

FEDERAL ENERGY REGULATORY COMMISSION

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OFFICE OF ENERGY PROJECTS

Project No. 1892-026 – New Hampshire/Vermont
Project No. 1855-045 – New Hampshire/Vermont
Project No. 1904-073 – New Hampshire/Vermont
TransCanada Hydro Northeast Inc.

John L. Ragonese
Relicensing Project Manager
TransCanada Hydro Northeast Inc.
4 Park Street, Suite 402
Concord, NH 03301

Subject: Determination on Requests for Study Modifications and New Studies – Wilder, Bellows Falls, and Vernon Hydroelectric Projects

Dear Mr. Ragonese:

Pursuant to 18 C.F.R. § 5.15 of the Commission's regulations, this letter contains the determination on requests for modifications to the approved study plan for the relicensing of TransCanada Hydro Northeast Inc.'s (TransCanada) Wilder (Wilder Project), Bellows Falls (Bellows Falls Project), and Vernon hydroelectric projects (Vernon Project). The determination is based on the study criteria set forth in sections 5.9(b), 5.15(d) and (e) of the Commission's regulations, applicable law, Commission policy and practice, and staff's review of the record of information.

Background

The study plan determination on non-aquatic studies for the projects as proposed by TransCanada was issued on September 13, 2013. A subsequent study plan determination was issued on February 21, 2014 to address the proposed aquatic studies. TransCanada filed study reports for ongoing and finalized studies on September 15, 2014, and September 14, 2015, and Commission staff issued determinations on requested study modifications and new studies associated with these study reports on January 22, 2015, and January 15, 2016, respectively. On March 1, 2016, TransCanada filed a study report for 10 additional finalized studies¹ and 22 ongoing studies. As required in section 5.15 of the Commission's regulations, the study report describes TransCanada's progress in implementing the approved study plan, and an explanation of variances from the study

¹ The finalized studies include studies 1, 4, 6, 10, 11, 12, 18, 30, 31, and 32.

plan and schedule. TransCanada held study report meetings on March 17 and 18, 2016, and filed meeting summaries on March 31, 2016.

Comments

Comments on the study report and meeting summaries, including requests for study modifications, were filed by: the U.S. Fish and Wildlife Service (FWS); the New Hampshire Fish and Game Department (New Hampshire FGD); the New Hampshire Department of Environmental Services (New Hampshire DES); the Vermont Department of Environmental Conservation (Vermont DEC); the Nature Conservancy (TNC); the Connecticut River Watershed Council (CRWC); the Connecticut River Joint Commissions (CRJC); the CRJC, Upper Valley Subcommittee (CRJC-UVS); the town of Lyme, Board of Selectman (Lyme); American Whitewater; the Appalachian Mountain Club; New England Flow; the Brattleboro Historical Society; Ross McIntyre; and John Mudge. TransCanada filed reply comments on May 31 and June 2, 2016.

A number of the comments received do not specifically request modifications to the approved studies, and are therefore not addressed herein. For example, some of the comments address the presentation of data; request additional analysis of existing available data; provide additional information; recommend protection, mitigation, and enhancement measures; address ongoing and future consultation; request information that was included in the study report; request information that TransCanada subsequently provided in its reply comments or agreed to provide in future reports;² or request additional information collection that is contingent upon the results of ongoing studies. In addition to the items listed above, this determination does not address requests for study modifications or additional studies that have been addressed in previous Commission letters. This determination only addresses new comments and requests that would require study modifications or additional studies.

Study Plan Determination

Pursuant to section 5.15(d) of the Commission's regulations, any proposal to modify a required study must be accompanied by a showing of good cause, and must include a demonstration that: (1) the approved study was not conducted as provided for

² In its reply comments filed on May 31, 2016, TransCanada states that it will file revised reports for finalized studies 1, 4, 6, 10, and 12 to address comments and requests for additional information. TransCanada states that it will also address comments and requests for additional information in the final reports for ongoing studies 13, 14, 15, and 16. In addition, TransCanada states that it will conduct additional fieldwork and file revised reports for studies 18 and 32. Studies 4 and 13 and a schedule for the other revised and final reports were filed on June 17, 2016.

in the approved study plan, or (2) the study was conducted under anomalous environmental conditions or that environmental conditions have changed in a material way. As specified in section 5.15(e), requests for new information gathering or studies must include a statement explaining: (1) any material change in law or regulations applicable to the information request, (2) why the goals and objectives of the approved study could not be met with the approved study methodology, (3) why the request was not made earlier, (4) significant changes in the project proposal or that significant new information material to the study objectives has become available, and (5) why the new study request satisfies the study criteria in section 5.9(b).

