

Exhibit CS-BW-61

Docket 8302

Exhibit CS-SMM-7

Project Construction General Permit

3-9020 NOI

Notice of Intent (NOI)

for Stormwater Discharges Associated with
Construction Activity on

Moderate Risk Sites

Under Vermont Construction General Permit 3-9020

For Department Use Only
NOI Number: _____



Submission of this completed Notice of Intent (NOI) constitutes notice that the entity in Section A intends to be authorized to discharge pollutants to waters of the State, from the project identified in Section E, under Vermont's Construction General Permit (CGP). Submission of this NOI also constitutes notice that the party identified in Section A of this form has read, understands and meets the eligibility conditions of the CGP; has determined that the project qualifies for coverage as a Moderate Risk project in conformance with Appendix A of the CGP; agrees to comply with all applicable terms and conditions of the CGP; understands that continued authorization under the CGP is contingent on maintaining eligibility for coverage; and, that the applicable practices within the authorized Erosion Prevention and Sediment Control Plans must be implemented and maintained for the duration of construction activities. In order to be granted coverage, all information required on this form must be provided and an application fee of \$360 payable to the State of Vermont must be submitted.

A. Landowner Information

1a. Name: PLH LLC 1b. Contact (if applicable): Steve Broyer
2. Mailing Address
a. Street/P.O. Box: 222 South 9th Street, Suite 1600 (ZIP 55402)
b. City/Town: Minneapolis c. State: Minnesota d. Zip: _____
3. Contact Information
a. Phone: 612-326-1500 b. Fax: NA c. Email: steve.broyer@ecosrenewable.com

B. Principal Operator Information (if known)

1. Name: _____
2. Mailing Address
a. Street/P.O. Box: _____
b. City/Town: _____ c. State: _____ d. Zip: _____
3. Contact Information
a. Phone: _____ b. Fax: _____ c. Email: _____

C. On-Site Plan Coordinator Information (if known)

1. Name: Watershed Consulting Associates, LLC AND SMM Engineering, LLC
2. Mailing Address:
a. Street/P.O. Box: Watershed Consulting Associates, LLC AND SMM Engineering, LLC
b. City/Town: Burlington c. State: VT d. Zip: 05406
3. Contact Information
a. Phone: (802) 497-2367 b. Fax: _____ c. Email: andres@watershedca.com

D. EPSC Plan Preparer Information

1. Name: Watershed Consulting Associates, LLC AND SMM Engineering, LLC
2. Mailing Address
a. Street/PO Box: PO Box 4413 (WCA) PO Box 5517 (SMM Engineering)
b. City/Town: Burlington c. State: VT d. Zip: 05406
3. Contact Information
a. Phone: (802) 497-2367 b. Fax: _____ c. Email: andres@watershedca.com

D. Project Information

1. Project Name: Chelsea Solar

2a. Is this project part of a Common Plan of Development¹? ☐ Yes ☒ No

2b. If Yes, Name of Development: _____

3a. Does this project have any previously issued or pending stormwater discharge permits? ☐ Yes ☒ No

3b. If Yes, Prior NOI Number(s): _____

4. Location Address

a. Street: Willow Road

b. City/Town: Bennington

c. Latitude: 42 ° 54 ' 31.554 "

d. Longitude: -73 ° 12 ' 19.6194 "

e. County: Bennington

➡ Use DEC's Waterbody Identification (WBID) ArcGIS webpage ([click here](#)) to answer questions 5 and 6 below.

5. Name of receiving water(s)²: VT01-03 (Walloomsac River)

6. Include a topographic location map.

7. Project Type: ☒ Residential ☐ Commercial ☐ Industrial ☒ Other: Solar Power Development

8. Total Area of Disturbance: 15.21 acres 9. Description of construction activities to be permitted (below):

Construction of an access road and installation of solar panels. Project will require clearing forested land to create fields in which to install panels. Access road will re surface an existing road (Willow Hill Rd) and extend it into the project area.

E. Public Notice Requirement

You must provide a copy of this complete NOI and related Appendix A to the municipal clerk for posting in the municipality in which the project is located. If the project and the related discharge(s) are located in different municipalities, then the completed NOI must be filed with the municipal clerk in each municipality. The municipal clerk must post the completed NOI. In order to be considered complete, you **must include the date of posting.**

Date of Posting at Municipal Office(s): _____

Information for the Municipal Clerk regarding posting instructions can be found on **Page 4** of this NOI.

F. Certification Relating to the Accuracy of the Information Submitted

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. I also certify that the Erosion Prevention and Sediment Control Plan authorized with this Notice of Intent will be implemented and maintained in accordance with Construction General Permit 3-9020 (amended 2008).

Landowner Name: Steve Broyer

Title: Owner

Signature: _____ Date: _____

Principal Operator: _____ Title: _____
(if known)

Signature: _____ Date: _____

EPSC Plan Preparer: Andres Torizzo / Scott Mapes, PE
(if applicable)

Title: Consulting Hydrologist / Engineer

Signature: Andres Torizzo

Digitally signed by Andres Torizzo
DN: cn=Andres Torizzo, o=Watershed Consulting Associates, LLC, ou, email=andres@watershedca.com,
c=US
Date: 2014.08.11 14:47:35 -0500

Date: _____

¹ "Common Plan of Development" is defined within the CGP 3-9020, Appendix C – Definitions, page A-12

² "Waters of the State" (i.e. receiving water) is defined within the CGP 3-9020, Appendix C – Definitions, page A-16

For Department Use Only

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION AUTHORIZATION TO DISCHARGE

A determination has been made that the proposed construction activities qualify for coverage under General Permit 3-9020 (amended 2008) as a Moderate Risk project. Subject to the conditions of General Permit 3-9020 (amended 2008) the applicant is hereby authorized to discharge stormwater runoff from a construction site as described in this Notice of Intent Number _____-9020.

