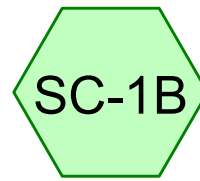
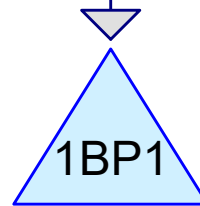




Perimeter



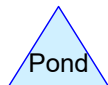
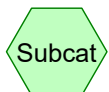
Central



Dry Well



Analysis Point #1



Routing Diagram for BSB Windham - Existing 03122020
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BSB Windham - Existing 03122020*Type III 24-hr 2-yr Storm Rainfall=3.10"*

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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

Subcatchment SC-1A: Perimeter

Runoff Area=45,157 sf 66.18% Impervious Runoff Depth>1.05"
Tc=5.0 min CN=77 Runoff=1.35 cfs 0.090 af

Subcatchment SC-1B: Central

Runoff Area=19,613 sf 83.56% Impervious Runoff Depth>1.71"
Tc=5.0 min CN=87 Runoff=0.96 cfs 0.064 af

Pond 1BP1: Dry Well

Peak Elev=308.53' Storage=381 cf Inflow=0.96 cfs 0.064 af
Discarded=0.00 cfs 0.003 af Primary=0.94 cfs 0.054 af Outflow=0.95 cfs 0.057 af

Link AP-1: Analysis Point #1

Inflow=2.29 cfs 0.144 af
Primary=2.29 cfs 0.144 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 1.35 cfs @ 12.08 hrs, Volume= 0.090 af, Depth> 1.05"

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 2-yr Storm Rainfall=3.10"

Area (sf)	CN	Description
369	32	Woods/grass comb., Good, HSG A
* 3,214	30	Landscaping, Good, HSG A
2,552	98	Roofs, HSG A
14,790	98	Paved roads w/curbs & sewers, HSG A
11,688	39	Pasture/grassland/range, Good, HSG A
12,544	98	Paved parking, HSG A
45,157	77	Weighted Average
15,271		33.82% Pervious Area
29,886		66.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum 5 min

Summary for Subcatchment SC-1B: Central

Runoff = 0.96 cfs @ 12.08 hrs, Volume= 0.064 af, Depth> 1.71"

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 2-yr Storm Rainfall=3.10"

Area (sf)	CN	Description
14,919	98	Paved parking, HSG A
810	39	>75% Grass cover, Good, HSG A
1,469	98	Roofs, HSG A
* 2,415	30	Landscaping Good, HSG A
19,613	87	Weighted Average
3,225		16.44% Pervious Area
16,388		83.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 MIN DRECT ENTRY

Summary for Pond 1BP1: Dry Well

Inflow Area = 0.450 ac, 83.56% Impervious, Inflow Depth > 1.71" for 2-yr Storm event
Inflow = 0.96 cfs @ 12.08 hrs, Volume= 0.064 af
Outflow = 0.95 cfs @ 12.10 hrs, Volume= 0.057 af, Atten= 2%, Lag= 1.4 min
Discarded = 0.00 cfs @ 8.25 hrs, Volume= 0.003 af
Primary = 0.94 cfs @ 12.10 hrs, Volume= 0.054 af

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

BSB Windham - Existing 03122020

Type III 24-hr 2-yr Storm Rainfall=3.10"

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Peak Elev= 308.53' @ 12.10 hrs Surf.Area= 2,043 sf Storage= 381 cf

Plug-Flow detention time= 53.5 min calculated for 0.057 af (88% of inflow)

Center-of-Mass det. time= 18.1 min (803.0 - 784.9)

Volume	Invert	Avail.Storage	Storage Description
#1	301.50'	2,731 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
301.50	13	0	0	13
301.60	13	1	1	14
308.00	13	83	85	96
308.15	25	3	87	108
309.00	8,836	2,644	2,731	8,921

Device	Routing	Invert	Outlet Devices
#1	Discarded	301.50'	9.070 in/hr Exfiltration over Horizontal area from 301.00' - 308.00' Excluded Horizontal area = 0 sf
#2	Primary	308.50'	50.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.00 cfs @ 8.25 hrs HW=301.58' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)**Primary OutFlow** Max=0.78 cfs @ 12.10 hrs HW=308.53' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.78 cfs @ 0.46 fps)**Summary for Link AP-1: Analysis Point #1**