As indicated in Appendix A, the requested modifications to six studies (1, 11, 14, 15, 18, and 30), and the requested new quantitative study on the impact of water level fluctuations on riverbank erosion are not approved. The bases for not modifying the study plan are explained in Appendices B (Requested Modifications to Approved Studies) and C (Requested New Studies). Commission staff considered all study plan criteria in section 5.9 of the Commission's regulations.

Please note that nothing in this determination is intended, in any way, to limit any agency's proper exercise of its independent statutory authority to require additional studies.

Erosion Studies

TransCanada filed a final report for the *Historical Riverbank Position and Erosion Study* (study 1) on March 1, 2016, and proposes to file final reports for the *Riverbank Transect Study* (study 2) and *Riverbank Erosion Study* (study 3) on August 1, 2016. Under the process plan and schedule, comments and requested study modifications on study 1 were due May 2, 2016, and comments and requested study modifications on studies 2 and 3 will be due September 30, 2016. CRWC, CRJC, and John Mudge request that the Commission extend the deadline for comments and requested study modifications on study 1 to coincide with the deadline for the other erosion studies (studies 2 and 3).

The objectives of studies 1, 2, and 3 are interrelated; therefore, if stakeholders request modifications to study 1 after reviewing the final reports for studies 2 and 3, Commission staff will address these requests in the study modification letter scheduled to be issued on November 29, 2016.

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If you have any questions, please contact Brandon Cherry at (202) 502-8328, or via e-mail at brandon.cherry@ferc.gov.

Sincerely,

Ann F. Miles
Director
Office of Energy Projects

Enclosures: Appendix A – Summary of Determinations on Requested Modifications to Approved Studies and New Studies
Appendix B – Staff’s Recommendations on Requested Modifications to Approved Studies
Appendix C – Staff’s Recommendations on Requested New Studies

cc: Mailing List, Public Files

APPENDIX A

SUMMARY OF DETERMINATIONS ON REQUESTED: MODIFICATIONS TO APPROVED STUDIES AND NEW STUDIES

Requested Modifications to Approved Studies (see Appendix B for discussion)

Study	Recommending Entity	Adopted	Adopted in part	Not Adopted
1 – Historical Riverbank Position and Erosion Study	CRWC, CRJC, CRJC-UVS, John Mudge			X
11 – American Eel Survey	CRWC			X
14 – Resident Fish Spawning in Impoundments Study	New Hampshire FGD, Vermont DEC, FWS, New Hampshire DES, TNC			X
15 – Resident Fish Spawning in Riverine Sections Study	New Hampshire FGD, Vermont DEC, FWS, New Hampshire DES, TNC			X
18 – American Eel Upstream Passage Assessment	Vermont DEC			X
30 – Recreation Facility Inventory and Use and Needs Assessment	CRWC			X

Requested New Studies (see Appendix C for discussion)

Study	Recommending Entity	Approved	Approved with Modifications	Not Required
Quantitative Analysis of the Impact of Water Level Fluctuations on Riverbank Erosion	Lyme			X

APPENDIX B

STAFF'S RECOMMENDATIONS ON REQUESTED MODIFICATIONS TO APPROVED STUDIES

Study 1 – Historical Riverbank Position and Erosion Study

Background

The goal of study 1 was to evaluate historical erosion and riverbank movement within the Wilder, Bellows Falls, and Vernon impoundments by collecting and analyzing historical records, including aerial photographs, topographic maps, surveys, etc. The data collected as part of study 1 will be further analyzed as part of study 2 (*Riverbank Transect Study*) and study 3 (*Riverbank Erosion Study*) to characterize the processes and determine the cause(s) of erosion occurring within the project boundary.

Requested Study Modifications

The Connecticut River Watershed Council (CRWC); the Connecticut River Joint Commissions (CRJC); the CRJC, Upper Valley Subcommittee; and Mr. John Mudge indicate that data collection efforts are incomplete as riverbank erosion studies conducted in the 1990's by the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) were not evaluated.

Comments on Requested Study Modifications

In its reply comments, TransCanada indicates that the erosion studies prepared by the USDA-NRCS in the 1990's were reviewed as part of study 1, but were determined to be insufficient for comparative purposes. TransCanada states that unlike the 1958 and 1978 studies presented in study 1, the USDA-NRCS studies were prepared over multiple years by multiple field personnel and therefore do not represent a singular snapshot of riverbank conditions within the project boundary. However, TransCanada acknowledges that the USDA-NRCS studies may potentially contain other information regarding riverbank erosion and will include a discussion of these studies in study 3.

