

Vermont Department of Environmental Conservation  
Watershed Management Division  
Rutland Regional Office  
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Rutland, VT 05701-5903

Agency of Natural Resources

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## AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES

Pursuant to Section C.2.2 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: **SA-09-003-2016**

Watercourse: **Bragg Brook**

Applicant Name: **Town of Norwich**

Email: [ahodgdon@norwich.vt.us](mailto:ahodgdon@norwich.vt.us)

Mailing Address: **P.O.Box 376, Norwich, VT 05001**

Phone: **(802) 263-9544**

Project Location: **Bridge 48**

Lat/Lon: **N 43.7177 / W 72.3270**

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes under **Section C.2.2.5 - the replacement of an existing CMP with an open bottom concrete structure.**
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit (SAGP).
3. The proposed activity will meet the terms and conditions of the General Permit provided:
  - a) The project will be completed **as illustrated on Revised sketch plans, Dated June 16, 2016, prepared by Andy Hodgdon, and to be discussed at site** and as approved by the Vermont Agency of Natural Resources.
  - b) The project will not adversely affect the public safety by increasing flood hazards.
  - c) The project will not significantly damage fish life or wildlife.
  - d) The project will not significantly damage the rights of riparian owners.
  - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
  - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
  - g) The ANR River Management Engineer is notified by phone or email when construction begins and is completed.
  - h) ***Normal in-stream Time of Year working dates for all SAGP activities are from June 1<sup>st</sup> through October 1<sup>st</sup>***, any in-stream work outside these dates will require an authorization by the River Management Engineer (RME).
  - i) This authorization has been posted for three days public comment. This authorization constitutes final approval.

**Additional Conditions: Onsite preconstruction meeting is required prior to commencement of any instream work activities.**

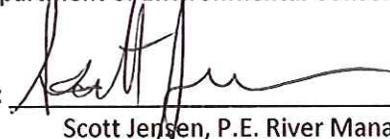
If there are any changes in the project plan or deviation in construction from the approved plans, Permittee must notify the ANR River Management Engineer immediately via phone (802) 490-6962 or email [scott.jensen@vermont.gov](mailto:scott.jensen@vermont.gov)

*If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.*

Signed this 21<sup>th</sup> day of June, 2016

This permit expires on October 1, 2017.

Alyssa B. Schuren, Commissioner  
Department of Environmental Conservation

by:   
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Scott Jensen, P.E. River Management Engineer



### Streambed Stone Fill Design Guidance

Type	Velocity Range (fps)*	Embeddedness (in)
E1	$V \leq 9$	18
E2	$9 < V \leq 11$	24
E3	$11 < V \leq 13$	36
E4	$13 < V \leq 15$	48

\*Maximum velocity should be based on a minimum 50-year design flow rate and calculated at the structure outlet.

### Item xxx.xxx CY Streambed Stone Fill Specification

Type E1. The longest dimension of the stone shall be at least 18 inches, and at least 50 percent of the volume of the stone in place shall have a least dimension of 12 inches, and at least 25 percent of the particles shall have a maximum dimension of 2 inches and be well graded material.

Type E2. The longest dimension of the stone shall be at least 24 inches, and at least 50 percent of the volume of the stone in place shall have a least dimension of 18 inches, and at least 25 percent of the particles shall have a maximum dimension of 2 inches and be well graded material.

Type E3. The longest dimension of the stone shall be at least 36 inches, and at least 50 percent of the volume of the stone in place shall have a least dimension of 24 inches, and at least 25 percent of the particles shall have a maximum dimension of 2 inches and be well graded material.

Type E4. The longest dimension of the stone shall be at least 48 inches, and at least 50 percent of the volume of the stone in place shall have a least dimension of 36 inches, and at least 25 percent of the particles shall have a maximum dimension of 2 inches and be well graded material.

### Notes

- The streambed stone fill shall be hard, blasted, angular rock other than serpentine rock containing the fibrous variety chrysotile (asbestos). Similar sized river sediment is an acceptable alternative as is a mixture of angular material and river sediment.
- Stone placed inside of a closed structure shall be placed such that the structure is not damaged.
- Care shall be taken to limit segregation of the materials.
- Add sand borrow item as needed to seal the bed and prevent subsurface flow.
- There shall be no subsurface flow upon final inspection.