52' @ 12.36 hrs Surf.Area= 11,484 sf Storage= 16,286 cf
Flood Elev= 55.67' Surf.Area= 11,484 sf Storage= 16,630 cf

Plug-Flow detention time= 443.0 min calculated for 0.692 af (87% of inflow)
Center-of-Mass det. time= 381.5 min (1,134.4 - 752.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,168 cf	**20.50'W x 280.12'L x 3.50'H Field A** 20,099 cf Overall - 7,178 cf Embedded = 12,921 cf x 40.0% Voids
#2A	52.67'	7,178 cf	**ADS_StormTech SC-740** x 156 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
#3	49.42'	4,284 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,630 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,742	0.0	0	0
49.43	5,742	40.0	23	23
50.16	5,742	40.0	1,677	1,700
50.17	5,742	30.0	17	1,717
50.66	5,742	30.0	844	2,561
50.67	5,742	20.0	11	2,572
52.16	5,742	20.0	1,711	4,284

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,742 sf
#3	Secondary	53.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.36 hrs HW=55.52' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.09 cfs @ 11.84 fps)
└**2=Exfiltration** (Passes 0.09 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=3.42 cfs @ 12.36 hrs HW=55.52' (Free Discharge)
└**3=Culvert** (Inlet Controls 3.42 cfs @ 4.35 fps)

Summary for Pond ssf41: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.33" for 10-year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 0.501 af
Outflow = 0.50 cfs @ 14.34 hrs, Volume= 0.400 af, Atten= 29%, Lag= 135.6 min
Primary = 0.08 cfs @ 14.34 hrs, Volume= 0.238 af
Secondary = 0.42 cfs @ 14.34 hrs, Volume= 0.162 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.15' @ 14.34 hrs Surf.Area= 11,270 sf Storage= 11,933 cf
Flood Elev= 49.67' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 735.3 min calculated for 0.400 af (80% of inflow)
Center-of-Mass det. time= 634.8 min (1,403.5 - 768.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	46.17'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	46.67'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	43.42'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.42	5,635	0.0	0	0
43.43	5,635	40.0	23	23
44.16	5,635	40.0	1,645	1,668
44.17	5,635	30.0	17	1,685
44.66	5,635	30.0	828	2,513
44.67	5,635	20.0	11	2,524
46.16	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	43.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	43.42'	**1.500 in/hr Exfiltration over Surface area above 43.42'** Excluded Surface area = 5,635 sf
#3	Secondary	47.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.71' / 47.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 14.34 hrs HW=48.15' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.42 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.42 cfs @ 14.34 hrs HW=48.15' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.42 cfs @ 1.83 fps)

Summary for Pond ssf42: ssf

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 3.75" for 10-year event
Inflow = 0.64 cfs @ 12.08 hrs, Volume= 0.086 af
Outflow = 0.56 cfs @ 12.23 hrs, Volume= 0.069 af, Atten= 12%, Lag= 8.6 min
Primary = 0.01 cfs @ 12.23 hrs, Volume= 0.027 af
Secondary = 0.55 cfs @ 12.23 hrs, Volume= 0.042 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.66' @ 12.23 hrs Surf.Area= 1,422 sf Storage= 1,707 cf
Flood Elev= 61.67' Surf.Area= 1,422 sf Storage= 2,027 cf

Plug-Flow detention time= 496.3 min calculated for 0.069 af (81% of inflow)
Center-of-Mass det. time= 418.4 min (1,170.9 - 752.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	58.17'	662 cf	**15.75'W x 45.16'L x 3.50'H Field A** 2,489 cf Overall - 835 cf Embedded = 1,654 cf x 40.0% Voids
#2A	58.67'	835 cf	**ADS_StormTech SC-740** x 18 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 3 rows
#3	55.42'	530 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,027 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.42	711	0.0	0	0
55.43	711	40.0	3	3
56.16	711	40.0	208	210
56.17	711	30.0	2	213
56.66	711	30.0	105	317
56.67	711	20.0	1	319
58.16	711	20.0	212	530

Device	Routing	Invert	Outlet Devices
#1	Primary	55.42'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	55.42'	**1.500 in/hr Exfiltration over Surface area above 55.42'** Excluded Surface area = 711 sf
#3	Secondary	60.06'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.05' / 60.06' S= -0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 12.23 hrs HW=60.66' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 11.00 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.55 cfs @ 12.23 hrs HW=60.66' (Free Discharge)
└**3=Culvert** (Barrel Controls 0.55 cfs @ 2.15 fps)

Summary for Pond ssf43: ssf

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 3.50" for 10-year event
Inflow = 0.66 cfs @ 12.08 hrs, Volume= 0.127 af
Outflow = 0.63 cfs @ 12.34 hrs, Volume= 0.108 af, Atten= 5%, Lag= 15.4 min
Primary = 0.02 cfs @ 12.34 hrs, Volume= 0.042 af
Secondary = 0.61 cfs @ 12.34 hrs, Volume= 0.065 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.93' @ 12.34 hrs Surf.Area= 1,934 sf Storage= 2,330 cf
Flood Elev= 60.90' Surf.Area= 1,934 sf Storage= 2,740 cf

Plug-Flow detention time= 484.9 min calculated for 0.108 af (85% of inflow)
Center-of-Mass det. time= 415.4 min (1,169.8 - 754.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.40'	910 cf	**11.00'W x 87.88'L x 3.50'H Field A** 3,383 cf Overall - 1,108 cf Embedded = 2,275 cf x 40.0% Voids
#2A	57.90'	1,108 cf	**ADS_StormTech SC-740** x 24 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	54.65'	721 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,740 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.65	967	0.0	0	0
54.66	967	40.0	4	4
55.39	967	40.0	282	286
55.40	967	30.0	3	289
55.89	967	30.0	142	431
55.90	967	20.0	2	433
57.39	967	20.0	288	721

Device	Routing	Invert	Outlet Devices
#1	Primary	54.65'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.65'	**1.500 in/hr Exfiltration over Surface area above 54.65'** Excluded Surface area = 967 sf
#3	Secondary	59.28'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.28' / 59.28' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.02 cfs @ 12.34 hrs HW=59.93' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.05 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.61 cfs @ 12.34 hrs HW=59.93' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.61 cfs @ 2.23 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1A: Runoff Area=17,785 sf 34.88% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=84 Runoff=1.64 cfs 0.118 af

Subcatchment 1B: Runoff Area=34,018 sf 20.08% Impervious Runoff Depth=2.97"
Tc=6.0 min CN=79 Runoff=2.72 cfs 0.194 af

Subcatchment 2: Runoff Area=31,049 sf 25.93% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=80 Runoff=2.56 cfs 0.182 af

Subcatchment 3: Runoff Area=36,147 sf 36.22% Impervious Runoff Depth=3.26"
Tc=6.0 min CN=82 Runoff=3.16 cfs 0.225 af

Subcatchment 4: Runoff Area=8,448 sf 0.00% Impervious Runoff Depth=2.52"
Tc=6.0 min CN=74 Runoff=0.57 cfs 0.041 af

Subcatchment 5: Runoff Area=10,807 sf 0.00% Impervious Runoff Depth=2.52"
Tc=6.0 min CN=74 Runoff=0.73 cfs 0.052 af

Subcatchment 6: Runoff Area=13,985 sf 32.06% Impervious Runoff Depth=3.26"
Tc=6.0 min CN=82 Runoff=1.22 cfs 0.087 af

Subcatchment 7: Runoff Area=30,345 sf 25.86% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=80 Runoff=2.50 cfs 0.178 af

Subcatchment 8: Runoff Area=45,551 sf 55.78% Impervious Runoff Depth=3.76"
Tc=6.0 min CN=87 Runoff=4.51 cfs 0.327 af

Subcatchment 9: Runoff Area=28,191 sf 63.29% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=89 Runoff=2.91 cfs 0.214 af

Subcatchment 10: access drive north of Runoff Area=30,932 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=3.61 cfs 0.294 af

Subcatchment 11: Runoff Area=43,174 sf 36.78% Impervious Runoff Depth=3.36"
Tc=6.0 min CN=83 Runoff=3.88 cfs 0.277 af

Subcatchment 12: Runoff Area=12,920 sf 57.98% Impervious Runoff Depth=3.86"
Tc=6.0 min CN=88 Runoff=1.31 cfs 0.095 af

Subcatchment 13: Runoff Area=45,163 sf 46.46% Impervious Runoff Depth=3.55"
Tc=6.0 min CN=85 Runoff=4.27 cfs 0.307 af

Subcatchment 14: Runoff Area=9,378 sf 94.36% Impervious Runoff Depth=4.85"
Tc=6.0 min CN=97 Runoff=1.09 cfs 0.087 af

Subcatchment 15: Runoff Area=9,157 sf 1.92% Impervious Runoff Depth=2.52"
Tc=6.0 min CN=74 Runoff=0.62 cfs 0.044 af

Subcatchment 16: Runoff Area=15,110 sf 34.16% Impervious Runoff Depth=3.26"
Tc=6.0 min CN=82 Runoff=1.32 cfs 0.094 af

Subcatchment 17: Runoff Area=13,300 sf 85.11% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=94 Runoff=1.50 cfs 0.115 af

Subcatchment 18A: Runoff Area=6,339 sf 40.91% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=84 Runoff=0.58 cfs 0.042 af

Subcatchment 18B: Runoff Area=4,023 sf 58.36% Impervious Runoff Depth=3.86"
Tc=6.0 min CN=88 Runoff=0.41 cfs 0.030 af

Subcatchment 19: Runoff Area=13,711 sf 81.76% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=94 Runoff=1.54 cfs 0.118 af

Subcatchment 20: Runoff Area=28,459 sf 73.83% Impervious Runoff Depth=4.28"
Tc=6.0 min CN=92 Runoff=3.11 cfs 0.233 af

Subcatchment 21: Runoff Area=9,994 sf 83.66% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=94 Runoff=1.12 cfs 0.086 af

Subcatchment 22: Runoff Area=13,511 sf 76.43% Impervious Runoff Depth=4.28"
Tc=6.0 min CN=92 Runoff=1.47 cfs 0.111 af

Subcatchment 23: sub 23 Runoff Area=28,475 sf 21.95% Impervious Runoff Depth=2.88"
Tc=6.0 min CN=78 Runoff=2.21 cfs 0.157 af

Subcatchment 24: Runoff Area=18,261 sf 67.19% Impervious Runoff Depth=4.28"
Tc=6.0 min CN=92 Runoff=1.99 cfs 0.150 af

Subcatchment 25: Runoff Area=118,223 sf 0.00% Impervious Runoff Depth=2.27"
Flow Length=438' Tc=67.0 min CN=71 Runoff=2.60 cfs 0.513 af

Subcatchment 26: Runoff Area=3,816 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=0.45 cfs 0.036 af

Subcatchment 27: Runoff Area=4,262 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.040 af

Subcatchment 28: Runoff Area=79,698 sf 27.42% Impervious Runoff Depth=3.55"
Tc=6.0 min CN=85 Runoff=7.53 cfs 0.542 af

Subcatchment 29: Runoff Area=1,306 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 30: Runoff Area=31,472 sf 77.98% Impervious Runoff Depth=4.39"
Tc=6.0 min CN=93 Runoff=3.49 cfs 0.265 af

Subcatchment 31: Runoff Area=70,616 sf 0.00% Impervious Runoff Depth=2.27"
Flow Length=217' Tc=12.3 min CN=71 Runoff=3.46 cfs 0.307 af

Subcatchment 32: Runoff Area=4,677 sf 60.42% Impervious Runoff Depth=3.96"
Tc=6.0 min CN=89 Runoff=0.48 cfs 0.035 af

Subcatchment 33: B3 green Runoff Area=107,893 sf 16.71% Impervious Runoff Depth=1.94"
Tc=6.0 min CN=67 Runoff=5.48 cfs 0.401 af

Subcatchment 34: Runoff Area=24,099 sf 20.00% Impervious Runoff Depth=2.02"
Tc=6.0 min CN=68 Runoff=1.28 cfs 0.093 af

Subcatchment 35: Runoff Area=20,997 sf 20.00% Impervious Runoff Depth=2.02"
Tc=6.0 min CN=68 Runoff=1.12 cfs 0.081 af

Subcatchment 36: B1M1 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 37: B1M2 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 38: B1M3 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 39: B2M4 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 40: B2M5 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 41: B2M6 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=13.15 cfs 1.069 af

Subcatchment 42: B6 Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=1.40 cfs 0.114 af

Subcatchment 43: B5 Runoff Area=18,983 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=2.22 cfs 0.180 af

Subcatchment 44: onsite untreated Runoff Area=159,363 sf 0.00% Impervious Runoff Depth=2.27"
Flow Length=574' Tc=18.8 min CN=71 Runoff=6.64 cfs 0.692 af

Subcatchment 45: Runoff Area=64,440 sf 0.00% Impervious Runoff Depth=2.19"
Flow Length=307' Tc=29.9 min CN=70 Runoff=2.11 cfs 0.269 af

Subcatchment 46: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth=2.27"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.48 cfs 0.065 af

Subcatchment 47: Runoff Area=79,187 sf 6.00% Impervious Runoff Depth=2.61"
Flow Length=639' Tc=15.9 min CN=75 Runoff=4.10 cfs 0.396 af

Subcatchment 48: Runoff Area=40,183 sf 0.00% Impervious Runoff Depth=2.19"
Flow Length=377' Tc=54.0 min CN=70 Runoff=0.97 cfs 0.168 af

Subcatchment 49: Runoff Area=84,173 sf 0.65% Impervious Runoff Depth=2.19"
Flow Length=470' Tc=54.1 min CN=70 Runoff=2.02 cfs 0.352 af

Subcatchment 50: Runoff Area=30,173 sf 100.00% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=98 Runoff=3.53 cfs 0.286 af

Subcatchment OS10: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth=2.52"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=32.83 cfs 7.945 af

Subcatchment os11a: OFFSITE 3 Runoff Area=192,533 sf 59.04% Impervious Runoff Depth=3.76"
Flow Length=532' Tc=6.8 min CN=87 Runoff=18.55 cfs 1.383 af

Subcatchment os11b: OFFSITE 3 Runoff Area=320,814 sf 1.43% Impervious Runoff Depth=2.35"
Flow Length=528' Tc=18.9 min CN=72 Runoff=13.85 cfs 1.444 af

Subcatchment OS9: OFFSITE 1 (Below Runoff Area=702,010 sf 3.63% Impervious Runoff Depth=2.61"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=25.82 cfs 3.508 af

Reach 9R: ANALYSIS POINT 9 Inflow=25.82 cfs 3.508 af
Outflow=25.82 cfs 3.508 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=1.69' Max Vel=11.61 fps Inflow=32.83 cfs 7.945 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=32.83 cfs 7.945 af

Reach 11R: Stream 9 Inflow=18.55 cfs 1.383 af
Outflow=18.55 cfs 1.383 af

Reach 17R: untreated Inflow=1.50 cfs 0.115 af
Outflow=1.50 cfs 0.115 af

Reach 20R: untreated Inflow=3.11 cfs 0.233 af
Outflow=3.11 cfs 0.233 af

Reach 23R: sub 23 Inflow=2.21 cfs 0.157 af
Outflow=2.21 cfs 0.157 af

Reach 27R: extisting Inflow=0.50 cfs 0.040 af
Outflow=0.50 cfs 0.040 af

Reach 29R: untreated Inflow=0.15 cfs 0.012 af
Outflow=0.15 cfs 0.012 af

Reach 32R: untreated Inflow=0.48 cfs 0.035 af
Outflow=0.48 cfs 0.035 af

Reach 44R: Inflow=6.64 cfs 0.692 af
Outflow=6.64 cfs 0.692 af

Reach 47R: Inflow=4.10 cfs 0.396 af
Outflow=4.10 cfs 0.396 af

Reach 48R: (new Reach) Inflow=0.97 cfs 0.168 af
Outflow=0.97 cfs 0.168 af

Reach 49R: Inflow=2.02 cfs 0.352 af
Outflow=2.02 cfs 0.352 af

Reach PT1: ANALYSIS POINT 1 at BWD Little River Inflow=3.00 cfs 0.520 af
Outflow=3.00 cfs 0.520 af

Reach PT10: Analysis point at Little River Inflow=7.53 cfs 0.542 af
Outflow=7.53 cfs 0.542 af

Reach PT2: ANALYSIS POINT 2 at BWD Reservoir Inflow=2.60 cfs 0.513 af
Outflow=2.60 cfs 0.513 af

Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir Inflow=3.46 cfs 0.307 af
Outflow=3.46 cfs 0.307 af

Reach PT5: all BWD reservoir Inflow=5.65 cfs 0.977 af
Outflow=5.65 cfs 0.977 af

Reach PT6: stream 9 offsite Avg. Flow Depth=1.33' Max Vel=4.26 fps Inflow=43.34 cfs 12.837 af
n=0.040 L=483.0' S=0.0145 '/' Capacity=401.91 cfs Outflow=43.32 cfs 12.837 af

Reach PT7: ANALYSIS POINT7 at US Avg. Flow Depth=0.32' Max Vel=7.59 fps Inflow=2.11 cfs 0.269 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=2.11 cfs 0.269 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.04' Max Vel=3.93 fps Inflow=0.48 cfs 0.065 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.48 cfs 0.065 af

Reach PT9: Analysis Point Stream 9 Avg. Flow Depth=1.12' Max Vel=24.66 fps Inflow=59.18 cfs 15.768 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=59.18 cfs 15.768 af

Reach S9-2: Stream 9 Avg. Flow Depth=1.34' Max Vel=5.43 fps Inflow=56.45 cfs 14.973 af
n=0.040 L=1,580.0' S=0.0233 '/' Capacity=120.91 cfs Outflow=56.06 cfs 14.973 af

Reach S9-3: Stream 9 Avg. Flow Depth=1.25' Max Vel=5.35 fps Inflow=58.61 cfs 15.422 af
n=0.035 L=364.0' S=0.0199 '/' Capacity=152.29 cfs Outflow=58.59 cfs 15.422 af

Reach tank: existing clarifier Inflow=86.69 cfs 10.012 af
Outflow=86.69 cfs 10.012 af

Pond dmh10: dmh10 Peak Elev=60.86' Inflow=27.41 cfs 2.118 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=27.41 cfs 2.118 af

Pond dmh11: dmh11 Peak Elev=57.39' Inflow=30.06 cfs 3.365 af
30.0" Round Culvert n=0.013 L=84.0' S=0.0050 '/' Outflow=30.06 cfs 3.365 af

Pond dmh13: dmh13 Peak Elev=56.95' Inflow=30.06 cfs 3.365 af
30.0" Round Culvert n=0.013 L=201.0' S=0.0050 '/' Outflow=30.06 cfs 3.365 af

Pond dmh14: dmh14 Peak Elev=56.32' Inflow=32.32 cfs 3.556 af
30.0" Round Culvert n=0.020 L=23.0' S=0.0052 '/' Outflow=32.32 cfs 3.556 af

Pond dmh15: dmh15 Peak Elev=56.20' Inflow=32.32 cfs 3.556 af
30.0" Round Culvert n=0.013 L=90.0' S=0.0050 '/' Outflow=32.32 cfs 3.556 af

Pond dmh16: dmh16 Peak Elev=60.60' Inflow=0.04 cfs 0.033 af
12.0" Round Culvert n=0.013 L=198.0' S=0.0126 '/' Outflow=0.04 cfs 0.033 af

Pond dmh17: dmh17 Peak Elev=55.73' Inflow=32.33 cfs 3.624 af
30.0" Round Culvert n=0.013 L=35.0' S=0.0051 '/' Outflow=32.33 cfs 3.624 af

Pond dmh19: dmh 19 Peak Elev=55.51' Inflow=2.18 cfs 0.161 af
12.0" Round Culvert n=0.013 L=59.0' S=0.0100 '/' Outflow=2.18 cfs 0.161 af

Pond dmh2: dmh2 Peak Elev=67.15' Inflow=12.39 cfs 0.969 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0150 '/' Outflow=12.39 cfs 0.969 af

Pond dmh20: dmh20 Peak Elev=55.95' Inflow=34.50 cfs 3.784 af
30.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=34.50 cfs 3.784 af

Pond dmh21: dmh21 Peak Elev=57.33' Inflow=43.04 cfs 4.884 af
30.0" Round Culvert n=0.013 L=281.0' S=0.0169 '/' Outflow=43.04 cfs 4.884 af

Pond dmh22: dmh 22 Peak Elev=54.80' Inflow=7.63 cfs 0.818 af
15.0" Round Culvert n=0.013 L=93.0' S=0.0051 '/' Outflow=7.63 cfs 0.818 af

Pond dmh23: dmh23 Peak Elev=62.00' Inflow=6.44 cfs 0.598 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0050 '/' Outflow=6.44 cfs 0.598 af

Pond dmh24: dmh24 Peak Elev=61.26' Inflow=6.44 cfs 0.598 af
12.0" Round Culvert n=0.013 L=72.0' S=0.0025 '/' Outflow=6.44 cfs 0.598 af

Pond dmh24a: dmh24a Peak Elev=60.91' Inflow=1.87 cfs 0.189 af
8.0" Round Culvert n=0.013 L=95.0' S=0.0095 '/' Outflow=1.87 cfs 0.189 af

Pond dmh25: dmh25 Peak Elev=60.45' Inflow=0.63 cfs 0.090 af
12.0" Round Culvert n=0.013 L=98.0' S=0.0510 '/' Outflow=0.63 cfs 0.090 af

Pond dmh26: dmh26 Peak Elev=59.64' Inflow=3.20 cfs 0.483 af
12.0" Round Culvert n=0.020 L=28.0' S=0.0050 '/' Outflow=3.20 cfs 0.483 af

Pond dmh27: dmh27 Peak Elev=57.59' Inflow=4.40 cfs 0.670 af
12.0" Round Culvert n=0.013 L=256.0' S=0.0050 '/' Outflow=4.40 cfs 0.670 af

Pond dmh29: dmh29 Peak Elev=59.22' Inflow=1.35 cfs 0.097 af
8.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=1.35 cfs 0.097 af

Pond dmh3: dmh3 Peak Elev=63.06' Inflow=14.92 cfs 1.149 af
24.0" Round Culvert n=0.013 L=125.0' S=0.0053 '/' Outflow=14.92 cfs 1.149 af

Pond dmh30: dmh30 Peak Elev=56.12' Inflow=1.35 cfs 0.097 af
12.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=1.35 cfs 0.097 af

Pond dmh31: dmh31 Peak Elev=57.74' Inflow=3.82 cfs 0.580 af
12.0" Round Culvert n=0.013 L=259.0' S=0.0050 '/' Outflow=3.82 cfs 0.580 af

Pond dmh32: dmh32 Peak Elev=55.83' Inflow=5.67 cfs 0.824 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0036 '/' Outflow=5.67 cfs 0.824 af

Pond dmh33: dmh33 Peak Elev=54.37' Inflow=0.43 cfs 0.110 af
12.0" Round Culvert n=0.013 L=201.0' S=0.0099 '/' Outflow=0.43 cfs 0.110 af

Pond dmh34: dmh34 Peak Elev=56.28' Inflow=5.82 cfs 0.556 af
12.0" Round Culvert n=0.013 L=39.0' S=0.0100 '/' Outflow=5.82 cfs 0.556 af

Pond dmh35: dmh35 Peak Elev=55.82' Inflow=10.95 cfs 1.566 af
18.0" Round Culvert n=0.013 L=276.0' S=0.0050 '/' Outflow=10.95 cfs 1.566 af

Pond dmh36: dmh36 Peak Elev=53.72' Inflow=10.95 cfs 1.566 af
18.0" Round Culvert n=0.013 L=159.0' S=0.0050 '/' Outflow=10.95 cfs 1.566 af

Pond dmh38: dmh38 Peak Elev=55.21' Inflow=10.58 cfs 0.941 af
18.0" Round Culvert n=0.013 L=106.0' S=0.0100 '/' Outflow=10.58 cfs 0.941 af

Pond dmh39: dmh39 Peak Elev=53.82' Inflow=10.58 cfs 0.974 af
18.0" Round Culvert n=0.013 L=58.0' S=0.0047 '/' Outflow=10.58 cfs 0.974 af

Pond dmh4: dmh4 Peak Elev=62.48' Inflow=14.92 cfs 1.149 af
24.0" Round Culvert n=0.013 L=66.0' S=0.0041 '/' Outflow=14.92 cfs 1.149 af

Pond dmh40: dmh40 Peak Elev=52.70' Inflow=17.84 cfs 2.540 af
24.0" Round Culvert n=0.013 L=340.0' S=0.0050 '/' Outflow=17.84 cfs 2.540 af

Pond dmh43: dmh43 Peak Elev=54.37' Inflow=28.67 cfs 3.502 af
24.0" Round Culvert n=0.013 L=193.0' S=0.0050 '/' Outflow=28.67 cfs 3.502 af

Pond dmh44: dmh44 Peak Elev=50.23' Inflow=28.67 cfs 3.542 af
30.0" Round Culvert n=0.013 L=82.0' S=0.0050 '/' Outflow=28.67 cfs 3.542 af

Pond dmh45: dmh45 Peak Elev=52.38' Inflow=41.16 cfs 4.508 af
30.0" Round Culvert n=0.013 L=316.0' S=0.0050 '/' Outflow=41.16 cfs 4.508 af

Pond dmh47: dmh47 Peak Elev=50.12' Inflow=41.16 cfs 4.508 af
30.0" Round Culvert n=0.013 L=104.0' S=0.0100 '/' Outflow=41.16 cfs 4.508 af

Pond dmh48: dmh48 Peak Elev=49.53' Inflow=43.12 cfs 4.766 af
30.0" Round Culvert n=0.013 L=117.0' S=0.0050 '/' Outflow=43.12 cfs 4.766 af

Pond dmh49: dmh49 Peak Elev=46.41' Inflow=43.13 cfs 4.833 af
36.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=43.13 cfs 4.833 af

Pond dmh5: dmh5 Peak Elev=62.04' Inflow=14.92 cfs 1.149 af
24.0" Round Culvert n=0.013 L=173.0' S=0.0050 '/' Outflow=14.92 cfs 1.149 af

Pond dmh50: dmh50 Peak Elev=51.33' Inflow=43.06 cfs 5.019 af
30.0" Round Culvert n=0.013 L=64.0' S=0.0100 '/' Outflow=43.06 cfs 5.019 af

Pond dmh51: dmh51 Peak Elev=50.67' Inflow=43.06 cfs 5.019 af
30.0" Round Culvert n=0.013 L=38.0' S=0.0287 '/' Outflow=43.06 cfs 5.019 af

Pond dmh52: dmh52 Peak Elev=48.28' Inflow=86.04 cfs 9.852 af
42.0" Round Culvert n=0.013 L=258.0' S=0.0194 '/' Outflow=86.04 cfs 9.852 af

Pond dmh53: dmh53 Peak Elev=40.34' Inflow=86.50 cfs 9.979 af
42.0" Round Culvert n=0.013 L=120.0' S=0.0208 '/' Outflow=86.50 cfs 9.979 af

Pond dmh54: dmh54 Peak Elev=34.37' Inflow=86.69 cfs 10.012 af
42.0" Round Culvert n=0.013 L=152.0' S=0.0329 '/' Outflow=86.69 cfs 10.012 af

Pond dmh55: dhm55 Peak Elev=26.37' Inflow=86.69 cfs 10.012 af
42.0" Round Culvert n=0.013 L=115.0' S=0.0304 '/' Outflow=86.69 cfs 10.012 af

Pond dmh56: dmh56 Peak Elev=19.87' Inflow=86.69 cfs 10.012 af
42.0" Round Culvert n=0.013 L=42.0' S=0.0357 '/' Outflow=86.69 cfs 10.012 af

Pond dmh59: dmh59 Peak Elev=66.94' Inflow=6.84 cfs 0.680 af
12.0" Round Culvert n=0.013 L=294.0' S=0.0050 '/' Outflow=6.84 cfs 0.680 af

Pond dmh6: dmh6 Peak Elev=62.15' Inflow=14.92 cfs 1.149 af
24.0" Round Culvert n=0.020 L=170.0' S=0.0050 '/' Outflow=14.92 cfs 1.149 af

Pond dmh60: dhm60 Peak Elev=42.78' Inflow=86.04 cfs 9.852 af
42.0" Round Culvert n=0.013 L=114.0' S=0.0175 '/' Outflow=86.04 cfs 9.852 af

Pond dmh7: dmh7 Peak Elev=60.27' Inflow=14.92 cfs 1.149 af
24.0" Round Culvert n=0.013 L=170.0' S=0.0050 '/' Outflow=14.92 cfs 1.149 af

Pond dmh8: dmh8 Peak Elev=64.27' Inflow=27.41 cfs 2.118 af
24.0" Round Culvert n=0.013 L=296.0' S=0.0040 '/' Outflow=27.41 cfs 2.118 af

Pond dmh9a: dmh9a Peak Elev=61.91' Inflow=27.41 cfs 2.118 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=27.41 cfs 2.118 af

Pond GSF 11: grassed soil filter Peak Elev=62.42' Storage=5,339 cf Inflow=3.88 cfs 0.277 af
Primary=0.03 cfs 0.075 af Secondary=1.26 cfs 0.153 af Outflow=1.28 cfs 0.227 af

Pond GSF 12: grassed soil filter Peak Elev=62.01' Storage=1,721 cf Inflow=1.31 cfs 0.095 af
Primary=0.01 cfs 0.025 af Secondary=0.83 cfs 0.049 af Outflow=0.84 cfs 0.074 af

Pond GSF 13: grassed soil filter Peak Elev=62.20' Storage=5,600 cf Inflow=4.27 cfs 0.307 af
Primary=0.03 cfs 0.097 af Secondary=1.99 cfs 0.158 af Outflow=2.02 cfs 0.255 af

Pond GSF 15: grassed soil filter Peak Elev=63.77' Storage=629 cf Inflow=0.62 cfs 0.044 af
Primary=0.00 cfs 0.005 af Secondary=0.39 cfs 0.029 af Outflow=0.40 cfs 0.034 af

Pond GSF 16: grassed soil filter Peak Elev=64.41' Storage=3,348 cf Inflow=1.32 cfs 0.094 af
Primary=0.01 cfs 0.024 af Secondary=0.03 cfs 0.009 af Outflow=0.04 cfs 0.033 af

Pond GSF 18A: grassed soil filter Peak Elev=57.41' Storage=1,104 cf Inflow=0.58 cfs 0.042 af
Primary=0.00 cfs 0.013 af Secondary=0.06 cfs 0.012 af Outflow=0.06 cfs 0.025 af

Pond GSF 18B: grassed soil filter Peak Elev=57.94' Storage=616 cf Inflow=0.41 cfs 0.030 af
Primary=0.00 cfs 0.006 af Secondary=0.18 cfs 0.014 af Outflow=0.19 cfs 0.020 af

Pond GSF 1A: Grassed soil filter Peak Elev=66.39' Storage=2,368 cf Inflow=1.64 cfs 0.118 af
Primary=0.01 cfs 0.036 af Secondary=0.61 cfs 0.054 af Outflow=0.63 cfs 0.090 af

Pond GSF 1B: grassed soil filter Peak Elev=67.06' Storage=1,919 cf Inflow=2.72 cfs 0.194 af
Primary=0.01 cfs 0.040 af Secondary=2.62 cfs 0.140 af Outflow=2.63 cfs 0.180 af

Pond GSF 2: grassed soil filter Peak Elev=57.76' Storage=2,980 cf Inflow=2.56 cfs 0.182 af
Primary=0.02 cfs 0.053 af Secondary=1.36 cfs 0.102 af Outflow=1.38 cfs 0.155 af

Pond GSF 24: grassed soil filter Peak Elev=40.76' Storage=2,704 cf Inflow=1.99 cfs 0.150 af
Primary=0.02 cfs 0.055 af Secondary=1.38 cfs 0.072 af Outflow=1.40 cfs 0.127 af

Pond GSF 3: grassed soil filter Peak Elev=55.94' Storage=3,691 cf Inflow=3.16 cfs 0.225 af
Primary=0.02 cfs 0.055 af Secondary=1.81 cfs 0.131 af Outflow=1.83 cfs 0.186 af

Pond GSF 4: grassed soil filter Peak Elev=55.15' Storage=709 cf Inflow=0.57 cfs 0.041 af
Primary=0.00 cfs 0.013 af Secondary=0.24 cfs 0.021 af Outflow=0.25 cfs 0.033 af

Pond GSF 5: grassed soil filter Peak Elev=54.65' Storage=967 cf Inflow=0.73 cfs 0.052 af
Primary=0.00 cfs 0.013 af Secondary=0.27 cfs 0.027 af Outflow=0.27 cfs 0.039 af

Pond GSF 6: grassed soil filter Peak Elev=48.39' Storage=1,716 cf Inflow=1.22 cfs 0.087 af
Primary=0.01 cfs 0.023 af Secondary=0.44 cfs 0.044 af Outflow=0.45 cfs 0.067 af

Pond GSF 7: grassed soil filter Peak Elev=54.81' Storage=3,616 cf Inflow=2.50 cfs 0.178 af
Primary=0.02 cfs 0.052 af Secondary=0.78 cfs 0.084 af Outflow=0.80 cfs 0.136 af

Pond GSF 8: grassed soil filter Peak Elev=57.86' Storage=5,556 cf Inflow=4.51 cfs 0.327 af
Primary=0.03 cfs 0.100 af Secondary=2.56 cfs 0.181 af Outflow=2.59 cfs 0.281 af

Pond GSF 9: grassed soil filter Peak Elev=63.20' Storage=2,970 cf Inflow=2.91 cfs 0.214 af
Primary=0.02 cfs 0.053 af Secondary=2.45 cfs 0.138 af Outflow=2.46 cfs 0.191 af

Pond ics 12: ICS 12 Peak Elev=64.81' Inflow=13.15 cfs 1.069 af
Primary=12.32 cfs 0.484 af Secondary=0.83 cfs 0.584 af Outflow=13.15 cfs 1.069 af

Pond ICS1: ICS 1 Peak Elev=67.48' Inflow=13.15 cfs 1.069 af
Primary=0.83 cfs 0.481 af Secondary=12.32 cfs 0.588 af Outflow=13.15 cfs 1.069 af

Pond ICS18: ICS18 Peak Elev=60.51' Inflow=2.22 cfs 0.180 af
Primary=0.67 cfs 0.152 af Secondary=1.55 cfs 0.028 af Outflow=2.22 cfs 0.180 af

Pond ics28: ICS28 Peak Elev=60.67' Inflow=1.40 cfs 0.114 af
Primary=0.64 cfs 0.105 af Secondary=0.76 cfs 0.009 af Outflow=1.40 cfs 0.114 af

Pond ICS37: ISC37 Peak Elev=55.72' Inflow=13.15 cfs 1.069 af
Primary=5.34 cfs 0.951 af Secondary=7.81 cfs 0.117 af Outflow=13.15 cfs 1.069 af

Pond ics46: ICS46 Peak Elev=50.35' Inflow=13.15 cfs 1.069 af
Primary=0.77 cfs 0.584 af Secondary=12.38 cfs 0.485 af Outflow=13.15 cfs 1.069 af

Pond ICS9: ICS9 Peak Elev=65.83' Inflow=13.15 cfs 1.069 af
Primary=0.80 cfs 0.583 af Secondary=12.35 cfs 0.486 af Outflow=13.15 cfs 1.069 af

Pond ISC42: ICS 42 Peak Elev=56.07' Inflow=13.15 cfs 1.069 af
Primary=5.71 cfs 0.966 af Secondary=7.44 cfs 0.103 af Outflow=13.15 cfs 1.069 af

Pond MPP 10: Rtank storage Peak Elev=61.85' Storage=0.075 af Inflow=3.61 cfs 0.294 af
8.0" Round Culvert x 6.00 n=0.013 L=2.0' S=0.0400 '/' Outflow=2.18 cfs 0.275 af

Pond MPP 14: Rtanks Peak Elev=56.65' Storage=931 cf Inflow=1.09 cfs 0.087 af
8.0" Round Culvert x 2.00 n=0.013 L=21.0' S=0.0052 '/' Outflow=0.69 cfs 0.082 af

Pond MPP 19: Rtanks Peak Elev=55.73' Storage=0.052 af Inflow=1.54 cfs 0.118 af
6.0" Round Culvert n=0.013 L=19.0' S=0.0042 '/' Outflow=0.43 cfs 0.110 af

Pond MPP 21: Rtanks Peak Elev=55.45' Storage=1,148 cf Inflow=1.12 cfs 0.086 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.51 cfs 0.082 af

Pond MPP 22: Rtanks Peak Elev=55.70' Storage=2,092 cf Inflow=1.47 cfs 0.111 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.44 cfs 0.103 af

Pond MPP 26: Rtanks Peak Elev=34.94' Storage=500 cf Inflow=0.45 cfs 0.036 af
8.0" Round Culvert n=0.013 L=8.0' S=0.0350 '/' Outflow=0.25 cfs 0.033 af

Pond MPP 50: Peak Elev=55.01' Storage=3,365 cf Inflow=3.53 cfs 0.286 af
8.0" Round Culvert x 7.00 n=0.013 L=3.0' S=0.0100 '/' Outflow=2.38 cfs 0.258 af

Pond mpp30: Rtanks Peak Elev=31.39' Storage=6,066 cf Inflow=4.60 cfs 0.346 af
Outflow=0.60 cfs 0.346 af

Pond SSF 36: ssf Peak Elev=64.57' Storage=11,181 cf Inflow=0.83 cfs 0.481 af
Primary=0.08 cfs 0.241 af Secondary=0.29 cfs 0.140 af Outflow=0.37 cfs 0.381 af

Pond ssf37: ssf Peak Elev=63.38' Storage=11,930 cf Inflow=0.80 cfs 0.583 af
Primary=0.08 cfs 0.244 af Secondary=0.51 cfs 0.240 af Outflow=0.59 cfs 0.484 af

Pond ssf38: ssf Peak Elev=63.19' Storage=15,152 cf Inflow=12.32 cfs 0.484 af
Primary=0.09 cfs 0.166 af Secondary=3.03 cfs 0.221 af Outflow=3.12 cfs 0.387 af

Pond ssf39: ssf Peak Elev=56.35' Storage=18,385 cf Inflow=5.34 cfs 0.951 af
Primary=0.10 cfs 0.246 af Secondary=4.36 cfs 0.577 af Outflow=4.46 cfs 0.823 af

Pond ssf40: ssf Peak Elev=58.35' Storage=16,630 cf Inflow=5.71 cfs 0.966 af
Primary=0.11 cfs 0.246 af Secondary=6.07 cfs 0.614 af Outflow=6.19 cfs 0.860 af

Pond ssf41: ssf Peak Elev=48.20' Storage=12,122 cf Inflow=0.77 cfs 0.584 af
Primary=0.08 cfs 0.244 af Secondary=0.51 cfs 0.237 af Outflow=0.59 cfs 0.481 af

Pond ssf42: ssf Peak Elev=60.70' Storage=1,726 cf Inflow=0.64 cfs 0.105 af
Primary=0.01 cfs 0.028 af Secondary=0.62 cfs 0.060 af Outflow=0.63 cfs 0.088 af

Pond ssf43: ssf Peak Elev=59.95' Storage=2,339 cf Inflow=0.67 cfs 0.152 af
Primary=0.02 cfs 0.043 af Secondary=0.64 cfs 0.089 af Outflow=0.65 cfs 0.133 af

Total Runoff Area = 116.264 ac Runoff Volume = 29.400 af Average Runoff Depth = 3.03"
74.76% Pervious = 86.915 ac 25.24% Impervious = 29.349 ac

Summary for Subcatchment 1A:

Runoff = 1.64 cfs @ 12.09 hrs, Volume= 0.118 af, Depth= 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	11,582	77	>75% Grass cover, Good, HSG C/D
*	6,203	98	Impervious, HSG C/D
	17,785	84	Weighted Average
	11,582		65.12% Pervious Area
	6,203		34.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 1B:

Runoff = 2.72 cfs @ 12.09 hrs, Volume= 0.194 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	6,832	98	Impervious
	27,186	74	>75% Grass cover, Good, HSG C
	34,018	79	Weighted Average
	27,186		79.92% Pervious Area
	6,832		20.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 2:

Runoff = 2.56 cfs @ 12.09 hrs, Volume= 0.182 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	8,052	98	Impervious
	5,300	74	>75% Grass cover, Good, HSG C
*	17,697	74	>75% Grass cover, Good, HSG C/D
	31,049	80	Weighted Average
	22,997		74.07% Pervious Area
	8,052		25.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 3:

Runoff = 3.16 cfs @ 12.09 hrs, Volume= 0.225 af, Depth= 3.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	13,091	98	Impervious, HSG C
*	15,516	74	>75% Grass cover, Good, HSG C/D
*	7,540	70	Woods, Good, HSG C/D
	36,147	82	Weighted Average
	23,056		63.78% Pervious Area
	13,091		36.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 4:

Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
	8,448	74	>75% Grass cover, Good, HSG C
	8,448		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 5:

Runoff = 0.73 cfs @ 12.09 hrs, Volume= 0.052 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

Area (sf)	CN	Description
10,807	74	>75% Grass cover, Good, HSG C
10,807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 6:

Runoff = 1.22 cfs @ 12.09 hrs, Volume= 0.087 af, Depth= 3.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	4,484	98	Impervious
*	9,501	74	>75% Grass cover, Good, HSG C
	13,985	82	Weighted Average
	9,501		67.94% Pervious Area
	4,484		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 7:

Runoff = 2.50 cfs @ 12.09 hrs, Volume= 0.178 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	7,846	98	Impervious
	3,270	74	>75% Grass cover, Good, HSG C
*	19,229	74	>75% Grass cover, Good, HSG C/D
	30,345	80	Weighted Average
	22,499		74.14% Pervious Area
	7,846		25.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 8:

Runoff = 4.51 cfs @ 12.09 hrs, Volume= 0.327 af, Depth= 3.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	25,409	98	Impervious
	20,142	74	>75% Grass cover, Good, HSG C
	45,551	87	Weighted Average
	20,142		44.22% Pervious Area
	25,409		55.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 9:

Runoff = 2.91 cfs @ 12.09 hrs, Volume= 0.214 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	10,348	74	>75% Grass cover, Good, HSG C/D
*	17,843	98	Impervious
	28,191	89	Weighted Average
	10,348		36.71% Pervious Area
	17,843		63.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 10: access drive north of B1

Runoff = 3.61 cfs @ 12.08 hrs, Volume= 0.294 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	30,932	98	Impervious
	30,932		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 11:

Runoff = 3.88 cfs @ 12.09 hrs, Volume= 0.277 af, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	15,881	98	Impervious
*	27,293	74	>75% Grass cover, Good, HSG C/D
	43,174	83	Weighted Average
	27,293		63.22% Pervious Area
	15,881		36.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 12:

Runoff = 1.31 cfs @ 12.09 hrs, Volume= 0.095 af, Depth= 3.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	7,491	98	Impervious, HSG C/D
	5,429	74	>75% Grass cover, Good, HSG C
	12,920	88	Weighted Average
	5,429		42.02% Pervious Area
	7,491		57.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 13:

Runoff = 4.27 cfs @ 12.09 hrs, Volume= 0.307 af, Depth= 3.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	20,981	98	Impervious
*	24,182	74	>75% Grass cover, Good, HSG C/D
	45,163	85	Weighted Average
	24,182		53.54% Pervious Area
	20,981		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 14:

Runoff = 1.09 cfs @ 12.08 hrs, Volume= 0.087 af, Depth= 4.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	8,849	98	Impervious
	529	74	>75% Grass cover, Good, HSG C
	9,378	97	Weighted Average
	529		5.64% Pervious Area
	8,849		94.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 15:

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.044 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	176	98	Impervious
*	4,183	74	>75% Grass cover, Good, HSG C/D
*	4,798	74	vegetated roof
	9,157	74	Weighted Average
	8,981		98.08% Pervious Area
	176		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 16:

Runoff = 1.32 cfs @ 12.09 hrs, Volume= 0.094 af, Depth= 3.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	5,161	98	Impervious
*	9,949	74	>75% Grass cover, Good, HSG C/D
	15,110	82	Weighted Average
	9,949		65.84% Pervious Area
	5,161		34.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 17:

Runoff = 1.50 cfs @ 12.08 hrs, Volume= 0.115 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	11,320	98	Impervious
*	1,980	74	>75% Grass cover, Good, HSG C/D
	13,300	94	Weighted Average
	1,980		14.89% Pervious Area
	11,320		85.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18A:

Runoff = 0.58 cfs @ 12.09 hrs, Volume= 0.042 af, Depth= 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	2,593	98	Impervious
*	3,746	74	>75% Grass cover, Good, HSG C/D
	6,339	84	Weighted Average
	3,746		59.09% Pervious Area
	2,593		40.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18B:

Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.030 af, Depth= 3.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	2,348	98	Impervious
*	1,675	74	>75% Grass cover, Good, HSG C/D
	4,023	88	Weighted Average
	1,675		41.64% Pervious Area
	2,348		58.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 19:

Runoff = 1.54 cfs @ 12.08 hrs, Volume= 0.118 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	11,210	98	Impervious
*	2,501	74	>75% Grass cover, Good, HSG C/D
	13,711	94	Weighted Average
	2,501		18.24% Pervious Area
	11,210		81.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 20:

Runoff = 3.11 cfs @ 12.08 hrs, Volume= 0.233 af, Depth= 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	21,010	98	Impervious
*	7,449	74	>75% Grass cover, Good, HSG C/D
	28,459	92	Weighted Average
	7,449		26.17% Pervious Area
	21,010		73.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 21:

Runoff = 1.12 cfs @ 12.08 hrs, Volume= 0.086 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	8,361	98	Impervious
*	1,633	74	>75% Grass cover, Good, HSG C/D
	9,994	94	Weighted Average
	1,633		16.34% Pervious Area
	8,361		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 22:

Runoff = 1.47 cfs @ 12.08 hrs, Volume= 0.111 af, Depth= 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	10,326	98	Impervious
*	3,185	74	>75% Grass cover, Good, HSG C/D
	13,511	92	Weighted Average
	3,185		23.57% Pervious Area
	10,326		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 23: sub 23

Runoff = 2.21 cfs @ 12.09 hrs, Volume= 0.157 af, Depth= 2.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