Dated this _____ day of _____, 20____

David K. Mears, Commissioner Department of Environmental Conservation

By: _____
Padraic Monks, Program Manager
Stormwater Program

PUBLIC COMMENT

Public comments concerning this Notice of Intent to discharge under CGP 3-9020 (amended 2008) are invited and must be submitted within 10 days of receipt of this Notice by the Municipal Clerk. Comments should address how the application complies or does not comply with the terms and conditions of CGP 3-9020 (amended 2008). A letter of interest should be filed by those persons who elect not to file comments but who wish to be notified if the comment period is extended or reopened for any reason. All written comments received within the time frame described above will be considered by the Department of Environmental Conservation in its final ruling to grant or deny authorization to discharge under CGP 3-9020 (amended 2008). Send written comments to:

Vermont Department of Environmental Conservation
Watershed Management Division, Stormwater Program
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

Please cite the NOI number in any correspondence.

APPEALS

Renewable Energy Projects – Right to Appeal to Public Service Board

If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the clerk of the Public Service Board within 30 days of the date of this decision. For further information, see the Public Service Board website at <http://psb.vermont.gov> or call (802) 828-2358. The address for the Public Service Board is 112 State Street Montpelier, Vermont 05620-2701.

All Other Projects – Right to Appeal to Environmental Court

Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org or call (802) 828-1660. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, Vermont 05641.

A copy of CGP 3-9020 (amended 2008) may be obtained by calling (802) 828-1535; by visiting the Department at the above address between the hours of 7:45 am and 4:30 pm; or by download from the Watershed Management Division's Web site at: www.vtwaterquality.org.

INFORMATION FOR MUNICIPAL CLERK

10 V.S.A. Chapter 47 §1263(b) provides for the public notice of an applicant's intent to discharge stormwater runoff associated with construction activity. Please post this notice and instruction sheet in a conspicuous place for 10 days from the date received. If you have any questions, contact the Watershed Management Division of the Department of Environmental Conservation at (802) 828-1535.

Submit this form and the \$360 fee to:

**Vermont Department of Environmental Conservation
Watershed Management Division, Stormwater Program
1 National Life Drive, Main 2
Montpelier, VT 05620-3522**

Construction General Permit 3-9020

Erosion Prevention and Sediment Control Plan

Summary Form



Project Information:	
Applicant Name: PLH LLC (Steve Broyer)	
Project Name: Chelsea Solar	
Application Date:	9/25/14

Plan Preparer Information:		
1.Name: Watershed Consulting Associates, LLC and SMM Engineering		
2. Mailing Address		
a. Street/PO Box: PO Box 4413 (WCA) and PO Box 5517 (SMM Engineering)		
b. City/Town: Burlington	c. State: Vermont	d. Zip: 05406
3. Contact Information		
a. Phone: 802-497-2367	b. Fax:	c. Email: andres@watershedca.com

Designer Certification

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.

I hereby certify that this Erosion Prevention and Sediment Control Plan was prepared in conformance with the requirements of DEC’s General Permit for Stormwater Runoff from Construction Sites (General Permit 3-9020) and DEC’s *The Vermont Standards and Specifications for Erosion Prevention and Sediment Control*. I also certify that I am knowledgeable in the principles and practices of erosion prevention and sediment control and possess the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity.

Signature: _____

Andres Torizzo

Digitally signed by Andres Torizzo
 DN: cn=Andres Torizzo, o=Watershed Consulting Associates, LLC, ou, email=andres@watershedca.com, c=US
 Date: 2014.08.06 06:47:44 -0500

Date: _____

General Project Information

Project Name: Chelsea Solar		
Project Town: Bennington		
Applicant Name: PLH LLC (Steve Broyer)		
Total Disturbed Area for this NOI (acres): 15.5	Total Disturbed Area as part of Larger Common Plan of Development (acres): 15.2 ☒ Not Applicable	
Project Duration (months): 12	Is winter construction planned? ☒ YES ☐ NO	Are winter EPSC requirements included? ☒ YES ☐ NO

Receiving Waters Summary

Number of receiving waters: 02	Distance from project to receiving water (feet): 20
Types: (i.e. stream, pond, wetland, etc.) streams	

Plan Components*

The submitted Erosion Prevention and Sediment Control Plan must have the following components:

☒	Pre-Construction Plan	☒	Construction Plan
☒	Stabilization Plan	☒	EPSC Details
☒	Location Map	☒	Project Description Narrative
☒	Drainage Map	☒	Minimum EPSC Plan Requirements

Each of the above plans contains the following:

☒	Project Name	☒	Designer's Name
☒	Plan Name and Number	☒	Scale Bar
☒	Revision Date	☒	North Arrow

Do not combine plan sheets or submit plans unrelated to EPSC!

Project Site Soil Summary

Enter area of disturbance by soil erodibility (acres):	Low (K< 0.22)	Moderate K(0.22<K<0.37) 15.2	High (K>0.37)
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List soil names with 0.5 acre or more of planned disturbance:
 Georgia loam, 8 to 15 percent slopes, very stony
 Stockbridge loam, 8 to 15 percent slopes, very stony

*See VT EPSC Standards and Specs, Section 3.3 for minimum plan requirements.

Discharge Area Summary

For each drainage area with disturbance of 0.5 acres or more, complete a line below.

