

Draft Screening Criteria Comments Summary and Reply Comments

This document summarizes the comments the Public Service Department (PSD), Agency of Natural Resources (ANR), and Agency of Commerce and Community Development (ACCD) received in response to the initial draft of the hydro screening criteria in the spring and summer of 2014. The individual comments are collated and provided as an accompanying document. This document also provides summary responses to the concepts introduced in the comments.

Criteria framing/introductory text/general:

Comment: Clarify the purpose of the document and provide additional resources.

Response: The final document contains a more detailed overview and will be accompanied by additional helpful resources on the PSD website (this will be updated as stakeholders provide additional resources for consideration). One commenter suggested providing the Vermont Dam Task Force list of priority sites for potential removal, and another suggested screening out these projects as well as projects located on or at infrastructure that has been deemed a safety hazard by state or federal agencies. These ideas are being further investigated.

C: Projects should have to meet Vermont Water Quality Standards. Additionally, projects that impact existing or designated uses should be red flagged. And, no projects should be built on Outstanding Resource Waters.

R: All FERC-licensed hydroelectric projects will need to obtain a Section 401 Water Quality Certification (401) from the Vermont Agency of Natural Resources, and thus will be required to meet Vermont's current Water Quality Standards. The screening criteria are designed, in large part, to address how projects can meet the Water Quality Standards. This is hopefully now more clearly reflected in the introductory text. As part of the 401 review, existing and designated uses will be reviewed under the state's anti-degradation policy, and treatment of Outstanding Resource Waters are also all reflected within the standards. Nevertheless, the criteria have been modified to incorporate this suggestion.

C: No such thing as "low-impact" hydro; document should be renamed. Also, the name could generate confusion with the Low Impact Hydropower Institute (LIHI) and their criteria for Renewable Energy Certificate eligibility (and the criteria are very different from LIHI's).

R: It is difficult to come up with a suitable name for the pilot program; "low-impact hydro" is a meaningful distinction to some, but strike others as an oxymoron. The new title, "Vermont Small Hydropower Assistance Program" better reflects the nature of the program and does not presume to pass judgment on the scale and impact of hydropower. The program and criteria are not designed to create a different standard than or confusion with LIHI, but rather to assist developers of projects with the least impact to natural and cultural resources with navigating and fulfilling the federal and state regulatory requirements and processes.

C: Developer’s ability to build, operate, and finance a project should be part of the screening.

R: The purpose of the screening is to help developers understand requirements of federal and state permitting requirements. Ad hoc opportunities to help developers understand project economics and resource commitments will be taken advantage of, but are not the primary (nor, arguably, the appropriate) function of the screening program. However, we have added language to the introductory text regarding the importance of considering these factors.

C: The criteria should objective, with standard terms and conditions, and administrative timelines.

R: The screening criteria are reflective of existing laws and standards, and are neither more nor less objective than those laws and standards. They are designed to help hydro project developers understand how their project needs to be designed and operated in order to meet the regulatory requirements as determined in federal and state statute and rulemaking. While some of the criteria will influence project design and operation, others – related to siting – may require case-by-case review or study, given the dynamic and variable nature of rivers. To the extent a threshold criteria can be set (beyond which further review would not likely be required), it has been (such as the use of default flow standards in lieu of site-specific flow studies); in general, any project that meets all the criteria would be likely to obtain a 401 and a FERC license or exemption with minimal time and expense compared with a project that failed to meet one or more criteria. Projects that fall short in certain criteria may also proceed through licensing, but may require additional study and review, and would not be eligible for enhanced agency assistance. A timeline for responsiveness has now been built into the screening criteria: within 30 days of receipt of adequate information demonstrating that a project meets all of the screening criteria, the three agencies will respond to schedule a site visit (the timing of which may be seasonally dependent). Within 30 days of the site visit, the agencies will respond with a comment letter advising the applicant on potential historic and natural resource issues that will need to be addressed in the 401 and FERC processes.

