



VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED
 MANAGEMENT DIVISION
 LAKES & PONDS PROGRAM

Shoreland Permit Application
 for a Shoreland Protection Permit under
 Chapter 49A of Title 10, § 1441 et seq.

For Shoreland Permitting Use Only
 Application Number:

2234-SP

Public Notice: At the same time this application is filed with Shoreland Permitting, a copy of this application must be provided to the municipal clerk for posting in the municipality in which the project is located.

Submission of this application constitutes notice that the person in Section A intends to create impervious surface and/or cleared area within the Protected Shoreland Area, and certifies that the project will comply with Chapter 49A of Title 10, § 1441 et seq. All information required on this form must be provided, and the requisite fees (Section G) must be submitted made payable to the State of Vermont, to be deemed complete. Refer to The Vermont Shoreland Protection Act - A Handbook for Shoreland Development and related instructions for guidance in completing this application.

A. Parcel Information

Landowner's Name: David and Erin Perry

2a. Physical Address (911 Address): 14 Perry Landing

2b. Town - County: Franklin - Franklin

2c. Zip: 05457

3. SPAN (The School Parcel Account Number is required for your application to be deemed complete. It can be obtained from your property tax bill. If you cannot locate your property tax bill, please obtain this information from your Town Clerk) : 23407510666

4. Phone: 434-825-1378

5. Email: perryprojects2016@gmail.com

6. Name of Lake/Pond: Carmi Lake - Franklin

7. Total Shore Frontage 60 (Feet)

8. Was the parcel of land created before July 1, 2014? Yes No

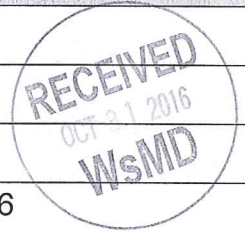
9. Are there wetlands associated with this parcel? Yes No
 Contact the Wetlands Program (802) 828-1535 or <http://dec.vermont.gov/watershed/wetlands>

10. Have you ever applied for a permit with the Department of Environmental Conservation associated with this parcel? Yes No

11. What is the surface area of your parcel within the Protected Shoreland Area (PSA): 12,600 (square feet)
 See the Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix C, Determining Lakeside Zone & PSA

12. What is the surface area of existing impervious surface on your parcel within the PSA: 2433 (square feet)
 See the Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix F, Calculating Percent Impervious Surface

13. What is the surface area of existing cleared are on your parcel within the PSA: 11,520 (square feet)
 See the Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix E, Calculating Percent Clearing



B. Applicant Contact Information

1. Name: David and Erin Perry

2a. Mailing Address: 2295 Camargo Dr

2b. Town: Charlottesville

2c. State: VA

2d. Zip: 22901

3. Phone: 434-825-1378

4. Email: perryprojects2016@gmail.com

C. Application Preparer Information (If the individual preparing the application is not the landowner.)

1. Name: Jeff Smith

2a. Mailing Address: 2295 Camargo Dr

2b. Town: Charlottesville

2c. State: VA

2d. Zip: 22901

3. Phone: 434-825-1378

4. Email: perryprojects2016@gmail.com

D. Project Description

1. Describe the proposed project. For this application to be considered administratively complete you must attach site plans that denote existing and proposed cleared areas and impervious surface and their distances from mean water level, no fewer than three photos of the project area, and dimensions and associated surface areas of cleared areas and impervious surfaces.

Construct a new garage measuring 30ft by 36ft. Remove the existing garage consisting of 15ft by 23ft and remove gravel drive 10ft by 35ft associated with old garage.

2. For developed parcels, how far is the existing habitable structure from Mean Water Level 25 (feet), and how far will new cleared area or impervious surface be from MWL 135 (feet)?

OR
For undeveloped parcels, how far will new cleared area or impervious surface be from MWL _____ (feet)?

