



2021 Workshop-disturbed

Prepared by Monroe County

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NOAA 24-hr C 2-Year Rainfall=3.30"

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Summary for Subcatchment 1S: Bypass Dist

Runoff = 2.72 cfs @ 12.22 hrs, Volume= 10,037 cf, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.30"

| Area (ac) | CN | Description |
|-----------|----|------------------------|
| * 1.100 | 80 | Grass |
| * 0.300 | 98 | parking |
| * 0.100 | 98 | Roadway |
| 1.500 | 85 | Weighted Average |
| 1.100 | | 73.33% Pervious Area |
| 0.400 | | 26.67% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------|
| 14.0 | | | | | Direct Entry, Direct entry |

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Summary for Subcatchment 3S: Area 1 Dist

Runoff = 2.79 cfs @ 12.11 hrs, Volume= 8,907 cf, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.30"

| Area (ac) | CN | Description |
|-----------|----|-------------------------|
| * 0.800 | 98 | Building |
| 0.800 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 5.0 | | | | | Direct Entry, direct |

Summary for Subcatchment 5S: Area 2 Dist

Runoff = 4.47 cfs @ 12.15 hrs, Volume= 14,380 cf, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 2-Year Rainfall=3.30"

| Area (ac) | CN | Description |
|-----------|----|------------------------|
| * 0.300 | 80 | Grass |
| * 1.200 | 98 | Parking |
| 1.500 | 94 | Weighted Average |
| 0.300 | | 20.00% Pervious Area |
| 1.200 | | 80.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 8.0 | | | | | Direct Entry, direct |

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Summary for Subcatchment 7S: Area 3 Dist

Runoff = 6.30 cfs @ 12.05 hrs, Volume= 16,609 cf, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.30"

| Area (ac) | CN | Description |
|-----------|----|------------------------|
| * 0.500 | 80 | Grass |
| * 1.100 | 98 | Parking |
| * 0.200 | 98 | Roadway |
| 1.800 | 93 | Weighted Average |
| 0.500 | | 27.78% Pervious Area |
| 1.300 | | 72.22% Impervious Area |

Summary for Reach 10R: Inflow to BMP 3

Inflow Area = 143,748 sf, 75.76% Impervious, Inflow Depth = 2.02" for 2-Year event
Inflow = 6.30 cfs @ 12.05 hrs, Volume= 24,257 cf
Outflow = 6.30 cfs @ 12.05 hrs, Volume= 24,257 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Summary for Pond 8P: BMP 1 - Inf Basin

Inflow Area = 34,848 sf, 100.00% Impervious, Inflow Depth = 3.07" for 2-Year event
 Inflow = 2.79 cfs @ 12.11 hrs, Volume= 8,907 cf
 Outflow = 0.09 cfs @ 14.75 hrs, Volume= 8,906 cf, Atten= 97%, Lag= 158.1 min
 Discarded = 0.09 cfs @ 14.75 hrs, Volume= 8,906 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 101.07' @ 14.75 hrs Surf.Area= 7,196 sf Storage= 5,464 cf

Plug-Flow detention time= 659.0 min calculated for 8,906 cf (100% of inflow)
 Center-of-Mass det. time= 658.9 min (1,414.9 - 756.0)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 100.00' | 39,500 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 100.00 | 3,000 | 0 | 0 |
| 101.00 | 7,000 | 5,000 | 5,000 |
| 102.00 | 10,000 | 8,500 | 13,500 |
| 103.00 | 13,000 | 11,500 | 25,000 |
| 104.00 | 16,000 | 14,500 | 39,500 |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|---------|--|
| #1 | Primary | 99.00' | 24.0" Round Culvert L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 99.00' / 98.50' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 102.00' | 6.0" Vert. Orifice/Grate C= 0.600 |
| #3 | Device 1 | 103.50' | 2.0" x 4.0" Horiz. Orifice/Grate C= 0.600 in 2.0" x 4.0" Grate (100% open area) Limited to weir flow at low heads |
| #4 | Discarded | 100.00' | 0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 90.00' |

Discarded OutFlow Max=0.09 cfs @ 14.75 hrs HW=101.07' (Free Discharge)
 ↑ **4=Exfiltration** (Controls 0.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=100.00' (Free Discharge)
 ↑ **1=Culvert** (Passes 0.00 cfs of 4.91 cfs potential flow)
 ↑ **2=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 9P: BMP 2