Area (sf)	CN	Description
6,249	98	Paved parking, HSG C
2,450	74	>75% Grass cover, Good, HSG C
10,135	74	>75% Grass cover, Good, HSG C
9,641	70	Woods, Good, HSG C
28,475	78	Weighted Average
22,226		78.05% Pervious Area
6,249		21.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct**

Summary for Subcatchment 24:

Runoff = 1.99 cfs @ 12.08 hrs, Volume= 0.150 af, Depth= 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	12,270	98	Impervious
	5,991	80	>75% Grass cover, Good, HSG D
	18,261	92	Weighted Average
	5,991		32.81% Pervious Area
	12,270		67.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 25:

Runoff = 2.60 cfs @ 12.89 hrs, Volume= 0.513 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	21,818	74	>75% Grass cover, Good, HSG C/D
*	96,405	70	Woods, Good, HSG C/D
	118,223	71	Weighted Average
	118,223		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.4	130	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
11.9	253	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	55	0.3000	1.37		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
67.0	438	Total			

Summary for Subcatchment 26:

Runoff = 0.45 cfs @ 12.08 hrs, Volume= 0.036 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	3,816	98	Impervious
	3,816		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 27:

Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	4,262	98	Impervious
	4,262		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 28:

Runoff = 7.53 cfs @ 12.09 hrs, Volume= 0.542 af, Depth= 3.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	21,852	98	Impervious
	40,598	80	>75% Grass cover, Good, HSG D
	6,418	77	Woods, Good, HSG D
	10,830	79	Woods/grass comb., Good, HSG D
	79,698	85	Weighted Average
	57,846		72.58% Pervious Area
	21,852		27.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 29:

Runoff = 0.15 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	1,306	98	Impervious
	1,306		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 30:

Runoff = 3.49 cfs @ 12.08 hrs, Volume= 0.265 af, Depth= 4.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	24,541	98	Impervious
*	6,931	74	>75% Grass cover, Good, HSG C/D
	31,472	93	Weighted Average
	6,931		22.02% Pervious Area
	24,541		77.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 31:

Runoff = 3.46 cfs @ 12.18 hrs, Volume= 0.307 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	24,011	74	>75% Grass cover, Good, HSG C/D
*	46,605	70	Woods, Good, HSG C/D
	70,616	71	Weighted Average
	70,616		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0500	0.16		**Sheet Flow, a-b**
					Grass: Dense n= 0.240 P2= 2.90"
1.7	86	0.1200	0.87		**Shallow Concentrated Flow, b-c**
					Forest w/Heavy Litter Kv= 2.5 fps
0.2	31	0.0300	2.60		**Shallow Concentrated Flow, c-d**
					Grassed Waterway Kv= 15.0 fps
12.3	217	Total			

Summary for Subcatchment 32:

Runoff = 0.48 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	2,826	98	Impervious
*	1,851	74	>75% Grass cover, Good, HSG C/D
	4,677	89	Weighted Average
	1,851		39.58% Pervious Area
	2,826		60.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 33: B3 green

Runoff = 5.48 cfs @ 12.09 hrs, Volume= 0.401 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	89,860	61	vegetated roof
*	18,033	98	penthouse
	107,893	67	Weighted Average
	89,860		83.29% Pervious Area
	18,033		16.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 34:

Runoff = 1.28 cfs @ 12.09 hrs, Volume= 0.093 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	19,279	61	vegetated roof
*	4,820	98	penthouse/walks on roof
	24,099	68	Weighted Average
	19,279		80.00% Pervious Area
	4,820		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 35:

Runoff = 1.12 cfs @ 12.09 hrs, Volume= 0.081 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	16,797	61	vegetated roof
*	4,200	98	penthouse/walks on roof
	20,997	68	Weighted Average
	16,797		80.00% Pervious Area
	4,200		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 36: B1M1

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 37: B1M2

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 38: B1M3

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 39: B2M4

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 40: B2M5

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 41: B2M6

Runoff = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 42: B6

Runoff = 1.40 cfs @ 12.08 hrs, Volume= 0.114 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	12,000	98	Impervious
	12,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 43: B5

Runoff = 2.22 cfs @ 12.08 hrs, Volume= 0.180 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	18,983	98	Impervious
	18,983		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 44: onsite untreated

Runoff = 6.64 cfs @ 12.26 hrs, Volume= 0.692 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	29,531	74	>75% Grass cover, Good, HSG C/D
*	129,832	70	Woods, Good, HSG C/D
	159,363	71	Weighted Average
	159,363		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	97	0.0620	0.25		**Sheet Flow, a-b** Grass: Short n= 0.150 P2= 2.90"
4.3	170	0.0090	0.66		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
1.3	97	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
6.8	210	0.0430	0.52		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
18.8	574	Total			

Summary for Subcatchment 45:

Runoff = 2.11 cfs @ 12.43 hrs, Volume= 0.269 af, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	5,799	74	>75% Grass cover, Good, HSG C/D
*	58,641	70	Woods, Good, HSG C/D
	64,440	70	Weighted Average
	64,440		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	79	0.0340	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.9	121	0.0800	0.71		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	34	0.0600	3.67		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage

29.9 307 Total

Summary for Subcatchment 46: SUBCAT 8

Runoff = 0.48 cfs @ 12.50 hrs, Volume= 0.065 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 47:

Runoff = 4.10 cfs @ 12.22 hrs, Volume= 0.396 af, Depth= 2.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
	16,941	80	>75% Grass cover, Good, HSG D
*	27,433	74	>75% Grass cover, Good, HSG C/D
*	30,061	70	Woods, Good, HSG C/D
*	4,752	98	Impervious
	79,187	75	Weighted Average
	74,435		94.00% Pervious Area
	4,752		6.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	102	0.0400	0.15		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
0.6	30	0.1000	0.79		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.6	100	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
3.2	407	0.0200	2.12		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
15.9	639	Total			

Summary for Subcatchment 48:

Runoff = 0.97 cfs @ 12.78 hrs, Volume= 0.168 af, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	305	74	>75% Grass cover, Good, HSG C/D
*	36,887	70	Woods, Good, HSG C/D
	2,991	70	Woods, Good, HSG C
	40,183	70	Weighted Average
	40,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.6	127	0.0200	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.4	115	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	45	0.2000	1.12		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
0.3	90	0.0880	4.45		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
54.0	377	Total			

Summary for Subcatchment 49:

Runoff = 2.02 cfs @ 12.75 hrs, Volume= 0.352 af, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	2,923	74	>75% Grass cover, Good, HSG C/D
*	80,702	70	Woods, Good, HSG C/D
*	548	98	Impervious
	84,173	70	Weighted Average
	83,625		99.35% Pervious Area
	548		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.4	115	0.0500	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
23.7	355	0.0100	0.25		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
54.1	470	Total			

Summary for Subcatchment 50:

Runoff = 3.53 cfs @ 12.08 hrs, Volume= 0.286 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	30,173	98	Impervious
	30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment OS10: OFFSITE 2 (above Perkins Rd)

Runoff = 32.83 cfs @ 13.29 hrs, Volume= 7.945 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment os11a: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 18.55 cfs @ 12.10 hrs, Volume= 1.383 af, Depth= 3.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment os11b: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 13.85 cfs @ 12.27 hrs, Volume= 1.444 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Subcatchment OS9: OFFSITE 1 (Below Perkins Rd)

Runoff = 25.82 cfs @ 12.51 hrs, Volume= 3.508 af, Depth= 2.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	6,087	74	>75% Grass cover, Good, HSG C
	72,382	70	Woods, Good, HSG C
	61,890	74	>75% Grass cover, Good, HSG C
	702,010	75	Weighted Average
	676,497		96.37% Pervious Area
	25,513		3.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Reach 9R: ANALYSIS POINT 9

Inflow Area = 16.116 ac, 3.63% Impervious, Inflow Depth = 2.61" for 25-year event
Inflow = 25.82 cfs @ 12.51 hrs, Volume= 3.508 af
Outflow = 25.82 cfs @ 12.51 hrs, Volume= 3.508 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

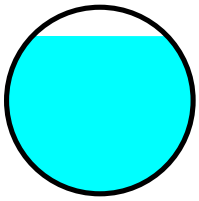
Summary for Reach 10R: Perkins Road Culvert

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth = 2.52" for 25-year event
Inflow = 32.83 cfs @ 13.29 hrs, Volume= 7.945 af
Outflow = 32.83 cfs @ 13.29 hrs, Volume= 7.945 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 11.61 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.64 fps, Avg. Travel Time= 0.1 min

Peak Storage= 71 cf @ 13.29 hrs
Average Depth at Peak Storage= 1.69'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: Stream 9

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth = 3.76" for 25-year event
Inflow = 18.55 cfs @ 12.10 hrs, Volume= 1.383 af
Outflow = 18.55 cfs @ 12.10 hrs, Volume= 1.383 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 17R: untreated

Inflow Area = 0.305 ac, 85.11% Impervious, Inflow Depth = 4.51" for 25-year event
Inflow = 1.50 cfs @ 12.08 hrs, Volume= 0.115 af
Outflow = 1.50 cfs @ 12.08 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 20R: untreated

Inflow Area = 0.653 ac, 73.83% Impervious, Inflow Depth = 4.28" for 25-year event
Inflow = 3.11 cfs @ 12.08 hrs, Volume= 0.233 af
Outflow = 3.11 cfs @ 12.08 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 23R: sub 23

Inflow Area = 0.654 ac, 21.95% Impervious, Inflow Depth = 2.88" for 25-year event
Inflow = 2.21 cfs @ 12.09 hrs, Volume= 0.157 af
Outflow = 2.21 cfs @ 12.09 hrs, Volume= 0.157 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 27R: extisting

Inflow Area = 0.098 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 0.50 cfs @ 12.08 hrs, Volume= 0.040 af
Outflow = 0.50 cfs @ 12.08 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 29R: untreated

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 0.15 cfs @ 12.08 hrs, Volume= 0.012 af
Outflow = 0.15 cfs @ 12.08 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 32R: untreated

Inflow Area = 0.107 ac, 60.42% Impervious, Inflow Depth = 3.96" for 25-year event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.48 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 44R:

Inflow Area = 3.658 ac, 0.00% Impervious, Inflow Depth = 2.27" for 25-year event
Inflow = 6.64 cfs @ 12.26 hrs, Volume= 0.692 af
Outflow = 6.64 cfs @ 12.26 hrs, Volume= 0.692 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 47R:

Inflow Area = 1.818 ac, 6.00% Impervious, Inflow Depth = 2.61" for 25-year event
Inflow = 4.10 cfs @ 12.22 hrs, Volume= 0.396 af
Outflow = 4.10 cfs @ 12.22 hrs, Volume= 0.396 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 48R: (new Reach)

Inflow Area = 0.922 ac, 0.00% Impervious, Inflow Depth = 2.19" for 25-year event
Inflow = 0.97 cfs @ 12.78 hrs, Volume= 0.168 af
Outflow = 0.97 cfs @ 12.78 hrs, Volume= 0.168 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 49R:

Inflow Area = 1.932 ac, 0.65% Impervious, Inflow Depth = 2.19" for 25-year event
Inflow = 2.02 cfs @ 12.75 hrs, Volume= 0.352 af
Outflow = 2.02 cfs @ 12.75 hrs, Volume= 0.352 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT1: ANALYSIS POINT 1 at BWD Little River

Inflow Area = 2.855 ac, 0.44% Impervious, Inflow Depth = 2.19" for 25-year event
Inflow = 3.00 cfs @ 12.78 hrs, Volume= 0.520 af
Outflow = 3.00 cfs @ 12.78 hrs, Volume= 0.520 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT10: Analysis point at Little River

Inflow Area = 1.830 ac, 27.42% Impervious, Inflow Depth = 3.55" for 25-year event
Inflow = 7.53 cfs @ 12.09 hrs, Volume= 0.542 af
Outflow = 7.53 cfs @ 12.09 hrs, Volume= 0.542 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD Reservoir

Inflow Area = 2.714 ac, 0.00% Impervious, Inflow Depth = 2.27" for 25-year event
Inflow = 2.60 cfs @ 12.89 hrs, Volume= 0.513 af
Outflow = 2.60 cfs @ 12.89 hrs, Volume= 0.513 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir

Inflow Area = 1.621 ac, 0.00% Impervious, Inflow Depth = 2.27" for 25-year event
Inflow = 3.46 cfs @ 12.18 hrs, Volume= 0.307 af
Outflow = 3.46 cfs @ 12.18 hrs, Volume= 0.307 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT5: all BWD reservoir

Inflow Area = 4.989 ac, 2.88% Impervious, Inflow Depth = 2.35" for 25-year event
Inflow = 5.65 cfs @ 12.14 hrs, Volume= 0.977 af
Outflow = 5.65 cfs @ 12.14 hrs, Volume= 0.977 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT6: stream 9 offsite

Inflow Area = 58.299 ac, 7.15% Impervious, Inflow Depth = 2.64" for 25-year event
Inflow = 43.34 cfs @ 12.87 hrs, Volume= 12.837 af
Outflow = 43.32 cfs @ 12.89 hrs, Volume= 12.837 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 4.7 min

Peak Storage= 4,912 cf @ 12.89 hrs
Average Depth at Peak Storage= 1.33'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 401.91 cfs

5.00' x 4.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

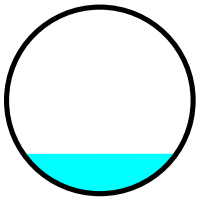
Summary for Reach PT7: ANALYSIS POINT7 at US Route 1 culvert

Inflow Area = 1.479 ac, 0.00% Impervious, Inflow Depth = 2.19" for 25-year event
Inflow = 2.11 cfs @ 12.43 hrs, Volume= 0.269 af
Outflow = 2.11 cfs @ 12.43 hrs, Volume= 0.269 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.59 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.20 fps, Avg. Travel Time= 0.4 min

Peak Storage= 23 cf @ 12.43 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Route 1 culvert

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth = 2.27" for 25-year event
Inflow = 0.48 cfs @ 12.50 hrs, Volume= 0.065 af
Outflow = 0.48 cfs @ 12.50 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 3.93 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.54 fps, Avg. Travel Time= 0.5 min

Peak Storage= 9 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

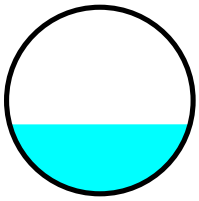
Summary for Reach PT9: Analysis Point Stream 9 at US Route 1 culvert

Inflow Area = 72.473 ac, 7.13% Impervious, Inflow Depth = 2.61" for 25-year event
Inflow = 59.18 cfs @ 12.48 hrs, Volume= 15.768 af
Outflow = 59.18 cfs @ 12.48 hrs, Volume= 15.768 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 24.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.08 fps, Avg. Travel Time= 0.2 min

Peak Storage= 223 cf @ 12.48 hrs
Average Depth at Peak Storage= 1.12'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

Inflow Area = 69.323 ac, 6.16% Impervious, Inflow Depth = 2.59" for 25-year event
Inflow = 56.45 cfs @ 12.44 hrs, Volume= 14.973 af
Outflow = 56.06 cfs @ 12.49 hrs, Volume= 14.973 af, Atten= 1%, Lag= 3.3 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.43 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 15.0 min

Peak Storage= 16,313 cf @ 12.49 hrs
Average Depth at Peak Storage= 1.34'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 120.91 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

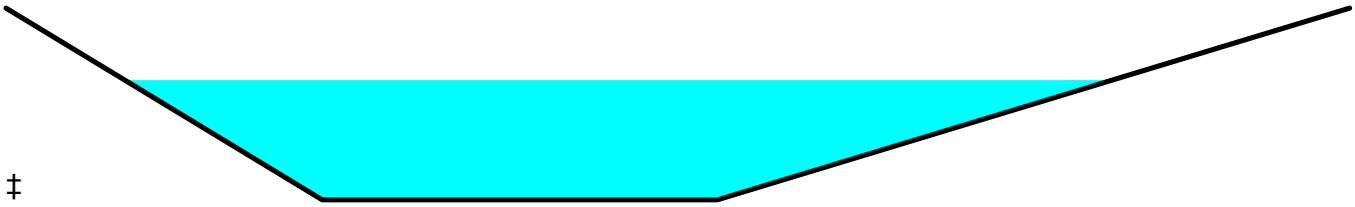
Summary for Reach S9-3: Stream 9

Inflow Area = 71.269 ac, 6.33% Impervious, Inflow Depth = 2.60" for 25-year event
Inflow = 58.61 cfs @ 12.46 hrs, Volume= 15.422 af
Outflow = 58.59 cfs @ 12.48 hrs, Volume= 15.422 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.35 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.61 fps, Avg. Travel Time= 3.8 min

Peak Storage= 3,982 cf @ 12.48 hrs
Average Depth at Peak Storage= 1.25'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 152.29 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Summary for Reach tank: existing clarifier

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af
Outflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond dmh10: dmh10

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 4.27" for 25-year event
Inflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af
Outflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af, Atten= 0%, Lag= 0.0 min
Primary = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.86' @ 12.09 hrs
Flood Elev= 65.54'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.59'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.59' / 53.56' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=27.36 cfs @ 12.09 hrs HW=60.84' (Free Discharge)
1=Culvert (Inlet Controls 27.36 cfs @ 8.71 fps)

Summary for Pond dmh11: dmh11

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 4.37" for 25-year event
Inflow = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af
Outflow = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af, Atten= 0%, Lag= 0.0 min
Primary = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.39' @ 12.09 hrs
Flood Elev= 65.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.54'	**30.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.54' / 53.12' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=30.05 cfs @ 12.09 hrs HW=57.38' (Free Discharge)
1=Culvert (Inlet Controls 30.05 cfs @ 6.12 fps)

Summary for Pond dmh13: dmh13

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 4.37" for 25-year event
Inflow = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af
Outflow = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af, Atten= 0%, Lag= 0.0 min
Primary = 30.06 cfs @ 12.09 hrs, Volume= 3.365 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 56.95' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.10'	**30.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.10' / 52.09' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=30.05 cfs @ 12.09 hrs HW=56.94' (Free Discharge)
↑**1=Culvert** (Inlet Controls 30.05 cfs @ 6.12 fps)

Summary for Pond dmh14: dmh14

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 4.32" for 25-year event
Inflow = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af
Outflow = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af, Atten= 0%, Lag= 0.0 min
Primary = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.32' @ 12.09 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	52.07'	**30.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.07' / 51.95' S= 0.0052 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 4.91 sf

Primary OutFlow Max=32.30 cfs @ 12.09 hrs HW=56.32' (Free Discharge)
↑**1=Culvert** (Inlet Controls 32.30 cfs @ 6.58 fps)

Summary for Pond dmh15: dmh15

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 4.32" for 25-year event
Inflow = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af
Outflow = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af, Atten= 0%, Lag= 0.0 min
Primary = 32.32 cfs @ 12.09 hrs, Volume= 3.556 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.20' @ 12.09 hrs
Flood Elev= 64.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.95'	**30.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.95' / 51.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=32.30 cfs @ 12.09 hrs HW=56.20' (Free Discharge)
1=Culvert (Inlet Controls 32.30 cfs @ 6.58 fps)

Summary for Pond dmh16: dmh16

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth > 1.14" for 25-year event
Inflow = 0.04 cfs @ 16.93 hrs, Volume= 0.033 af
Outflow = 0.04 cfs @ 16.93 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.04 cfs @ 16.93 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.60' @ 16.93 hrs
Flood Elev= 64.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 58.00' S= 0.0126 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.03 cfs @ 16.93 hrs HW=60.60' (Free Discharge)
1=Culvert (Inlet Controls 0.03 cfs @ 0.85 fps)

Summary for Pond dmh17: dmh17

Inflow Area = 10.447 ac, 87.59% Impervious, Inflow Depth > 4.16" for 25-year event
Inflow = 32.33 cfs @ 12.09 hrs, Volume= 3.624 af
Outflow = 32.33 cfs @ 12.09 hrs, Volume= 3.624 af, Atten= 0%, Lag= 0.0 min
Primary = 32.33 cfs @ 12.09 hrs, Volume= 3.624 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.73' @ 12.09 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.48'	**30.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.48' / 51.30' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=32.31 cfs @ 12.09 hrs HW=55.73' (Free Discharge)
1=Culvert (Inlet Controls 32.31 cfs @ 6.58 fps)

Summary for Pond dmh19: dmh 19

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth > 4.42" for 25-year event
Inflow = 2.18 cfs @ 12.08 hrs, Volume= 0.161 af
Outflow = 2.18 cfs @ 12.08 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min
Primary = 2.18 cfs @ 12.08 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.51' @ 12.08 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.48'	**12.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.48' / 53.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.18 cfs @ 12.08 hrs HW=55.51' (Free Discharge)
1=Culvert (Inlet Controls 2.18 cfs @ 2.77 fps)

Summary for Pond dmh2: dmh2

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 4.50" for 25-year event
Inflow = 12.39 cfs @ 12.08 hrs, Volume= 0.969 af
Outflow = 12.39 cfs @ 12.08 hrs, Volume= 0.969 af, Atten= 0%, Lag= 0.0 min
Primary = 12.39 cfs @ 12.08 hrs, Volume= 0.969 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.15' @ 12.08 hrs
Flood Elev= 69.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.00' / 61.50' S= 0.0150 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=12.37 cfs @ 12.08 hrs HW=67.14' (Free Discharge)
1=Culvert (Inlet Controls 12.37 cfs @ 7.00 fps)

Summary for Pond dmh20: dmh20

Inflow Area = 10.883 ac, 88.09% Impervious, Inflow Depth > 4.17" for 25-year event
Inflow = 34.50 cfs @ 12.09 hrs, Volume= 3.784 af
Outflow = 34.50 cfs @ 12.09 hrs, Volume= 3.784 af, Atten= 0%, Lag= 0.0 min
Primary = 34.50 cfs @ 12.09 hrs, Volume= 3.784 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 55.95' @ 12.09 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**30.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.28' / 50.78' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=34.49 cfs @ 12.09 hrs HW=55.95' (Free Discharge)
↑**1=Culvert** (Inlet Controls 34.49 cfs @ 7.03 fps)

Summary for Pond dmh21: dmh21

Inflow Area = 14.600 ac, 81.45% Impervious, Inflow Depth > 4.01" for 25-year event
Inflow = 43.04 cfs @ 12.10 hrs, Volume= 4.884 af
Outflow = 43.04 cfs @ 12.10 hrs, Volume= 4.884 af, Atten= 0%, Lag= 0.0 min
Primary = 43.04 cfs @ 12.10 hrs, Volume= 4.884 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.33' @ 12.10 hrs
Flood Elev= 58.55'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.76'	**30.0" Round Culvert** L= 281.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.76' / 46.00' S= 0.0169 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=43.04 cfs @ 12.10 hrs HW=57.33' (Free Discharge)
↑**1=Culvert** (Inlet Controls 43.04 cfs @ 8.77 fps)

Summary for Pond dmh22: dmh 22

Inflow Area = 2.671 ac, 64.47% Impervious, Inflow Depth > 3.68" for 25-year event
Inflow = 7.63 cfs @ 12.09 hrs, Volume= 0.818 af
Outflow = 7.63 cfs @ 12.09 hrs, Volume= 0.818 af, Atten= 0%, Lag= 0.0 min
Primary = 7.63 cfs @ 12.09 hrs, Volume= 0.818 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.80' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.50'	**15.0" Round Culvert** L= 93.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.50' / 51.03' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=7.63 cfs @ 12.09 hrs HW=54.80' (Free Discharge)
1=Culvert (Inlet Controls 7.63 cfs @ 6.21 fps)

Summary for Pond dmh23: dmh23

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 3.54" for 25-year event
Inflow = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af
Outflow = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af, Atten= 0%, Lag= 0.0 min
Primary = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.00' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.19'	**12.0" Round Culvert** L= 138.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.19' / 54.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=6.44 cfs @ 12.09 hrs HW=62.00' (Free Discharge)
1=Culvert (Barrel Controls 6.44 cfs @ 8.19 fps)

Summary for Pond dmh24: dmh24

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 3.54" for 25-year event
Inflow = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af
Outflow = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af, Atten= 0%, Lag= 0.0 min
Primary = 6.44 cfs @ 12.09 hrs, Volume= 0.598 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.26' @ 12.09 hrs
Flood Elev= 61.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.10'	**12.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.10' / 55.92' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=6.44 cfs @ 12.09 hrs HW=61.26' (Free Discharge)
1=Culvert (Barrel Controls 6.44 cfs @ 8.19 fps)

Summary for Pond dmh24a: dmh24a

Inflow Area = 0.602 ac, 71.74% Impervious, Inflow Depth > 3.76" for 25-year event
Inflow = 1.87 cfs @ 12.15 hrs, Volume= 0.189 af
Outflow = 1.87 cfs @ 12.15 hrs, Volume= 0.189 af, Atten= 0%, Lag= 0.0 min
Primary = 1.87 cfs @ 12.15 hrs, Volume= 0.189 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.91' @ 12.15 hrs
Flood Elev= 63.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0" Round Culvert** L= 95.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.10' S= 0.0095 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.87 cfs @ 12.15 hrs HW=60.89' (Free Discharge)
1=Culvert (Barrel Controls 1.87 cfs @ 5.35 fps)

Summary for Pond dmh25: dmh25

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth > 2.64" for 25-year event
Inflow = 0.63 cfs @ 12.34 hrs, Volume= 0.090 af
Outflow = 0.63 cfs @ 12.34 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min
Primary = 0.63 cfs @ 12.34 hrs, Volume= 0.090 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.45' @ 12.34 hrs
Flood Elev= 67.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.00'	**12.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.00' / 55.00' S= 0.0510 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.62 cfs @ 12.34 hrs HW=60.45' (Free Discharge)
1=Culvert (Inlet Controls 0.62 cfs @ 1.81 fps)

Summary for Pond dmh26: dmh26

Inflow Area = 2.028 ac, 41.73% Impervious, Inflow Depth > 2.86" for 25-year event
Inflow = 3.20 cfs @ 12.28 hrs, Volume= 0.483 af
Outflow = 3.20 cfs @ 12.28 hrs, Volume= 0.483 af, Atten= 0%, Lag= 0.0 min
Primary = 3.20 cfs @ 12.28 hrs, Volume= 0.483 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 59.64' @ 12.28 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.75'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.75' / 57.61' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.20 cfs @ 12.28 hrs HW=59.64' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 3.20 cfs @ 4.07 fps)

Summary for Pond dmh27: dmh27

Inflow Area = 2.712 ac, 46.62% Impervious, Inflow Depth > 2.96" for 25-year event
Inflow = 4.40 cfs @ 12.29 hrs, Volume= 0.670 af
Outflow = 4.40 cfs @ 12.29 hrs, Volume= 0.670 af, Atten= 0%, Lag= 0.0 min
Primary = 4.40 cfs @ 12.29 hrs, Volume= 0.670 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.59' @ 12.29 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.03'	**12.0" Round Culvert** L= 256.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.03' / 51.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.40 cfs @ 12.29 hrs HW=57.59' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 4.40 cfs @ 5.60 fps)

Summary for Pond dmh29: dmh29

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 4.23" for 25-year event
Inflow = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af
Outflow = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.22' @ 12.09 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.85'	**8.0" Round Culvert** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.85' / 57.39' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.35 cfs @ 12.09 hrs HW=59.21' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.35 cfs @ 3.86 fps)

Summary for Pond dmh3: dmh3

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 4.10" for 25-year event
Inflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af
Outflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.06' @ 12.09 hrs
Flood Elev= 68.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**24.0" Round Culvert** L= 125.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 59.84' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.90 cfs @ 12.09 hrs HW=63.06' (Free Discharge)
└**1=Culvert** (Inlet Controls 14.90 cfs @ 4.74 fps)

Summary for Pond dmh30: dmh30

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 4.23" for 25-year event
Inflow = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af
Outflow = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 1.35 cfs @ 12.09 hrs, Volume= 0.097 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.12' @ 12.09 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.40'	**12.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.40' / 54.37' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.35 cfs @ 12.09 hrs HW=56.12' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.35 cfs @ 3.12 fps)

Summary for Pond dmh31: dmh31

Inflow Area = 2.303 ac, 48.70% Impervious, Inflow Depth > 3.02" for 25-year event
Inflow = 3.82 cfs @ 12.27 hrs, Volume= 0.580 af
Outflow = 3.82 cfs @ 12.27 hrs, Volume= 0.580 af, Atten= 0%, Lag= 0.0 min
Primary = 3.82 cfs @ 12.27 hrs, Volume= 0.580 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.74' @ 12.27 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.35'	**12.0" Round Culvert** L= 259.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.35' / 53.05' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.82 cfs @ 12.27 hrs HW=57.73' (Free Discharge)
1=Culvert (Barrel Controls 3.82 cfs @ 4.86 fps)

Summary for Pond dmh32: dmh32

Inflow Area = 3.424 ac, 42.31% Impervious, Inflow Depth > 2.89" for 25-year event
Inflow = 5.67 cfs @ 12.28 hrs, Volume= 0.824 af
Outflow = 5.67 cfs @ 12.28 hrs, Volume= 0.824 af, Atten= 0%, Lag= 0.0 min
Primary = 5.67 cfs @ 12.28 hrs, Volume= 0.824 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.83' @ 12.28 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.73'	**12.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.73' / 51.60' S= 0.0036 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.66 cfs @ 12.28 hrs HW=55.83' (Free Discharge)
1=Culvert (Inlet Controls 5.66 cfs @ 7.21 fps)

Summary for Pond dmh33: dmh33

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth > 4.18" for 25-year event
Inflow = 0.43 cfs @ 12.49 hrs, Volume= 0.110 af
Outflow = 0.43 cfs @ 12.49 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 12.49 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.37' @ 12.49 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 52.01' S= 0.0099 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.43 cfs @ 12.49 hrs HW=54.37' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.43 cfs @ 1.63 fps)

Summary for Pond dmh34: dmh34

Inflow Area = 3.030 ac, 25.90% Impervious, Inflow Depth > 2.20" for 25-year event
Inflow = 5.82 cfs @ 12.10 hrs, Volume= 0.556 af
Outflow = 5.82 cfs @ 12.10 hrs, Volume= 0.556 af, Atten= 0%, Lag= 0.0 min
Primary = 5.82 cfs @ 12.10 hrs, Volume= 0.556 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.28' @ 12.10 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.99'	**12.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.99' / 51.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.81 cfs @ 12.10 hrs HW=56.27' (Free Discharge)
↑**1=Culvert** (Inlet Controls 5.81 cfs @ 7.39 fps)

Summary for Pond dmh35: dmh35

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 2.58" for 25-year event
Inflow = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af
Outflow = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af, Atten= 0%, Lag= 0.0 min
Primary = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.82' @ 12.23 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.55'	**18.0" Round Culvert** L= 276.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.55' / 50.17' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=10.95 cfs @ 12.23 hrs HW=55.81' (Free Discharge)
1=Culvert (Barrel Controls 10.95 cfs @ 6.20 fps)

Summary for Pond dmh36: dmh36

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 2.58" for 25-year event
Inflow = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af
Outflow = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af, Atten= 0%, Lag= 0.0 min
Primary = 10.95 cfs @ 12.23 hrs, Volume= 1.566 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.72' @ 12.23 hrs
Flood Elev= 53.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.15'	**18.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.15' / 49.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=10.95 cfs @ 12.23 hrs HW=53.72' (Free Discharge)
1=Culvert (Barrel Controls 10.95 cfs @ 6.20 fps)

Summary for Pond dmh38: dmh38

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 4.37" for 25-year event
Inflow = 10.58 cfs @ 12.09 hrs, Volume= 0.941 af
Outflow = 10.58 cfs @ 12.09 hrs, Volume= 0.941 af, Atten= 0%, Lag= 0.0 min
Primary = 10.58 cfs @ 12.09 hrs, Volume= 0.941 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.21' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.98'	**18.0" Round Culvert** L= 106.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.98' / 50.92' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=10.57 cfs @ 12.09 hrs HW=55.21' (Free Discharge)
1=Culvert (Inlet Controls 10.57 cfs @ 5.98 fps)

Summary for Pond dmh39: dmh39

Inflow Area = 2.778 ac, 93.02% Impervious, Inflow Depth > 4.21" for 25-year event
Inflow = 10.58 cfs @ 12.09 hrs, Volume= 0.974 af
Outflow = 10.58 cfs @ 12.09 hrs, Volume= 0.974 af, Atten= 0%, Lag= 0.0 min
Primary = 10.58 cfs @ 12.09 hrs, Volume= 0.974 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.82' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.59'	**18.0" Round Culvert** L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.59' / 50.32' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=10.58 cfs @ 12.09 hrs HW=53.82' (Free Discharge)
1=Culvert (Inlet Controls 10.58 cfs @ 5.99 fps)

Summary for Pond dmh4: dmh4

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 4.10" for 25-year event
Inflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af
Outflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.48' @ 12.09 hrs
Flood Elev= 68.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.84'	**24.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.84' / 59.57' S= 0.0041 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.89 cfs @ 12.09 hrs HW=62.47' (Free Discharge)
1=Culvert (Barrel Controls 14.89 cfs @ 4.75 fps)

Summary for Pond dmh40: dmh40

Inflow Area = 10.062 ac, 50.87% Impervious, Inflow Depth > 3.03" for 25-year event
Inflow = 17.84 cfs @ 12.09 hrs, Volume= 2.540 af
Outflow = 17.84 cfs @ 12.09 hrs, Volume= 2.540 af, Atten= 0%, Lag= 0.0 min
Primary = 17.84 cfs @ 12.09 hrs, Volume= 2.540 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 52.70' @ 12.09 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.33'	**24.0" Round Culvert** L= 340.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.33' / 47.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=17.82 cfs @ 12.09 hrs HW=52.70' (Free Discharge)
↑**1=Culvert** (Barrel Controls 17.82 cfs @ 5.67 fps)

Summary for Pond dmh43: dmh43

Inflow Area = 12.646 ac, 60.91% Impervious, Inflow Depth > 3.32" for 25-year event
Inflow = 28.67 cfs @ 12.09 hrs, Volume= 3.502 af
Outflow = 28.67 cfs @ 12.09 hrs, Volume= 3.502 af, Atten= 0%, Lag= 0.0 min
Primary = 28.67 cfs @ 12.09 hrs, Volume= 3.502 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.37' @ 12.09 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.61'	**24.0" Round Culvert** L= 193.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.61' / 46.64' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=28.65 cfs @ 12.09 hrs HW=54.37' (Free Discharge)
↑**1=Culvert** (Inlet Controls 28.65 cfs @ 9.12 fps)

Summary for Pond dmh44: dmh44

Inflow Area = 12.894 ac, 59.74% Impervious, Inflow Depth > 3.30" for 25-year event
Inflow = 28.67 cfs @ 12.09 hrs, Volume= 3.542 af
Outflow = 28.67 cfs @ 12.09 hrs, Volume= 3.542 af, Atten= 0%, Lag= 0.0 min
Primary = 28.67 cfs @ 12.09 hrs, Volume= 3.542 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.23' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.62'	**30.0" Round Culvert** L= 82.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.62' / 46.21' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=28.66 cfs @ 12.09 hrs HW=50.23' (Free Discharge)
1=Culvert (Inlet Controls 28.66 cfs @ 5.84 fps)

Summary for Pond dmh45: dmh45

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 3.49" for 25-year event
Inflow = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af
Outflow = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af, Atten= 0%, Lag= 0.0 min
Primary = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.38' @ 12.09 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.19'	**30.0" Round Culvert** L= 316.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.19' / 44.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=41.10 cfs @ 12.09 hrs HW=52.36' (Free Discharge)
1=Culvert (Barrel Controls 41.10 cfs @ 8.37 fps)

Summary for Pond dmh47: dmh47

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 3.49" for 25-year event
Inflow = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af
Outflow = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af, Atten= 0%, Lag= 0.0 min
Primary = 41.16 cfs @ 12.09 hrs, Volume= 4.508 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.12' @ 12.09 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**30.0" Round Culvert** L= 104.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.00' / 42.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=41.10 cfs @ 12.09 hrs HW=50.10' (Free Discharge)
1=Culvert (Inlet Controls 41.10 cfs @ 8.37 fps)

Summary for Pond dmh48: dmh48

Inflow Area = 16.171 ac, 67.89% Impervious, Inflow Depth > 3.54" for 25-year event
Inflow = 43.12 cfs @ 12.09 hrs, Volume= 4.766 af
Outflow = 43.12 cfs @ 12.09 hrs, Volume= 4.766 af, Atten= 0%, Lag= 0.0 min
Primary = 43.12 cfs @ 12.09 hrs, Volume= 4.766 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 49.53' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.94'	**30.0" Round Culvert** L= 117.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.94' / 42.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=43.10 cfs @ 12.09 hrs HW=49.52' (Free Discharge)
1=Culvert (Inlet Controls 43.10 cfs @ 8.78 fps)

Summary for Pond dmh49: dmh49

Inflow Area = 16.492 ac, 67.20% Impervious, Inflow Depth > 3.52" for 25-year event
Inflow = 43.13 cfs @ 12.09 hrs, Volume= 4.833 af
Outflow = 43.13 cfs @ 12.09 hrs, Volume= 4.833 af, Atten= 0%, Lag= 0.0 min
Primary = 43.13 cfs @ 12.09 hrs, Volume= 4.833 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 46.41' @ 12.09 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.33'	**36.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.33' / 42.23' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=43.14 cfs @ 12.09 hrs HW=46.41' (Free Discharge)
1=Culvert (Inlet Controls 43.14 cfs @ 6.10 fps)

Summary for Pond dmh5: dmh5

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 4.10" for 25-year event
Inflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af
Outflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 62.04' @ 12.09 hrs
Flood Elev= 69.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.48'	**24.0" Round Culvert** L= 173.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.48' / 58.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.90 cfs @ 12.09 hrs HW=62.04' (Free Discharge)
↑**1=Culvert** (Inlet Controls 14.90 cfs @ 4.74 fps)

Summary for Pond dmh50: dmh50

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 3.94" for 25-year event
Inflow = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af
Outflow = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af, Atten= 0%, Lag= 0.0 min
Primary = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 51.33' @ 12.10 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**30.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.75' / 44.11' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=43.05 cfs @ 12.10 hrs HW=51.32' (Free Discharge)
↑**1=Culvert** (Inlet Controls 43.05 cfs @ 8.77 fps)

Summary for Pond dmh51: dmh51

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 3.94" for 25-year event
Inflow = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af
Outflow = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af, Atten= 0%, Lag= 0.0 min
Primary = 43.06 cfs @ 12.10 hrs, Volume= 5.019 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.67' @ 12.10 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.09'	**30.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.09' / 43.00' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=43.05 cfs @ 12.10 hrs HW=50.66' (Free Discharge)
1=Culvert (Inlet Controls 43.05 cfs @ 8.77 fps)

Summary for Pond dmh52: dmh52

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af
Outflow = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af, Atten= 0%, Lag= 0.0 min
Primary = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.28' @ 12.09 hrs
Flood Elev= 50.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**42.0" Round Culvert** L= 258.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 36.00' S= 0.0194 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=85.91 cfs @ 12.09 hrs HW=48.27' (Free Discharge)
1=Culvert (Inlet Controls 85.91 cfs @ 8.93 fps)

Summary for Pond dmh53: dmh53

Inflow Area = 32.207 ac, 72.77% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.50 cfs @ 12.10 hrs, Volume= 9.979 af
Outflow = 86.50 cfs @ 12.10 hrs, Volume= 9.979 af, Atten= 0%, Lag= 0.0 min
Primary = 86.50 cfs @ 12.10 hrs, Volume= 9.979 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 40.34' @ 12.10 hrs
Flood Elev= 41.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**42.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 30.50' S= 0.0208 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=86.40 cfs @ 12.10 hrs HW=40.33' (Free Discharge)
1=Culvert (Inlet Controls 86.40 cfs @ 8.98 fps)

Summary for Pond dmh54: dmh54

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af
Outflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af, Atten= 0%, Lag= 0.0 min
Primary = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.37' @ 12.10 hrs
Flood Elev= 38.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**42.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.00' / 22.00' S= 0.0329 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=86.60 cfs @ 12.10 hrs HW=34.36' (Free Discharge)
1=Culvert (Inlet Controls 86.60 cfs @ 9.00 fps)

Summary for Pond dmh55: dhm55

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af
Outflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af, Atten= 0%, Lag= 0.0 min
Primary = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.37' @ 12.10 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**42.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.00' / 15.50' S= 0.0304 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=86.60 cfs @ 12.10 hrs HW=26.36' (Free Discharge)
1=Culvert (Inlet Controls 86.60 cfs @ 9.00 fps)

Summary for Pond dmh56: dmh56

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af
Outflow = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af, Atten= 0%, Lag= 0.0 min
Primary = 86.69 cfs @ 12.10 hrs, Volume= 10.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 19.87' @ 12.10 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**42.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.50' / 11.00' S= 0.0357 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=86.60 cfs @ 12.10 hrs HW=19.86' (Free Discharge)
↑**1=Culvert** (Inlet Controls 86.60 cfs @ 9.00 fps)

Summary for Pond dmh59: dmh59

Inflow Area = 2.253 ac, 63.02% Impervious, Inflow Depth > 3.62" for 25-year event
Inflow = 6.84 cfs @ 12.09 hrs, Volume= 0.680 af
Outflow = 6.84 cfs @ 12.09 hrs, Volume= 0.680 af, Atten= 0%, Lag= 0.0 min
Primary = 6.84 cfs @ 12.09 hrs, Volume= 0.680 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.94' @ 12.09 hrs
Flood Elev= 59.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.30'	**12.0" Round Culvert** L= 294.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.30' / 52.83' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=6.84 cfs @ 12.09 hrs HW=66.93' (Free Discharge)
↑**1=Culvert** (Barrel Controls 6.84 cfs @ 8.70 fps)

Summary for Pond dmh6: dmh6

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 4.10" for 25-year event
Inflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af
Outflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.15' @ 12.09 hrs
Flood Elev= 68.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.58'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.58' / 57.73' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.90 cfs @ 12.09 hrs HW=62.14' (Free Discharge)
1=Culvert (Barrel Controls 14.90 cfs @ 4.74 fps)

Summary for Pond dmh60: dhm60

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 3.72" for 25-year event
Inflow = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af
Outflow = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af, Atten= 0%, Lag= 0.0 min
Primary = 86.04 cfs @ 12.09 hrs, Volume= 9.852 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 42.78' @ 12.09 hrs
Flood Elev= 44.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	**42.0" Round Culvert** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.50' / 33.50' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=85.91 cfs @ 12.09 hrs HW=42.77' (Free Discharge)
1=Culvert (Inlet Controls 85.91 cfs @ 8.93 fps)

Summary for Pond dmh7: dmh7

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 4.10" for 25-year event
Inflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af
Outflow = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 14.92 cfs @ 12.09 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.27' @ 12.09 hrs
Flood Elev= 67.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.71'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.71' / 56.86' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.90 cfs @ 12.09 hrs HW=60.27' (Free Discharge)
1=Culvert (Inlet Controls 14.90 cfs @ 4.74 fps)

Summary for Pond dmh8: dmh8

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 4.27" for 25-year event
Inflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af
Outflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af, Atten= 0%, Lag= 0.0 min
Primary = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.27' @ 12.09 hrs
Flood Elev= 66.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.84'	**24.0" Round Culvert** L= 296.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.84' / 55.66' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=27.36 cfs @ 12.09 hrs HW=64.24' (Free Discharge)
1=Culvert (Barrel Controls 27.36 cfs @ 8.71 fps)

Summary for Pond dmh9a: dmh9a

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 4.27" for 25-year event
Inflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af
Outflow = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af, Atten= 0%, Lag= 0.0 min
Primary = 27.41 cfs @ 12.09 hrs, Volume= 2.118 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.91' @ 12.09 hrs
Flood Elev= 65.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.64'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.64' / 54.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=27.36 cfs @ 12.09 hrs HW=61.89' (Free Discharge)
1=Culvert (Inlet Controls 27.36 cfs @ 8.71 fps)

Summary for Pond GSF 11: grassed soil filter

Inflow Area = 0.991 ac, 36.78% Impervious, Inflow Depth = 3.36" for 25-year event
Inflow = 3.88 cfs @ 12.09 hrs, Volume= 0.277 af
Outflow = 1.28 cfs @ 12.39 hrs, Volume= 0.227 af, Atten= 67%, Lag= 18.3 min
Primary = 0.03 cfs @ 12.39 hrs, Volume= 0.075 af
Secondary = 1.26 cfs @ 12.39 hrs, Volume= 0.153 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 62.42' @ 12.39 hrs Surf.Area= 5,223 sf Storage= 5,339 cf
Flood Elev= 63.00' Surf.Area= 5,598 sf Storage= 7,213 cf

Plug-Flow detention time= 411.9 min calculated for 0.227 af (82% of inflow)
Center-of-Mass det. time= 340.1 min (1,151.9 - 811.9)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	5,560 cf	**gsf11 (Irregular)** Listed below (Recalc)
#2	58.24'	1,653 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,213 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,200	181.0	0	0	2,200
62.00	2,771	200.0	2,480	2,480	2,807
63.00	3,400	219.0	3,080	5,560	3,474

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,198	0.0	0	0
58.25	2,198	40.0	9	9
58.99	2,198	40.0	651	659
59.00	2,198	30.0	7	666
59.49	2,198	30.0	323	989
59.50	2,198	20.0	4	993
61.00	2,198	20.0	659	1,653

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.7" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.05' / 57.78' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**4.0" Vert. Orifice/Grate X 6.00** C= 0.600
#5	Device 3	62.50'	**25.7" Horiz. cb19 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.39 hrs HW=62.42' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.79 fps)
└─**2=Exfiltration** (Passes 0.03 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=1.26 cfs @ 12.39 hrs HW=62.42' (Free Discharge)
└─**3=Culvert** (Passes 1.26 cfs of 2.66 cfs potential flow)
└─**4=Orifice/Grate** (Orifice Controls 1.26 cfs @ 2.41 fps)
└─**5=cb19 beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 12: grassed soil filter

Inflow Area = 0.297 ac, 57.98% Impervious, Inflow Depth = 3.86" for 25-year event
Inflow = 1.31 cfs @ 12.09 hrs, Volume= 0.095 af
Outflow = 0.84 cfs @ 12.18 hrs, Volume= 0.074 af, Atten= 36%, Lag= 5.6 min
Primary = 0.01 cfs @ 12.18 hrs, Volume= 0.025 af
Secondary = 0.83 cfs @ 12.18 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.01' @ 12.18 hrs Surf.Area= 2,092 sf Storage= 1,721 cf
Flood Elev= 62.50' Surf.Area= 2,255 sf Storage= 2,348 cf