See the [Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix A – Estimating Mean Water Level](#)

3. Can all new cleared area or impervious surface be set back at least 100 feet from MWL? Yes No
If no, explain why below (attach support information as needed):

4a. What is the slope of the project site area: 0 %

See The [Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix B, Determining Slope](#)

4b. Is the slope of the project area less than 20%?

Yes No If yes, skip 4c.

4c. If no above (4b), describe the measures taken to ensure the slope is stable, resulting in minimal erosion and impacts to water quality (attach support information as needed):

5a. What is the surface area of new impervious surface associated with this project: 1080 (Square Feet)

See the [Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix F, Calculating Percent Impervious Surface](#).

5b. What is the total resulting impervious surface after completion of the project and prior to implementation of best management practices: 2778 (Square Feet)

For D5b, add A12 to D5a

5c. Is the total in 5b. 20% or less of the parcel area within the PSA? Yes (if yes, skip 5d.) No

If 5a is 0, check the n/a box, otherwise divide D5b by A11 and multiply by 100 for percentage. Total percentage = _____ % N/A

5d. If no above (5c), describe the best management practices used to manage, treat, and control erosion from stormwater from the portion of impervious surface that exceeds 20% (attach support information as needed):
In addition to removing the existing garage and reducing the driveway, we will construct a rain garden of appropriate size (approximately 80 sq ft) per the Vermont Rain Garden Manual and direct the rain from the roof of the new garage into the rain garden via guttering and downspouts.

6a. What is the surface area of new cleared area associated with this project: <u>0</u> (Square Feet) See the Vermont Shoreland Protection Act - A Handbook for Shoreland Development, Appendix E, Calculating Percent Clearing.	6b. What is the total resulting cleared area after completion of the project and prior to implementation of best management practices: <u>11,520</u> (Square Feet) For 6b, add A13 to 6a
6c. Is the total in 6b. 40% or less of the parcel area within the PSA? <input type="checkbox"/> Yes (if yes, skip 6d) <input checked="" type="checkbox"/> No If 6a is 0, check the n/a box, otherwise divide 6b by A11 and multiply by 100 for percentage. Total percentage = % <input type="checkbox"/> N/A	
6d. If no above (6c), establishing vegetative cover (revegetation) is the only applicable best management practice. Please describe a revegetation plan that will be equal to or greater in surface area than the proposed new cleared area as identified in 6a. Identify the location on the parcel where the revegetation will occur and how far from mean water level it will be (attach support information as needed). <u>The existing lot has been long cleared. The new garage does not create any additional cleared area. We will use native plants and grasses in the rain garden</u>	
E. Landowner Certification	
As APPLICANT, I hereby certify that the statements presented on this application are true and accurate and recognize that by signing this application, I agree to complete all aspects of the project as authorized. I understand that failure to comply with the foregoing may result in violation of the Shoreland Protection Act, 10 V.S.A. Chapter 49A, and the Vermont Agency of Natural Resources may bring an enforcement action for violations of the Act pursuant to 10 V.S.A. chapter 201.	
Applicant/Landowner Signature: <u>Eric Pige</u> Date: <u>9-21-16</u>	
F. Application Preparer Certification (if applicable)	
As APPLICATION PREPARER, I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Application Preparer Signature: <u>J. Smith</u> Date: <u>10/23/16</u>	
G. Additional Required Documentation (Please check to ensure you have completed the following)	
<input checked="" type="checkbox"/> All sections of the application are complete (or otherwise indicate "not applicable")	
<input checked="" type="checkbox"/> Application includes site plans denoting existing and proposed cleared area and impervious surface and distances from mean water level	
<input checked="" type="checkbox"/> Application description includes dimensions and surface areas of cleared areas and impervious surfaces Application includes photos of project area	
H. Permit Application Fees	
Administrative Fee: \$125.00	125
Impervious Area Fee: \$0.50 per square ft.	Enter new impervious area as entered in item (5a) <u>1080</u> x 0.5 <u>\$540</u>
Total Fee due:	<u>\$665</u>

