November 30, 2020

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

RE: P-6985-005: Kinneytown Hydroelectric Project; Comments by Interested Persons

Dear Secretary Bose:

On behalf of Save the Sound, Inc. (Save the Sound) and the Naugatuck River Revival Group (NRRG), I write to provide comments regarding the Kinneytown Hydroelectric Project ("Kinneytown" or "Project") and the ongoing issues with its operations and fish passage. Save the Sound and NRRG first wrote to the Commission on October 20, 2020, wherein we explained in some detail each organization's background and interest in the matters that the Commission is currently considering regarding Kinneytown.[1]

I. Summary of Comments

Notwithstanding the very significant public and private efforts that have been expended during the last decades to restore the water quality, fisheries, recreational, and aesthetic attributes of the once hugely degraded Naugatuck River – efforts that have included the expenditures of many millions of dollars of public and private monies – and the considerable resulting progress that has been achieved *upstream* of Kinneytown due to these multi-community efforts, the Project as currently operated has *singularly* halted – *stopped in its tracks* – the recovery of native diadromous and resident species in the Naugatuck River. Each year, thousands of fish, representing the array of species targeted for restoration by the State of Connecticut (including American shad, alewife, blueback herring and sea-run brown trout)[2] remain stranded at the foot of Kinneytown. These species are subject to predation and unable to migrate upstream to more than thirty miles of restored spawning and rearing habitat that waits just upstream. Through direct on-site observations of the constantly failing fish passage at the Project, a sampling of which are provided in these comments, it is obvious that upstream fish passage at the Project does not work and cannot be described as safe, timely and effective. For downstream migration,

[1] Letter from Save the Sound and NRRG to FERC Docket No. P-6985-005 (Oct. 20, 2020).
[2] *See* State of Connecticut, Department of Environmental Protection Fisheries Division, Plan for the Restoration of Anadromous Fish to the Naugatuck River, Connecticut (1994, revised 1996) (hereinafter "Naugatuck River Restoration Plan").

no safe passage exists, although an absence of monitoring means that accurate records of downstream morbidity and mortality is unavailable.

This depressing, ongoing situation is the result of another failure – the failure of the Project's owner, the Kinneytown Hydro Co., Inc. (the "Exemptee"), to comply with its license exemption conditions and its utter indifference to the ecological harm that its compliance failure has caused. The Exemptee has been out of compliance for nearly a decade and has ignored efforts by FERC to evaluate its compliance. This noncompliance, combined with a patient attitude toward the Exemptee's conduct exhibited by state and federal agencies prior to the September 29, 2020 filing by the U.S. Fish and Wildlife Service with the Commission[3] has resulted in the fisheries situation that Save the Sound and NRRG ask the Commission to confront and correct.

Even in the early years immediately after construction of the fish passage facilities in 2000 and prior to the shutdown of the Unit 2 (or Ansonia) powerhouse, when the ladder and dam operations were functioning as intended, the available data shows that the number of fish successfully navigating the denil fishway and passing upstream was quite small, strongly suggesting that safe, timely and effective passage *was never occurring at the Project*. Therefore, the Exemptee's stated goal in response to the FWS's *Request for Information* [4] and the Commission's *Additional Information Request* [5] – that the operations of the Project be altered to re-create the fish passage intended in 2000[6] – *is unlikely to result in the fish passage needed on this river. There is no evidence that either restoring Unit 2 or eliminating false attraction through some other fix is sufficient, in and of itself, to achieve safe, timely, and effective fish passage.*

Instead, in order to implement the fisheries outcomes intended in the license exemption, the Commission, working with the natural resources agencies, must use their individual and collective authority to impose on the Exemptee species-specific fish passage performance standards to ensure that safe, timely and effective passage is the actual outcome of future Project operations. Achievement of these performance standards must be assured by multi-year post-installation effectiveness testing to measure and monitor whether any Commission-required changes to Project operations are actually successful.