Drainage Area	Disturbance Area (acres)	Weighted Soil K ¹ <.18, .18-.37 or >.37			Average Slope % <5, 5-15 or >15			Risk ² L, M or H	EPSC ³ A, B and/or C
		<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐		
1A	1.41	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	AB
1B	1.77	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	A
1C	1.92	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	A
1D	2.19	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	A
1E	3.73	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	A
1	3.89	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	A
2	0.29	<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☒	5 – 15% ☐	>15% ☐	L	A
		<.18 ☐	.18-.37 ☒	>.37 ☐	<5% ☐	5 – 15% ☒	>15% ☐	M	
		<.18 ☐	.18-.37 ☐	>.37 ☐	<5% ☐	5 – 15% ☐	>15% ☐		
		<.18 ☐	.18-.37 ☐	>.37 ☐	<5% ☐	5 – 15% ☐	>15% ☐		
		<.18 ☐	.18-.37 ☐	>.37 ☐	<5% ☐	5 – 15% ☐	>15% ☐		
		<.18 ☐	.18-.37 ☐	>.37 ☐	<5% ☐	5 – 15% ☐	>15% ☐		
		<.18 ☐	.18-.37 ☐	>.37 ☐	<5% ☐	5 – 15% ☐	>15% ☐		

¹ Area weighted, go to page 3.16 of the Vermont Standards and Specifications for EPSC

² Low Medium or High – Refer to Table 3.2 in Vermont Standards and Specifications for EPSC

³ Refer to Table 3.3: A = Limit Disturbed Soil, Temporary Stabilization, Small Area Sediment Control

B = Slope Protection, Runoff Control, Flow Protection

C = Large Area Sediment Control

Standard: Temporary Stabilization and Vegetation Establishment

Check all that apply

Project Name: Chelsea Solar

Designer Name: Watershed Consulting Associates

Practice

Description

Surface Roughening

☐ Location shown on plans

☐ Detail Provided

Mulching

☒ Directions on plans

☒ Directions on plans include temporary stabilization

Within 7 days of initial disturbance

☒ Not used in areas exceeding 3:1 slope

Mulch Material: hay

Application Rate: 1"

Temporary & Permanent Plantings

☐ Location shown on plans

☐ Detail Provided

☐ Seeding Deadline of September 15 on plans

Seed Mix Specified: _____

Soil Amendments

☐ Detail Provided

List Amendments Required: _____

Rolled Erosion Control Products

☐ Location shown on plans

Types of RECP specified: nag150

☒ Detail Provided

☒ Complies with manufacturer's recommendations

Construction Road Stabilization

☒ Location shown on plans

☒ Detail Provided

Other

Describe all other specified Temporary Stabilization and Vegetation Establishment Practices:

Standard: Limiting Disturbance

Check all that apply

Project Name: Chelsea Solar

Designer Name: Watershed Consulting Associate

Practice

Description

Limit Concurrent Disturbance

Maximum acres disturbed at any one time: **5**

Phasing

Number of Independent Phases:

☒ Directions to complete each phase before commencing following phase

Limits of Disturbance (LOD)

☒ Shown on plans

☒ Detail provided

☒ Silt fence not used as LOD

☒ Fence around drip line of trees

Type of barrier within 50 feet of waters of the state (including wetlands):

☒ Construction fence

☐ Snow fence

☐ Boulders

☐ Other(specify):

Other barrier type(s) called out on plans:

☐ Barrier tape

☐ Rope

☐ Flagging tape

☐ Other(specify)

Other

Describe all other specified Limiting Disturbance practices:

Standard: Runoff Control

Check all that apply

Project Name: Chelsea Solar

Designer Name: Watershed Consulting Associates,

Practice	Description
Fiber Roll	☒ Location shown on plans ☒ Detail provided
Water Bar	☐ Location shown on plans ☐ Detail provided ☐ Stable outlet provided
Check Dam	☐ Location shown on plans ☐ Side Slopes 2:1 or flatter ☐ Detail provided ☐ Spacing on plans is accurate
Diversion	☐ Location shown on plans ☐ Channel grade called out on plans ☐ Detail provided ☐ Directions for stabilization ☐ Design calculations included
Earth Dike	☐ Location shown on plans ☐ Location shown on plans ☐ Detail provided ☐ Channel grade called out on plans <u>Dike Type:</u> ☐ Type A (Drainage area < 5 Acres) ☐ Minimum cross sections on plans ☐ Type B (Drainage area < 10 Acres) ☐ Directions for stabilization
Temporary Swale	☐ Location shown on plans ☐ Outlet protection specified ☐ Detail provided ☐ Channel grade called out on plans <u>Swale Type:</u> ☐ Type A (Drainage area < 5 Acres) ☐ Minimum cross sections on plans ☐ Type B (Drainage area < 10 Acres) ☐ Directions for stabilization
Perimeter Swale	☐ Location shown on plans ☐ Outlet protection specified ☐ Detail provided ☐ Channel grade called out on plans ☐ Drainage area < 2 Acres) ☐ Minimum cross sections on plans ☐ Directions for stabilization

Standard: Slope Protection

Check all that apply

Project Name: Chelsea Solar	Designer Name: Watershed Consulting Associates, LL
Practice	Description
Rip Rap	☒ Location shown on plans ☒ Detail Provided
Retaining Wall	☐ Location shown on plans ☐ Detail Provided
Brush Layer	☐ Location shown on plans ☐ Detail Provided
Live Fascine	☐ Location shown on plans ☐ Detail Provided
Branch Packing	☐ Location shown on plans ☐ Detail Provided

Standard: Flow Protection

Check all that apply

Grassed Waterway	☐ Location shown on plans ☐ Detail Provided	☐ Calculations Included ☐ Outlet Protection Specified
Lined Outlet/ Lined Waterway	☐ Location shown on plans ☐ Detail Provided	☐ Calculations Included ☐ Designed to 10-year/24 hour storm event
Rock Outlet Protection	☒ Location shown on plans ☒ Detail Provided	☒ Location is to scale, sized ☐ Drain < 2 acres
Grade Stabilization Structure	☐ Location shown on plans ☐ Detail Provided ☐ Calculations Included	
Paved Flume	☐ Location shown on plans ☐ Detail Provided ☐ Calculations Included ☐ Designed to 10-year storm ☐ Slope < 1.5:1	