Submit this form and application fee, payable to:
State of Vermont - Vermont Department of Environmental Conservation
Watershed Management Division - Shoreland Permitting
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

Direct all correspondence or questions to Shoreland Permitting at:
ANR.WSLMD.Shoreland@vermont.gov
Revised April 2016

For additional information visit:
http://dec.vermont.gov/watershed/lakes_ponds

one sq = 5'

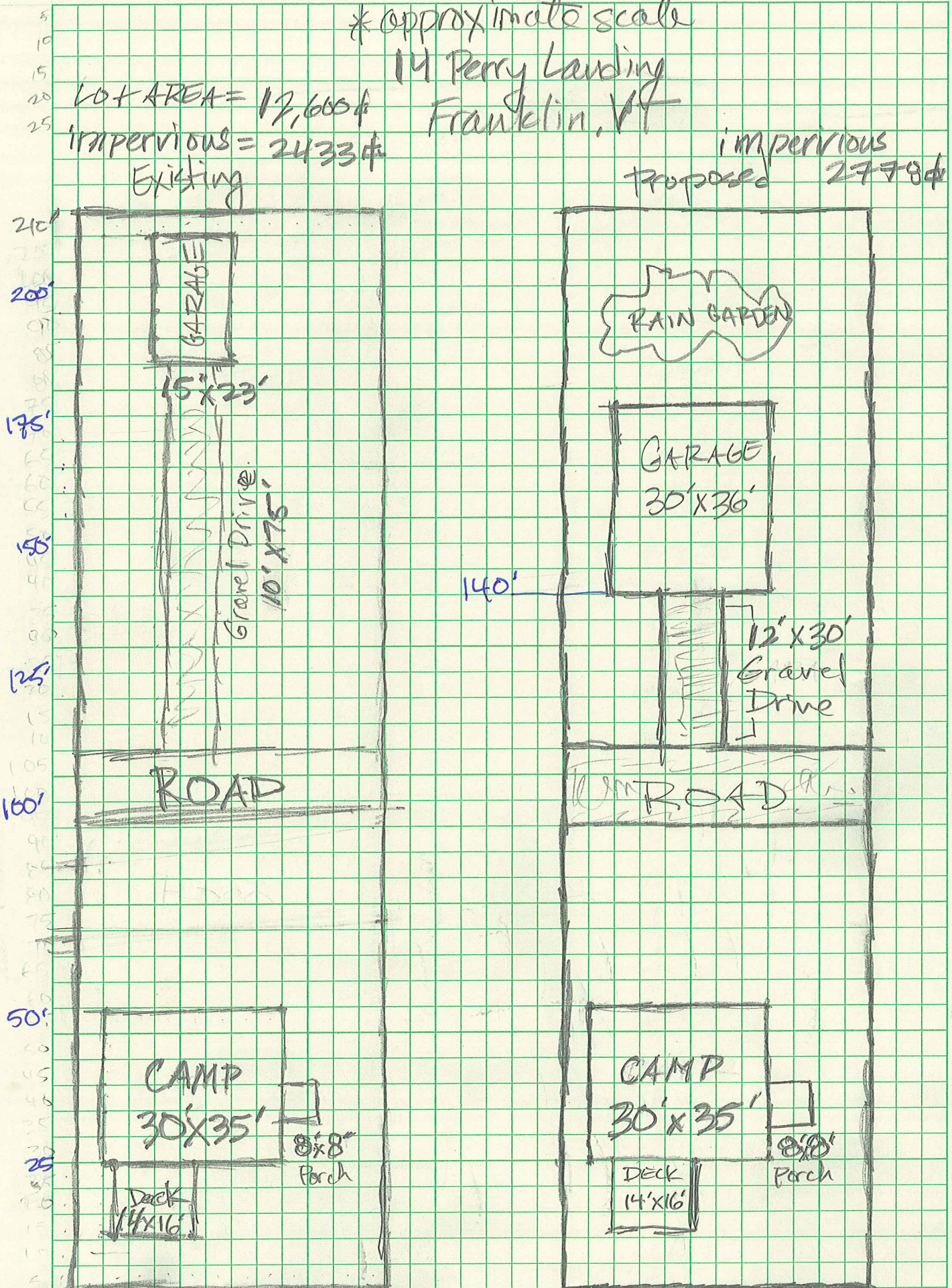
* approximate scale

14 Perry Landing
Franklin, VA

LOT AREA = 17,600 sq ft

Impervious Existing = 2433 sq ft

Impervious Proposed = 2778 sq ft

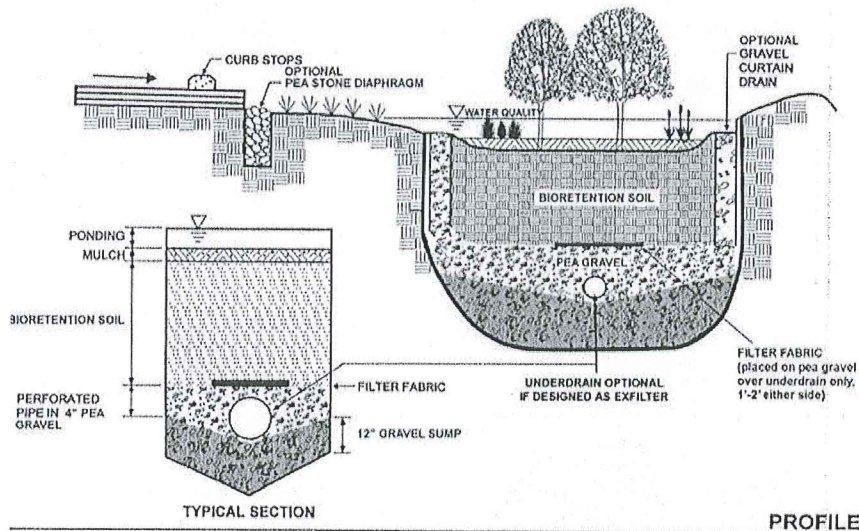


5'
10'
15'
20'
25'
240'
200'
175'
150'
125'
100'
50'

140'

