

120 Hatchery Way, Ellsworth, ME 04605

March 20, 2020

VIA E-FILING Ms. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N. E. Washington, DC 20426

RE: Green Lake Hydroelectric Project (FERC No. 7189-014) Comments and Information Regarding NMFS Study Dispute

Dear Secretary Bose:

In response to the 'Notice of Formal Dispute of FERC's Study Plan Determination for the Green Lake Hydroelectric Project (P-7189) and comments on FERC's Study Plan Determination', as filed by National Marine Fisheries Service (NMFS) on February 25, 2020, please find attached our comments and information.

If you have any questions or need additional information, please contact me by email at <u>caroline@greenlakewaterpower.com</u> or by phone at (425) 553-6718

Sincerely, Caroline Kleinschmidt Relicensing Coordinator Green Lake Water Power Co.

Enclosure: Comments and Information Regarding NMFS Study Dispute. cc: Distribution List

Green Lake Hydroelectric Project (FERC No. 7189-014) Comments and Information Regarding NMFS Study Dispute

• Synopsis:

Green Lake Water Power Co. (GLWP) supports the restoration and protection of Atlantic salmon and alewives to Maine waters through reasonable and practical fisheries management measures. GLWP is also a producer of clean, renewable energy, helps the Green Lake National Fish Hatchery (GLNFH) accomplish its mission, and manages Green Lake and Reeds Brook in an environmentally responsible manner. GLWP understands the National Marine Fisheries Service (NMFS) objective to evaluate whether fish passage at the Green Lake dam should be a part of the relicensing of the Project. However, GLWP concurs with the Federal Energy Regulatory Commission's (FERC) conclusion that the various pieces of information needed by the FERC and appropriate to this project are either already available in documents filed with the FERC or to be filed containing the results of the Director's approved relicensing studies.

GLWP does not believe the Fish Passages Alternatives Study for Atlantic salmon and alewives proposed by NMFS is warranted. The key reasons are the following:

- 1) The study appears to be oriented around an overarching agenda of NMFS to remove and regulate dams, rather than to understand and address what is actually needed to restore Atlantic salmon to the Gulf of Maine.
- 2) The available natural flows in the Green Lake watershed are insufficient during the fish passage season to support effective fish passage regardless of the presence and operation of Green Lake dam.
- 3) There is little if any chance that the lack of Atlantic salmon fish passage at the Green Lake Dam will affect any significant number or population of fish over the life of the new license.
- 4) There are questions regarding the long term and immediate benefits to and effects on the lake of installing fish passage. Management of the Green Lake fisheries is under the jurisdiction of Maine Department of Inland Fisheries and Wildlife (MDIFW), which has concerns about allowing migratory fish passage, alewife in particular, into Green Lake with the potential of introducing invasive species and other unintended effects on indigenous fish.
- 5) NMFS does not appear to have a realistic understanding of the size, details and scope of the Project during their activities so far in the relicensing process. They appear not to have fully read or understood the Pre-application Document (PAD) and other documents filed with the FERC as part of this relicensing.

Information on each of the above listed areas is contained in a section below. More detailed information is available in the appendices and references.

1. NMFS Agenda

NMFS, in the Executive Summary of its recovery plan for GOM Atlantic salmon (USFWS/NMFS 2018), summarizes the understood threats to species restoration. The two most significant threats are stated to be dams and inadequacy of regulatory mechanisms related to dams. Such factors as commercial fisheries, disease and predation are stated to be "secondary stressors."

Later in the document the precipitous decline in Atlantic salmon return rates in the 1980s is mentioned briefly on page 14. Some of the changes made to address this (such as fish hatcheries taking on a role of maintaining the needed genetic diversity of Atlantic salmon) are touched on, followed by a lengthy section on the removal of dams.

It is clear that any dam changes the environment in its vicinity—that is inherent in its design and purpose. There are dams in this country that have outlived their usefulness and have social and environmental costs that outweigh any benefit they may provide. Removing these dams can yield great benefits to us all. Other dams result in a net contribution to those around them.

By concentrating on dams and their regulation as the major reason for the decline of Atlantic salmon, NMFS could be intentionally or accidently covering up the fact that the very real present danger to Atlantic salmon is the low return rates. While dams likely played a significant role in the original decline in Atlantic salmon populations, times have changed. The environment now, in which efforts are underway to recover Atlantic salmon, is quite different (on many levels) than it was in the past when Atlantic salmon populations started to decline. Trying to fix the current problem today by singling out and concentrating on one of yesterday's causes is not a scientific approach.

