

Responsiveness Summary

To Public Comments Received on the 03/01/11 Draft of the ANR Stream Alteration General Permit

The following discussion is based on the comments received in response to the draft Stream Alteration General Permit placed on public notice on March 10, 2011, pursuant 10 V.S.A. §7501. On April 11, 2011, the Vermont Agency of Natural Resources (VANR) held a public meeting to present and discuss proposed Stream Alteration General Permit. Public comments were accepted from March 10 to April 11, 2011.

Remarks were recorded at the April 11th public meeting, and seven organizations, firms, and individuals submitted written comments. This document lists the questions and comments made and ANR responses including how they were incorporated into the final draft General Permit.

Ken Smith, Associate General Counsel, On behalf of the Water Resources Panel of the Vermont Natural Resources Board

“First, the Panel would like to commend the Rivers Program for its work to manage the overall physical condition of watercourses and floodplains to a more stable, equilibrium condition. Management towards equilibrium conditions not only protects the public safety, the rights of riparian owners and fish and wildlife, but has a beneficial effect on water quality as well.

The Panel understands that the physical parameter of water quality is critical to the integrity, protection and restoration of the chemical and biological parameters of water quality. Expanding state stream alteration jurisdiction from drainages of ten (10) or more square miles to fills of ten (10) or more cubic yards also serves to protect designated and existing uses by ensuring adequate aquatic organism passage through culverts and other in-stream fixtures. Moreover, the proposed General Permit will also help to ensure that downstream water quality will be protected, restored and enhanced as smaller projects are engineered to consider the sediment erosion and deposition effects of stream alterations. Managing towards stream equilibrium will result in reduced amounts of erosion in Vermont's streams and thereby also work to reduce the amount of nutrients entering such waters.”

Robert Krebs

1. There are three quantitative standards that aren't easily equated to each other and this may cause some confusion/struggle with the general permit users/applicants. One standard is the remaining statutory provision that limits jurisdiction over stream alteration projects to those involving 10 cubic yards or more. This statutory standard is a reasonably bright line that is volumetric in nature, and exceedance would trigger the need for a general permit. Please consider placing this information (notice) below the title of Stream Alteration General Permit. Those seeking direction would have to read carefully to section C.1.2 for find this information. For this general permit this is the red light-green light for the whole document.

The second standard is the water shed characteristic standard, .ie., is the stream perennial or intermittent. Again this should be brought to the attention of the potential users possibly before the introduction paragraph. My point is here that there should be a clear instruction for stream projects;

Less than 10 cubic yards	go no further
Intermittent stream	go no further

The third standard is a planametric area standard that sets up another layer of jurisdictional permit conditions. These watershed area limits define non-reporting, reporting and individual permit requirements.

All three of these standards require different methodologies for determining jurisdiction, resulting in unnecessary time being spent. Consider some way to simplify or connect these standards if possible.

Response: An applicability statement has now been placed before the Introduction at the beginning of the document.

2. The web reference about technical guidance (in the footnote) did not take me directly to the equilibrium standard needed for a determination.

Response: A new web reference has been placed in the footnote which takes the reader directly to a web-page which has more information on the equilibrium standard, as well as other outreach material.

3. As discussed in the narrative about the report to the legislature, mapping the limits of the various jurisdictional authorities would help reduce the possible disputes and non-compliance by scofflaws. It may also be useful to post on the web site some methodology for determining a perennial stream (such as the James City County manual).

Response: At the web site reference above, the Agency will post both technical field guidance for determining perennial streams, as well as town-based maps of the different stream sizes referenced in the GP, including those streams with watersheds less than 0.5 square miles.

4. As the new jurisdiction of the stream alteration permit takes hold there needs to be increased/better cooperation/communication with the State Agriculture and Forestry Departments and to make sure that the standards/practices result in the same equilibrium standard.

Response: This communication/cooperation has begun. The DEC is working, at present, with both the Agency of Agriculture and the Department of Forest and Parks in their efforts to revise and update their rules. These efforts will include the incorporation of any appropriate standards established in the Stream Alteration GP, consistent with public policies established for agriculture and forestry.

5. If there is no earthwork for a directionally bored utility crossing it would most likely be exempt from all stream alteration permitting. I don't believe a such an activity would be possible in the watercourse.