Aggressive action to address this situation is long overdue. There is widespread support for bringing the goal of finally restoring the Naugatuck River and its historic fish runs to fruition, as evidenced by the comments of the Naugatuck Valley Council of Governments (NVCOG) representing nineteen member municipalities, wherein NVCOG explains to the Commission its commitment "to the return of migratory fish to the Naugatuck River and tributaries, and to

[3] *See* Letter from U.S. Fish & Wildlife Service to FERC, re: Comments on Kinneytown Ansonia Unit Reactivation, Kinneytown Hydroelectric Project, FERC No. 6985 (Sept. 29, 2020 (hereinafter "FWS Request for Information").
[4] *Id.*
[5] Letter from FERC to Kinneytown Hydro Co., Inc. re: Additional Information Request – Inoperable Unit and Article 2 Requirements (Oct. 9, 2020) (hereinafter "FERC Request for Information").
[6] Letter from Randald Bartlett, Kinneytown Hydro Company, Inc. to FERC re: Kinneytown Hydroelectric Project (FERC No. P-6985-005); Additional Information Request – Inoperable Unit and Article 2 Requirement 1 (Nov. 9, 2020) (hereinafter "KHC Response to Information Request").

downstream safety, and . . . engaging in this process to ensure the future health of the River."[7] As evidenced by the Exemptee's consistent non-compliance, indifference, and lack of follow-through, the Commission cannot rely on the Exemptee to correct this situation without a clear regulatory charge. The Exemptee has had its chance and shown its colors.

In the comments that follow, Save the Sound and NRRG will provide the Commission with: 1) On-the-ground observations of the operations and failed fish passage at the Kinneytown Hydroelectric Project; 2) Evidence of the potential for the recovery of the Naugatuck River fish run; 3) The local and regional context of the importance of restoring the Naugatuck River fish run; 4) Analysis of Exemptee's compliance with license exemption conditions; and 5) Action requested of the Commission.

In support of these comments, the following attachments are included in this submission:

- **Attachment A:** Affidavit, video link, and Observation Logs submitted on behalf of Naugatuck River Revival Group by President Kevin Zak

- **Attachment B:** Affidavit submitted on behalf of John Waldman, Professor of Biology, Queens College CUNY

- **Attachment C:** Affidavit submitted on behalf of Long Island Soundkeeper William Lucey

- **Attachment D:** Comments submitted on behalf of other Naugatuck River users

- **Attachment E:** Kinneytown Dam fish count data provided by Steve Gephard, CT DEEP

II. The Potential of Restored Naugatuck River Fish Runs Has Not Been Realized Because of Ineffective Passage at the Kinneytown Dam.

The Kinneytown Dam is a first-in-river dam, located 19 miles upstream from the Long Island Sound and five miles upstream from the confluence of the Naugatuck River and the Housatonic River. No other blockages to fish passage – dams or otherwise – exist between Long Island Sound and the Kinneytown Dam. If fish passage at the Project is not safe, timely, and effective, migrating fish are blocked from reaching over 32 miles of additional historical spawning and juvenile rearing habitats upstream in the Naugatuck River and its tributaries.

Historically, the Naugatuck River supported significant diadromous fish runs, like many other Connecticut rivers. Unfortunately, dam construction from the mid-1700s to the mid-1900s largely extirpated these runs. Riverside development coupled with sewage and manufacturing discharges further reduced water quality to the point that the surveys in the 1950s revealed very little life in the river. Since then, enormous strides have been made in improving the water

[7] Letter from Rick Dunne, NVCOG to FERC Docket No. P-6985-005 (Oct. 27, 2020) (hereinafter "NVCOG Letter").

quality of the Naugatuck through the implementation and enforcement of the Clean Water Act and water quality standards, with the river now home to a trophy trout fishery and welcoming to diverse wildlife. As the Naugatuck River Restoration Plan notes: "Public interest in the river, angling, and fish restoration heightened as the water became noticeably cleaner and the trout stocking was resumed in certain reaches."[8]

With the closing of many of the factories, many of the Naugatuck River dams ceased to provide hydropower or serve any other economic purpose. The Anaconda Dam, Freight Street Dam, Union City Dam and the Platts Mill Dam were removed in 1999; the Chase Brass Dam was removed in 2004 and a fish bypass channel was put in at the Tingue Dam in Seymour just upstream of the Kinneytown Dam in 2014 at a cost of $6.3 million. While the Tingue bypass channel has run into problems and is not currently operating, the state is working on a retrofit to bring it back on-line shortly. Upon completion of the Tingue bypass, the only obstacle that will stand in the way of fish migration from Long Island Sound all the way to Thomaston is the ineffective fish ladder at the Kinneytown Dam. And as explained in the accompanying affidavits of both Long Island Soundkeeper William Lucey and John Waldman, Professor of Biology at Queens College CUNY, the restoration of fish runs of the Naugatuck River also are critical for the protection of vulnerable Atlantic coast river herring populations.[9]