Inflow Area = 1.487 ac, 71.44% Impervious, Inflow Depth > 1.17" for 2-yr Storm event
 Inflow = 2.29 cfs @ 12.09 hrs, Volume= 0.144 af
 Primary = 2.29 cfs @ 12.09 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

BSB Windham - Existing 03122020*Type III 24-hr 10-yr Storm Rainfall=4.60"*

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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

Subcatchment SC-1A: Perimeter

Runoff Area=45,157 sf 66.18% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=77 Runoff=2.78 cfs 0.184 af

Subcatchment SC-1B: Central

Runoff Area=19,613 sf 83.56% Impervious Runoff Depth>3.01"
Tc=5.0 min CN=87 Runoff=1.67 cfs 0.113 af

Pond 1BP1: Dry Well

Peak Elev=308.56' Storage=426 cf Inflow=1.67 cfs 0.113 af
Discarded=0.00 cfs 0.003 af Primary=1.67 cfs 0.102 af Outflow=1.67 cfs 0.105 af

Link AP-1: Analysis Point #1

Inflow=4.43 cfs 0.286 af
Primary=4.43 cfs 0.286 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 2.78 cfs @ 12.08 hrs, Volume= 0.184 af, Depth> 2.13"

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-yr Storm Rainfall=4.60"

Area (sf)	CN	Description
369	32	Woods/grass comb., Good, HSG A
* 3,214	30	Landscaping, Good, HSG A
2,552	98	Roofs, HSG A
14,790	98	Paved roads w/curbs & sewers, HSG A
11,688	39	Pasture/grassland/range, Good, HSG A
12,544	98	Paved parking, HSG A
45,157	77	Weighted Average
15,271		33.82% Pervious Area
29,886		66.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum 5 min

Summary for Subcatchment SC-1B: Central

Runoff = 1.67 cfs @ 12.07 hrs, Volume= 0.113 af, Depth> 3.01"

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 10-yr Storm Rainfall=4.60"

Area (sf)	CN	Description
14,919	98	Paved parking, HSG A
810	39	>75% Grass cover, Good, HSG A
1,469	98	Roofs, HSG A
* 2,415	30	Landscaping Good, HSG A
19,613	87	Weighted Average
3,225		16.44% Pervious Area
16,388		83.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 MIN DRECT ENTRY

Summary for Pond 1BP1: Dry Well

Inflow Area = 0.450 ac, 83.56% Impervious, Inflow Depth > 3.01" for 10-yr Storm event
Inflow = 1.67 cfs @ 12.07 hrs, Volume= 0.113 af
Outflow = 1.67 cfs @ 12.10 hrs, Volume= 0.105 af, Atten= 0%, Lag= 1.3 min
Discarded = 0.00 cfs @ 6.55 hrs, Volume= 0.003 af
Primary = 1.67 cfs @ 12.10 hrs, Volume= 0.102 af

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

BSB Windham - Existing 03122020

Type III 24-hr 10-yr Storm Rainfall=4.60"

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Peak Elev= 308.56' @ 12.09 hrs Surf.Area= 2,248 sf Storage= 426 cf

Plug-Flow detention time= 38.0 min calculated for 0.105 af (93% of inflow)

Center-of-Mass det. time= 15.1 min (786.7 - 771.6)

Volume	Invert	Avail.Storage	Storage Description
#1	301.50'	2,731 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
301.50	13	0	0	13
301.60	13	1	1	14
308.00	13	83	85	96
308.15	25	3	87	108
309.00	8,836	2,644	2,731	8,921

Device	Routing	Invert	Outlet Devices
#1	Discarded	301.50'	9.070 in/hr Exfiltration over Horizontal area from 301.00' - 308.00' Excluded Horizontal area = 0 sf
#2	Primary	308.50'	50.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.00 cfs @ 6.55 hrs HW=301.58' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)**Primary OutFlow** Max=1.59 cfs @ 12.10 hrs HW=308.55' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 1.59 cfs @ 0.58 fps)**Summary for Link AP-1: Analysis Point #1**

