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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
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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, September 14, 2015, and March 1, 2016, and Commission staff issued determinations on requested study modifications and new studies associated with these study reports on January 22, 2015, January 15, 2016, and June 29, 2016, respectively. On May 17, 2016, TransCanada filed a study report for five additional finalized studies.[1] 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

[1] The finalized studies include studies 8, 17, 19, 22, and 23.

the study plan and schedule. TransCanada held a study report meeting on June 1, 2016, and filed a meeting summary on June 14, 2016.

Comments

Comments on the study report and meeting summaries, including requests for study modifications and new studies, were filed by: the U.S. Fish and Wildlife Service (FWS); the Bureau of Indian Affairs; the Vermont Agency of Natural Resources (Vermont ANR); the New Hampshire Fish and Game Department (New Hampshire FGD); the Nature Conservancy (TNC); the Connecticut River Watershed Council (CRWC); the Elnu Tribe of the Abenaki; the Nulhegan Band of the Coosuk-Abenaki Nation; the Koasek Traditional Band of the Koas Abenaki Nation; and John Mudge. TransCanada filed reply comments on August 15, 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; address ongoing and future consultation; request information that was included in the study report; or request information that TransCanada has subsequently provided[2] or agreed to provide in future reports.[3] 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 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

[2] In addition to its reply comments, TransCanada filed supplemental information for studies 8, 19, and 22 on August 31, 2016.

[3] In its reply comments, TransCanada states that it will file revised reports for finalized studies 17 and 23 by October 1, 2016, to address comments and requests for additional information. In addition, TransCanada states that it will address comments in the final reports for ongoing studies 24 and 33.

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 studies 19 (*American Eel Downstream Passage Assessment*) and 22 (*Downstream Migration of Juvenile American Shad at Vernon*) are approved and the requested modifications to studies 17 (*Upstream Passage of Riverine Species Assessment*) and 24 (*Dwarf Wedgemussel and Co-Occurring Mussel Study*) and the new study requested on the effectiveness of the Wilder and Bellows Falls fish ladders at passing American eel are not approved. The specific modifications to the studies and the bases for modifying or not modifying the study plan are explained in Appendix 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.

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
17 – Upstream Passage of Riverine Species Assessment	Vermont ANR, New Hampshire FGD, TNC			X
19 – American Eel Downstream Passage Assessment	New Hampshire FGD, TNC	X		
22 – Downstream Migration of Juvenile American Shad at Vernon	FWS, Vermont ANR, New Hampshire FGD, TNC	X		
24 – Dwarf Wedgemussel and Co-Occurring Mussel Study	FWS, TNC, New Hampshire FGD			X

Requested New Studies (see Appendix C for discussion)

Study	Recommending Entity	Approved	Approved with Modifications	Not Required
Effectiveness Testing of the Wilder and Bellows Falls Fish Ladders at Passing American Eel	Vermont ANR, New Hampshire FGD, TNC, CRWC			X

APPENDIX B

STAFF'S RECOMMENDATIONS ON REQUESTED MODIFICATIONS TO APPROVED STUDIES

Study 17 – Upstream Passage of Riverine Species Assessment

Background

The goal of this study was to determine the use and temporal distribution of riverine and diadromous fish passing upstream in the existing Wilder, Bellows Falls, and Vernon fish ladders during the ice-free period. To determine existing fish ladder use and timing, passage through the fish ladders was video recorded from April 17, 2015, to January 7, 2016, at the Wilder Project; from April 15, 2015, to January 6, 2016, at the Bellows Falls Project; and from May 5, 2015, to January 6, 2016, at the Vernon Project.

During a routine inspection of the Wilder fish ladder on September 4, 2015, a U.S. Fish and Wildlife Service (FWS) engineer determined that the fish ladder was operating abnormally. On September 23, 2015, TransCanada inspected the ladder, determined that debris had collected in some of the orifices of the fish ladder, removed the debris, and normal operation resumed.

Requested Study Modifications

The Vermont Agency of Natural Resources (Vermont ANR) requests that TransCanada conduct another year of study at the Wilder Project or provide information to demonstrate that the fish ladder was operating normally before and after September 4, 2015. The New Hampshire Fish and Game Department (New Hampshire FGD) and Nature Conservancy (TNC) support Vermont ANR's request.

Comments on Requested Study Modifications

TransCanada states that although it is not known how long the debris was present in the fish ladder prior to its removal, American eel, bass, walleye, trout, and sunfish successfully moved through the fish ladder prior to and after the debris removal.[4] TransCanada indicates that another year of study is not likely to yield any new information and would not be worth the cost.