Standard: Large and Small Sediment Control

Check all that apply

Project Name: Chelsea Solar	Designer Name: Watershed Consulting Associates, LL
Practice	Description
Silt Fence	☒ Locations shown on plans ☒ Detail Provided ☒ Located on Contours ☒ Drainage Area $\leq \frac{1}{4}$ acre per 100 linear feet ☒ Not located in areas of concentrated flow ☒ Slopes $\leq 2:1$
Excavated Storm Drain Inlet Protection	Number specified: _____ ☐ Drainage Area ≤ 1 acre/ inlet ☐ Locations shown on plans ☐ Detail Provided
Fabric Drop Inlet Protection	Number specified: _____ ☐ Drainage Area ≤ 1 acre/ inlet ☐ Locations shown on plans ☐ Detail Provided
Stone and Drop Block Inlet Protection	Number specified: _____ ☐ Drainage Area ≤ 1 acre/ inlet ☐ Locations shown on plans ☐ Detail Provided
Stabilized Construction Entrance	☒ Location shown on plans ☒ Detail Provided ☒ Present at all vehicle access points to public roadways
Debris Basin	☐ Location shown on plans ☐ Detail Provided ☐ Calculations Included
Rock Dam	☐ Location shown on plans ☐ Detail Provided ☐ Calculations Included
Sediment Trap	Number specified: _____ ☐ Worksheet completed for each (Use: Page 7 of 12)
Temporary Sediment Basin	Number specified: _____ ☐ Worksheet completed for each (Use: Page 8 thru 10 of 12)

Standard: Small Area Sediment Control – Sediment Traps

Check all that apply

Project Name:Chelsea Solar

Designer Name:Watershed Consulting Associates, LLC

Practice		Description
Pipe Outlet Sediment Trap	☐ Location shown on plans ☐ Detail Provided ☐ Drainage Area ≤ 5 acres	☐ Capacity ≥ 3600 feet ³ per acre drainage area ☐ Calculations provided
Grass Outlet Sediment Trap	☐ Location shown on plans ☐ Detail Provided ☐ Drainage Area ≤ 5 acres	☐ Capacity ≥ 3600 feet ³ per acre drainage area ☐ Calculations provided
Catch Basin Sediment Trap	☐ Location shown on plans ☐ Detail Provided ☐ Drainage Area ≤ 3 acres	☐ Capacity ≥ 3600 feet ³ per acre drainage area ☐ Calculations provided
Stone Outlet Sediment Trap	☐ Location shown on plans ☐ Detail Provided ☐ Drainage Area ≤ 5 acres	☐ Capacity ≥ 3600 feet ³ per acre drainage area ☐ Calculations provided
Riprap Outlet Sediment Trap	☐ Location shown on plans ☐ Detail Provided ☐ Drainage Area ≤ 15 acres	☐ Capacity ≥ 3600 feet ³ per acre drainage area ☐ Calculations provided

Temporary Sediment Basin Summary

Check all that apply – Complete one sheet per Sediment Basin

Project Name: Chelsea Solar		Designer Name: Watershed Consulting Associates, LLC	
Drainage Area #:	Sediment Basin #:	Drainage Area Size (acres):	
Total Required Storage: _____ cubic feet		Total Storage Available: _____ cubic feet	
Class: 1 ☐ or 2 ☐			
Standard:	Class 1		Class 2
	☐ Drainage Area ≤ 100 acres		☐ Drainage Area ≤ 100 acres
	☐ Dam Height ≤ 10 ft		☐ Dam Height ≤ 15 ft
	☐ Embankment Width ≥ 8 ft		☐ Embankment Width ≥ 8 ft
	☐ Embankment Side Slopes ≤ 2:1		☐ Embankment Side Slopes ≤ 2½ :1
Plans include:	☐ Location of Basin		
	☐ Plan view of the storage basin and emergency spillway		
	☐ Existing and proposed contours		
	☐ Cross section of dam		
	☐ Cross section of principal spillway		
	☐ Cross section of emergency spillway		
	☐ Profile of emergency spillway.		
	☐ Details of pipe connections		
	☐ Details of riser to pipe connections		
	☐ Details of riser base		
	☐ Details of Anti-seep control		
	☐ Details of trash rack cleanout elevation		
	☐ Details of anti-vortex device		
	☐ Directions for final disposal of basin and collected sediment deposits		
	☐ Directions for removal of dam basin with 36 months of installation		

Temporary Sediment Basin Design

Complete one sheet per Sediment Basin – See Directions Below (page 12)

Drainage Area #:

Sediment Basin #:

Drainage Area Size (acres):

BASIN SIZE DESIGN

1. Minimum sediment storage volume = $134 \text{ yds}^3 \times \text{_____ acres of drainage area} = \text{_____ yds}^3$
2. a. Cleanout at 50 percent of minimum required volume: _____ yds^3
b. Elevation corresponding to scheduled time to clean out: _____ feet
c. Distance below top of riser: _____ feet
3. Minimum surface area is **larger** of $0.01 Q_{(1)}$ _____ or, 0.015 drainage area = _____

DESIGN OF SPILLWAYS & ELEVATIONS

Runoff

4. $Q_{p(10)} = \text{_____ cfs}$ (EFH, Ch. 2, TR-55, or Section 4; Attach runoff computation sheet)

Pipe Spillway (Q_{ps})

5. Minimum pipe spillway capacity: _____ $Q_{ps} = 0.2 \times \text{_____ acres. Drainage} = \text{_____ cfs}$

Note: If there is no emergency spillway, then required $Q_{ps} = Q_{p(10)} = \text{_____ cfs}$

6. $H = \text{_____ feet}$ Barrel length = _____ feet
7. Barrel: Diameter: _____ inches; $Q_{ps} = (Q \text{ _____} \times (\text{cor.fac.}) \text{ _____} = \text{_____ cfs}$
8. Riser: Diameter: _____ inches

