



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PATRICK C. KELIHER
COMMISSIONER

June 24, 2019

Kelly Maloney
Manager, Licensing and Compliance – Northeast
Brookfield Renewable
A50 Main Street, Lewiston, Maine 04240

RE: SPECIES PROTECTION PLAN FOR ATLANTIC SALMON, ATLANTIC STURGEON AND SHORTNOSE STURGEON LOCKWOOD, HYDRO KENNEBEC, SHAWMUT, AND WESTON PROJECTS

Dear Ms. Maloney:

The Maine Department of Marine Resources (MDMR) has reviewed the draft Species Protection Plan (SPP). We find it woefully inadequate and incomplete. Compared to the SPP for the Penobscot River, the performance standards proposed for the Kennebec River do not provide sufficient protection for endangered Atlantic salmon. Considering the critical importance of this wild population to the recovery of the species in Maine, we cannot support your proposed standards. Unlike the Penobscot SPP, the draft SPP does not list actions that will be taken if performance standards are not met. This is unacceptable, because of all the uncertainty surrounding upstream fish passages that have not been constructed, or in some cases, designed. The draft SPP contains no consideration of how the bypass fishway at the Lockwood Project could impact spawning shortnose sturgeon and Atlantic sturgeon. For example, depending on the final design, how will both sturgeon species be excluded from the fishway. Finally, the draft SPP does not list actions, specifically construction of the Lockwood upstream fish lift modifications¹, that would be taken if the Lockwood bypass fishway is unsuccessful at passing the other species in the river (alewife, blueback herring, American shad, American eel, sea lamprey) or how invasive species will be prevented from expanding their range.

6.0 PERFORMANCE STANDARDS AND GOALS

Downstream Salmon Smolt Station Survival Standard

We believe that an “end of pipe survival” of 84.9% for smolts is too low, because all smolts in the Kennebec River need to pass four hydropower dams to reach the estuary. Furthermore, these are all wild smolts, and are more valuable than hatchery reared smolts. On the Penobscot River, the performance standard is 96% survival at each of the four mainstem dams (Orono, Stillwater, Milford, and West Enfield). However, only a fraction of the outmigrating smolts (<12%)

¹ Lockwood Upstream Fish Lift Modifications, 60% submittal, date 1/25/17.

pass all four dams, resulting in an “end-of pipe-survival” of 84.9%. The remaining smolts pass one or two mainstem dams, resulting in 96% and 92% “end-of-pipe” survival, respectively. We note that neither the draft SPP nor the Draft BA provide an explanation of how the survival standard of 84.9% was determined to be appropriate.

We are also concerned with using the three-year average of survival studies to determine if performance standards are being met. The variability around an average of 84.9% could be large; for example, the average of 100%, 78%, and 77% is 85% survival. We recommend additional years of study if survival in a study falls below a certain agreed-upon value.

The SPP should include a performance standard for adult salmon migrating downstream. We understand that few adults are currently emigrating from the river. However, we anticipate that the need for safe, timely, and effective downstream passage for adults will increase as the population increases.

Upstream Adult Salmon Survival Standard

We are concerned with using the three-year average of survival studies to determine if performance standards are being met. The variability around 81.4% could be large. We recommend that a minimum survival for the three years be established that is acceptable to all the agencies and Brookfield.

Downstream Salmon Smolt Timing Goal

Please consult with the agencies to determine an appropriate timing goal for adult salmon migrating downstream.

Upstream Salmon Adult Timing Goal

On the Penobscot River, 95% of adults at Milford and West Enfield that enter the project tailraces (defined as 200 meters downstream of the lowermost turbine discharge structure), must locate the fishway entrance and pass within 48 hours when ambient water temperature is below 23°C. The 48 hr. timing standard has never been achieved in effectiveness studies. However, the proposal in the draft SPP (that adult Atlantic salmon that pass upstream of Lockwood by September 30 pass through all four projects not later than October 15) sets the bar far too low without any justification. By this standard, the majority of adult salmon that pass upstream, which occurs between May and July, could languish somewhere between Lockwood and Weston without any repercussions. A more reasonable alternative would be that salmon have to pass within three days at each project.

