

STREAM ALTERATION RULES

PUBLIC HEARING & SUBMITTED WRITTEN COMMENTS

Definitions, Language Clarification, and Background:

Appreciation for defining “stream”; is there any way to have other Programs use this definition? (Andrew Geffert, SVE Associates Engineering). Will there be cross-Program and cross-Agency cooperation to have a singular set of definitions and consistent language? (Tom Kennedy, Southern Windsor County RPC)

As other Agency Rules and Procedures are updated, the Agency will strive, where appropriate, to establish a consistent set of definitions.

We thoroughly support the equilibrium & connectivity standards included in these rules. (David Deen, Connecticut River Watershed Council)

The equilibrium and connectivity performance standards are essential for the Agency to carry out the statutory mandate to authorize stream alterations only when the alteration will comply with the requirements of 10 V.S.A. § 1023(a).

Instream material – has there been discussion about non-woody “debris”? (ex. Volkswagons) (Chris Campany – Windham Regional Commission)

Chapter 41 of Title 10 of the Vermont statutes only pertains to the Agency’s jurisdiction to regulate activities which result in the movement, fill, or excavation of ten cubic yards or more of “instream material” in any year. Instream material is defined at 10 V.S.A. § 1002(8) and in the Rule at §27-201(28) to include all gradations of sediment from silt to boulders; ledge rock; and large woody debris. The removal of debris not included in the definition of instream material may be conducted without a stream alteration permit if it does not involve the movement, fill, or excavation of 10 cubic yards of instream material.

Is there a change in how woody debris is being handled in these rules? (Clark Amadon – Trout Unlimited)?

The authority to explicitly regulate woody debris as instream material was established with the passage of Act 138 (2012). The movement, fill, or excavation of 10 cubic yards or more of large woody debris requires a stream alteration permit and will be evaluated against the statutory criteria (10 V.S.A. §1023(a)), the equilibrium and connectivity standards, and the criteria established for next-flood and emergency protective measures.

The engineering term “Q” is used frequently in these rules and needs to be defined for the non-engineers. (Frederick Nicholson, Bay View Environmental)

The term “discharge (Q)” has been added to the definitions section in the first instance of its usage in the definition of “annual flood.”

Berm in the river corridor – when does a fill become a berm? How big does a driveway need to be to be considered in a river corridor? (Andrew Geffert, SVE Associates Engineering)?

The definition of “berm” has been modified to add greater specificity beyond that provided in statute. The definition now states: “Berm” means a linear fill of earthen material on or adjacent to the bank of a watercourse that constrains waters from entering a “flood hazard area” or “river corridor,” as those terms are defined in 10 V.S.A. §§ 752(3) and (11). For the purposes of this Rule, the Secretary shall classify linear fill as a regulated berm when earthen material is pushed or excavated from a stream bed or adjacent lands into a raised barrier between a watercourse and adjacent lands.

Do the rules apply to intermittent streams? (Nancy Ketcham, Green Mountain National Forest)?

No, the Rule, which is governed by 10 V.S.A. Chapter 41, applies only to perennial streams. Chapter 41 of Title 10 of the Vermont statutes is limited to the regulation of “watercourses” and 10 V.S.A. § 1002(10) defines “watercourse” as any perennial stream.

How much is new language in these draft rules? (Nancy Ketcham, Green Mountain National Forest)

The Vermont Legislature authorized the issuance of the Rule in 2012 through Act 138. This is the first draft of the Stream Alteration Rule in the state of Vermont.

The general permit language regarding five years is confusing. (David Deen, Connecticut River Watershed Council)

Language has been added to §27-504 of the draft Rule for clarification.

Fluvial Erosion Hazards

Will the fluvial erosion mapping overlay become available to the public? (Craig Jewett, Otter Creek Engineering)

River corridor (i.e., fluvial erosion hazard) maps, where they have been produced, are available to the public through the River Corridor and Floodplain Management Section of the Rivers Program in the DEC Watershed Management Division. The Program is working on and will be publishing river corridor maps for the entire state. After quality assurance and public input processes, these maps will be available on the ANR (web-based) Atlas.