Discussion and Staff Recommendation

The historical riverbank position maps prepared as part of study 1 using historic 1958 and 1978 erosion studies represent a snapshot of the riverbank stability and erosion conditions during the years when the studies were conducted. As indicated by TransCanada, the USDA-NRCS erosion studies were conducted over multiple years using different methodologies and bank stability classifications. Preparation of an additional historical riverbank map using the 1990's USDA-NRCS erosion studies would

not provide a directly comparable representation of bank stability and erosion conditions for that period. Additionally, the 1958 and 1978 riverbank position maps, in conjunction with the historical ground photo comparisons and digitized bank position maps presents a comprehensive summary of historical riverbank positions. Therefore, Commission staff does not recommend revising study 1 to include the USDA-NRCS data from the 1990s.

Study 11 – American Eel Survey

Background

The goal of study 11 was to provide baseline data on the presence of American eels in the Wilder, Bellows Falls, and Vernon project areas. Study objectives included characterizing the distribution and abundance of eels in the project impoundments, riverine sections, and the project-influenced portions of tributaries. Electrofishing and eel pots were used to sample 102 mainstem river sites and 24 tributary sites during July and August 2015. A total of three American eels were collected (all from the Bellows Falls impoundment).

Requested Study Modifications

CRWC requests that TransCanada conduct another field season “over the widest areas of known concentration of eels using the widest array of survey techniques.”

Comments on Requested Study Modifications

In its reply comments, TransCanada states that the amount of effort and the survey methods used in 2015, combined with the lack of any unusual circumstances or conditions (such as river conditions or equipment failure), make the study results valid and more sampling unnecessary.

Discussion and Staff Recommendation

CRWC does not provide a specific geographic scope nor does it recommend specific methods for conducting additional field surveys. In addition, CRWC does not indicate why the methods used in 2015 or the environmental conditions during 2015 warrant additional sampling (section 5.15(d)).

The sampling effort and methods TransCanada employed during the 2015 field season were substantial, and there were no anomalous environmental conditions during 2015 that would have materially affected the study results (section 5.15(d)(2)). Additionally, the study results are consistent with pre-existing information on eel abundance in the study area. For these reasons, we do not recommend requiring TransCanada to conduct additional sampling for American eel.

Studies 14 and 15 – Resident Fish Spawning in Impoundments and Riverine Sections Studies

Background

The goal of studies 14 and 15 is to assess project effects on resident fish spawning in the impoundments and in the riverine portions of the project area. The target species for this study were smallmouth bass, largemouth bass, yellow perch, black crappie, pumpkinseed, bluegill, chain pickerel, northern pike, golden shiner, white sucker, spottail shiner, walleye, and fallfish in the impoundments and smallmouth bass, walleye, white sucker, and fallfish in the riverine sections. In 2015, TransCanada conducted field surveys assessing the timing and locations of fish spawning under existing conditions and the potential effects of impoundment fluctuations and generation-related flow releases on nest abandonment, spawning fish displacement, and egg dewatering.

Requested Study Modifications

The New Hampshire Fish and Game Department (New Hampshire FGD) and Vermont Department of Environmental Conservation (Vermont DEC) request that these studies be repeated in 2017 for the following species: walleye, white sucker, largemouth bass, black crappie, northern pike, chain pickerel, spottail shiner, and golden shiner because very few or no spawning observations were made for these species during the 2015 fieldwork. The U.S. Fish and Wildlife Service, New Hampshire Department of Environmental Services, and Nature Conservancy state that they support the comments made by New Hampshire FGD and Vermont DEC on studies 14 and 15.

Comments on Requested Study Modifications

In its reply comments, TransCanada states that the paucity of spawning observations for some species cannot be attributed to mis-timed or insufficient sampling effort, faulty sampling design, or inadequate field methodologies. TransCanada states that although there were periodic high flows in June 2015, overall, conditions were not sufficiently anomalous to materially affect the study results (section 5.15(d)(2)). TransCanada suggests that additional field surveys are not warranted because they would not necessarily produce different results or additional useful information.

Discussion and Staff Recommendation

The level of sampling effort and methodologies TransCanada employed during the 2015 field work was substantial for this study. While it is not clear why more spawning behavior was not observed for walleye, northern pike, chain pickerel, golden shiner, spottail shiner, black crappie, and white sucker, these species are common in the project

area and existing literature on their spawning behavior and preferred habitats is readily available. Commission staff expect that the information collected during studies 14 and 15, combined with existing literature and other project-specific information collected in others studies that describe habitat, water level fluctuations, and water surface elevations at likely spawning sites for these species, will be adequate to describe project effects and inform the development of license conditions (section 5.9(b)(5)). Therefore, we do not recommend repeating these studies in 2016 or 2017.

Study 18 – American Eel Upstream Passage Assessment

Background

The goal of study 18 was to collect information on American eels attempting to move upstream past the projects and identify locations where they congregate while attempting upstream passage. The objectives of this study were to: (1) conduct systematic surveys at the Wilder, Bellows Falls, and Vernon Projects to identify areas where eels are staging or attempting to ascend project structures; and (2) collect eels with temporary traps or other devices to determine if they can be collected and passed upstream in substantial numbers.