C: How would communication with the U.S. Army Corps and the U.S. Fish & Wildlife Service be facilitated?

R: These entities would be invited to participate in the interagency site visit.

C: The screening criteria make the development of new hydropower projects economically impossible. Others are cart-before-the-horse.

R: The screening criteria reflect current law and legally adopted rules, and do not set a higher bar than a project would otherwise have to meet. If a project cannot meet federal and state regulatory requirements, it is not able to be permitted, regardless of project economics. Regarding cart-before-the-horse criteria, we have reframed the document such that, to the extent possible, these types of criteria are framed as project expectations, and the criteria apply to project factors that can be determined up front or by the resource agencies after a site visit.

Criterion 1: Will Qualify for a FERC 10 MW Exemption

C: Projects should still have to meet the National Environmental Policy Act (NEPA) and Vermont Water Quality Standards; also, all federal and state regulations must be followed.

R: The criteria do not suggest a change in the standard of environmental review as required by FERC and ANR. A FERC 10 MW 'exemption' is not an exemption from federal and state review; rather, it is a regulatory pathway for projects that meet certain criteria, including: being <10 MW; being located at the site of an existing dam or using a natural water feature; proposing increased capacity; and for which all lands and facilities other than federal lands are owned by the exemptee. Exemptions are in fact permits and require application and review, but – as opposed to licenses – are issued in perpetuity.

C: The requirement should be for projects that qualify for a 10 MW exemption OR a minor hydro license (5 MW or less), to include projects that do not have full control of all lands at this early stage of the project. Another commenter suggested the requirement be expanded to municipally owned dams and municipal projects. And a third pointed out redundancies between the requirements to meet a FERC 10 MW exemption and other parts of the screening criteria.

R: We have eliminated this criterion and added in a new criterion that would require applicants to either control the relevant lands surrounding their proposed projects or otherwise demonstrate support from adjoining landowners. The new Criterion 1 requires that projects not be located on Class A waters, Outstanding Resource Waters, or federally or state-protected river reaches.

Criterion 2: Will be Located at an Existing Dam, or Project Will Not Require a Dam or Other Impoundment

C: Projects should also be evaluated in terms of bypass length, habitat dewatered, aesthetics, amount of water used or diverted, and cumulative impacts.

R: These factors would all be evaluated as part of ANR's 401 certification and FERC's licensing processes.

C: License renewals should not be eligible for inclusion in this program.

R: Relicensing is a FERC-guided process. This program is meant to apply to new projects. This is now clarified in the program overview text.

Criterion 3: Will Not Change the Impoundment Elevation

C: Flow limitations at the powerhouse must meet a true run-of-river standard on an instantaneous basis at all times of year and at all flows. Another entity wondered how this criterion will account for seasonal fluctuations in the impoundment level (i.e., can a project run continuously at the same rate during summer low period or winter freeze?).

R: This is already incorporated in the criteria. River flows naturally fluctuate with season and precipitation events. A true run-of-river hydroelectric project is only permitted to operate when flows are above the bypass flow requirement plus minimum hydraulic turbine capacity. It is likely that during low-flow periods that flows will not meet the flow requirements needed to operate and all flow will be required to be passed over the dam into the bypass reach.

C: In some instances, a lowering of the impoundment elevation might be an improvement over existing conditions. This is better stated as, "Will not increase impoundment elevation or increase fluctuation in

water elevation.”

R: The language has been changed and the ANR will evaluate whether lowering the current elevation of the impoundment would provide benefits, such as alleviating the risk of flood upstream.

Criterion 4: Will Be Operated as True Run of River

C: Similar to the above questions, flow limitations at the power house must meet a true run-of-river standard; and how will this apply to seasonal flow fluctuations?

R: As the criterion states, projects must meet a true run-of-river standard. They will have conservation flow for the bypass and flow capacity requirement for generation. River flows will have to be above both to operate the project. This will be addressed and conditioned in ANR’s 401 process.