In an area where a river corridor is not defined, what will be used? (Craig Jewett, Otter Creek Engineering) Are the Fluvial Erosion Hazards mentioned in the Rules the same or different from Act 250 guidelines on FEH? (Andrew Geffert, SVE Associates Engineering)

If permit authorization is requested along a river for which a river corridor map has not been published by the Agency, the River Management Section of the Rivers Program will use the “Technical Guidance for Determining Floodway Limits Pursuant to Act 250 Criterion 1(D)” published on the Program’s web page to request river corridor delineation from the applicant. The Program may conduct the corridor delineation in compliance and enforcement cases.

§27-102(a) Policy

Insert the word lateral before the word location in the first sentence of the Policy section. Include some information that streams move laterally. (David Deen, Connecticut River Watershed Council)

The Agency agrees with this suggestion and has made this change.

§27-201 Definitions (29)

Remove with or without an impending high flow event from the definition of “imminent threat”. Imminent threat wording is not clear – may not understand language regarding “w and w/o impending high water event”. What else would trigger an emergency activity other than high water? (David Deen, Connecticut River Watershed Council)

The Agency agrees that removing that language from the definition of “imminent threat” will clarify the definition and thus, the Agency has made that change.

§27-301(b)3. Applicability - Flood Hazard Areas

The language in the applicability section concerning flood hazard areas should end at “1% or greater chance” because language is important and the official policy of the state should no longer be using the phrase “100 year flood.” The 1% concept would seem to be an important distinction for the rule to communicate. (David Deen, Connecticut River Watershed Council)

The Agency agrees with this suggestion, and therefore, the Agency has made that change.

§27-302 Exemptions

Are there any limitations on time of year for gravel extractions? (Chris Company – Windham Regional Commission)

Time-of-year restrictions are a level of regulatory specificity that is not included in this Rule. Instream time-of-year work restrictions are included in the Stream Alteration General Permit and on a case-by-case basis when the Secretary issues an individual stream alteration permit.

Are the notifications of gravel removal by riparian owners available online? Request was made to list owner gravel extractions along with intended use in a public format. (Clark Amadon – Trout Unlimited)

Notifications of removal of 10 to 50 cubic yards of gravel for private use are not currently available online. This information is available to the public upon request. The statute (10 V.S.A. § 1021) stipulates that gravel may only be removed for private and not commercial use. No other specificity of use is required of the riparian landowner.

Removal of fifty cubic yards of gravel will still have a negative impact on the waterway, including increased channelization. (Mad Dog chapter of Trout Unlimited). Gravel extraction of any amount should not be allowed. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

Section 1021(c) of Title 10 of the Vermont Statutes prohibits the removal of gravel from any watercourse primarily for construction or for sale. However, 10 V.S.A. § 1021(d) authorizes the extraction of gravel for private use. Section 1021(d) provides that a riparian owner may remove up to 50 cubic yards of gravel per year for the owner's use on the owner's property so long as at least 72 hours prior to the removal of 10 cubic yards, or more, the landowner notifies the Secretary of Natural Resources. The Agency may not overturn this state statutory provision through rulemaking.

Agricultural & silvicultural practices need more definition in the context of streams. There is current damage to streams due to livestock, logging, etc. and it is unclear why there are those exemptions. (Tom Kennedy, Southern Windsor County RPC). Accepted agricultural and silvicultural practices must be regulated to ensure that they contribute to river stability. ANR is missing an important opportunity and creating a dangerous loophole by allowing these exemptions. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation).

Accepted Agricultural Practices (AAPs) and accepted silvicultural practices are defined by the Secretary of Agriculture, Food, and Markets and the Commissioner of Forest, Parks, and Recreation respectively. State statute (10 V.S.A. § 1021(f)) exempts these activities from stream alteration regulation. These statutory exemptions cannot be changed by ANR Rule; only the Legislature may make such changes.