NMFS, in its document *National Marine Fisheries Service Comments and Study Requests* dated July 26, 2019 (NMFS Study Requests) states the following: "we note that project decommissioning with dam removal is the only alternative that would completely eliminate the threat to Atlantic salmon and their critical habitat posed by the Green Lake Project." This was reaffirmed in their comments to the Proposed Study Plan on December 12, 2019 (NMFS PSP Comments), despite it being pointed out in section 5.2 of the Project's Proposed Study Plan of September 2019 (PSP) that removing the dam would seriously threaten the existence of the GLNFH, and could be a contravention of the Endangered Species Act.

In the NMFS Proposed Study Plan comments document of December 12, 2019, Jennifer Anderson, states "While dam removal would eliminate the need for fish passage, the requested study does not suggest that the Green Lake Dam should be removed." This statement, however, does not address the prior statement by NMFS nor its current position on dam removal. The assertion that "project decommissioning with dam removal is the only alternative that would completely eliminate the threat to Atlantic salmon and their critical habitat pose by the Green Lake Project" was not made within a study request, it was included in the comments on the PAD (NMFS Study Requests). This description is included here as an illustration of a potential motivation for expensive and onerous measures by NMFS that are not strictly based on their charter.

The NMFS document of December 12, 2019 goes on to mention and discuss "the take of endangered Atlantic salmon." It could be argued that any take of Atlantic salmon would be

predicated on two things: 1) the presence of fish passage that exposes fish to danger, and 2) the actual presence of fish. With a predicted fish frequency of one Atlantic salmon in 21 years at the Green Lake Dam, the presence of Atlantic salmon at the dam is a supposition at this point. With one of two conservation populations of the GOM DPS of Atlantic salmon dependent on Green Lake and its dam, GLWP suggests that removing any risks or uncertainties related to the GLNFH are more important than collecting extra data about fish passage at the dam.

It is somewhat telling that the Final Recovery Plan for Atlantic salmon (USFWS/NMFS 2018) indicates on page 50 that there are no expenses expected toward installing fishways at FERC licensed dams in the Downeast Coastal SHRU in the 2019-2023 timeframe. The Project waters are part of the Downeast Coastal SHRU, and a requirement to invest \$50,000 for a study on fish passage alternatives at the Project is contrary to this Recovery Plan statement. Parts of the project (facilities and operations) are aimed directly at increasing the reliability and effectiveness of the GLNFH's water supply from Green Lake. One can question why the NMFS has suddenly chosen this fight on a minor dam, about which the information required for the FERC to evaluate fish passage is already available, and which already has a demonstrable value toward the recovery of Atlantic salmon.

2. Available Flows

The naturally available flows at the Green Lake dam and in the Green Lake watershed do not support effective fish passage designs.

Even without fish passage flow, the Project typically experiences a net deficit of water during the summer which disallows generation during the summer. Several recent summers have had water deficits sufficient to drop the level of the lake below the targeted minimum summer lake level despite the Project ceasing generation with the lake level near the middle of the summer range and only allowing the required minimum flow of 1 cfs past the dam into Reeds Brook

See Appendix B for additional streamflow and water level data.

3. Fish Returns

The Green Lake Watershed makes up approximately 8% of the overall Union River Watershed. Per the Maine Department of Marine Resources (MDMR) the total number of Atlantic salmon that have been captured at the Ellsworth Dam on the Union River (and that would potentially be transported upstream) is 7 from 2008 through 2019 (PAD, RSP). This is an average of about 0.6 fish per year.

Although not necessarily a fisheries management method to assess potential migration run sizes, assuming waterflow is proportional to drainage area, and salmon swim upstream in proportion to water flow, this would equate to a total average of less than one fish migrating up Reeds Brook in 20 years. With essentially no Atlantic salmon present in Reeds Brook, it is questionable whether the project has or will have an effect on Atlantic salmon.

4. Green Lake Fisheries Management

Fish passage is a proven mechanism to overcome a barrier to anadromous fish migration. Implementing fish passage requires confidence that the fishway will solve more problems than it creates in terms of fishery management objectives, abundance, and good health.

An early step in this process is to determine whether fish passage is desirable. At Green Lake there are State fisheries management agency concerns as to the desirability of fish passage. It would be logical to address questions on the resulting benefits to the existing and potential future migratory fish access to the lake prior to engaging in extensive activity regarding how to implement migratory fish passage.