In comments submitted to FERC on October 27, 2020, the Executive Director of the NVCOG, writing on behalf of NVCOG and the nineteen member municipalities, wrote:

> There has been substantial public investment made over the previous decades to remove barriers to fish passage along the Naugatuck River upstream from Kinneytown Dam, including the recently completed Tingue Bypass Channel in Seymour. This investment was done with the understanding that fish passage at [the Kinneytown Dam] was being addressed with an effective fish ladder. . . . We are very concerned that the returns on the investments made all along the River are not being realized if fish are not able to access the miles of habitat above Kinneytown Dam.[10]

The potential of this restored fish run is great, even if diminished from historic runs. The Naugatuck River Restoration Plan, written in 1994 and revised in 1996, projected restoration of the River would yield over 22,000 shad and over 220,000 river herring.[11] In its 2009 grant application for funding for the Tingue Dam Bypass Channel, Connecticut Department of Energy and Environmental Protection (CT DEEP) estimates that annually there would be 20,000 returning American shad and 30,000 returning river herring (both blueback herring and alewife) reaching the Tingue Dam just a mile upstream from Kinneytown.[12] The Tingue Dam Bypass

[8] Naugatuck River Restoration Plan at 1.
[9] John Waldman, Professor Biology at Queens College CUNY, and Long Island Soundkeeper Bill Lucey have provided detailed comments on the broader significance and value of a restored Naugatuck River fish run, provided herein in Attachments B and C, respectively.
[10] NVCOG Letter at 1.
[11] Naugatuck River Restoration Plan at 7.
[12] CT DEP, Tingue Dam Bypass Channel, Naugatuck River, Connecticut, Application for NOAA Coastal and Marine Habitat Restoration Project Grants Under the American Recovery and Reinvestment Act of 2009 at 2 (2009),

project was completed in 2014, but these goals have not come close to being achieved because the vast number of these fish are not passing the downstream Kinneytown Dam and reaching Tingue.

Local fishermen and recreationalists who have regularly visited the Naugatuck River downstream of the Kinneytown Dam have observed the abundance and diversity of fish species that reach the Dam but are unable to pass. Kevin Zak, President of NRRG and a life-long Naugatuck resident, regularly visits the area immediately downstream of the Project and has fastidiously documented his observations through notes, videos, and photographs.[13] Mr. Zak has borne witness to the potential of this fish run, and the issues with the current operations and construction of the fish ladder, as documented by the Observation Logs provided in Attachment A.[14] A link to video footage showing in real time the ongoing inability of multiple species to pass upstream was additionally compiled by Mr. Zak and also been included in Attachment A.[15]

While Mr. Zak's observations only show a snapshot of the number of individuals and species[16] in the river each day – since there is neither constant, ongoing underwater recording or other fish tracking required of the Exemptee and Mr. Zak is undertaking these observations as a volunteer – nevertheless, the sampling of Mr. Zak's logs and the video provided to the Commission demonstrate that on numerous occasions there have been many fish of various species that are attempting to pass, are left stranded at the base of the dam where they are vulnerable to predation, or both.[17]

Examples of such observations that related directly to CT restoration goals and to informing an assessment of needed action include:

- Examples of Species and Abundance at Base of Kinneytown Dam –
    - Gizzard shad
        - Observed below tailrace on March 30, 2016.[18]
        - Trapped in bypass reach on May 27, 2016.[19]
        - Trapped in bypass reach on May 31, 2016.[20]
        - Observed in bypass reach on June 16, 2020.[21]
    - Salmon
        - Observed in bypass reach on May 30, 2015.[22]

available at http://www.ct.gov/recovery/lib/recovery/certification/noaa/noaa_application_dep_tinguedam.pdf (hereinafter "Tingue Dam Bypass Application").

[13] Kevin Zak, Naugatuck River Revival Group, Affidavit, Attachment A.

[14] *Id.* The Observation Logs in Attachment A are just a sampling of the documentation gathered by Mr. Zak over the last decade. More observations, video footage, and photographs can be made available upon request and specific direction (such as specific species or issues) from the Commission or the agencies.

[15] *Id.*

[16] *See* Waldman, Attachment B, (species identifications affirmed by fish biologist John Waldman).

[17] Zak, Attachment A.