Response: This activity was listed under the non-reporting category, not necessarily to claim that boring under the watercourse would be jurisdictional, but rather to ensure that associated activities and pipeline maintenance (that did require instream work) were subject to Chapter 41 requirements.

6. There will need to be a comprehensive educational outreach if this stream crossing/culvert replacement section is to be understood by the general public.

Response: It is anticipated that the general public will either need to retain the services of a qualified consultant or contact the River Management Engineer for assistance. Guidance documents are available for design and these will be made more accessible.

7. Please address the liability issue when State River Corridor engineers consult with and recommend to property owners solutions to solve equilibrium problems or other conflicts.

Response: 12 V.S.A. Chapter 189 § 5601 and 5602, spell of the liabilities of the State and of State employees in the conductance of their assigned duties. As long as an employee is acting within the scope of their employment and is not acting grossly negligent or engaging in willful misconduct they would be covered by the State in case of an action for damages.

8. Is it anticipated that permits will have an expiration date?

Response: As stated in Section F. the General Permit has an expiration date of five years after the signing date of the GP. Individual Permits will include a project specific expiration date.

Troy Dare, Northern Vermont RC&D

1. C.2.1.3. says "installed within 50 linear feet of a municipal bridge or culvert "...but does that mean the rest of the system (barrel and riser) has to be within that 50' as well? I assume yes, but I wanted to be clear.

Response: The 50 linear feet refers to the location of the intake.

2. It also says "municipal" in there...what does that mean when we want to put a hydrant near a "private" bridge or culvert?

Response: If it is not with 50 linear feet of a municipal bridge or culvert, then it would be a reporting project unless the River Management Engineer decides otherwise.

Evan Fitzgerald, Fitzgerald Environmental Associates

Thank you for the opportunity to comment on the proposed changes to VTDEC's stream alteration permitting. On the whole I think this is a very positive step forward for protecting water quality and mitigating erosion hazards in Vermont, and I commend your Division for developing a comprehensive approach to permitting stream alterations. However, I do have some comments and questions regarding the proposed permit. They are summarized below.

1. The introduction states: *"Should any project proponent be uncertain with regard to the interpretation, application, or compliance with the provisions of this General Permit, he/she should*

engage the services of a registered Professional Engineer or contact a Department of Environmental Conservation, River Management Engineer.” Based on my experience working in the Vermont permitting community, many times as a sub-consultant to Professional Engineers (PE), I do not think it is necessary or advantageous to limit applicants to a PE for technical advice. In my opinion and experience, a majority of PEs in Vermont are not directly trained in fluvial geomorphology, and are therefore not familiar with basic concepts in the science (which are pervasive throughout the permit) such as “dynamic equilibrium” and “bank full width”. In addition, many PEs are less familiar with concepts of watershed hydrology, such as the nuanced definition of “perennial” versus “intermittent” channels in the permit, than watershed scientists. I suggest adding “or a similarly experienced technical consultant” or “or a trained hydrologist” to this sentence.

Response: Reference to a registered Professional Engineer has been changed to a “qualified consultant.”

2. Under Section C.1.3.b, the permit states that the “*material removed shall be above the waterline...*” The definition of “waterline” could be interpreted differently depending on the season and flow characteristics. If the intent of this provision is to limit alterations of sediment stored within the bank full channel for purposes of maintaining long-term channel stability and equilibrium, I suggest better defining the term “waterline” here based on some seasonal characteristics. Alternatively, if the intent is only to limit direct impacts to water quality (e.g., increases in turbidity) during the time of gravel removal, then the phrasing is likely sufficient and my comment can be disregarded.

Response: In this instance, waterline means that which exists at the time when the activity is to occur, as is intended by statute. The Agency will encourage people to take allowed quantities of gravel from locations above bankfull, where possible, in order to maintain the cross-section associated with equilibrium conditions.

3. Under Sections C.2.1.4 and C.2.1.5, the term “bank full width” is used but neither a definition nor instructions on how the applicant is to determine this width to comply with the permit is provided. For example, should the applicant or his/her consultant use direct field measurements to determine bank full width, or should DEC’s hydraulic geometry curves be used as the basis for the structure design?