C: There should be some evaluation of the capacity of a developer to operate a project in compliance with conditions imposed by a 401 or FERC license.

A: This program is meant to provide guidance to developers at the very early stages of a project. In that regard, it is possible for the participating state agencies to lay out project expectations, but is it premature and impractical to incorporate any review of a developer’s financial or operational capacity. However, it should be noted that operating a hydroelectric project out of compliance with 401 conditions is something ANR takes seriously. ANR has enforcement authority over water quality certifications and may issue penalties for violations of conditions to hydro project operators.

C: There is nothing on ANR’s 303(d) list in terms of violations from hydropower projects. Additionally, the U.S. Fish and Wildlife Service usually requires passage of 90% of inflow during the refilling of the impoundment after a drawdown for maintenance or emergency purposes; this should be added.

R: The existing hydroelectric projects that do not meet current Water Quality Standards are listed on Part F of the state’s priority waters list. Part F list waters that are assessed as altered due to hydrologic factors that may impact aquatic biota and habitat as well as other designated uses. These often include a lack of or low bypass flow, water level or flow fluctuation, or some other modified hydrologic condition that precludes the water from meeting the designated uses. The current list is available at: http://www.watershedmanagement.vt.gov/mapp/docs/mapp_Part_F_2014_final.pdf.

Similar to the U.S. Fish and Wildlife Service, ANR also requires the passage of 90% of inflow during refills after the impoundment has been drawn down for maintenance. However, such activities need to be approved by the ANR prior to the drawdown as condition in the 401.

Criterion 5: Proposed Bypass Flows Will Meet Hydrologic Standards as Defined By the ANR Flow Procedure

C: Several commenters urged use of U.S. Fish and Wildlife Service’s recommended minimum of 0.5 csm (summer), 1.0 csm (fall/winter), and 4 csm (spring) to ensure all designated uses are protected under the Vermont Water Quality Standards, and one suggested that if other approaches to compliance are pursued, stakeholders should be invited to review and comment on any proposed study plans. Another urged the criterion require proposed bypass flows to meet or exceed hydrologic standards.

R: The recommended seasonal conservation flows are from the ANR Flow Procedure, are identical to the

U.S. Fish and Wildlife Service's recommendation, and are what is reflected in this criterion; the numbers were left out for brevity but have been put back in the revised draft for clarity. If an applicant proposes an alternative approach, there is a strong likelihood that a habitat flow study would be needed and the project would not be eligible for the program. However, the project developer could still pursue the project and stakeholders interested in the project would have an opportunity to participate in the FERC licensing process.

C: The criterion should also say, "Bypasses of <500' in length shall have minimum 7Q10 flows in the bypass reach." This procedure should only apply to bypasses < 500' in length. The ANR flow procedure is clear that the flow requirement is aquatic base flow (ABF) in the tailrace and generally 7Q10 in the bypass reach; ANR staff sometimes interprets this as requiring ABF flows in the bypass reach. ABFs have not been compiled from any rivers in Vermont. Hydrologic studies show about 70 percent of gaged rivers in Vermont cannot meet ABF flows under natural conditions. All existing hydro meets the Water Quality Standards, according to ANR, which should be used as a guideline. ANR should consider turning the flow procedure into a rule.

R: ANR's legal obligation under Section 401 of the federal Clean Water Act is to issue a water quality certification that there is reasonable assurance the hydroelectric project operations will comply with Water Quality Standards. The Standards have been revised substantially since the ANR flow procedure. The ANR Streamflow Procedure was adopted in July 1993; the current Standards were adopted on October 30, 2014 and include, among other things, language addressing hydrology, streamflow protection, and aquatic biota and habitat which was first included in July 2000. The statement that all existing hydro meet current Water Quality Standards is not accurate. Part F of the Vermont Waters List includes waters altered by flow regulation that results in impacts to aquatic biota and habitat and/or other designated uses within the Vermont Water Quality Standards. These projects tend to have older water quality certifications with inadequate bypass or operation flows or water level fluctuations that impact designated uses.