[18] *Id.* at 36-38 (Entry No. 62).

[19] *Id.* at 51-52 (Entry No. 53).

[20] *Id.* at 56-58 (Entry No. 47).

[21] *Id.* at 129-130 (Entry No. 74).

[22] *Id.* at 16-17 (Entry No. 67).

        - Observed at spillway on June 7, 2020.[23]
        - Observed below spillway on June 14, 2020.[24]
        - Observed in bypass reach on June 21, 2020.[25]
    - Herring
        - Observed below tailrace in April 2017.[26]
    - Trout
        - Observed below spillway on June 14, 2020.[27]
        - Observed in bypass reach on June 21, 2020.[28]
    - Bass
        - Observed near fish ladder on May 16, 2020.[29]
        - Observed in bypass reach on June 14, 2020.[30]
        - Observed in tailrace on June 21, 2020.[31]
        - Observed in tailrace on June 25, 2020.[32]
    - Carp
        - Observed in bypass reach on March 25, 2016.[33]
        - Observed near fish ladder on May 16, 2020.[34]
        - Observed below spillway on June 7, 2020.[35]
        - Observed in fish ladder on July 21, 2020.[36]
    - Lamprey
        - Trapped on spillway apron on May 25, 2015.[37]
        - Observed on boulders in bypass reach on May 30, 2015.[38]
        - Observed on spillway on June 5, 2015.[39]
        - Rescued below spillway on May 27, 2016.[40]
        - Observed on spillway on May 17, 2020.[41]
        - Observed below spillway on May 30, 2020.[42]
        - Observed below spillway on June 7, 2020.[43]

[23] *Id.* at 116-118 (Entry No. 20).
[24] *Id.* at 124-128 (Entry No. 3).
[25] *Id.* at 139-140 (Entry No. 30).
[26] *Id.* at 83-85 (Entry No. 8).
[27] *Id.* at 124-128 (Entry No. 3).
[28] *Id.* at 139-140 (Entry No. 30).
[29] *Id.* at 94-96 (Entry No. 14).
[30] *Id.* at 124-128 (Entry No. 3).
[31] *Id.* at 142-144 (Entry No. 28).
[32] *Id.* at 166-167 (Entry No. 26).
[33] *Id.* at 39-40 (Entry No. 63).
[34] *Id.* at 94-96 (Entry No. 14).
[35] *Id.* at 121-123 (Entry No. 11).
[36] *Id.* at 241-243 (Entry No. 37).
[37] *Id.* at 13-15 (Entry No. 96).
[38] *Id.* at 18-20 (Entry No. 92).
[39] *Id.* at 27-28 (Entry No. 95).
[40] *Id.* at 53-55 (Entry No. 49).
[41] *Id.* at 97-98 (Entry No. 71).
[42] *Id.* at 107-110 (Entry No. 35).
[43] *Id.* at 119-120 (Entry No. 18).

- Examples of Stranding and Predation –

    - Stranded lamprey on May 25, 2015.[44]
    - Elvers and other fish stranded on May 30, 2015.[45]
    - Fish stranded on September 28, 2015.[46]
    - Stranded fish on April 29, 2016.[47]
    - Stranded fish on May 13, 2016.[48]
    - Gizzard shad stranded on May 27, 2016.[49]
    - Gizzard shad and other fish stranded on May 31, 2016.[50]
    - Stranded lamprey on June 7, 2020.[51]
    - Stranded fish on June 14, 2020.[52]
    - Predation on July 3, 2020.[53]
    - Predation on August 29, 2020.[54]

Mr. Zak's video also shows examples of species' presence and abundance, and the stranding that results from ineffective fish passage. Observations made by other local fishermen and recreationalists, included in Attachment D hereto, confirm Mr. Zak's documentation.[55] Collectively, these Observation Logs and other information tell a story of the potential for restoration that is stopped in its tracks at the face of the Kinneytown Dam.

Confirming Mr. Zak's observations of ineffective fish passage, CT DEEP's recorded fish counts are remarkably low.[56] For example, of the last nineteen (19) years of monitoring data, in only three (3) years (2002 – 17; 2012 – 59; 2013 – 14) did more than ten (10) American shad pass the Dam.[57] In eight (8) of those years, there were no American shad that passed.[58] No American eels have passed since 2010, when only three (3) passed the Dam.[59] Since 2010, only seven (7) blueback herring have ever been recorded passing the Kinneytown Dam.[60] While fish passage rates for most species declined after the shutdown of Unit 2, fish passage rates prior to 2013 were still low, and not indicative of safe, timely, and effective fish passage.[61] This suggests that the fish ladder, functioning as designed, does not effectuate the necessary passage rates.