Inflow Area = 65,340 sf, 80.00% Impervious, Inflow Depth = 2.64" for 2-Year event
 Inflow = 4.47 cfs @ 12.15 hrs, Volume= 14,380 cf
 Outflow = 0.34 cfs @ 13.33 hrs, Volume= 11,476 cf, Atten= 92%, Lag= 70.9 min
 Discarded = 0.03 cfs @ 13.33 hrs, Volume= 3,828 cf
 Primary = 0.30 cfs @ 13.33 hrs, Volume= 7,647 cf

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 91.69' @ 13.33 hrs Surf.Area= 6,876 sf Storage= 8,758 cf

Plug-Flow detention time= 493.2 min calculated for 11,476 cf (80% of inflow)
 Center-of-Mass det. time= 414.1 min (1,204.4 - 790.3)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 90.00' | 32,750 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 90.00 | 3,500 | 0 | 0 |
| 91.00 | 5,500 | 4,500 | 4,500 |
| 92.00 | 7,500 | 6,500 | 11,000 |
| 93.00 | 10,500 | 9,000 | 20,000 |
| 94.00 | 15,000 | 12,750 | 32,750 |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 89.00' | 18.0" Round Culvert L= 25.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 89.00' / 88.00' S= 0.0400 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 91.00' | 4.0" Vert. Orifice/Grate C= 0.600 |
| #3 | Primary | 93.00' | 2.0" x 4.0" Horiz. Orifice/Grate C= 0.600 in 2.0" x 4.0" Grate (100% open area) Limited to weir flow at low heads |
| #4 | Discarded | 90.00' | 0.200 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 30.00' |

Discarded OutFlow Max=0.03 cfs @ 13.33 hrs HW=91.69' (Free Discharge)
 ↑**4=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.30 cfs @ 13.33 hrs HW=91.69' (Free Discharge)
 ↑**1=Culvert** (Passes 0.30 cfs of 11.85 cfs potential flow)
 ↑**2=Orifice/Grate** (Orifice Controls 0.30 cfs @ 3.48 fps)
 ↑**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 11P: BMP 3

Inflow Area = 143,748 sf, 75.76% Impervious, Inflow Depth = 2.02" for 2-Year event
 Inflow = 6.30 cfs @ 12.05 hrs, Volume= 24,257 cf
 Outflow = 0.12 cfs @ 22.73 hrs, Volume= 9,351 cf, Atten= 98%, Lag= 641.1 min
 Discarded = 0.05 cfs @ 22.73 hrs, Volume= 7,288 cf
 Primary = 0.07 cfs @ 22.73 hrs, Volume= 2,064 cf

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 81.13' @ 22.73 hrs Surf.Area= 20,869 sf Storage= 19,983 cf

Plug-Flow detention time= 957.9 min calculated for 9,342 cf (39% of inflow)
 Center-of-Mass det. time= 784.0 min (1,639.1 - 855.2)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 80.00' | 105,500 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 80.00 | 14,500 | 0 | 0 |
| 81.00 | 20,000 | 17,250 | 17,250 |
| 82.00 | 26,500 | 23,250 | 40,500 |
| 83.00 | 33,000 | 29,750 | 70,250 |
| 84.00 | 37,500 | 35,250 | 105,500 |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 79.00' | 18.0" Round Culvert L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 79.00' / 78.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 81.00' | 9.0" Vert. Orifice/Grate C= 0.600 |
| #3 | Primary | 83.00' | 2.0" x 4.0" Horiz. Orifice/Grate C= 0.600 in 2.0" x 4.0" Grate (100% open area) Limited to weir flow at low heads |
| #4 | Discarded | 80.00' | 0.100 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 73.00' |

Discarded OutFlow Max=0.05 cfs @ 22.73 hrs HW=81.13' (Free Discharge)
 ↑**4=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.07 cfs @ 22.73 hrs HW=81.13' (Free Discharge)
 ↑**1=Culvert** (Passes 0.07 cfs of 10.01 cfs potential flow)
 ↑**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 1.25 fps)
 ↑**3=Orifice/Grate** (Controls 0.00 cfs)