Length: _____ feet

Height (h): _____ feet

Crest Elevation: _____ feet

9. Trash Rack: Diameter: _____ inches

Height: _____ inches

Emergency Spillway Design: If no spillway designed, please specify reason: _____

10. Emergency Spillway Flow ($Q_{es} = Q_p - Q_{ps}$): _____ - _____ = _____ cfs

11. Width _____ feet

H_p _____ feet

Crest elevation _____ feet

Design High Water Elevation _____ feet

Entrance channel slope _____ %

Top of Dam Elevation _____ feet

Exit channel slope _____ %

ANTI-SEEP COLLAR/ SEEPAGE DIAPHRAGM DESIGN

12. Collars: $y = \text{_____ feet}$; $z = \text{_____}:1$; pipe slope = _____ %, $L_s = \text{_____ feet}$

Use _____ collars, _____ inches square; projection = _____ feet

13. Diaphragms: Number _____ ; width _____ feet; height _____ feet

DEWATERING ORIFICE SIZING

13. $A_o = A_s \times (2h)^{0.5} = \text{_____ feet}^2$

$h = \text{_____ ft.}$; therefore use a _____ inch orifice

Temporary Sediment Basin Design Directions

1. Minimum required sediment storage volume is 134 cubic yards (3600 cubic feet) per acre from each acre of drainage area. Values larger than 134 cubic yards per acre may be used for greater protection. Compute volume using entire drainage area although only part may be disturbed.
2. The volume of a naturally shaped basin (no excavation in basin) may be approximated by the formula $V = (0.4)(A)(d)$, where V is in cubic feet, A is the surface area of the basin, in square feet, and d is the maximum depth of the basin, in feet. Volume may be computed from contour information or other suitable methods.
3. If volume of basin is not adequate for required storage, excavate to obtain the required volume.
4. The minimum surface area of the basin pool at the storage volume elevation will be the larger of the two elevations shown.
5. USDA-NRCS TR-55 or the NRCS Engineering Field Handbook – Chapter 2, are the preferred methods for runoff computation. Runoff curve numbers will be computed for the drainage area that reflects the maximum construction condition.
6. Required minimum discharge from pipe spillway equals 0.2 cfs/acre times total drainage area. (This is equivalent to a uniform runoff of 5 in. per 24 hours). The pipe shall be designed to carry Q_p if site conditions preclude installation of an emergency spillway to protect the structure.
7. Determine value of “H” from field conditions; “H” is the interval between the centerline of the outlet pipe and the emergency spillway crest, or if there is no emergency spillway, to the design high water.
8. See Standards and Specifications for Pipe Spillway Design Charts.
9. See Riser Inflow Curves in Standards and Specifications.
10. Compute the orifice size required to dewater the basin over a 10 hour period.
11. See Trash Rack and Anti-Vortex Device Design details in Standards and Specifications.
12. Compute Q_{es} by subtracting actual flow carried by the pipe spillway from the total inflow, Q_p .
13. Use appropriate tables in Standards and Specifications to obtain values of H_p , bottom width, and actual Q_{es} .
14. See Anti-Seep Collar / Seepage Diaphragm Design in Standards and Specifications.
15. Fill in design elevations. The emergency spillway crest must be set no closer to riser crest than value of h , which causes pipe spillway to carry the minimum, required Q . Therefore, the elevation difference between spillways shall be equal to the value of h , or one foot, whichever is greater. Design high water is the elevation of the emergency spillway crest plus the value of H_p , or if there is no emergency spillway, it is the elevation of the riser crest plus h required to handle the 10-year storm. Minimum top of dam elevation requires 1.0 ft. of freeboard above design high water.

**THIS PLAN TO REMAIN ON THE
CONSTRUCTION SITE AT ALL TIMES**

Erosion Prevention and Sediment Control Plan

**Chelsea Solar
Bennington, Vermont**

9-25-14

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1.0 Introduction

This plan is intended to provide erosion prevention and sediment control guidance for the Chelsea Solar Development below Apple Hill Drive in Bennington, Vermont. The intent of this plan is to provide Erosion Prevention and Sediment Control guidance during the construction of the access roads and installation of the solar panels associated with this project, as well as to provide EPSC during the construction of stormwater operational Best Management Practices that will control runoff from impervious surfaces associated with this development.

This plan is based on the requirements found in the "Vermont Standards and Specifications for Erosion Prevention and Sediment Control (2006), developed by the Vermont Department of Environmental Conservation (DEC) as a component of the permitting program for General Permit 3-9020 (2006, Amended 2008) for Stormwater Runoff from Construction Sites.

Risk analysis for this project (based on guidelines set forth in 3-9020 Appendix A) place this project in the Moderate category (total score of 2). Based on this score, an Erosion Prevention and Sediment Control Plan (EPSCP) has been prepared.

2.0 Existing Site Conditions

The site is located adjacent to the US Route 7 / VT Rt. 289 Interchange in Bennington, VT. The site is presently wooded, with few small areas of open space. Slopes on the site vary from 5-15%. Underlying soils are listed in the table below.

MUSYM	MUNAME
41C	Galway-Farmington complex, 8 to 15 percent slopes, very rocky
67C	Georgia loam, 8 to 15 percent slopes, very stony
40B	Galway-Nellis-Farmington complex, 3 to 8 percent slopes, rocky
64B	Stockbridge loam, 2 to 8 percent slopes
65C	Stockbridge loam, 8 to 15 percent slopes, very stony
66B	Georgia loam, 3 to 8 percent slopes
69B	Massena silt loam, 3 to 8 percent slopes, very stony

3.0 Project Site Water Resources

There is one mapped stream in proximity to the project. This tributary of the Walloomsac River crosses underneath the current Willow Road extension at the base of the hill leading to the proposed solar site. There will be no activity in this area other than re-graveling the existing part of Willow Road leading to the site to allow for safe passage, during construction only, of vehicles. There is also a Class II wetland primarily to the East of the stream. There are no other mapped streams on the site.

4.0 Proposed Construction

Proposed construction on site will consist of

- Installation of an access road from Apple Hill Drive
- Re-graveling of Willow Road for access to the southern part of the site
- Installation of solar panels using round concrete footings

Calculated total disturbance on the site has been calculated at 15.2 acres. Construction will proceed in four phases.