0 5 10 15 20 25 30 35

50' LAKE CARMEL SHORE



TYPICAL COMPONENTS

Adapted from MDE, 2000 and RI DEM, 2010

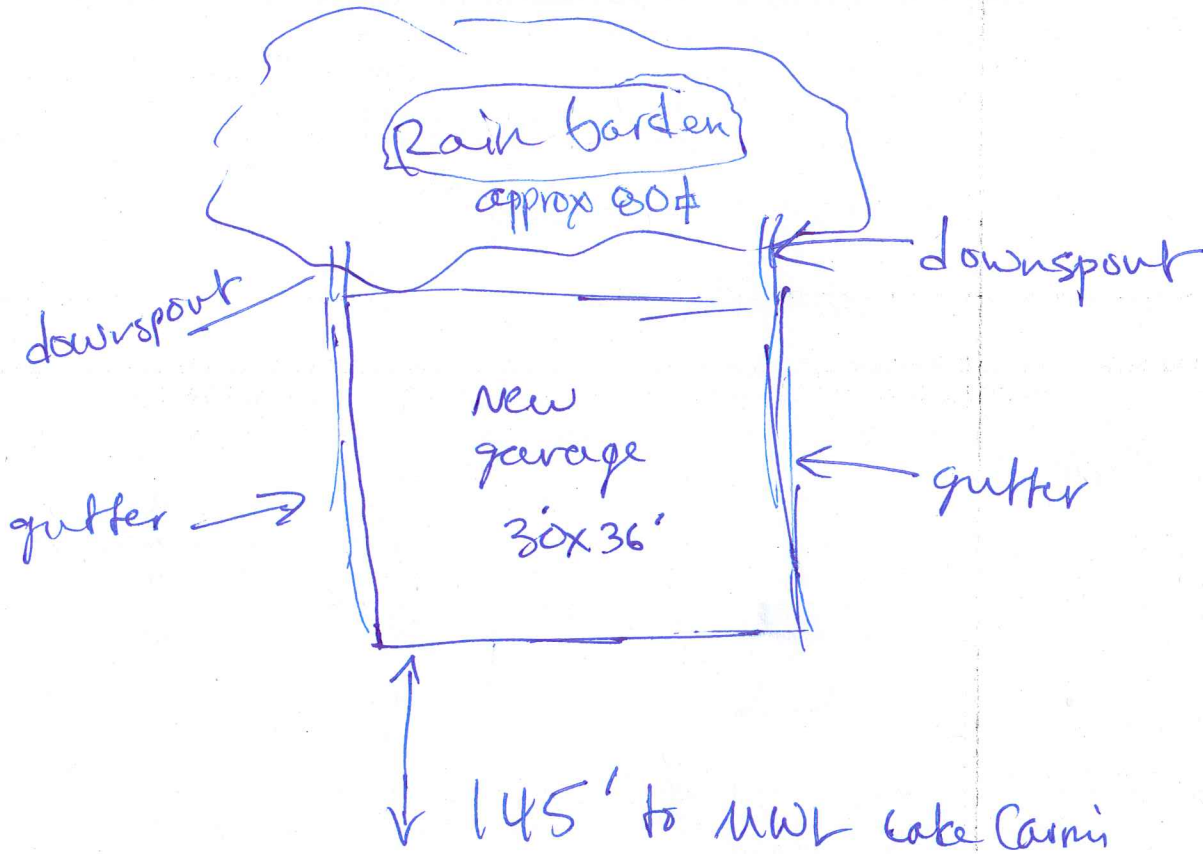
CONSTRUCTION STEPS:

1. Construction should only begin after installation of the contributing impervious surfaces has been completed. The bioretention area will fail if large volumes of construction-related sediment flow into it. Ideally, bioretention should remain outside the limit of disturbance during construction to prevent soil compaction by heavy equipment.
2. Locate rain garden(s) where downspouts or runoff from parking lots or driveways can enter the facility while flowing away from buildings and impervious surfaces. Locate at least 5-10 feet from foundations, away from buried utilities, not over septic system components, and not near the edge of a steep slope.
3. Measure the impervious area draining to the planned bioretention area and determine the required rain garden surface area from the table on the next page, based on your planned ponding depth and excavation depth.
4. Perform infiltration test according to directions in the Appendix. Underdrain is needed if rate is less than 0.5 inches/ hour.
5. Measure elevations and stake out the bioretention area dimensions and any needed pre-treatment. Ensure that positive flow will be maintained into the garden, the overflow elevation allows for 6 inches of ponding, and that the outer edge of the garden is higher than the down-slope overflow point. If garden is on a slope, a berm two feet wide can be constructed on the downhill side and/ or the garden can be dug into the hillside, taking greater care for erosion control at the garden inlet(s).
6. Remove turf or other vegetation in the area of the rain garden (if any exists). Excavation work should be completed from the sides, to excavate the bioretention area to its appropriate design depth and dimensions. Excavating equipment should never sit inside the rain garden footprint. Level bottom of garden as much as possible to maximize infiltration area.
