



## CONNECTICUT RIVER WATERSHED COUNCIL

The River Connects Us

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Submitted electronically

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

In Re))

TransCanada Hydro Northeast Inc.

Project No. 1892, Project No. 1855, Project No. 1904

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### **Comments of the Connecticut River Watershed Council**

**on the above referenced FERC project studies 1, 10, 11, 13, 14, 15, 30**

#### **Statement of Interest:**

The Connecticut River Watershed Council is a four state nonprofit membership organization that has an interest in protecting environmental values that directly and indirectly support the State, regional and local economies and quality of life in the project area.

The interests and goals represented by CRWC for these projects include improving water quality; enhancing habitat for fish and other aquatic biota; safeguarding and improving wildlife habitat; protecting rare, threatened and endangered species; protecting wetlands; protecting shorelands from erosion and the resulting sedimentation of the river bottom.

CRWC interests include enhancing public recreation; protecting aesthetic values; protecting archeological, cultural, and historical resources; fostering sustainable economic development and preserving the local tax base; and maintaining the potential energy benefits of relicensing these hydroelectric projects on the Connecticut River.

#### **STUDY 1 – Historical Riverbank Position and Erosion Study:**

In the summary, the study offers a preliminary finding that erosion has remained unchanged or decreased but the study does not offer the data/observations that allow for that or any other finding. It would seem that the statement of preliminary finding sets up a self-fulfilling prophecy that there will be a finding in the subsequent studies that the rate and distribution of erosion has declined over the period of 1958 to 2016.

In addition to unsupported claims, this is an incomplete study. There are studies that are not included in the bibliography of shoreland erosion studies conducted by the Conservation Districts in the valley in 1992 and presumably not used in the compilation of erosion over time since the bibliography does not list them.

Then in the words of the study itself in section 6.0, “As such, the results of this study alone are insufficient to make an accurate assessment of project effects.” Somewhat in conflict with their earlier claim of drawing a conclusion that there is a decrease in the erosion rate.

The point of the three studies is to gather all information and then provide complete or at least sufficient information about project effects on erosion to decide if there are project effects that influence or cause shoreland erosion. TransCanada has not completed that work and presented all the information they could provide and while we wait for the other studies, CRWC is uncertain about the value of making comments now in the study process about project effects on shoreland erosion. Not only is there a lack of compelling information now but one cannot be sure what will be available when the final studies are presented. There may even be a need when TC presents studies 2 and 3 for additional fieldwork and analysis to determine if there are project effects causing erosion.

CRWC endorses the observations contained in the telling comments submitted to FERC by O. Ross McIntyre M.D. on 3/28/16 entitled “Comments on Report Study 1 Wilder Hydroelectric Project (FERC Project 1892-026.” His main point is that this Study is incomplete. In addition, he observes there is no statistical analysis offered in the study, there is little about land use effects on erosion, little about ramping rate effects on erosion, and virtually no discussion about piping, an active erosion force in all waterbodies with heightened impact in reservoir settings. These studies need to address these areas of concern. One can only hope that the subsequent studies address these issues but if not then CRWC would call on FERC to require additional study of erosion forces within the project area potentially caused by project operations.

CRWC would add areas needing further analysis. Those related to climate change are: What effects have snow pack levels over the years 1958 and 2016 had on spring water flows? What are the changes if any in flows based on sever weather events year round? Have either of these situations increased or abetted shoreland erosion when added to the effects of project operations. If they would affect erosion, then would these conditions warrant a change in project operations?

**Request:** Given all of the above comments, CRWC requests of FERC that they extend the comment deadline on Study 1 until the close of comment period for all of the erosion studies.

### **STUDY 10 - Fish Assemblage Study:**

#### *Impoundments:*

Overall species richness was relatively similar among the three impoundments, though family richness was slightly higher in the Vernon impoundment. Yellow Perch, Spottail Shiner, and Fallfish represented the three most abundant species collected in all three impoundments with Rock Bass in the Wilder and Bellows Falls impoundments and Bluegill in the Vernon impoundment and Tessellated Darter in the Wilder and Vernon impoundments.

#### *Riverine Reaches:*

The spatial scope of the Vernon Riverine reach (1.5 miles) is significantly smaller than that of Wilder (17.7 miles) or Bellows Falls (6 miles) therefore abundance and distribution rates may

not be comparable. Species and family richness was higher in the Bellows Falls reach than in the Wilder reach. Values for family richness between Bellows Falls and Vernon Riverine reaches were the same, though species richness was lower in the Vernon Riverine reach. Among the five most abundant species in each of the three Riverine reaches with only Smallmouth Bass represented in all three reaches.

**Requests:**

CRWC requests that the study report clarify any criteria used to determine the upper extent of project influence upon tributaries.