Discussion and Staff Recommendation

[4] TransCanada indicates that an array of American eel, bass, walleye, trout, and sunfish were observed moving through the fish ladder from August 25 to September 23.

A review of the daily fish passage observations from late August through late September (Appendix C of the study report) indicates that there were no significant variations or anomalous patterns in the assemblage of species or numbers of fish using the ladder.

The goal of study 17 was to determine the timing of species using the three fish ladders, and the data collected from the Wilder fish ladder adequately describe the fish species that use the ladder and the timing of their use. While it is possible that the number of fish and/or passage rates were reduced somewhat during the period of abnormal operation, there is no evidence that the abnormal operation resulted in fewer or different species using the ladder. Based on the available information, we conclude that the study results achieve the established goal, provide the required information, and are adequate for the Commission to evaluate project effects on fish movements and to develop any necessary license conditions (section 5.9(b)(5)). Therefore, we do not recommend requiring TransCanada to conduct another year of video recording at the Wilder fish ladder.

Study 19 – American Eel Downstream Passage Assessment

Background

The goals of this study were to determine movement rates, timing, passage route selection, and mortality rates of adult American eels at the Vernon, Bellows Falls, and Wilder Projects. Movement rates, timing, and passage route selection of American eels were determined using radio telemetry and mortality rates of American eels were determined using balloon tags.

Requested Study Modifications

New Hampshire FGD requests that TransCanada provide a table that lists the total number of eels using each passage route at each dam. Specifically, New Hampshire FGD requests this data for four categories of eels: (1) the 24 eels that were released upstream of Wilder dam and were detected downstream of all three projects (category 1); (2) the 21 eels that were released upstream of Wilder dam and were detected downstream of Wilder dam and Bellows Falls, but were not detected at Vernon dam (category 2); (3) the 44 eels that were released upstream of Bellows Falls and were detected downstream of both Bellows Falls dam and Vernon dam (category 3); and (4) the 21 eels that were released upstream of Bellows Fall dam and were detected downstream of Bellows Falls dam, but were not detected at Vernon dam (category 4). New Hampshire FGD indicates that evaluating this information may help understand the cumulative effects of the three dams on downstream eel passage. TNC supports New Hampshire FGD's request.

Comments on Requested Study Modifications

TransCanada responds that the study was not designed to evaluate cumulative survival or passage through multiple dams. However, TransCanada also states that it could provide a table listing each of the eels by New Hampshire FGD's categories and this data could be compared to the maps in Appendix E of the final report to determine individual eel routes.

Discussion and Staff Recommendation

The telemetry portion of the study was not designed to track the eels passing multiple dams, instead it was designed to determine the movement rates, timing, and route selection of eels at each dam by releasing tagged eels upstream of a dam and tracking the eels until they were detected downstream of that dam. However, because the study was being conducted simultaneously at all three dams, some eels (i.e., those categorized by New Hampshire FGD) were incidentally detected at multiple dams. While the study was not intended to evaluate cumulative survival or passage through multiple dams, the table that TransCanada indicates it could provide, in combination with the maps already provided in Appendix E, would require minimal extra effort or cost to prepare and could provide information that helps describe the relationship between an eel's passage route and its likelihood of successfully passing multiple dams. Therefore, because providing this information would have little cost (section 5.9(b)(7)) and may be useful for staff's analysis (section 5.9(b)(5)), we recommend that TransCanada provide a table listing each eel by New Hampshire FGD's categories as an addendum to the final report within 45 days of the date of this letter.

Study 22 – Downstream Migration of Juvenile American Shad at Vernon

Background

The objectives of study 22 included evaluating downstream passage route selection and survival for juvenile American shad (juvenile shad) at the Vernon Project. TransCanada evaluated downstream passage route selection by tagging 310 juvenile shad with radio tags, releasing the tagged fish in 15 groups of approximately 20 fish per group from late September 2015 through late October 2015, and tracking the fish as they passed through the project's intakes, spillway, and downstream fish passage facilities. TransCanada evaluated the survival of juvenile shad passing downstream through the project's turbines by tagging 451 juvenile shad with balloon tags, releasing 151 fish through Unit 4, releasing 150 fish through Unit 8, and releasing 150 fish downstream of the dam as controls.[5] Balloon-tagged fish were recovered in the tailrace and examined for survival and injuries.