7. If an underdrain is needed, place at least 3 inches of #57 stone on the bottom, install the perforated underdrain pipe (6" diameter Schedule 40 perforated PVC pipe), pack #57 stone to 3 inches above the underdrain pipe, and add approximately 3 inches of choker stone as a filter between the underdrain and the soil media layer.
8. Mix sand, topsoil, and compost together to make the 'bioretention soil mix'. The soil mix should be mostly sand (85- 88%) with a little silt (8-12%), clay (0-2%), and organic matter in the form of compost (3-5%).
9. Install the soil media in 12-inch lifts until the desired top elevation of the bioretention area is reached. The soil media can be compacted by saturating it with water, or the depth of soil media can be increased by 10% to allow for settling. These lifts should not be mechanically compacted. Leave the surface eight to 12 inches below your highest surrounding surface. Eight inches allows for 6 inches ponding and 2" of mulch. The surface of the rain garden should be as close to level as possible.
10. If needed, build a berm at the downhill edge and sides of the rain garden with the remaining subsoil. The top of the berm needs to be level, and set at the maximum ponding elevation.
11. Create an overflow and ensure it is protected from erosion.
12. Build the inlet feature as appropriate for your application. Examples include a pipe connected to a downspout, a rock lined swale with a gentle slope, a newly constructed or retrofit curb-cut, or a manufactured pre-treatment device like a Rain Guardian. For rain gardens constructed near structures, an impermeable liner under the rocks at the end of the swale near the structure is recommended to keep water from soaking in close to the foundation.
13. Prepare planting holes for any trees or shrubs, and plant the woody vegetation. Plant the rest with a selection of herbaceous plants.
14. Place the surface cover in the rain garden area (hardwood mulch, river stone or turf), depending on the design.
15. Water all plants thoroughly. Regular watering will likely be needed to establish plants, especially during the first growing season.