Plug-Flow detention time= 420.7 min calculated for 0.074 af (78% of inflow)
Center-of-Mass det. time= 340.3 min (1,136.8 - 796.5)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	1,681 cf	**gsf12 (Irregular)** Listed below (Recalc)
#2	58.24'	667 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,348 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	886	151.0	0	0	886
62.00	1,201	164.0	1,040	1,040	1,248
62.50	1,368	170.0	642	1,681	1,428

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	887	0.0	0	0
58.25	887	40.0	4	4
58.99	887	40.0	263	266
59.00	887	30.0	3	269
59.49	887	30.0	130	399
59.50	887	20.0	2	401
61.00	887	20.0	266	667

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.20'	**8.0" Round Culvert**
			L= 21.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 58.20' / 58.10' S= 0.0048 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	61.90'	**25.7" Horiz. cb15a beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.18 hrs HW=62.01' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.32 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.83 cfs @ 12.18 hrs HW=62.01' (Free Discharge)
└**3=Culvert** (Passes 0.83 cfs of 2.47 cfs potential flow)
└**4=cb15a beehive equiv** (Weir Controls 0.83 cfs @ 1.10 fps)

Summary for Pond GSF 13: grassed soil filter

Inflow Area = 1.037 ac, 46.46% Impervious, Inflow Depth = 3.55" for 25-year event
Inflow = 4.27 cfs @ 12.09 hrs, Volume= 0.307 af
Outflow = 2.02 cfs @ 12.25 hrs, Volume= 0.255 af, Atten= 53%, Lag= 10.0 min
Primary = 0.03 cfs @ 12.25 hrs, Volume= 0.097 af
Secondary = 1.99 cfs @ 12.25 hrs, Volume= 0.158 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.20' @ 12.25 hrs Surf.Area= 6,218 sf Storage= 5,600 cf
Flood Elev= 63.00' Surf.Area= 7,083 sf Storage= 8,909 cf

Plug-Flow detention time= 444.8 min calculated for 0.255 af (83% of inflow)
Center-of-Mass det. time= 376.2 min (1,182.2 - 806.0)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	7,028 cf	**gsf13 (Irregular)** Listed below (Recalc)
#2	58.24'	1,881 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,500	328.0	0	0	2,500
62.00	3,513	347.0	2,992	2,992	3,575
63.00	4,582	366.0	4,036	7,028	4,710

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,501	0.0	0	0
58.25	2,501	40.0	10	10
58.99	2,501	40.0	740	750
59.00	2,501	30.0	8	758
59.49	2,501	30.0	368	1,125
59.50	2,501	20.0	5	1,130
61.00	2,501	20.0	750	1,881

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900

			Inlet / Outlet Invert= 58.05' / 57.82' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**25.7" Horiz. cb18 beehive equiv** C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.25 hrs HW=62.20' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.53 fps)
└**2=Exfiltration** (Passes 0.03 cfs of 0.14 cfs potential flow)

Secondary OutFlow Max=1.98 cfs @ 12.25 hrs HW=62.20' (Free Discharge)
└**3=Culvert** (Passes 1.98 cfs of 2.59 cfs potential flow)
└**4=cb18 beehive equiv** (Weir Controls 1.98 cfs @ 1.47 fps)

Summary for Pond GSF 15: grassed soil filter

Inflow Area = 0.210 ac, 1.92% Impervious, Inflow Depth = 2.52" for 25-year event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 0.044 af
Outflow = 0.40 cfs @ 12.19 hrs, Volume= 0.034 af, Atten= 36%, Lag= 6.0 min
Primary = 0.00 cfs @ 12.19 hrs, Volume= 0.005 af
Secondary = 0.39 cfs @ 12.19 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.77' @ 12.19 hrs Surf.Area= 1,332 sf Storage= 629 cf
Flood Elev= 65.00' Surf.Area= 2,017 sf Storage= 1,939 cf

Plug-Flow detention time= 270.7 min calculated for 0.034 af (78% of inflow)
Center-of-Mass det. time= 187.1 min (1,022.6 - 835.5)

Volume	Invert	Avail.Storage	Storage Description
#1	63.50'	1,489 cf	**gsf15 (Irregular)** Listed below (Recalc)
#2	60.74'	450 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,939 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.50	600	168.0	0	0	600
64.00	858	177.0	363	363	862
65.00	1,418	196.0	1,126	1,489	1,456

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	599	0.0	0	0
60.75	599	40.0	2	2
61.49	599	40.0	177	180
61.50	599	30.0	2	181
61.99	599	30.0	88	270
62.00	599	20.0	1	271
63.50	599	20.0	180	450

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.52' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	63.70'	**25.7" Horiz. cb9 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.19 hrs HW=63.77' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.35 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.39 cfs @ 12.19 hrs HW=63.77' (Free Discharge)
↑—**3=Culvert** (Passes 0.39 cfs of 2.19 cfs potential flow)
↑—**4=cb9 beehive equiv** (Weir Controls 0.39 cfs @ 0.85 fps)

Summary for Pond GSF 16: grassed soil filter

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth = 3.26" for 25-year event
Inflow = 1.32 cfs @ 12.09 hrs, Volume= 0.094 af
Outflow = 0.04 cfs @ 16.93 hrs, Volume= 0.033 af, Atten= 97%, Lag= 290.3 min
Primary = 0.01 cfs @ 16.93 hrs, Volume= 0.024 af
Secondary = 0.03 cfs @ 16.93 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.41' @ 16.93 hrs Surf.Area= 3,199 sf Storage= 3,348 cf

Plug-Flow detention time= 911.1 min calculated for 0.033 af (35% of inflow)
Center-of-Mass det. time= 784.5 min (1,599.1 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	62.75'	4,054 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	60.74'	753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,806 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.75	1,000	215.0	0	0	1,000
63.00	1,165	220.0	270	270	1,181
64.00	1,858	241.0	1,498	1,768	1,986
65.00	2,741	270.0	2,285	4,054	3,192

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	1,001	0.0	0	0
60.75	1,001	40.0	4	4
61.49	1,001	40.0	296	300
61.50	1,001	30.0	3	303
61.99	1,001	30.0	147	450
62.00	1,001	20.0	2	452
63.50	1,001	20.0	300	753

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.54' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	64.40'	**25.7" Horiz. cb8 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 16.93 hrs HW=64.41' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.19 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.07 cfs potential flow)

Secondary OutFlow Max=0.02 cfs @ 16.93 hrs HW=64.41' (Free Discharge)
└**3=Culvert** (Passes 0.02 cfs of 2.44 cfs potential flow)
└**4=cb8 beehive equiv** (Weir Controls 0.02 cfs @ 0.29 fps)

Summary for Pond GSF 18A: grassed soil filter

Inflow Area = 0.146 ac, 40.91% Impervious, Inflow Depth = 3.45" for 25-year event
Inflow = 0.58 cfs @ 12.09 hrs, Volume= 0.042 af
Outflow = 0.06 cfs @ 12.88 hrs, Volume= 0.025 af, Atten= 90%, Lag= 47.9 min
Primary = 0.00 cfs @ 12.88 hrs, Volume= 0.013 af
Secondary = 0.06 cfs @ 12.88 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.41' @ 12.88 hrs Surf.Area= 2,038 sf Storage= 1,104 cf

Plug-Flow detention time= 645.4 min calculated for 0.025 af (60% of inflow)
Center-of-Mass det. time= 540.3 min (1,349.3 - 809.0)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	1,183 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,868 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	900	183.0	0	0	900
58.00	1,490	202.0	1,183	1,183	1,513

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	912	0.0	0	0
54.25	912	40.0	4	4
54.99	912	40.0	270	274
55.00	912	30.0	3	276
55.49	912	30.0	134	410
55.50	912	20.0	2	412
57.00	912	20.0	274	686

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.40'	**25.7" Horiz. cb24 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.88 hrs HW=57.41' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.55 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.04 cfs @ 12.88 hrs HW=57.41' (Free Discharge)
↑—**3=Culvert** (Passes 0.04 cfs of 2.33 cfs potential flow)
↑—**4=cb24 beehive equiv** (Weir Controls 0.04 cfs @ 0.38 fps)

Summary for Pond GSF 18B: grassed soil filter

Inflow Area = 0.092 ac, 58.36% Impervious, Inflow Depth = 3.86" for 25-year event
Inflow = 0.41 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.19 cfs @ 12.26 hrs, Volume= 0.020 af, Atten= 54%, Lag= 10.6 min
Primary = 0.00 cfs @ 12.26 hrs, Volume= 0.006 af
Secondary = 0.18 cfs @ 12.26 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.94' @ 12.26 hrs Surf.Area= 860 sf Storage= 616 cf

Plug-Flow detention time= 439.6 min calculated for 0.020 af (67% of inflow)
Center-of-Mass det. time= 343.9 min (1,140.4 - 796.5)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	430 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	221 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		651 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	290	88.0	0	0	290
58.00	587	107.0	430	430	601

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	294	0.0	0	0
54.25	294	40.0	1	1
54.99	294	40.0	87	88
55.00	294	30.0	1	89
55.49	294	30.0	43	132
55.50	294	20.0	1	133
57.00	294	20.0	88	221

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.90'	**25.7" Horiz. cb23 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.26 hrs HW=57.94' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.24 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.17 cfs @ 12.26 hrs HW=57.94' (Free Discharge)
↑—**3=Culvert** (Passes 0.17 cfs of 2.52 cfs potential flow)
↑—**4=cb23 beehive equiv** (Weir Controls 0.17 cfs @ 0.65 fps)

Summary for Pond GSF 1A: Grassed soil filter

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth = 3.45" for 25-year event
Inflow = 1.64 cfs @ 12.09 hrs, Volume= 0.118 af
Outflow = 0.63 cfs @ 12.34 hrs, Volume= 0.090 af, Atten= 62%, Lag= 15.0 min
Primary = 0.01 cfs @ 12.34 hrs, Volume= 0.036 af
Secondary = 0.61 cfs @ 12.34 hrs, Volume= 0.054 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.39' @ 12.34 hrs Surf.Area= 3,651 sf Storage= 2,368 cf
Flood Elev= 68.00' Surf.Area= 5,086 sf Storage= 6,753 cf

Plug-Flow detention time= 488.9 min calculated for 0.090 af (76% of inflow)
Center-of-Mass det. time= 405.4 min (1,214.4 - 809.0)

Volume	Invert	Avail.Storage	Storage Description
#1	65.75'	5,554 cf	**Grassed Underdrain Soil Filter (Irregular)** Listed below (Recalc)
#2	62.99'	1,198 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,753 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.75	1,600	234.0	0	0	1,600
66.00	1,775	239.0	422	422	1,797
67.00	2,525	261.0	2,139	2,561	2,708
68.00	3,488	286.0	2,994	5,554	3,830

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.99	1,598	0.0	0	0
63.00	1,598	40.0	6	6
63.74	1,598	40.0	473	479
63.75	1,598	30.0	5	484
64.24	1,598	30.0	235	719
64.25	1,598	20.0	3	722
65.74	1,598	20.0	476	1,198

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.99'	**2.400 in/hr Exfiltration over Surface area**
#3	Secondary	62.50'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.50' / 62.26' S= 0.0089 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.30'	**25.7" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.34 hrs HW=66.39' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.84 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.61 cfs @ 12.34 hrs HW=66.39' (Free Discharge)
└**3=Culvert** (Passes 0.61 cfs of 2.50 cfs potential flow)
└**4=Orifice/Grate** (Weir Controls 0.61 cfs @ 0.99 fps)

Summary for Pond GSF 1B: grassed soil filter

Inflow Area = 0.781 ac, 20.08% Impervious, Inflow Depth = 2.97" for 25-year event
Inflow = 2.72 cfs @ 12.09 hrs, Volume= 0.194 af
Outflow = 2.63 cfs @ 12.11 hrs, Volume= 0.180 af, Atten= 3%, Lag= 1.3 min
Primary = 0.01 cfs @ 12.11 hrs, Volume= 0.040 af
Secondary = 2.62 cfs @ 12.11 hrs, Volume= 0.140 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 67.06' @ 12.11 hrs Surf.Area= 2,387 sf Storage= 1,919 cf
Flood Elev= 67.00' Surf.Area= 2,309 sf Storage= 1,826 cf

Plug-Flow detention time= 250.3 min calculated for 0.180 af (93% of inflow)
Center-of-Mass det. time= 213.3 min (1,036.1 - 822.7)

Volume	Invert	Avail.Storage	Storage Description
#1	65.50'	32,509 cf	**gsf1B (Irregular)** Listed below (Recalc)
#2	62.74'	545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		33,054 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.50	393	187.0	0	0	393
66.00	583	194.0	242	242	626
67.00	1,576	297.0	1,039	1,282	4,658
68.00	3,199	450.0	2,340	3,622	13,760
69.00	68,644	2,673.0	28,887	32,509	566,223

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.74	733	0.0	0	0
62.75	733	40.0	3	3
63.40	733	40.0	191	194
63.50	733	30.0	22	216
63.99	733	30.0	108	323
64.00	733	20.0	1	325
65.50	733	20.0	220	545

Device	Routing	Invert	Outlet Devices
#1	Primary	62.75'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	62.70'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.70' / 62.60' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.90'	**25.7" Horiz. CB16 beehive grate equiv dbl X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.11 hrs HW=67.06' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.97 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.06 cfs potential flow)

Secondary OutFlow Max=2.66 cfs @ 12.11 hrs HW=67.06' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.66 cfs @ 7.63 fps)
└**4=CB16 beehive grate equiv dbl** (Passes 2.66 cfs of 2.75 cfs potential flow)

Summary for Pond GSF 2: grassed soil filter

Inflow Area = 0.713 ac, 25.93% Impervious, Inflow Depth = 3.07" for 25-year event
Inflow = 2.56 cfs @ 12.09 hrs, Volume= 0.182 af
Outflow = 1.38 cfs @ 12.22 hrs, Volume= 0.155 af, Atten= 46%, Lag= 8.1 min
Primary = 0.02 cfs @ 12.22 hrs, Volume= 0.053 af
Secondary = 1.36 cfs @ 12.22 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.76' @ 12.22 hrs Surf.Area= 3,691 sf Storage= 2,980 cf
Flood Elev= 59.00' Surf.Area= 4,991 sf Storage= 6,448 cf

Plug-Flow detention time= 404.1 min calculated for 0.155 af (85% of inflow)
Center-of-Mass det. time= 339.1 min (1,159.2 - 820.1)

Volume	Invert	Avail.Storage	Storage Description
#1	56.75'	5,317 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.99'	1,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,448 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.75	1,500	218.0	0	0	1,500
57.00	1,669	223.0	396	396	1,684
58.00	2,371	245.0	2,010	2,406	2,536
59.00	3,488	283.0	2,912	5,317	4,154

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.99	1,503	0.0	0	0
54.00	1,503	40.0	6	6
54.74	1,503	40.0	445	451
54.75	1,503	30.0	5	455
55.24	1,503	30.0	221	676
55.25	1,503	20.0	3	679
56.75	1,503	20.0	451	1,130

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.95'	**8.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.95' / 53.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb20 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.22 hrs HW=57.76' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.30 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=1.35 cfs @ 12.22 hrs HW=57.76' (Free Discharge)
└**3=Culvert** (Passes 1.35 cfs of 2.47 cfs potential flow)
└**4=cb20 beehive equiv** (Weir Controls 1.35 cfs @ 1.29 fps)

Summary for Pond GSF 24: grassed soil filter

Inflow Area = 0.419 ac, 67.19% Impervious, Inflow Depth = 4.28" for 25-year event
Inflow = 1.99 cfs @ 12.08 hrs, Volume= 0.150 af
Outflow = 1.40 cfs @ 12.16 hrs, Volume= 0.127 af, Atten= 30%, Lag= 4.8 min
Primary = 0.02 cfs @ 12.16 hrs, Volume= 0.055 af
Secondary = 1.38 cfs @ 12.16 hrs, Volume= 0.072 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 40.76' @ 12.16 hrs Surf.Area= 3,287 sf Storage= 2,704 cf

Plug-Flow detention time= 474.9 min calculated for 0.127 af (85% of inflow)
Center-of-Mass det. time= 411.5 min (1,193.0 - 781.5)

Volume	Invert	Avail.Storage	Storage Description
#1	39.75'	4,479 cf	**gsf24 (Irregular)** Listed below (Recalc)
#2	36.99'	1,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		5,533 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.75	1,400	150.0	0	0	1,400
40.00	1,516	156.0	364	364	1,551
41.00	2,013	176.0	1,759	2,123	2,105
42.00	2,717	200.0	2,356	4,479	2,847

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.99	1,401	0.0	0	0
37.00	1,401	40.0	6	6
37.74	1,401	40.0	415	420
37.75	1,401	30.0	4	425
38.24	1,401	30.0	206	630
38.25	1,401	20.0	3	633
39.75	1,401	20.0	420	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	36.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	36.80'	**8.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 36.80' / 36.00' S= 0.0200 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4 Device 3 40.60' **25.7" Horiz. cb32 beehive equiv** C= 0.600
Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.16 hrs HW=40.76' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.30 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=1.37 cfs @ 12.16 hrs HW=40.76' (Free Discharge)
└**3=Culvert** (Passes 1.37 cfs of 2.53 cfs potential flow)
└**4=cb32 beehive equiv** (Weir Controls 1.37 cfs @ 1.30 fps)

Summary for Pond GSF 3: grassed soil filter

Inflow Area = 0.830 ac, 36.22% Impervious, Inflow Depth = 3.26" for 25-year event
Inflow = 3.16 cfs @ 12.09 hrs, Volume= 0.225 af
Outflow = 1.83 cfs @ 12.20 hrs, Volume= 0.186 af, Atten= 42%, Lag= 6.9 min
Primary = 0.02 cfs @ 12.20 hrs, Volume= 0.055 af
Secondary = 1.81 cfs @ 12.20 hrs, Volume= 0.131 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 55.94' @ 12.20 hrs Surf.Area= 4,210 sf Storage= 3,691 cf
Flood Elev= 57.00' Surf.Area= 5,449 sf Storage= 7,083 cf

Plug-Flow detention time= 373.2 min calculated for 0.186 af (82% of inflow)
Center-of-Mass det. time= 302.0 min (1,116.7 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	54.75'	5,872 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	51.99'	1,211 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,083 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.75	1,600	268.0	0	0	1,600
55.00	1,804	274.0	425	425	1,868
56.00	2,657	295.0	2,217	2,642	2,860
57.00	3,839	332.0	3,230	5,872	4,733

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.99	1,610	0.0	0	0
52.00	1,610	40.0	6	6
52.74	1,610	40.0	477	483
52.75	1,610	30.0	5	488
53.24	1,610	30.0	237	725
53.25	1,610	20.0	3	728
54.75	1,610	20.0	483	1,211

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.95'	**12.0" Round Culvert**
			L= 14.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.95' / 51.81' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	55.75'	**25.7" Horiz. cb25 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.20 hrs HW=55.94' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.53 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=1.80 cfs @ 12.20 hrs HW=55.94' (Free Discharge)
↑—**3=Culvert** (Passes 1.80 cfs of 5.58 cfs potential flow)
↑—**4=cb25 beehive equiv** (Weir Controls 1.80 cfs @ 1.42 fps)

Summary for Pond GSF 4: grassed soil filter

Inflow Area = 0.194 ac, 0.00% Impervious, Inflow Depth = 2.52" for 25-year event
Inflow = 0.57 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.25 cfs @ 12.32 hrs, Volume= 0.033 af, Atten= 57%, Lag= 13.9 min
Primary = 0.00 cfs @ 12.32 hrs, Volume= 0.013 af
Secondary = 0.24 cfs @ 12.32 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.15' @ 12.32 hrs Surf.Area= 1,127 sf Storage= 709 cf
Flood Elev= 56.00' Surf.Area= 1,431 sf Storage= 1,405 cf

Plug-Flow detention time= 454.3 min calculated for 0.033 af (82% of inflow)
Center-of-Mass det. time= 379.9 min (1,215.5 - 835.5)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	1,061 cf	**gsf4 (Irregular)** Listed below (Recalc)
#2	51.74'	344 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,405 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.50	457	163.0	0	0	457
55.00	623	169.0	269	269	636
56.00	974	182.0	792	1,061	1,039

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.74	457	0.0	0	0
51.75	457	40.0	2	2
52.49	457	40.0	135	137
52.50	457	30.0	1	138
52.99	457	30.0	67	206
53.00	457	20.0	1	207
54.50	457	20.0	137	344

Device	Routing	Invert	Outlet Devices
#1	Primary	51.75'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.70'	**8.0" Round Culvert**
			L= 17.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.70' / 51.53' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	55.10'	**25.7" Horiz. cb26 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.32 hrs HW=55.15' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.86 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.24 cfs @ 12.32 hrs HW=55.15' (Free Discharge)
↑—**3=Culvert** (Passes 0.24 cfs of 2.34 cfs potential flow)
↑—**4=cb26 beehive equiv** (Weir Controls 0.24 cfs @ 0.72 fps)

Summary for Pond GSF 5: grassed soil filter

Inflow Area = 0.248 ac, 0.00% Impervious, Inflow Depth = 2.52" for 25-year event
Inflow = 0.73 cfs @ 12.09 hrs, Volume= 0.052 af
Outflow = 0.27 cfs @ 12.38 hrs, Volume= 0.039 af, Atten= 63%, Lag= 17.2 min
Primary = 0.00 cfs @ 12.38 hrs, Volume= 0.013 af
Secondary = 0.27 cfs @ 12.38 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.65' @ 12.38 hrs Surf.Area= 1,601 sf Storage= 967 cf
Flood Elev= 55.00' Surf.Area= 1,857 sf Storage= 1,360 cf

Plug-Flow detention time= 434.2 min calculated for 0.039 af (75% of inflow)
Center-of-Mass det. time= 345.6 min (1,181.1 - 835.5)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	908 cf	**gsf5 (Irregular)** Listed below (Recalc)
#2	51.24'	451 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,360 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	600	210.0	0	0	600
55.00	1,257	228.0	908	908	1,265

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	600	0.0	0	0
51.25	600	40.0	2	2
51.99	600	40.0	178	180
52.00	600	30.0	2	182
52.49	600	30.0	88	270
52.50	600	20.0	1	271
54.00	600	20.0	180	451

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.95' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.60'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.38 hrs HW=54.65' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.86 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=0.26 cfs @ 12.38 hrs HW=54.65' (Free Discharge)
↑—**3=Culvert** (Passes 0.26 cfs of 2.42 cfs potential flow)
↑—**4=cb beehive equiv** (Weir Controls 0.26 cfs @ 0.74 fps)

Summary for Pond GSF 6: grassed soil filter

Inflow Area = 0.321 ac, 32.06% Impervious, Inflow Depth = 3.26" for 25-year event
Inflow = 1.22 cfs @ 12.09 hrs, Volume= 0.087 af
Outflow = 0.45 cfs @ 12.36 hrs, Volume= 0.067 af, Atten= 63%, Lag= 16.3 min
Primary = 0.01 cfs @ 12.36 hrs, Volume= 0.023 af
Secondary = 0.44 cfs @ 12.36 hrs, Volume= 0.044 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.39' @ 12.36 hrs Surf.Area= 2,208 sf Storage= 1,716 cf
Flood Elev= 50.00' Surf.Area= 2,772 sf Storage= 4,107 cf

Plug-Flow detention time= 446.1 min calculated for 0.067 af (77% of inflow)
Center-of-Mass det. time= 363.2 min (1,177.9 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	3,352 cf	**gsf6 (Irregular)** Listed below (Recalc)
#2	44.74'	755 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
47.50	1,004	156.0	0	0	1,004
48.00	1,082	159.0	521	521	1,113
49.00	1,413	172.0	1,244	1,765	1,493
50.00	1,768	184.0	1,587	3,352	1,877

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.74	1,004	0.0	0	0
44.75	1,004	40.0	4	4
45.49	1,004	40.0	297	301
45.50	1,004	30.0	3	304
45.99	1,004	30.0	148	452
46.00	1,004	20.0	2	454
47.50	1,004	20.0	301	755

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	44.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	44.70'	**8.0" Round culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.70' / 44.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	48.20'	**4.0" Vert. Orifice X 6.00** C= 0.600
#5	Device 3	49.00'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.36 hrs HW=48.39' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.16 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.44 cfs @ 12.36 hrs HW=48.39' (Free Discharge)
└─**3=culvert** (Passes 0.44 cfs of 2.43 cfs potential flow)
├─**4=Orifice** (Orifice Controls 0.44 cfs @ 1.46 fps)
└─**5=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 7: grassed soil filter

Inflow Area = 0.697 ac, 25.86% Impervious, Inflow Depth = 3.07" for 25-year event
Inflow = 2.50 cfs @ 12.09 hrs, Volume= 0.178 af
Outflow = 0.80 cfs @ 12.41 hrs, Volume= 0.136 af, Atten= 68%, Lag= 19.4 min
Primary = 0.02 cfs @ 12.41 hrs, Volume= 0.052 af
Secondary = 0.78 cfs @ 12.41 hrs, Volume= 0.084 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 54.81' @ 12.41 hrs Surf.Area= 5,200 sf Storage= 3,616 cf
Flood Elev= 56.00' Surf.Area= 7,240 sf Storage= 8,558 cf

Plug-Flow detention time= 483.0 min calculated for 0.136 af (76% of inflow)
Center-of-Mass det. time= 397.9 min (1,218.0 - 820.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	7,026 cf	**gsf7 (Irregular)** Listed below (Recalc)
#2	51.24'	1,532 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,558 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	2,037	220.0	0	0	2,037
55.00	3,467	289.0	2,720	2,720	4,843
56.00	5,203	357.0	4,306	7,026	8,354

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	2,037	0.0	0	0
51.25	2,037	40.0	8	8
51.99	2,037	40.0	603	611
52.00	2,037	30.0	6	617
52.49	2,037	30.0	299	917
52.50	2,037	20.0	4	921
54.00	2,037	20.0	611	1,532

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round cb29** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.48' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.70'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.41 hrs HW=54.81' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.05 fps)
└─**2=Exfiltration** (Passes 0.02 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=0.78 cfs @ 12.41 hrs HW=54.81' (Free Discharge)
└─**3=cb29** (Passes 0.78 cfs of 2.47 cfs potential flow)
└─**4=cb beehive equiv** (Weir Controls 0.78 cfs @ 1.07 fps)

Summary for Pond GSF 8: grassed soil filter

Inflow Area = 1.046 ac, 55.78% Impervious, Inflow Depth = 3.76" for 25-year event
Inflow = 4.51 cfs @ 12.09 hrs, Volume= 0.327 af
Outflow = 2.59 cfs @ 12.20 hrs, Volume= 0.281 af, Atten= 43%, Lag= 6.8 min
Primary = 0.03 cfs @ 12.20 hrs, Volume= 0.100 af
Secondary = 2.56 cfs @ 12.20 hrs, Volume= 0.181 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.86' @ 12.20 hrs Surf.Area= 5,373 sf Storage= 5,556 cf
Flood Elev= 58.50' Surf.Area= 5,815 sf Storage= 7,903 cf

Plug-Flow detention time= 407.9 min calculated for 0.281 af (86% of inflow)
Center-of-Mass det. time= 346.6 min (1,146.4 - 799.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	6,471 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.74'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,903 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.50	2,600	200.0	0	0	2,600
57.50	3,227	218.0	2,908	2,908	3,234
58.50	3,910	237.0	3,563	6,471	3,959

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.74	1,905	0.0	0	0
53.75	1,905	40.0	8	8
54.49	1,905	40.0	564	572
54.50	1,905	30.0	6	577
54.99	1,905	30.0	280	857
55.00	1,905	20.0	4	861
56.50	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	53.75'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.50'	**8.0" Round cb10 culvert** L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.50' / 52.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb10 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.20 hrs HW=57.86' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 9.73 fps)
└─**2=Exfiltration** (Passes 0.03 cfs of 0.12 cfs potential flow)

Secondary OutFlow Max=2.59 cfs @ 12.20 hrs HW=57.86' (Free Discharge)
└─**3=cb10 culvert** (Barrel Controls 2.59 cfs @ 7.43 fps)
└─**4=cb10 beehive equiv** (Passes 2.59 cfs of 2.97 cfs potential flow)

Summary for Pond GSF 9: grassed soil filter

Inflow Area = 0.647 ac, 63.29% Impervious, Inflow Depth = 3.96" for 25-year event
Inflow = 2.91 cfs @ 12.09 hrs, Volume= 0.214 af
Outflow = 2.46 cfs @ 12.14 hrs, Volume= 0.191 af, Atten= 15%, Lag= 3.0 min
Primary = 0.02 cfs @ 12.14 hrs, Volume= 0.053 af
Secondary = 2.45 cfs @ 12.14 hrs, Volume= 0.138 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.20' @ 12.14 hrs Surf.Area= 4,415 sf Storage= 2,970 cf
Flood Elev= 65.00' Surf.Area= 6,073 sf Storage= 8,972 cf

Plug-Flow detention time= 318.8 min calculated for 0.191 af (89% of inflow)
Center-of-Mass det. time= 267.9 min (1,060.9 - 793.0)

Volume	Invert	Avail.Storage	Storage Description
#1	62.50'	7,539 cf	**gsf9 (Irregular)** Listed below (Recalc)
#2	59.24'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,972 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.50	1,905	437.0	0	0	1,905
63.00	2,345	443.0	1,061	1,061	2,379
64.00	3,244	455.0	2,782	3,843	3,347
65.00	4,168	468.0	3,696	7,539	4,408

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.24	1,905	0.0	0	0
59.25	1,905	40.0	8	8
59.99	1,905	40.0	564	572
60.00	1,905	30.0	6	577
60.49	1,905	30.0	280	857
60.50	1,905	20.0	4	861
62.00	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	59.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	59.00'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 57.92' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.95'	**25.7" Horiz. cb6 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.14 hrs HW=63.20' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.53 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=2.61 cfs @ 12.14 hrs HW=63.20' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.61 cfs @ 7.47 fps)
└**4=cb6 beehive equiv** (Passes 2.61 cfs of 2.69 cfs potential flow)

Summary for Pond ics 12: ICS 12

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 12.32 cfs @ 12.08 hrs, Volume= 0.484 af
Secondary = 0.83 cfs @ 12.08 hrs, Volume= 0.584 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.81' @ 12.08 hrs
Flood Elev= 65.42'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.70'	**18.0" Round Culvert** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.15' S= 0.1375 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	62.95'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	60.75'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.75' / 60.72' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	60.75'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=12.30 cfs @ 12.08 hrs HW=64.80' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.30 cfs @ 6.96 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.30 cfs of 33.51 cfs potential flow)

Secondary OutFlow Max=0.83 cfs @ 12.08 hrs HW=64.80' (Free Discharge)
└**3=Culvert** (Passes 0.83 cfs of 5.63 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.83 cfs @ 9.49 fps)

Summary for Pond ICS1: ICS 1

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 0.83 cfs @ 12.08 hrs, Volume= 0.481 af
Secondary = 12.32 cfs @ 12.08 hrs, Volume= 0.588 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.48' @ 12.08 hrs
Flood Elev= 69.38'

Device	Routing	Invert	Outlet Devices
#1	Secondary	63.37'	**18.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.27' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.31'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	63.37'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.37' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	63.37'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.83 cfs @ 12.08 hrs HW=67.47' (Free Discharge)
└**3=Culvert** (Passes 0.83 cfs of 5.67 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.83 cfs @ 9.55 fps)

Secondary OutFlow Max=12.30 cfs @ 12.08 hrs HW=67.47' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.30 cfs @ 6.96 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.30 cfs of 74.62 cfs potential flow)

Summary for Pond ICS18: ICS18

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 2.22 cfs @ 12.08 hrs, Volume= 0.180 af
Outflow = 2.22 cfs @ 12.08 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min
Primary = 0.67 cfs @ 12.08 hrs, Volume= 0.152 af
Secondary = 1.55 cfs @ 12.08 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.51' @ 12.08 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.81'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.81' / 57.80' S= 0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	57.81'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 4	60.25'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	57.80'	**12.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.80' / 56.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.67 cfs @ 12.08 hrs HW=60.51' (Free Discharge)
↑—**1=Culvert** (Passes 0.67 cfs of 2.04 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.67 cfs @ 7.67 fps)

Secondary OutFlow Max=1.54 cfs @ 12.08 hrs HW=60.51' (Free Discharge)
↑—**4=Culvert** (Passes 1.54 cfs of 4.44 cfs potential flow)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 1.54 cfs @ 1.46 fps)

Summary for Pond ics28: ICS28

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 1.40 cfs @ 12.08 hrs, Volume= 0.114 af
Outflow = 1.40 cfs @ 12.08 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.08 hrs, Volume= 0.105 af
Secondary = 0.76 cfs @ 12.08 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.67' @ 12.08 hrs
Flood Elev= 63.95'

Device	Routing	Invert	Outlet Devices
#1	Secondary	58.00'	**8.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	60.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	58.15'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.15' / 58.12' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	58.15'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.64 cfs @ 12.08 hrs HW=60.66' (Free Discharge)
└**3=Culvert** (Passes 0.64 cfs of 1.96 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.64 cfs @ 7.38 fps)

Secondary OutFlow Max=0.75 cfs @ 12.08 hrs HW=60.66' (Free Discharge)
└**1=Culvert** (Passes 0.75 cfs of 2.03 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.75 cfs @ 1.14 fps)

Summary for Pond ICS37: ISC37

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 5.34 cfs @ 12.08 hrs, Volume= 0.951 af
Secondary = 7.81 cfs @ 12.08 hrs, Volume= 0.117 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.72' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.50'	**18.0" Round Culvert** L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.50' / 52.00' S= 0.0098 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.34 cfs @ 12.08 hrs HW=55.72' (Free Discharge)
├**3=Culvert** (Inlet Controls 4.64 cfs @ 5.91 fps)
└**4=Orifice/Grate** (Orifice Controls 0.70 cfs @ 7.98 fps)

Secondary OutFlow Max=7.79 cfs @ 12.08 hrs HW=55.72' (Free Discharge)
└**1=Culvert** (Passes 7.79 cfs of 10.55 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 7.79 cfs @ 2.72 fps)

Summary for Pond ics46: ICS46

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 0.77 cfs @ 12.08 hrs, Volume= 0.584 af
Secondary = 12.38 cfs @ 12.08 hrs, Volume= 0.485 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 50.35' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Secondary	46.20'	**18.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.20' / 46.00' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	49.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	46.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.80' / 46.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	46.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.77 cfs @ 12.08 hrs HW=50.33' (Free Discharge)
└**3=Culvert** (Passes 0.77 cfs of 5.20 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.77 cfs @ 8.84 fps)

Secondary OutFlow Max=12.36 cfs @ 12.08 hrs HW=50.33' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.36 cfs @ 6.99 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.36 cfs of 20.48 cfs potential flow)

Summary for Pond ICS9: ICS9

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 0.80 cfs @ 12.08 hrs, Volume= 0.583 af
Secondary = 12.35 cfs @ 12.08 hrs, Volume= 0.486 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.83' @ 12.08 hrs
Flood Elev= 66.76'

Device	Routing	Invert	Outlet Devices
#1	Secondary	61.70'	**18.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.18'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	62.00'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.00' / 61.65' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

#4 Device 3 62.00' **4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.80 cfs @ 12.08 hrs HW=65.82' (Free Discharge)
└**3=Culvert** (Passes 0.80 cfs of 5.44 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.80 cfs @ 9.20 fps)

Secondary OutFlow Max=12.33 cfs @ 12.08 hrs HW=65.82' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.33 cfs @ 6.98 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.33 cfs of 27.82 cfs potential flow)

Summary for Pond ISC42: ICS 42

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af
Outflow = 13.15 cfs @ 12.08 hrs, Volume= 1.069 af, Atten= 0%, Lag= 0.0 min
Primary = 5.71 cfs @ 12.08 hrs, Volume= 0.966 af
Secondary = 7.44 cfs @ 12.08 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.07' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.20'	**18.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.20' / 51.88' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.37'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.71 cfs @ 12.08 hrs HW=56.07' (Free Discharge)
├**3=Culvert** (Inlet Controls 4.97 cfs @ 6.32 fps)
└**4=Orifice/Grate** (Orifice Controls 0.74 cfs @ 8.48 fps)

Secondary OutFlow Max=7.42 cfs @ 12.08 hrs HW=56.07' (Free Discharge)
└**1=Culvert** (Passes 7.42 cfs of 11.86 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 7.42 cfs @ 2.66 fps)

Summary for Pond MPP 10: Rtank storage

Inflow Area = 0.710 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 3.61 cfs @ 12.08 hrs, Volume= 0.294 af
Outflow = 2.18 cfs @ 12.19 hrs, Volume= 0.275 af, Atten= 40%, Lag= 6.1 min
Primary = 2.18 cfs @ 12.19 hrs, Volume= 0.275 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.85' @ 12.19 hrs Surf.Area= 0.179 ac Storage= 0.075 af

Plug-Flow detention time= 112.8 min calculated for 0.275 af (94% of inflow)
Center-of-Mass det. time= 77.9 min (825.3 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.23'	0.091 af	**6.25'W x 1,248.97'L x 1.94'H Field A** 0.347 af Overall - 0.118 af Embedded = 0.229 af x 40.0% Voids
#2A	61.48'	0.112 af	**ACF R-Tank HD 0.5** x 2128 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 4 Rows of 532 Chambers
		0.204 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.48'	**8.0" Round Culvert X 6.00** L= 2.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.48' / 61.40' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.18 cfs @ 12.19 hrs HW=61.85' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.18 cfs @ 2.62 fps)

Summary for Pond MPP 14: Rtanks

Inflow Area = 0.215 ac, 94.36% Impervious, Inflow Depth = 4.85" for 25-year event
Inflow = 1.09 cfs @ 12.08 hrs, Volume= 0.087 af
Outflow = 0.69 cfs @ 12.18 hrs, Volume= 0.082 af, Atten= 37%, Lag= 5.7 min
Primary = 0.69 cfs @ 12.18 hrs, Volume= 0.082 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.65' @ 12.18 hrs Surf.Area= 1,935 sf Storage= 931 cf
Flood Elev= 60.50' Surf.Area= 1,935 sf Storage= 2,354 cf

Plug-Flow detention time= 104.1 min calculated for 0.082 af (95% of inflow)
Center-of-Mass det. time= 74.7 min (829.7 - 755.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	55.98'	1,011 cf	**15.44'W x 125.33'L x 2.04'H Field A** 3,941 cf Overall - 1,413 cf Embedded = 2,528 cf x 40.0% Voids
#2A	56.23'	1,343 cf	**ACF R-Tank HD 0.5** x 583 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 11 Rows of 53 Chambers
		2,354 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	56.23'	**8.0" Round Culvert X 2.00** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.23' / 56.12' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.68 cfs @ 12.18 hrs HW=56.65' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.68 cfs @ 2.12 fps)

Summary for Pond MPP 19: Rtanks

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth = 4.51" for 25-year event
Inflow = 1.54 cfs @ 12.08 hrs, Volume= 0.118 af
Outflow = 0.43 cfs @ 12.49 hrs, Volume= 0.110 af, Atten= 72%, Lag= 24.4 min
Primary = 0.43 cfs @ 12.49 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.73' @ 12.42 hrs Surf.Area= 0.074 ac Storage= 0.052 af

Plug-Flow detention time= 184.6 min calculated for 0.110 af (93% of inflow)
Center-of-Mass det. time= 146.0 min (918.4 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.83'	0.033 af	**18.06'W x 179.28'L x 1.84'H Field A** 0.137 af Overall - 0.055 af Embedded = 0.082 af x 40.0% Voids
#2A	55.08'	0.052 af	**ACF R-Tank HD 0.5** x 988 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 76 Chambers
		0.085 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.08'	**6.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.08' / 55.00' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.43 cfs @ 12.49 hrs HW=55.73' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.43 cfs @ 2.20 fps)

Summary for Pond MPP 21: Rtanks

Inflow Area = 0.229 ac, 83.66% Impervious, Inflow Depth = 4.51" for 25-year event
Inflow = 1.12 cfs @ 12.08 hrs, Volume= 0.086 af
Outflow = 0.51 cfs @ 12.25 hrs, Volume= 0.082 af, Atten= 54%, Lag= 10.1 min
Primary = 0.51 cfs @ 12.25 hrs, Volume= 0.082 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.45' @ 12.25 hrs Surf.Area= 1,510 sf Storage= 1,148 cf

Plug-Flow detention time= 111.2 min calculated for 0.082 af (96% of inflow)
Center-of-Mass det. time= 86.0 min (858.3 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.48'	818 cf	**16.75'W x 90.14'L x 2.09'H Field A** 3,151 cf Overall - 1,105 cf Embedded = 2,046 cf x 40.0% Voids
#2A	54.73'	1,050 cf	**ACF R-Tank HD 0.5** x 456 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 38 Chambers
		1,868 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.73'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.73' / 54.73' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.51 cfs @ 12.25 hrs HW=55.45' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.51 cfs @ 2.62 fps)

Summary for Pond MPP 22: Rtanks

Inflow Area = 0.310 ac, 76.43% Impervious, Inflow Depth = 4.28" for 25-year event
Inflow = 1.47 cfs @ 12.08 hrs, Volume= 0.111 af
Outflow = 0.44 cfs @ 12.40 hrs, Volume= 0.103 af, Atten= 70%, Lag= 19.2 min
Primary = 0.44 cfs @ 12.40 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.70' @ 12.40 hrs Surf.Area= 3,003 sf Storage= 2,092 cf

Plug-Flow detention time= 179.8 min calculated for 0.103 af (93% of inflow)
Center-of-Mass det. time= 141.3 min (922.8 - 781.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.80'	1,262 cf	**16.75'W x 179.28'L x 1.79'H Field A** 5,367 cf Overall - 2,211 cf Embedded = 3,156 cf x 40.0% Voids
#2A	55.05'	2,100 cf	**ACF R-Tank HD 0.5** x 912 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 76 Chambers
		3,363 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.05'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.05' / 55.05' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.44 cfs @ 12.40 hrs HW=55.70' (Free Discharge)
1=Culvert (Barrel Controls 0.44 cfs @ 2.27 fps)

Summary for Pond MPP 26: Rtanks

Inflow Area = 0.088 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 0.45 cfs @ 12.08 hrs, Volume= 0.036 af
Outflow = 0.25 cfs @ 12.20 hrs, Volume= 0.033 af, Atten= 45%, Lag= 7.1 min
Primary = 0.25 cfs @ 12.20 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 34.94' @ 12.20 hrs Surf.Area= 1,289 sf Storage= 500 cf

Plug-Flow detention time= 146.4 min calculated for 0.033 af (92% of inflow)
Center-of-Mass det. time= 102.4 min (849.7 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	34.37'	492 cf	**18.06'W x 71.37'L x 1.69'H Field A** 2,175 cf Overall - 945 cf Embedded = 1,230 cf x 40.0% Voids
#2A	34.62'	898 cf	**ACF R-Tank HD 0.5** x 390 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 30 Chambers
		1,390 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	34.62'	**8.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.62' / 34.34' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.25 cfs @ 12.20 hrs HW=34.94' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.25 cfs @ 1.51 fps)

Summary for Pond MPP 50:

Inflow Area = 0.693 ac,100.00% Impervious, Inflow Depth = 4.96" for 25-year event
Inflow = 3.53 cfs @ 12.08 hrs, Volume= 0.286 af
Outflow = 2.38 cfs @ 12.17 hrs, Volume= 0.258 af, Atten= 33%, Lag= 5.1 min
Primary = 2.38 cfs @ 12.17 hrs, Volume= 0.258 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.01' @ 12.17 hrs Surf.Area= 5,946 sf Storage= 3,365 cf

Plug-Flow detention time= 132.1 min calculated for 0.258 af (90% of inflow)
Center-of-Mass det. time= 81.9 min (829.3 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.33'	2,878 cf	**4.94'W x 1,204.40'L x 1.84'H Field A** 10,925 cf Overall - 3,731 cf Embedded = 7,195 cf x 40.0% Voids
#2A	54.33'	3,544 cf	**ACF R-Tank HD 0.5** x 1539 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 3 Rows of 513 Chambers
		6,422 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.58'	**8.0" Round Culvert X 7.00** L= 3.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.58' / 54.55' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.38 cfs @ 12.17 hrs HW=55.01' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.38 cfs @ 2.06 fps)

Summary for Pond mpp30: Rtanks

Inflow Area = 1.205 ac, 54.78% Impervious, Inflow Depth = 3.45" for 25-year event
Inflow = 4.60 cfs @ 12.09 hrs, Volume= 0.346 af
Outflow = 0.60 cfs @ 12.66 hrs, Volume= 0.346 af, Atten= 87%, Lag= 34.3 min
Primary = 0.60 cfs @ 12.66 hrs, Volume= 0.346 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 31.39' @ 12.66 hrs Surf.Area= 9,089 sf Storage= 6,066 cf
Flood Elev= 31.78' Surf.Area= 9,089 sf Storage= 8,611 cf

Plug-Flow detention time= 107.7 min calculated for 0.346 af (100% of inflow)
Center-of-Mass det. time= 107.6 min (902.0 - 794.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	30.73'	4,011 cf	**8.56'W x 815.99'L x 2.04'H Field B** 14,234 cf Overall - 4,206 cf Embedded = 10,028 cf x 40.0% Voids
#2B	30.98'	3,995 cf	**ACF R-Tank HD 0.5** x 1735 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 5 Rows of 347 Chambers
#3C	29.28'	259 cf	**10.56'W x 74.72'L x 1.69'H Field C** 1,337 cf Overall - 689 cf Embedded = 648 cf x 40.0% Voids
#4C	29.53'	654 cf	**ACF R-Tank HD 1.0** x 155 Inside #3 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 5 Rows of 31 Chambers
#5D	29.28'	968 cf	**17.12'W x 76.72'L x 3.42'H Field D** 4,487 cf Overall - 2,066 cf Embedded = 2,420 cf x 40.0% Voids
#6D	29.53'	1,963 cf	**ACF R-Tank HD 1.5** x 310 Inside #5 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 10 Rows of 31 Chambers
		11,851 cf	Total Available Storage

