

Vermont Agency of Natural Resources

Initial Project Review of Hydroelectric Development Proposals

Introduction

The Vermont Agency of Natural Resources (ANR) is responsible for assuring that hydroelectric projects conform with the Vermont Water Quality Standards (Standards). Depending on the specific characteristics of a proposed project, it will be regulated either by the state or by the Federal Energy Regulatory Commission (FERC). In either case, it must meet Standards, which are available at dec.vermont.gov/watershed/laws .

The Standards require that Vermont's waters be managed to support several designated uses, including aquatic biota and habitat, wildlife, aesthetics, and recreation. To assist project proponents in meeting Standards, ANR staff can, upon request, conduct necessary site visits early in the project scoping phase to identify the most significant resource issues that are likely to arise during permitting. Prior to scheduling a site visit, the Agency requests some basic information about the site and the design of the proposed project be prepared by the proponent (see listing on the following page). Once the information is received, Agency staff will contact the proponent to schedule a visit. There can be considerable lead time before the visit actually takes place, given the need to coordinate schedules among the participants and the necessity of having flow and site conditions (e.g., lack of snow cover) that will allow assessment of the site.

During the site visits, ANR technical staff will walk the project area and make observations to become familiar with the location, get a sense of the project proposal and identify potential issues and possible design and operational considerations. Following additional discussion within the Agency and possibly further dialogue with the project proponent, the Agency will, if requested, issue a letter that describes the issues and provides a preliminary assessment of any natural resource constraints. The letters are advisory only and do not constitute Agency approval or disapproval of the project, which can only occur after the Agency has received any necessary permit or certification applications.

The goal of these assessments and the follow-up is to make the process more predictable by giving potential project developers an early indication of issues that will have to be considered in the regulatory process. By taking this step early, the Agency hopes that project developers will have better information to inform decisions about investing in more detailed feasibility studies and designs. If the project would have significant impacts on high-quality resources, the Agency may conclude that it is unlikely a viable project exists. In other cases, the Agency may indicate that the resource issues are relatively minor. In either case, it is then up to the proponent to determine the economics of the project and whether to move forward.

Site and Project Information for Initial Project Review

Please submit the following information with your request for an ANR initial project review site visit.

Developer Information

- Name of developer and contact information

Project Location and Site Map and Photo Documentation

- Site Locator Map based on USGS 1:24000 scale topographic map showing the location of the project
- Watershed boundaries shown on USGS topographic map at scale necessary to accommodate entire watershed area¹
- Site Plan at an appropriate scale to show all proposed structures, land (including property boundaries and ownership) and water area that will be affected by the proposed project
- Photo documentation of the site and stream including
 - all existing structures that will support the project
 - the dam or intake location from upstream and downstream
 - the stream as viewed from the dam or intake location looking up
 - the stream as viewed from the dam or intake looking down
 - the reach that is by-passed by the penstock as viewed from downstream
 - the point at which the withdrawn flow is returned to the stream as viewed from upstream and downstream

Description of Civil Works and Operations

- Existing and proposed civil works required to support the project, including powerhouses, dams, water conduits (penstock), transmission lines, water impoundments, roads, and other appurtenant works and structures that will be utilized and/or required to support the project
- Turbine and generator
 - Proposed operating regime (run of river or store and release) including practical project turbine operating range (maximum and minimum in cfs)
- Measures employed to avoid/minimize fish impingement and entrainment

Hydrology and Geomorphology

- Drainage area at the proposed project site¹
- Annual flow duration curve
- Proposed instream flows in the penstock-bypassed reach²
- Longitudinal stream profile beginning 10 channel widths upstream and ending 10 channel widths downstream of the proposed project site¹
- Description of any impoundment/reservoir water level management that will occur

¹ Can be obtained from USGS Stream Stats website at <http://water.usgs.gov/osw/streamstats/Vermont.html>

² Refer to ANR's *Agency Procedure for Determining Acceptable Minimum Stream Flows* (July 14, 1993) for details on conservation flow requirements in the reach bypassed by the penstock, and the downstream reach if the project will not be operated run-of-river. (dec.vermont.gov/content/agency-procedure-determining-acceptable-minimum-stream-flows)