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[44] *Id.* at 13-15 (Entry No. 96).
[45] *Id.* at 22-24 (Entry No. 93).
[46] *Id.* at 29-31 (Entry No. 61).
[47] *Id.* at 45-57 (Entry No. 64).
[48] *Id.* at 48-50 (Entry No. 52).
[49] *Id.* at 51-52 (Entry No. 53).
[50] *Id.* at 56-58 (Entry No. 47), and 65-67 (Entry No. 54).
[51] *Id.* at 119-120 (Entry No. 18).
[52] *Id.* at 124-128 (Entry No. 3).
[53] *Id.* at 199-202 (Entry No. 85).
[54] *Id.* at 255 (Entry No. 38).
[55] Other Naugatuck River Users, Comments, Attachment D.
[56] CT DEEP Fish Counts at Kinneytown Dam, provided by Steve Gephard, CT DEEP, Attachment E. Email correspondence from Mr. Gephard noted that no American shad or river herring passed in 2020.
[57] *Id.*
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *Id.*

In looking to finally achieve the goals of the Naugatuck River Restoration Plan and the investments made by the state and surrounding towns, we must look to the river's potential, considering the fish that present themselves at the face of the dam today. While estimates of the river's potential vary, what is clear is that fish passage at the Kinneytown Dam is not safe, timely, and effective, leaving fish unable to access the full reaches of available spawning grounds and habitat. Fish are not passing the Kinneytown Dam because of: 1) false attraction caused by the closure of Unit 2; and 2) the flawed design of the fish ladder.

III. For Years, the Exemptee Has Been Out of Compliance with Its License Exemption Requirements

The Exemptee is operating the Kinneytown Hydroelectric Project under a FERC license exemption, issued in 1983. An exemption holder is required to operate its project as described in its exemption application and as approved by FERC.[62] As a part of the FERC approval of a license exemption application, state and federal agencies can provide conditions through the submission of comments, which are then incorporated into the license exemption and are enforceable.[63] Both FWS and CT DEEP submitted enforceable conditions, discussed below.

Notwithstanding these requirements, the Exemptee has been out of compliance with the conditions and terms of its license exemption for nearly a decade, as follows: 1) Unit 2 has not operated for years, contrary to the facility's FERC exemption requirements and without permission for non-operation having been granted by the Commission; 2) the fish passage is ineffective, contrary to FWS and CT DEEP's exemption conditions; and 3) from all appearances, the dam has not been properly maintained and may pose safety risks.

A. Dam Operations – Unit 2 and False Attraction

The Exemptee is required to operate two hydropower generation units. The approved exemption application included both units in its project and operating plans,[64] and the license exemption order was granted for the project as described in that application.[65] This requirement to operate both units is not inconsequential. Each hydropower generation unit plays a particular role in the overall operation of the project.[66] Furthermore, the fish ladder "was designed with the assumption that the Ansonia Unit [or Unit 2] would be operated" in order to avoid issues of false

[62] 18 C.F.R. § 4.96(a).
[63] 18 C.F.R. § 4.106(a), (b). *See also* FERC, Order Granting Exemption from Licensing of a Small Hydroelectric Project of 5 Megawatts or Less, Project No. 6985-000 , Standard Article 2 (issued May 20, 1983) (hereinafter "FERC Exemption Order").
[64] Arco Metals Co., Application for Exemption of Small Hydroelectric Power Project From Licensing, Project No. 6985-000 4-12 (Jan. 1983) (hereinafter "FERC Exemption Application").
[65] FERC Exemption Order at 2.
[66] FERC Exemption Application at 12 ("[D]uring period of high flow, [Unit 2] would be operated to effectively utilize the excess available flow at the dam. During periods of low flow below the minimum operating point of the proposed new unit at the dam, the existing unit would be operated, and the new unit would be shut down.").

attraction.[67] The operation of Unit 2 redirects flows and minimizes pooling of water at the face of the dam.[68]

However, in violation of its license exemption, Unit 2 has not been in operation since at least 2014, if not as early as 2010. As the Commission stated in its *Additional Information Request*:

