

Data file name: C:\Users\jbrunoehler\Dropbox (ADS)\StormTech\Projects\School Sisters of Notre Dame\40380 WinSLAMM 2021.04.27.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 04-27-2021 Time: 08:37:22
Site information:

LU# 1 - Residential: A Total area (ac): 4.330
1 - Roofs 1: 1.040 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 1.064 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.226 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Residential: B Total area (ac): 0.984
1 - Roofs 1: 0.984 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

LU# 3 - Residential: B1 Total area (ac): 1.964
31 - Sidewalks 1: 0.214 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.750 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: C Total area (ac): 2.823
1 - Roofs 1: 0.756 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.199 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.868 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: C1 Total area (ac): 0.420
13 - Paved Parking 1: 0.041 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.051 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.328 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Residential: C2 Total area (ac): 1.774
1 - Roofs 1: 0.545 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.223 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.006 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Residential: D1 Total area (ac): 0.479
45 - Large Landscaped Areas 1: 0.479 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Residential: D2 Total area (ac): 0.382
1 - Roofs 1: 0.097 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.285 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Residential: D3 Total area (ac): 0.189
31 - Sidewalks 1: 0.024 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.165 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 10 - Residential: E1 Total area (ac): 0.908
31 - Sidewalks 1: 0.050 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.858 ac. Normal Silty Source Area PSD

File: C:\WinSLAMM Files\NURP.cpz

LU# 11 - Residential: E2 Total area (ac): 0.433

1 - Roofs 1: 0.080 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.353 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Residential: E3 Total area (ac): 2.508

13 - Paved Parking 1: 0.191 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.150 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz

45 - Large Landscaped Areas 1: 2.167 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 13 - Residential: F Total area (ac): 1.002

1 - Roofs 1: 0.258 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.327 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.417 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 14 - Residential: F1 Total area (ac): 1.247

1 - Roofs 1: 0.226 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.450 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.012 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.559 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 15 - Residential: F2 Total area (ac): 0.434

45 - Large Landscaped Areas 1: 0.434 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 16 - Residential: F3 Total area (ac): 0.464

1 - Roofs 1: 0.048 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.416 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 17 - Residential: F4 Total area (ac): 0.615
45 - Large Landscaped Areas 1: 0.615 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 18 - Residential: F5 Total area (ac): 0.718
45 - Large Landscaped Areas 1: 0.718 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 19 - Residential: F6 Total area (ac): 0.152
45 - Large Landscaped Areas 1: 0.152 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 20 - Residential: G Total area (ac): 0.103
45 - Large Landscaped Areas 1: 0.103 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 21 - Residential: H1 Total area (ac): 2.635
1 - Roofs 1: 0.304 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.218 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.113 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 22 - Residential: H2 Total area (ac): 1.499
1 - Roofs 1: 0.181 ac. Flat Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.111 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.207 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 23 - Residential: H3 Total area (ac): 0.171
13 - Paved Parking 1: 0.024 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.147 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 24 - Residential: H4 Total area (ac): 0.315
45 - Large Landscaped Areas 1: 0.315 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 25 - Residential: H5 Total area (ac): 0.333
45 - Large Landscaped Areas 1: 0.333 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 26 - Residential: H6 Total area (ac): 0.153
45 - Large Landscaped Areas 1: 0.153 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 27 - Residential: I* Total area (ac): 1.289
45 - Large Landscaped Areas 1: 1.289 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

LU# 28 - Residential: J* Total area (ac): 0.352
31 - Sidewalks 1: 0.031 ac. Connected Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.321 ac. Normal Silty Source Area PSD
File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - DS Biofilters # 1

1. Top area (square feet) = 1505
2. Bottom area (square feet) = 521
3. Depth (ft): 3.5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 8
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.01
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.33
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 5
3. Height of datum to bottom of weir opening: 3