Storage Group B created with Chamber Wizard
Storage Group C created with Chamber Wizard
Storage Group D created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	29.28'	**18.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.28' / 29.00' S= 0.0140 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	29.28'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	30.00'	**3.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.60 cfs @ 12.66 hrs HW=31.39' (Free Discharge)
└─**1=Culvert** (Passes 0.27 cfs of 7.84 cfs potential flow)
  └─**3=Orifice/Grate** (Orifice Controls 0.27 cfs @ 5.42 fps)
└─**2=Orifice/Grate** (Orifice Controls 0.33 cfs @ 6.79 fps)

Summary for Pond SSF 36: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.23" for 25-year event
Inflow = 0.83 cfs @ 12.08 hrs, Volume= 0.481 af
Outflow = 0.37 cfs @ 15.83 hrs, Volume= 0.381 af, Atten= 55%, Lag= 224.7 min
Primary = 0.08 cfs @ 15.83 hrs, Volume= 0.241 af
Secondary = 0.29 cfs @ 15.83 hrs, Volume= 0.140 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 64.57' @ 15.83 hrs Surf.Area= 11,270 sf Storage= 11,181 cf
Flood Elev= 66.27' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 782.8 min calculated for 0.381 af (79% of inflow)
Center-of-Mass det. time= 668.6 min (1,441.1 - 772.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	62.77'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	63.27'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	60.02'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.02	5,635	0.0	0	0
60.03	5,635	40.0	23	23
60.76	5,635	40.0	1,645	1,668
60.77	5,635	30.0	17	1,685
61.26	5,635	30.0	828	2,513
61.27	5,635	20.0	11	2,524
62.76	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	60.02'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.02'	**1.500 in/hr Exfiltration over Surface area above 60.02'** Excluded Surface area = 5,635 sf
#3	Secondary	64.31'	**12.0" Round Culvert X 2.00** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 64.31' / 64.31' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 15.83 hrs HW=64.57' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.21 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.29 cfs @ 15.83 hrs HW=64.57' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.29 cfs @ 1.34 fps)

Summary for Pond ssf37: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.71" for 25-year event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.583 af
Outflow = 0.59 cfs @ 14.53 hrs, Volume= 0.484 af, Atten= 26%, Lag= 147.0 min
Primary = 0.08 cfs @ 14.53 hrs, Volume= 0.244 af
Secondary = 0.51 cfs @ 14.53 hrs, Volume= 0.240 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.38' @ 14.53 hrs Surf.Area= 11,332 sf Storage= 11,930 cf
Flood Elev= 64.85' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 644.4 min calculated for 0.484 af (83% of inflow)
Center-of-Mass det. time= 552.7 min (1,317.8 - 765.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.35'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	61.85'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	58.60'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.60	5,666	0.0	0	0
58.61	5,666	40.0	23	23
59.34	5,666	40.0	1,654	1,677
59.35	5,666	30.0	17	1,694
59.84	5,666	30.0	833	2,527
59.85	5,666	20.0	11	2,538
61.34	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	58.60'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.60'	**1.500 in/hr Exfiltration over Surface area above 58.60'** Excluded Surface area = 5,666 sf
#3	Secondary	62.89'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.89' / 62.89' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 14.53 hrs HW=63.38' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.47 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.51 cfs @ 14.53 hrs HW=63.38' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.51 cfs @ 1.94 fps)

Summary for Pond ssf38: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.25" for 25-year event
Inflow = 12.32 cfs @ 12.08 hrs, Volume= 0.484 af
Outflow = 3.12 cfs @ 12.41 hrs, Volume= 0.387 af, Atten= 75%, Lag= 19.6 min
Primary = 0.09 cfs @ 12.41 hrs, Volume= 0.166 af
Secondary = 3.03 cfs @ 12.41 hrs, Volume= 0.221 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.19' @ 12.41 hrs Surf.Area= 11,332 sf Storage= 15,152 cf
Flood Elev= 63.62' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 370.4 min calculated for 0.387 af (80% of inflow)
Center-of-Mass det. time= 360.5 min (1,086.6 - 726.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	60.12'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	60.62'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	57.37'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.37	5,666	0.0	0	0
57.38	5,666	40.0	23	23
58.11	5,666	40.0	1,654	1,677
58.12	5,666	30.0	17	1,694
58.61	5,666	30.0	833	2,527
58.62	5,666	20.0	11	2,538
60.11	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	57.37'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	57.37'	**1.500 in/hr Exfiltration over Surface area above 57.37'** Excluded Surface area = 5,666 sf
#3	Secondary	61.66'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.66' / 61.66' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.41 hrs HW=63.19' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.09 cfs @ 11.56 fps)
└**2=Exfiltration** (Passes 0.09 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=3.03 cfs @ 12.41 hrs HW=63.19' (Free Discharge)
└**3=Culvert** (Inlet Controls 3.03 cfs @ 3.85 fps)

Summary for Pond ssf39: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.42" for 25-year event
Inflow = 5.34 cfs @ 12.08 hrs, Volume= 0.951 af
Outflow = 4.46 cfs @ 12.38 hrs, Volume= 0.823 af, Atten= 16%, Lag= 17.7 min
Primary = 0.10 cfs @ 12.38 hrs, Volume= 0.246 af
Secondary = 4.36 cfs @ 12.38 hrs, Volume= 0.577 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.35' @ 12.38 hrs Surf.Area= 12,365 sf Storage= 18,385 cf
Flood Elev= 55.67' Surf.Area= 12,365 sf Storage= 18,385 cf

Plug-Flow detention time= 411.1 min calculated for 0.823 af (87% of inflow)
Center-of-Mass det. time= 347.3 min (1,097.3 - 750.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,625 cf	**58.50'W x 109.24'L x 3.50'H Field A** 22,367 cf Overall - 8,303 cf Embedded = 14,064 cf x 40.0% Voids
#2A	52.67'	8,303 cf	**ADS_StormTech SC-740** x 180 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 12 rows
#3	49.42'	4,457 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		18,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,974	0.0	0	0
49.43	5,974	40.0	24	24
50.16	5,974	40.0	1,744	1,768
50.17	5,974	30.0	18	1,786
50.66	5,974	30.0	878	2,664
50.67	5,974	20.0	12	2,676
52.16	5,974	20.0	1,780	4,457

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,974 sf
#3	Secondary	53.71'	**12.0" Round Culvert**

L= 5.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.10 cfs @ 12.38 hrs HW=56.30' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.10 cfs @ 12.58 fps)
└**2=Exfiltration** (Passes 0.10 cfs of 0.22 cfs potential flow)

Secondary OutFlow Max=4.31 cfs @ 12.38 hrs HW=56.30' (Free Discharge)
└**3=Culvert** (Inlet Controls 4.31 cfs @ 5.49 fps)

Summary for Pond ssf40: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 4.48" for 25-year event
Inflow = 5.71 cfs @ 12.08 hrs, Volume= 0.966 af
Outflow = 6.19 cfs @ 12.17 hrs, Volume= 0.860 af, Atten= 0%, Lag= 5.2 min
Primary = 0.11 cfs @ 12.17 hrs, Volume= 0.246 af
Secondary = 6.07 cfs @ 12.17 hrs, Volume= 0.614 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.35' @ 12.17 hrs Surf.Area= 11,484 sf Storage= 16,630 cf
Flood Elev= 55.67' Surf.Area= 11,484 sf Storage= 16,630 cf

Plug-Flow detention time= 379.8 min calculated for 0.860 af (89% of inflow)
Center-of-Mass det. time= 324.3 min (1,074.1 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,168 cf	**20.50'W x 280.12'L x 3.50'H Field A** 20,099 cf Overall - 7,178 cf Embedded = 12,921 cf x 40.0% Voids
#2A	52.67'	7,178 cf	**ADS_StormTech SC-740** x 156 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
#3	49.42'	4,284 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,630 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,742	0.0	0	0
49.43	5,742	40.0	23	23
50.16	5,742	40.0	1,677	1,700
50.17	5,742	30.0	17	1,717
50.66	5,742	30.0	844	2,561
50.67	5,742	20.0	11	2,572
52.16	5,742	20.0	1,711	4,284

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,742 sf
#3	Secondary	53.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.11 cfs @ 12.17 hrs HW=58.35' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.11 cfs @ 14.35 fps)
└**2=Exfiltration** (Passes 0.11 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=6.07 cfs @ 12.17 hrs HW=58.35' (Free Discharge)
└**3=Culvert** (Inlet Controls 6.07 cfs @ 7.73 fps)

Summary for Pond ssf41: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.71" for 25-year event
Inflow = 0.77 cfs @ 12.08 hrs, Volume= 0.584 af
Outflow = 0.59 cfs @ 14.53 hrs, Volume= 0.481 af, Atten= 23%, Lag= 147.0 min
Primary = 0.08 cfs @ 14.53 hrs, Volume= 0.244 af
Secondary = 0.51 cfs @ 14.53 hrs, Volume= 0.237 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.20' @ 14.53 hrs Surf.Area= 11,270 sf Storage= 12,122 cf
Flood Elev= 49.67' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 651.7 min calculated for 0.481 af (82% of inflow)
Center-of-Mass det. time= 558.0 min (1,323.1 - 765.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	46.17'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	46.67'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	43.42'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.42	5,635	0.0	0	0
43.43	5,635	40.0	23	23
44.16	5,635	40.0	1,645	1,668
44.17	5,635	30.0	17	1,685
44.66	5,635	30.0	828	2,513
44.67	5,635	20.0	11	2,524
46.16	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	43.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	43.42'	**1.500 in/hr Exfiltration over Surface area above 43.42'** Excluded Surface area = 5,635 sf
#3	Secondary	47.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.71' / 47.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 14.53 hrs HW=48.20' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.47 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.51 cfs @ 14.53 hrs HW=48.20' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.51 cfs @ 1.94 fps)

Summary for Pond ssf42: ssf

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 4.56" for 25-year event
Inflow = 0.64 cfs @ 12.08 hrs, Volume= 0.105 af
Outflow = 0.63 cfs @ 12.22 hrs, Volume= 0.088 af, Atten= 3%, Lag= 8.1 min
Primary = 0.01 cfs @ 12.22 hrs, Volume= 0.028 af
Secondary = 0.62 cfs @ 12.22 hrs, Volume= 0.060 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.70' @ 12.22 hrs Surf.Area= 1,422 sf Storage= 1,726 cf
Flood Elev= 61.67' Surf.Area= 1,422 sf Storage= 2,027 cf

Plug-Flow detention time= 416.8 min calculated for 0.088 af (84% of inflow)
Center-of-Mass det. time= 346.3 min (1,095.6 - 749.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	58.17'	662 cf	**15.75'W x 45.16'L x 3.50'H Field A** 2,489 cf Overall - 835 cf Embedded = 1,654 cf x 40.0% Voids
#2A	58.67'	835 cf	**ADS_StormTech SC-740** x 18 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 3 rows
#3	55.42'	530 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,027 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.42	711	0.0	0	0
55.43	711	40.0	3	3
56.16	711	40.0	208	210
56.17	711	30.0	2	213
56.66	711	30.0	105	317
56.67	711	20.0	1	319
58.16	711	20.0	212	530

Device	Routing	Invert	Outlet Devices
#1	Primary	55.42'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	55.42'	**1.500 in/hr Exfiltration over Surface area above 55.42'** Excluded Surface area = 711 sf
#3	Secondary	60.06'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.05' / 60.06' S= -0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 12.22 hrs HW=60.70' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 11.05 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.62 cfs @ 12.22 hrs HW=60.70' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.62 cfs @ 2.23 fps)

Summary for Pond ssf43: ssf

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 4.20" for 25-year event
Inflow = 0.67 cfs @ 12.08 hrs, Volume= 0.152 af
Outflow = 0.65 cfs @ 12.20 hrs, Volume= 0.133 af, Atten= 3%, Lag= 7.2 min
Primary = 0.02 cfs @ 12.20 hrs, Volume= 0.043 af
Secondary = 0.64 cfs @ 12.20 hrs, Volume= 0.089 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.95' @ 12.20 hrs Surf.Area= 1,934 sf Storage= 2,339 cf
Flood Elev= 60.90' Surf.Area= 1,934 sf Storage= 2,740 cf

Plug-Flow detention time= 416.6 min calculated for 0.133 af (87% of inflow)
Center-of-Mass det. time= 353.1 min (1,104.4 - 751.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.40'	910 cf	**11.00'W x 87.88'L x 3.50'H Field A** 3,383 cf Overall - 1,108 cf Embedded = 2,275 cf x 40.0% Voids
#2A	57.90'	1,108 cf	**ADS_StormTech SC-740** x 24 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	54.65'	721 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,740 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.65	967	0.0	0	0
54.66	967	40.0	4	4
55.39	967	40.0	282	286
55.40	967	30.0	3	289
55.89	967	30.0	142	431
55.90	967	20.0	2	433
57.39	967	20.0	288	721

Device	Routing	Invert	Outlet Devices
#1	Primary	54.65'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.65'	**1.500 in/hr Exfiltration over Surface area above 54.65'** Excluded Surface area = 967 sf
#3	Secondary	59.28'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.28' / 59.28' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.02 cfs @ 12.20 hrs HW=59.95' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.06 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.64 cfs @ 12.20 hrs HW=59.95' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.64 cfs @ 2.26 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1A: Runoff Area=17,785 sf 34.88% Impervious Runoff Depth=5.33"
Tc=6.0 min CN=84 Runoff=2.49 cfs 0.181 af

Subcatchment 1B: Runoff Area=34,018 sf 20.08% Impervious Runoff Depth=4.77"
Tc=6.0 min CN=79 Runoff=4.33 cfs 0.310 af

Subcatchment 2: Runoff Area=31,049 sf 25.93% Impervious Runoff Depth=4.88"
Tc=6.0 min CN=80 Runoff=4.03 cfs 0.290 af

Subcatchment 3: Runoff Area=36,147 sf 36.22% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=82 Runoff=4.88 cfs 0.353 af

Subcatchment 4: Runoff Area=8,448 sf 0.00% Impervious Runoff Depth=4.22"
Tc=6.0 min CN=74 Runoff=0.96 cfs 0.068 af

Subcatchment 5: Runoff Area=10,807 sf 0.00% Impervious Runoff Depth=4.22"
Tc=6.0 min CN=74 Runoff=1.23 cfs 0.087 af

Subcatchment 6: Runoff Area=13,985 sf 32.06% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=82 Runoff=1.89 cfs 0.137 af

Subcatchment 7: Runoff Area=30,345 sf 25.86% Impervious Runoff Depth=4.88"
Tc=6.0 min CN=80 Runoff=3.94 cfs 0.283 af

Subcatchment 8: Runoff Area=45,551 sf 55.78% Impervious Runoff Depth=5.67"
Tc=6.0 min CN=87 Runoff=6.68 cfs 0.494 af

Subcatchment 9: Runoff Area=28,191 sf 63.29% Impervious Runoff Depth=5.90"
Tc=6.0 min CN=89 Runoff=4.25 cfs 0.318 af

Subcatchment 10: access drive north of Runoff Area=30,932 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=5.02 cfs 0.412 af

Subcatchment 11: Runoff Area=43,174 sf 36.78% Impervious Runoff Depth=5.22"
Tc=6.0 min CN=83 Runoff=5.94 cfs 0.431 af

Subcatchment 12: Runoff Area=12,920 sf 57.98% Impervious Runoff Depth=5.79"
Tc=6.0 min CN=88 Runoff=1.92 cfs 0.143 af

Subcatchment 13: Runoff Area=45,163 sf 46.46% Impervious Runoff Depth=5.44"
Tc=6.0 min CN=85 Runoff=6.42 cfs 0.470 af

Subcatchment 14: Runoff Area=9,378 sf 94.36% Impervious Runoff Depth=6.84"
Tc=6.0 min CN=97 Runoff=1.52 cfs 0.123 af

Subcatchment 15: Runoff Area=9,157 sf 1.92% Impervious Runoff Depth=4.22"
Tc=6.0 min CN=74 Runoff=1.04 cfs 0.074 af

Subcatchment 16: Runoff Area=15,110 sf 34.16% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=82 Runoff=2.04 cfs 0.148 af

Subcatchment 17: Runoff Area=13,300 sf 85.11% Impervious Runoff Depth=6.49"
Tc=6.0 min CN=94 Runoff=2.11 cfs 0.165 af

Subcatchment 18A: Runoff Area=6,339 sf 40.91% Impervious Runoff Depth=5.33"
Tc=6.0 min CN=84 Runoff=0.89 cfs 0.065 af

Subcatchment 18B: Runoff Area=4,023 sf 58.36% Impervious Runoff Depth=5.79"
Tc=6.0 min CN=88 Runoff=0.60 cfs 0.045 af

Subcatchment 19: Runoff Area=13,711 sf 81.76% Impervious Runoff Depth=6.49"
Tc=6.0 min CN=94 Runoff=2.18 cfs 0.170 af

Subcatchment 20: Runoff Area=28,459 sf 73.83% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=92 Runoff=4.44 cfs 0.340 af

Subcatchment 21: Runoff Area=9,994 sf 83.66% Impervious Runoff Depth=6.49"
Tc=6.0 min CN=94 Runoff=1.59 cfs 0.124 af

Subcatchment 22: Runoff Area=13,511 sf 76.43% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=92 Runoff=2.11 cfs 0.162 af

Subcatchment 23: sub 23 Runoff Area=28,475 sf 21.95% Impervious Runoff Depth=4.66"
Tc=6.0 min CN=78 Runoff=3.55 cfs 0.254 af

Subcatchment 24: Runoff Area=18,261 sf 67.19% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=92 Runoff=2.85 cfs 0.218 af

Subcatchment 25: Runoff Area=118,223 sf 0.00% Impervious Runoff Depth=3.89"
Flow Length=438' Tc=67.0 min CN=71 Runoff=4.56 cfs 0.880 af

Subcatchment 26: Runoff Area=3,816 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=0.62 cfs 0.051 af

Subcatchment 27: Runoff Area=4,262 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=0.69 cfs 0.057 af

Subcatchment 28: Runoff Area=79,698 sf 27.42% Impervious Runoff Depth=5.44"
Tc=6.0 min CN=85 Runoff=11.34 cfs 0.830 af

Subcatchment 29: Runoff Area=1,306 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=0.21 cfs 0.017 af

Subcatchment 30: Runoff Area=31,472 sf 77.98% Impervious Runoff Depth=6.37"
Tc=6.0 min CN=93 Runoff=4.95 cfs 0.383 af

Subcatchment 31: Runoff Area=70,616 sf 0.00% Impervious Runoff Depth=3.89"
Flow Length=217' Tc=12.3 min CN=71 Runoff=6.02 cfs 0.526 af

Subcatchment 32: Runoff Area=4,677 sf 60.42% Impervious Runoff Depth=5.90"
Tc=6.0 min CN=89 Runoff=0.70 cfs 0.053 af

Subcatchment 33: B3 green Runoff Area=107,893 sf 16.71% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=67 Runoff=10.04 cfs 0.716 af

Subcatchment 34: Runoff Area=24,099 sf 20.00% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=68 Runoff=2.31 cfs 0.165 af

Subcatchment 35: Runoff Area=20,997 sf 20.00% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=68 Runoff=2.02 cfs 0.144 af

Subcatchment 36: B1M1 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 37: B1M2 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 38: B1M3 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 39: B2M4 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 40: B2M5 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 41: B2M6 Runoff Area=112,560 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=18.26 cfs 1.499 af

Subcatchment 42: B6 Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=1.95 cfs 0.160 af

Subcatchment 43: B5 Runoff Area=18,983 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=3.08 cfs 0.253 af

Subcatchment 44: onsite untreated Runoff Area=159,363 sf 0.00% Impervious Runoff Depth=3.89"
Flow Length=574' Tc=18.8 min CN=71 Runoff=11.56 cfs 1.187 af

Subcatchment 45: Runoff Area=64,440 sf 0.00% Impervious Runoff Depth=3.79"
Flow Length=307' Tc=29.9 min CN=70 Runoff=3.71 cfs 0.467 af

Subcatchment 46: SUBCAT 8 Runoff Area=14,976 sf 0.00% Impervious Runoff Depth=3.89"
Flow Length=276' Tc=34.7 min CN=71 Runoff=0.83 cfs 0.112 af

Subcatchment 47: Runoff Area=79,187 sf 6.00% Impervious Runoff Depth=4.33"
Flow Length=639' Tc=15.9 min CN=75 Runoff=6.82 cfs 0.655 af

Subcatchment 48: Runoff Area=40,183 sf 0.00% Impervious Runoff Depth=3.79"
Flow Length=377' Tc=54.0 min CN=70 Runoff=1.71 cfs 0.291 af

Subcatchment 49: Runoff Area=84,173 sf 0.65% Impervious Runoff Depth=3.79"
Flow Length=470' Tc=54.1 min CN=70 Runoff=3.57 cfs 0.610 af

Subcatchment 50: Runoff Area=30,173 sf 100.00% Impervious Runoff Depth=6.96"
Tc=6.0 min CN=98 Runoff=4.89 cfs 0.402 af

Subcatchment OS10: OFFSITE 2 (above Runoff Area=1,644,982 sf 2.57% Impervious Runoff Depth=4.22"
Flow Length=2,221' Tc=94.2 min CN=74 Runoff=55.33 cfs 13.271 af

Subcatchment os11a: OFFSITE 3 Runoff Area=192,533 sf 59.04% Impervious Runoff Depth=5.67"
Flow Length=532' Tc=6.8 min CN=87 Runoff=27.47 cfs 2.089 af

Subcatchment os11b: OFFSITE 3 Runoff Area=320,814 sf 1.43% Impervious Runoff Depth=4.00"
Flow Length=528' Tc=18.9 min CN=72 Runoff=23.82 cfs 2.455 af

Subcatchment OS9: OFFSITE 1 (Below Runoff Area=702,010 sf 3.63% Impervious Runoff Depth=4.33"
Flow Length=1,353' Tc=35.1 min CN=75 Runoff=42.88 cfs 5.810 af

Reach 9R: ANALYSIS POINT 9 Inflow=42.88 cfs 5.810 af
Outflow=42.88 cfs 5.810 af

Reach 10R: Perkins Road Culvert Avg. Flow Depth=2.00' Max Vel=11.61 fps Inflow=55.33 cfs 13.271 af
24.0" Round Pipe n=0.013 L=25.0' S=0.0200 '/' Capacity=31.99 cfs Outflow=34.15 cfs 13.271 af

Reach 11R: Stream 9 Inflow=27.47 cfs 2.089 af
Outflow=27.47 cfs 2.089 af

Reach 17R: untreated Inflow=2.11 cfs 0.165 af
Outflow=2.11 cfs 0.165 af

Reach 20R: untreated Inflow=4.44 cfs 0.340 af
Outflow=4.44 cfs 0.340 af

Reach 23R: sub 23 Inflow=3.55 cfs 0.254 af
Outflow=3.55 cfs 0.254 af

Reach 27R: extisting Inflow=0.69 cfs 0.057 af
Outflow=0.69 cfs 0.057 af

Reach 29R: untreated Inflow=0.21 cfs 0.017 af
Outflow=0.21 cfs 0.017 af

Reach 32R: untreated Inflow=0.70 cfs 0.053 af
Outflow=0.70 cfs 0.053 af

Reach 44R: Inflow=11.56 cfs 1.187 af
Outflow=11.56 cfs 1.187 af

Reach 47R: Inflow=6.82 cfs 0.655 af
Outflow=6.82 cfs 0.655 af

Reach 48R: (new Reach) Inflow=1.71 cfs 0.291 af
Outflow=1.71 cfs 0.291 af

Reach 49R: Inflow=3.57 cfs 0.610 af
Outflow=3.57 cfs 0.610 af

Reach PT1: ANALYSIS POINT 1 at BWD Little River Inflow=5.28 cfs 0.901 af
Outflow=5.28 cfs 0.901 af

Reach PT10: Analysis point at Little River Inflow=11.34 cfs 0.830 af
Outflow=11.34 cfs 0.830 af

Reach PT2: ANALYSIS POINT 2 at BWD Reservoir Inflow=4.56 cfs 0.880 af
Outflow=4.56 cfs 0.880 af

Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir Inflow=6.02 cfs 0.526 af
Outflow=6.02 cfs 0.526 af

Reach PT5: all BWD reservoir Inflow=9.78 cfs 1.660 af
Outflow=9.78 cfs 1.660 af

Reach PT6: stream 9 offsite Avg. Flow Depth=1.74' Max Vel=4.93 fps Inflow=72.86 cfs 21.170 af
n=0.040 L=483.0' S=0.0145 '/' Capacity=401.91 cfs Outflow=72.80 cfs 21.170 af

Reach PT7: ANALYSIS POINT7 at US Avg. Flow Depth=0.43' Max Vel=8.94 fps Inflow=3.71 cfs 0.467 af
18.0" Round Pipe n=0.013 L=83.0' S=0.0398 '/' Capacity=20.95 cfs Outflow=3.71 cfs 0.467 af

Reach PT8: ANALYSIS POINT 8 at US Avg. Flow Depth=0.06' Max Vel=4.91 fps Inflow=0.83 cfs 0.112 af
36.0" x 24.0" Box Pipe n=0.011 L=76.0' S=0.0632 '/' Capacity=144.91 cfs Outflow=0.83 cfs 0.112 af

Reach PT9: Analysis Point Stream 9 Avg. Flow Depth=1.50' Max Vel=28.33 fps Inflow=100.24 cfs 26.069 af
36.0" Round Pipe n=0.011 L=93.0' S=0.0645 '/' Capacity=200.22 cfs Outflow=100.24 cfs 26.069 af

Reach S9-2: Stream 9 Avg. Flow Depth=1.77' Max Vel=6.29 fps Inflow=95.71 cfs 24.812 af
n=0.040 L=1,580.0' S=0.0233 '/' Capacity=120.91 cfs Outflow=95.21 cfs 24.812 af

Reach S9-3: Stream 9 Avg. Flow Depth=1.63' Max Vel=6.18 fps Inflow=99.55 cfs 25.542 af
n=0.035 L=364.0' S=0.0199 '/' Capacity=152.29 cfs Outflow=99.53 cfs 25.542 af

Reach tank: existing clarifier Inflow=181.74 cfs 15.144 af
Outflow=181.74 cfs 15.144 af

Pond dmh10: dmh10 Peak Elev=65.57' Inflow=37.73 cfs 3.092 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=37.73 cfs 3.092 af

Pond dmh11: dmh11 Peak Elev=67.52' Inflow=66.58 cfs 4.887 af
30.0" Round Culvert n=0.013 L=84.0' S=0.0050 '/' Outflow=66.58 cfs 4.887 af

Pond dmh13: dmh13 Peak Elev=67.08' Inflow=66.58 cfs 4.887 af
30.0" Round Culvert n=0.013 L=201.0' S=0.0050 '/' Outflow=66.58 cfs 4.887 af

Pond dmh14: dmh14 Peak Elev=67.09' Inflow=69.25 cfs 5.183 af
30.0" Round Culvert n=0.020 L=23.0' S=0.0052 '/' Outflow=69.25 cfs 5.183 af

Pond dmh15: dmh15 Peak Elev=66.97' Inflow=69.25 cfs 5.183 af
30.0" Round Culvert n=0.013 L=90.0' S=0.0050 '/' Outflow=69.25 cfs 5.183 af

Pond dmh16: dmh16 Peak Elev=60.90' Inflow=0.51 cfs 0.086 af
12.0" Round Culvert n=0.013 L=198.0' S=0.0126 '/' Outflow=0.51 cfs 0.086 af

Pond dmh17: dmh17 Peak Elev=66.91' Inflow=70.27 cfs 5.333 af
30.0" Round Culvert n=0.013 L=35.0' S=0.0051 '/' Outflow=70.27 cfs 5.333 af

Pond dmh19: dmh 19 Peak Elev=56.03' Inflow=3.06 cfs 0.233 af
12.0" Round Culvert n=0.013 L=59.0' S=0.0100 '/' Outflow=3.06 cfs 0.233 af

Pond dmh2: dmh2 Peak Elev=70.33' Inflow=17.24 cfs 1.398 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0150 '/' Outflow=17.24 cfs 1.398 af

Pond dmh20: dmh20 Peak Elev=67.95' Inflow=73.27 cfs 5.566 af
30.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=73.27 cfs 5.566 af

Pond dmh21: dmh21 Peak Elev=74.86' Inflow=89.20 cfs 7.251 af
30.0" Round Culvert n=0.013 L=281.0' S=0.0169 '/' Outflow=89.20 cfs 7.251 af

Pond dmh22: dmh 22 Peak Elev=60.17' Inflow=13.23 cfs 1.237 af
15.0" Round Culvert n=0.013 L=93.0' S=0.0051 '/' Outflow=13.23 cfs 1.237 af

Pond dmh23: dmh23 Peak Elev=76.19' Inflow=11.48 cfs 0.910 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0050 '/' Outflow=11.48 cfs 0.910 af

Pond dmh24: dmh24 Peak Elev=71.39' Inflow=11.48 cfs 0.910 af
12.0" Round Culvert n=0.013 L=72.0' S=0.0025 '/' Outflow=11.48 cfs 0.910 af

Pond dmh24a: dmh24a Peak Elev=71.50' Inflow=3.92 cfs 0.287 af
8.0" Round Culvert n=0.013 L=95.0' S=0.0095 '/' Outflow=3.92 cfs 0.287 af

Pond dmh25: dmh25 Peak Elev=61.02' Inflow=2.15 cfs 0.154 af
12.0" Round Culvert n=0.013 L=98.0' S=0.0510 '/' Outflow=2.15 cfs 0.154 af

Pond dmh26: dmh26 Peak Elev=61.82' Inflow=5.64 cfs 0.799 af
12.0" Round Culvert n=0.020 L=28.0' S=0.0050 '/' Outflow=5.64 cfs 0.799 af

Pond dmh27: dmh27 Peak Elev=75.07' Inflow=9.45 cfs 1.096 af
12.0" Round Culvert n=0.013 L=256.0' S=0.0050 '/' Outflow=9.45 cfs 1.096 af

Pond dmh29: dmh29 Peak Elev=60.30' Inflow=1.93 cfs 0.143 af
8.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=1.93 cfs 0.143 af

Pond dmh3: dmh3 Peak Elev=64.29' Inflow=19.96 cfs 1.694 af
24.0" Round Culvert n=0.013 L=125.0' S=0.0053 '/' Outflow=19.96 cfs 1.694 af

Pond dmh30: dmh30 Peak Elev=56.32' Inflow=1.93 cfs 0.143 af
12.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=1.93 cfs 0.143 af

Pond dmh31: dmh31 Peak Elev=67.86' Inflow=7.40 cfs 0.942 af
12.0" Round Culvert n=0.013 L=259.0' S=0.0050 '/' Outflow=7.40 cfs 0.942 af

Pond dmh32: dmh32 Peak Elev=68.43' Inflow=12.02 cfs 1.358 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0036 '/' Outflow=12.02 cfs 1.358 af

Pond dmh33: dmh33 Peak Elev=54.47' Inflow=0.66 cfs 0.162 af
12.0" Round Culvert n=0.013 L=201.0' S=0.0099 '/' Outflow=0.66 cfs 0.162 af

Pond dmh34: dmh34 Peak Elev=66.20' Inflow=11.06 cfs 0.960 af
12.0" Round Culvert n=0.013 L=39.0' S=0.0100 '/' Outflow=11.06 cfs 0.960 af

Pond dmh35: dmh35 Peak Elev=77.44' Inflow=27.31 cfs 2.631 af
18.0" Round Culvert n=0.013 L=276.0' S=0.0050 '/' Outflow=27.31 cfs 2.631 af

Pond dmh36: dmh36 Peak Elev=68.68' Inflow=27.31 cfs 2.631 af
18.0" Round Culvert n=0.013 L=159.0' S=0.0050 '/' Outflow=27.31 cfs 2.631 af

Pond dmh38: dmh38 Peak Elev=60.33' Inflow=18.55 cfs 1.368 af
18.0" Round Culvert n=0.013 L=106.0' S=0.0100 '/' Outflow=18.55 cfs 1.368 af

Pond dmh39: dmh39 Peak Elev=59.69' Inflow=19.43 cfs 1.429 af
18.0" Round Culvert n=0.013 L=58.0' S=0.0047 '/' Outflow=19.43 cfs 1.429 af

Pond dmh4: dmh4 Peak Elev=63.63' Inflow=19.96 cfs 1.694 af
24.0" Round Culvert n=0.013 L=66.0' S=0.0041 '/' Outflow=19.96 cfs 1.694 af

Pond dmh40: dmh40 Peak Elev=70.24' Inflow=46.20 cfs 4.060 af
24.0" Round Culvert n=0.013 L=340.0' S=0.0050 '/' Outflow=46.20 cfs 4.060 af

Pond dmh43: dmh43 Peak Elev=78.01' Inflow=64.76 cfs 5.450 af
24.0" Round Culvert n=0.013 L=193.0' S=0.0050 '/' Outflow=64.76 cfs 5.450 af

Pond dmh44: dmh44 Peak Elev=60.31' Inflow=65.82 cfs 5.525 af
30.0" Round Culvert n=0.013 L=82.0' S=0.0050 '/' Outflow=65.82 cfs 5.525 af

Pond dmh45: dmh45 Peak Elev=68.62' Inflow=83.17 cfs 6.919 af
30.0" Round Culvert n=0.013 L=316.0' S=0.0050 '/' Outflow=83.17 cfs 6.919 af

Pond dmh47: dmh47 Peak Elev=65.12' Inflow=83.17 cfs 6.919 af
30.0" Round Culvert n=0.013 L=104.0' S=0.0100 '/' Outflow=83.17 cfs 6.919 af

Pond dmh48: dmh48 Peak Elev=65.61' Inflow=86.36 cfs 7.292 af
30.0" Round Culvert n=0.013 L=117.0' S=0.0050 '/' Outflow=86.36 cfs 7.292 af

Pond dmh49: dmh49 Peak Elev=54.43' Inflow=87.48 cfs 7.409 af
36.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=87.48 cfs 7.409 af

Pond dmh5: dmh5 Peak Elev=63.27' Inflow=19.96 cfs 1.694 af
24.0" Round Culvert n=0.013 L=173.0' S=0.0050 '/' Outflow=19.96 cfs 1.694 af

Pond dmh50: dmh50 Peak Elev=70.05' Inflow=91.52 cfs 7.491 af
30.0" Round Culvert n=0.013 L=64.0' S=0.0100 '/' Outflow=91.52 cfs 7.491 af

Pond dmh51: dmh51 Peak Elev=69.39' Inflow=91.52 cfs 7.491 af
30.0" Round Culvert n=0.013 L=38.0' S=0.0287 '/' Outflow=91.52 cfs 7.491 af

Pond dmh52: dmh52 Peak Elev=66.67' Inflow=178.88 cfs 14.900 af
42.0" Round Culvert n=0.013 L=258.0' S=0.0194 '/' Outflow=178.88 cfs 14.900 af

Pond dmh53: dmh53 Peak Elev=59.36' Inflow=181.44 cfs 15.096 af
42.0" Round Culvert n=0.013 L=120.0' S=0.0208 '/' Outflow=181.44 cfs 15.096 af

Pond dmh54: dmh54 Peak Elev=53.44' Inflow=181.74 cfs 15.144 af
42.0" Round Culvert n=0.013 L=152.0' S=0.0329 '/' Outflow=181.74 cfs 15.144 af

Pond dmh55: dhm55 Peak Elev=45.44' Inflow=181.74 cfs 15.144 af
42.0" Round Culvert n=0.013 L=115.0' S=0.0304 '/' Outflow=181.74 cfs 15.144 af

Pond dmh56: dmh56 Peak Elev=38.94' Inflow=181.74 cfs 15.144 af
42.0" Round Culvert n=0.013 L=42.0' S=0.0357 '/' Outflow=181.74 cfs 15.144 af

Pond dmh59: dmh59 Peak Elev=94.46' Inflow=12.04 cfs 1.030 af
12.0" Round Culvert n=0.013 L=294.0' S=0.0050 '/' Outflow=12.04 cfs 1.030 af

Pond dmh6: dmh6 Peak Elev=64.06' Inflow=19.96 cfs 1.694 af
24.0" Round Culvert n=0.020 L=170.0' S=0.0050 '/' Outflow=19.96 cfs 1.694 af

Pond dmh60: dhm60 Peak Elev=61.17' Inflow=178.88 cfs 14.900 af
42.0" Round Culvert n=0.013 L=114.0' S=0.0175 '/' Outflow=178.88 cfs 14.900 af

Pond dmh7: dmh7 Peak Elev=61.50' Inflow=19.96 cfs 1.694 af
24.0" Round Culvert n=0.013 L=170.0' S=0.0050 '/' Outflow=19.96 cfs 1.694 af

Pond dmh8: dmh8 Peak Elev=70.18' Inflow=37.73 cfs 3.092 af
24.0" Round Culvert n=0.013 L=296.0' S=0.0040 '/' Outflow=37.73 cfs 3.092 af

Pond dmh9a: dmh9a Peak Elev=66.62' Inflow=37.73 cfs 3.092 af
24.0" Round Culvert n=0.013 L=206.0' S=0.0050 '/' Outflow=37.73 cfs 3.092 af

Pond GSF 11: grassed soil filter Peak Elev=62.90' Storage=6,891 cf Inflow=5.94 cfs 0.431 af
Primary=0.03 cfs 0.077 af Secondary=2.82 cfs 0.303 af Outflow=2.85 cfs 0.381 af

Pond GSF 12: grassed soil filter Peak Elev=62.09' Storage=1,817 cf Inflow=1.92 cfs 0.143 af
Primary=0.01 cfs 0.025 af Secondary=1.84 cfs 0.096 af Outflow=1.85 cfs 0.122 af

Pond GSF 13: grassed soil filter Peak Elev=62.69' Storage=7,544 cf Inflow=6.42 cfs 0.470 af
Primary=0.04 cfs 0.100 af Secondary=2.75 cfs 0.318 af Outflow=2.79 cfs 0.418 af

Pond GSF 15: grassed soil filter Peak Elev=63.83' Storage=673 cf Inflow=1.04 cfs 0.074 af
Primary=0.00 cfs 0.005 af Secondary=1.01 cfs 0.059 af Outflow=1.01 cfs 0.064 af

Pond GSF 16: grassed soil filter Peak Elev=64.48' Storage=3,506 cf Inflow=2.04 cfs 0.148 af
Primary=0.01 cfs 0.025 af Secondary=0.50 cfs 0.061 af Outflow=0.51 cfs 0.086 af

Pond GSF 18A: grassed soil filter Peak Elev=57.48' Storage=1,185 cf Inflow=0.89 cfs 0.065 af
Primary=0.00 cfs 0.013 af Secondary=0.55 cfs 0.035 af Outflow=0.55 cfs 0.048 af

Pond GSF 18B: grassed soil filter Peak Elev=57.99' Storage=644 cf Inflow=0.60 cfs 0.045 af
Primary=0.00 cfs 0.006 af Secondary=0.58 cfs 0.028 af Outflow=0.58 cfs 0.035 af

Pond GSF 1A: Grassed soil filter Peak Elev=66.51' Storage=2,626 cf Inflow=2.49 cfs 0.181 af
Primary=0.01 cfs 0.037 af Secondary=2.14 cfs 0.117 af Outflow=2.15 cfs 0.154 af

Pond GSF 1B: grassed soil filter Peak Elev=67.37' Storage=2,510 cf Inflow=4.33 cfs 0.310 af
Primary=0.01 cfs 0.041 af Secondary=2.76 cfs 0.255 af Outflow=2.78 cfs 0.296 af

Pond GSF 2: grassed soil filter Peak Elev=58.04' Storage=3,643 cf Inflow=4.03 cfs 0.290 af
Primary=0.02 cfs 0.055 af Secondary=2.57 cfs 0.208 af Outflow=2.59 cfs 0.262 af

Pond GSF 24: grassed soil filter Peak Elev=40.85' Storage=2,883 cf Inflow=2.85 cfs 0.218 af
Primary=0.02 cfs 0.057 af Secondary=2.56 cfs 0.139 af Outflow=2.58 cfs 0.196 af

Pond GSF 3: grassed soil filter Peak Elev=56.09' Storage=4,106 cf Inflow=4.88 cfs 0.353 af
Primary=0.02 cfs 0.057 af Secondary=4.43 cfs 0.257 af Outflow=4.45 cfs 0.313 af

Pond GSF 4: grassed soil filter Peak Elev=55.22' Storage=757 cf Inflow=0.96 cfs 0.068 af
Primary=0.00 cfs 0.013 af Secondary=0.93 cfs 0.048 af Outflow=0.93 cfs 0.061 af

Pond GSF 5: grassed soil filter Peak Elev=54.74' Storage=1,056 cf Inflow=1.23 cfs 0.087 af
Primary=0.00 cfs 0.013 af Secondary=1.13 cfs 0.061 af Outflow=1.13 cfs 0.074 af

Pond GSF 6: grassed soil filter Peak Elev=48.63' Storage=2,027 cf Inflow=1.89 cfs 0.137 af
Primary=0.01 cfs 0.024 af Secondary=1.31 cfs 0.092 af Outflow=1.31 cfs 0.116 af

Pond GSF 7: grassed soil filter Peak Elev=54.99' Storage=4,223 cf Inflow=3.94 cfs 0.283 af
Primary=0.02 cfs 0.054 af Secondary=2.54 cfs 0.187 af Outflow=2.56 cfs 0.241 af

Pond GSF 8: grassed soil filter Peak Elev=58.43' Storage=7,650 cf Inflow=6.68 cfs 0.494 af
Primary=0.04 cfs 0.104 af Secondary=2.76 cfs 0.344 af Outflow=2.80 cfs 0.448 af

Pond GSF 9: grassed soil filter Peak Elev=63.41' Storage=3,518 cf Inflow=4.25 cfs 0.318 af
Primary=0.02 cfs 0.055 af Secondary=2.68 cfs 0.240 af Outflow=2.70 cfs 0.296 af

Pond ics 12: ICS 12 Peak Elev=67.96' Inflow=18.26 cfs 1.499 af
Primary=17.14 cfs 0.781 af Secondary=1.12 cfs 0.718 af Outflow=18.26 cfs 1.499 af

Pond ICS1: ICS 1 Peak Elev=70.63' Inflow=18.26 cfs 1.499 af
Primary=1.12 cfs 0.581 af Secondary=17.14 cfs 0.918 af Outflow=18.26 cfs 1.499 af

Pond ICS18: ICS18 Peak Elev=60.60' Inflow=3.08 cfs 0.253 af
Primary=0.68 cfs 0.200 af Secondary=2.40 cfs 0.053 af Outflow=3.08 cfs 0.253 af

Pond ics28: ICS28 Peak Elev=60.74' Inflow=1.95 cfs 0.160 af
Primary=0.65 cfs 0.139 af Secondary=1.29 cfs 0.021 af Outflow=1.95 cfs 0.160 af

Pond ICS37: ISC37 Peak Elev=56.51' Inflow=18.26 cfs 1.499 af
Primary=6.14 cfs 1.256 af Secondary=12.12 cfs 0.243 af Outflow=18.26 cfs 1.499 af

Pond ics46: ICS46 Peak Elev=53.49' Inflow=18.26 cfs 1.499 af
Primary=1.07 cfs 0.717 af Secondary=17.18 cfs 0.782 af Outflow=18.26 cfs 1.499 af

Pond ICS9: ICS9 Peak Elev=68.98' Inflow=18.26 cfs 1.499 af
Primary=1.10 cfs 0.716 af Secondary=17.16 cfs 0.783 af Outflow=18.26 cfs 1.499 af

Pond ISC42: ICS 42 Peak Elev=56.33' Inflow=18.26 cfs 1.499 af
Primary=5.96 cfs 1.275 af Secondary=12.29 cfs 0.224 af Outflow=18.26 cfs 1.499 af

Pond MPP 10: Rtank storage Peak Elev=61.95' Storage=0.091 af Inflow=5.02 cfs 0.412 af
8.0" Round Culvert x 6.00 n=0.013 L=2.0' S=0.0400 '/' Outflow=3.18 cfs 0.394 af

Pond MPP 14: Rtanks Peak Elev=56.76' Storage=1,121 cf Inflow=1.52 cfs 0.123 af
8.0" Round Culvert x 2.00 n=0.013 L=21.0' S=0.0052 '/' Outflow=1.00 cfs 0.118 af

Pond MPP 19: Rtanks Peak Elev=56.12' Storage=0.068 af Inflow=2.18 cfs 0.170 af
6.0" Round Culvert n=0.013 L=19.0' S=0.0042 '/' Outflow=0.66 cfs 0.162 af

Pond MPP 21: Rtanks Peak Elev=55.93' Storage=1,485 cf Inflow=1.59 cfs 0.124 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.73 cfs 0.120 af

Pond MPP 22: Rtanks Peak Elev=56.11' Storage=2,784 cf Inflow=2.11 cfs 0.162 af
6.0" Round Culvert n=0.013 L=2.0' S=0.0000 '/' Outflow=0.67 cfs 0.153 af

Pond MPP 26: Rtanks Peak Elev=35.02' Storage=594 cf Inflow=0.62 cfs 0.051 af
8.0" Round Culvert n=0.013 L=8.0' S=0.0350 '/' Outflow=0.36 cfs 0.048 af

Pond MPP 50: Peak Elev=55.11' Storage=3,895 cf Inflow=4.89 cfs 0.402 af
8.0" Round Culvert x 7.00 n=0.013 L=3.0' S=0.0100 '/' Outflow=3.46 cfs 0.373 af

Pond mpp30: Rtanks Peak Elev=32.18' Storage=9,944 cf Inflow=6.96 cfs 0.527 af
Outflow=0.73 cfs 0.527 af

Pond SSF 36: ssf Peak Elev=64.58' Storage=11,236 cf Inflow=1.12 cfs 0.581 af
Primary=0.08 cfs 0.251 af Secondary=0.32 cfs 0.229 af Outflow=0.40 cfs 0.480 af

Pond ssf37: ssf Peak Elev=63.42' Storage=12,071 cf Inflow=1.10 cfs 0.716 af
Primary=0.08 cfs 0.254 af Secondary=0.58 cfs 0.361 af Outflow=0.67 cfs 0.615 af

Pond ssf38: ssf Peak Elev=135.10' Storage=16,132 cf Inflow=17.14 cfs 0.781 af
Primary=0.20 cfs 0.176 af Secondary=25.54 cfs 0.508 af Outflow=25.73 cfs 0.684 af