Phase 1 (access road):	4.97 ac
Phase 2 (west side panel area):	5.00 ac
Phase 3 (east side panel area):	4.95 ac
Phase 4 (Apple Hill Drive access road):	0.29 ac

5.0 Erosion Prevention and Sediment Control Practices

5.1 Temporary/Permanent Stabilization Schedule

All disturbed areas must be stabilized within 7 days of initial disturbance, after which disturbed areas must be stabilized at the end of each workday. Refer to the Stabilization notes presented on Sheet 6 for procedures for both temporary and permanent stabilization.

5.2 Silt Fence

Silt fence shall be installed down gradient of areas of disturbance, and shall be placed around all soil stockpiles. Proper silt fence installation is essential. Refer to Sheet 8 for a construction detail.

5.3 Rolled Erosion Control Products (RECP) / Stone Rip-Rap

North American Green S150 RECP is proposed for erosion control on slopes greater than or equal to 3:1, and in all areas of concentrated flow with a slope <5%. Stone rip-rap is proposed for drainage channels with a slope >5% and in areas of higher flow. Installation of these blankets and stone must be performed according to the details provided on Sheet 8.

5.4 Limits of Disturbance

The limit of disturbance shall be a 3-foot high orange “construction” safety fence or 4-inch thick construction cordon attached to trees or stakes, and shall be located along the perimeter of the construction site. The fencing will be placed onto the plans following the development of final grading. The fence shall remain in place until final stabilization is achieved. A detail is provided on Sheet 8.

5.5 Site Inspections

Site inspections shall be performed at least once every seven days, and within 24-hours of a precipitation event that causes runoff to leave the construction site. Following the completion of active construction and initial stabilization, the disturbed areas shall be evaluated once per month until a vigorous vegetative cover is achieved. The purpose of these inspections is to ensure that the measures proposed as a part of this plan are functioning properly.

5.6 Stabilized Construction Entrance

A Stabilized Construction Entrance (SCE) shall be installed at the Willow Road construction entrance. A construction detail is provided on Sheet 8. This will reduce the amount of sediment tracked offsite by construction vehicles.

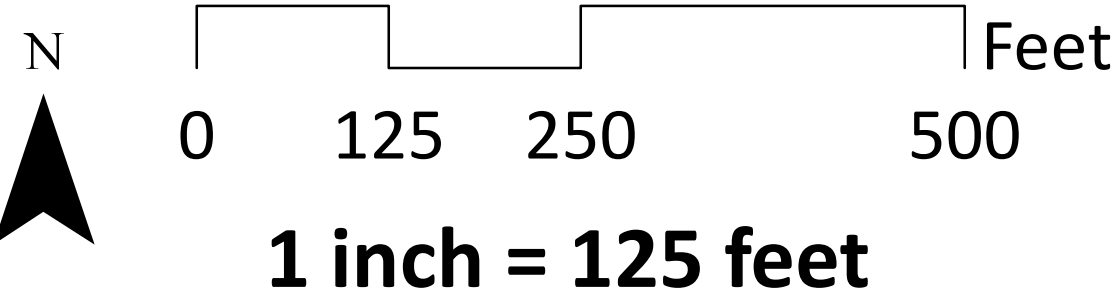
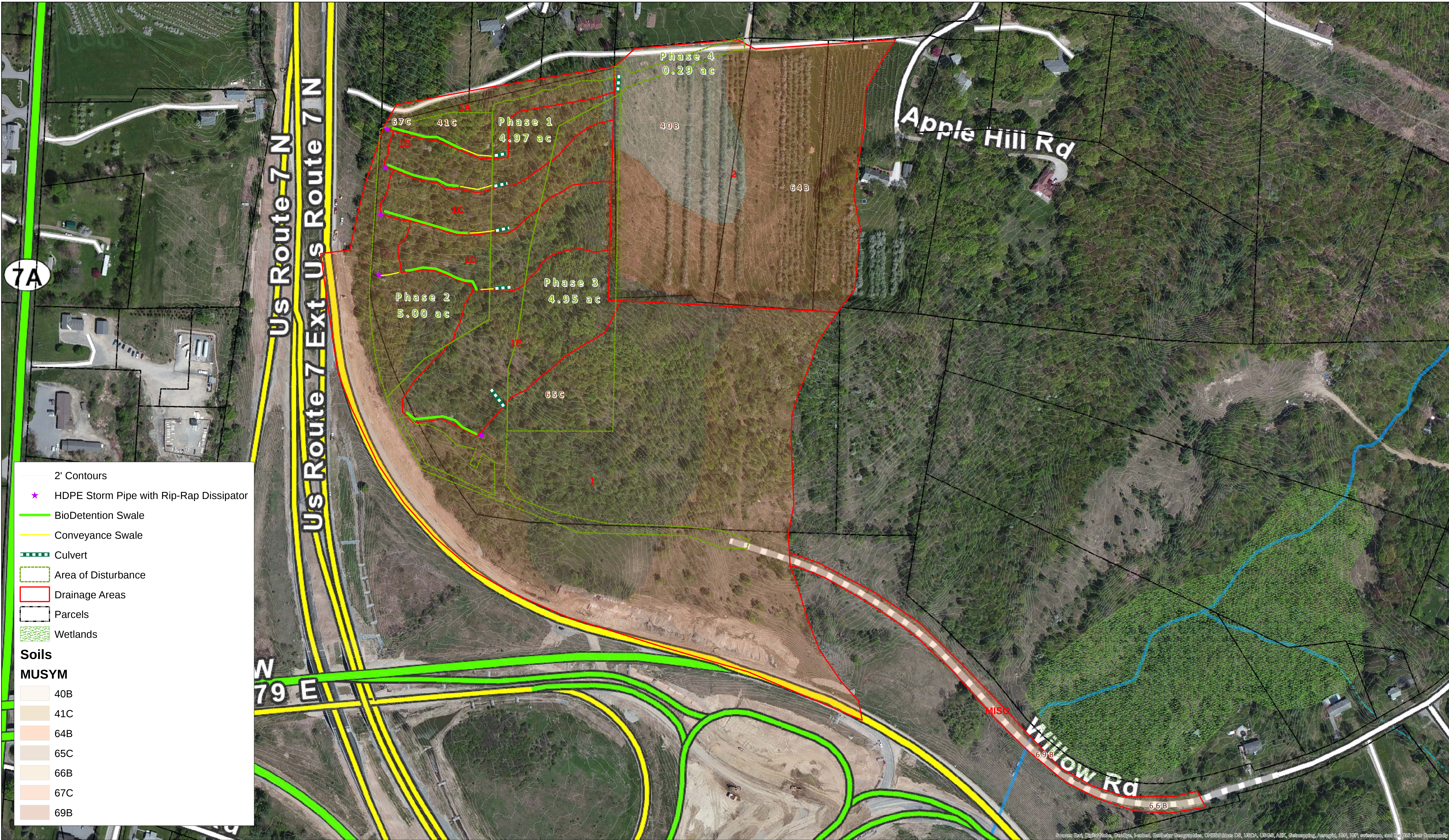
6.0 Construction Sequencing / Phasing Plan

