

New Hampshire Fish and Game Department

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November 10, 2015

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E., Room 1A Washington, DC 20426

> RE: Review of Updated Study Reports (9/14/15) for FERC project numbers P-1904 (Vernon), P-1855 (Bellows Falls), and P-1892 (Wilder).

Dear Secretary Bose:

As the agency responsible for protecting fish and wildlife resources in New Hampshire, the New Hampshire Fish and Game Department (NHFGD) monitors and attempts to reduce the impacts of hydroelectric facilities on fish and wildlife species and their habitats.

The NHFGD submits the following comments after a review of the Updated Study Reports dated 9/14/15 for Vernon (FERC No. 1904), Bellows Falls (FERC No. 1855), and Wilder (FERC No. 1892) projects.

Study 13 (Tributary and Backwater Fish Access and Habitats Study):

Study 13 examined whether water level fluctuations from Project Operations impeded fish access to tributary and backwater habitats. It was previously agreed upon between the resource agencies and TransCanada that water depths < 0.5 feet would be considered to be inadequate access for fish to enter tributaries and backwaters from the mainstem river. In the Updated Study Report, TransCanada added another variable to define inadequate access, stating that inadequate access for fish to enter into tributaries and backwaters from the mainstem river was water depths <0.5 feet occurring more than 25% of the time.

In the Updated Study Report, if access to tributaries and backwaters at the 37 study sites contained water depths that were <0.5 feet more than 25% of the time, these locations were examined further to determine if project operations were negatively influencing fish access. Resource agencies were not consulted on the percentage of time (>25%) of low water depths (<0.5 feet) required to indicate inadequate access. The NHFGD feels that 25% is too high and requests that any location where water depths were <0.5 feet for any period of time be examined to determine if project operations will negatively influence fish access.

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Although not specifically a goal of this study, access to tributary and backwater areas is likely most important to fish for spawning and rearing habitat. In fact, the Study 13 Updated Study Report states, "Water-level fluctuations have the potential to create conditions that could impede the movement of fish between the Connecticut River and its tributaries and backwaters. These conditions, if present, could limit access to spawning and rearing habitat."

Discussions occurred during previous meetings between Agency Staff and TransCanada on this topic with Agency Staff contending that the spring spawning season was likely the most important time of the year that tributary and backwater access was needed. TransCanada countered that Study 13 was not a survey about fish spawning. Access to these areas would not be an issue during high spring flows, and that access would not be impacted by Project Operations at this time of year. However, as shown in the statement above, TransCanada does recognize that access to spawning and rearing habitats is a potential issue under certain conditions. Additionally, Updated Study Reports for Study 14 (Resident Fish Spawning in Impoundments) and Study 15 (Resident Fish Spawning in Riverine Sections) show that spawning and parental care by some species takes place in May and June, at a time period when high spring flows may have receded in some years.

All evaluations and predictions of limited access in the Updated Study Report for Study 13 occurred between late July and mid-November 2014. As before, the NHFGD still feels it is important to examine fish access at these locations during the spring spawning period and requests that TransCanada extrapolate their data from various studies to determine if fish access was limited (<0.5 feet for any period of time) during the spring of 2015 at any of the 37 study sites examined in Study 13. If it is found that fish access was limited (<0.5 feet for any period of time) during the spring period at any study site, further analysis of the study site(s) should be conducted to determine if project operations were negatively influencing fish access. If data cannot be extrapolated to determine if fish access at the 37 study sites was limited during the spring spawning period, the NHFGD requests that Study 13 be performed again during the spring of 2016.

Study 14 (Resident Fish Spawning in Impoundments Study) and 15 (Resident Fish Spawning in Riverine Sections Study):

These two studies were performed to assess whether project-related water level fluctuations affect resident fish spawning. Species of interest included smallmouth bass, largemouth bass, yellow perch, black crappie, pumpkinseed, bluegill, chain pickerel, northern pike, golden shiner, white sucker, spottail shiner, walleye, fallfish, and white sucker.

During Study 14's tributary egg-block sampling, eggs of target species (white sucker and walleye) were only captured at two locations and eggs at both locations were from white suckers. During Study 14's backwater sampling, northern pike and chain pickerel eggs were not found and only a single pickerel larvae was collected. Also during Study 14's backwater

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sampling, no captured black crappie showed signs of spawning characteristics, no black crappie nests were observed, and no spawning aggregations of golden shiner or spottail shiners were observed, although ripe individuals of these species were occasionally captured. During Study 15, no white sucker eggs and only a single walleye egg were collected.

Water clarity during backwater sampling for Study 14 in June was listed as a reason in the Updated Study Report for not being able to identify new spawning activities or to relocate existing nests or eggs. Similarly, it was suggested in the Updated Study Report that the lack of white sucker eggs collected in Study 14 and walleye eggs in Study 15 was likely because spawning occurred some distance upstream. Another potential reason given by TransCanada's consultants for the lack of walleye eggs sampled was that they might have spawned in deeper water than what was sampled and thus would not be impacted by Project Operations. During a meeting with Agency Staff on October 1, 2015, TransCanada staff was asked if sampling could have occurred after the northern pike and chain pickerel spawn to which their consultants replied that they didn't miss the spawn, but were "just in the wrong spots."

The NHFGD completely understands the difficulty in collecting these types of data and the intense effort that went into completing these two studies. However, regardless of the reasons given above for minimal or missing species specific information, it appears the data needed to assess project-related impacts on resident fish spawning are lacking for walleye, northern pike, chain pickerel, golden shiner, spottail shiner, black crappie, and possibly white sucker. The NHFGD requests that Study 13 and 14 be conducted again in 2016, but only targeting these specific species. It is hoped that environmental conditions in 2016 will be more conducive for conducting this study and/or that different sampling locations will be examined in order to provide the information needed on these species.

Thank you for this opportunity to comment on these very important relicensing projects. If you have any questions regarding these recommendations, please do not hesitate to contact Fisheries Biologist Gabe Gries at 603-352-9669 and/or Carol Henderson, Environmental Review Coordinator at 603-271-3511 or via email at carol.henderson@wildlife.nh.gov.

Sincerely,

Glenn Normandeau Executive Director

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