Response: A footnote to a set of technical guides for defining and determining bankfull has been added.

4. For projects involving the “*maintenance of existing ditched or channelized perennial streams less than 0.5 square miles of watershed size, i.e. roadside ditches, agricultural ditches, streams diverted for water supply purposes...*” (Section C.2.1.9), it would appear that DEC is setting a lower watershed size threshold in these stream settings for its permitting jurisdiction. Projects within existing ditched/channelized perennial streams with a drainage area of 0.5 square miles require reporting to DEC (per C.2.2.2); whereas projects proposed for previously un-channelized streams of this same size do not (per C.2.2.3). If I am interpreting this correctly, it would appear that DEC is, at least for the smallest perennial streams (with drainage areas of 0.5 to 1.0 square miles), more concerned with regulating stream alterations on previously ditched/channelized streams than undisturbed channels. If this is the case, perhaps there is good

reason for this approach that is not explained in the draft permit? For me the approach is counterintuitive, as I would consider alterations to previously unchannelized streams as having a greater likelihood to impact water quality and fluvial erosion hazards than alterations to previously channelized streams.

Response: Section C.2.1.1 provides for regulation of previously unchannelized perennial streams at or less than 1.0 square mile. If a proposed activity in a small perennial stream meets the equilibrium standard than it qualifies as a non-reporting activity. If it cannot meet an equilibrium standard, and it does not fall under the provisions for maintenance of existing channelized conditions (under 0.5 sq.ml.) in an agricultural, roadway, of water supply use, as provided for in C.2.1.9, then it would need to be a reported activity. Much of this has been clarified in the GP narrative and in the Activities Table added on page 11.

Roy Schiff and Jim MacBroom, Milone & MacBroom, Inc

The proposed Stream Alteration General Permit (03/01/11 Draft) improves upon the existing Vermont Stream Alteration Permit due to its foundations in river science and efforts to decrease risks in river corridors while maintaining flexibility for small-scale resource management and restoration projects. The tiered approach to the proposed Stream Alteration General Permit allows ample flexibility for working near rivers. Managing towards the “equilibrium standard” will improve the state’s river corridors by limiting development in floodprone areas to provide space for river channels to move in their floodplains. This approach will reduce the financial burden on the state to protect and rebuild flood-prone infrastructure. Giving a channel more space will also improve water quality and floodplain agriculture by allowing sediment and nutrients to settle on floodplains rather than to be transported downstream. Some comments follow.

1. It would be helpful to see a table of the different categories (i.e., exempt, non-reporting, reporting, individual) analogous to what exists in the US Army Corps of Engineers Vermont General Permit.

Response: Such a table has been constructed and added at the end of the Stream Alteration General Permit.

2. Perhaps add a simple and practical definition to that for “Equilibrium Standard” since it is so central to this permit and Act 110 – “The scientific principal essentially calls for providing ample space for a river to meander in its floodplain.” Is there an appropriate times scale?

Response: The basic scientific principal of “vertical channel stability” (...without unnaturally aggrading (raising) or degrading (lowering) the channel bed elevation) is articulated in the Section B Definitions.

3. The definition of perennial stream was confusing. Be sure reference to areas refer to watersheds and not streams. Why are streams of “significant linear scale” (?) intermittent? I believe that the statement about ditches means that they are included in the definition of perennial streams here and fall under this permit, yet it is not clear.

Response: The definition of Perennial Stream has been clarified

4. In Section C.2.1.4(a): ...do not reduce the channel DIMENSIONS AND cross sectionAL AREA;...

Response: These language changes have been made.

5. Section C.2.1.4(d): ...AND FOLLOW VT AOP DESIGN GUIDELINES (Bates and Kirn, 2009).

Response: Reference to the AOP guidelines (which are fairly specific to culvert design) was made in Section 2.15 for new private stream crossing structures of any type or replacement of existing culverts. This same reference was not added as suggested guidance for the repair or replacement of existing bridges.