Pond ssf39: ssf Peak Elev=58.59' Storage=18,385 cf Inflow=6.14 cfs 1.256 af
Primary=0.11 cfs 0.257 af Secondary=6.02 cfs 0.868 af Outflow=6.13 cfs 1.125 af

Pond ssf40: ssf Peak Elev=59.05' Storage=16,630 cf Inflow=5.96 cfs 1.275 af
Primary=0.12 cfs 0.257 af Secondary=6.57 cfs 0.910 af Outflow=6.69 cfs 1.167 af

Pond ssf41: ssf Peak Elev=48.23' Storage=12,241 cf Inflow=1.07 cfs 0.717 af
Primary=0.08 cfs 0.254 af Secondary=0.57 cfs 0.358 af Outflow=0.65 cfs 0.612 af

Pond ssf42: ssf Peak Elev=60.72' Storage=1,731 cf Inflow=0.65 cfs 0.139 af
Primary=0.01 cfs 0.029 af Secondary=0.64 cfs 0.093 af Outflow=0.65 cfs 0.122 af

Pond ssf43: ssf Peak Elev=59.96' Storage=2,345 cf Inflow=0.68 cfs 0.200 af
Primary=0.02 cfs 0.045 af Secondary=0.65 cfs 0.135 af Outflow=0.67 cfs 0.180 af

Total Runoff Area = 116.264 ac Runoff Volume = 46.440 af Average Runoff Depth = 4.79"
74.76% Pervious = 86.915 ac 25.24% Impervious = 29.349 ac

Summary for Subcatchment 1A:

Runoff = 2.49 cfs @ 12.09 hrs, Volume= 0.181 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	11,582	77	>75% Grass cover, Good, HSG C/D
*	6,203	98	Impervious, HSG C/D
	17,785	84	Weighted Average
	11,582		65.12% Pervious Area
	6,203		34.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 1B:

Runoff = 4.33 cfs @ 12.09 hrs, Volume= 0.310 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	6,832	98	Impervious
	27,186	74	>75% Grass cover, Good, HSG C
	34,018	79	Weighted Average
	27,186		79.92% Pervious Area
	6,832		20.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 2:

Runoff = 4.03 cfs @ 12.09 hrs, Volume= 0.290 af, Depth= 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	8,052	98	Impervious
	5,300	74	>75% Grass cover, Good, HSG C
*	17,697	74	>75% Grass cover, Good, HSG C/D
	31,049	80	Weighted Average
	22,997		74.07% Pervious Area
	8,052		25.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 3:

Runoff = 4.88 cfs @ 12.09 hrs, Volume= 0.353 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	13,091	98	Impervious, HSG C
*	15,516	74	>75% Grass cover, Good, HSG C/D
*	7,540	70	Woods, Good, HSG C/D
	36,147	82	Weighted Average
	23,056		63.78% Pervious Area
	13,091		36.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 4:

Runoff = 0.96 cfs @ 12.09 hrs, Volume= 0.068 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
	8,448	74	>75% Grass cover, Good, HSG C
	8,448		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 5:

Runoff = 1.23 cfs @ 12.09 hrs, Volume= 0.087 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

Area (sf)	CN	Description
10,807	74	>75% Grass cover, Good, HSG C
10,807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 6:

Runoff = 1.89 cfs @ 12.09 hrs, Volume= 0.137 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	4,484	98	Impervious
*	9,501	74	>75% Grass cover, Good, HSG C
	13,985	82	Weighted Average
	9,501		67.94% Pervious Area
	4,484		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 7:

Runoff = 3.94 cfs @ 12.09 hrs, Volume= 0.283 af, Depth= 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	7,846	98	Impervious
	3,270	74	>75% Grass cover, Good, HSG C
*	19,229	74	>75% Grass cover, Good, HSG C/D
	30,345	80	Weighted Average
	22,499		74.14% Pervious Area
	7,846		25.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 8:

Runoff = 6.68 cfs @ 12.08 hrs, Volume= 0.494 af, Depth= 5.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	25,409	98	Impervious
	20,142	74	>75% Grass cover, Good, HSG C
	45,551	87	Weighted Average
	20,142		44.22% Pervious Area
	25,409		55.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 9:

Runoff = 4.25 cfs @ 12.08 hrs, Volume= 0.318 af, Depth= 5.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	10,348	74	>75% Grass cover, Good, HSG C/D
*	17,843	98	Impervious
	28,191	89	Weighted Average
	10,348		36.71% Pervious Area
	17,843		63.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 10: access drive north of B1

Runoff = 5.02 cfs @ 12.08 hrs, Volume= 0.412 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	30,932	98	Impervious
	30,932		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 11:

Runoff = 5.94 cfs @ 12.09 hrs, Volume= 0.431 af, Depth= 5.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	15,881	98	Impervious
*	27,293	74	>75% Grass cover, Good, HSG C/D
	43,174	83	Weighted Average
	27,293		63.22% Pervious Area
	15,881		36.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 12:

Runoff = 1.92 cfs @ 12.08 hrs, Volume= 0.143 af, Depth= 5.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	7,491	98	Impervious, HSG C/D
	5,429	74	>75% Grass cover, Good, HSG C
	12,920	88	Weighted Average
	5,429		42.02% Pervious Area
	7,491		57.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 13:

Runoff = 6.42 cfs @ 12.09 hrs, Volume= 0.470 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	20,981	98	Impervious
*	24,182	74	>75% Grass cover, Good, HSG C/D
	45,163	85	Weighted Average
	24,182		53.54% Pervious Area
	20,981		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 14:

Runoff = 1.52 cfs @ 12.08 hrs, Volume= 0.123 af, Depth= 6.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	8,849	98	Impervious
	529	74	>75% Grass cover, Good, HSG C
	9,378	97	Weighted Average
	529		5.64% Pervious Area
	8,849		94.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 15:

Runoff = 1.04 cfs @ 12.09 hrs, Volume= 0.074 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	176	98	Impervious
*	4,183	74	>75% Grass cover, Good, HSG C/D
*	4,798	74	vegetated roof
	9,157	74	Weighted Average
	8,981		98.08% Pervious Area
	176		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 16:

Runoff = 2.04 cfs @ 12.09 hrs, Volume= 0.148 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	5,161	98	Impervious
*	9,949	74	>75% Grass cover, Good, HSG C/D
	15,110	82	Weighted Average
	9,949		65.84% Pervious Area
	5,161		34.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 17:

Runoff = 2.11 cfs @ 12.08 hrs, Volume= 0.165 af, Depth= 6.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	11,320	98	Impervious
*	1,980	74	>75% Grass cover, Good, HSG C/D
	13,300	94	Weighted Average
	1,980		14.89% Pervious Area
	11,320		85.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18A:

Runoff = 0.89 cfs @ 12.09 hrs, Volume= 0.065 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	2,593	98	Impervious
*	3,746	74	>75% Grass cover, Good, HSG C/D
	6,339	84	Weighted Average
	3,746		59.09% Pervious Area
	2,593		40.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 18B:

Runoff = 0.60 cfs @ 12.08 hrs, Volume= 0.045 af, Depth= 5.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	2,348	98	Impervious
*	1,675	74	>75% Grass cover, Good, HSG C/D
	4,023	88	Weighted Average
	1,675		41.64% Pervious Area
	2,348		58.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 19:

Runoff = 2.18 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 6.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	11,210	98	Impervious
*	2,501	74	>75% Grass cover, Good, HSG C/D
	13,711	94	Weighted Average
	2,501		18.24% Pervious Area
	11,210		81.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 20:

Runoff = 4.44 cfs @ 12.08 hrs, Volume= 0.340 af, Depth= 6.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	21,010	98	Impervious
*	7,449	74	>75% Grass cover, Good, HSG C/D
	28,459	92	Weighted Average
	7,449		26.17% Pervious Area
	21,010		73.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 21:

Runoff = 1.59 cfs @ 12.08 hrs, Volume= 0.124 af, Depth= 6.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	8,361	98	Impervious
*	1,633	74	>75% Grass cover, Good, HSG C/D
	9,994	94	Weighted Average
	1,633		16.34% Pervious Area
	8,361		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 22:

Runoff = 2.11 cfs @ 12.08 hrs, Volume= 0.162 af, Depth= 6.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	10,326	98	Impervious
*	3,185	74	>75% Grass cover, Good, HSG C/D
	13,511	92	Weighted Average
	3,185		23.57% Pervious Area
	10,326		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 23: sub 23

Runoff = 3.55 cfs @ 12.09 hrs, Volume= 0.254 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

Area (sf)	CN	Description
6,249	98	Paved parking, HSG C
2,450	74	>75% Grass cover, Good, HSG C
10,135	74	>75% Grass cover, Good, HSG C
9,641	70	Woods, Good, HSG C
28,475	78	Weighted Average
22,226		78.05% Pervious Area
6,249		21.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct**

Summary for Subcatchment 24:

Runoff = 2.85 cfs @ 12.08 hrs, Volume= 0.218 af, Depth= 6.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	12,270	98	Impervious
	5,991	80	>75% Grass cover, Good, HSG D
	18,261	92	Weighted Average
	5,991		32.81% Pervious Area
	12,270		67.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 25:

Runoff = 4.56 cfs @ 12.88 hrs, Volume= 0.880 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	21,818	74	>75% Grass cover, Good, HSG C/D
*	96,405	70	Woods, Good, HSG C/D
	118,223	71	Weighted Average
	118,223		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
54.4	130	0.0150	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
11.9	253	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	55	0.3000	1.37		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
67.0	438	Total			

Summary for Subcatchment 26:

Runoff = 0.62 cfs @ 12.08 hrs, Volume= 0.051 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	3,816	98	Impervious
	3,816		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 27:

Runoff = 0.69 cfs @ 12.08 hrs, Volume= 0.057 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	4,262	98	Impervious
	4,262		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 28:

Runoff = 11.34 cfs @ 12.09 hrs, Volume= 0.830 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	21,852	98	Impervious
	40,598	80	>75% Grass cover, Good, HSG D
	6,418	77	Woods, Good, HSG D
	10,830	79	Woods/grass comb., Good, HSG D
	79,698	85	Weighted Average
	57,846		72.58% Pervious Area
	21,852		27.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 29:

Runoff = 0.21 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	1,306	98	Impervious
	1,306		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 30:

Runoff = 4.95 cfs @ 12.08 hrs, Volume= 0.383 af, Depth= 6.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	24,541	98	Impervious
*	6,931	74	>75% Grass cover, Good, HSG C/D
	31,472	93	Weighted Average
	6,931		22.02% Pervious Area
	24,541		77.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 31:

Runoff = 6.02 cfs @ 12.17 hrs, Volume= 0.526 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	24,011	74	>75% Grass cover, Good, HSG C/D
*	46,605	70	Woods, Good, HSG C/D
	70,616	71	Weighted Average
	70,616		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0500	0.16		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
1.7	86	0.1200	0.87		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	31	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
12.3	217	Total			

Summary for Subcatchment 32:

Runoff = 0.70 cfs @ 12.08 hrs, Volume= 0.053 af, Depth= 5.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	2,826	98	Impervious
*	1,851	74	>75% Grass cover, Good, HSG C/D
	4,677	89	Weighted Average
	1,851		39.58% Pervious Area
	2,826		60.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 33: B3 green

Runoff = 10.04 cfs @ 12.09 hrs, Volume= 0.716 af, Depth= 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	89,860	61	vegetated roof
*	18,033	98	penthouse
	107,893	67	Weighted Average
	89,860		83.29% Pervious Area
	18,033		16.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 34:

Runoff = 2.31 cfs @ 12.09 hrs, Volume= 0.165 af, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	19,279	61	vegetated roof
*	4,820	98	penhouse/walks on roof
	24,099	68	Weighted Average
	19,279		80.00% Pervious Area
	4,820		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 35:

Runoff = 2.02 cfs @ 12.09 hrs, Volume= 0.144 af, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	16,797	61	vegetated roof
*	4,200	98	penthouse/walks on roof
	20,997	68	Weighted Average
	16,797		80.00% Pervious Area
	4,200		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 36: B1M1

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 37: B1M2

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 38: B1M3

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 39: B2M4

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 40: B2M5

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 41: B2M6

Runoff = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	112,560	98	Roof
	112,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 42: B6

Runoff = 1.95 cfs @ 12.08 hrs, Volume= 0.160 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	12,000	98	Impervious
	12,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 43: B5

Runoff = 3.08 cfs @ 12.08 hrs, Volume= 0.253 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	18,983	98	Impervious
	18,983		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment 44: onsite untreated

Runoff = 11.56 cfs @ 12.26 hrs, Volume= 1.187 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	29,531	74	>75% Grass cover, Good, HSG C/D
*	129,832	70	Woods, Good, HSG C/D
	159,363	71	Weighted Average
	159,363		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	97	0.0620	0.25		**Sheet Flow, a-b** Grass: Short n= 0.150 P2= 2.90"
4.3	170	0.0090	0.66		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
1.3	97	0.0320	1.25		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
6.8	210	0.0430	0.52		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
18.8	574	Total			

Summary for Subcatchment 45:

Runoff = 3.71 cfs @ 12.42 hrs, Volume= 0.467 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	5,799	74	>75% Grass cover, Good, HSG C/D
*	58,641	70	Woods, Good, HSG C/D
	64,440	70	Weighted Average
	64,440		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	79	0.0340	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
2.9	121	0.0800	0.71		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.2	34	0.0600	3.67		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
0.5	73	0.0600	2.64	10.56	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100 Earth, dense brush, high stage

29.9 307 Total

Summary for Subcatchment 46: SUBCAT 8

Runoff = 0.83 cfs @ 12.49 hrs, Volume= 0.112 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	12,652	70	Woods, Good, HSG C/D
*	2,324	74	>75% Grass cover, Good, HSG C/D
	14,976	71	Weighted Average
	14,976		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.0	67	0.0150	0.03		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
1.1	43	0.0700	0.66		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.1	14	0.7100	2.11		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
1.5	152	0.0240	1.67	6.68	**Trap/Vee/Rect Channel Flow, d-e** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.100
34.7	276	Total			

Summary for Subcatchment 47:

Runoff = 6.82 cfs @ 12.21 hrs, Volume= 0.655 af, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
	16,941	80	>75% Grass cover, Good, HSG D
*	27,433	74	>75% Grass cover, Good, HSG C/D
*	30,061	70	Woods, Good, HSG C/D
*	4,752	98	Impervious
	79,187	75	Weighted Average
	74,435		94.00% Pervious Area
	4,752		6.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	102	0.0400	0.15		**Sheet Flow, a-b** Grass: Dense n= 0.240 P2= 2.90"
0.6	30	0.1000	0.79		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.6	100	0.0300	2.60		**Shallow Concentrated Flow, c-d** Grassed Waterway Kv= 15.0 fps
3.2	407	0.0200	2.12		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
15.9	639	Total			

Summary for Subcatchment 48:

Runoff = 1.71 cfs @ 12.77 hrs, Volume= 0.291 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	305	74	>75% Grass cover, Good, HSG C/D
*	36,887	70	Woods, Good, HSG C/D
	2,991	70	Woods, Good, HSG C
	40,183	70	Weighted Average
	40,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.6	127	0.0200	0.04		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
5.4	115	0.0200	0.35		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
0.7	45	0.2000	1.12		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
0.3	90	0.0880	4.45		**Shallow Concentrated Flow, d-e** Grassed Waterway Kv= 15.0 fps
54.0	377	Total			

Summary for Subcatchment 49:

Runoff = 3.57 cfs @ 12.74 hrs, Volume= 0.610 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	2,923	74	>75% Grass cover, Good, HSG C/D
*	80,702	70	Woods, Good, HSG C/D
*	548	98	Impervious
	84,173	70	Weighted Average
	83,625		99.35% Pervious Area
	548		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.4	115	0.0500	0.06		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
23.7	355	0.0100	0.25		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
54.1	470	Total			

Summary for Subcatchment 50:

Runoff = 4.89 cfs @ 12.08 hrs, Volume= 0.402 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	30,173	98	Impervious
	30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, a-b**

Summary for Subcatchment OS10: OFFSITE 2 (above Perkins Rd)

Runoff = 55.33 cfs @ 13.29 hrs, Volume= 13.271 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	298,066	70	Woods, Good, HSG C/D
*	42,276	98	Impervious
*	1,304,640	74	>75% Grass cover, Good, HSG C/D
	1,644,982	74	Weighted Average
	1,602,706		97.43% Pervious Area
	42,276		2.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.2	141	0.0280	0.05		**Sheet Flow, a-b** Woods: Dense underbrush n= 0.800 P2= 2.90"
15.3	384	0.0280	0.42		**Shallow Concentrated Flow, b-c** Forest w/Heavy Litter Kv= 2.5 fps
2.5	227	0.0480	1.53		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
18.6	780	0.0100	0.70		**Shallow Concentrated Flow, d-e** Short Grass Pasture Kv= 7.0 fps
12.6	689	0.0170	0.91		**Shallow Concentrated Flow, e-f** Short Grass Pasture Kv= 7.0 fps
94.2	2,221	Total			

Summary for Subcatchment os11a: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 27.47 cfs @ 12.10 hrs, Volume= 2.089 af, Depth= 5.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	113,681	98	Impervious
*	33,806	70	Woods, Good, HSG C/D
*	45,046	74	>75% Grass cover, Good, HSG C/D
	192,533	87	Weighted Average
	78,852		40.96% Pervious Area
	113,681		59.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	16	0.1870	2.22		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
4.7	419	0.0100	1.50		**Shallow Concentrated Flow, b-c** Grassed Waterway Kv= 15.0 fps
2.0	97	0.1000	0.79		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
6.8	532	Total			

Summary for Subcatchment os11b: OFFSITE 3 (Matthew Brothers Lot)

Runoff = 23.82 cfs @ 12.26 hrs, Volume= 2.455 af, Depth= 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	4,576	98	Impervious
*	203,815	70	Woods, Good, HSG C/D
*	112,423	74	>75% Grass cover, Good, HSG C/D
	320,814	72	Weighted Average
	316,238		98.57% Pervious Area
	4,576		1.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	96	0.0880	0.13		**Sheet Flow, a-b** Woods: Light underbrush n= 0.400 P2= 2.90"
4.6	357	0.0340	1.29		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
2.2	75	0.0534	0.58		**Shallow Concentrated Flow, c-d** Forest w/Heavy Litter Kv= 2.5 fps
18.9	528	Total			

Summary for Subcatchment OS9: OFFSITE 1 (Below Perkins Rd)

Runoff = 42.88 cfs @ 12.48 hrs, Volume= 5.810 af, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.20"

	Area (sf)	CN	Description
*	25,513	98	Impervious
*	532,320	74	>75% Grass cover, Good, HSG C/D
*	3,818	94	Gravel roads, HSG C/D
	6,087	74	>75% Grass cover, Good, HSG C
	72,382	70	Woods, Good, HSG C
	61,890	74	>75% Grass cover, Good, HSG C
	702,010	75	Weighted Average
	676,497		96.37% Pervious Area
	25,513		3.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.2000	2.25		**Sheet Flow, a-b** Smooth surfaces n= 0.011 P2= 2.90"
12.6	373	0.0050	0.49		**Shallow Concentrated Flow, b-c** Short Grass Pasture Kv= 7.0 fps
13.1	715	0.0170	0.91		**Shallow Concentrated Flow, c-d** Short Grass Pasture Kv= 7.0 fps
9.3	250	0.0320	0.45		**Shallow Concentrated Flow, d-e** Forest w/Heavy Litter Kv= 2.5 fps
35.1	1,353	Total			

Summary for Reach 9R: ANALYSIS POINT 9

Inflow Area = 16.116 ac, 3.63% Impervious, Inflow Depth = 4.33" for 100-year event
Inflow = 42.88 cfs @ 12.48 hrs, Volume= 5.810 af
Outflow = 42.88 cfs @ 12.48 hrs, Volume= 5.810 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

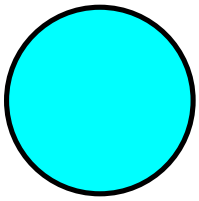
Summary for Reach 10R: Perkins Road Culvert

Inflow Area = 37.764 ac, 2.57% Impervious, Inflow Depth = 4.22" for 100-year event
Inflow = 55.33 cfs @ 13.29 hrs, Volume= 13.271 af
Outflow = 34.15 cfs @ 12.69 hrs, Volume= 13.271 af, Atten= 38%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 11.61 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.12 fps, Avg. Travel Time= 0.1 min

Peak Storage= 79 cf @ 12.70 hrs
Average Depth at Peak Storage= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.99 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 25.0' Slope= 0.0200 '/'
Inlet Invert= 75.50', Outlet Invert= 75.00'



Summary for Reach 11R: Stream 9

Inflow Area = 4.420 ac, 59.04% Impervious, Inflow Depth = 5.67" for 100-year event
Inflow = 27.47 cfs @ 12.10 hrs, Volume= 2.089 af
Outflow = 27.47 cfs @ 12.10 hrs, Volume= 2.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 17R: untreated

Inflow Area = 0.305 ac, 85.11% Impervious, Inflow Depth = 6.49" for 100-year event
Inflow = 2.11 cfs @ 12.08 hrs, Volume= 0.165 af
Outflow = 2.11 cfs @ 12.08 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 20R: untreated

Inflow Area = 0.653 ac, 73.83% Impervious, Inflow Depth = 6.25" for 100-year event
Inflow = 4.44 cfs @ 12.08 hrs, Volume= 0.340 af
Outflow = 4.44 cfs @ 12.08 hrs, Volume= 0.340 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 23R: sub 23

Inflow Area = 0.654 ac, 21.95% Impervious, Inflow Depth = 4.66" for 100-year event
Inflow = 3.55 cfs @ 12.09 hrs, Volume= 0.254 af
Outflow = 3.55 cfs @ 12.09 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 27R: extisting

Inflow Area = 0.098 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 0.69 cfs @ 12.08 hrs, Volume= 0.057 af
Outflow = 0.69 cfs @ 12.08 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 29R: untreated

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 0.21 cfs @ 12.08 hrs, Volume= 0.017 af
Outflow = 0.21 cfs @ 12.08 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 32R: untreated

Inflow Area = 0.107 ac, 60.42% Impervious, Inflow Depth = 5.90" for 100-year event
Inflow = 0.70 cfs @ 12.08 hrs, Volume= 0.053 af
Outflow = 0.70 cfs @ 12.08 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 44R:

Inflow Area = 3.658 ac, 0.00% Impervious, Inflow Depth = 3.89" for 100-year event
Inflow = 11.56 cfs @ 12.26 hrs, Volume= 1.187 af
Outflow = 11.56 cfs @ 12.26 hrs, Volume= 1.187 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 47R:

Inflow Area = 1.818 ac, 6.00% Impervious, Inflow Depth = 4.33" for 100-year event
Inflow = 6.82 cfs @ 12.21 hrs, Volume= 0.655 af
Outflow = 6.82 cfs @ 12.21 hrs, Volume= 0.655 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 48R: (new Reach)

Inflow Area = 0.922 ac, 0.00% Impervious, Inflow Depth = 3.79" for 100-year event
Inflow = 1.71 cfs @ 12.77 hrs, Volume= 0.291 af
Outflow = 1.71 cfs @ 12.77 hrs, Volume= 0.291 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 49R:

Inflow Area = 1.932 ac, 0.65% Impervious, Inflow Depth = 3.79" for 100-year event
Inflow = 3.57 cfs @ 12.74 hrs, Volume= 0.610 af
Outflow = 3.57 cfs @ 12.74 hrs, Volume= 0.610 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT1: ANALYSIS POINT 1 at BWD Little River

Inflow Area = 2.855 ac, 0.44% Impervious, Inflow Depth = 3.79" for 100-year event
Inflow = 5.28 cfs @ 12.74 hrs, Volume= 0.901 af
Outflow = 5.28 cfs @ 12.74 hrs, Volume= 0.901 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT10: Analysis point at Little River

Inflow Area = 1.830 ac, 27.42% Impervious, Inflow Depth = 5.44" for 100-year event
Inflow = 11.34 cfs @ 12.09 hrs, Volume= 0.830 af
Outflow = 11.34 cfs @ 12.09 hrs, Volume= 0.830 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT2: ANALYSIS POINT 2 at BWD Reservoir

Inflow Area = 2.714 ac, 0.00% Impervious, Inflow Depth = 3.89" for 100-year event
Inflow = 4.56 cfs @ 12.88 hrs, Volume= 0.880 af
Outflow = 4.56 cfs @ 12.88 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT3: ANALYSIS POINT 3/4 at BWD Reservoir

Inflow Area = 1.621 ac, 0.00% Impervious, Inflow Depth = 3.89" for 100-year event
Inflow = 6.02 cfs @ 12.17 hrs, Volume= 0.526 af
Outflow = 6.02 cfs @ 12.17 hrs, Volume= 0.526 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT5: all BWD reservoir

Inflow Area = 4.989 ac, 2.88% Impervious, Inflow Depth = 3.99" for 100-year event
Inflow = 9.78 cfs @ 12.14 hrs, Volume= 1.660 af
Outflow = 9.78 cfs @ 12.14 hrs, Volume= 1.660 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach PT6: stream 9 offsite

Inflow Area = 58.299 ac, 7.15% Impervious, Inflow Depth = 4.36" for 100-year event
Inflow = 72.86 cfs @ 12.60 hrs, Volume= 21.170 af
Outflow = 72.80 cfs @ 12.63 hrs, Volume= 21.170 af, Atten= 0%, Lag= 2.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.93 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.96 fps, Avg. Travel Time= 4.1 min

Peak Storage= 7,139 cf @ 12.63 hrs
Average Depth at Peak Storage= 1.74'
Bank-Full Depth= 4.00' Flow Area= 52.0 sf, Capacity= 401.91 cfs

5.00' x 4.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 21.00'
Length= 483.0' Slope= 0.0145 '/'
Inlet Invert= 71.00', Outlet Invert= 64.00'

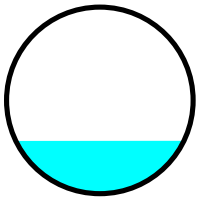
Summary for Reach PT7: ANALYSIS POINT7 at US Route 1 culvert

Inflow Area = 1.479 ac, 0.00% Impervious, Inflow Depth = 3.79" for 100-year event
Inflow = 3.71 cfs @ 12.42 hrs, Volume= 0.467 af
Outflow = 3.71 cfs @ 12.42 hrs, Volume= 0.467 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.94 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.63 fps, Avg. Travel Time= 0.4 min

Peak Storage= 34 cf @ 12.42 hrs
Average Depth at Peak Storage= 0.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.95 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0398 '/'
Inlet Invert= 21.60', Outlet Invert= 18.30'



Summary for Reach PT8: ANALYSIS POINT 8 at US Route 1 culvert

Inflow Area = 0.344 ac, 0.00% Impervious, Inflow Depth = 3.89" for 100-year event
Inflow = 0.83 cfs @ 12.49 hrs, Volume= 0.112 af
Outflow = 0.83 cfs @ 12.49 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 4.91 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.60 fps, Avg. Travel Time= 0.5 min

Peak Storage= 13 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 2.00' Flow Area= 6.0 sf, Capacity= 144.91 cfs

36.0" W x 24.0" H Box Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 76.0' Slope= 0.0632 '/'
Inlet Invert= 23.40', Outlet Invert= 18.60'

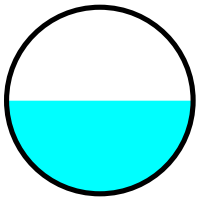
Summary for Reach PT9: Analysis Point Stream 9 at US Route 1 culvert

Inflow Area = 72.473 ac, 7.13% Impervious, Inflow Depth = 4.32" for 100-year event
Inflow = 100.24 cfs @ 12.45 hrs, Volume= 26.069 af
Outflow = 100.24 cfs @ 12.45 hrs, Volume= 26.069 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 28.33 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 9.28 fps, Avg. Travel Time= 0.2 min

Peak Storage= 329 cf @ 12.45 hrs
Average Depth at Peak Storage= 1.50'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 200.22 cfs

36.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 93.0' Slope= 0.0645 '/'
Inlet Invert= 20.00', Outlet Invert= 14.00'



Summary for Reach S9-2: Stream 9

Inflow Area = 69.323 ac, 6.16% Impervious, Inflow Depth = 4.30" for 100-year event
Inflow = 95.71 cfs @ 12.41 hrs, Volume= 24.812 af
Outflow = 95.21 cfs @ 12.47 hrs, Volume= 24.812 af, Atten= 1%, Lag= 3.3 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.29 fps, Min. Travel Time= 4.2 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 13.0 min

Peak Storage= 23,901 cf @ 12.47 hrs
Average Depth at Peak Storage= 1.77'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 120.91 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 1,580.0' Slope= 0.0233 '/'
Inlet Invert= 64.00', Outlet Invert= 27.25'

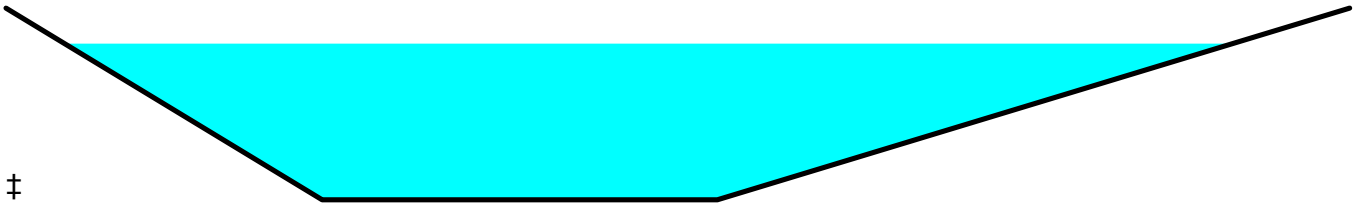
Summary for Reach S9-3: Stream 9

Inflow Area = 71.269 ac, 6.33% Impervious, Inflow Depth = 4.30" for 100-year event
Inflow = 99.55 cfs @ 12.44 hrs, Volume= 25.542 af
Outflow = 99.53 cfs @ 12.45 hrs, Volume= 25.542 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.18 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 3.2 min

Peak Storage= 5,859 cf @ 12.45 hrs
Average Depth at Peak Storage= 1.63'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 152.29 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 4.0 '/' Top Width= 17.00'
Length= 364.0' Slope= 0.0199 '/'
Inlet Invert= 27.25', Outlet Invert= 20.00'



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Summary for Reach tank: existing clarifier

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 5.63" for 100-year event
Inflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af
Outflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond dmh10: dmh10

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 6.24" for 100-year event
Inflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af
Outflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af, Atten= 0%, Lag= 0.0 min
Primary = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.57' @ 12.08 hrs
Flood Elev= 65.54'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.59'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.59' / 53.56' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=37.67 cfs @ 12.08 hrs HW=65.54' (Free Discharge)
1=Culvert (Inlet Controls 37.67 cfs @ 11.99 fps)

Summary for Pond dmh11: dmh11

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 6.35" for 100-year event
Inflow = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af
Outflow = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af, Atten= 0%, Lag= 0.0 min
Primary = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.52' @ 12.10 hrs
Flood Elev= 65.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.54'	**30.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.54' / 53.12' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=66.10 cfs @ 12.10 hrs HW=67.34' (Free Discharge)
1=Culvert (Inlet Controls 66.10 cfs @ 13.47 fps)

Summary for Pond dmh13: dmh13

Inflow Area = 9.243 ac, 93.25% Impervious, Inflow Depth > 6.35" for 100-year event
Inflow = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af
Outflow = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af, Atten= 0%, Lag= 0.0 min
Primary = 66.58 cfs @ 12.10 hrs, Volume= 4.887 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 67.08' @ 12.10 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.10'	**30.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.10' / 52.09' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=66.10 cfs @ 12.10 hrs HW=66.90' (Free Discharge)
↑**1=Culvert** (Inlet Controls 66.10 cfs @ 13.47 fps)

Summary for Pond dmh14: dmh14

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 6.29" for 100-year event
Inflow = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af
Outflow = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af, Atten= 0%, Lag= 0.0 min
Primary = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.09' @ 12.10 hrs
Flood Elev= 65.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	52.07'	**30.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.07' / 51.95' S= 0.0052 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 4.91 sf

Primary OutFlow Max=68.77 cfs @ 12.10 hrs HW=66.90' (Free Discharge)
↑**1=Culvert** (Inlet Controls 68.77 cfs @ 14.01 fps)

Summary for Pond dmh15: dmh15

Inflow Area = 9.890 ac, 91.29% Impervious, Inflow Depth > 6.29" for 100-year event
Inflow = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af
Outflow = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af, Atten= 0%, Lag= 0.0 min
Primary = 69.25 cfs @ 12.10 hrs, Volume= 5.183 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.97' @ 12.10 hrs
Flood Elev= 64.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.95'	**30.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.95' / 51.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=68.77 cfs @ 12.10 hrs HW=66.78' (Free Discharge)
1=Culvert (Inlet Controls 68.77 cfs @ 14.01 fps)

Summary for Pond dmh16: dmh16

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth > 2.99" for 100-year event
Inflow = 0.51 cfs @ 12.47 hrs, Volume= 0.086 af
Outflow = 0.51 cfs @ 12.47 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Primary = 0.51 cfs @ 12.47 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.90' @ 12.47 hrs
Flood Elev= 64.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 58.00' S= 0.0126 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.51 cfs @ 12.47 hrs HW=60.90' (Free Discharge)
1=Culvert (Inlet Controls 0.51 cfs @ 1.71 fps)

Summary for Pond dmh17: dmh17

Inflow Area = 10.447 ac, 87.59% Impervious, Inflow Depth > 6.13" for 100-year event
Inflow = 70.27 cfs @ 12.10 hrs, Volume= 5.333 af
Outflow = 70.27 cfs @ 12.10 hrs, Volume= 5.333 af, Atten= 0%, Lag= 0.0 min
Primary = 70.27 cfs @ 12.10 hrs, Volume= 5.333 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.91' @ 12.10 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.48'	**30.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.48' / 51.30' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=69.78 cfs @ 12.10 hrs HW=66.72' (Free Discharge)
1=Culvert (Inlet Controls 69.78 cfs @ 14.22 fps)

Summary for Pond dmh19: dmh 19

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth > 6.41" for 100-year event
Inflow = 3.06 cfs @ 12.08 hrs, Volume= 0.233 af
Outflow = 3.06 cfs @ 12.08 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
Primary = 3.06 cfs @ 12.08 hrs, Volume= 0.233 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.03' @ 12.08 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.48'	**12.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.48' / 53.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.05 cfs @ 12.08 hrs HW=56.03' (Free Discharge)
1=Culvert (Inlet Controls 3.05 cfs @ 3.89 fps)

Summary for Pond dmh2: dmh2

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 6.49" for 100-year event
Inflow = 17.24 cfs @ 12.08 hrs, Volume= 1.398 af
Outflow = 17.24 cfs @ 12.08 hrs, Volume= 1.398 af, Atten= 0%, Lag= 0.0 min
Primary = 17.24 cfs @ 12.08 hrs, Volume= 1.398 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 70.33' @ 12.08 hrs
Flood Elev= 69.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.00' / 61.50' S= 0.0150 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=17.21 cfs @ 12.08 hrs HW=70.31' (Free Discharge)
1=Culvert (Inlet Controls 17.21 cfs @ 9.74 fps)

Summary for Pond dmh20: dmh20

Inflow Area = 10.883 ac, 88.09% Impervious, Inflow Depth > 6.14" for 100-year event
Inflow = 73.27 cfs @ 12.10 hrs, Volume= 5.566 af
Outflow = 73.27 cfs @ 12.10 hrs, Volume= 5.566 af, Atten= 0%, Lag= 0.0 min
Primary = 73.27 cfs @ 12.10 hrs, Volume= 5.566 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 67.95' @ 12.10 hrs
Flood Elev= 61.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**30.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.28' / 50.78' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=72.81 cfs @ 12.10 hrs HW=67.75' (Free Discharge)
↑**1=Culvert** (Inlet Controls 72.81 cfs @ 14.83 fps)

Summary for Pond dmh21: dmh21

Inflow Area = 14.600 ac, 81.45% Impervious, Inflow Depth > 5.96" for 100-year event
Inflow = 89.20 cfs @ 12.10 hrs, Volume= 7.251 af
Outflow = 89.20 cfs @ 12.10 hrs, Volume= 7.251 af, Atten= 0%, Lag= 0.0 min
Primary = 89.20 cfs @ 12.10 hrs, Volume= 7.251 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 74.86' @ 12.10 hrs
Flood Elev= 58.55'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.76'	**30.0" Round Culvert** L= 281.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.76' / 46.00' S= 0.0169 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=88.76 cfs @ 12.10 hrs HW=74.64' (Free Discharge)
↑**1=Culvert** (Inlet Controls 88.76 cfs @ 18.08 fps)

Summary for Pond dmh22: dmh 22

Inflow Area = 2.671 ac, 64.47% Impervious, Inflow Depth > 5.56" for 100-year event
Inflow = 13.23 cfs @ 12.09 hrs, Volume= 1.237 af
Outflow = 13.23 cfs @ 12.09 hrs, Volume= 1.237 af, Atten= 0%, Lag= 0.0 min
Primary = 13.23 cfs @ 12.09 hrs, Volume= 1.237 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.17' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.50'	**15.0" Round Culvert** L= 93.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.50' / 51.03' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=13.21 cfs @ 12.09 hrs HW=60.15' (Free Discharge)
1=Culvert (Inlet Controls 13.21 cfs @ 10.77 fps)

Summary for Pond dmh23: dmh23

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 5.40" for 100-year event
Inflow = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af
Outflow = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af, Atten= 0%, Lag= 0.0 min
Primary = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 76.19' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.19'	**12.0" Round Culvert** L= 138.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.19' / 54.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=11.47 cfs @ 12.09 hrs HW=76.15' (Free Discharge)
1=Culvert (Barrel Controls 11.47 cfs @ 14.61 fps)

Summary for Pond dmh24: dmh24

Inflow Area = 2.024 ac, 60.68% Impervious, Inflow Depth > 5.40" for 100-year event
Inflow = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af
Outflow = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af, Atten= 0%, Lag= 0.0 min
Primary = 11.48 cfs @ 12.09 hrs, Volume= 0.910 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 71.39' @ 12.09 hrs
Flood Elev= 61.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.10'	**12.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.10' / 55.92' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=11.47 cfs @ 12.09 hrs HW=71.36' (Free Discharge)
1=Culvert (Inlet Controls 11.47 cfs @ 14.61 fps)

Summary for Pond dmh24a: dmh24a

Inflow Area = 0.602 ac, 71.74% Impervious, Inflow Depth > 5.72" for 100-year event
Inflow = 3.92 cfs @ 12.09 hrs, Volume= 0.287 af
Outflow = 3.92 cfs @ 12.09 hrs, Volume= 0.287 af, Atten= 0%, Lag= 0.0 min
Primary = 3.92 cfs @ 12.09 hrs, Volume= 0.287 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 71.50' @ 12.09 hrs
Flood Elev= 63.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0" Round Culvert** L= 95.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.10' S= 0.0095 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=3.91 cfs @ 12.09 hrs HW=71.45' (Free Discharge)
1=Culvert (Barrel Controls 3.91 cfs @ 11.20 fps)

Summary for Pond dmh25: dmh25

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth > 4.52" for 100-year event
Inflow = 2.15 cfs @ 12.13 hrs, Volume= 0.154 af
Outflow = 2.15 cfs @ 12.13 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min
Primary = 2.15 cfs @ 12.13 hrs, Volume= 0.154 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.02' @ 12.13 hrs
Flood Elev= 67.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.00'	**12.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.00' / 55.00' S= 0.0510 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.14 cfs @ 12.13 hrs HW=61.02' (Free Discharge)
1=Culvert (Inlet Controls 2.14 cfs @ 2.73 fps)

Summary for Pond dmh26: dmh26

Inflow Area = 2.028 ac, 41.73% Impervious, Inflow Depth > 4.73" for 100-year event
Inflow = 5.64 cfs @ 12.26 hrs, Volume= 0.799 af
Outflow = 5.64 cfs @ 12.26 hrs, Volume= 0.799 af, Atten= 0%, Lag= 0.0 min
Primary = 5.64 cfs @ 12.26 hrs, Volume= 0.799 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 61.82' @ 12.26 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.75'	**12.0" Round Culvert** L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.75' / 57.61' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.64 cfs @ 12.26 hrs HW=61.82' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.64 cfs @ 7.18 fps)

Summary for Pond dmh27: dmh27

Inflow Area = 2.712 ac, 46.62% Impervious, Inflow Depth > 4.85" for 100-year event
Inflow = 9.45 cfs @ 12.11 hrs, Volume= 1.096 af
Outflow = 9.45 cfs @ 12.11 hrs, Volume= 1.096 af, Atten= 0%, Lag= 0.0 min
Primary = 9.45 cfs @ 12.11 hrs, Volume= 1.096 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 75.07' @ 12.11 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	53.03'	**12.0" Round Culvert** L= 256.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.03' / 51.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=9.44 cfs @ 12.11 hrs HW=75.04' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 9.44 cfs @ 12.02 fps)

Summary for Pond dmh29: dmh29

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 6.23" for 100-year event
Inflow = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af
Outflow = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min
Primary = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.30' @ 12.08 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.85'	**8.0" Round Culvert** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.85' / 57.39' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.93 cfs @ 12.08 hrs HW=60.30' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.93 cfs @ 5.52 fps)

Summary for Pond dmh3: dmh3

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 6.04" for 100-year event
Inflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af
Outflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af, Atten= 0%, Lag= 0.0 min
Primary = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.29' @ 12.08 hrs
Flood Elev= 68.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**24.0" Round Culvert** L= 125.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.50' / 59.84' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.93 cfs @ 12.08 hrs HW=64.29' (Free Discharge)
└**1=Culvert** (Inlet Controls 19.93 cfs @ 6.34 fps)

Summary for Pond dmh30: dmh30

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth > 6.23" for 100-year event
Inflow = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af
Outflow = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min
Primary = 1.93 cfs @ 12.08 hrs, Volume= 0.143 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.32' @ 12.08 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.40'	**12.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.40' / 54.37' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.94 cfs @ 12.08 hrs HW=56.32' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.94 cfs @ 2.57 fps)

Summary for Pond dmh31: dmh31

Inflow Area = 2.303 ac, 48.70% Impervious, Inflow Depth > 4.91" for 100-year event
Inflow = 7.40 cfs @ 12.10 hrs, Volume= 0.942 af
Outflow = 7.40 cfs @ 12.10 hrs, Volume= 0.942 af, Atten= 0%, Lag= 0.0 min
Primary = 7.40 cfs @ 12.10 hrs, Volume= 0.942 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.86' @ 12.10 hrs
Flood Elev= 63.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.35'	**12.0" Round Culvert** L= 259.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.35' / 53.05' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=7.39 cfs @ 12.10 hrs HW=67.84' (Free Discharge)
1=Culvert (Barrel Controls 7.39 cfs @ 9.41 fps)

Summary for Pond dmh32: dmh32

Inflow Area = 3.424 ac, 42.31% Impervious, Inflow Depth > 4.76" for 100-year event
Inflow = 12.02 cfs @ 12.11 hrs, Volume= 1.358 af
Outflow = 12.02 cfs @ 12.11 hrs, Volume= 1.358 af, Atten= 0%, Lag= 0.0 min
Primary = 12.02 cfs @ 12.11 hrs, Volume= 1.358 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 68.43' @ 12.11 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.73'	**12.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.73' / 51.60' S= 0.0036 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=12.01 cfs @ 12.11 hrs HW=68.41' (Free Discharge)
1=Culvert (Inlet Controls 12.01 cfs @ 15.29 fps)

Summary for Pond dmh33: dmh33

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth > 6.16" for 100-year event
Inflow = 0.66 cfs @ 12.39 hrs, Volume= 0.162 af
Outflow = 0.66 cfs @ 12.39 hrs, Volume= 0.162 af, Atten= 0%, Lag= 0.0 min
Primary = 0.66 cfs @ 12.39 hrs, Volume= 0.162 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.47' @ 12.39 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 201.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 52.01' S= 0.0099 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.66 cfs @ 12.39 hrs HW=54.47' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.66 cfs @ 1.84 fps)

Summary for Pond dmh34: dmh34

Inflow Area = 3.030 ac, 25.90% Impervious, Inflow Depth > 3.80" for 100-year event
Inflow = 11.06 cfs @ 12.09 hrs, Volume= 0.960 af
Outflow = 11.06 cfs @ 12.09 hrs, Volume= 0.960 af, Atten= 0%, Lag= 0.0 min
Primary = 11.06 cfs @ 12.09 hrs, Volume= 0.960 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.20' @ 12.09 hrs
Flood Elev= 59.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.99'	**12.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.99' / 51.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=11.04 cfs @ 12.09 hrs HW=66.17' (Free Discharge)
↑**1=Culvert** (Inlet Controls 11.04 cfs @ 14.06 fps)

Summary for Pond dmh35: dmh35

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 4.33" for 100-year event
Inflow = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af
Outflow = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af, Atten= 0%, Lag= 0.0 min
Primary = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 77.44' @ 12.10 hrs
Flood Elev= 58.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.55'	**18.0" Round Culvert** L= 276.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.55' / 50.17' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=27.28 cfs @ 12.10 hrs HW=77.38' (Free Discharge)
1=Culvert (Barrel Controls 27.28 cfs @ 15.44 fps)

Summary for Pond dmh36: dmh36

Inflow Area = 7.284 ac, 34.79% Impervious, Inflow Depth > 4.33" for 100-year event
Inflow = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af
Outflow = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af, Atten= 0%, Lag= 0.0 min
Primary = 27.31 cfs @ 12.10 hrs, Volume= 2.631 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 68.68' @ 12.10 hrs
Flood Elev= 53.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.15'	**18.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.15' / 49.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=27.28 cfs @ 12.10 hrs HW=68.64' (Free Discharge)
1=Culvert (Barrel Controls 27.28 cfs @ 15.44 fps)

Summary for Pond dmh38: dmh38

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth > 6.35" for 100-year event
Inflow = 18.55 cfs @ 12.08 hrs, Volume= 1.368 af
Outflow = 18.55 cfs @ 12.08 hrs, Volume= 1.368 af, Atten= 0%, Lag= 0.0 min
Primary = 18.55 cfs @ 12.08 hrs, Volume= 1.368 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.33' @ 12.08 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.98'	**18.0" Round Culvert** L= 106.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.98' / 50.92' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=18.22 cfs @ 12.08 hrs HW=60.09' (Free Discharge)
1=Culvert (Inlet Controls 18.22 cfs @ 10.31 fps)