TransCanada conducted the surveys in 2015, but no concentrations of eels were identified except for at survey locations at the Vernon Project, including the fishway. Attempts to trap eels in 2015 were unsuccessful. TransCanada proposes to place temporary eel traps in the Vernon fishway during 2016.

Requested Study Modifications

Vermont DEC requests that TransCanada also conduct additional eel trapping in the fish ladders at the Wilder and Bellows Falls Projects in 2016, in addition to the proposed trapping at the Vernon Project.

Comments on Requested Study Modifications

In its reply comments, TransCanada indicates that sampling the fishways at the Bellows Falls or Wilder Project would not be worthwhile due to the low numbers of eels observed at these projects.

Discussion and Staff Recommendation

A primary objective of study 18 was to determine where eels concentrate and evaluate the effectiveness of using traps to collect eels from these areas as a means for providing upstream passage. Concentrations of eels were identified at the Vernon Project (80 eels) and a study of the potential to trap eels in the fishway as a means to provide

upstream passage during periods when the fishway does not operate would be consistent with the study objectives. Because this information is needed for staff's analysis and development of license articles (section 5.9(b)(5)), we recommend that TransCanada proceed with the proposed eel trapping in the Vernon fishway during 2016. However, because only 3 eels were observed at the Bellows Falls Project and no eels were observed at the Wilder Project, we do not recommend additional trapping at those sites in 2016.

Study 30 – Recreational Facility Inventory and Use and Needs Assessment

Background

The study determination letter issued September 13, 2013, requires TransCanada to collect traffic counts, spot counts, interview data, and facility operator estimates, where possible, at public recreation sites. The Hoyt's Landing site at the Bellows Falls Project includes a fishing area and boat ramp. A vehicle traffic counter was installed at Hoyt's Landing in April 2014. TransCanada staff confirmed the traffic counter was operational during a site visit in November of 2014; however, the counter disappeared sometime before a subsequent site visit in March 2015, resulting in a loss of visitation data for the winter season.

Requested Study Modifications

CRWC states that the lack of data at Hoyt's Landing could skew overall recreational data for the entire project because Hoyt's Landing appears to be the most heavily used facility. CRWC requests that TransCanada perform a season-long count of usage at Hoyt's Landing.

Comments on Requested Study Modifications

In its reply comments, TransCanada states that although the traffic counter data was not retrievable, TransCanada staff performed spot counts throughout the winter to observe winter use and documented vehicle tracks in the snow at the Hoyt's Landing parking lot. TransCanada states that the level of winter usage at Hoyt's Landing, as well as the recreational activities it supports, are well understood, and it is not clear what additional counts would achieve.

Discussion and Staff Recommendation

Recreational use at river access sites in New England is generally lower in winter than in summer, and the results of the study indicate that Hoyt's Landing follows this pattern. Any capacity and crowding issues at the Hoyt's Landing site would likely occur during the summer, not during the winter. Therefore, collecting another season of traffic counts at Hoyt's Landing would not provide any additional information that is needed to

understand seasonal use patterns or capacity limitations at Hoyt's Landing. Because TransCanada's study results provide adequate information for Commission staff to evaluate recreational use and the adequacy of existing facilities at Hoyt's Landing, we do not recommend that TransCanada conduct any additional traffic counts.

APPENDIX C

STAFF'S RECOMMENDATIONS ON REQUESTED NEW STUDIES

New Study Request: Quantitative Analysis of the Impact of Water Level Fluctuations on Riverbank Erosion

Requested New Study

The town of Lyme, Board of Selectmen (Lyme) requests that TransCanada conduct a quantitative analysis of how water-level fluctuations associated with project operation impact riverbank stability and erosion. Lyme does not describe the goals and objectives (section 5.9(b)(1)), describe existing information and need for additional information (section 5.9(b)(4)), explain how the study would inform the development of license conditions (section 5.9(b)(5)), describe the study methodology (section 5.9(b)(6)), or describe the level of effort and cost (section 5.9(b)(7)).

Comments on Requested New Study

In its reply comments, TransCanada indicates that the Commission-approved erosion studies are currently ongoing (studies 2 and 3); therefore, requesting a quantitative erosional analysis is premature.

Discussion and Staff Recommendation

The erosion studies being conducted by TransCanada will provide information that can be used to evaluate the impact project operations have on riverbank stability and erosion. Because the results of TransCanada's ongoing studies should be adequate for staff's analysis and development of any license requirements (section 5.9(b)(5)), we do not recommend conducting any additional quantitative analysis at this time.