Project Name: Barre City/Barre Town MEGC M 6000(11) Version: 5/4/2017 Discharge Point: 1 Dry Swale # 1 Dry Swale (4.3.2) **Practice Drainage Area** ft^3 1 Total Area (acres) 1.514Acre-feet 2 0.863 WQ_V to practice 0.071 3094 Impervious Area (acres) Designed to Infiltrate? • Yes O No 3 O n∕a Designed to Infiltrate Modified CN for WQ (1.0") О No 4 95 $>WQ_V$

storm

* Questions preceded by an asterix (*) may change based on previously entered values

• Yes

	Feasibility (4.3.2.1)	Response	Attachment location
5	Is the maximum longitudinal slope of the swale ≤5% without check dams or similar grade controls or ≤6% with grade controls?	🖲 Yes 🔾 No	Attachment 5
U	Is the SHGWT separated three (3) feet or more from the bottom of the practice?	🖲 Yes 🔾 No	Attachment 1
7*	Has the infiltration rate (fc) of the underlying soil been confirmed to be at least 0.2 inches per hour by the soil testing requirements in Section 4.3.3.2?	● Yes ○ No	Attachment 1

	Conveyance (4.3.2.2)	Response	Attachment location
8	Has an underdrain been provided? (required if the underlying soils have an infiltration rate of less than 0.2 inches per hour)	🔾 Yes 🖲 No	
9*		● Yes O No	
10	Is the peak velocity for the 1-year storm non-erosive (3.5-5 fps)?	● Yes O No	Attachment 4
11	Does the swale have the capacity to convey the 10-year, 24-hour storm safely with 6 inches of freeboard?	🖲 Yes 🔾 No	Attachment 4
	Have the outfalls and the conveyance to the discharge point been designed/protected to avoid erosive velocities?	● Yes ○ No	Attachment 5
13	Does the swale have a trapezoidal or parabolic cross section with side slopes ≤ 2H:1V?	● Yes ○ No	Attachment 5
14	Are check dams being used?	● Yes ○ No	Attachment 5
15*	Have the checkdams been designed in conformance with Section 4.3.2.2?	● Yes ○ No	Attachment 5

	Pre-Treatment (4.3.2.3)		Response	Attachment location
16	Has pretreatment been provided for non-roofto	p runoff?	● Yes ○ No	Attachment 5
17	What type of pretreatment is being used?	Swale Forebay (10% WQv) Filter Strip Deep Sump Catch		Attachment 5

Treatment (4.3.2.4) Response Attachment location
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18	What type filter media is being used?	O Bioretention Mix (Section 4.3.1.4) Sand (ASTM C-33)		Attachment 5
19*			● Yes () No	
20	Is the swale bottom 2-8 feet wide, or have meas erosion been provided if the swale bottom is wi	ures to prevent braiding and der than 8 feet?	● Yes ○ No	Attachment 5

	Treatment Volume Calculation - Dry Swale without Underdrain		Response	Attachment location
21	What is the forebay volume? (optional) (4	ft ³)		
22	What is the surface area of the filter bed/ swale bottom? $A_{\rm f}$ (ft²)	500	Attachment 5
23	What is the depth of the filter bed? (2-4 feet) $d_{\rm f}$	(ft)	2	Attachment 5
24	What is the coefficient of permeability of the filter media? $k (ft/d)$	ay)	3.5	Attachment 5
25	What is the average height of water above the filter bed? $h_{\rm f}$	(ft)	0.5	Attachment 4
26	What is the design filter bed drain time? (≤ 2 days) t_f (da	ys)	2	Attachment 4
27*	Treatment Volume	Tv	4375	ft ³
28*	Treatment Volume	Tv	0.100	ac-ft

 \uparrow Enter this value on the Standards

Compliance Worksheet

Treatment Volume Calculation- Dry Swale with Underd	rain	Response	Attachment location
29*	A_{f} (ft ²)		
30 * Underdrain not used (question 8). This section not required.	(ft)		
31*	porosity		
32*		0	ft ³
33*			ac-ft

Landscaping (4.3.2.5)	Response	Attachment location
Does the site plan specify a landscaping plan that ensures dense and vigorous vegetation over the contributing pervious drainage areas and the practice?	● Yes ○ No	Attachment 5

<u>Attachment location</u>: Indicate the specific location (i.e. appendix, page, plan sheet) where the requisite support documentation has been provided within the application.

Post-Construction Soil Depth and Quality Standard

	Feasibility (3.1)	Response	Attachment location
1	Have all areas of disturbance within the site that are subject to the Post- Construction Soil Depth and Quality Standard been identified on a plan sheet? This includes all disturbed areas on slopes ≤ 33% which are not covered by an impervious surface, part of a structural stormwater treatment practice, or engineered as structural fill once development is complete.	● Yes ○ No	Attachment 5
2	Have all areas that will not be disturbed and areas exempt from the Standard, including the reason for the exemtion, been identified on a plan sheet?	● Yes ○ No	Attachment 5

	Treatme	nt (3.2)	Attachment Location
	Is the min	imum topsoil depth specified as:	
3	\checkmark	4 inches	Attachment 5
		The depth of the 0 and A horizons on the NRCS Official Soil Series Description of	
		the native mapped soils (provide documentation)	
	Which of	the following methods are utilized to meet soil quality requirements for this site? Option 1: Leave undisturbed native vegetation and soil, and protect from compaction during construction.	
4	\checkmark	Option 2: Amend existing site topsoil or subsoil in place.	Attachment 5
	\checkmark	Option 3: Remove and stockpile existing topsoil during grading.	Attachment 5
	V	Option 4: Import topsoil mix, or other materials for mixing, including compost, of sufficient organic content and depth.	Attachment 5

		Respor	nse	Attachment location
5	Does the site layout retain the duff layer and native topsoil in an undisturbed state to the maximum extent practicable?	• Yes	O No	Attachment 5
6	Is the organic matter content of the topsoil layer specified to be at least 4%?	• Yes	O No	Attachment 5
7	Is compost or other materials used to amend soils specified to have a C:N ratio below 25:1?	• Yes	⊖ No	Attachment 5
8	Is it specified that compost shall meet the definition of "compost" or meet the contaminant standards in the Vermont Solid Waste Management Rules?	• Yes	⊖ No	Attachment 5
9	If Exceptional Quality (EQ) biosolids are used as a soil amendment, do they comprise no more than 35% of the total volume of soil, and is it specifed that they be well mixed before or during application?	• Yes	O No	Attachment 5

	Vegetation and Landscaping (3.3)	Response	Attachment location
	Does the application include a site-specific plan for soil management that:		
10	Identifies all areas on the site subject to the standard?	● Yes O No	Attachment 5
11	Includes construction details and notes on the various methods the contractor may use to meet he Standard?	● Yes 〇 No	Attachment 5
12	Includes a statement that soil depth and quality shall be established towards the end of construction, and once established, be protected from compaction?	● Yes 〇 No	Attachment 5
	Includes instructions for contractor verification of the Standard, including a sampling scheme that includes nine 8-inch deep test holes per acre of area subject to the Standard?	● Yes ○ No	Attachment 5
14	Instructions that test holes shall be excavated using only a shovel driven soley by the inspector's weight and shall be at least 50 feet apart from each other?	● Yes 🔾 No	Attachment 5
15	Instructions to establish dense an vigorous vegetative cover over turf areas?	🖲 Yes 🔾 No	Attachment 5

<u>Attachment location</u>: Indicate the specific location (i.e. appendix, page, plan sheet) where the requisite support documentation has been provided within the application.