With respect to electrofishing techniques of boat, pram, & backpack, CRWC requests that the study report provide clarity regarding the methods by which the study team estimated the width of the effective electrical field of the shocking area

Within the study report, "habitat type" is actually referring to substrate type. CRWC feels that the term habitat type is more indicative of riffle, run, glide, pool, etc. rather than substrate type. CRWC requests a terminology change from habitat type to substrate type.

CRWC requests that the report offer assemblage data in graphical form rather than, or in addition to the previously offered tables in the interest of ease of data analysis and interpretation.

CRWC requests that the study report provide criteria with respect to how age designation (>500g = adult, 499-11g = juvenile, <10g = YOY) was determined. Is this a standard rule of thumb?

**STUDY 11 - American Eel Survey:**

Sampling efforts in total resulted in the capture of three eels at two sites, both within the Bellows Falls impoundment (11-B035 & 11-B051). The study report makes the claim that this data indicates the presence of American Eels within the project affected reach, in very low abundance. The team captured all three eels on 8/19/2015. All eels captured were greater than 18 inches in length with one of those three classified as a silver (mature) eel.

Water quality parameters were collected at each site including temperature (C), pH (su), conductivity, turbidity (NTU), dissolved oxygen (DO mg/L), and % saturation. Grab samples were collected during 1-2 visits at each of the study sites, therefore this data should not be used to draw conclusions with respect to characterizing overall long-term site conditions due to limited data quantity. Issues with meter calibration lead to questionable or inaccurate turbidity data (some readings came back negative). At the two eel capture sites pH exceeded Vermont standards during one site visit at one site. DO, conductivity, turbidity, and temperature were all typical of seasonal (late summer) and site conditions. Mainstem water temperature ranged from 18.5 C to 26.1 C from late-July to late August. Temperatures at the tributary sites ranged from 15.7 C to 26.5 C.

The study states that though American Eels inhabit the Connecticut River system as far north as the Connecticut Lakes, there is no indication of relative abundance associated with that statement. The catch rates for this study were *very* low, as the study shows only three eels captured. This presents potential questions regarding the effectiveness of the methodology used

for this study, as other studies have produced much greater numbers of eels. For instance, TransCanada ILP Studies 17 & 18 (Study 18 produced 80 eels below Vernon and 3 at Bellow Falls & Study 17 produced 1,551 migrating up the Vernon ladder, 60 eels migrating up the Bellows Falls ladder, and 52 eels migrating up the Wilder ladder) as well as the HG&E Upstream Eel Passage Report which produced 20,038 eels passing at the Holyoke Dam and FirstLight Study 3.3.4 which produced 5,972 eels passing at the Turners Falls Dam, though the study states that a similar study conducted by Yoder et. al. produced very similar results to this study (TransCanada ILP Study 11). The study also references the electrofishing studies conducted at the former Vermont Yankee, which recorded only 27 eels in 25 years of sampling. The study justifies the disparities between this study and Studies 17 & 18, as well as other higher producing studies by stating that ILP Studies 17 & 18 were focused in areas where eels would typically congregate while this study (Study 11) was not. The overarching theme of this study is that American Eels are present in the Connecticut River system, but distributed in *very* low abundance throughout the project affected reach. CRWC feels that may not be the case given potential problems with sampling and differing results in various survey and passage studies.

**Request:** that FERC require another field season of American Eel survey over the widest areas of known concentration of eels using the widest array of survey techniques.

### **STUDY 13 - Tributary & Backwater Fish Access & Habitats:**

Water quality data was collected (temp [C], pH, conductivity, turbidity, DO, and DO saturation %) to reflect the tributary/backwater conditions. Roughly 39% of pH data points collected were lower than New Hampshire and Vermont state standards for Class B waters (<6.5 standard units). Three additional instances exceeded New Hampshire state standards of eight standard units (roughly 2% exceeded). Turbidity readings ranged from 1-265 NTU with roughly 88% reading less than 10 NTU (Vermont state standards). Four turbidity data points exceeded 50 NTU, two of which were greater than 250 NTU. DO concentrations generally remained within compliance of New Hampshire and Vermont state standards, which only a few instances reading outside of those standards.

The study report relied heavily on the claim that the period of fieldwork was somewhat drier than what is typical for that time of year during portions of the study season. This statement provided the study a platform to state that any instances of inadequate fish passage presented a worst-case scenario, likely implying that these conditions are not typical even during low-flow conditions, despite the fact that these instances occurred during the study season. They employed a ten-year average in making the claim of unusually dry conditions.