Proper sequencing and phasing of construction activities is a critical component to this plan. Disturbance has been broken down into 4 distinct phases to reduce the amount of disturbed soils at any one time on the site. No more than 5 acres of land may be disturbed at any one time on this project. The Phases of construction proposed for this project are identified on the Erosion Control Plan, Sheet 5.

The sequence of Phases 1-4 may be modified providing the previous phase is completely stabilized before initiating disturbance on the subsequent phase of construction.

7.0 Summary

This plan should provide the measures necessary to prevent erosion and the mobilization of sediment offsite during the remaining construction of the Chan Residence and associated infrastructure. A copy of the “Vermont Erosion Prevention and Sediment Control Field Guide, 2006” developed by the Vermont Agency of Natural Resources shall be kept onsite to use as additional guidance during project construction. Actual onsite conditions including changes to proposed grading or facility operations may require additional erosion and sediment control measures to be implemented to prevent erosion and sediment mobilization offsite, and to protect water quality.



Chelsea Solar
Drainage Plan
Bennington, VT

9-25-14

APPENDIX A - RISK EVALUATION

Accurately answering the questions in this appendix will allow you to determine whether a proposed construction project is considered a Low Risk or Moderate Risk project, which defines the application and permit requirements that are applicable to your project.

The risk evaluation procedure consists of two parts. Part I is a Basic Risk Evaluation, which determines if a project is automatically categorized as Low Risk based upon the answers to a few basic questions.

If a project is not automatically categorized as Low Risk based upon the Basic Risk Evaluation, you must complete Part II, Detailed Risk Evaluation, to determine the risk category for your project. This part includes questions on more detailed aspects of the project.

Once the appropriate risk category has been determined, refer to Part III for the application requirements.

You should be aware that each completed Appendix A is incorporated by reference and included in the terms of this general permit, and each permittee shall undertake its construction activities in accordance with the completed Appendix A, as a condition of this permit. Failure to comply with the completed Appendix A shall be deemed a violation of this permit and subject to enforcement action.

APPENDIX A

Part I – Basic Risk Evaluation

A project may automatically be categorized as Low Risk based on a few basic project characteristics. Answer each question below to determine if a project is automatically categorized as Low Risk. For definitions of terms used in the following questions (e.g. disturbance, vegetated buffer) refer to Appendix C.

Basic Risk Evaluation					
Criteria		Answer		Score Direction	Enter Score
1.	Will the proposed independent project alone disturb more than 2 acres of land?	YES ☒	NO ☐	If YES, enter 1, if NO enter 0	1
2.	Is the project within a watershed impaired due to stormwater or sediment as specified on Part A of the Vermont 303(d) list?	YES ☐	NO ☒	If YES, enter 1, if NO enter 0	0
3.	Will the project have any stormwater discharges from the construction site to receiving water(s) that do not first pass through a 50 ft vegetated buffer area?	YES ☐	NO ☒	If YES, enter 1, if NO enter 0	0
4.	Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?	YES ☐	NO ☒	If YES, enter 1, if NO enter 0	0
5.	Will the project have more than five acres of disturbed earth at any one time?	YES ☐	NO ☒	If YES, enter 1, if NO enter 0	0
Total Score for Basic Risk Evaluation (add score from questions 1-5)					1

If the Total Score for Basic Risk Evaluation is 0, the proposed project is eligible for coverage under this permit as a Low Risk project. Proceed to Part IV of Appendix A for a summary of the application requirements for Low Risk Projects. If not, proceed to Part II.

Criterion 1: Only include the disturbance planned for an independent project. For example, if a lot owner is only building on a single house lot in a residential subdivision, only consider the disturbance associated with that lot, not the entire common plan. Refer to Appendix C for definitions of independent project and disturbance.

Criterion 2: Refer to the following web page for a list of waters in these categories:
http://www.vtwaterquality.org/stormwater/htm/sw_cgpeeligibility.htm

Criterion 3: Refer to the Appendix C for the definition of vegetated buffer area.

Criterion 4: Refer to Appendix C for definitions of temporary and final stabilization.

Criterion 5: Refer to Appendix C for the definition of disturbed earth.

Part II – Detailed Risk Evaluation

For projects not automatically categorized as Low Risk in Part I, this Detailed Risk Evaluation must be completed to determine if a project is Low Risk, Moderate Risk, or requires an Individual Permit. This evaluation determines the risk category by weighing the balance of factors which contribute to and mitigate against the risk of a discharge of sediment from the construction project. Complete all questions in Part II for the independent project. For definitions of terms used in the evaluation, refer to Appendix C.