Exemptions should be granted only in extremely limited circumstances and certainly not – for example – for all state infrastructure projects requiring only an informal consultation with the Agency. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation).

All exemptions listed in §27-302 of the draft Rule are required by state statute (10 V.S.A. § 1021). These statutory exemptions cannot be changed by ANR Rule.

Authorizing gravel extractions in Outstanding Resource Waters (ORW) runs counter to their designation; it is impossible to remove gravel from an ORW without causing a discharge that diminishes the quality of life at the ORW in violation of federal law. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation).

Section 1021(d)(4) of Title 10 of the Vermont Statutes authorizes the extraction of gravel from an ORW for private use. Section 1021(d)(4) provides that in an ORW a riparian owner may remove no more than 10 cubic yards of gravel per year, and must notify the Secretary of Natural Resources at least 72 hours prior to the removal of any gravel. The Agency may not overturn this state statutory provision through rulemaking.

§27-402(a)2. Standards - Will not significantly damage fish life or wildlife.

For the standards, a definition of what is considered “significant” damage to fish life and wildlife is sorely needed. (Tom Kennedy, Southern Windsor County RPC)

In determining whether or not a proposed activity *will significantly damage fish life or wildlife* (10 V.S.A. § 1023(a)(2)), the Secretary shall apply the equilibrium and connectivity standards (§27-402(b) of the draft Rule). An activity that leads to an unnatural aggrading or degrading of the streambed at a reach scale or results in localized erosion that creates a vertical or horizontal discontinuity in the streambed or banks would constitute significant damage to fish life and wildlife. These draft Rules also allow, that on a case-by-case basis, the Agency may deem that a proposed stream alteration impact a specific habitat feature (as per §27-402(a)) and thereby significantly damage local fish or wildlife populations.

§27-402(a)3. Standards - Will not significantly damage the rights of riparian owners

The Vermont Administrative Procedures Act disfavors the use of such vague and ambiguous language contained in the standards – “Will not significantly damage the rights of riparian owners”. What does this mean? Which “rights” do the rules refer to? By what standard will ANR determine “significant damage” to the unspecified “rights”? (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The language in question is contained in state statute and may only be modified by the Legislature. It is assumed that the Legislature was referring to a landowner’s right to use his/her property. This Rule, as expressed in the Policy Section (§27-102(b)), acknowledges that “Stream alterations that change the course, current, or cross-section of a stream and that cause the stream to significantly depart from or further depart from its equilibrium condition, or that alter the connectivity of the stream in its vertical and horizontal dimensions, increase risks to aquatic life, riparian property, and public safety.” In other words, what one person does to protect one’s property may result in stream adjustments that damage the riparian property of others. In resolving conflicts between the rights of upstream and downstream landowners, the Agency will apply the equilibrium and connectivity standards. It is recognized that the stream alteration

statutes and the draft Rule do not resolve certain intractable conflicts where emergency measures to protect someone's house or important public infrastructure may, over time, lead to threats and damage to the property of others and to the environment.

§27-601(d) Public Comment on Individual Permit Application

Ten days is a very short timeframe during which to contact the Agency, obtain a copy of the application, consult an expert (if necessary), and formulate comments regarding an individual permit application. Because individual permits are likely to pose a higher environmental risk and thus be more complicated, we request that a 30-day public comment period be the default for individual permits. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

Section 27-601(d) states that "The Secretary shall provide an opportunity for public comment on the [individual permit] application for no less than ten days. At the Secretary's sole discretion, the Secretary may provide additional notice of the permit application and may conduct a public meeting to receive additional public comment." This allows the Agency to extend the comment period beyond ten days for its own review or to receive public comment when individuals or interested parties request additional time. The Agency often reviews applications for individual permits for a period greater than ten days, but, from experience, knows that some activities authorized with an individual permit (e.g., restoration projects) should be allowed to move forward as quickly as possible. The instream construction period in Vermont may be as short as three months (minus times of flooding) and to delay ALL projects by 30 days would push many up against the time-of-year restrictions used to protect spawning habitat.