MDIFW has expressed concerns on FERC's administrative record about the effects of implementing fish passage because of the potential for invasive species gaining access to Green Lake through upstream fish passage, density dependent interactions between migratory and non-migratory species, and other unintended effects on the indigenous fish in the lake.

Appendix C contains the Letter to the Secretary Bose on June 26, 2019 from MDIFW regarding these concerns.

5. Project Specifics

NMFS has not demonstrated a realistic understanding of the size, details and scope of the Project during their activities so far in the relicensing process. They appear not to have fully read or understood the PAD and other documents filed with the FERC as part of this relicensing (see Appendix D below for some examples in their Project communication).

NMFS states that "it is very possible that the study objectives could be accomplished with even less cost and effort" than the \$50,000 they estimate for the study (without providing the basis for such a presumption). \$50,000 is close to the annual gross income of the Project (PAD section 7.0), annual profit is much less. NMFS is pushing this study despite the fact that the information needed by the FERC to evaluate the feasibility and necessity of fish passage at the Green Lake dam is already available and that other studies have been requested that will provide data that is needed and not yet available about Green Lake and Reeds Brook.

NMFS' estimate for the cost of fish passage at a dam in the Downeast Coastal region is \$250,000 (USFWS/NMFS 2018... page 49). Either NMFS understands the Project conditions and realizes that this level of expense would likely make the Project non-viable, or they view all hydro-projects alike and have a "one size fits all" standard that is applied to all hydropower relicensing. Either way, they appear determined to follow a course that places organizational "necessities" above the existing facts (e.g., acknowledgement of limited migratory run size) and needs of the fish they are charged to protect.

APPENDIX A – STAGE VS. VOLUME

Elevation,	Gage at	Lake Area,	Storage,	Acre – Ft,		
USGS	Dam	Acres	Acre - Ft	Incremental		
157.5	4.0	2907	0	0		
157.7	4.2	2920	583	583		
158.7	5.2	2986	3536	2953		
159.7	6.2	3052	6555	3019		
160.7	7.2	3118	9640	3085		
161.7	8.2	3184	12791	3151		
162.7	9.2	3250	16008	3217		
163.7	10.2	3316	19290	3282		

Green Lake

The reference point for the above table is the lowest Winter Minimum: 157.5 USGS, or 4.0 on the gage.

For reference purposes (gage values):

Summer Minimum: 6.2

Winter Minimum: 4.0 or the level on 15-Oct, whichever is higher

Maximum Year Round: 7.2

Spillway Elevation: 7.2

Source: GLWP

APPENDIX B: INPUT FLOW DURATION SUMMARY

Month	Mean/Average Daily <u>Flow</u>	Median Daily <u>Flow</u>	<u>Minimum Daily</u> <u>Flow</u>	<u>Maximum Daily</u> <u>Flow</u>	
	<u>(cfs)</u>	<u>(cfs)</u>	<u>(cfs)</u>	<u>(cfs)</u>	
<u>January</u>	<u>104</u>	<u>77</u>	<u>9</u>	<u>892</u>	
<u>February</u>	<u>84</u>	<u>55</u>	<u>13</u>	<u>862</u>	
<u>March</u>	<u>154</u>	<u>110</u>	<u>18</u>	<u>1003</u>	
<u>April</u>	<u>252</u>	<u>204</u>	<u>44</u>	<u>1471</u>	
May	<u>126</u>	<u>97</u>	<u>15</u>	<u>883</u>	
<u>June</u>	<u>74</u>	<u>43</u>	<u>13</u>	<u>704</u>	
July	<u>36</u>	<u>19</u>	<u>4</u>	<u>730</u>	
August	<u>27</u>	<u>13</u>	<u>3</u>	<u>467</u>	
<u>September</u>	<u>27</u>	<u>11</u>	<u>3</u>	<u>809</u>	
October	<u>70</u>	<u>30</u>	<u>3</u>	<u>1357</u>	
November	125	<u>96</u>	<u>7</u>	<u>1153</u>	
December	154	107	<u>9</u>	2358	
Annual	<u>102</u>	<u>61</u>	<u>3</u>	2358	

Green Lake Input flow duration summary table.

Source: GLWP PAD

Additional flow duration values calculated from the flow duration curves for May-October.

