

4.2.1 Geology and Soil Resources: Black River, Williams River and Saxtons River at confluence of Connecticut River
Estuaries, specifically Commissary Brook Estuary and Herrick's Cove and Upper Meadows

Goals and Objectives

5.9 (b)(1) – Describe the goals and objectives of each study proposal and the information to be obtained.

The goal of this study is to evaluate the projects operation and maintenance on Riverbank erosion (including the potential effects on protected species, cultural resources and structural integrity) of the Saxtons River Commissary Brook Estuary, Herrick's Cove and Upper Meadows areas.

Specifically the objectives of the study include:

- Identify, describe, classify and map any estuary or wetland issues or concerns, especially on protected species, vegetation and wildlife habitat or invasive species in the reservoir and impoundment area of the dam (and project area below the power plant) that are or will be impacted by erosion
- Identify measures that may be taken to protect or mitigate adverse effects on the vegetative and wildlife communities and wetlands
- Identify, describe, classify and map any issues or concerns in the Saxtons River, Commissary Brook, Herrick's Cove and Upper Meadows from impacts of erosion on approved activities
- Identify measures that may be taken to protect or mitigate adverse effects on the approved activities in the Herrick's Cove

5.9 (b)(2) – If Applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.

Not applicable.

5.9 (b)(3) – If the requestor is not a resource agency, explain any relevant public interest consideration in regard to the proposed study.

Sections 4(e) and 10(a) of the Federal Power Act (FPA) require the Commission to give equal consideration to all uses of the waterway on which a project is located. When reviewing a proposed action, the Commission must consider the environmental, recreational, fish and wildlife, and other non-developmental values of the project, as well as power and developmental values.

Vegetation Communities and the wildlife habitat they support, including wetlands, are resources of particular interest of a variety of reasons including their ecological functions, sporting interest, and subsistence use. Describing the effects on these resources is necessary to fulfill the Commission's

responsibilities under NEPA. Ensuring that environmental measures pertaining to these resources are considered in a reasoned way is relevant to the Commission's public interest determination.

Background and Existing Information

5.9 (b)(4) – Describe existing information concerning the subject of the study proposal, and the need for additional information.

- Information on the effects and impacts of erosion on these areas is not in the Pre-Application Document

The general information about the effects and impacts of erosion on the habitats and wildlife on the estuaries, and on the Herrick's Cove approved activities do not take into account recent changes in conditions especially dramatic changes from intensive flooding and overflow's and washouts and that have taken place as the result of Tropical Storm Irene.

Project Nexus

5.9 (b)(5) – Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.

Project related activities impact the water levels on the banks and shorelines, thus impacts and effects of erosion the estuaries and coves.

Proposed Methodology

5.9 (b)(6) – Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.

Proposed methods include:

- Using a qualified biologist knowledgeable in area vegetation and wildlife, identify, classify and delineate on a map major vegetation cover types, wildlife, and invasive species with special focus on the estuaries
- Using accepted practices evaluate erosion concerns including on access (including time of day, seasons and distance from trails) that may influence approved recreational activities at Herrick's Cove

- Prepare a report that includes an analytical summary and graphical representations of the data from the above studies, including erosion and.... Impacts. All data points used to develop the report (including date and time of collection), should be included within an appendix to the report

Level of Effort and Cost

5.9 (b)(7) – Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

The estimated cost of this study is: \$x,xxx. The study may be completed in on study season (12 months).

X to x technicians would be expected to spend x hours each monthly to conduct field work. Report preparation should take a biologist x work days.