> The Commission's Division of Dam Safety and Inspections (D2SI) issued a Dam Safety Inspection Report for the project on February 20, 2014, which indicated that Unit 2 in the lower powerhouse does not generate as a result of a fire and that the penstock has been dewatered; the report indicated that the unit had not generated since the last dam safety inspection in 2010. [69]

Since Unit 2 stopped generating power, the Exemptee failed to follow through on any efforts to restart the unit's operations or to restore the intended operations of the fish passage, despite several engagements with FERC and state and federal natural resource agencies. While the Exemptee did file a plan to evaluate the necessary repairs and costs of restoring generation in 2014, it requested additional time to identify the full scope of costs.[70] The Exemptee provided an update to the Commission in June 2016, indicating that the review was ongoing and another update would be provided the following year.[71] However, thereafter, "[n]o further communication about the status of the repairs to Unit 2 have been provided."[72]

Once the Exemptee shut down Unit 2 and without further regulatory engagement and scrutiny, it is not difficult to theorize as to why the Exemptee chose to ignore its license exemption requirements for as long as it could get away with it: diverting water into the canal no longer produced hydroelectricity from Unit 2 and therefore income for the Project; in fact, such water diversion "wasted" water which, during lower flow river conditions, could instead be directed to the generating station that was still operating. In its November 9, 2020 response to the Commission, the Exemptee essentially admitted as much:

> Diverting water through the project's canal toward the Unit 2 powerhouse reduces the flow at the main project spillway. Under certain flow conditions, passing water through the project's canal would allow for minimal flow over the project's spillway. Since Unit 2 has been out of service, KHC has not passed water through the project's canal.[73]

But whatever its reason or excuse, the Exemptee's failure to comply with this term of its license exemption is not trivial; it is, instead, critical to any hope that the fish ladder would function as designed. CT DEEP fish passage shows a significant decline, or complete cessation, of fish passage after 2013 when Unit 2 went completely offline.[74] These significant declines are graphed

[67] FWS Request for Information at 2.
[68] FERC Request for Information at 2.
[69] *Id.*
[70] *Id.*
[71] *Id.*
[72] *Id.* at 3.
[73] KHC Response to Information Request at 1.
[74] CT DEEP Fish Counts, Attachment E.

and provided in Mr. Lucey's affidavit.[75] In FWS's September 29, 2020 information request, the agency cited significant percent changes in passage counts for all species.[76] "Without the Ansonia Unit [or Unit 2] operating, the project spills much more frequently, which leads to false attraction to the spillway and documented fish stranding. The result is a substantial reduction in fish passage counts . . . and periodic fish kills below the spillway."[77] Again, the operation of Unit 2 was built into the design and functionality of the fish ladder. Mr. Zak's Observation Logs show examples of such resulting false attraction.[78]

Crucially, in its response to the information requests made by FWS and FERC, the Exemptee did not deny the causal link between the closure of Unit 2 and declines in fish passage rates. Nor did the Exemptee offer any explanation or excuse from why it chose to operate in noncompliance with its exemption, never seeking FERC's permission. Nor did Exemptee explain why it never attempted to rectify the fish passage problems created by its non-compliant Unit 2 shutdown.[79] It was apparently not until 2020, and at the instigation of CT DEEP and FWS, that the Exemptee engaged in a few discussions with the natural resources agencies as to how to replicate the function of Unit 2 as needed for the operation of the fish ladder.[80]

According to FWS, "[t]o date, KHC has not committed to either reactivating or decommissioning the Ansonia Unit. KHC has not agreed to implement measures needed to remedy the fishway efficiency problems created by not operating the Ansonia Unit."[81] The Exemptee's history of inaction and lack of follow-through necessitates FERC to exercise its authority to require compliance.