Control Practice 2: Wet Detention Pond CP# 1 (DS) - Dry Pond 1

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 0

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.33

2. Number of orifices: 1

3. Invert elevation above datum (ft): 0

Outlet type: Orifice 2

1. Orifice diameter (ft): 0.5

2. Number of orifices: 1

3. Invert elevation above datum (ft): 3

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 3

2. Weir crest width (ft): 0.1

3. Height from datum to bottom of weir opening: 3.75

Pond stage and surface area

Outflow (cfs)	Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other
0.00	0	0.00	0.0000	0.00	
0.00	1	0.01	0.6160	6.00	
0.00	2	1.00	0.6850	0.00	
0.00	3	2.00	0.7560	0.00	
0.00	4	3.00	0.8270	0.00	
0.00	5	4.00	0.9000	0.00	

Control Practice 3: Upflo Filter CP# 1 (DS) - DS UpfloFilter # 1

Media Type: CPZ

Fraction of Area Served by Upflo Filters (0-1): 1.0

Height from Outlet Invert to Structure Top (ft): 4.5

Sump Depth (ft): 2.00

The program will determine the Sump Cleaning/Filter Replacement Frequency
Solve for Given Conditions

Number of filters: 6

Control Practice 4: Grass Swale CP# 1 (DS) - South Campus East Swale

Total drainage area (acres)= 18.830

Fraction of drainage area served by swales (ac) = 1.00
Swale density (ft/ac) = 0.00
Total swale length (ft) = 396
Average swale length to outlet (ft)= 313
Typical bottom width (ft) = 4.0
Typical swale side slope (_H:1V) = 3.0
Typical longitudinal slope (ft.H/ft.V) = 0.077
Swale retardance factor: C
Typical grass height (in) = 6.0
Swale dynamic infiltration rate (in/hr)= 0.000
Typical swale depth (ft) for cost analysis (optional) = 0.0
Particle size distribution file name: Not needed - calculated by program
Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 5: Upflo Filter CP# 2 (DS) - DS UpfloFilter # 2

Media Type: CPZ

Fraction of Area Served by Upflo Filters (0-1): 1.0

Height from Outlet Invert to Structure Top (ft): 4.5

Sump Depth (ft): 2.00

The program will determine the Sump Cleaning/Filter Replacement Frequency
Solve for Given Conditions

Number of filters: 10

Control Practice 6: Grass Swale CP# 2 (DS) - South Berm Swale

Total drainage area (acres)= 2.788

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 265

Average swale length to outlet (ft)= 213

Typical bottom width (ft) = 0.0

Typical swale side slope (_H:1V) = 3.0

Typical longitudinal slope (ft.H/ft.V) = 0.008

Swale retardance factor: C

Typical grass height (in) = 6.0

Swale dynamic infiltration rate (in/hr)= 0.000

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 7: Grass Swale CP# 3 (DS) - West Swale

Total drainage area (acres)= 2.081

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 480

Average swale length to outlet (ft)= 313

Typical bottom width (ft) = 0.0

Typical swale side slope (_H:1V) = 3.0
 Typical longitudinal slope (ft.H/ft.V) = 0.013
 Swale retardance factor: C
 Typical grass height (in) = 6.0
 Swale dynamic infiltration rate (in/hr)= 0.000
 Typical swale depth (ft) for cost analysis (optional) = 0.0
 Particle size distribution file name: Not needed - calculated by program
 Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 8: Wet Detention Pond CP# 2 (DS) - Infiltration Basin 1
 Particle Size Distribution file name: Not needed - calculated by program
 Initial stage elevation (ft): 0
 Peak to Average Flow Ratio: 3.8
 Maximum flow allowed into pond (cfs): No maximum value entered
 Outlet Characteristics:

Outlet type: Broad Crested Weir
 1. Weir crest length (ft): 3
 2. Weir crest width (ft): 0.1
 3. Height from datum to bottom of weir opening: 9.75

Pond stage and surface area

Outflow (cfs)	Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other
0.00	0	0.00	0.0000	0.00	
0.00	1	0.01	0.0260	6.00	
0.00	2	1.00	0.0380	0.00	
0.00	3	2.00	0.0510	0.00	
0.00	4	3.00	0.0680	0.00	
0.00	5	4.00	0.0860	0.00	
0.00	6	5.00	0.1000	0.00	
0.00	7	6.00	0.1290	0.00	
0.00	8	7.00	0.1530	0.00	
0.00	9	8.00	0.1800	0.00	
0.00	10	9.00	0.2080	0.00	
0.00	11	10.00	0.2380	0.00	