Summary for Pond dmh39: dmh39

Inflow Area = 2.778 ac, 93.02% Impervious, Inflow Depth > 6.17" for 100-year event
Inflow = 19.43 cfs @ 12.08 hrs, Volume= 1.429 af
Outflow = 19.43 cfs @ 12.08 hrs, Volume= 1.429 af, Atten= 0%, Lag= 0.0 min
Primary = 19.43 cfs @ 12.08 hrs, Volume= 1.429 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.69' @ 12.08 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	50.59'	**18.0" Round Culvert** L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.59' / 50.32' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=19.10 cfs @ 12.08 hrs HW=59.42' (Free Discharge)
1=Culvert (Inlet Controls 19.10 cfs @ 10.81 fps)

Summary for Pond dmh4: dmh4

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 6.04" for 100-year event
Inflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af
Outflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af, Atten= 0%, Lag= 0.0 min
Primary = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.63' @ 12.08 hrs
Flood Elev= 68.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.84'	**24.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.84' / 59.57' S= 0.0041 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.93 cfs @ 12.08 hrs HW=63.63' (Free Discharge)
1=Culvert (Inlet Controls 19.93 cfs @ 6.34 fps)

Summary for Pond dmh40: dmh40

Inflow Area = 10.062 ac, 50.87% Impervious, Inflow Depth > 4.84" for 100-year event
Inflow = 46.20 cfs @ 12.09 hrs, Volume= 4.060 af
Outflow = 46.20 cfs @ 12.09 hrs, Volume= 4.060 af, Atten= 0%, Lag= 0.0 min
Primary = 46.20 cfs @ 12.09 hrs, Volume= 4.060 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 70.24' @ 12.09 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.33'	**24.0" Round Culvert** L= 340.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.33' / 47.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=46.12 cfs @ 12.09 hrs HW=70.17' (Free Discharge)
↑**1=Culvert** (Barrel Controls 46.12 cfs @ 14.68 fps)

Summary for Pond dmh43: dmh43

Inflow Area = 12.646 ac, 60.91% Impervious, Inflow Depth > 5.17" for 100-year event
Inflow = 64.76 cfs @ 12.10 hrs, Volume= 5.450 af
Outflow = 64.76 cfs @ 12.10 hrs, Volume= 5.450 af, Atten= 0%, Lag= 0.0 min
Primary = 64.76 cfs @ 12.10 hrs, Volume= 5.450 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 78.01' @ 12.10 hrs
Flood Elev= 56.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.61'	**24.0" Round Culvert** L= 193.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.61' / 46.64' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=64.46 cfs @ 12.10 hrs HW=77.75' (Free Discharge)
↑**1=Culvert** (Inlet Controls 64.46 cfs @ 20.52 fps)

Summary for Pond dmh44: dmh44

Inflow Area = 12.894 ac, 59.74% Impervious, Inflow Depth > 5.14" for 100-year event
Inflow = 65.82 cfs @ 12.10 hrs, Volume= 5.525 af
Outflow = 65.82 cfs @ 12.10 hrs, Volume= 5.525 af, Atten= 0%, Lag= 0.0 min
Primary = 65.82 cfs @ 12.10 hrs, Volume= 5.525 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.31' @ 12.10 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.62'	**30.0" Round Culvert** L= 82.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.62' / 46.21' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=65.54 cfs @ 12.10 hrs HW=60.21' (Free Discharge)
1=Culvert (Inlet Controls 65.54 cfs @ 13.35 fps)

Summary for Pond dmh45: dmh45

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 5.36" for 100-year event
Inflow = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af
Outflow = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af, Atten= 0%, Lag= 0.0 min
Primary = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 68.62' @ 12.10 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	46.19'	**30.0" Round Culvert** L= 316.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.19' / 44.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=83.17 cfs @ 12.10 hrs HW=68.62' (Free Discharge)
1=Culvert (Barrel Controls 83.17 cfs @ 16.94 fps)

Summary for Pond dmh47: dmh47

Inflow Area = 15.478 ac, 66.46% Impervious, Inflow Depth > 5.36" for 100-year event
Inflow = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af
Outflow = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af, Atten= 0%, Lag= 0.0 min
Primary = 83.17 cfs @ 12.10 hrs, Volume= 6.919 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.12' @ 12.10 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**30.0" Round Culvert** L= 104.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.00' / 42.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=83.17 cfs @ 12.10 hrs HW=65.12' (Free Discharge)
1=Culvert (Inlet Controls 83.17 cfs @ 16.94 fps)

Summary for Pond dmh48: dmh48

Inflow Area = 16.171 ac, 67.89% Impervious, Inflow Depth > 5.41" for 100-year event
Inflow = 86.36 cfs @ 12.10 hrs, Volume= 7.292 af
Outflow = 86.36 cfs @ 12.10 hrs, Volume= 7.292 af, Atten= 0%, Lag= 0.0 min
Primary = 86.36 cfs @ 12.10 hrs, Volume= 7.292 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 65.61' @ 12.10 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.94'	**30.0" Round Culvert** L= 117.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.94' / 42.35' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=86.00 cfs @ 12.10 hrs HW=65.43' (Free Discharge)
1=Culvert (Inlet Controls 86.00 cfs @ 17.52 fps)

Summary for Pond dmh49: dmh49

Inflow Area = 16.492 ac, 67.20% Impervious, Inflow Depth > 5.39" for 100-year event
Inflow = 87.48 cfs @ 12.10 hrs, Volume= 7.409 af
Outflow = 87.48 cfs @ 12.10 hrs, Volume= 7.409 af, Atten= 0%, Lag= 0.0 min
Primary = 87.48 cfs @ 12.10 hrs, Volume= 7.409 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.43' @ 12.10 hrs
Flood Elev= 50.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.33'	**36.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 42.33' / 42.23' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=87.14 cfs @ 12.10 hrs HW=54.35' (Free Discharge)
1=Culvert (Inlet Controls 87.14 cfs @ 12.33 fps)

Summary for Pond dmh5: dmh5

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 6.04" for 100-year event
Inflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af
Outflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af, Atten= 0%, Lag= 0.0 min
Primary = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 63.27' @ 12.08 hrs
Flood Elev= 69.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.48'	**24.0" Round Culvert** L= 173.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.48' / 58.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.93 cfs @ 12.08 hrs HW=63.27' (Free Discharge)
↑**1=Culvert** (Inlet Controls 19.93 cfs @ 6.34 fps)

Summary for Pond dmh50: dmh50

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 5.88" for 100-year event
Inflow = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af
Outflow = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af, Atten= 0%, Lag= 0.0 min
Primary = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 70.05' @ 12.10 hrs
Flood Elev= 56.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**30.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.75' / 44.11' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=91.00 cfs @ 12.10 hrs HW=69.79' (Free Discharge)
↑**1=Culvert** (Inlet Controls 91.00 cfs @ 18.54 fps)

Summary for Pond dmh51: dmh51

Inflow Area = 15.296 ac, 78.92% Impervious, Inflow Depth > 5.88" for 100-year event
Inflow = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af
Outflow = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af, Atten= 0%, Lag= 0.0 min
Primary = 91.52 cfs @ 12.10 hrs, Volume= 7.491 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 69.39' @ 12.10 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.09'	**30.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.09' / 43.00' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=91.00 cfs @ 12.10 hrs HW=69.13' (Free Discharge)
1=Culvert (Inlet Controls 91.00 cfs @ 18.54 fps)

Summary for Pond dmh52: dmh52

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 5.62" for 100-year event
Inflow = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af
Outflow = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af, Atten= 0%, Lag= 0.0 min
Primary = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.67' @ 12.10 hrs
Flood Elev= 50.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**42.0" Round Culvert** L= 258.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 36.00' S= 0.0194 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=178.75 cfs @ 12.10 hrs HW=66.64' (Free Discharge)
1=Culvert (Inlet Controls 178.75 cfs @ 18.58 fps)

Summary for Pond dmh53: dmh53

Inflow Area = 32.207 ac, 72.77% Impervious, Inflow Depth > 5.62" for 100-year event
Inflow = 181.44 cfs @ 12.10 hrs, Volume= 15.096 af
Outflow = 181.44 cfs @ 12.10 hrs, Volume= 15.096 af, Atten= 0%, Lag= 0.0 min
Primary = 181.44 cfs @ 12.10 hrs, Volume= 15.096 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.36' @ 12.10 hrs
Flood Elev= 41.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**42.0" Round Culvert** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 30.50' S= 0.0208 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=181.29 cfs @ 12.10 hrs HW=59.32' (Free Discharge)
1=Culvert (Inlet Controls 181.29 cfs @ 18.84 fps)

Summary for Pond dmh54: dmh54

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 5.63" for 100-year event
Inflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af
Outflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af, Atten= 0%, Lag= 0.0 min
Primary = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.44' @ 12.10 hrs
Flood Elev= 38.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**42.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.00' / 22.00' S= 0.0329 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=181.59 cfs @ 12.10 hrs HW=53.40' (Free Discharge)
1=Culvert (Inlet Controls 181.59 cfs @ 18.87 fps)

Summary for Pond dmh55: dhm55

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 5.63" for 100-year event
Inflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af
Outflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af, Atten= 0%, Lag= 0.0 min
Primary = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 45.44' @ 12.10 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**42.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.00' / 15.50' S= 0.0304 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=181.59 cfs @ 12.10 hrs HW=45.40' (Free Discharge)
1=Culvert (Inlet Controls 181.59 cfs @ 18.87 fps)

Summary for Pond dmh56: dmh56

Inflow Area = 32.295 ac, 72.84% Impervious, Inflow Depth > 5.63" for 100-year event
Inflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af
Outflow = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af, Atten= 0%, Lag= 0.0 min
Primary = 181.74 cfs @ 12.10 hrs, Volume= 15.144 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 38.94' @ 12.10 hrs
Flood Elev= 30.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**42.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.50' / 11.00' S= 0.0357 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=181.59 cfs @ 12.10 hrs HW=38.90' (Free Discharge)
↑**1=Culvert** (Inlet Controls 181.59 cfs @ 18.87 fps)

Summary for Pond dmh59: dmh59

Inflow Area = 2.253 ac, 63.02% Impervious, Inflow Depth > 5.49" for 100-year event
Inflow = 12.04 cfs @ 12.09 hrs, Volume= 1.030 af
Outflow = 12.04 cfs @ 12.09 hrs, Volume= 1.030 af, Atten= 0%, Lag= 0.0 min
Primary = 12.04 cfs @ 12.09 hrs, Volume= 1.030 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 94.46' @ 12.09 hrs
Flood Elev= 59.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.30'	**12.0" Round Culvert** L= 294.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.30' / 52.83' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=12.02 cfs @ 12.09 hrs HW=94.35' (Free Discharge)
↑**1=Culvert** (Barrel Controls 12.02 cfs @ 15.31 fps)

Summary for Pond dmh6: dmh6

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 6.04" for 100-year event
Inflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af
Outflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af, Atten= 0%, Lag= 0.0 min
Primary = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.06' @ 12.08 hrs
Flood Elev= 68.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.58'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.58' / 57.73' S= 0.0050 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.93 cfs @ 12.08 hrs HW=64.05' (Free Discharge)
1=Culvert (Barrel Controls 19.93 cfs @ 6.34 fps)

Summary for Pond dmh60: dhm60

Inflow Area = 31.788 ac, 72.84% Impervious, Inflow Depth > 5.62" for 100-year event
Inflow = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af
Outflow = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af, Atten= 0%, Lag= 0.0 min
Primary = 178.88 cfs @ 12.10 hrs, Volume= 14.900 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.17' @ 12.10 hrs
Flood Elev= 44.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	**42.0" Round Culvert** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.50' / 33.50' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 9.62 sf

Primary OutFlow Max=178.75 cfs @ 12.10 hrs HW=61.14' (Free Discharge)
1=Culvert (Inlet Controls 178.75 cfs @ 18.58 fps)

Summary for Pond dmh7: dmh7

Inflow Area = 3.365 ac, 81.45% Impervious, Inflow Depth > 6.04" for 100-year event
Inflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af
Outflow = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af, Atten= 0%, Lag= 0.0 min
Primary = 19.96 cfs @ 12.08 hrs, Volume= 1.694 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.50' @ 12.08 hrs
Flood Elev= 67.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.71'	**24.0" Round Culvert** L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.71' / 56.86' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.93 cfs @ 12.08 hrs HW=61.50' (Free Discharge)
1=Culvert (Inlet Controls 19.93 cfs @ 6.34 fps)

Summary for Pond dmh8: dmh8

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 6.24" for 100-year event
Inflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af
Outflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af, Atten= 0%, Lag= 0.0 min
Primary = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 70.18' @ 12.08 hrs
Flood Elev= 66.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.84'	**24.0" Round Culvert** L= 296.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.84' / 55.66' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=37.67 cfs @ 12.08 hrs HW=70.14' (Free Discharge)
1=Culvert (Barrel Controls 37.67 cfs @ 11.99 fps)

Summary for Pond dmh9a: dmh9a

Inflow Area = 5.949 ac, 89.51% Impervious, Inflow Depth > 6.24" for 100-year event
Inflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af
Outflow = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af, Atten= 0%, Lag= 0.0 min
Primary = 37.73 cfs @ 12.08 hrs, Volume= 3.092 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 66.62' @ 12.08 hrs
Flood Elev= 65.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	55.64'	**24.0" Round Culvert** L= 206.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.64' / 54.61' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=37.67 cfs @ 12.08 hrs HW=66.59' (Free Discharge)
1=Culvert (Inlet Controls 37.67 cfs @ 11.99 fps)

Summary for Pond GSF 11: grassed soil filter

Inflow Area = 0.991 ac, 36.78% Impervious, Inflow Depth = 5.22" for 100-year event
Inflow = 5.94 cfs @ 12.09 hrs, Volume= 0.431 af
Outflow = 2.85 cfs @ 12.25 hrs, Volume= 0.381 af, Atten= 52%, Lag= 9.6 min
Primary = 0.03 cfs @ 12.25 hrs, Volume= 0.077 af
Secondary = 2.82 cfs @ 12.25 hrs, Volume= 0.303 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 62.90' @ 12.25 hrs Surf.Area= 5,535 sf Storage= 6,891 cf
Flood Elev= 63.00' Surf.Area= 5,598 sf Storage= 7,213 cf

Plug-Flow detention time= 271.7 min calculated for 0.381 af (88% of inflow)
Center-of-Mass det. time= 217.5 min (1,016.9 - 799.4)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	5,560 cf	**gsf11 (Irregular)** Listed below (Recalc)
#2	58.24'	1,653 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,213 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,200	181.0	0	0	2,200
62.00	2,771	200.0	2,480	2,480	2,807
63.00	3,400	219.0	3,080	5,560	3,474

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,198	0.0	0	0
58.25	2,198	40.0	9	9
58.99	2,198	40.0	651	659
59.00	2,198	30.0	7	666
59.49	2,198	30.0	323	989
59.50	2,198	20.0	4	993
61.00	2,198	20.0	659	1,653

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.7" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.05' / 57.78' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**4.0" Vert. Orifice/Grate X 6.00** C= 0.600
#5	Device 3	62.50'	**25.7" Horiz. cb19 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.25 hrs HW=62.90' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 10.36 fps)
└─**2=Exfiltration** (Passes 0.03 cfs of 0.13 cfs potential flow)

Secondary OutFlow Max=2.82 cfs @ 12.25 hrs HW=62.90' (Free Discharge)
└─**3=Culvert** (Inlet Controls 2.82 cfs @ 8.08 fps)
└─**4=Orifice/Grate** (Passes < 2.17 cfs potential flow)
└─**5=cb19 beehive equiv** (Passes < 5.66 cfs potential flow)

Summary for Pond GSF 12: grassed soil filter

Inflow Area = 0.297 ac, 57.98% Impervious, Inflow Depth = 5.79" for 100-year event
Inflow = 1.92 cfs @ 12.08 hrs, Volume= 0.143 af
Outflow = 1.85 cfs @ 12.11 hrs, Volume= 0.122 af, Atten= 4%, Lag= 1.4 min
Primary = 0.01 cfs @ 12.11 hrs, Volume= 0.025 af
Secondary = 1.84 cfs @ 12.11 hrs, Volume= 0.096 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.09' @ 12.11 hrs Surf.Area= 2,117 sf Storage= 1,817 cf
Flood Elev= 62.50' Surf.Area= 2,255 sf Storage= 2,348 cf

Plug-Flow detention time= 282.9 min calculated for 0.122 af (85% of inflow)
Center-of-Mass det. time= 219.6 min (1,005.0 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	1,681 cf	**gsf12 (Irregular)** Listed below (Recalc)
#2	58.24'	667 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,348 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	886	151.0	0	0	886
62.00	1,201	164.0	1,040	1,040	1,248
62.50	1,368	170.0	642	1,681	1,428

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	887	0.0	0	0
58.25	887	40.0	4	4
58.99	887	40.0	263	266
59.00	887	30.0	3	269
59.49	887	30.0	130	399
59.50	887	20.0	2	401
61.00	887	20.0	266	667

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.20'	**8.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.20' / 58.10' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	61.90'	**25.7" Horiz. cb15a beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.11 hrs HW=62.09' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.42 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=1.83 cfs @ 12.11 hrs HW=62.09' (Free Discharge)
└**3=Culvert** (Passes 1.83 cfs of 2.50 cfs potential flow)
└**4=cb15a beehive equiv** (Weir Controls 1.83 cfs @ 1.43 fps)

Summary for Pond GSF 13: grassed soil filter

Inflow Area = 1.037 ac, 46.46% Impervious, Inflow Depth = 5.44" for 100-year event
Inflow = 6.42 cfs @ 12.09 hrs, Volume= 0.470 af
Outflow = 2.79 cfs @ 12.28 hrs, Volume= 0.418 af, Atten= 57%, Lag= 11.5 min
Primary = 0.04 cfs @ 12.28 hrs, Volume= 0.100 af
Secondary = 2.75 cfs @ 12.28 hrs, Volume= 0.318 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 62.69' @ 12.28 hrs Surf.Area= 6,737 sf Storage= 7,544 cf
Flood Elev= 63.00' Surf.Area= 7,083 sf Storage= 8,909 cf

Plug-Flow detention time= 296.3 min calculated for 0.418 af (89% of inflow)
Center-of-Mass det. time= 244.1 min (1,038.2 - 794.1)

Volume	Invert	Avail.Storage	Storage Description
#1	61.00'	7,028 cf	**gsf13 (Irregular)** Listed below (Recalc)
#2	58.24'	1,881 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	2,500	328.0	0	0	2,500
62.00	3,513	347.0	2,992	2,992	3,575
63.00	4,582	366.0	4,036	7,028	4,710

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.24	2,501	0.0	0	0
58.25	2,501	40.0	10	10
58.99	2,501	40.0	740	750
59.00	2,501	30.0	8	758
59.49	2,501	30.0	368	1,125
59.50	2,501	20.0	5	1,130
61.00	2,501	20.0	750	1,881

Device	Routing	Invert	Outlet Devices
#1	Primary	58.25'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	58.05'	**8.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900

			Inlet / Outlet Invert= 58.05' / 57.82' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.00'	**25.7" Horiz. cb18 beehive equiv** C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Primary OutFlow Max=0.04 cfs @ 12.28 hrs HW=62.69' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 10.11 fps)
↑—**2=Exfiltration** (Passes 0.04 cfs of 0.16 cfs potential flow)

Secondary OutFlow Max=2.75 cfs @ 12.28 hrs HW=62.69' (Free Discharge)
↑—**3=Culvert** (Inlet Controls 2.75 cfs @ 7.89 fps)
↑—**4=cb18 beehive equiv** (Passes 2.75 cfs of 12.62 cfs potential flow)

Summary for Pond GSF 15: grassed soil filter

Inflow Area = 0.210 ac, 1.92% Impervious, Inflow Depth = 4.22" for 100-year event
Inflow = 1.04 cfs @ 12.09 hrs, Volume= 0.074 af
Outflow = 1.01 cfs @ 12.11 hrs, Volume= 0.064 af, Atten= 2%, Lag= 1.1 min
Primary = 0.00 cfs @ 12.11 hrs, Volume= 0.005 af
Secondary = 1.01 cfs @ 12.11 hrs, Volume= 0.059 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.83' @ 12.11 hrs Surf.Area= 1,363 sf Storage= 673 cf
Flood Elev= 65.00' Surf.Area= 2,017 sf Storage= 1,939 cf

Plug-Flow detention time= 166.0 min calculated for 0.064 af (87% of inflow)
Center-of-Mass det. time= 106.5 min (927.3 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	63.50'	1,489 cf	**gsf15 (Irregular)** Listed below (Recalc)
#2	60.74'	450 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,939 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.50	600	168.0	0	0	600
64.00	858	177.0	363	363	862
65.00	1,418	196.0	1,126	1,489	1,456

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	599	0.0	0	0
60.75	599	40.0	2	2
61.49	599	40.0	177	180
61.50	599	30.0	2	181
61.99	599	30.0	88	270
62.00	599	20.0	1	271
63.50	599	20.0	180	450

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.52' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	63.70'	**25.7" Horiz. cb9 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.11 hrs HW=63.83' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.44 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=1.00 cfs @ 12.11 hrs HW=63.83' (Free Discharge)
↑—**3=Culvert** (Passes 1.00 cfs of 2.22 cfs potential flow)
↑—**4=cb9 beehive equiv** (Weir Controls 1.00 cfs @ 1.17 fps)

Summary for Pond GSF 16: grassed soil filter

Inflow Area = 0.347 ac, 34.16% Impervious, Inflow Depth = 5.10" for 100-year event
Inflow = 2.04 cfs @ 12.09 hrs, Volume= 0.148 af
Outflow = 0.51 cfs @ 12.47 hrs, Volume= 0.086 af, Atten= 75%, Lag= 23.2 min
Primary = 0.01 cfs @ 12.47 hrs, Volume= 0.025 af
Secondary = 0.50 cfs @ 12.47 hrs, Volume= 0.061 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 64.48' @ 12.47 hrs Surf.Area= 3,261 sf Storage= 3,506 cf

Plug-Flow detention time= 448.5 min calculated for 0.086 af (59% of inflow)
Center-of-Mass det. time= 343.8 min (1,145.8 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	62.75'	4,054 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	60.74'	753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,806 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.75	1,000	215.0	0	0	1,000
63.00	1,165	220.0	270	270	1,181
64.00	1,858	241.0	1,498	1,768	1,986
65.00	2,741	270.0	2,285	4,054	3,192

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.74	1,001	0.0	0	0
60.75	1,001	40.0	4	4
61.49	1,001	40.0	296	300
61.50	1,001	30.0	3	303
61.99	1,001	30.0	147	450
62.00	1,001	20.0	2	452
63.50	1,001	20.0	300	753

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	60.70'	**8.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.54' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	64.40'	**25.7" Horiz. cb8 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.47 hrs HW=64.48' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.28 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=0.49 cfs @ 12.47 hrs HW=64.48' (Free Discharge)
└**3=Culvert** (Passes 0.49 cfs of 2.46 cfs potential flow)
└**4=cb8 beehive equiv** (Weir Controls 0.49 cfs @ 0.92 fps)

Summary for Pond GSF 18A: grassed soil filter

Inflow Area = 0.146 ac, 40.91% Impervious, Inflow Depth = 5.33" for 100-year event
Inflow = 0.89 cfs @ 12.09 hrs, Volume= 0.065 af
Outflow = 0.55 cfs @ 12.18 hrs, Volume= 0.048 af, Atten= 38%, Lag= 5.9 min
Primary = 0.00 cfs @ 12.18 hrs, Volume= 0.013 af
Secondary = 0.55 cfs @ 12.18 hrs, Volume= 0.035 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.48' @ 12.18 hrs Surf.Area= 2,079 sf Storage= 1,185 cf

Plug-Flow detention time= 383.6 min calculated for 0.048 af (74% of inflow)
Center-of-Mass det. time= 296.9 min (1,093.6 - 796.8)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	1,183 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,868 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	900	183.0	0	0	900
58.00	1,490	202.0	1,183	1,183	1,513

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	912	0.0	0	0
54.25	912	40.0	4	4
54.99	912	40.0	270	274
55.00	912	30.0	3	276
55.49	912	30.0	134	410
55.50	912	20.0	2	412
57.00	912	20.0	274	686

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.40'	**25.7" Horiz. cb24 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.18 hrs HW=57.48' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.64 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=0.54 cfs @ 12.18 hrs HW=57.48' (Free Discharge)
↑—**3=Culvert** (Passes 0.54 cfs of 2.36 cfs potential flow)
↑—**4=cb24 beehive equiv** (Weir Controls 0.54 cfs @ 0.95 fps)

Summary for Pond GSF 18B: grassed soil filter

Inflow Area = 0.092 ac, 58.36% Impervious, Inflow Depth = 5.79" for 100-year event
Inflow = 0.60 cfs @ 12.08 hrs, Volume= 0.045 af
Outflow = 0.58 cfs @ 12.10 hrs, Volume= 0.035 af, Atten= 2%, Lag= 1.1 min
Primary = 0.00 cfs @ 12.10 hrs, Volume= 0.006 af
Secondary = 0.58 cfs @ 12.10 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 57.99' @ 12.10 hrs Surf.Area= 877 sf Storage= 644 cf

Plug-Flow detention time= 289.4 min calculated for 0.035 af (78% of inflow)
Center-of-Mass det. time= 210.6 min (996.0 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	430 cf	**gsf18a (Irregular)** Listed below (Recalc)
#2	54.24'	221 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		651 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
57.00	290	88.0	0	0	290
58.00	587	107.0	430	430	601

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.24	294	0.0	0	0
54.25	294	40.0	1	1
54.99	294	40.0	87	88
55.00	294	30.0	1	89
55.49	294	30.0	43	132
55.50	294	20.0	1	133
57.00	294	20.0	88	221

Device	Routing	Invert	Outlet Devices
#1	Primary	54.25'	**0.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	54.00'	**8.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.00' / 53.95' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.90'	**25.7" Horiz. cb23 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.10 hrs HW=57.99' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.30 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.57 cfs @ 12.10 hrs HW=57.99' (Free Discharge)
↑—**3=Culvert** (Passes 0.57 cfs of 2.54 cfs potential flow)
↑—**4=cb23 beehive equiv** (Weir Controls 0.57 cfs @ 0.97 fps)

Summary for Pond GSF 1A: Grassed soil filter

Inflow Area = 0.408 ac, 34.88% Impervious, Inflow Depth = 5.33" for 100-year event
Inflow = 2.49 cfs @ 12.09 hrs, Volume= 0.181 af
Outflow = 2.15 cfs @ 12.13 hrs, Volume= 0.154 af, Atten= 14%, Lag= 2.8 min
Primary = 0.01 cfs @ 12.13 hrs, Volume= 0.037 af
Secondary = 2.14 cfs @ 12.13 hrs, Volume= 0.117 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.51' @ 12.13 hrs Surf.Area= 3,742 sf Storage= 2,626 cf
Flood Elev= 68.00' Surf.Area= 5,086 sf Storage= 6,753 cf

Plug-Flow detention time= 313.4 min calculated for 0.154 af (85% of inflow)
Center-of-Mass det. time= 248.8 min (1,045.6 - 796.8)

Volume	Invert	Avail.Storage	Storage Description
#1	65.75'	5,554 cf	**Grassed Underdrain Soil Filter (Irregular)** Listed below (Recalc)
#2	62.99'	1,198 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,753 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.75	1,600	234.0	0	0	1,600
66.00	1,775	239.0	422	422	1,797
67.00	2,525	261.0	2,139	2,561	2,708
68.00	3,488	286.0	2,994	5,554	3,830

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.99	1,598	0.0	0	0
63.00	1,598	40.0	6	6
63.74	1,598	40.0	473	479
63.75	1,598	30.0	5	484
64.24	1,598	30.0	235	719
64.25	1,598	20.0	3	722
65.74	1,598	20.0	476	1,198

Device	Routing	Invert	Outlet Devices
#1	Primary	63.00'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.99'	**2.400 in/hr Exfiltration over Surface area**
#3	Secondary	62.50'	**8.0" Round Culvert** L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.50' / 62.26' S= 0.0089 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.30'	**25.7" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.13 hrs HW=66.51' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.00 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.21 cfs potential flow)

Secondary OutFlow Max=2.18 cfs @ 12.13 hrs HW=66.51' (Free Discharge)
└**3=Culvert** (Passes 2.18 cfs of 2.55 cfs potential flow)
└**4=Orifice/Grate** (Weir Controls 2.18 cfs @ 1.51 fps)

Summary for Pond GSF 1B: grassed soil filter

Inflow Area = 0.781 ac, 20.08% Impervious, Inflow Depth = 4.77" for 100-year event
Inflow = 4.33 cfs @ 12.09 hrs, Volume= 0.310 af
Outflow = 2.78 cfs @ 12.18 hrs, Volume= 0.296 af, Atten= 36%, Lag= 5.7 min
Primary = 0.01 cfs @ 12.18 hrs, Volume= 0.041 af
Secondary = 2.76 cfs @ 12.18 hrs, Volume= 0.255 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 67.37' @ 12.18 hrs Surf.Area= 2,846 sf Storage= 2,510 cf
Flood Elev= 67.00' Surf.Area= 2,309 sf Storage= 1,826 cf

Plug-Flow detention time= 162.0 min calculated for 0.296 af (96% of inflow)
Center-of-Mass det. time= 136.9 min (946.2 - 809.3)

Volume	Invert	Avail.Storage	Storage Description
#1	65.50'	32,509 cf	**gsf1B (Irregular)** Listed below (Recalc)
#2	62.74'	545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		33,054 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
65.50	393	187.0	0	0	393
66.00	583	194.0	242	242	626
67.00	1,576	297.0	1,039	1,282	4,658
68.00	3,199	450.0	2,340	3,622	13,760
69.00	68,644	2,673.0	28,887	32,509	566,223

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.74	733	0.0	0	0
62.75	733	40.0	3	3
63.40	733	40.0	191	194
63.50	733	30.0	22	216
63.99	733	30.0	108	323
64.00	733	20.0	1	325
65.50	733	20.0	220	545

Device	Routing	Invert	Outlet Devices
#1	Primary	62.75'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	62.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	62.70'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.70' / 62.60' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	66.90'	**25.7" Horiz. CB16 beehive grate equiv dbl X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.18 hrs HW=67.37' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.33 fps)
└**2=Exfiltration** (Passes 0.01 cfs of 0.07 cfs potential flow)

Secondary OutFlow Max=2.76 cfs @ 12.18 hrs HW=67.37' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.76 cfs @ 7.92 fps)
└**4=CB16 beehive grate equiv dbl** (Passes 2.76 cfs of 14.25 cfs potential flow)

Summary for Pond GSF 2: grassed soil filter

Inflow Area = 0.713 ac, 25.93% Impervious, Inflow Depth = 4.88" for 100-year event
Inflow = 4.03 cfs @ 12.09 hrs, Volume= 0.290 af
Outflow = 2.59 cfs @ 12.18 hrs, Volume= 0.262 af, Atten= 36%, Lag= 5.6 min
Primary = 0.02 cfs @ 12.18 hrs, Volume= 0.055 af
Secondary = 2.57 cfs @ 12.18 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.04' @ 12.18 hrs Surf.Area= 3,919 sf Storage= 3,643 cf
Flood Elev= 59.00' Surf.Area= 4,991 sf Storage= 6,448 cf

Plug-Flow detention time= 256.6 min calculated for 0.262 af (90% of inflow)
Center-of-Mass det. time= 209.8 min (1,016.7 - 806.9)

Volume	Invert	Avail.Storage	Storage Description
#1	56.75'	5,317 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.99'	1,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		6,448 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.75	1,500	218.0	0	0	1,500
57.00	1,669	223.0	396	396	1,684
58.00	2,371	245.0	2,010	2,406	2,536
59.00	3,488	283.0	2,912	5,317	4,154

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.99	1,503	0.0	0	0
54.00	1,503	40.0	6	6
54.74	1,503	40.0	445	451
54.75	1,503	30.0	5	455
55.24	1,503	30.0	221	676
55.25	1,503	20.0	3	679
56.75	1,503	20.0	451	1,130

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.95'	**8.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.95' / 53.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb20 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.18 hrs HW=58.04' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.65 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=2.57 cfs @ 12.18 hrs HW=58.04' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.57 cfs @ 7.37 fps)
└**4=cb20 beehive equiv** (Passes 2.57 cfs of 6.52 cfs potential flow)

Summary for Pond GSF 24: grassed soil filter

Inflow Area = 0.419 ac, 67.19% Impervious, Inflow Depth = 6.25" for 100-year event
Inflow = 2.85 cfs @ 12.08 hrs, Volume= 0.218 af
Outflow = 2.58 cfs @ 12.12 hrs, Volume= 0.196 af, Atten= 9%, Lag= 2.2 min
Primary = 0.02 cfs @ 12.12 hrs, Volume= 0.057 af
Secondary = 2.56 cfs @ 12.12 hrs, Volume= 0.139 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 40.85' @ 12.12 hrs Surf.Area= 3,336 sf Storage= 2,883 cf

Plug-Flow detention time= 331.4 min calculated for 0.196 af (90% of inflow)
Center-of-Mass det. time= 281.8 min (1,053.7 - 771.9)

Volume	Invert	Avail.Storage	Storage Description
#1	39.75'	4,479 cf	**gsf24 (Irregular)** Listed below (Recalc)
#2	36.99'	1,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		5,533 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.75	1,400	150.0	0	0	1,400
40.00	1,516	156.0	364	364	1,551
41.00	2,013	176.0	1,759	2,123	2,105
42.00	2,717	200.0	2,356	4,479	2,847

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.99	1,401	0.0	0	0
37.00	1,401	40.0	6	6
37.74	1,401	40.0	415	420
37.75	1,401	30.0	4	425
38.24	1,401	30.0	206	630
38.25	1,401	20.0	3	633
39.75	1,401	20.0	420	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	36.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	36.80'	**8.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 36.80' / 36.00' S= 0.0200 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4 Device 3 40.60' **25.7" Horiz. cb32 beehive equiv** C= 0.600
Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.12 hrs HW=40.85' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.42 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.08 cfs potential flow)

Secondary OutFlow Max=2.56 cfs @ 12.12 hrs HW=40.85' (Free Discharge)
↑—**3=Culvert** (Inlet Controls 2.56 cfs @ 7.33 fps)
↑—**4=cb32 beehive equiv** (Passes 2.56 cfs of 2.77 cfs potential flow)

Summary for Pond GSF 3: grassed soil filter

Inflow Area = 0.830 ac, 36.22% Impervious, Inflow Depth = 5.10" for 100-year event
Inflow = 4.88 cfs @ 12.09 hrs, Volume= 0.353 af
Outflow = 4.45 cfs @ 12.12 hrs, Volume= 0.313 af, Atten= 9%, Lag= 2.2 min
Primary = 0.02 cfs @ 12.12 hrs, Volume= 0.057 af
Secondary = 4.43 cfs @ 12.12 hrs, Volume= 0.257 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 56.09' @ 12.12 hrs Surf.Area= 4,368 sf Storage= 4,106 cf
Flood Elev= 57.00' Surf.Area= 5,449 sf Storage= 7,083 cf

Plug-Flow detention time= 241.7 min calculated for 0.313 af (89% of inflow)
Center-of-Mass det. time= 189.2 min (991.1 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	54.75'	5,872 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	51.99'	1,211 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,083 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.75	1,600	268.0	0	0	1,600
55.00	1,804	274.0	425	425	1,868
56.00	2,657	295.0	2,217	2,642	2,860
57.00	3,839	332.0	3,230	5,872	4,733

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.99	1,610	0.0	0	0
52.00	1,610	40.0	6	6
52.74	1,610	40.0	477	483
52.75	1,610	30.0	5	488
53.24	1,610	30.0	237	725
53.25	1,610	20.0	3	728
54.75	1,610	20.0	483	1,211

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.99'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.95'	**12.0" Round Culvert**
			L= 14.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 51.95' / 51.81' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	55.75'	**25.7" Horiz. cb25 beehive equiv** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.12 hrs HW=56.09' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.71 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.10 cfs potential flow)

Secondary OutFlow Max=4.42 cfs @ 12.12 hrs HW=56.09' (Free Discharge)
└**3=Culvert** (Passes 4.42 cfs of 5.70 cfs potential flow)
└**4=cb25 beehive equiv** (Weir Controls 4.42 cfs @ 1.92 fps)

Summary for Pond GSF 4: grassed soil filter

Inflow Area = 0.194 ac, 0.00% Impervious, Inflow Depth = 4.22" for 100-year event
Inflow = 0.96 cfs @ 12.09 hrs, Volume= 0.068 af
Outflow = 0.93 cfs @ 12.11 hrs, Volume= 0.061 af, Atten= 3%, Lag= 1.2 min
Primary = 0.00 cfs @ 12.11 hrs, Volume= 0.013 af
Secondary = 0.93 cfs @ 12.11 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.22' @ 12.11 hrs Surf.Area= 1,151 sf Storage= 757 cf
Flood Elev= 56.00' Surf.Area= 1,431 sf Storage= 1,405 cf

Plug-Flow detention time= 267.0 min calculated for 0.061 af (89% of inflow)
Center-of-Mass det. time= 215.4 min (1,036.1 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	1,061 cf	**gsf4 (Irregular)** Listed below (Recalc)
#2	51.74'	344 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,405 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.50	457	163.0	0	0	457
55.00	623	169.0	269	269	636
56.00	974	182.0	792	1,061	1,039

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.74	457	0.0	0	0
51.75	457	40.0	2	2
52.49	457	40.0	135	137
52.50	457	30.0	1	138
52.99	457	30.0	67	206
53.00	457	20.0	1	207
54.50	457	20.0	137	344

Device	Routing	Invert	Outlet Devices
#1	Primary	51.75'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.70'	**8.0" Round Culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.70' / 51.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	55.10'	**25.7" Horiz. cb26 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.11 hrs HW=55.22' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.95 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.92 cfs @ 12.11 hrs HW=55.22' (Free Discharge)
↑—**3=Culvert** (Passes 0.92 cfs of 2.37 cfs potential flow)
↑—**4=cb26 beehive equiv** (Weir Controls 0.92 cfs @ 1.13 fps)

Summary for Pond GSF 5: grassed soil filter

Inflow Area = 0.248 ac, 0.00% Impervious, Inflow Depth = 4.22" for 100-year event
Inflow = 1.23 cfs @ 12.09 hrs, Volume= 0.087 af
Outflow = 1.13 cfs @ 12.12 hrs, Volume= 0.074 af, Atten= 8%, Lag= 2.1 min
Primary = 0.00 cfs @ 12.12 hrs, Volume= 0.013 af
Secondary = 1.13 cfs @ 12.12 hrs, Volume= 0.061 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.74' @ 12.12 hrs Surf.Area= 1,661 sf Storage= 1,056 cf
Flood Elev= 55.00' Surf.Area= 1,857 sf Storage= 1,360 cf

Plug-Flow detention time= 253.5 min calculated for 0.074 af (85% of inflow)
Center-of-Mass det. time= 190.0 min (1,010.7 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	908 cf	**gsf5 (Irregular)** Listed below (Recalc)
#2	51.24'	451 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		1,360 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	600	210.0	0	0	600
55.00	1,257	228.0	908	908	1,265

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	600	0.0	0	0
51.25	600	40.0	2	2
51.99	600	40.0	178	180
52.00	600	30.0	2	182
52.49	600	30.0	88	270
52.50	600	20.0	1	271
54.00	600	20.0	180	451

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.3" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.95' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.60'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 12.12 hrs HW=54.74' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.98 fps)
↑—**2=Exfiltration** (Passes 0.00 cfs of 0.04 cfs potential flow)

Secondary OutFlow Max=1.12 cfs @ 12.12 hrs HW=54.74' (Free Discharge)
↑—**3=Culvert** (Passes 1.12 cfs of 2.45 cfs potential flow)
↑—**4=cb beehive equiv** (Weir Controls 1.12 cfs @ 1.21 fps)

Summary for Pond GSF 6: grassed soil filter

Inflow Area = 0.321 ac, 32.06% Impervious, Inflow Depth = 5.10" for 100-year event
Inflow = 1.89 cfs @ 12.09 hrs, Volume= 0.137 af
Outflow = 1.31 cfs @ 12.17 hrs, Volume= 0.116 af, Atten= 30%, Lag= 4.9 min
Primary = 0.01 cfs @ 12.17 hrs, Volume= 0.024 af
Secondary = 1.31 cfs @ 12.17 hrs, Volume= 0.092 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.63' @ 12.17 hrs Surf.Area= 2,291 sf Storage= 2,027 cf
Flood Elev= 50.00' Surf.Area= 2,772 sf Storage= 4,107 cf

Plug-Flow detention time= 284.3 min calculated for 0.116 af (85% of inflow)
Center-of-Mass det. time= 221.4 min (1,023.4 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	3,352 cf	**gsf6 (Irregular)** Listed below (Recalc)
#2	44.74'	755 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		4,107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
47.50	1,004	156.0	0	0	1,004
48.00	1,082	159.0	521	521	1,113
49.00	1,413	172.0	1,244	1,765	1,493
50.00	1,768	184.0	1,587	3,352	1,877

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.74	1,004	0.0	0	0
44.75	1,004	40.0	4	4
45.49	1,004	40.0	297	301
45.50	1,004	30.0	3	304
45.99	1,004	30.0	148	452
46.00	1,004	20.0	2	454
47.50	1,004	20.0	301	755

Device	Routing	Invert	Outlet Devices
#1	Primary	44.75'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	44.74'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Secondary	44.70'	**8.0" Round culvert** L= 17.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.70' / 44.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	48.20'	**4.0" Vert. Orifice X 6.00** C= 0.600
#5	Device 3	49.00'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 12.17 hrs HW=48.63' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.47 fps)
└─**2=Exfiltration** (Passes 0.01 cfs of 0.05 cfs potential flow)

Secondary OutFlow Max=1.30 cfs @ 12.17 hrs HW=48.63' (Free Discharge)
└─**3=culvert** (Passes 1.30 cfs of 2.52 cfs potential flow)
├─**4=Orifice** (Orifice Controls 1.30 cfs @ 2.49 fps)
└─**5=cb beehive equiv** (Controls 0.00 cfs)

Summary for Pond GSF 7: grassed soil filter

Inflow Area = 0.697 ac, 25.86% Impervious, Inflow Depth = 4.88" for 100-year event
Inflow = 3.94 cfs @ 12.09 hrs, Volume= 0.283 af
Outflow = 2.56 cfs @ 12.18 hrs, Volume= 0.241 af, Atten= 35%, Lag= 5.6 min
Primary = 0.02 cfs @ 12.18 hrs, Volume= 0.054 af
Secondary = 2.54 cfs @ 12.18 hrs, Volume= 0.187 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 54.99' @ 12.18 hrs Surf.Area= 5,490 sf Storage= 4,223 cf
Flood Elev= 56.00' Surf.Area= 7,240 sf Storage= 8,558 cf

Plug-Flow detention time= 299.3 min calculated for 0.241 af (85% of inflow)
Center-of-Mass det. time= 235.1 min (1,042.0 - 806.9)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	7,026 cf	**gsf7 (Irregular)** Listed below (Recalc)
#2	51.24'	1,532 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,558 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
54.00	2,037	220.0	0	0	2,037
55.00	3,467	289.0	2,720	2,720	4,843
56.00	5,203	357.0	4,306	7,026	8,354

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.24	2,037	0.0	0	0
51.25	2,037	40.0	8	8
51.99	2,037	40.0	603	611
52.00	2,037	30.0	6	617
52.49	2,037	30.0	299	917
52.50	2,037	20.0	4	921
54.00	2,037	20.0	611	1,532

Device	Routing	Invert	Outlet Devices
#1	Primary	51.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	51.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	51.00'	**8.0" Round cb29** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 51.00' / 50.48' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	54.70'	**25.7" Horiz. cb beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.18 hrs HW=54.99' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.28 fps)
↑—**2=Exfiltration** (Passes 0.02 cfs of 0.13 cfs potential flow)

Secondary OutFlow Max=2.54 cfs @ 12.18 hrs HW=54.99' (Free Discharge)
↑—**3=cb29** (Inlet Controls 2.54 cfs @ 7.27 fps)
↑—**4=cb beehive equiv** (Passes 2.54 cfs of 3.46 cfs potential flow)

Summary for Pond GSF 8: grassed soil filter

Inflow Area = 1.046 ac, 55.78% Impervious, Inflow Depth = 5.67" for 100-year event
Inflow = 6.68 cfs @ 12.08 hrs, Volume= 0.494 af
Outflow = 2.80 cfs @ 12.29 hrs, Volume= 0.448 af, Atten= 58%, Lag= 12.2 min
Primary = 0.04 cfs @ 12.29 hrs, Volume= 0.104 af
Secondary = 2.76 cfs @ 12.29 hrs, Volume= 0.344 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.43' @ 12.29 hrs Surf.Area= 5,768 sf Storage= 7,650 cf
Flood Elev= 58.50' Surf.Area= 5,815 sf Storage= 7,903 cf

Plug-Flow detention time= 279.2 min calculated for 0.448 af (91% of inflow)
Center-of-Mass det. time= 232.9 min (1,021.4 - 788.4)

Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	6,471 cf	**Grassed Underdrain (Irregular)** Listed below (Recalc)
#2	53.74'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		7,903 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
56.50	2,600	200.0	0	0	2,600
57.50	3,227	218.0	2,908	2,908	3,234
58.50	3,910	237.0	3,563	6,471	3,959

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.74	1,905	0.0	0	0
53.75	1,905	40.0	8	8
54.49	1,905	40.0	564	572
54.50	1,905	30.0	6	577
54.99	1,905	30.0	280	857
55.00	1,905	20.0	4	861
56.50	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	53.75'	**0.8" Vert. Orifice/Grate** C= 0.600
#2	Device 1	53.74'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	53.50'	**8.0" Round cb10 culvert** L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.50' / 52.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	57.60'	**25.7" Horiz. cb10 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.04 cfs @ 12.29 hrs HW=58.43' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 10.38 fps)
└─**2=Exfiltration** (Passes 0.04 cfs of 0.13 cfs potential flow)