B. Safe, Timely, and Effective Fish Passage

The Exemptee is also required to provide safe, timely, and effective fish passage. Both FWS and CT DEEP provided comments on the FERC exemption application, which included enforceable conditions.[82] The FWS condition is as follows:

> The Exemptee shall provide fish-passage facilities at this project when prescribed by the [FWS] in conjunction with the restoration of migratory fish in the Naugatuck River. Such facilities shall be based on the conceptual plans which were prepared by the FWS . . . .[83]

[75] Lucey Affidavit, Attachment C, ¶ 18.
[76] *See* FWS Request for Information at 2, Table 1.
[77] FWS Request for Information at 2.
[78] Zak, Attachment A, various logs.
[79] KHC Response to Information Request at 1.
[80] *Id.* at 1; FWS Request for Information at 3.
[81] FWS Request for Information at 3.
[82] "Standard Article 2, included in this exemption, requires compliance with any terms and conditions that Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. The terms and conditions referred to in Article 2 are contained in any letters of comment by these agencies which have been forwarded to the Applicant in conjunction with this exemption." FERC Exemption Order at 1.
[83] Letter from William Patterson, FWS, to FERC re: Kinneytown Dam Hydroelectric Project Exemption Application 1-2 (Apr. 11, 1983).

The DEEP condition reads:

> Implementation of this project as described in the application is acceptable and consistent with the Department's statutory responsibilities for resource and environmental quality management[, based on the Exemptee's r]ecognition and acceptance of a responsibility to provide adequate passage for anadromous fish species upon request from the Department when migratory fish plans are developed on the Naugatuck River that would require a fish ladder for passage through the project area.[84]

Standard Article 2 of the exemption order requires compliance with these conditions.[85]

While the Exemptee constructed a fish ladder per the designs approved by FWS after the completion of the Naugatuck River Restoration Plan, the approved design relied on the operation of Unit 2 and the diversion of flow through its canal. As described above, Unit 2 has been out of operation since at least 2013. Therefore, the Exemptee has not "provide[d] fish passage facilities . . . based on the conceptual plans which were prepared by the FWS" as is required by the FWS condition. The Exemptee has been out of compliance with this condition since Unit 2 ceased operations. Again, this shutdown was of great consequence, with fish counts significantly declined thereafter.

However, even if the Exemptee were operating the Kinneytown Hydroelectric Project as designed and approved, fish passage counts indicate that fish passage has never been safe, timely, and effective. The DEEP condition requires "adequate passage," and both conditions would be nonsensical if such fish passage were not required to function in such a manner to preserve or restore fish runs or, in other words, provide safe, timely, and effective fish passage.

Effectiveness testing conducted shortly after the construction of the fish ladder (between 2000 and 2002) indicates that the fish ladder soon after start-up had issues, even when functioning as designed (with Unit 2 in operation).[86] "The final report, prepared by CT DEEP, noted that under certain flow conditions, fish are attracted to the spillway and that this false attraction apparently reduced the effectiveness of the ladder."[87] CT DEEP's fish passage data also show very low fish counts in the years prior to the shutdown of Unit 2, which were then further aggravated after 2013.[88]

The Exemptee is not in compliance with the conditions set forth by FWS and CT DEEP because of the closure of Unit 2, but also because no safe, timely, and effective fish passage ever has been provided at the project for the span of its operations.

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[84] Letter from Stanley Pac, DEP, to FERC re: Arco Metals Company 1 (Apr. 5, 1983).
[85] FERC Exemption Order at 1.
[86] FWS Request for Information at 2.
[87] *Id.*
[88] *See* CT DEEP Fish Counts, Attachment E. *See also* Lucey Affidavit, Attachment C.

C. Dam Safety

While unrelated to the issue of fish passage, Save the Sound and NRRG have observed cracks on the face of the dam, water seepage through said cracks, and exposed rebar. John Spain, FERC Regional Engineer commented on a 2019 safety inspection, stating: "The concrete on the downstream face of the spillway is in poor condition in several areas with cracking, concrete loss, and exposed steel. Reviewing pictures from the 2010 inspection, the concrete has continued to deteriorate and expose more steel. Continued exposure of steel and loss of concrete may develop into a dam safety issue."[89]

Mr. Zak also documented this in Observation Logs.[90] Some examples include:

- Spalling and exposed rebar observed in 2015.[91]
- Spalling and cracks on spillway wall observed on March 8, 2016.[92]
- Exposed rebar and crack observed in July 2020.[93]
- Crack in spillway wall observed on July 1, 2020.[94]
- General disrepair observed on September 24, 2020.[95]

Further, NVCOG expressed its concern for the dam's condition: "The video and photographic evidence was also concerning from a dam safety perspective, showing the entire facility in disrepair, and the dam itself in dire condition. The dam has large cracks throughout, exposing rebar, with water freely flowing from the downstream face of the dam."[96]

While neither Save the Sound nor NRRG have access to the FERC safety inspection reports and therefore cannot know the extent of the problem and any responsive actions taken by the Exemptee, all commenters have expressed significant concerns with the condition of the dam.