Control Practice 9: Grass Swale CP# 4 (DS) - South Campus West Swale

Total drainage area (acres)= 5.486
 Fraction of drainage area served by swales (ac) = 1.00
 Swale density (ft/ac) = 0.00
 Total swale length (ft) = 218
 Average swale length to outlet (ft)= 213
 Typical bottom width (ft) = 0.0
 Typical swale side slope (_H:1V) = 5.0
 Typical longitudinal slope (ft.H/ft.V) = 0.009
 Swale retardance factor: C
 Typical grass height (in) = 6.0
 Swale dynamic infiltration rate (in/hr)= 0.000
 Typical swale depth (ft) for cost analysis (optional) = 0.0
 Particle size distribution file name: Not needed - calculated by program
 Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 10: Wet Detention Pond CP# 3 (DS) - Dry Pond 3

Particle Size Distribution file name: Not needed - calculated by program
 Initial stage elevation (ft): 0
 Peak to Average Flow Ratio: 3.8
 Maximum flow allowed into pond (cfs): No maximum value entered
 Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 0

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 20
2. Weir crest width (ft): 20
3. Height from datum to bottom of weir opening: 3.75

Pond stage and surface area

Outflow (cfs)	Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other
0.00	0	0.00	0.0000	0.00	
0.00	1	0.01	0.2200	6.00	
0.00	2	1.00	0.2600	0.00	
0.00	3	2.00	0.3020	0.00	
0.00	4	3.00	0.3460	0.00	
0.00	5	4.00	0.3920	0.00	

0.00

Control Practice 11: Grass Swale CP# 5 (DS) - South Campus Road East Swale

Total drainage area (acres)= 1.002

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 415

Average swale length to outlet (ft)= 313

Typical bottom width (ft) = 3.0

Typical swale side slope (_H:1V) = 4.0

Typical longitudinal slope (ft.H/ft.V) = 0.005

Swale retardance factor: C

Typical grass height (in) = 6.0

Swale dynamic infiltration rate (in/hr)= 0.000

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 12: Grass Swale CP# 6 (DS) - South Campus Road West Swale

Total drainage area (acres)= 1.247

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 475

Average swale length to outlet (ft)= 313

Typical bottom width (ft) = 3.0

Typical swale side slope (_H:1V) = 4.0

Typical longitudinal slope (ft.H/ft.V) = 0.004

Swale retardance factor: C

Typical grass height (in) = 6.0

Swale dynamic infiltration rate (in/hr)= 0.000

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 13: Wet Detention Pond CP# 4 (DS) - Dry Pond 2

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 0

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.5

2. Number of orifices: 1

3. Invert elevation above datum (ft): 0

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 3
2. Weir crest width (ft): 0.1
3. Height from datum to bottom of weir opening: 2.75

Pond stage and surface area

Outflow (cfs)	Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other
0.00	0	0.00	0.0000	0.00	
0.00	1	0.01	0.2400	1.00	
0.00	2	1.00	0.2700	0.00	
0.00	3	1.50	0.2900	0.00	
0.00	4	2.00	0.3100	0.00	
0.00	5	3.00	0.3500	0.00	

Control Practice 14: Grass Swale CP# 7 (DS) - East Swale

Total drainage area (acres)= 5.878

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 706

Average swale length to outlet (ft)= 313

Typical bottom width (ft) = 4.0

Typical swale side slope (_H:1V) = 3.0

Typical longitudinal slope (ft.H/ft.V) = 0.016

Swale retardance factor: C

Typical grass height (in) = 6.0

Swale dynamic infiltration rate (in/hr)= 0.000

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration

calculations: True

Control Practice 15: Upflo Filter CP# 3 (DS) - DS UpfloFilter # 3

Media Type: CPZ

Fraction of Area Served by Upflo Filters (0-1): 1.0

Height from Outlet Invert to Structure Top (ft): 4.5

Sump Depth (ft): 2.00

The program will determine the Sump Cleaning/Filter Replacement Frequency

Solve for Given Conditions

Number of filters: 10