



To: Paul Vlasich, PE  
Town Engineer  
13 Newfields Rd  
Exeter, NH 03833

Date: 05/10/2024

Memorandum

Project #: 52151.06

From: Jacob San Antonio 

Re: Response to Letter from Catherine Edison to Town of Exeter Select Board

This memorandum provides information related to the concerns raised in the e-mail from Catherine Edison to the Town of Exeter Select Board dated Friday May 3<sup>rd</sup>, 2024. The concerns raised in the e-mail were previously addressed in the Appendix H of the Feasibility Study which includes responses to both verbal and written comments made by the community during the public comment period. The concerns are highlighted below, followed by our response.

### Concerns:

"I request that the Select Board formally revisit the decision/vote on (10/2/23) to move forward with the submission of the NOAA Restoring Fish Passage through Barrier Removal grant application (submitted 10/16/23), in light of information that was either not available and/or not presented to the Board at the time that this decision was made. Exeter now has a pending grant application for funds to remove a dam for the sole purpose of improving Alewife fish passage, in spite of the fact that state data and scientific summaries conclude that there are few to no Alewife even reaching the dam for the past eight years, following the removal of the Great Dam, which greatly increased fish passage in Exeter and was expected to allow many more fish to travel up river.

When the Exeter River Advisory Committee presented their case for this grant application to the Select Board and requested their approval to submit it, key elements were missing from that presentation which should have factored into the Board's decision. As a result of this missing and incomplete information, the Town of Exeter, on behalf of its citizens, submitted a grant application that can now be seen as factually false in several of its key arguments. These flaws speak to the core statements of the need for funding, and the decision-making process upon which the application rests. These issues would seem to render the application false and invalid.

I, and others in the community, feel that failure to acknowledge these issues and take action to correct them immediately has the potential to result in \$2 million of federal resources being awarded based on an application now known to have false information and exaggeration in its argument. Immediate action is needed to correct the grant as decisions on funding are expected by July, 2024.

I ask the Select Board either withdraw the application or amend the information provided in the grant to NOAA to avoid unfairly misleading the grantor. The issues arose from a highly rushed process (conducted in about 2 weeks), based on an incomplete feasibility study, which willfully bypassed the public process. If the application is withdrawn or amended to reflect the facts, this will give NOAA transparency, allow time for all stakeholders and abutters to participate and make informed decisions, and will also provide time to investigate the true underlying issue with up river fish passage in the Exeter River. We need to understand the true reason behind little to no Alewife fish passage before any grant is made, or any decision or actions regarding the dam are taken."

### Response:

We respectfully disagree that key information was missing from the decision process at the time of the NOAA Grant application decision. Though the Feasibility Study was not complete at that time, the primary conclusions and basis for

the grant application have not changed. In addition, improving Alewife fish passage is not the sole reason that led to the Town submitting a grant application to fund removal of the dam. The NOAA grant application and the feasibility study discuss multiple environmental, resilience and public safety benefits associated with dam removal, including the following project goals:

- Goal 1: Advance restoration efforts for diadromous fish populations by eliminating a barrier to upstream fish passage
- Goal 2: Improve the Exeter River's declining water quality and strengthen the Exeter River's natural ecosystem
- Goal 3: Increase the Exeter River's flood resilience and reduce vulnerability to the growing risk of fluvial flooding
- Goal 4: Increase public safety by eliminating unsafe dam infrastructure.

The response to Verbal Comment #2 and #5, copied below, provide additional information pertaining to Ms. Edison's concerns. Verbal comment response #5 details why the NHF&G fish counts do not detail the number of fish reaching the dam, just the number of fish able to ascend the fish ladder. Further based on correspondence with NHF&G based on their observations made on May 9, 2024, the fish count at Pickpocket fish ladder was already over 100 this year, and further hundreds of herring were observed below the dam further refuting the point that few to no Alewife have even reached the dam in the last eight years.