[5] TransCanada injected the fish into the turbines by releasing the fish into a water-filled tube and positioning the tube's exit on the downstream side of the unit's trashrack

Twenty six of the radio-tagged juvenile shad used in the route selection study were never detected after release. An additional 43 juvenile shad were detected at least once upstream of Vernon dam but were not detected downstream of the Vernon dam; therefore, route selection could not be determined for these fish. TransCanada could not determine the downstream passage route for eight fish. The remaining 233 juvenile shad were detected at multiple locations that allowed for a determination of route selection.

TransCanada estimated 100 percent and 99.3 percent of juvenile shad survived for at least one hour (1-hour survival) after passing through Units 4 and 8, respectively.[6] TransCanada also calculated injury rates of 2.1 percent and 0.9 percent for juvenile shad passing through Units 4 and 8, respectively.[7]

Fish Detected at the Dam but not Downstream

Requested Study Modifications

FWS requests that TransCanada provide the last known detection locations for the 43 juvenile shad that were detected upstream of Vernon dam but were not detected downstream because the data from these fish may provide anecdotal information about indirect project effects, such as predation. Vermont ANR, New Hampshire FGD, and TNC support FWS's request.

Comments on Requested Study Modifications

In its reply comments, TransCanada states that the purpose of the radio telemetry study was to evaluate downstream passage route selection, not passage survival or causes of non-passage. TransCanada further states that last known location data is not informative because it is impossible to determine if the fish were alive at the last known location, if they were dead and drifted there, or if the fish lost the tags.

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so that the test fish would be entrained into the turbine. TransCanada used a similar apparatus to release the control fish directly into the tailrace.

[6] TransCanada designed the study to estimate 48-hour survival rates; however, the control fish experienced high mortality thereby making any calculated 48-hour survival rate estimate unreliable or nonsensical (e.g., calculated 48-hour survival estimates could be higher than 1-hour survival estimates).

[7] TransCanada estimated injury rates by examining all recovered test and control fish. Injuries included physical damage and loss of equilibrium.

Discussion and Staff Recommendation

While TransCanada is correct that the purpose of the radio telemetry study was to provide route-selection data for juvenile shad, the Commission's order on rehearing issued on May 14, 2015,[8] made it clear that study 22 is also expected to provide information about passage delay. The final report for study 22 addresses delay by providing the time from first detection at Vernon dam to the time detected downstream of the dam for fish that passed the dam; however, it does not provide any information about the delay of the 43 fish that were only detected upstream of the dam. The time from first detection upstream of the dam to the last detection upstream of the dam for these 43 fish would describe the time spent in the vicinity of the dam without passing downstream. While this information would not be directly comparable to the delay information provided in the final report, it could provide additional useful information about delay. Therefore, we recommend that TransCanada provide the time from first detection upstream of the dam to the time of last detection upstream of the dam for the 43 fish that were only detected upstream of the dam. Furthermore, we recommend that TransCanada provide the location of last detection for each of the 43 fish, as requested by FWS, because this information may demonstrate patterns or clustering that could indicate predation or other factors that may be reducing passage success.

In addition to the information described above, we recommend that TransCanada provide the time each fish spent in the area monitored by each receiver on the upstream side of the dam.[9] This information will help to describe the locations where delay may be occurring and should be provided for each of the 233 fish that were used to determine route selection, as well as the 43 fish that were only detected upstream of the dam. Providing this additional information would have minimal additional cost (section 5.9(b)(7)) and could inform staff's analysis (section 5.9(b)(5)); therefore, we recommend that TransCanada be required to provide this information as an addendum to the final report within 45 days of the date of this letter.

Detection of Fish at Downstream Locations

Requested Study Modifications

FWS requests that TransCanada provide the number of juvenile shad that passed through turbine and non-turbine downstream passage routes and the numbers fish in each category that were detected at the most downstream radio receiver (i.e., the receiver near Stebbins Island). FWS indicates that comparing these numbers to the survival rates

[8] 151 FERC ¶ 61,116.

[9] The sum of time that each fish spent in each receiver's detection area.

estimated from the balloon-tagging study may provide additional information about downstream passage survival. Vermont ANR, New Hampshire FGD, and TNC support FWS's request.

Comments on Requested Study Modifications

TransCanada states that the purpose of the radio telemetry study was to evaluate downstream passage route selection, and that downstream detection information would not provide reliable survival information for several reasons, including dead fish drifting after passage and the loss of tags during passage.