6. Section C.2.1.5(b): The criteria about the headwater depth plus 1 foot being below the top of culvert may not make sense as some structures are designed to have hw/D larger than 1, as long as it does not overtop embankment. I would change this to headwater depth plus 1 foot does not overtop road embankment for culverts.
7. Response: The Program elected to keep a conservative design standard for the crossing to be authorized as a non-reporting activity. Applicants are welcome to discuss other bridge and culvert design with the Program on a case-by-case basis

8. C.2.1.9 agency needs capitalization

Response: This was corrected throughout the document.

9. C.2.2.3 and C.2.3 (d), shouldn't these be 0.5 square miles?

Response: These Sections and the applicability of the 0.5 square mile threshold was clarified in the body of the GP as well as in the new Table at the end of the GP.

10. C.2.3.(a): Contractor is often not known when permitting is done so may want to pull this requirement and create a follow-up notification process such as with the VT CGP.

Response: This information is used on the project review process for stream alterations. The activity reporting form will indicate that the contractor information should be supplied (if known).

11. Should this general permit refer to other permits that may still be needed such as NFIP, US Army Corps Section 404, VT CGP, etc?

Response: The risk of omission does not warrant trying to list all jurisdictions. The responsibility must remain with the applicant. The River Management Engineer does attempt to remind people of other obligations they may have.

12. The exempt activity should require maintaining the bed gradation before and after the excavation, one should not be able to remove the gravel or cobble of an armor bed and leave an erodible sandy bed material.

Response: These exempt activities are listed verbatim from statute (Chapter 41). While the Program should and will continue to provide this type of technical guidance, it cannot regulate the exempt activity (as such) under Chapter 41 jurisdiction.

13. All culverts, bridges, and fords should be fish passable.

Response: This sentiment is consistent with state statute and is the intent of the activity-specific criteria established in the GP.

Friends of the Mad River, Friends of the Winooski River, and the White River Partnership

1. The definition for “equilibrium standard” is very technical. What support will be provided for lay people and others as they attempt to interpret this definition?

Response: Documents on the Rivers Program web page will attempt to explain the equilibrium standard. The map-based geomorphic data is also available on-line. Project proponents will have three options in obtaining technical assistance:

- a) Technical consultants
- b) DEC River Management Engineers
- c) Conservation Districts and watershed groups

The citizens and part-time staff of the Districts and watershed groups have been working with the Program to conduct stream geomorphic assessments for over five years. Their 20 year statewide presence and ongoing interest in the natural stability of Vermont streams will assist the Department with the outreach and education that will help landowners and municipalities with meeting the equilibrium standards.

2. How was the definition for perennial stream developed?

Response: The Program utilized 2006 research by the US Geological Survey in estimating the probability of intermittent flow in Vermont streams and will provide this and other guidance on the Program’s web page.

3. Several criteria under 10 VSA § 1023(a) are listed here which may allow the Secretary to declare an activity “de minimus”. How will “significant damage” and “adversely affect” be interpreted here? It is critical to have practical working definitions of "adversely affect" and "significant damage", "all reasonable means" and "significant stream bank erosion." Please provide some examples of how these terms will be used in the decision making process.

Response: Understandably, people would like to have some greater exactitude around these terms. As was explained in detail in the Program’s Act 110 report to the Legislature on the Stream Alteration General Permit Program, maintaining some interpretive discretion is critical to the Program and to the resource. In the GP, meeting equilibrium standard has been equated to substantially avoiding the “adverse affect” clauses of 10 VSA § 1023(a). The Program will seek to meet the equilibrium standard in a manner “consistent with the reasonable use of riparian rights” (10 VSA § 1001). Practically each conflict between a human investment and the dynamics of a river has a unique set of environmental and socio-economic circumstances, and, therefore, the evaluation and

permitting of stream alterations cannot be achieved with a strict or standard set of practices. The River Management Engineer will maximize adherence with the equilibrium standard as a condition to meeting Chapter 41 statutory requirements and the antidegradation procedures for protecting high quality waters in its duties to (WQ) certify instream activities requiring federal permits. The ability to use high standards such as equilibrium and de minimus as the backdrop for balancing stream protection and property rights, without strict numeric standards, creates the only possibility for the Program to use so few staff resources in support of managing all perennial streams state-wide. If each activity required a quantitative analysis, the river management engineer would be limited to providing technical assistance on a fraction of the activities they presently advise. Many, many projects would go forward with little or no direct state oversight.