<u>Month</u>	<u>Mean/</u> <u>Average</u> <u>flow</u> (cfs)	<u>Median</u> <u>flow</u> (<u>cfs)</u>	<u>Min.</u> <u>flow</u> (cfs)	<u>5%</u> <u>Flow</u> (<u>cfs)</u>	<u>95%</u> Flow	Mean Exceed <u>%</u> (cfs)	GLNFH Flow Average (cfs)	<u>Mean</u> <u>Avail.</u> <u>(cfs)</u>	<u>95%</u> <u>Avail.</u> <u>(cfs)</u>	Min Monthly Average (cfs)	<u>Max</u> <u>Monthly</u> <u>Average</u> (<u>cfs)</u>
<u>May</u>	<u>126</u>	<u>97</u>	<u>15</u>	328	<u>36</u>	<u>34</u>	<u>8</u>	<u>118</u>	28	<u>42</u>	<u>294</u>
Jun	<u>74</u>	<u>43</u>	<u>13</u>	<u>247</u>	<u>18</u>	<u>29</u>	<u>8</u>	<u>66</u>	10	<u>26</u>	225
Jul	<u>36</u>	<u>19</u>	<u>4</u>	<u>119</u>	<u>9</u>	<u>24</u>	<u>9</u>	<u>27</u>	<u>0</u>	<u>12</u>	<u>125</u>
Aug	27	<u>13</u>	<u>3</u>	100	<u>4</u>	26	<u>12</u>	<u>15</u>	-8	<u>3</u>	106
<u>Sep</u>	27	<u>11</u>	<u>3</u>	<u>96</u>	4	21	<u>16</u>	<u>11</u>	-12	<u>4</u>	<u>153</u>
Oct	<u>70</u>	<u>30</u>	<u>3</u>	289	4	<u>28</u>	<u>17</u>	<u>53</u>	<u>-13</u>	<u>6</u>	<u>275</u>

Source: GLWP and Kleinschmidt Group

Mean, Median and Min flow are from the PAD table above.

5% Flow and 95% Flow are the high and low bounds specified for proper operation of fish passage per the USFWS Fish Passage Engineering Design Criteria (USFWS 2017).

Mean Exceed % is the percentage of time that the mean flow is exceeded.

GLNFH Flow Average is the average monthly historical flow discharged from GLNFH waste treatment lagoons. The amount taken from Green Lake would be slightly higher because of the filter backwash water discharged into Reeds Brook from the hatchery treatment plant.

Mean Avail. is the average flow into Green Lake after accounting for water used by the GLNFH.

95% Avail. is the net amount of water flow into Green Lake that is exceeded 95% of the time after accounting for water used by the GLNFH.

Min and Max Monthly Average are the minimum/maximum monthly averages of daily flow values for each month during the flow data period of 1998 through 2018. For example, during 1998-2018 there was at least one May when the average of the daily flow values was as low as 42 cfs and at least one with an average as high as 294 cfs. For comparison, from the upper table, it is seen that there was at least one day with a flow value as low as 15 cfs and at least one with a value as high as 884 cfs.

From the tables, it can be seen that using mean drainage area flow rates during the May-October period could create a misleading idea of the flow available to the Project from Green Lake:

- 1) Mean flow into the lake does not account for the water used by the GLNFH.
- 2) The mean flow is at the 21-34% exceed level. Thus, 66 to 79 percent of the time the mean flow is not available.
- 3) The median flow is less than half of the mean flow during the low flow months of July through October, and by definition the median flow is available only half the time.
- 4) There is much more potential for unusually large amounts of flow into the lake to affect average flows than unusually small ones. If the typical flow into the lake during a month is 25 cfs then the lowest inflow value of zero is 25 below the typical value. The maximum flow is not similarly bounded—it could be 800 cfs. The 800 cfs, while potentially raising the mean flow considerably for the month, would flow from the lake over a few days and not provide an increased flow potential over an extended period.
- 5) The Min and Max Monthly Averages in the right two columns of the second table suggest that the high and low flow values that make up the flow duration curves are not evenly distributed. The low flow days are more likely to be grouped in time with other low flow days and high flow days are more likely to be grouped in time with other high flow days, resulting in a large difference between the lowest and highest flow instances of a given month across the years. This further suggests that some of the inherent assumptions about storage being effective to allow sustained mean flows are likely to be impractical.
- 6) Averaging is used in several places in the derivation of flow duration curves. "mean flow" can refer to any of the following:
 - a. The flow averaged across the hours of a day
 - b. The flow averaged across the days of a month
 - c. The flow averaged across all days in a specific month across a set of years
 - d. The flow averaged across the days in a year
 - e. Etc.