IV. FERC Must Require Performance-Based Standards for Safe, Timely, and Effective Fish Passage and Post-Installation Effectiveness Testing

The Exemptee is out of compliance with its license exemption terms and conditions, resulting in significant harm to the environment. This non-compliance has prevented the restoration of Naugatuck River fish runs, despite significant investments made by the state and neighboring communities. Safe, timely, and effective fish passage at Kinneytown Dam is the lynchpin for finally achieving restored fish runs to the Naugatuck. However, as discussed above, the Exemptee has shown a complete lack of interest and effort to come back into compliance, ignoring past attempts by FERC, FWS, and CT DEEP to work with them in developing

[89] Letter from John Spain, FERC, to Enel Green Power North America re: comments on June 10, 2019 dam safety inspection (Jul. 5, 2019).
[90] Zak Affidavit, Attachment A.
[91] *Id.* at 11-12 (Entry No. 99).
[92] *Id.* at 32-35 (Entry No. 72).
[93] *Id.* at 173-174 (Entry No. 97).
[94] *Id.* at 181-188 (Entry No. 84).
[95] *Id.* at 258-259 (Entry No. 1).
[96] NVCOG Letter at 2.

solutions. In its response to the requests for information from FERC and FWS, the Exemptee provided little substance in proposing a solution. It requested additional time to assess solutions to bring Unit 2 back into service, despite these same discussions being had in years prior. The solution proposed to recreate the Unit 2's effects on river flows lacks detail or schedule, lending doubt to the certainty that it will be accomplished and effective prior to the 2021 fish runs. This issue is ripe for more aggressive engagement by FERC.

We request that the Commission exercise its full authority and ensure that safe, timely, and effective fish passage is achieved without further delay. When developing plans for such fish passage, the Commission, working with the natural resource agencies, should require consideration of the river's true restoration potential, not simply restoration to the low fish counts recorded when the current fish ladder was first in operation as designed.[97] It must be remembered that the intent of the fish passage conditions in the license exemption were to support the goals of the Naugatuck River Restoration Plan, and the baseline of any correlated actions must be considered accordingly. The performance-based efficiency standards must be considered in light of what the Naugatuck River requires for restoration and must be consistent with what the Commission and USFWS have required in other New England rivers. As a 2004 FERC report explains:

> Having obtained an estimate of passage effectiveness, it is important to be able to compare it with some criterion of acceptability. What does a passage efficiency of 50% for an anadromous species mean to the restoration of the stock in that river basin? Establishing criteria for passage efficiency or effectiveness seems necessary if anadromous fish restoration efforts are to be successful. Such criteria are expected to be specific for a given species and river basin.[98]

Further, the Commission must require that any solution be approved and reviewed according to performance-based standards be subsequently observed and measured by post-installation effectiveness testing: "The process of mitigating adverse environmental impacts should include an assessment of the effectiveness of the mitigation that is implemented."[99] A straightforward summary of the components of this post-installation effectiveness testing is offered by Mr. Lucey in his affidavit in Attachment C.[100] The burden of compliance with the terms and conditions of the license exemption, including the development of fish passage that is safe, timely, and effective, rests on the Exemptee. The Exemptee has the obligation to develop proposed plans and schedules, and bear any such costs. The Exemptee must also bear the costs of any post-installation effectiveness testing.

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[97] *See, e.g.*, Tingue Dam Bypass Application at 2; Zak Affidavit, Attachment A.
[98] Division of Hydropower Administration & Compliance, Office of Energy Projects, FERC, Evaluation of Mitigation Effectiveness at Hydropower Projects: Fish Passage 36 (Sept. 2004), *available at* https://www.ferc.gov/sites/default/files/2020-07/fish-pass-final-report.pdf.
[99] FERC, Evaluation of Mitigation Effectiveness at Hydropower Projects: Fish Passage at 35.
[100] Lucey Affidavit, Attachment C, ¶ 24.

V. Conclusion

Save the Sound and NRRG request that FERC proceed to more aggressive action to resolve the long-delayed, failed fish passage at the Project. Fish passage at the Kinneytown Dam is the lynchpin to restoring fish runs on the Naugatuck River, and the safe, timely, and effective fish passage at the Dam will establish the conditions where this can finally be accomplished.

Respectfully submitted,

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