Detailed Risk Evaluation – Identify Risk Factors				
Criteria		Answer	Score Direction	Enter Score
A.	Will the proposed project have earth disturbance within 100 ft (horizontal) upslope of any lake or pond or 50 feet (horizontal) upslope of any rivers or stream (perennial or seasonal)?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
B.	Will the project have stormwater discharges by direct conveyance (tributary, channel, ditch, storm sewer, etc.) to a water of the state listed on the 303 (d) Part A list as being impaired by stormwater or sediment; a Class A Water; or an Outstanding Resource Water?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
C.	Will the project have more than five acres of disturbed earth at any one time?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
D.	Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
E.	Will the project include more than one acre of disturbance on soil that is greater than 15% slope?	YES ☒ NO ☐	If YES, enter 1, if NO enter 0	1
F.	Will the project include more than one acre of disturbance of soils with a high ($K > 0.36$) erodibility rating?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
G.	Total Score for Risk Factors (add A through F)			1

Criterion A: Measure lake distance from mean water level, and stream or river distance from top of bank. Do not include disturbance for the installation of stormwater treatment facilities or road stream crossings if there are no reasonable alternative locations.

Criterion B: Refer to http://www.vtwaterquality.org/stormwater/htm/sw_cgpeeligibility.htm for the listing.

Criterion C: The maximum allowable for Low Risk Projects is 7 acres. **Moderate risk projects over 5 acres may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.**

Criterion D: The maximum allowable for Low Risk Projects is 21 days. **Moderate risk projects over 21 days may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.**

Criterion E: Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the future disturbance area.

Criterion F: Include disturbance for the entire individual project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps for your county. If soils data is not available (e.g. if the site is built on assorted fill material), contact ANR for directions on evaluating soil erodibility.

Part II Continued – Detailed Risk Mitigation Factor Evaluation

Detailed Risk Evaluation – Identify Risk Mitigation Factors				
Criteria		Answer	Score Direction	Enter Score
H.	Will stormwater leaving the construction site pass through at least 50 feet of established vegetated buffer before entering a receiving water?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
I.	Will the project be limited to two acres or less of disturbed earth at any one time?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
J.	Will the project have a maximum of 7 consecutive days of disturbed earth exposure in any location before temporary or final stabilization is implemented?	YES ☒ NO ☐	If YES, enter 1, if NO enter 0	1
K.	Will the project disturb less than two acres of soil with an erodibility higher than K=0.17?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
L.	Will the project include less than two acres of disturbance on soil that is greater than 5% slope?	YES ☐ NO ☒	If YES, enter 1, if NO enter 0	0
M.	Total Score for Risk Mitigation Factors (add H through L.)			1

Criterion H: Refer to Appendix C for a definition of vegetated buffer.

Criterion I: Refer to Appendix C for a definition of earth disturbance.

Criterion J: Refer to Appendix C for definitions of temporary and final stabilization.

Criterion K: Include disturbance for the duration of the project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps available at USDA-NRCS District Offices. If soils data are not available (e.g. if the site is built on assorted fill material), contact DEC for directions on evaluating soil erodibility.

Criterion L: Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the proposed disturbance area.

Total Risk Score		
N.	Moderate Risk Base Score	2
O.	Enter Score from Line G above (Risk Factor Total)	1
P.	Add lines N and O	3
Q.	Enter Score from Line M above (Risk Mitigation Factor Total)	1
R.	<u>OVERALL RISK SCORE:</u> Subtract line Q from line P	2

Part III– Interpreting the Detailed Risk Evaluation

OVERALL SCORE	Risk Category	Directions for Filing for Permits
<1	Low Risk	The proposed project is eligible for the Construction General Permit as a Low Risk project provided that the requirements of Subpart 2 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit. Refer to Part IV of Appendix A for a summary of the application requirements for Low Risk projects.
1-2	Moderate Risk	The proposed project is eligible for the Construction General Permit as a Moderate Risk project provided that the requirements of Subpart 3 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit. Refer to Part IV of Appendix A for a summary of the application requirements for Moderate Risk projects.
>2	Requires Individual Permit	The proposed project is not eligible for coverage under the Construction General Permit, and therefore requires coverage under an Individual Discharge Permit. Please refer to Stormwater Section on the Water Quality Division website for more information: www.vtwaterquality.org/stormwater.htm.

Part IV – Filing Directions

1. Low Risk Projects

Projects that qualify as Low Risk are required to implement the applicable practices detailed in the *Low Risk Site Handbook for Erosion Prevention and Sediment Control*. To obtain coverage under General Permit 3-9020 as a Low Risk project, applicants must submit the following to DEC:

1. A completed Notice of Intent form for General Permit 3-9020;
2. A completed Appendix A;
3. The required processing fee.

To satisfy the public comment requirement, **applicants must file a copy of the completed Notice of Intent form, including a copy of Appendix A, with the municipal clerk in the municipalities where the project will occur prior to submitting this information to ANR. Details of the public notice process are in Part 2 of the general permit.**

2. Moderate Risk Projects

Projects that qualify as Moderate Risk are required to implement a site-specific Erosion Prevention and Sediment Control (EPSC) Plan that conforms to *The Vermont Standards and Specifications for Erosion Prevention and Sediment Control*. To obtain coverage under General Permit 3-9020 as a Moderate Risk project, applicants must submit the following to DEC:

1. A completed Notice of Intent form for General Permit 3-9020;
2. A completed Appendix A;
3. A site-specific EPSC Plan;
4. A certification by the plan preparer that the EPSC Plan conforms to *The Vermont Standards and Specifications for Erosion Prevention and Sediment Control*;
5. The required processing fee.

To satisfy the public comment requirement, **applicants must file a copy of the completed Notice of Intent form, including a copy of Appendix A, with the municipal clerk in the municipalities where the project will occur prior to submitting this information to ANR. Details of the public notice process are in Part 3 of the general permit.**