

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....

No

Design Point: storm

P=

1.00

inch

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Description
1	1.20	0.58	48%	0.48	2,114	Dry Swale
2	1.08	0.16	15%	0.19	731	Dry Swale
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	2.28	0.74	33%	0.34	2,845	Subtotal 1
Total	2.28	0.74	33%	0.34	2,845	Initial WQv

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area	Contributing Impervious Area	Notes
	(Acre)	(Acre)	
Conservation of Natural Areas	0.00	0.00	minimum 10,000 sf
Riparian Buffers	0.00	0.00	maximum contributing length 75 feet to 150 feet
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	Up to 100 sf directly connected impervious area may be subtracted per tree
Total	0.00	0.00	

Recalculate WQv after application of Area Reduction Techniques

	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Runoff Coefficient Rv	WQv (ft ³)
"<<Initial WQv"	2.28	0.74	33%	0.34	2,845
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	2.28	0.74	33%	0.34	2,845
Disconnection of Rooftops		0.10			
Adjusted WQv after Area Reduction and Rooftop Disconnect	2.28	0.64	28%	0.30	2,505
WQv reduced by Area Reduction techniques					340

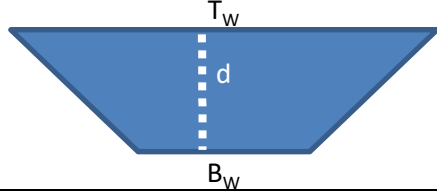
Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techniques/Standard SMPs		Total Contributing Area	Total Contributing Impervious Area	WQv Reduced (RRv)	WQv Treated
			(acres)	(acres)	cf	cf
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.10		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	1.08	0.16	0	731
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	1.08			
	Bioretention & Infiltration Bioretention	F-5	0.00	0.00	0	0
	Dry swale	O-1	2.28	0.64	2505	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4)	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2)	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction →			0.00	0.10	340	
Totals by Volume Reduction →			0.00	0.00	0	
Totals by Standard SMP w/RRV →			4.44	0.80	2505	731
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			4.44	0.91	2,845	731
	Impervious Cover v	error				

NOI QUESTIONS

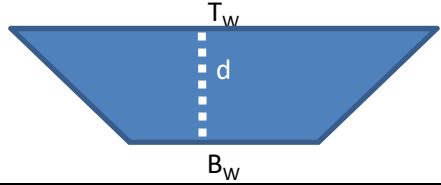
#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	2845	0.065
30	Total RRV Provided	2845	0.065
31	Is RRV Provided \geq WQv Required?	Yes	
32	Minimum RRV	923	0.021
32a	Is RRV Provided \geq Minimum RRV Required?	Yes	
33a	Total WQv Treated	731	0.017
34	Sum of Volume Reduced & Treated	3576	0.082
34	Sum of Volume Reduced and Treated	3576	0.082
35	Is Sum RRV Provided and WQv Provided \geq WQv Required?	Yes	

Apply Peak Flow Attenuation			
36	Channel Protection	C_{pv}	
37	Overbank	Q_p	
37	Extreme Flood Control	Q_f	
	Are Quantity Control requirements met?	Yes	Plan Completed

Dry Swale Worksheet

Design Point:	storm						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
1	1.20	0.58	0.48	0.48	2114.41	1.00	Dry Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.10	40%	0.41	1,775	<<WQv after adjusting for Disconnected Rooftops	
Pretreatment Provided					Pretreatment Technique		
Pretreatment (10% of WQv)			177	ft ³	Veg Buffer		
Calculate Available Storage Capacity							
Bottom Width	6	ft	Design with a bottom width no greater than eight feet to avoid potential gullyng and channel braiding, but no less than two feet				
Side Slope (X:1)	4	Okay	Channels shall be designed with moderate side slopes (flatter than 3:1) for most conditions. 2:1 is the absolute maximum side slope				
Longitudinal Slope	2%	Okay	Maximum longitudinal slope shall be 4%				
Flow Depth	1.5	ft	Maximum ponding depth of one foot at the mid-point of the channel, and a maximum depth of 18" at the end point of the channel (for storage of the WQv)				
Top Width	18	ft					
Area	18.00	sf					
Minimum Length	89	ft					
Actual Length	400	ft					
End Point Depth check	1.00	Okay	A maximum depth of 18" at the end point of the channel (for storage of the WQv)				
Storage Capacity	7,377	ft ³					
Soil Group (HSG)			B				
Runoff Reduction							
Is the Dry Swale contributing flow to another practice?			No	Select Practice			
RRv	1,775	ft³	Runoff Reduction equals 40% in HSG A and B and 20% in HSG C and D up to the WQv				
Volume Treated	0	ft ³	This is the difference between the WQv calculated and the runoff reduction achieved in the swale				
Volume Directed	0	ft ³	This volume is directed another practice				
Volume V	Okay		Check to be sure that channel is long enough to store WQv				

Dry Swale Worksheet

Design Point:	storm						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
2	1.08	0.16	0.15	0.19	730.80	1.00	Dry Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	15%	0.19	731	<<WQv after adjusting for Disconnected Rooftops	
Pretreatment Provided					Pretreatment Technique		
Pretreatment (10% of WQv)			73	ft ³	Veg Buffer		
Calculate Available Storage Capacity							
Bottom Width	6	ft	Design with a bottom width no greater than eight feet to avoid potential gullyng and channel braiding, but no less than two feet				
Side Slope (X:1)	4	Okay	Channels shall be designed with moderate side slopes (flatter than 3:1) for most conditions. 2:1 is the absolute maximum side slope				
Longitudinal Slope	2%	Okay	Maximum longitudinal slope shall be 4%				
Flow Depth	1.5	ft	Maximum ponding depth of one foot at the mid-point of the channel, and a maximum depth of 18" at the end point of the channel (for storage of the WQv)				
Top Width	18	ft					
Area	18.00	sf					
Minimum Length	37	ft					
Actual Length	100	ft					
End Point Depth check	1.00	Okay	A maximum depth of 18" at the end point of the channel (for storage of the WQv)				
Storage Capacity	1,873	ft ³					
Soil Group (HSG)			B				
Runoff Reduction							
Is the Dry Swale contributing flow to another practice?			No	Select Practice			
RRv	731	ft³	Runoff Reduction equals 40% in HSG A and B and 20% in HSG C and D up to the WQv				
Volume Treated	0	ft ³	This is the difference between the WQv calculated and the runoff reduction achieved in the swale				
Volume Directed	0	ft ³	This volume is directed another practice				
Volume V	Okay		Check to be sure that channel is long enough to store WQv				

Dry Swale Worksheet

Total RRV	2,505.45
Total Area	2.28
Total Impervious Area	0.64
Total Volume Treated	0.00
Rooftop Disconnect Impervious Area Total	0.10