C: The hydrologic standards in the ANR flow procedure should be considered a floor rather than ceiling. Flows should meet levels needed for aquatic habitat, all fish cycles, and recreational uses of the river (especially in boatable reaches).

R: The seasonal conservation flows in the ANR flow procedure are adequate to protect all designated uses.

Criterion 6: When the Agency of Natural Resources determines, based on a site-specific determination, that:

- a. Fish passage facilities are not needed;**
- b. Project will not affect threatened or endangered species;**
- c. Project does not significantly alter site aesthetics; and**
- d. Project is not located where there is a bypass of high habitat value.**

C: Some commenters supported some or all of these criteria. Others suggested they should be removed because they are too subjective, do not offer specific criteria a developer would be able to use to

demonstrate compliance, and reflect things developers may not be able to determine in the early stages of a project. For instance, when is fish passage required? In some cases, the net effect may be to reduce overall fish passage in VT by inhibiting development of existing sites that already block fish passage. One suggestion was to remove this language and replace it with something about protecting fish from impingement and entrainment (for instance, “the velocities at the intake should be < 3 feet per second, to avoid impingement or entrainment”). Another commenter suggested revising the language to say, “Fish passage facilities are not needed and new barriers to fish passage are not created.” Yet another suggested that fish passage shouldn’t be required at sites that have existed (and blocked fish passage) for a long time, since you’re not changing the condition. Also, when would a project significantly affect threatened or endangered species (and do these include species listed under federal as well as state law)? And what is “significant” with respect to aesthetics – is there a specific standard that can be met? Can previous decisions be used as guidance – for instance, flows can be turned “off” at night and “on” during the day, per a previous Water Resources Board decision? Can the language reflect the opportunity to actually enhance aesthetic and recreational opportunities? Or, how is “high” habitat value determined (not defined in Water Quality Standards)? Instead, there should be reference to specific water classes and bypass minimum lengths. For instance, “No hydro will be permitted in Class A waters, and a maximum bypass length of 500’ is permitted in Class B waters” (based on previous FERC decisions). All possible stakeholders should have the opportunity to review and comment on any such proposed determinations before they are issued by ANR.

R: This criterion has been moved to Step 2 in order to reflect the understanding that many of the answers to these questions will be unknown at the time of application under Step 1 of this program, but may be determined at the time of the site visit and reflect important expectations for the development and operation of a truly low-impact project.

Criterion 7: Will comply with ANR Stream Alteration Standards

C: This is a minimum requirement for all construction. But, it has also never been an issue in the past for FERC licensing. Also, the link provided references a draft version; the standards have not been adopted, so the link should be updated. Additionally, all contractors on site should be certified as having completed Standard River Practices Training for Contractors by VTRANS and ANR.

R: This criterion has been moved to Step 2 and will be determined as part of the site-specific review process. The link has been updated to reflect the current rule language.

Criterion 8: Where there are direct or indirect impacts to historic and archaeological resources, projects are reviewed on a case-by-case basis by the State Historic Preservation Office, and adhere to recommendations made by that office.

C: This is a minimum requirement since Section 106 compliance is mandatory under FERC rules. Which federal agency would be the lead under this scheme?

R: This requirement pertains to the State Historic Preservation Office.

C: Agree in concept, but would like to see at least a timeline for determination as to whether there are affected resources – perhaps 30 days.

R: See the new program timelines as described in the program documents.

C: What does “indirect impacts” mean? If there will be no digging, can a project be exempt from this criterion?

R: For more discussion of indirect impacts, see

http://accd.vermont.gov/strong_communities/preservation/review_compliance/telecom_criteria. Note that this criterion has been moved to Step 2 and will be determined after a site visit.