Discussion and Staff Recommendation

TransCanada suggests that because the purpose of the radio telemetry study was to provide route selection data for juvenile shad and it is impossible to determine the condition of fish and tags as they pass the downstream receivers, the detection information should not be used to estimate survival. However, as part of study 23 TransCanada used detection data from study 22 to provide survival rates for juvenile shad passing through non-turbine routes even though the actual condition of these fish was unknown (see Table 7.1-5 in study 23). While it is clear that the actual condition of the fish detected downstream of Vernon dam cannot be determined, examination of detections at the two downstream receivers (i.e., the tailrace receiver and the receiver upstream of Stebbins Island) by passage route may provide some anecdotal information about survival after passing over the dam and through the reach downstream of the dam. Because providing this information would have minimal additional cost (section 5.9(b)(7)) and could inform staff's analysis (section 5.9(b)(5)), we recommend that TransCanada be required to provide a breakdown of the detections at the two downstream receivers by passage route as an addendum to the final report within 45 days of the date of this letter.

Study 24 – Dwarf Wedgemussel and Co-Occurring Mussel Study

Background

One goal of study 24 is to assess the potential effects of flow regimes on dwarf wedgemussel and their habitat. In order to achieve this goal, TransCanada proposed to develop habitat suitability criteria (HSC)[10] using the Delphi technique in its progress

[10] These criteria describe suitable and unsuitable habitat conditions for aquatic organisms and typically include variables such as water depth and velocity. The HSC can then be used in conjunction with hydraulic models to determine the location, suitability, and persistence of habitat under different flow regimes.

report filed on March 2, 2015. The Delphi technique is one method for combining the knowledge and opinions of a group of experts (Crance, 1987), and is often used to develop HSC when existing criteria are unavailable. TransCanada presented its proposed methodology, including its intention to select regional experts for the Delphi Panel, to members of the aquatics working group,[11] in a meeting on March 5, 2015. No member of the working group disagreed with TransCanada's proposal. In its study report filed on September 14, 2015, TransCanada indicated that five panelists agreed to participate in the process and no comments were filed regarding the number of panelists. However, during the March 18, 2016, study report meeting, TransCanada indicated that only three panelists participated. TransCanada filed a report that included the Delphi-developed HSC and proposed next steps on May 16, 2016.

Requested Study Modifications

FWS and TNC suggest that TransCanada restricted the number of Delphi panelists and express concern that the participation of only three panelists may have biased the Delphi process. Therefore, FWS recommends that TransCanada add three or more experts to the Delphi panel and conduct additional rounds of review until consensus on the HSC is achieved. In addition, FWS recommends that the aquatics working group review and provide feedback to revise the HSC and specific habitat analyses. Additionally, after TransCanada conducts initial model testing, FWS suggests that the aquatics working group review and again provide feedback on the HSC before TransCanada proceeds with the full habitat modeling runs. TNC similarly recommends adding panelists, at least 8 to 10 total panelists, and conducting additional rounds of review to develop the HSC. New Hampshire FGD supports FWS's and TNC's requests.

Comments on Requested Study Modifications

TransCanada notes that the Delphi process for developing HSC can vary according to multiple factors including the number of participants, available data, project schedule, and other factors, and states that the Delphi Panel is small because the number of regional experts on the dwarf wedgemussel is small, not because the number of panelists was restricted. TransCanada indicates that only one comment received from stakeholders expressed concern over the accuracy of the HSC themselves and argues that more panelists and more rounds of review would not likely provide new or significantly different HSC for dwarf wedgemussel. TransCanada also notes that almost seven months

[11] The aquatics working group consists of multiple stakeholders, including FWS, New Hampshire FGD, the Vermont Fish and Wildlife Department, the Vermont Department of Environmental Conservation, the New Hampshire Department of Environmental Services, TNC, the Connecticut River Watershed Council, the Connecticut River Joint Commissioners, American Whitewater, New England FLOW, and others.

were needed for the existing Delphi panel to conduct three rounds of review to develop a report, and that additional panelists and additional rounds of review would likely require significantly more time.