Secondary OutFlow Max=2.76 cfs @ 12.29 hrs HW=58.43' (Free Discharge)
└─**3=cb10 culvert** (Barrel Controls 2.76 cfs @ 7.92 fps)
└─**4=cb10 beehive equiv** (Passes 2.76 cfs of 15.85 cfs potential flow)

Summary for Pond GSF 9: grassed soil filter

Inflow Area = 0.647 ac, 63.29% Impervious, Inflow Depth = 5.90" for 100-year event
Inflow = 4.25 cfs @ 12.08 hrs, Volume= 0.318 af
Outflow = 2.70 cfs @ 12.18 hrs, Volume= 0.296 af, Atten= 36%, Lag= 5.7 min
Primary = 0.02 cfs @ 12.18 hrs, Volume= 0.055 af
Secondary = 2.68 cfs @ 12.18 hrs, Volume= 0.240 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.41' @ 12.18 hrs Surf.Area= 4,598 sf Storage= 3,518 cf
Flood Elev= 65.00' Surf.Area= 6,073 sf Storage= 8,972 cf

Plug-Flow detention time= 223.5 min calculated for 0.295 af (93% of inflow)
Center-of-Mass det. time= 185.8 min (968.1 - 782.3)

Volume	Invert	Avail.Storage	Storage Description
#1	62.50'	7,539 cf	**gsf9 (Irregular)** Listed below (Recalc)
#2	59.24'	1,433 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,972 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.50	1,905	437.0	0	0	1,905
63.00	2,345	443.0	1,061	1,061	2,379
64.00	3,244	455.0	2,782	3,843	3,347
65.00	4,168	468.0	3,696	7,539	4,408

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.24	1,905	0.0	0	0
59.25	1,905	40.0	8	8
59.99	1,905	40.0	564	572
60.00	1,905	30.0	6	577
60.49	1,905	30.0	280	857
60.50	1,905	20.0	4	861
62.00	1,905	20.0	572	1,433

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**0.6" Vert. Orifice/Grate** C= 0.600
#2	Device 1	59.24'	**1.000 in/hr Exfiltration over Surface area**
#3	Secondary	59.00'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 57.92' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	62.95'	**25.7" Horiz. cb6 beehive equiv** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.18 hrs HW=63.41' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.79 fps)
└**2=Exfiltration** (Passes 0.02 cfs of 0.11 cfs potential flow)

Secondary OutFlow Max=2.68 cfs @ 12.18 hrs HW=63.41' (Free Discharge)
└**3=Culvert** (Inlet Controls 2.68 cfs @ 7.67 fps)
└**4=cb6 beehive equiv** (Passes 2.68 cfs of 6.79 cfs potential flow)

Summary for Pond ics 12: ICS 12

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 17.14 cfs @ 12.08 hrs, Volume= 0.781 af
Secondary = 1.12 cfs @ 12.08 hrs, Volume= 0.718 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 67.96' @ 12.08 hrs
Flood Elev= 65.42'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.70'	**18.0" Round Culvert** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.70' / 60.15' S= 0.1375 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	62.95'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	60.75'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.75' / 60.72' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	60.75'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=17.11 cfs @ 12.08 hrs HW=67.94' (Free Discharge)
└**1=Culvert** (Inlet Controls 17.11 cfs @ 9.68 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 17.11 cfs of 148.03 cfs potential flow)

Secondary OutFlow Max=1.11 cfs @ 12.08 hrs HW=67.94' (Free Discharge)
└**3=Culvert** (Passes 1.11 cfs of 7.72 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 1.11 cfs @ 12.76 fps)

Summary for Pond ICS1: ICS 1

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 1.12 cfs @ 12.08 hrs, Volume= 0.581 af
Secondary = 17.14 cfs @ 12.08 hrs, Volume= 0.918 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 70.63' @ 12.08 hrs
Flood Elev= 69.38'

Device	Routing	Invert	Outlet Devices
#1	Secondary	63.37'	**18.0" Round Culvert** L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.27' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.31'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	63.37'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 63.37' / 63.37' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	63.37'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.12 cfs @ 12.08 hrs HW=70.61' (Free Discharge)
└**3=Culvert** (Passes 1.12 cfs of 7.75 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 1.12 cfs @ 12.80 fps)

Secondary OutFlow Max=17.11 cfs @ 12.08 hrs HW=70.61' (Free Discharge)
└**1=Culvert** (Inlet Controls 17.11 cfs @ 9.68 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 17.11 cfs of 209.86 cfs potential flow)

Summary for Pond ICS18: ICS18

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 3.08 cfs @ 12.08 hrs, Volume= 0.253 af
Outflow = 3.08 cfs @ 12.08 hrs, Volume= 0.253 af, Atten= 0%, Lag= 0.0 min
Primary = 0.68 cfs @ 12.08 hrs, Volume= 0.200 af
Secondary = 2.40 cfs @ 12.08 hrs, Volume= 0.053 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.60' @ 12.08 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.81'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.81' / 57.80' S= 0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	57.81'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 4	60.25'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	57.80'	**12.0" Round Culvert** L= 84.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.80' / 56.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.68 cfs @ 12.08 hrs HW=60.60' (Free Discharge)
↑—**1=Culvert** (Passes 0.68 cfs of 2.08 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.68 cfs @ 7.80 fps)

Secondary OutFlow Max=2.39 cfs @ 12.08 hrs HW=60.60' (Free Discharge)
↑—**4=Culvert** (Passes 2.39 cfs of 4.53 cfs potential flow)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 2.39 cfs @ 1.71 fps)

Summary for Pond ics28: ICS28

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 1.95 cfs @ 12.08 hrs, Volume= 0.160 af
Outflow = 1.95 cfs @ 12.08 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min
Primary = 0.65 cfs @ 12.08 hrs, Volume= 0.139 af
Secondary = 1.29 cfs @ 12.08 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.74' @ 12.08 hrs
Flood Elev= 63.95'

Device	Routing	Invert	Outlet Devices
#1	Secondary	58.00'	**8.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.00' / 57.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	60.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	58.15'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.15' / 58.12' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 3	58.15'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.65 cfs @ 12.08 hrs HW=60.74' (Free Discharge)
└**3=Culvert** (Passes 0.65 cfs of 1.99 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 0.65 cfs @ 7.49 fps)

Secondary OutFlow Max=1.29 cfs @ 12.08 hrs HW=60.74' (Free Discharge)
└**1=Culvert** (Passes 1.29 cfs of 2.06 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 1.29 cfs @ 1.37 fps)

Summary for Pond ICS37: ISC37

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 6.14 cfs @ 12.08 hrs, Volume= 1.256 af
Secondary = 12.12 cfs @ 12.08 hrs, Volume= 0.243 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.51' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.50'	**18.0" Round Culvert** L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.50' / 52.00' S= 0.0098 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=6.13 cfs @ 12.08 hrs HW=56.50' (Free Discharge)
├**3=Culvert** (Inlet Controls 5.34 cfs @ 6.79 fps)
└**4=Orifice/Grate** (Orifice Controls 0.79 cfs @ 9.04 fps)

Secondary OutFlow Max=12.10 cfs @ 12.08 hrs HW=56.50' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.10 cfs @ 6.85 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.10 cfs of 24.28 cfs potential flow)

Summary for Pond ics46: ICS46

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.08 hrs, Volume= 0.717 af
Secondary = 17.18 cfs @ 12.08 hrs, Volume= 0.782 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.49' @ 12.08 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Secondary	46.20'	**18.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.20' / 46.00' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	49.00'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	46.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.80' / 46.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Device 3	46.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.07 cfs @ 12.08 hrs HW=53.47' (Free Discharge)
└**3=Culvert** (Passes 1.07 cfs of 7.42 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 1.07 cfs @ 12.28 fps)

Secondary OutFlow Max=17.15 cfs @ 12.08 hrs HW=53.47' (Free Discharge)
└**1=Culvert** (Inlet Controls 17.15 cfs @ 9.71 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 17.15 cfs of 125.58 cfs potential flow)

Summary for Pond ICS9: ICS9

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.08 hrs, Volume= 0.716 af
Secondary = 17.16 cfs @ 12.08 hrs, Volume= 0.783 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 68.98' @ 12.08 hrs
Flood Elev= 66.76'

Device	Routing	Invert	Outlet Devices
#1	Secondary	61.70'	**18.0" Round Culvert** L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	64.18'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	62.00'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.00' / 61.65' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

#4 Device 3 62.00' **4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.09 cfs @ 12.08 hrs HW=68.95' (Free Discharge)
└**3=Culvert** (Passes 1.09 cfs of 7.58 cfs potential flow)
└**4=Orifice/Grate** (Orifice Controls 1.09 cfs @ 12.54 fps)

Secondary OutFlow Max=17.13 cfs @ 12.08 hrs HW=68.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 17.13 cfs @ 9.69 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 17.13 cfs of 138.54 cfs potential flow)

Summary for Pond ISC42: ICS 42

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af
Outflow = 18.26 cfs @ 12.08 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min
Primary = 5.96 cfs @ 12.08 hrs, Volume= 1.275 af
Secondary = 12.29 cfs @ 12.08 hrs, Volume= 0.224 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.33' @ 12.08 hrs
Flood Elev= 57.00'

Device	Routing	Invert	Outlet Devices
#1	Secondary	52.20'	**18.0" Round Culvert** L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.20' / 51.88' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	55.37'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	52.80'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 52.80' / 52.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Primary	52.80'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.96 cfs @ 12.08 hrs HW=56.32' (Free Discharge)
└**3=Culvert** (Inlet Controls 5.19 cfs @ 6.61 fps)
└**4=Orifice/Grate** (Orifice Controls 0.77 cfs @ 8.82 fps)

Secondary OutFlow Max=12.34 cfs @ 12.08 hrs HW=56.32' (Free Discharge)
└**1=Culvert** (Inlet Controls 12.34 cfs @ 6.98 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 12.34 cfs of 12.35 cfs potential flow)

Summary for Pond MPP 10: Rtank storage

Inflow Area = 0.710 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 5.02 cfs @ 12.08 hrs, Volume= 0.412 af
Outflow = 3.18 cfs @ 12.18 hrs, Volume= 0.394 af, Atten= 37%, Lag= 5.6 min
Primary = 3.18 cfs @ 12.18 hrs, Volume= 0.394 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 61.95' @ 12.18 hrs Surf.Area= 0.179 ac Storage= 0.091 af

Plug-Flow detention time= 92.2 min calculated for 0.394 af (96% of inflow)
Center-of-Mass det. time= 65.9 min (808.4 - 742.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.23'	0.091 af	**6.25'W x 1,248.97'L x 1.94'H Field A** 0.347 af Overall - 0.118 af Embedded = 0.229 af x 40.0% Voids
#2A	61.48'	0.112 af	**ACF R-Tank HD 0.5** x 2128 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 4 Rows of 532 Chambers
		0.204 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.48'	**8.0" Round Culvert X 6.00** L= 2.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.48' / 61.40' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=3.18 cfs @ 12.18 hrs HW=61.95' (Free Discharge)
↑**1=Culvert** (Barrel Controls 3.18 cfs @ 2.82 fps)

Summary for Pond MPP 14: Rtanks

Inflow Area = 0.215 ac, 94.36% Impervious, Inflow Depth = 6.84" for 100-year event
Inflow = 1.52 cfs @ 12.08 hrs, Volume= 0.123 af
Outflow = 1.00 cfs @ 12.17 hrs, Volume= 0.118 af, Atten= 34%, Lag= 5.3 min
Primary = 1.00 cfs @ 12.17 hrs, Volume= 0.118 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.76' @ 12.17 hrs Surf.Area= 1,935 sf Storage= 1,121 cf
Flood Elev= 60.50' Surf.Area= 1,935 sf Storage= 2,354 cf

Plug-Flow detention time= 85.5 min calculated for 0.118 af (96% of inflow)
Center-of-Mass det. time= 63.2 min (812.1 - 748.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	55.98'	1,011 cf	**15.44'W x 125.33'L x 2.04'H Field A** 3,941 cf Overall - 1,413 cf Embedded = 2,528 cf x 40.0% Voids
#2A	56.23'	1,343 cf	**ACF R-Tank HD 0.5** x 583 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 11 Rows of 53 Chambers
		2,354 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	56.23'	**8.0" Round Culvert X 2.00** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.23' / 56.12' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.00 cfs @ 12.17 hrs HW=56.76' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.00 cfs @ 2.32 fps)

Summary for Pond MPP 19: Rtanks

Inflow Area = 0.315 ac, 81.76% Impervious, Inflow Depth = 6.49" for 100-year event
Inflow = 2.18 cfs @ 12.08 hrs, Volume= 0.170 af
Outflow = 0.66 cfs @ 12.39 hrs, Volume= 0.162 af, Atten= 70%, Lag= 18.6 min
Primary = 0.66 cfs @ 12.39 hrs, Volume= 0.162 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.12' @ 12.39 hrs Surf.Area= 0.074 ac Storage= 0.068 af

Plug-Flow detention time= 156.6 min calculated for 0.162 af (95% of inflow)
Center-of-Mass det. time= 127.9 min (891.7 - 763.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.83'	0.033 af	**18.06'W x 179.28'L x 1.84'H Field A** 0.137 af Overall - 0.055 af Embedded = 0.082 af x 40.0% Voids
#2A	55.08'	0.052 af	**ACF R-Tank HD 0.5** x 988 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 76 Chambers
		0.085 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.08'	**6.0" Round Culvert** L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.08' / 55.00' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.66 cfs @ 12.39 hrs HW=56.12' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.66 cfs @ 3.37 fps)

Summary for Pond MPP 21: Rtanks

Inflow Area = 0.229 ac, 83.66% Impervious, Inflow Depth = 6.49" for 100-year event
Inflow = 1.59 cfs @ 12.08 hrs, Volume= 0.124 af
Outflow = 0.73 cfs @ 12.25 hrs, Volume= 0.120 af, Atten= 54%, Lag= 9.9 min
Primary = 0.73 cfs @ 12.25 hrs, Volume= 0.120 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.93' @ 12.25 hrs Surf.Area= 1,510 sf Storage= 1,485 cf

Plug-Flow detention time= 92.3 min calculated for 0.120 af (97% of inflow)
Center-of-Mass det. time= 73.9 min (837.8 - 763.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.48'	818 cf	**16.75'W x 90.14'L x 2.09'H Field A** 3,151 cf Overall - 1,105 cf Embedded = 2,046 cf x 40.0% Voids
#2A	54.73'	1,050 cf	**ACF R-Tank HD 0.5** x 456 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 38 Chambers
		1,868 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.73'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.73' / 54.73' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.73 cfs @ 12.25 hrs HW=55.93' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.73 cfs @ 3.71 fps)

Summary for Pond MPP 22: Rtanks

Inflow Area = 0.310 ac, 76.43% Impervious, Inflow Depth = 6.25" for 100-year event
Inflow = 2.11 cfs @ 12.08 hrs, Volume= 0.162 af
Outflow = 0.67 cfs @ 12.38 hrs, Volume= 0.153 af, Atten= 68%, Lag= 17.8 min
Primary = 0.67 cfs @ 12.38 hrs, Volume= 0.153 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.11' @ 12.38 hrs Surf.Area= 3,003 sf Storage= 2,784 cf

Plug-Flow detention time= 150.9 min calculated for 0.153 af (95% of inflow)
Center-of-Mass det. time= 122.0 min (894.0 - 771.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.80'	1,262 cf	**16.75'W x 179.28'L x 1.79'H Field A** 5,367 cf Overall - 2,211 cf Embedded = 3,156 cf x 40.0% Voids
#2A	55.05'	2,100 cf	**ACF R-Tank HD 0.5** x 912 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 12 Rows of 76 Chambers
		3,363 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	55.05'	**6.0" Round Culvert** L= 2.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 55.05' / 55.05' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.67 cfs @ 12.38 hrs HW=56.11' (Free Discharge)
1=Culvert (Inlet Controls 0.67 cfs @ 3.41 fps)

Summary for Pond MPP 26: Rtanks

Inflow Area = 0.088 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 0.62 cfs @ 12.08 hrs, Volume= 0.051 af
Outflow = 0.36 cfs @ 12.19 hrs, Volume= 0.048 af, Atten= 41%, Lag= 6.4 min
Primary = 0.36 cfs @ 12.19 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 35.02' @ 12.19 hrs Surf.Area= 1,289 sf Storage= 594 cf

Plug-Flow detention time= 120.6 min calculated for 0.048 af (94% of inflow)
Center-of-Mass det. time= 86.8 min (829.3 - 742.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	34.37'	492 cf	**18.06'W x 71.37'L x 1.69'H Field A** 2,175 cf Overall - 945 cf Embedded = 1,230 cf x 40.0% Voids
#2A	34.62'	898 cf	**ACF R-Tank HD 0.5** x 390 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 13 Rows of 30 Chambers
		1,390 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	34.62'	**8.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.62' / 34.34' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.36 cfs @ 12.19 hrs HW=35.02' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.36 cfs @ 1.69 fps)

Summary for Pond MPP 50:

Inflow Area = 0.693 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-year event
Inflow = 4.89 cfs @ 12.08 hrs, Volume= 0.402 af
Outflow = 3.46 cfs @ 12.16 hrs, Volume= 0.373 af, Atten= 29%, Lag= 4.7 min
Primary = 3.46 cfs @ 12.16 hrs, Volume= 0.373 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.11' @ 12.16 hrs Surf.Area= 5,946 sf Storage= 3,895 cf

Plug-Flow detention time= 108.5 min calculated for 0.373 af (93% of inflow)
Center-of-Mass det. time= 69.1 min (811.7 - 742.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	54.33'	2,878 cf	**4.94'W x 1,204.40'L x 1.84'H Field A** 10,925 cf Overall - 3,731 cf Embedded = 7,195 cf x 40.0% Voids
#2A	54.33'	3,544 cf	**ACF R-Tank HD 0.5** x 1539 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 3 Rows of 513 Chambers
		6,422 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	54.58'	**8.0" Round Culvert X 7.00** L= 3.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.58' / 54.55' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=3.45 cfs @ 12.16 hrs HW=55.11' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 3.45 cfs @ 2.27 fps)

Summary for Pond mpp30: Rtanks

Inflow Area = 1.205 ac, 54.78% Impervious, Inflow Depth = 5.25" for 100-year event
Inflow = 6.96 cfs @ 12.09 hrs, Volume= 0.527 af
Outflow = 0.73 cfs @ 12.85 hrs, Volume= 0.527 af, Atten= 89%, Lag= 46.0 min
Primary = 0.73 cfs @ 12.85 hrs, Volume= 0.527 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 32.18' @ 12.85 hrs Surf.Area= 9,089 sf Storage= 9,944 cf
Flood Elev= 31.78' Surf.Area= 9,089 sf Storage= 8,611 cf

Plug-Flow detention time= 147.8 min calculated for 0.527 af (100% of inflow)
Center-of-Mass det. time= 147.7 min (933.7 - 786.0)

Volume	Invert	Avail.Storage	Storage Description
#1B	30.73'	4,011 cf	**8.56'W x 815.99'L x 2.04'H Field B** 14,234 cf Overall - 4,206 cf Embedded = 10,028 cf x 40.0% Voids
#2B	30.98'	3,995 cf	**ACF R-Tank HD 0.5** x 1735 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 5 Rows of 347 Chambers
#3C	29.28'	259 cf	**10.56'W x 74.72'L x 1.69'H Field C** 1,337 cf Overall - 689 cf Embedded = 648 cf x 40.0% Voids
#4C	29.53'	654 cf	**ACF R-Tank HD 1.0** x 155 Inside #3 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 5 Rows of 31 Chambers
#5D	29.28'	968 cf	**17.12'W x 76.72'L x 3.42'H Field D** 4,487 cf Overall - 2,066 cf Embedded = 2,420 cf x 40.0% Voids
#6D	29.53'	1,963 cf	**ACF R-Tank HD 1.5** x 310 Inside #5 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 10 Rows of 31 Chambers
		11,851 cf	Total Available Storage

Storage Group B created with Chamber Wizard
Storage Group C created with Chamber Wizard
Storage Group D created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	29.28'	**18.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.28' / 29.00' S= 0.0140 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	29.28'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	30.00'	**3.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.73 cfs @ 12.85 hrs HW=32.18' (Free Discharge)
└**1=Culvert** (Passes 0.34 cfs of 9.85 cfs potential flow)
└**3=Orifice/Grate** (Orifice Controls 0.34 cfs @ 6.90 fps)
└**2=Orifice/Grate** (Orifice Controls 0.39 cfs @ 8.02 fps)

Summary for Pond SSF 36: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 2.70" for 100-year event
Inflow = 1.12 cfs @ 12.08 hrs, Volume= 0.581 af
Outflow = 0.40 cfs @ 13.96 hrs, Volume= 0.480 af, Atten= 64%, Lag= 112.8 min
Primary = 0.08 cfs @ 13.96 hrs, Volume= 0.251 af
Secondary = 0.32 cfs @ 13.96 hrs, Volume= 0.229 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 64.58' @ 13.96 hrs Surf.Area= 11,270 sf Storage= 11,236 cf
Flood Elev= 66.27' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 678.7 min calculated for 0.480 af (83% of inflow)
Center-of-Mass det. time= 574.6 min (1,342.0 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	62.77'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	63.27'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	60.02'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.02	5,635	0.0	0	0
60.03	5,635	40.0	23	23
60.76	5,635	40.0	1,645	1,668
60.77	5,635	30.0	17	1,685
61.26	5,635	30.0	828	2,513
61.27	5,635	20.0	11	2,524
62.76	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	60.02'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	60.02'	**1.500 in/hr Exfiltration over Surface area above 60.02'** Excluded Surface area = 5,635 sf
#3	Secondary	64.31'	**12.0" Round Culvert X 2.00** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 64.31' / 64.31' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 13.96 hrs HW=64.58' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.23 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.32 cfs @ 13.96 hrs HW=64.58' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.32 cfs @ 1.38 fps)

Summary for Pond ssf37: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.33" for 100-year event
Inflow = 1.10 cfs @ 12.08 hrs, Volume= 0.716 af
Outflow = 0.67 cfs @ 12.42 hrs, Volume= 0.615 af, Atten= 39%, Lag= 20.3 min
Primary = 0.08 cfs @ 12.42 hrs, Volume= 0.254 af
Secondary = 0.58 cfs @ 12.42 hrs, Volume= 0.361 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 63.42' @ 12.42 hrs Surf.Area= 11,332 sf Storage= 12,071 cf
Flood Elev= 64.85' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 553.8 min calculated for 0.614 af (86% of inflow)
Center-of-Mass det. time= 471.2 min (1,231.7 - 760.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	61.35'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	61.85'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	58.60'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.60	5,666	0.0	0	0
58.61	5,666	40.0	23	23
59.34	5,666	40.0	1,654	1,677
59.35	5,666	30.0	17	1,694
59.84	5,666	30.0	833	2,527
59.85	5,666	20.0	11	2,538
61.34	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	58.60'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	58.60'	**1.500 in/hr Exfiltration over Surface area above 58.60'** Excluded Surface area = 5,666 sf
#3	Secondary	62.89'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.89' / 62.89' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 12.42 hrs HW=63.42' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.51 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.58 cfs @ 12.42 hrs HW=63.42' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.58 cfs @ 2.02 fps)

Summary for Pond ssf38: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.63" for 100-year event
Inflow = 17.14 cfs @ 12.08 hrs, Volume= 0.781 af
Outflow = 25.73 cfs @ 12.10 hrs, Volume= 0.684 af, Atten= 0%, Lag= 1.0 min
Primary = 0.20 cfs @ 12.10 hrs, Volume= 0.176 af
Secondary = 25.54 cfs @ 12.10 hrs, Volume= 0.508 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 135.10' @ 12.10 hrs Surf.Area= 11,332 sf Storage= 16,132 cf
Flood Elev= 63.62' Surf.Area= 11,332 sf Storage= 16,132 cf

Plug-Flow detention time= 241.9 min calculated for 0.684 af (88% of inflow)
Center-of-Mass det. time= 230.1 min (956.3 - 726.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	60.12'	5,284 cf	**11.00'W x 515.08'L x 3.50'H Field A** 19,831 cf Overall - 6,621 cf Embedded = 13,210 cf x 40.0% Voids
#2A	60.62'	6,621 cf	**ADS_StormTech SC-740** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	57.37'	4,227 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,132 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.37	5,666	0.0	0	0
57.38	5,666	40.0	23	23
58.11	5,666	40.0	1,654	1,677
58.12	5,666	30.0	17	1,694
58.61	5,666	30.0	833	2,527
58.62	5,666	20.0	11	2,538
60.11	5,666	20.0	1,688	4,227

Device	Routing	Invert	Outlet Devices
#1	Primary	57.37'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	57.37'	**1.500 in/hr Exfiltration over Surface area above 57.37'** Excluded Surface area = 5,666 sf
#3	Secondary	61.66'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.66' / 61.66' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.20 cfs @ 12.10 hrs HW=135.08' (Free Discharge)
└**1=Orifice/Grate** (Passes 0.20 cfs of 0.33 cfs potential flow)
└**2=Exfiltration** (Exfiltration Controls 0.20 cfs)

Secondary OutFlow Max=24.95 cfs @ 12.10 hrs HW=132.02' (Free Discharge)
└**3=Culvert** (Inlet Controls 24.95 cfs @ 31.77 fps)

Summary for Pond ssf39: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 5.83" for 100-year event
Inflow = 6.14 cfs @ 12.08 hrs, Volume= 1.256 af
Outflow = 6.13 cfs @ 12.08 hrs, Volume= 1.125 af, Atten= 0%, Lag= 0.0 min
Primary = 0.11 cfs @ 12.08 hrs, Volume= 0.257 af
Secondary = 6.02 cfs @ 12.08 hrs, Volume= 0.868 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 58.59' @ 12.08 hrs Surf.Area= 12,365 sf Storage= 18,385 cf
Flood Elev= 55.67' Surf.Area= 12,365 sf Storage= 18,385 cf

Plug-Flow detention time= 333.4 min calculated for 1.125 af (90% of inflow)
Center-of-Mass det. time= 278.4 min (1,024.3 - 745.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,625 cf	**58.50'W x 109.24'L x 3.50'H Field A** 22,367 cf Overall - 8,303 cf Embedded = 14,064 cf x 40.0% Voids
#2A	52.67'	8,303 cf	**ADS_StormTech SC-740** x 180 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 12 rows
#3	49.42'	4,457 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		18,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,974	0.0	0	0
49.43	5,974	40.0	24	24
50.16	5,974	40.0	1,744	1,768
50.17	5,974	30.0	18	1,786
50.66	5,974	30.0	878	2,664
50.67	5,974	20.0	12	2,676
52.16	5,974	20.0	1,780	4,457

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,974 sf
#3	Secondary	53.71'	**12.0" Round Culvert**

L= 5.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.11 cfs @ 12.08 hrs HW=58.26' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.11 cfs @ 14.28 fps)
↑—**2=Exfiltration** (Passes 0.11 cfs of 0.22 cfs potential flow)

Secondary OutFlow Max=6.02 cfs @ 12.08 hrs HW=58.27' (Free Discharge)
↑—**3=Culvert** (Inlet Controls 6.02 cfs @ 7.66 fps)

Summary for Pond ssf40: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 5.92" for 100-year event
Inflow = 5.96 cfs @ 12.08 hrs, Volume= 1.275 af
Outflow = 6.69 cfs @ 12.08 hrs, Volume= 1.167 af, Atten= 0%, Lag= 0.0 min
Primary = 0.12 cfs @ 12.08 hrs, Volume= 0.257 af
Secondary = 6.57 cfs @ 12.08 hrs, Volume= 0.910 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.05' @ 12.08 hrs Surf.Area= 11,484 sf Storage= 16,630 cf
Flood Elev= 55.67' Surf.Area= 11,484 sf Storage= 16,630 cf

Plug-Flow detention time= 307.9 min calculated for 1.167 af (92% of inflow)
Center-of-Mass det. time= 260.9 min (1,006.5 - 745.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	52.17'	5,168 cf	**20.50'W x 280.12'L x 3.50'H Field A** 20,099 cf Overall - 7,178 cf Embedded = 12,921 cf x 40.0% Voids
#2A	52.67'	7,178 cf	**ADS_StormTech SC-740** x 156 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
#3	49.42'	4,284 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,630 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.42	5,742	0.0	0	0
49.43	5,742	40.0	23	23
50.16	5,742	40.0	1,677	1,700
50.17	5,742	30.0	17	1,717
50.66	5,742	30.0	844	2,561
50.67	5,742	20.0	11	2,572
52.16	5,742	20.0	1,711	4,284

Device	Routing	Invert	Outlet Devices
#1	Primary	49.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	49.42'	**1.500 in/hr Exfiltration over Surface area above 49.42'** Excluded Surface area = 5,742 sf
#3	Secondary	53.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 53.71' / 53.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.12 cfs @ 12.08 hrs HW=59.05' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.12 cfs @ 14.90 fps)
└**2=Exfiltration** (Passes 0.12 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=6.57 cfs @ 12.08 hrs HW=59.05' (Free Discharge)
└**3=Culvert** (Inlet Controls 6.57 cfs @ 8.36 fps)

Summary for Pond ssf41: ssf

Inflow Area = 2.584 ac,100.00% Impervious, Inflow Depth = 3.33" for 100-year event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 0.717 af
Outflow = 0.65 cfs @ 12.52 hrs, Volume= 0.612 af, Atten= 39%, Lag= 26.0 min
Primary = 0.08 cfs @ 12.52 hrs, Volume= 0.254 af
Secondary = 0.57 cfs @ 12.52 hrs, Volume= 0.358 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 48.23' @ 12.52 hrs Surf.Area= 11,270 sf Storage= 12,241 cf
Flood Elev= 49.67' Surf.Area= 11,270 sf Storage= 16,373 cf

Plug-Flow detention time= 560.1 min calculated for 0.612 af (85% of inflow)
Center-of-Mass det. time= 475.5 min (1,236.0 - 760.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	46.17'	5,035 cf	**25.25'W x 223.16'L x 3.50'H Field A** 19,722 cf Overall - 7,135 cf Embedded = 12,587 cf x 40.0% Voids
#2A	46.67'	7,135 cf	**ADS_StormTech SC-740** x 155 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
#3	43.42'	4,204 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		16,373 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.42	5,635	0.0	0	0
43.43	5,635	40.0	23	23
44.16	5,635	40.0	1,645	1,668
44.17	5,635	30.0	17	1,685
44.66	5,635	30.0	828	2,513
44.67	5,635	20.0	11	2,524
46.16	5,635	20.0	1,679	4,204

Device	Routing	Invert	Outlet Devices
#1	Primary	43.42'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	43.42'	**1.500 in/hr Exfiltration over Surface area above 43.42'** Excluded Surface area = 5,635 sf
#3	Secondary	47.71'	**12.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 47.71' / 47.71' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 12.52 hrs HW=48.23' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 10.51 fps)
↑—**2=Exfiltration** (Passes 0.08 cfs of 0.20 cfs potential flow)

Secondary OutFlow Max=0.57 cfs @ 12.52 hrs HW=48.23' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.57 cfs @ 2.00 fps)

Summary for Pond ssf42: ssf

Inflow Area = 0.275 ac,100.00% Impervious, Inflow Depth = 6.04" for 100-year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 0.139 af
Outflow = 0.65 cfs @ 12.15 hrs, Volume= 0.122 af, Atten= 1%, Lag= 4.1 min
Primary = 0.01 cfs @ 12.15 hrs, Volume= 0.029 af
Secondary = 0.64 cfs @ 12.15 hrs, Volume= 0.093 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 60.72' @ 12.15 hrs Surf.Area= 1,422 sf Storage= 1,731 cf
Flood Elev= 61.67' Surf.Area= 1,422 sf Storage= 2,027 cf

Plug-Flow detention time= 332.0 min calculated for 0.122 af (88% of inflow)
Center-of-Mass det. time= 271.4 min (1,016.6 - 745.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	58.17'	662 cf	**15.75'W x 45.16'L x 3.50'H Field A** 2,489 cf Overall - 835 cf Embedded = 1,654 cf x 40.0% Voids
#2A	58.67'	835 cf	**ADS_StormTech SC-740** x 18 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 3 rows
#3	55.42'	530 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,027 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.42	711	0.0	0	0
55.43	711	40.0	3	3
56.16	711	40.0	208	210
56.17	711	30.0	2	213
56.66	711	30.0	105	317
56.67	711	20.0	1	319
58.16	711	20.0	212	530

Device	Routing	Invert	Outlet Devices
#1	Primary	55.42'	**0.4" Vert. Orifice/Grate** C= 0.600
#2	Device 1	55.42'	**1.500 in/hr Exfiltration over Surface area above 55.42'** Excluded Surface area = 711 sf
#3	Secondary	60.06'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 60.05' / 60.06' S= -0.0020 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.01 cfs @ 12.15 hrs HW=60.72' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.01 cfs @ 11.07 fps)
↑—**2=Exfiltration** (Passes 0.01 cfs of 0.02 cfs potential flow)

Secondary OutFlow Max=0.64 cfs @ 12.15 hrs HW=60.72' (Free Discharge)
↑—**3=Culvert** (Barrel Controls 0.64 cfs @ 2.26 fps)

Summary for Pond ssf43: ssf

Inflow Area = 0.436 ac,100.00% Impervious, Inflow Depth = 5.50" for 100-year event
Inflow = 0.68 cfs @ 12.08 hrs, Volume= 0.200 af
Outflow = 0.67 cfs @ 12.16 hrs, Volume= 0.180 af, Atten= 2%, Lag= 4.7 min
Primary = 0.02 cfs @ 12.16 hrs, Volume= 0.045 af
Secondary = 0.65 cfs @ 12.16 hrs, Volume= 0.135 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 59.96' @ 12.16 hrs Surf.Area= 1,934 sf Storage= 2,345 cf
Flood Elev= 60.90' Surf.Area= 1,934 sf Storage= 2,740 cf

Plug-Flow detention time= 335.6 min calculated for 0.180 af (90% of inflow)
Center-of-Mass det. time= 281.5 min (1,028.6 - 747.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.40'	910 cf	**11.00'W x 87.88'L x 3.50'H Field A** 3,383 cf Overall - 1,108 cf Embedded = 2,275 cf x 40.0% Voids
#2A	57.90'	1,108 cf	**ADS_StormTech SC-740** x 24 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
#3	54.65'	721 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		2,740 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.65	967	0.0	0	0
54.66	967	40.0	4	4
55.39	967	40.0	282	286
55.40	967	30.0	3	289
55.89	967	30.0	142	431
55.90	967	20.0	2	433
57.39	967	20.0	288	721

Device	Routing	Invert	Outlet Devices
#1	Primary	54.65'	**0.5" Vert. Orifice/Grate** C= 0.600
#2	Device 1	54.65'	**1.500 in/hr Exfiltration over Surface area above 54.65'** Excluded Surface area = 967 sf
#3	Secondary	59.28'	**8.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.28' / 59.28' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.02 cfs @ 12.16 hrs HW=59.96' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.07 fps)
↑**2=Exfiltration** (Passes 0.02 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.65 cfs @ 12.16 hrs HW=59.96' (Free Discharge)
↑**3=Culvert** (Barrel Controls 0.65 cfs @ 2.28 fps)

ATTACHMENT M

Updated Stormwater Management Plan Narrative

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

RANSOM Consulting, Inc.

Consulting Engineers and Scientists

Nordic Aquafarms
Stormwater Management Plan

List of Appendices:

Appendix A: Stormwater Treatment Calculations
Appendix B: Post Construction Stormwater Management
Appendix C: Stormwater BMP Inspection and Maintenance Requirements
Appendix D: Pre-Development Calculations
Appendix E: Post Development Calculations

Site Description:

The site (refer to Site Location Map) is an approximately 54-acre development parcel consisting of several parcels under contract with multiple entities including the Belfast Water District (BWD), Mathews Brothers, and Sam Cassida (Refer to the attached Site Location Map). The portion of the site on the Mathews Brothers parcel in the northeast quadrant of the site is primarily grass, with a stand of trees along the drainage channel that defines the eastern boundary of the new parcel. The remainder of the development parcel (from Belfast Water District and Cassida parcels) is primarily vegetated (wooded) with an area in the south currently developed with structures and pavement associated with operations of the BWD. The Belfast Reservoir Number One exists south of the site with a 250-foot strip between the reservoir and the site being retained by the Belfast Water District, within the Resource Protection District, as a buffer to the reservoir.

Portions of the site within the land owned by the Belfast Water District are currently developed with buildings (office building, former filter house, maintenance garages) and associated driveways and parking associated with current BWD operations. A concrete dam controls the water level to the reservoir and piping associated with the former use of the reservoir as the water supply for the City of Belfast still exists adjacent to the dam and office building. Also adjacent to the office building and the dam is a former settling basin previously used in treatment of domestic water supply.

The topography of the undeveloped site slopes generally from north to south/southwest into Reservoir Number One. Groundwater in the area also appears to flow from north to south across the site toward the reservoir. The site slopes steepen within the 250-foot buffer with fingers of notable rivulets, drainage channels, and ravines exiting into the reservoir. The reservoir is controlled by a dam located just west of Route 1 and outlets into Belfast Bay. There is considerable area upgradient of the site which also drains to the reservoir. This Stormwater Management Plan also addresses the offsite areas currently draining onto and through the site.

Table 1: Stormwater Treatment

Subcatchment Area #	Total Area (sq.ft)	Developed Area (sq. ft)	New Impervious (sf)	Treated Impervious (sq. ft)	Landscaped (sq. ft)	Treated Landscaped (sq. ft)	Treatment System
1A	17785	17785	6203	6203	11582	11582	GSF 1A
1B	34018	22308	6832	4033	15476	9245	GSF 1B
2	31049	26280	8052	8052	18228	18228	GSF 2
3	36147	28605	13091	13901	15514	15514	GSF 3
4	8448	8448	0	0	9707	9707	GSF 4
5	10807	10807	0	0	10807	10807	GSF 5
6	13985	13985	4484	4484	9501	9501	GSF 6
7	30345	30345	7846	7846	22499	22499	GSF 7
8	45551	45551	25409	25409	20142	20142	GSF 8
9	27099	27099	17996	17996	9103	9103	GSF 9
10	30932	30932	30932	30932	0	0	MPP 10
11	43174	43174	15881	15881	27293	27293	GSF 11
12	12920	12920	7491	7491	5429	5429	GSF 12
13	45163	45163	20981	20981	24182	24182	GSF 13
14	9378	9378	8849	8849	529	529	MPP 14
15	9157	9157	4974	4974	4183	4183	GSF 15/GR 15
16	15110	15110	5161	5161	9949	9949	GSF 16
17	13300	13300	10855	0	2445	0	-
18A	6339	6339	2593	2593	3746	3746	GSF 18A
18B	4023	4023	2348	2348	1675	1675	GSF 18B
19	13711	13711	11210	11210	2501	2501	MPP 19
20	28459	28459	21010	0	7449	0	-
21	9994	9994	8361	7379	1633	1441	MPP 21
22	13511	13511	10326	10326	3185	3185	MPP 22
23	28475	18834	6249	0	12585	0	-
24	18261	18261	12270	12270	5991	5991	GSF 24
25	118223	21818	0	0	21818	0	-
26	3816	3816	3816	3816	0	0	MPP 26
27	4262	4262	0	0	0	0	-
28	79698	9061	2064	1407	2429	2429	GR 28
29	1306	1306	1306	0	0	0	-
30	31472	31472	24541	24541	6931	6931	MPP 30
31	70616	24011	0	0	24011	0	-
32	4677	4677	2826	0	1851	0	-
33	107893	107893	107893	107893	0	0	GR 33
34	24099	24099	24099	24099	0	0	GR 34
35	20997	20997	20997	20997	0	0	GR 35
36	112560	112560	112560	112560	0	0	SSF 36
37	112560	112560	112560	112560	0	0	SSF 37
38	112560	112560	112560	112650	0	0	SSF 38
39	112560	112560	112560	112560	0	0	SSF 39
40	112560	112560	112560	112560	0	0	SSF 40
41	112560	112560	112560	112560	0	0	SSF 41
42	12000	12000	12000	12000	0	0	SSF 42
43	18983	18983	18983	18983	0	0	SSF 43
44	159363	52028	0	0	97156	0	-
45	64440	5799	0	0	5799	0	-
46	14976	0	0	0	0	0	-
47	79187	15454	0	0	10702	0	-
48	40183	305	0	0	305	0	-
49	84173	3471	548	0	2923	0	-
50	30173	30173	30173	30173	0	0	MPP 50
north channel	135154	59131	0	0	0	0	-
Totals	2338192	1649595	1194010	1147678	429259	235792	

% new impervious treated

96.1%

% new developed area treated

83.9%

A Class B high intensity soil survey (HISS) has been performed on this site and is included in *Section 11, Soils* of this Site Location of Development Act permit application. The results of the HISS mapping are included in the stormwater analysis.

Wetland areas and streams are identified on the existing conditions plans included as an attachment in this Section. In addition, these features are shown on the stormwater plans (also included as an attachment) as well as the HISS mapping discussed in the above paragraph.

Development Description:

Nordic Aquafarms proposes the development of a salmon fish growing operation capable of providing 33,000 metric tons per year of seafood to consumers in the northeastern US. While construction is proposed in two phases (see previous sections of this application for additional information on construction phasing), the stormwater management systems have been considered for the complete project build-out.

The salmon growing operation is done indoors and therefore requires a fair number of buildings to perform that function. Buildings proposed on-site consist of:

Building 1 – Consists of 3 grow modules constructed in succession.

Building 2 – Consists of 3 grow modules constructed in succession.

Building 3 – Smolt Building

Building 4 – Fish Processing Facility

Building 5 – Central Utility Plan

Building 6 – Oxygen generation. This area is currently designated as a building but may be modified based on the requirements of the oxygen generation contractor and their equipment. This may be an outdoor facility that houses generation equipment on a concrete pad. If this is the case, the concrete pad will be surrounded by curbing to collect stormwater runoff.

Building 7 – Office/Maintenance Building

Building 8 – Water/Wastewater Treatment Building

Building 9 – Gate House

The buildings are arranged such that operations central to the needs of the fish growing process will be performed in the middle of the complex, while the larger fish grow module buildings are on the exterior. Water and wastewater treatment will be closer to Route 1 to facilitate intake and discharge of seawater. The building complex will be supported by paved access drives surrounding the facility and between buildings. Efforts were made to group buildings adjacent to one another to minimize the amount of

pavement. Loading areas are located adjacent to access drives. Employee parking is scattered throughout the complex in areas that expect to see more employee activity such as the Smolt Building, the processing

facility, the office/maintenance garage, and the water/wastewater treatment facility. Additionally, a small parking area is provided adjacent to the entrance gate to facilitate public use of the existing trail system located on the property within the 250-foot resource protection district being retained by the BWD. Among and adjacent to the paved areas are landscaped islands and grassed areas.

Grading of the site post development still slopes from the north to the south/southwest. To accommodate the function of the buildings and associated access, the center of the site has less significant grade change while the northern and southern portions of the site include steeper slopes to match grading at the 40-foot "no disturbance" buffer at the site boundary.

While existing drainage channels in the center of the site will be filled to accommodate development, the channels to the south and through the 250-foot buffer retained by the BWD will remain. In addition, stormwater from off-site areas to the north will be diverted and underdrain piping will be included around building foundations and during construction to facilitate transport of any groundwater encountered toward the existing drainage channels to the south.

Stormwater Management – Basic Standards:

Erosion and sedimentation control measures during construction are detailed within *Section 14, Basic Standards Submissions* of this Site Location of Development Act Permit. Post-Construction stormwater management practices and good housekeeping practices will be in accordance with Maine DEP Best Management Practices. A post construction stormwater management plan as well as inspection and maintenance requirements and third-party inspection contract are provided in *Appendix C* of this Stormwater Management Plan.

Stormwater Management – Quality (General Standards):

A project must meet Maine's *Chapter 500, Stormwater Management* general standards if the project results in one or more acres of impervious area, or 5 acres or more of developed area for projects that are not within the direct watershed of an urban impaired stream or a lake most at risk (as defined by Chapter 502). To meet the general standards, the project's stormwater management system must include treatment measures that will provide pollutant removal or treatment (or both), mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, and mitigate potential temperature impacts. To do that a project must provide treatment of 95% of the impervious area and no less than 80% of the developed area. In addition, runoff from upgradient areas must either be redirected away from the project's stormwater treatment measures or that measure must be sized to address the runoff volume of the upgradient area at 50% of the sizing requirements. Although the amount of on-site treatment provided may be reduced by providing treatment on a currently untreated off-site area in the same watershed, this is not proposed for this project at this time.

Treatment of stormwater is addressed using Maine's Best Management Practices (BMPs). These BMPs are focused on meeting the following water quality objectives:

- Effective pollutant removal – removal of fine particles that carry nutrient and heavy metal load as well as dissolved pollutants and hydrocarbons.

- Cooling – to protect aquatic life within a river, stream, or brook watershed discharge must effectively cool down.

- Channel protection – discharge within a river, stream, or brook watershed must be released slowly to avoid destabilization and resulting sedimentation of receiving channels.

- Flood control – detention for large, infrequent storm events to avoid flooding infrastructure.

The water quality volume is the initial depth of runoff that is considered to carry the bulk of pollutants deposited since the last rain event. Studies have indicated that the first inch of runoff distributed over the watershed carries 90% of the pollutant load from a storm event. Maine's BMPs identified in Volume III of the Maine Stormwater Management Design Manual consider this when establishing the treatment volume identified within each BMP. The BMPs chosen for this site to meet the water quality objectives include:

- Subsurface Sand Filters: Filtration BMP discussed in *Maine's Stormwater Management Manual, Volume III, Chapter 7.3, Subsurface Sand Filters.*

- Grassed Underdrained Soil Filters: Filtration BMP discussed in *Maine's Stormwater Management Manual, Volume III, Chapter 7.1, Grassed Underdrained Soil Filters.*

- Manmade Pervious Paver Systems: Filtration BMP discussed in *Maine's Stormwater Management Manual, Volume III, Chapter 7.7, Manmade Pervious Surfaces.*

- Green Roof System: Filtration BMP discussed in *Maine's Stormwater Management Manual, Volume III, Chapter 7.6, Vegetated Roofs.*

Project Specific Water Quality Treatment Measures:

The stormwater management facilities identified above are used throughout the developed site. Calculations detailing the sizing of the treatment facilities are in *Appendix A.* The subcatchment areas being treated by each of the stormwater management facilities are identified on 11 x 17 figures at a scale of 1" = 50' within *Appendix B*. The areas are also included on the Post-Development watershed map, which is included as two 24"x36" drawings at a scale of 1" = 120' within *Appendix E*. Table 1 (at the end of this section) indicates the amount of treatment provided within each subcatchment area as well as for the whole site. The results of calculations indicate that greater than 95% of the new impervious surface and greater than 80% of the new developed area are treated by the stormwater management facilities proposed for this development. In addition, each of the stormwater BMPs are further described below with discussions about how they were used on this site.