4. Under C.1.3 c. What does “notification” entail? Please describe the notification process. How will the public be informed of watershed activities that fall under the general permit? It would be helpful if there were an (online) location where notifications of general permits were posted. Citizens and watershed groups could play an important role in ensuring that our waterways are protected. An e-mail list serve of permit notifications for specific areas that groups could sign up for would be even more helpful. Will the town zoning administrators and/or town boards be brought up to speed with this process? There might be a role that towns could play in communicating about these projects.

Response: Notification requirements are laid out in 10 VSA § 1022 for individual permits and in 10 VSA § 7503 for GP authorizations as reported activities. In both cases, project proponents are required to send notification to the municipal clerk. The Rivers Program has no administrative assistance at this time. Therefore, the time taken by the River Engineer to maintain a broader notification process for every reported activity, would be less time spent providing technical assistance to ensure stream protection. The work of citizens and watershed groups to assist the Rivers Program in the collection of high quality stream geomorphic data and river corridor plans, over the past 5 years, has, and will continue to be, a critically important role in ensuring that our waterways will be protected. The Rivers Program has been working and outreaching to town zoning administrators and other town boards to train them on river corridor and floodplain protection. Where encroachment is limited through municipal planning and zoning, conflicts with river dynamics will be minimized and the need for stream alterations is vastly reduced.

5. Are there cases in which ANR would conduct an on-site review? What is the threshold for this?

Response: The River Management Engineer tries to make on-site reviews as much as possible. It is highly preferable to go into the field and talk directly to landowners about the river and how well a proposed activity will fit with the river dynamics. On-site reviews are conducted on a large majority of the projected which are brought to the Programs attention. Due to the volume of calls, the River Management Engineer may not be able to see every sight. Based on the nature of the activity, and the engineer’s familiarity with the site and the contractors, an activity may be deemed de minimus and allowed to go forward as a non-reporting activity.

6. Will there be education or information provided to contractors and engineers about how to comply with the general permit process? Without such education, and only self-monitoring, mistakes could be made inadvertently. The website that is referred to in the general permit notice is not functioning.

Response: The web pages and links will be made functional. A number of technical documents are under preparation to help private contractors and engineers comply with the general permit. The Act 110 legislative report called for substantial resources to enable the Program to carry out a training program for consultants that may work on stream alteration projects. Building this capacity is a very high priority for the Program and described as critical to the success of the General Permit Program.

7. It would be helpful to be provided with some examples of the implementation of this permit process in different scenarios.

Response: The Program will attempt to follow up with this suggestion as we move forward, by documenting and posting good examples of how projects have been guided through the GP.

Vermont Electric Power Company

In general, VELCO supports the Department's proposal and offers its comments to address specific challenges posed in the context of VELCO's responsibility to provide safe, cost-effective construction, operation and maintenance of Vermont's electric transmission and telecommunication system. VELCO's comments appear in italics below.

1. **Section B – Definitions** VELCO suggests providing a definition for the phrase “limits of the watercourse” as used within the context of the proposed General Permit. VELCO suggests defining the limits of the watercourse as: Limits of the watercourse means the area within the top of banks of the watercourse, however if the top of banks are not discernable or in the case of a watercourse with a steep elevated terrace with a top of slope, the limits of the watercourse shall mean the area within the bankfull width of the watercourse.

Response: An applicability statement has been included at the very beginning of the General Permit that explains the jurisdiction to be within the top-of-bank to top-of-bank, cross-sectional limits of perennial streams. The entire right and left banks of a channel irrespective of the bankfull elevation are jurisdictional.

2. **Comment 2. Section C-1 - Exempt Activities** VELCO suggests including an exemption for the installation, repair, and maintenance of temporary bridges associated with utility installation, operation, and maintenance activities. For the purpose of this definition, VELCO suggests that “temporary” shall mean a duration not exceeding 24 months.

Response: Only statutorily exempt activities are listed in the GP as exempt. If temporary crossings meet the criteria specified in C.2.1.4. or C.2.1.5, they would be non-reporting. If they can not meet these criteria, the River Management Engineer should be notified. The Engineer has the discretion to evaluate the temporary crossing and authorize the activity as non-reporting.