§27-701(b) Applicability of Emergency Protective Measures

This section is overly broad. What are the parameters that define a "flood event"? From the wording, it seems that almost any place, at any time, could qualify as an emergency under this section. ANR must be more specific about the factors used to determine when a flood event has concluded. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The key point the Legislature was making when this language was crafted and adopted was that it is not about the size of the flood or whether there's been a presidential declaration; it's whether an imminent risk to life or a risk of damage to public or private property exists. If an emergency protective measure as defined in §27-703 of the draft Rule is necessary to address an imminent threat to life or an imminent threat of severe damage to property during flooding or "other emergency conditions", then the Secretary may authorize the measure.

§27-702 Criteria for Coverage as an Emergency Protective Measure

The language in the section "Criteria for Coverage as an Emergency Protective Measure" leaves much to interpretation and could benefit from examples. Is a road closure an imminent threat? A

culvert plugged with woody debris? If a property owner believes that their property will flood because there are gravel bars in the streambed? What are some examples that are appropriate actions? Digging out an entire reach of river? Taking gravel from the river to fix the washed out road? What is “in a manner consistent with any general permit”? (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The practices that will be approved as emergency protective measures are limited to those measures described in §27-704 of the draft Rule and will be incorporated into the Agency’s Stream Alteration General Permit. The Statute (10 V.S.A. § 1021) requires that emergency measures be implemented in a manner consistent with the general permit. Changes have been made to the draft Rule to reinforce that an emergency protective measure may be initiated by municipal officials only when necessary to preserve life or to prevent severe imminent damage to public or private property, when such property has experienced damage and is under threat of imminent failure within the next 72 hours. The municipality must document how the emergency protective measure has been minimized in addressing the threat.

§27-702(b)2. The municipality shall notify the Secretary electronically and by telephone within 24 hours....

What if there is no phone or email service? Why must a municipality notify the Secretary of emergency protective measures by phone and email? Is this not overkill and a burden on communities? (Tom Kennedy, Southern Windsor County RPC)

The language was changed to allow for written and verbal communication of the limited information listed in §27-702(b) is critical to ensuring that a preliminary authorization by the Secretary is communicated as clearly and concisely as possible. The written communication may be electronic (e-mailed) documentation will be used to meet the public notice requirements, as necessary to qualify for a final authorization under the Rule. Verbal communication may be over the phone or in person and avoids the misunderstandings that often occur when information is exchanged by e-mail only.

§27-703(a)2. Streambed or streambank fills necessary to provide access to critical public facilities....

Please define these “critical” facilities mentioned in §27-703(a)2.; they are required to be defined in all hazard plans. (Tom Kennedy, Southern Windsor County RPC)

The word critical was deleted as it was not the intent to describe a certain class of public facility in the context of streambed and streambank fills as emergency measures.

§27-704(c) Removal of Instream Materials

Unclear what is meant by “instream materials” in §27-704(c). (Tom Kennedy, Southern Windsor County RPC)

The term “instream materials” is defined in §27-201(28). “Instream materials” means all gradations of sediment from silt to boulders; ledge rock; or large woody debris, as these materials exist in the bed of a watercourse, within the banks of a watercourse, or enter as placed-fill in the bed or on the banks of a watercourse.

§27-704 Standards for Implementing Emergency Protective Measures (a) through (f)

In the age of electronic pictures, a record of the problem and then all work at progressive stages should be required to be part of the permanent record of any instream work. (David Deen, Connecticut River Watershed Council)

Photo documentation has been added to the information required in §27-705(c) for a final authorization.