7.1.1 UPSTREAM PASSAGE FACILITY AND OPERATIONAL MEASURES

The draft SPP states “*The trucking component of the fish lift at Lockwood will continue to be operated by MDMR for salmon, American shad and river herring*”. The MDMR has no responsibilities under this SPP. Please revise this sentence to indicate that Brookfield is responsible for passage and supports MDMR as needed.

The draft SPP states “MDMR will continue to collect size, age, and condition data.” Please remove this statement since MDMR has no responsibilities under this SPP.

7.1.1 UPSTREAM PASSAGE FACILITY AND OPERATIONAL MEASURES

7.2.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

In the draft SPP, the Licensee proposes to “Not operate the lift to capture/truck salmon when river water temperatures are greater than 24.5 C.” Please add to this sentence “or some other temperature determined by the agencies”.

7.1.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

Please indicate the timing of the flashboard replacement during which MDMR assists in the collection of adult Atlantic salmon for transfer to Sandy River or release back into the Kennebec, will be determined in consultation with MDMR.

7.1.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

7.2.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

7.3.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

7.4.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

In these sections, Brookfield indicates that they need 200 adult returns to conduct studies. MDMR disagrees, and believes that studies can be conducted with 80-100 adults.

In these sections, the MDMR recommends that passage studies be completed at regular intervals, every 5-10 years for example, to ensure standards are being met throughout the term of this SPP.

Please indicate in these sections that underwater cameras will be used to help capture salmon as well as to observe salmon behavior and movements.

7.1.3 DOWNSTREAM PASSAGE FACILITY AND OPERATIONAL MEASURES

The draft SPP states that Brookfield will spill for a two-week period in low flow years during the peak smolt outmigration season. Please remove this timing window and indicate that the amount of time and when spill will occur will be in consultation with the agencies.

7.1.4 DOWNSTREAM PASSAGE STUDIES AND MONITORING MEASURES

MDMR believes that passage studies should be completed at regular intervals, for example every 5-10 years, to ensure standards are being met throughout the term of this SPP.

7.2.2 UPSTREAM PASSAGE STUDIES AND MONITORING MEASURES

Please correct the first sentence to indicate that no studies have been conducted to evaluate the upstream facility at Hydro Kennebec.

In this section it indicates the use of underwater cameras of observe salmon behavior and movements. Please indicate that the cameras will also be used to help capture salmon.

7.2.3 DOWNSTREAM PASSAGE FACILITY AND OPERATIONAL MEASURES

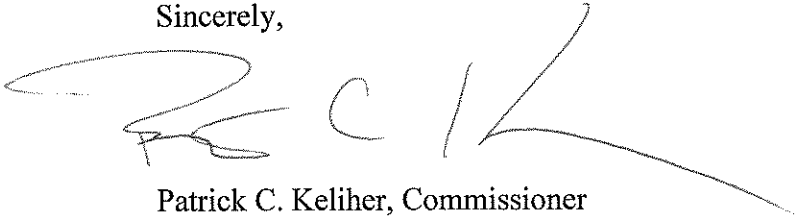
In the last paragraph please indicate that spill may be one of the operational modifications taken.

7.3.3 DOWNSTREAM PASSAGE FACILITY AND OPERATIONAL MEASURES

In the last bulleted item Brookfield proposes to drop sections of hinged flashboards for the month of May during the smolt passage season. Please remove this timing window and indicate that the amount of time and when this will occur will be in consultation with the agencies.

If you have any questions, please contact Gail Wippelhauser at 207-624-6349 or by email at gail.wippelhauser@maine.gov or Paul Christman at 207-624-6352 or paul.christman@maine.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. C. Keliher', with a long horizontal stroke extending to the right.

Patrick C. Keliher, Commissioner

cc: Gail Wippelhauser, Paul Christman, Sean Ledwin, DMR
John Perry, Jason Seiders DIFW
Kathy Howatt, DEP
Anna Harris, Antonio Bentivoglio, USFWS
Matt Buyoff, Don Dow, NOAA