<p>GREEN STORMWATER INFRASTRUCTURE SIMPLIFIED SIZING TOOL FOR SMALL PROJECTS</p>	<p>NAME/ ADDRESS: <i>David and Erik Perry 14 Perry Landing Franklin, VT</i></p>	<p>BIORETENTION AND RAIN GARDENS SPECIFICATIONS PAGE 1 OF 2</p>
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SKETCH LAYOUT

PROVIDE PLAN VIEWS OF BIORETENTION/RAIN GARDEN AND STRUCTURE OR GROUND-LEVEL IMPERVIOUS COVER, SHOWING DRAINAGE AREAS DIRECTED TO BIORETENTION, KEY DIMENSIONS AND CONNECTIONS, AND OVERFLOW



SIZING CALCULATION:

Total impervious surface area (square feet)	Depth of Bioretention Soil Mix (Inches)			
	18	24	30	36
100	8.3	7.2	6.3	5.7
500	40	35	30	25
1000	80	75	65	60
2000	165	145	125	115
3000	250	215	190	170
4000	335	290	250	225
5000	415	360	315	285
7500	625	540	475	425
10000	835	720	635	565

MEASURE CONTRIBUTING IMPERVIOUS AREA, AND READ AREA FOR GIVEN MEDIA DEPTH. DESIGN TABLE ASSUMES 6 INCHES OF PONDING AND 0.5 INCHES/HOUR INFILTRATION RATE. USE THE CALCULATOR TO ADJUST MEDIA DEPTH, PONDING DEPTH, & INFILTRATION RATE.

CONTRIBUTING IMPERVIOUS AREA: 1080 SQ. FT. (MAX. 10,000)

Infiltration rate: 0.5 inches / hour (min. 0.5)

Depth of soil media: 18" inches (24-36)

Ponding depth: 6" inches (6-9)

Bioretention filter bed bottom surface area: 80 sq. ft.

MAINTENANCE:

1. Irrigate vegetation as needed, especially in the first season.
2. Remove weeds and invasive species.
3. Remove and replace unsuccessful plantings.
4. Replenish mulch if used.
5. Stabilize eroded areas and re-seed or replant.
6. Remove sediment and debris from curb cuts, forebays, or other pre-treatment annually or when flow to garden is blocked.
7. Rake clogged surface or remove silt from surface to restore infiltration.
8. Monitor for appropriate drainage; if garden does not drain an underdrain may be necessary.