§27-705 – Public Notice

It would be helpful for there to be a clear physical indicator that the work is taking place with authorization from ANR. A big blue sign with a large white P on it posted at or near the work site could answer many questions for anyone concerned about the work. (David Deen, Connecticut River Watershed Council)

§27-705(d) states that notifications, authorizations, and documentation, as they are issued, shall be placed on-site where and when the emergency protective measures are being undertaken. Further detail on how the authorization must be displayed on-site will be indicated in the General Permit.

Procedure and Policy:

What would have been the effect if these rules had been in place during Irene? (Clark Amadon – Trout Unlimited) Will these rules be exempt from a Governor’s suspension during the next flood emergency? Is there any Agency action that can prevent the rules from being suspended? (Frederick Nicholson, Bay View Environmental) (Tom Kennedy, Southern Windsor County RPC) (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The adoption of this Rule does not change or impact the Governor’s general powers under Title 3 of the Vermont Statutes or the Governor’s Emergency Powers under 20 V.S.A. § 9. Once this Rule is adopted, procedures will be in place for authorizing stream alterations during emergencies. Such a rule was not in place during or immediately after Tropical Storm Irene.

General Permits – is this rule the actual General Permit or is the General permit going to be issued later? (Andrew Geffert, SVE Associates Engineering)

The Rule governs both Individual and General Permits, but the General Permit is issued separately by the Department of Environmental Conservation as authorized by the Secretary.

Next Flood Measures – what is the difference between a “Next Flood” and a regular permit? Is it the level of burden of proof? (Andrew Geffert, SVE Associates Engineering)

Measures to address next-flood threats and “normal” stream alterations that are not addressing a threat must BOTH be authorized in writing by the Secretary BEFORE any action is taken. Next-flood measures are authorized in cases where the *next annual flood* poses a risk to life or a risk of severe damage to improved property and a stream alteration is necessary to prevent such threat. The next-flood threat must meet the standards in §27-706(d) and be documented as required in §27-706(e).

Are there sufficient protections to prevent abuse of the Next Flood permit? (Clark Amadon – Trout Unlimited) (Andrew Geffert, SVE Associates Engineering). For Next Flood, there should be some statement in the rule that there is an expectation of contact with stream alteration engineers and other ANR staff trained to make these evaluations of the threat and the response prior to instream work. The rule should say that such contact is required unless the Secretary waives that requirement. (David Deen, Connecticut River Watershed Council). Next Flood Events are generally not emergencies. They come with some warning and thus full permitting through the Agency should be required. Allowing next-flood measures without consultation with ANR river staff unnecessarily puts rivers – and people – at excessive risk from future impacts of improperly conducted stream alteration activities. ANR should provide some written instructions – even in the time of emergencies – on the work that is authorized. Some form of written communication memorializing the scope of authorization is essential for clarity that will minimize damage to rivers. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The draft Rule states that activities proposed to address next food threats must have prior approval from the Secretary before they can be undertaken. It has been clarified in the draft Rule that all next-flood activities will be authorized with an individual permit or written authorization under the General Permit. Written documentation and approvals are posted for review by the public.

It is of gravest concern that many provisions of the rules require that a person undertaking stream work has an in-depth, comprehensive and current knowledge of river science. Partnering the ability to authorize an activity with a lack of river science knowledge appears as a failure of the Agency’s responsibility to protect Vermont’s rivers – and public safety. We urge serious reconsideration of the authorities granted in Subchapter 7. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The Agency stands by its strong and scientifically based stream alteration standards. The equilibrium and connectivity performance standards ensure that stream alterations are conducted so as to accommodate flows, sediment, and aquatic organism passage. Additionally,

pursuant to 10 V.S.A. § 1023(d), the Agency is conducting training for state and municipal transportation workers to increase awareness and knowledge of river science and engineering.