Inflow Area = 1.487 ac, 71.44% Impervious, Inflow Depth > 2.31" for 10-yr Storm event
 Inflow = 4.43 cfs @ 12.09 hrs, Volume= 0.286 af
 Primary = 4.43 cfs @ 12.09 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

BSB Windham - Existing 03122020*Type III 24-hr 25-yr Storm Rainfall=5.80"*

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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

Subcatchment SC-1A: Perimeter

Runoff Area=45,157 sf 66.18% Impervious Runoff Depth>3.09"
Tc=5.0 min CN=77 Runoff=4.02 cfs 0.267 af

Subcatchment SC-1B: Central

Runoff Area=19,613 sf 83.56% Impervious Runoff Depth>4.08"
Tc=5.0 min CN=87 Runoff=2.24 cfs 0.153 af

Pond 1BP1: Dry Well

Peak Elev=308.56' Storage=449 cf Inflow=2.24 cfs 0.153 af
Discarded=0.00 cfs 0.003 af Primary=2.21 cfs 0.143 af Outflow=2.21 cfs 0.146 af

Link AP-1: Analysis Point #1

Inflow=6.21 cfs 0.409 af
Primary=6.21 cfs 0.409 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 4.02 cfs @ 12.08 hrs, Volume= 0.267 af, Depth> 3.09"

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-yr Storm Rainfall=5.80"

Area (sf)	CN	Description
369	32	Woods/grass comb., Good, HSG A
* 3,214	30	Landscaping, Good, HSG A
2,552	98	Roofs, HSG A
14,790	98	Paved roads w/curbs & sewers, HSG A
11,688	39	Pasture/grassland/range, Good, HSG A
12,544	98	Paved parking, HSG A
45,157	77	Weighted Average
15,271		33.82% Pervious Area
29,886		66.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum 5 min

Summary for Subcatchment SC-1B: Central

Runoff = 2.24 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 4.08"

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-yr Storm Rainfall=5.80"

Area (sf)	CN	Description
14,919	98	Paved parking, HSG A
810	39	>75% Grass cover, Good, HSG A
1,469	98	Roofs, HSG A
* 2,415	30	Landscaping Good, HSG A
19,613	87	Weighted Average
3,225		16.44% Pervious Area
16,388		83.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 MIN DRECT ENTRY

Summary for Pond 1BP1: Dry Well

Inflow Area = 0.450 ac, 83.56% Impervious, Inflow Depth > 4.08" for 25-yr Storm event
 Inflow = 2.24 cfs @ 12.07 hrs, Volume= 0.153 af
 Outflow = 2.21 cfs @ 12.09 hrs, Volume= 0.146 af, Atten= 1%, Lag= 1.1 min
 Discarded = 0.00 cfs @ 5.50 hrs, Volume= 0.003 af
 Primary = 2.21 cfs @ 12.09 hrs, Volume= 0.143 af

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

BSB Windham - Existing 03122020

Type III 24-hr 25-yr Storm Rainfall=5.80"

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Peak Elev= 308.56' @ 12.09 hrs Surf.Area= 2,347 sf Storage= 449 cf

Plug-Flow detention time= 31.8 min calculated for 0.146 af (95% of inflow)

Center-of-Mass det. time= 13.5 min (777.8 - 764.3)

Volume	Invert	Avail.Storage	Storage Description
#1	301.50'	2,731 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
301.50	13	0	0	13
301.60	13	1	1	14
308.00	13	83	85	96
308.15	25	3	87	108
309.00	8,836	2,644	2,731	8,921

Device	Routing	Invert	Outlet Devices
#1	Discarded	301.50'	9.070 in/hr Exfiltration over Horizontal area from 301.00' - 308.00' Excluded Horizontal area = 0 sf
#2	Primary	308.50'	50.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.00 cfs @ 5.50 hrs HW=301.58' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)**Primary OutFlow** Max=2.02 cfs @ 12.09 hrs HW=308.56' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 2.02 cfs @ 0.63 fps)**Summary for Link AP-1: Analysis Point #1**

Inflow Area = 1.487 ac, 71.44% Impervious, Inflow Depth > 3.30" for 25-yr Storm event
 Inflow = 6.21 cfs @ 12.08 hrs, Volume= 0.409 af
 Primary = 6.21 cfs @ 12.08 hrs, Volume= 0.409 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

BSB Windham - Existing 03122020

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