- Diversion of Upgradient Runoff. A stormwater channel has been provided within the developed area of the site and downgradient of the 40-foot buffer adjacent to the northern property boundary to divert stormwater from off-site areas. Currently, stormwater from upgradient areas travels

south/southwest through the site and toward the stream that defines the eastern boundary of the site (Stream 9). Although the channel is currently not anticipated to provide treatment to runoff from the offsite areas, the channel is designed with a minimal slope of 0.5% to reduce velocity and erosion potential. Stone check dams are also provided to minimize release of sediment to the stream. Post-development hydraulic modelling is provided in *Appendix D*.

- Subsurface Sand Filters (SSF): Subsurface sand filters are being used exclusively to treat runoff from some of the flat building roofs. The chamber system and stone over the sand filter is designed to store stormwater and discharge it at an attenuated rate to reduce thermal impacts downstream of the system. The subsurface system with detention/retention uses sand and does not provide a source of organic matter for filtration. A pretreatment structure in the form of a fabric wrapped chamber provides the initial settlement and filtration of contaminants, although the intent is to minimize the sediment load (and subsequent maintenance) by using only stormwater runoff from roofs. The roofs of these buildings are an unlikely source of hydrocarbons and therefore hydrocarbon pretreatment is not considered.

  Buildings 1 and 2 are to be built with 3 grow modules each – constructed in succession. Each grow module has an individual subsurface sand filter that can be installed at the time of the construction of the module to treat the runoff from the roof. Building 5 (the Central Utility Plant) uses a SSF as does the roof runoff from Building 6 (or the enclosed concrete equipment pad) for a total of eight SSF systems provided. The SSF systems are located primarily beneath paved surfaces. Each is preceded by an inlet control structure which limits the volume of roof runoff discharged to the filter. A weir in the inlet control structure is provided to allow only the equivalent of the treatment volume (as defined by design guidance per Maine Stormwater Technical Design Manual) through a pipe to the chamber system. Storms with volumes in excess of the treatment volume of 1.0 inches times the subcatchment's impervious area is discharged over the weir to the closed piping network. The treatment volume is filtered through an 18-inch sand filter at a rate no less than 24 and no more than 48 hours and the sand filter is underlain with a drainage layer that collects and transports the treated stormwater to the discharge pipe network. six-inch slotted underdrain pipes are provided in the drainage layer beneath each chamber. A solid discharge collector pipe connects the underdrain pipe every 50 feet along the chamber length and discharges to the pipe network.

- Grassed Soil Filters (GSF): Grassed underdrained soil filters are used primarily for treatment of some paved areas as well as landscaped developed areas. The GSF systems capture and retain runoff and pass it through a soil filter media. The media is a mixture of silty sand and organic matter to remove a range of pollutants including suspended solids, phosphorus, nitrogen, metals, hydrocarbons, and other dissolved pollutants. The filter also provides for attenuation of discharge which provides reduction of thermal impacts to downstream areas as well as minimizing potential channel erosion. The system is sized to store the treatment volume (1.0 inches times the impervious area and 0.4 inches times the landscaped developed area) above the filter with the larger volume storms bypassing the filter through a catch basin and into the closed piping system. The 18-inch thick filter media is underlain with a drainage system and perforated underdrain collection piping which ultimately discharges to the catch basin.

  GSF systems are provided in grassed areas adjacent to pavement throughout the site. The size of the system varies depending on the area draining to it but does not exceed 3,000 sf surface area over the soil filter. Locations where the stormwater is transported to the GSF via a channel or a

pipe, a sediment forebay is provided to minimize discharge of sediment to the filter basin. Refer to calculations in *Appendix A*, and stormwater management facility drawings provided in *Appendix B.*

- Manmade Pervious Pavers (MPP): Pervious paver systems are used almost exclusively for the treatment of paved areas on site, though some systems in parking areas may see some runoff from adjacent landscaped area discharging to the system. The MPP system consists of a permeable surface, base, and subbase materials which allow the penetration of runoff into the underlying soil filter. The area of pervious pavers must be no less than 20% of the area being treated and the flow path to the pervious paver section must be no greater than 50 feet. A storage reservoir is provided below the paver bedding material and above the sand filter layer capable of storing the treatment area equivalent to 1.0 inches times the impervious area and 0.4 inches times the landscaped developed area. The 18-inch thick sand filter layer is underlain with a drainage system consisting of R-Tank storage tanks prior to discharge to the closed piping network. Catch basins in the pervious area capture overflow from larger storms and discharge to the R-Tank system. The use of the R-Tank system allows additional storage for attenuation of larger storm events.

  The pervious pavers proposed are H25 loaded so can be used in higher traffic areas, however the paver systems are proposed for parking areas in the center of the site as well as on the outer access drives adjacent to both Building 1 and Building 2. The interior pavers in the parking areas are the full length of the parking spaces and pick up runoff from local paved surfaces. The pavers in the access drives are 6 feet wide and are intended to pick up the runoff from the paved access drive itself.

- Grassed Roof Systems (GRS): The vegetated roofs are limited to those roofs which are technically flat and with limited protrusions or equipment and with minimal anticipated foot traffic. Rooftop vegetation provides advantages beyond stormwater treatment including the reduction in the heat island effect with improvements in building insulation and increases in the life expectancy of the base roof material. The vegetated roof also provides attenuation of stormwater runoff and peak flows as well as treatment under the General Standards of Chapter 500 within a layer of filter media and vegetation. There are two types of vegetated roof systems: extensive and intensive. The extensive roof systems typically provide coverage over the entire roof with a thinner media depth for the growth of sedums or similar arid plants and also provide little treatment. Intensive systems tend to provide access to the roof itself, provide for more open space on the roof and, with a thicker media, provide more nutrient uptake and greater flow attenuation. The containment of the treatment volume within the media provides stormwater treatment and enhances the overall effectiveness of the vegetated roof.

  Buildings on this site will utilize intensive green roof systems. Buildings 3, 4, and 8 will be constructed with green roofs although Building 3 will be constructed in two phases each with a mechanical penthouse extending through the roof system. The design of each green roof system considers up to 20 % of the entire roof area is taken up with the penthouse and/or elevated access pathways to access areas on the roof. The remaining area will utilize an intensive modular pre-grown roof system as manufactured by Firestone. The Firestone Skyscape module platforms are 15” x 20” and, with the number of modules that can fit on the roof, can provide storage and subsequent treatment for a volume equivalent to 1.0 inches x the impervious surface of the entire roof. Although the roof is vegetated, the area is still considered to be impervious. Roof drains

will be provided to collect runoff from the larger storm events and any stormwater that is not able to be stored in the filter media prior to evapotranspiration.

Stormwater Management – Quantity (Flooding Standards):

A project must meet Maine's *Chapter 500, Stormwater Management* flooding standards if the project results in three or more acres of impervious area, or 20 acres or more of developed area. To meet the flooding standard, the project's stormwater management systems must:

- detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that peak flow of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project;

- design the piped or open channel systems based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits;

- not flood the primary access road to the project and any public roads bordering the project a s a result of a 25-year, 24-hour storm event

A project is eligible for a waiver from the flooding standard for insignificant increases in peak flow rates from a project site. A waiver is also available for a project in the watershed of a coastal wetland, great pond, or major river segment provided the stormwater is conveyed via sheet flow, in a manmade open channel, or in a piped system directly into one of these resources.

As part of this application, Nordic Aquafarms is requesting a waiver from the flooding standard for the portion of the project which is currently in the watershed of a great pond and a coastal wetland and which is discharging directly to the coastal wetland, below the dam of the reservoir (great pond) through the existing on-site settling tank.

Nordic Aquafarms is not requesting a waiver from the flooding standard for the portion of the project which is currently in the watershed of a coastal wetland but is upstream from an existing culvert on US Route 1. The discharge from this culvert is routed through a downstream property on the opposite side of US Route 1 to the coastal wetland. The project does not intend to upgrade the existing culvert or increase the flow to the channel on the downstream property. It is anticipated that the runoff peak flow to the existing culvert after development will be below peak runoff pre- development for the 2-year, 10-year, and 25-year storm events as well as the 100-year frequency storm. Increase in peak runoff at PT6 (refer to tables below) is primarily due to additional area added to the off-site subcatchment OS 9. The stormwater channel located north of Building 1 to divert off-site runoff is included with OS 9 in the post-development condition.

Stormwater runoff in the pre-development condition is evaluated at multiple analysis points. Runoff from off-site subcatchments of 9, 10, and 11 is evaluated at a point where it enters the stream along the eastern boundary (PT6). Runoff is also evaluated at locations of culverts discharging under US Route 1 (PT7, PT8, and PT9). Runoff toward the Little River is evaluated at PT1. There are three separate analysis points (PT2, PT3, and PT4) which are combined as PT5 for runoff headed toward Reservoir Number One. Runoff from subcatchment 28, which consists of existing roadway and buildings, is evaluated at a point just below the dam (PT10). Pre-development stormwater plans, HydroCAD calculations, and backup

calculations are included in *Appendix D*. Subcatchments in the post-development condition were established based on subareas used to define treatment boundaries. The majority of the subcatchments discharge to the closed piping system which ultimately discharges through the existing settling basin below the dam at Reservoir Number One. In addition, there are analysis points that mimic the same locations evaluated in the pre-development condition; PT1, PT5, PT6, PT7, PT8, PT9 and PT10. Post-development stormwater plans, HydroCAD calculations, and backup calculations are included in *Appendix E*.

Hydraulic Analysis:

Stormwater runoff calculations for quantity were made using the HydroCAD 10.0 computer program, which is based on the Soil Conservation Service's TR-20 methodology. Runoff hydrographs are generated based on a standard Type III 24-hour storm for Waldo County identified in Appendix H of *Maine DEP Chapter 500, Stormwater Management.*

Four storm events were evaluated as follows:

1. 2-year frequency flood event: 2.9" rainfall
2. 10-year frequency flood event: 4.2" rainfall
3. 25-year frequency flood event: 5.2" rainfall
4. 100-year frequency flood event: 7.2" rainfall

Runoff Curve numbers were determined based on land coverage and hydro-geological soil type C. Times of concentration were developed based on runoff flow paths for each subarea and shown on the Pre and Post-Development plans. A minimum Tc of 6 minutes was set in the HydroCAD model.

Peak runoff flow rates and runoff volumes are provided at the analysis points, which are identified on the Pre and Post-Development plans. Comparison of the runoff peak flow rates are provided at each analysis point on Tables 2-5 below

Table 2 – 2-year Storm

Analysis Point	Pre-Development	Post-Development
1	1.9 cfs	0.8 cfs
5	6.2 cfs	1.6 cfs
6	13.0 cfs	13.6 cfs
7	0.6 cfs	0.6 cfs
8	0.1 cfs	0.1 cfs
9	18.9 cfs	18.2 cfs
10	3.1 sfs	3.2 cfs

Table 3 – 10-year Storm

Analysis Point	Pre-Development	Post-Development
1	4.8 cfs	2.0 cfs
5	15.0 cfs	3.7 cfs
6	28.0 cfs	29.5 cfs
7	1.4 cfs	1.4 cfs
8	0.3 cfs	0.3 cfs
9	42.0 cfs	40.1 cfs
10	5.8 cfs	5.6 cfs

Table 4 – 25-year Storm

Analysis Point	Pre-Development	Post-Development
1	7.3 cfs	3.0 cfs
5	22.9 cfs	5.6 cfs
6	41.0 cfs	43.3 cfs
7	2.1 cfs	2.1 cfs
8	0.5 cfs	0.5 cfs
9	62.1 cfs	59.2 cfs
10	7.9 cfs	7.5 cfs

Table 5 – 100-year Storm

Analysis Point	Pre-Development	Post-Development
1	12.9 cfs	5.3 cfs
5	40.2 cfs	9.8 cfs
6	65.4 cfs	72.8 cfs
7	3.7 cfs	3.7 cfs
8	0.8 cfs	0.8 cfs
9	105.2 cfs	100.2 cfs
10	12.2 cfs	11.3 cfs

Storm Sewer Piping Capacity:

Stormwater piping was sized to have capacity to handle the 10-year storm event at a minimum. HydroCAD was used to determine the water levels in the upstream and downstream structures, the maximum flow rate in the pipe, and the calculated velocity at the peak of the storm event. The Energy Grade Line (EGL) elevations were calculated from the water levels generated within the software. The pipe was sized to keep the velocity in the pipe between 2.5 feet per second (fps) and 10 fps with a preferred velocity closer to 6 fps. Although the 10-year storm is the basis for design, the 25-year event was also evaluated, and every effort was made to provide increased capacity if possible. The flow rate in the pipe (generated by HydroCAD) was compared to the full-flow capacity of the pipe (using Mannings equation). The slope of the EGL was also compared to the slope of the pipe invert. Piping runs with significant discrepancies were re-evaluated to consider resizing the pipe as necessary. The EGL

elevations were compared to the flood elevations (most often the rim of structures) to determine if there was too much pressure building in the lines. Refer to Table 6 – Pipe Capacity attached.

Table 6 - Pipe Capacity

Pipe	Pipe Dia (in.)	From Structure	Flood Elevation	10-yr EGL	Invert	To Structure	Flood Elevation	10-yr EGL	Invert	Length (ft)	Invert Slope (ft/ft)	EGL Slope (ft/ft)	10-yr Velocity (Q/A)	10-yr Flow (hydrocad)	Full-Flow Capacity
P1	18	B1M1			64.93	ICS-1	69.38		64.60	13	0.025			10.59	16.77
P2	18	ICS-1	69.38	66.77	63.50	DMH-2	69.15	66.43	63.27	23	0.010	0.015	5.61	9.90	10.53
P3	18	DMH-2	69.15	66.43	63.00	DMH-3	68.85	62.70	61.50	100	0.015	0.037	5.64	9.97	12.89
P4	24	DMH-3	68.85	62.37	60.50	DMH-4	68.60	61.85	59.87	125	0.005	0.004	3.18	9.98	16.10
P5	24	DMH-4	68.60	61.85	59.84	DMH-5	69.04	61.34	59.51	66	0.005	0.008	3.18	9.98	16.03
P6	8	CB-16	67.00	67.27	62.80	DMH-3	68.85	62.48	62.60	20	0.010	0.240	4.16	1.45	1.21
P7	24	DMH-5	69.04	61.34	59.48	DMH-6	68.33	60.77	58.61	173	0.005	0.003	3.18	9.98	16.08
P8	24	DMH-6	68.33	60.77	58.58	DMH-7	67.50	59.57	57.73	170	0.005	0.007	3.18	9.98	16.03
P9	24	DMH-7	67.50	59.57	57.71	DMH-8	66.60	61.31	56.86	170	0.005	-0.010	3.18	9.98	16.03
P10	24	DMH-8	66.60	61.78	56.84	DMH-9A	65.74	60.05	55.66	236	0.005	0.007	6.35	19.94	16.03
P11	18	B1M2			62.17	ICS-9	66.76		62.15	4	0.005			10.59	7.44
P12	18	ICS-9	66.76	65.49	61.70	DMH-8	66.60	61.64	61.00	14	0.050	0.275	5.59	9.88	23.54
P13	24	DMH-9A	65.74	60.05	55.64	DMH-10	65.54	59.00	54.61	206	0.005	0.005	6.35	19.94	16.03
P14	24	DMH-10	65.54	59.00	54.59	DMH-11	65.56	56.81	53.56	206	0.005	0.011	6.35	19.94	16.03
P15	18	B1M3			60.97	ICS-12	65.42		60.95	4	0.005			10.59	7.44
P16	18	ICS-12	65.42	64.27	60.70	DMH-11	65.56	56.67	60.66	4	0.010	1.900	5.62	9.92	10.53
P17	30	DMH-11	65.56	56.49	53.54	DMH-13	65.80	56.05	53.12	84	0.005	0.005	4.49	22.03	29.07
P18	30	DMH-13	65.80	56.05	53.10	DMH-14	65.80	55.30	52.09	201	0.005	0.004	4.49	22.03	29.14
P19	30	DMH-14	65.80	55.31	52.07	DMH-15	64.33	54.94	51.95	23	0.005	0.016	4.54	22.26	29.69
P20	30	DMH-15	64.33	54.94	51.95	DMH-17	63.00	54.57	51.50	90	0.005	0.004	4.54	22.26	29.07
P20A	8	CB-9	65.00	63.73	60.70	DMH-17	63.00	54.25	60.52	18	0.010	0.527	0.34	0.12	1.21
P21	30	DMH-17	63.00	54.57	51.48	DMH-20	61.50	54.43	51.30	35	0.005	0.004	4.54	22.27	29.48
P22	30	DMH-20	61.50	54.52	51.28	DMH-21	58.55	54.80	50.78	100	0.005	-0.003	4.78	23.45	29.07
P23	15	DMH-22	59.50	54.00	51.50	DMH-21	58.55	54.79	51.03	93	0.005	-0.008	4.68	5.74	4.60
P24	12	DMH-59	59.75	61.96	54.30	DMH-22	59.50	54.33	52.83	294	0.005	0.026	6.59	5.17	2.52
P25	12	DMH-23	59.50	59.80	55.19	DMH-59	59.75	61.89	54.50	138	0.005	-0.015	6.19	4.86	2.52
P26	12	B5			57.89	ICS-18	62.00		57.82	13	0.005			10.59	2.62
P27	12	ICS-18	62.00	60.49	57.80	DMH-19	61.50	55.20	56.96	84	0.010	0.063	1.43	1.12	3.57
P28	12	DMH-19	59.50	55.21	54.48	DMH-20	61.50	54.15	53.89	59	0.010	0.018	1.63	1.28	3.57
P29	8	CB-10	57.60	57.89	53.50	DMH-21	58.55	54.60	52.93	57	0.010	0.058	3.15	1.10	1.21
P30	12	DMH-24	61.30	59.99	56.10	DMH-23	59.50	59.80	55.92	72	0.003	0.003	6.19	4.86	1.79
P31	6	CB-43	60.25		56.23	P30			56.13	21	0.005			0.05	0.39
P32	8	B4			57.75	DMH-24	61.30		57.69	12	0.005			10.59	0.86
P33	6	CB-15	61.90	56.80	56.23	DMH-24	61.30	59.50	56.12	21	0.005	-0.129	2.70	0.53	0.41
P34	8	DMH-24A	63.30	60.43	58.00	DMH-24	61.30	59.72	57.10	95	0.009	0.007	4.64	1.62	1.18
P35	8	CB-15A	62.50	61.96	58.20	DMH-24A	63.30	60.11	58.10	21	0.005	0.088	0.80	0.28	0.84
P36	12	DMH-33	59.50	54.33	54.00	DMH-34	59.50	53.05	52.01	201	0.010	0.006	0.45	0.35	3.55
P37	8	CB-23	57.90		54.00	P36			53.95	11	0.005			0.01	0.82
P38	8	CB-24	57.40		54.00	P36			53.95	11	0.005			0.03	0.82
P38A	15	B3			55.43	DMH-34	59.50		54.77	33	0.020			10.59	9.16
P39	12	DMH-34	59.50	54.35	51.99	DMH-35	58.50	53.12	51.60	39	0.010	0.032	4.69	3.68	3.57
P40	12	DMH-32	58.50	52.81	51.73	DMH-35	58.50	52.87	51.57	36	0.004	-0.002	2.34	1.84	2.38
P41	8	CB-20	59.00	57.69	53.95	DMH-32	58.50	52.74	53.76	19	0.010	0.261	1.26	0.44	1.21
P42	12	DMH-27	63.00	53.81	53.03	DMH-32	58.50	52.77	51.75	256	0.005	0.004	1.78	1.40	2.52
P43	12	DMH-25	67.00	60.19	60.00	DMH-27	63.00	53.76	55.00	98	0.051	0.066	0.15	0.12	8.07
P44	8	CB-17	68.00	66.32	62.55	DMH-25	67.00	60.19	62.26	27	0.011	0.227	0.34	0.12	1.26
P45	12	DMH-31	63.50	55.13	54.35	DMH-27	63.00	53.81	53.05	259	0.005	0.005	1.77	1.39	2.53
P46	12	DMH-30	63.50	55.96	55.40	DMH-31	63.50	55.10	54.37	206	0.005	0.004	1.06	0.83	2.52
P47	8	DMH-29	63.50	58.67	57.85	DMH-30	63.50	56.03	57.39	46	0.010	0.057	2.38	0.83	1.21
P48	8	ICS-28	63.95	60.65	58.00	DMH-29	63.50	58.61	57.90	10	0.010	0.204	1.40	0.49	1.21
P49	8	B6			59.20	ICS-28	63.95		58.85	71	0.005			10.59	0.85
P50	8	CB-19	62.00	62.20	58.05	DMH-26	63.00	58.53	57.78	27	0.010	0.136	1.23	0.43	1.21
P51	8	CB-18	62.00	62.14	58.05	DMH-26	63.00	58.56	57.82	23	0.010	0.156	1.81	0.63	1.21
P52	12	DMH-26	63.00	58.54	57.75	DMH-31	63.50	55.03	57.61	28	0.005	0.125	1.40	1.10	2.52
P53	18	DMH-35	58.50	52.89	51.55	DMH-36	53.80	51.49	50.17	276	0.005	0.005	2.61	4.61	7.44
P54	12	CB-25	55.75	55.85	51.95	DMH-36	53.80	51.39	51.81	14	0.010	0.319	0.80	0.63	3.57
P55	18	DMH-36	53.80	51.32	50.15	DMH-40	57.00	51.33	49.35	159	0.005	0.000	2.61	4.61	7.47
P56	18	B2M4			53.16	ICS-37	57.00		52.50	33	0.020			10.59	14.89
P57	8	CB-26	56.00	55.11	51.70	DMH-39	56.50	52.36	51.53	17	0.010	0.162	0.09	0.03	1.21
P58	18	ICS-37	57.00	56.14	52.50	DMH-38	56.50	54.30	52.00	51	0.010	0.036	6.00	10.59	10.42
P59	18	DMH-38	56.50	53.97	51.98	DMH-39	56.50	52.59	50.92	106	0.010	0.013	3.83	6.77	10.53
P60	18	DMH-39	56.50	52.59	50.90	DMH-40	57.00	51.16	50.32	58	0.010	0.025	3.83	6.77	10.53
P61	24	DMH-40	57.00	51.42	49.33	DMH-43	56.50	51.23	47.63	340	0.005	0.001	3.61	11.35	16.03
P62	24	DMH-43	56.50	51.57	47.61	DMH-44	56.00	49.26	46.64	193	0.005	0.012	5.92	18.60	16.07
P63	18	B2M5			54.20	ICS-42	57.00		53.50	35	0.020			10.59	14.89
P64	18	ICS-42	57.00	56.48	52.20	DMH-43	56.50	50.40	51.88	16	0.020	0.380	6.00	10.59	14.89
P66	8	CB-27	55.00	54.61	51.00	DMH-44	56.00	48.96	50.95	5	0.010	1.130	0.11	0.04	1.21
P67	30	DMH-44	56.00	49.18	46.62	DMH-45	56.00	49.99	46.21	82	0.005	-0.010	3.79	18.60	29.07
P68	30	DMH-45	56.00	50.32	46.19	DMH-47	55.50	48.13	44.61	316	0.005	0.007	5.93	29.10	29.07
P69	18	B2M6			48.50	ICS-46	55.50		47.50	30	0.033			10.59	19.22
P70	18	ICS-46	55.50	50.38	46.20	DMH-47	55.50	47.18	46.00	22	0.009	0.145	6.00	10.59	10.04
P71	30	DMH-47	55.50	48.13	44.00	DMH-48	50.50	47.33	42.96	104	0.010	0.008	5.93	29.10	41.11
P72	30	DMH-48	50.50	47.39	42.94	DMH-49	50.50	45.84	42.35	117	0.005	0.013	6.29	30.85	29.19
P73	8	CB-28	50.00	48.27	44.70	DMH-49	50.50	45.35	44.53	17	0.010	0.172	0.26	0.09	1.21
P74	36	DMH-49	50.50	45.64	42.33	DMH-52	50.00	45.71	42.26	14	0.005	-0.005	4.37	30.86	47.27
P75	30	DMH-51	55.50	48.34	44.09	DMH-52	50.00	45.96	43.00	38	0.029	0.063	5.95	29.18	69.62
P76	30	DMH-50	56.00	48.99	44.75	DMH-51	55.50	48.34	44.11	64	0.010	0.010	5.95	29.18	41.11
P77	8	CB-29	56.00	54.73	51.00	DMH-50	56.00	48.44	50.48	26	0.020	0.242	0.37	0.13	1.71
P78	30	DMH-21	58.55	55.00	50.76	DMH-50	56.00	48.99	46.00	281	0.017	0.021	5.94	29.16	53.50
P79	42	DMH-52	50.00	46.00	41.00	DMH-60	44.00	40.50	36.00	258	0.019	0.021	6.17	59.31	140.37
P80	42	DMH-60	44.00	40.50	35.50	DMH-53	41.50	37.08	33.50	114	0.018	0.030	6.17	59.31	133.55
P81	8	CB-32	42.00	40.72	36.80	DMH-53	41.50	37.45	36.00	40	0.020	0.082	1.52	0.53	1.71
P82	42	DMH-53	41.50	38.00	33.00	DMH-54	38.50	31.09	30.50	120	0.021	0.058	6.17	59.33	145.53
P83	12	CB-30	53.00		48.00	DMH-57	50.00		45.80	87	0.025			1.56	5.68
P84	12	DMH-58	50.00		44.40	CB-31	46.00		41.50	114	0.025			45.80	5.69
P85	12	CB-31	46.00		40.80	GSF 24		0.00	39.24	78	0.020			1.56	5.05
P87	8	CB-34	38.29	34.89	34.50	DMH-54	38.50	31.43	34.34	8	0.020	0.433	0.54	0.19	1.71

Table 6 - Pipe Capacity

Pipe	Pipe Dia (in.)	From Structure	Flood Elevation	10-yr EGL	Invert	To Structure	Flood Elevation	10-yr EGL	Invert	Length (ft)	Invert Slope (ft/ft)	EGL Slope (ft/ft)	10-yr Velocity (Q/A)	10-yr Flow (hydrocad)	Full-Flow Capacity
P88	42	DMH-54	38.50	32.02	27.00	DMH-55	30.00	24.02	22.00	152	0.033	0.053	6.19	59.50	182.87
P89	42	DMH-55	30.00	24.02	19.00	DMH-56	30.00	17.52	15.50	115	0.030	0.057	6.19	59.50	175.90
P90	42	DMH-56	30.00	17.52	12.50	CLARIFIER		0.59	11.00	42	0.036	0.403	6.19	59.50	190.55
P91	12	B8			30.01	R-Tanks	50.00		29.88	13	0.010			10.59	3.57
P92	18	R-TANKS / DMH-58	50.00		29.28	OUTLET	31.78		29.00	25	0.011			45.80	11.14
P93	12	DMH-16	64.00	60.54	60.50	DMH-17	59.50	54.25	58.00	215	0.012	0.029	0.01	0.01	3.85
P94	8	CB-8	64.40	60.74	60.70	DMH-16	50.00	60.54	60.54	16	0.010	0.013	0.03	0.01	1.21
P95	8	CB-6	62.95		59.00	P18			57.92	54	0.020			1.44	1.71
NOTES: Highlighted piping runs were not evaluated in HydroCAD and therefore were not compared to Manning's full flow capacity.															

ATTACHMENT N

Pipe and Structure Table Revisions

(Update to Appendix B of the Stormwater Management Plan)

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

Figure 2

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
ICS-1	69.38	18	64.60	12	63.15	66.16
				18	63.50	
DMH-2	69.15	18	63.27	18	63.00	-
DMH-3	68.85	8	62.60	18	60.50	-
		24	61.50			
DMH-4	68.60	6	60.55	18	59.84	-
		24	59.87			

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-16	66.30	6	63.00	8	62.80
CB-17	66.30	6	62.75	8	62.55

Piping

Pipe	Pipe Dia (in.)	From		To		Length (ft)	Slope (ft/ft)
		Structure	Elevation	Structure	Elevation		
P1	18	B1M1	64.93	ICS-1	64.60	13	0.025
P2	18	ICS-1	63.50	DMH-2	63.27	23	0.010
P3	18	DMH-2	63.00	DMH-3	61.50	100	0.015
P4	24	DMH-3	60.50	DMH-4	59.87	125	0.005
P5	24	DMH-4	59.84	DMH-5	59.51	66	0.005
P6	8	CB-16	62.80	DMH-3	62.60	20	0.010
P44	8	CB-17	62.55	DMH-25	62.26	27	0.011

Figure 3

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-25	67	8	62.26	12	60.00	-
DMH-27	63	12	53.05	15	53.03	-
		12	55.00			

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-20	57.60	6	54	8	53.95
CB-23	57.90	6	54.25	8	54.00
CB-24	57.40	6	54.25	8	54.00

Piping

Pipe	Pipe Dia (in.)	From		To		Length (ft)	Slope (ft/ft)
		Structure	Elevation	Structure	Elevation		
P36	12	DMH-33	54	DMH-34	52.01	201	0.010
P37	8	CB-23	54	P36	53.95	11	0.005
P38	8	CB-24	54	P36	53.95	11	0.005
P41	8	CB-20	53.95	DMH-32	53.76	19	0.010
P42	12	DMH-27	53.03	DMH-32	51.75	256	0.005
P43	12	DMH-25	60	DMH-27	55	98	0.051
P44	8	CB-17	62.55	DMH-25	62.26	27	0.011
P45	12	DMH-31	54.35	DMH-27	53.05	259	0.005

Figure 4

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-26	63	8	57.82	12	57.75	-
		8	57.78			
ICS-28	63.95	8	58.85	8	58.15	60.50
				8	58.00	
DMH-29	63.5	8	57.90	8	57.85	-
DMH-30	63.5	8	57.39	12	55.40	-
		6	55.52			
DMH-31	63.5	12	57.61	15	54.35	-
		12	54.37			

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-17	66.30	6	62.75	8	62.55
CB-18	61.88	6	58.25	8	58.05

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P38A	15	B3	55.43	DMH-34	54.77	33	0.020
P45	12	DMH-31	54.35	DMH-27	53.05	259	0.005
P46	12	DMH-30	55.4	DMH-31	54.37	206	0.005
P47	8	DMH-29	57.85	DMH-30	57.39	46	0.010
P48	8	ICS-28	58	DMH-29	57.9	10	0.010
P49	8	B6	59.2	ICS-28	58.85	71	0.005
P50	8	CB-19	58.05	DMH-26	57.78	27	0.010
P51	8	CB-18	58.05	DMH-26	57.82	23	0.010
P52	12	DMH-26	57.75	DMH-31	57.61	28	0.005

Figure 5

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-24	61.3	8	57.10	12	56.10	-
		8	57.69			
		8	56.12			
DMH-24A	63.3	8	58.10	8	58.00	-
DMH-33	59.5	6	55.00	12	54.00	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-15	61.90	-	-	6	56.47
CB-15A	61.90	6	58.25	8	58.20
CB-21	59.90	-	-	6	55.12
CB-22	58.90	-	-	6	55.12
CB-43	60.25	-	-	6	56.23

Piping

Pipe	Pipe Dia (in.)	From	Elevation	To	Elevation	Length (ft)	Slope (ft/ft)
		Structure		Structure			
P30	12	DMH-24	56.1	DMH-23	55.92	72	0.003
P31	6	CB-43	56.23	P30	56.13	21	0.005
P32	8	B4	57.75	DMH-24	57.69	12	0.005
P33	6	CB-15	56.23	DMH-24	56.12	21	0.005
P34	8	DMH-24A	58	DMH-24	57.1	95	0.009
P35	8	CB-15A	58.2	DMH-24A	58.1	21	0.005
P92	18	ANKS / DM	29.28	OUTLET	29	25	0.011

Figure 6

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-14	65.8	30	52.09	30	52.07	-
DMH-15	64.33	30	51.95	30	51.95	-
DMH-17	63	8	60.52	30	51.48	-
		12	58.00			
		30	51.50			
ICS-18	62	12	57.82	8	57.81	60.25
				12	57.80	
DMH-19	61.5	12	56.97	12	54.48	-
		6	54.50			
DMH-20	61.5	12	53.89	30	51.28	-
		30	51.30			
DMH-21	58.55	8	52.93	36	50.76	-
		15	51.03			
		30	50.78			
DMH-22	59.5	12	52.83	15	51.50	-
DMH-23	59.5	12	55.92	12	55.19	-
DMH -59	59.75	12	54.50	12	54.30	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-9	63.70	6	60.75	8	60.70
CB-10	57.60	6	53.75	8	53.50
CB-11	58.82	-	-	6	55.05
CB-12	58.82	-	-	6	55.05
CB-13	58.90	-	-	6	54.73
CB-14	58.80	-	-	6	54.73

Figure 7

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-9A	65.74	6	57.37	24	55.64	-
		24	55.66			
DMH-10	65.54	6	57.37	24	54.59	-
		24	54.61			
DMH-11	65.56	18	60.15	30	53.54	-
		24	53.56			
ICS-12	65.42	18	60.95	12	60.75	62.95
				18	60.70	
DMH-13	65.8	30	53.12	30	53.10	-
DMH-16	64	8	60.54	12	60.50	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-4A	65.52	-	-	6	61.48
CB-5	65.40	-	-	6	61.48
CB-6	62.95	6	59.25	8	59.00
CB-7 (rain guardian)	65.07	-	-	-	64.19
CB-7A (rain guardian)	65.07	-	-	-	64.19
CB-8	64.40	6	60.75	8	60.70

Piping

Pipe	Pipe Dia (in.)	From	Elevation	To	Elevation	Length (ft)	Slope (ft/ft)
		Structure		Structure			
P13	24	DMH-9A	55.64	DMH-10	54.61	206	0.005
P14	24	DMH-10	54.59	DMH-11	53.56	206	0.005
P15	18	B1M3	60.97	ICS-12	60.95	4	0.005
P16	18	ICS-12	60.7	DMH-11	60.66	4	0.010
P17	30	DMH-11	53.54	DMH-13	53.12	84	0.005
P18	30	DMH-13	53.1	DMH-14	52.09	201	0.005
P93	12	DMH-16	60.5	DMH-17	58	215	0.012
P94	8	CB-8	60.7	DMH-16	60.54	16	0.010
P95	8	CB-6	59	P18	57.92	54	0.020

Figure 8

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-5	69.04	24	59.57	18	59.48	-
DMH-6	68.33	6	58.60	18	58.58	-
		24	58.61			
DMH-7	67.5	6	58.60	18	57.71	-
		24	57.73			
DMH-8	66.6	24	61.00	24	56.84	-
		24	56.86			
ICS-9	66.76	18	62.15	12	62.00	64.18
				18	61.70	

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P7	24	DMH-5	59.48	DMH-6	58.61	173	0.005
P8	24	DMH-6	58.58	DMH-7	57.73	170	0.005
P9	24	DMH-7	57.71	DMH-8	56.86	170	0.005
P10	24	DMH-8	56.84	DMH-9A	55.66	236	0.005
P11	18	B1M2	62.17	ICS-9	62.15	4	0.005
P12	18	ICS-9	61.7	DMH-8	61	14	0.050

Figure 9

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-5	69.04	18	59.57	18	59.48	-
DMH-6	68.33	6	58.60	18	58.58	-
		18	58.61			
DMH-7	67.5	6	58.60	18	57.71	-
		18	57.73			
DMH-8	66.6	18	61.00	24	56.84	-
		18	56.86			
ICS-9	66.76	18	62.15	12	62.00	64.18
				18	61.70	
DMH-9A	65.74	6	57.37	24	55.64	-
		24	55.66			
DMH-10	65.54	6	57.37	24	54.59	-
		24	54.61			
DMH-11	65.56	18	60.15	30	53.54	-
		24	53.56			
ICS-12	65.42	18	60.95	12	60.75	62.95
				18	60.70	

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-1	68.82	-	-	6	61.48
CB-2	67.85	-	-	6	61.48
CB-3	66.87	-	-	6	61.48
CB-4	65.74	-	-	6	61.48
CB-4A	65.52	-	-	6	61.48
CB-5	65.40	-	-	6	61.48

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P7	24	DMH-5	59.48	DMH-6	58.61	173	0.005028902
P8	24	DMH-6	58.58	DMH-7	57.73	170	0.005
P9	24	DMH-7	57.71	DMH-8	56.86	170	0.005
P10	24	DMH-8	56.84	DMH-9A	55.66	236	0.005
P11	18	B1M2	62.17	ICS-9	62.15	4	0.005
P12	18	ICS-9	61.7	DMH-8	61	14	0.05
P13	24	DMH-9A	55.64	DMH-10	54.61	206	0.005
P14	24	DMH-10	54.59	DMH-11	53.56	206	0.005
P15	18	B1M3	60.97	ICS-12	60.95	4	0.005
P16	18	ICS-12	60.7	DMH-11	60.66	4	0.01

Figure 10

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-32	58.5	8	53.76	18	51.73	-
		12	51.75			
DMH-34	59.5	12	52.01	12	51.99	-
		12	54.77			
DMH-35	58.5	12	51.60	18	51.55	-
		12	51.57			
DMH-36	53.8	12	51.81	18	50.15	-
		18	50.17			
ICS-37	57	18	53.50	12	52.80	55.00
				18	52.50	
DMH-38	56.5	18	52.00	18	51.98	-
DMH-39	56.5	8	51.53	18	50.90	-
		18	50.92			
DMH-40	57	6	50.32	24	49.33	-
		18	49.35			

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-25	55.75	6	52	12	51.95
CB-26	55.10	6	51.75	8	51.70

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P39	12	DMH-34	51.99	DMH-35	51.6	39	0.010
P40	12	DMH-32	51.73	DMH-35	51.57	36	0.004
P53	18	DMH-35	51.55	DMH-36	50.17	276	0.005
P54	12	CB-25	51.95	DMH-36	51.81	14	0.010
P55	18	DMH-36	50.15	DMH-40	49.35	159	0.005
P56	18	B2M4	53.16	ICS-37	52.5	33	0.020
P57	8	CB-26	51.7	DMH-39	51.53	17	0.010
P58	18	ICS-37	52.5	DMH-38	52	51	0.010
P59	18	DMH-38	51.98	DMH-39	50.92	106	0.010
P60	18	DMH-39	50.9	DMH-40	50.32	58	0.010
P61	24	DMH-40	49.33	DMH-43	47.63	340	0.005

Figure 11

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
ICS-42	57	18	53.50	12	52.80	55.37
				18	52.20	
DMH-43	56.5	18	52.48	24	47.61	-
		24	47.63			
DMH-44	56	8	50.95	30	46.62	-
		6	49.42			
		24	46.64			
DMH-45	56	6	49.42	30	46.19	-
		30	46.21			

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-27	54.60	6	51.25	8	51.00

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P61	24	DMH-40	49.33	DMH-43	47.63	340	0.005
P62	24	DMH-43	47.61	DMH-44	46.64	193	0.005025907
P63	18	B2M5	54.2	ICS-42	53.5	35	0.02
P64	18	ICS-42	52.2	DMH-43	51.88	16	0.02
P66	8	CB-27	51	DMH-44	50.95	5	0.01
P67	30	DMH-44	46.62	DMH-45	46.21	82	0.005
P68	30	DMH-45	46.19	DMH-47	44.61	316	0.005

Figure 12

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
ICS-46	55.5	18	47.50	12 18	46.80 46.20	49.00
DMH-47	55.5	18 30	46.00 44.61	30	44.00	-
DMH-48	50.5	6 36	43.42 42.96	30	42.94	-
DMH-49	50.5	6 30 8	43.42 42.35 44.53	36	42.33	-
DMH-50	56	36 8	46.00 50.48	36	44.75	-
DMH-51	55.5	36	44.11	36	44.09	-
DMH-52	50	36 36	42.23 43.00	42	41.00	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-28	48.2	6	44.75	8	44.7
CB-29	54.70	6	51.25	8	51.00

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P68	30	DMH-45	46.19	DMH-47	44.61	316	0.005
P69	18	B2M6	48.5	ICS-46	47.5	30	0.033
P70	18	ICS-46	46.2	DMH-47	46	22	0.009
P71	30	DMH-47	44	DMH-48	42.96	104	0.010
P72	30	DMH-48	42.94	DMH-49	42.35	117	0.005
P73	8	CB-28	44.7	DMH-49	44.53	17	0.010
P74	36	DMH-49	42.33	DMH-52	42.26	14	0.005
P75	30	DMH-51	44.09	DMH-52	43	38	0.029
P76	30	DMH-50	44.75	DMH-51	44.11	64	0.010
P77	8	CB-29	51	DMH-50	50.48	26	0.020
P78	30	DMH-21	50.76	DMH-50	46	281	0.017

Figure 13

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-53	41.5	42	33.50	42	33.00	-
		8	36.00			
DMH-57	50	12	45.80	12	44.40	-
DMH-60	44	42	36.00	42	35.50	0

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-30	53	-	-	12	48
CB-31	46	12	41.5	12	40.8
CB-32	40.60	6	37	8	36.80

Piping

Pipe	Pipe Dia (in.)	From	Elevation	To	Elevation	Length (ft)	Slope (ft/ft)
		Structure		Structure			
P79	42	DMH-52	41	DMH-60	36	258	0.019
P80	42	DMH-60	35.5	DMH-53	33.5	114	0.018
P81	8	CB-32	36.8	DMH-53	36	40	0.020
P82	42	DMH-53	33	DMH-54	30.5	120	0.021
P83	12	CB-30	48	DMH-57	45.8	87	0.025
P84	12	DMH-57	44.4	CB-31	41.5	114	0.025
P85	12	CB-31	40.8	GSF 24	39.24	78	0.020

Figure 14

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-54	38.5	8	34.34	42	27.00	-
		42	30.50			
DMH-55	30	42	22.00	42	19.00	-
DMH-56	30	42	15.50	42	12.50	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-34	38.29	6	34.62	8	34.50

Piping

Pipe	Pipe Dia (in.)	From Structure	Elevation	To Structure	Elevation	Length (ft)	Slope (ft/ft)
P82	42	DMH-53	33	DMH-54	30.5	120	0.021
P87	8	CB-34	34.5	DMH-54	34.34	8	0.020
P88	42	DMH-54	27	DMH-55	22	152	0.033
P89	42	DMH-55	19	DMH-56	15.5	115	0.030
P90	42	DMH-56	12.5	CLARIFIER	11	42	0.036

Figure 15

Structures

Structure	Rim Elevation	Inlets		Outlets		Weir Elevation
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation	
DMH-58	50	18	29.28	18	29.00	-

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-35	35.40	-	-	6	30.98
CB-36	35.50	-	-	6	30.98
CB-37	35.00	-	-	6	30.98
CB-38	35.00	-	-	6	30.98
CB-39	35.30	-	-	6	30.98
CB-40	35.40	-	-	6	30.98
CB-41	35.45	-	-	6	30.98
CB-42	35.50	-	-	6	30.98

Piping

Pipe	Pipe Dia (in.)	From	To	Length (ft)	Slope (ft/ft)
		Structure	Structure		
P91	8	B3	DMH-57	13	0.02

Piping

Pipe	Pipe Dia (in.)	From	Elevation	To	Elevation	Length (ft)	Slope (ft/ft)
		Structure		Structure			
P91	12	B8	30.01	R-Tanks	29.88	13	0.01

Figure 16

Catch Basins

Structure	Rim Elevation	Inlets		Outlets	
		Pipe Dia. (in.)	Elevation	Pipe Dia. (in.)	Elevation
CB-44	59.00	-	-	6	54.58
CB-45	59.00	-	-	6	54.58
CB-46	59.00	-	-	6	54.58
CB-47	59.00	-	-	6	54.58
CB-48	59.00	-	-	6	54.58
CB-49	59.00	-	-	6	54.58
CB-50	58.65	-	-	6	54.58

ATTACHMENT O

Stream 9 Crossing Calculations

Nordic Aquafarms, Inc., Land-based Aquaculture Facility, Belfast, Maine
L-28319-26-A-N, Review Comments

Ransom Consulting, Inc.
Project 171.05027.008

Nordic Aqua Farms
Response to DEP SLODA Review Comments dated June 25, 2019
Project Number: 18076

Comment:
C. Flood Standard Commet 19.
Sheet CG201: Please demonstrate that the propsed culvert can pass the 25-yr 24-hr storm

S-9 Stream Information

Bankfull width measurements= by Normandeau taken 50' upstream, 50' downstream, and at proposed crossing
Bankfull width is equivalent to ordinary high water as observed by Normandeau

50 Upstream	7	ft
50' Downstream	4	ft
At Crossing	9	ft
Average	6.67	ft

25-year storm	52.44	cfs	From Summary for Reach S9-2: Stream 9 HydroCAD Report NAF Post Development prepared by Ransom Consulting

Crossing Information

Width= 1.2*bankfull width 8 ft

Upstream Elev.	33.41
Downstream Elev.	32.29

Type Crossing Structure- open bottom box culvert

Span	17	ft	Span allows for stream to meander naturally within box culvert
Height	5	ft	
Embeddment	2	ft	
Length	64	ft	
Slope	0.0175		

Calculate Discharge for 25-Year Storm Event

$$V = \frac{1.49 \times R^{0.66} \times S^{0.5}}{n} \qquad Q = VA$$

Inputs

*Channel Wetted Perimeter	17.23	ft
Channel Area	11.13	sf
Hydraulic Radius* R = (A/P)	0.65	ft
Slope, S=	0.0175	ft/ft
Mannings Roughness,n	0.07	

Calculations

Flow Velocity, V =	2.11	fps	
Discharge, Q	205.21	cfs	OK

*Channel cross section based on area above wetland elevation to where bank intersects with culvert walls.
This leaves 1.7 ft + of freeboard above section to top of culvert.