Under 10 V.S.A. § 1021(b), emergency protective measures shall “have prior approval from a member of the municipal legislative body” and “be reported to the secretary by the legislative body within 24 hours after the onset of the emergency.” Therefore, municipalities have the statutory authority to approve and undertake emergency protective measures, but they must seek technical assistance and implement emergency protective measures in a manner consistent with §27-704 of the Rule or run the risk of an enforcement action, which may include restoring the stream. In drafting 10 V.S.A. § 1021(d), the Legislature changed the reporting period from 72 to 24 hours for municipalities to contact the Agency. This should allow for the Agency to require a quicker correction, if the actions being taken by the municipality are not consistent with the Rule. Note, under §27-705 of the Rule, once the Agency has received notification from a municipality that the municipality has a threat that requires emergency protective measures, the Secretary must determine whether the activity qualifies as an emergency protective measure and the Secretary may deny authorization, require the municipality to halt operations until the Agency can conduct a site visit, or preliminarily approve the activity.

Emergency Protective Measures - we suggest that verbal authorization concurrent with electronic notification of what is being authorized be required before any emergency action is taken – easily accomplished by a River Emergency hotline and electronic mail during times of emergency. Emergency Protective Measure activities should be undertaken with some guidance from ANR from the start rather than twenty-four hours of unguided and damaging activity being done in rivers (thereby increasing the risk to the public). Within twenty-four hours, written authorization (or modifications) should be provided by the Agency to ensure work is done in a way that does not increase flooding risks. We are encouraged by the proclamations of various state agencies that meaningful steps have been taken to ensure that during the next widespread storm event that there will be a great number of trained state employees to assist on river (and other emergency) issues. If this is true, then providing such immediate response should not be unduly burdensome to state government. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

Requiring state authorization prior to a municipality initiating an emergency protective measure would be contrary to the statutory provisions in 10 V.S.A. § 1021(b). (See explanation above.)

Has the Army Corps of Engineers reviewed these rules? Do you anticipate any problems with the Corps regarding these rules? (Chris Campany – Windham Regional Commission)

A copy of the draft Rule was sent to the Vermont Regulatory Office of the Corps. The Agency did not receive any comment from the Corps regarding the draft Rule. The Agency does not anticipate any problems as the draft ANR Rules are more explicit and resource protective than the Corps General Permit issued under Section 404 of the Clean Water Act.

Were the RPCs involved with the development of these rules and in what way? (Kris Hughes, Rutland RPC)

The RPCs were sent drafts of the Rule and invited to make comment both before and after the formal rulemaking process began.

Are we now FEMA compliant with the passage of these rules? (Tom Kennedy, Southern Windsor County RPC)

FEMA is currently reviewing the statutory and performance standards for stream alterations contained in the Rule to determine whether the Vermont state standards comply with the FEMA's regulations at 44 C.F.R. § 206.226(d).

Concerns were raised about the complexity of these rules. Will there be a chance for a "dry run" before the next flood event? Can changes, specifically simplification, be made to the rules as a result of findings during such a dry run? (Kris Hughes, Rutland RPC)

This Rule cannot be implemented and enforced until it completes the administrative rulemaking process and is formally adopted, and then future changes must also go through the rulemaking process. Small scale floods occur each year somewhere in Vermont and these will serve as learning opportunities for municipalities and their contractors and will help prepare the State, municipalities, and contractors for larger storm events like Tropical Storm Irene. The State is conducting extensive training sessions for Vermont Agency of Transportation operations and local road foreman.

How does the Program balance the policy of protecting streams with protecting built environments? Can stream protection be weighted more heavily when the built environment is newer and could be moved? (David Deen, Connecticut River Watershed Council)

The Agency would need a more direct legislative mandate to use the stream alteration statutes to begin condemning public infrastructure and existing inhabitable structures. The one exception stipulated in the Rule is that the Agency will not authorize an emergency protective measure or next-flood activity if the measure will endanger the safety of other persons. The State is also facilitating and cost-sharing federal buy-outs of damaged properties and the relocating and resizing of infrastructure to better meet the equilibrium and connectivity standards. Several state agencies are engaged in river corridor planning to examine hazard mitigation projects, including the relocation of structures to promote river stability and floodplain function.