The study states that 27 locations had at least 0.5 ft. of water 75% of the time or more at the confluence cross section, including all backwater sites. The study concludes that there are likely no adverse effects upon fish access caused by dam-related water fluctuations at those sites. The study also states that the instances of inadequate fish passage are exclusively limited to tributaries and that the vast majority of those tributaries were stream order one or 2 (smaller

tributaries). Only one tributary larger than stream order two (Cobb Brook – stream order 3) presented conditions inadequate for fish passage (<0.5ft of water 40.5% of the time).

The study report concludes that project operations have no discernible adverse effects upon backwater and tributary water quality conditions; stating that the baseline water quality study carried out in 2012 corroborates that conclusion.

The study report states that 27 of the 37 monitored sites do not exhibit adverse effects due to dam operations based upon the study criteria. The study states that only two sites CT-B-3.10 (impoundment site) and CT-BR-4.04 (Cobb Brook) appear to have any potential significant AOP limitations directly attributable to dam operations.

This study identified a number of sites labelled as “potentially affected” and states that they needed further assessment to make a true determination. The report states that these determinations will be made once interrelated studies have been completed and that these determinations will be included in a study report addendum and/or the draft license application when those documents are submitted.

**Request:** That FERC extend the final comment period for Study 13 to match the deadline for all related studies as referenced in Study 13. It is difficult to evaluate effectively studies that rely on studies, which are not yet available.

#### **STUDIES 14 & 15 - Resident Fish Spawning in Impoundments & Riverine Sections:**

It is very clear, especially given the lack of Chain Pickerel & Northern Pike spawn observed, that this sampling effort was carried out too late in the season. This should have taken place mid-late March/early April.

The study report states, “Because Yellow Perch eggs are encapsulated within a moist, gelatinous mass, brief periods of exposure did not appear to affect viability.” Later on in the study report, it is acknowledged, “the relationship between exposure duration and viability is unknown.”

Fallfish nest elevations were measured from the base on the premise that “Fallfish lay their eggs at the level of the streambed prior to covering them with the mound of rocks.” CRWC feels that the nests likely need some water above the base of the nest in order for the eggs to remain viable, even if it is just a fraction of an inch.

#### **Requests:**

CRWC requests that the study report include an explanation as to how it was determined that dewatering had no adverse effects upon Yellow Perch egg viability when dewatered for only a “brief period of time.” CRWC also requests that the study report define a “brief period of time” and include a citation to any scientific literature that supports this claim. If there is no scientific literature available to support this claim, the study report should classify Yellow Perch eggs as dewatered if they exceed the WSE at any time regardless of exposure duration.

### **STUDY 30 - Recreational Facility Inventory, Use and Needs Assessment:**

Sumner Falls (a notoriously dangerous site – a number of deaths have occurred at that site) was given a 9 out of 10 for safety by survey respondents. This site is subject to heavy dam operational influence.

Table 4.1-2, depicting estimated use (in recreation days) at study area recreation sites from March 2015 through February 2015 does not appear to take into consideration the fact that the Charlestown Boat Launch & Picnic Area (among the more heavily utilized recreational facilities in the project affected reach) has since closed. No analysis appears discussing potential project operational affects upon the closure of this facility due to poor boat launch condition.

Counter (counts traffic at facility access points) at Hoyt's Landing went missing upon site visit in March 2015, having disappeared at some point following the November 2014 site visit. CRWC has concerns regarding the lack of available data with respect to recreational use of Hoyt's Landing, which even given the large data gap at this site still appears to be by far the most heavily utilized recreational facility within the project affected reach (it also happens to be the best designed and most effectively maintained facility in the reach). Lack of data at this site could vastly skew overall recreational use data within the context of the entire project affected reach.

Did the study carry out more detailed sampling with respect to places of origin of users? CRWC feels that while it is important to understand which state respondents hail from, understanding the relative abundance of abutters, to residents who live in close proximity to the river, to respondents who traveled long distances to reach the river can vastly influence responses received.

CRWC has some concerns that the 6% of respondents who traveled from states which do not meet the Connecticut River at any point, as well as the unknown number of respondents who had to travel several hours to get to the river, may influence the overall survey responses to an unprecedented degree.

**Request:** That FERC require TransCanada to do a season long count of usage at Hoyts Landing and that the information become part of the final Recreation Study. In the meantime, FERC should extend the study comment period until TransCanada adds the data generated to the study report.

We appreciate the opportunity to submit our comments on the studies for the proposed projects P-1904 (Vernon), P-1855 (Bellows Falls), P-1892 (Wilder). We hope you will take our requests to heart and by doing so give all of the stakeholders the information we need to consider when developing appropriate recommendations for license conditions.

Sincerely,



David L. Deen, River Steward



Chris Yurek, ECO AmeriCorps



Document Content(s)

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