Discussion and Staff Recommendation

The Delphi technique is based upon the premise that a consensus of experts will provide a more accurate response to a question than a single expert. We agree that a total of three Delphi panelists is a small panel, but there is no set minimum or maximum number of Delphi panelists for any given question. It is clear that a Delphi-developed HSC should represent a pool of judgments from individuals who are knowledgeable about the habitat requirements of the target species (section 5.9(b)(6)). While it is unfortunate that several potential panelists contacted by TransCanada could not or would not participate in the process, the HSC produced were developed by a group of individuals with exceptional knowledge of dwarf wedgemussel habitat suitability in the region. In addition, the record does not show that TransCanada restricted the potential list of participants when it was initially established. Based on the project record, including TransCanada's recent response to comments, it seems that several regional experts were invited to participate, and that the number of regional experts is simply limited.

A single comment was received regarding the accuracy of the HSC for water depth, but this comment focused on the initial draft of the HSC, and not the Delphi-finalized HSC. No commenters raised concern over the accuracy of the final HSC. Our review of the final HSC in comparison with the available information presented in the May 16, 2016, HSC report and supporting citations included therein indicate that the Delphi-developed HSC are reasonable. As such, adding panel members and conducting additional rounds of review, which could take several months, is not needed to refine the HSC as this would not likely result in new or substantially different HSC. Therefore, expanding the panel and conducting more Delphi review of the HSC would not be worth the cost (section 5.9(b)(7)) and we do not recommend it.

Furthermore, we note that TransCanada's proposal includes stakeholder review of the HSC and indicates that the HSC will now be evaluated, tested, and possibly modified based on data from the study area, relevant publications, data from other TransCanada relicensing studies, and expert opinion. Although the exact process is not outlined, we assume the aquatics working group, or any interested experts, may submit comments on the accuracy of the HSC to TransCanada so that the HSC may be refined, if needed, prior to full habitat modeling runs. As such, the aquatics working group should have ample opportunity to provide feedback on the HSC and specific habitat analyses under the current study proposal.

APPENDIX C

STAFF'S RECOMMENDATIONS ON REQUESTED NEW STUDIES

New Study Request: Effectiveness Testing of the Wilder and Bellows Falls Fish Ladders at Passing American Eel

Requested New Study

The Vermont Agency of Natural Resources (Vermont ANR) requests that TransCanada test the effectiveness of the Wilder and Bellows Falls fish ladders at passing American eel. The New Hampshire Fish and Game Department, Nature Conservancy, and Connecticut River Watershed Council support Vermont ANR's request. Vermont ANR does not 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

TransCanada responds that Vermont ANR's request does not meet the Commission's study request criteria and that study 17, in combination with the other studies related to American eel (studies 11, 18, 19, and 23), suggest that there are too few eels in the system to justify a new study.

Discussion and Staff Recommendation

To determine if additional passage measures (i.e., in addition to the existing fish ladders) are needed for providing upstream passage for American eel, TransCanada used systematic visual surveys and eel pots to sample for eels that may be collecting at the base of the Vernon, Wilder, and Bellows Falls spillways (study 18). During 2015, 80 eels were observed at Vernon; however, no eels were observed downstream of the Wilder spillway and only 3 were observed downstream of the Bellows Falls spillway. Because of the low numbers of eels observed at Wilder and Bellows Falls in 2015, additional sampling was not conducted at these projects in 2016; however, additional sampling was conducted at Vernon. The results of the Wilder and Bellows Falls sampling in 2015 suggest that there are either very low numbers of eels present in these project areas or that the eels that are present are able to locate and pass upstream through the Wilder and Bellows Falls fish ladders.

During study 17, there were a total of 203 observations of American eels moving upstream in the Wilder fish ladder and 151 observations of eels moving downstream. In the Bellows Falls fish ladder, there were 254 observations of eels moving upstream and 185 observations of eels moving downstream. Because individual eels may have moved

upstream and downstream past the video recorders multiple times, the video observations cannot be used to determine the number of individual eels moving through the Wilder and Bellows Falls fish ladders. However, the information collected is evidence that there are eels present in both project areas and eels are actively moving upstream and downstream through the fish ladders of the Wilder and Bellows Falls Projects.

When considered together, the information collected in studies 17 and 18 provide no evidence that the Wilder and Bellows Falls fish ladders are ineffective at providing upstream passage for American eels. To the contrary, the results of these studies suggest that eels are actively using both fish ladders and few eels are collecting downstream of the spillways. Based on this information, we do not recommend requiring TransCanada to conduct effectiveness testing of American eel passage in the Wilder and Bellows Falls fish ladders.

LITERATURE CITED

Crance, J.H. 1987. Guidelines for using the Delphi Technique to develop habitat suitability index curves. U.S. Fish and Wildlife Service. Biological Report. 82(10.134). 21 pp.

Document Content(s)