Enforcement of these will be difficult without publication of permits and education by the Agency. (Mad Dog chapter of Trout Unlimited)

All reported General Permit authorizations, next-flood authorizations, emergency measure authorizations, and individual permits will be published on the Agency's web page. The Agency agrees that extensive outreach and education will be required if Vermont wants to successfully carry out the policies stated in this Rule.

Communications and Training:

Can a more accessible webpage be utilized to communicate to the public? (David Deen, Connecticut River Watershed Council) (Andrew Geffert, SVE Associates Engineering) Since each division of the Agency posts notices on different web pages please specify which "Agency website" it is that draft general permits will be noticed on. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

Yes, the Agency is working on a map-based web portal so that interested parties may locate projects and download documents linked to points on a map. The specific WEB URL will be included in the General Permit and prominently featured on the River Management Program web page.

Consistent with other permit programs, it is suggested that the rivers program maintain a list of "interested persons" who receive electronic notices of activities in the program such as draft general permits, notice of application under a general permit, notice of authorizations or denials, etc. (Kim Greenwood, Vermont Natural Resources Council; Anthony Iarrapino, Conservation Law Foundation)

The Program will make all authorizations and permits available on a map-based notification web portal. New draft authorizations still open for public comment will be so noted using a color coding system on the map display.

Be explicit in terms of requirements that local officials would face in a flood emergency. Have those requirements clearly listed on an easy-to-access website. (Clark Amadon – Trout Unlimited) (David Deen, Connecticut River Watershed Council)

The Program will follow this suggestion. The Program will also conduct outreach to towns with publications and small workshops in partnership with the RPCs to train local officials in the emergency measure documentation process. Those towns that have been through a declared disaster may find the final authorization process less onerous because the information is the same documentation required by FEMA for reimbursement of town expenses under the Public Assistance Program.

This may not be a topic for the rule itself but ANR should make clear how they would inform people about the standards that exist under the non-reporting and general permit activities, especially under

the non-reporting standards and practices. The rule content should be broadly circulated taking full advantage of communication networks that exist such as the ANR web site, VLCT, CRJC, CRWC, VNRC and the RPCs. Request made to have these rules prominently featured on the Rivers Program website and distributed widely through broadcast and other means. (David Deen, Connecticut River Watershed Council) Request made for more education work using the river flumes. (Chris Campany – Windham Regional Commission) (Clark Amadon – Trout Unlimited)

The Agency will work with all the listed organizations and through its web pages and through the use of river flumes to educate local officials about stream alteration best practices, rules, and general permit requirements.

Emergency measures rules are long overdue and welcome. (Clark Amadon – Trout Unlimited) (Tom Kennedy, Southern Windsor County RPC)

The Program has documented that structural encroachments and post-flood stream channelization are the predominate sources of disequilibrium and discontinuity in Vermont streams causing flood and erosion hazards and habitat impacts. State regulation of emergency, post-flood work should result in the elimination of unnecessary channelization, dredging, and encroachment.

The Policy Section of the Rules and education on streams is very welcome. Having equilibrium and connectivity standards in rule is long-overdue in Vermont. (David Deen, Connecticut River Watershed Council) Recognition of the Program's role in training in stream management; communities and road crews have increased awareness of best practices. (Clark Amadon – Trout Unlimited)

The Program appreciates these comments. Adopting equilibrium and connectivity standards puts Vermont in the vanguard of applying a well-established set of river science precepts which are indeed long-overdue in the United States. Streams and rivers are dynamic systems and we will begin to reap their environmental, social, and economic benefits if we respect that they are not static in the landscape, i.e., they must have room and freedom to move.

Concerns about next flood event and if the Program has personnel to administer and enforce emergency measures. We would like to see more Program field personnel (River Management Engineers)...5 or 6 additional. (Clark Amadon – Trout Unlimited)

More Program staff during flood emergencies is needed. To that end, the Agency is working to establish reserves of trained staff that may be called up to assist existing river engineers and Vermont communities during emergencies.