#### Verbal Comment #2 Response:

The decision to apply for the NOAA grant prior to the completion of the Feasibility Study was based on several factors. First is the time-sensitive and competitive nature of the grant process. Applying for these grants often needs to begin well ahead of having every specific detail finalized or every decision made. Another significant factor was the unprecedented level of grant funding being offered by NOAA with no local match. The potential financial support provided by this grant could significantly influence the scope and feasibility of the dam removal alternative. For example, costs to revegetate the newly exposed portions of the river could be covered by the grant. Furthermore, our early application was submitted to assure the Town would meet the timeline proposed by NHDES in their Letter of Deficiency, and subsequent extension of time. With information available near the NOAA Grant Application deadline in the Fall of 2023, the dam removal option was identified as the preferred alternative at the time. Although dam removal has been identified as a preferred alternative, the Town has made no decision of an acceptance of a grant. Grant opportunities for dam modification projects are presented in the Feasibility Study, which is one factor that the Town must consider when weighing alternatives.

#### Verbal Comment #5 Response:

The Pickpocket Dam clearly presents a barrier to upstream and downstream fish passage, and its removal would have a significant net benefit in restoring aquatic habitat connectivity within the Exeter River watershed. This would benefit not only anadromous fish, but also freshwater species present in the upstream and downstream reach of the river. The removal of the Pickpocket Dam would make available an additional 6.2 miles of unobstructed fish habitat on the mainstem of the river, and 8.1 miles of tributaries. Removal of the dam would not only restore river connectivity but also improve instream habitat that is available for fish and other aquatic species, as well as instream flow and better water quality for the river as a whole.

While a denil ladder is present at the Pickpocket Dam, it is important to understand that structural fishways act as "filters," since not all the fish below the dam are able to ascend the ladder. Thus, even with the fish ladder, the dam

still presents a barrier to upstream passage; its presence on the dam is simply an adaptation intended to mitigate but not eliminate the dam's impact on river connectivity. An example of this filtering effect was seen at the Great Dam when fish were observed below but not using the ladder prior to the removal of the Great Dam. And, at the Lamprey River in Newmarket, a study to evaluate passage efficiency of a fishway found that handling effects, diel movement patterns, and fishway saturation negatively affected passage success. The estimated probability of passage success of an average Alewife was 63% for males and 64% for females (Sullivan, Baily, and Berlinsky, 2023).

Additionally, while the denil ladder allows for some amount of upstream fish passage, there is no provision for downstream passage at all. Fish must swim over the spillway during periods of moderate to high flows, which leads to mortality of some fish due to the fall and turbulent flow below the dam. Further, downstream fish passage is entirely eliminated under low flow conditions or drought years where there is little to no flow going over the spillway to allow safe passage for herring and other species to pass over the spillway.

Finally, regarding the assertion that the NHF&G fish counts demonstrate that the Pickpocket Dam is not a barrier, this data reflects only the number of fish that are able to reach the top of the denil ladder, not the total number of fish able to reach the dam. The data does suggest that there has been a decrease of fish ascending the Pickpocket Dam ladder, despite the apparent increase in the anadromous fish run at the site of the former Great Dam. This may be because the removal of the Great Dam has improved habitat quality to such a degree that fish (especially blueback herring, the dominant species in the anadromous fish run) are able to find suitable habitat somewhere below the Pickpocket Dam, which would decrease the total number of fish needing to ascend above the Pickpocket Dam site. NH Fish and Game reports that the fish observed at the Pickpocket Dam are mostly alewives, which would again support the idea that Blueback Herring are finding suitable spawning habitat somewhere below the Pickpocket Dam. This data does not refute that removal of the Pickpocket Dam would benefit fish passage, nor do they support the assertion that the dam is an important resource to investigate the fishery resource in the Exeter River. Rather, they point to the success in restoring habitat for blueback herring as a result of the removal of the Great Dam.