One must be careful to understand what is being averaged when using a mean flow.

The USFWS Fish Passage Engineering Design Criteria document (USFWS 2017) specifies a minimum downstream attraction flow of 25 cfs (page 9-2), a minimum upstream attraction flow of 50 cfs (page 6-3) and that the operating range for fish passage is bounded by the 95% and 5% exceeded flow values.

Using a typical downstream period of May-June and an upstream period of May-October, results in a requirement for at least 75 cfs during May-June and 50cfs July-October for successful fish passage. None of these months have 95% flows that satisfy these requirements. Only two months, May and October even have mean flows that meet the minimum flow requirements. October has a mean flow that barely meets the 50 cfs requirement, and that mean flow is actually only available 28% of the time in October. These values do not include such factors as evaporation and leakage past the dam so they actually paint a slightly optimistic view of the available flow

Under the current licensing terms, the Project has severely limited storage available in the lake, during the summer, to smooth out precipitation peaks and troughs. The Project is restricted to managing within a one foot range of lake elevation. With the threat of large storms and dry spells, the effective range that can be used for storage of water that is then used by the project (for minimum flows or, rarely during the summer, generation) is 3-6 inches. This amounts to a useful storage amount of about 750-1500 acre-feet (Appendix A), or a flow value of 12-24 cfs across a month. We have recently experience several summers when the lake level has dropped below our allowed minimum despite shutting the turbine down with the lake near the middle of the range and only allowing our required minimum flows past the dam.

APPENDIX C - MDIFW'S LETTER TO SECRETARY BOSE JUNE 26, 2019:

"Subject: Invasive Species Concerns for the Green Lake Dam Project (FERC No. 7189)

"Dear Secretary Bose:

"In our letter dated April 30, 2019, the Maine Department of Inland Fisheries and Wildlife (MDIFW) filed comments on the Green Lake Water Power Company Notice of Intent and Pre-Application Document for the Green Lake Dam Project (FERC No. 7189). The Project is located on Green Lake and Reeds Brook in the City of Ellsworth, Hancock County, Maine. MDIFW is a cabinet level agency of the State of Maine, and under Maine State Law (12 MRSA, §10051) MDIFW's mandate is "...to preserve, protect, and enhance the inland fisheries and wildlife resources of the State; to encourage the wise use of these resources; to ensure coordinated planning for the future use and preservation of these resources; and to provide for effective management of these resources." Currently there are no upstream fish passage provisions at the Green Lake Dam, and in the previous filing MDIFW expressed concerns about the spread of invasive species into Green Lake should upstream passage be considered in the future.

Current Status

"MDIFW actively manages Green Lake for both landlocked salmon and lake trout, and while lake trout do not spawn in the lake there is a large contribution of wild landlocked salmon from the tributaries. Additionally, there is also a popular smallmouth bass fishery in the lake. Should upstream passage be installed at Green Lake, MDIFW is concerned that the introduction of largemouth bass, which are present downstream in Graham Lake, may negatively impact these managed fisheries. Largemouth bass are an aggressive top predator that have negatively impacted fisheries in other Maine waters. Future threats from other species not yet present are also a concern. Green Lake also has an indigenous population of Arctic char and is currently only one of the fourteen waters in Maine which supports the species.

"In addition to invasive fish concerns associated with fish passage, density dependent interactions between anadromous alewives and landlocked rainbow smelt remains an ongoing concern of our Agency and is a focus of an interagency interactions workgroup to coordinate research that will support restoration management goals. Smelt are an established fishery in Green Lake as well as the preferred forage species of landlocked salmon. To be clear, MDIFW continues to be supportive of the restoration of searun species to Maine waters within the historic ranges of these species; however, our Agency does have density dependent concerns regarding possible negative interactions between anadromous alewives and landlocked smelts that could decrease year-around smelt forage for managed game species in certain waterbodies, including Green Lake. "

John Perry Environmental Review Coordinator

The link to this document on FERC Online is: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15282546

APPENDIX D: EXAMPLES OF NMFS LACK OF KNOWLEDGE OF THE PROJECT.

Problems with the Notice of Formal Study Dispute of FERC's Study Plan Determination for the Green Lake Hydroelectric Project (P-7189-014) and comments on FERC's Study Plan Determination, signed by Jennifer Anderson, Assistant Regional Administrator for Protected Resources:

- The Resource Management Goals that are stated to require the Fish Passage Alternatives Study (FPAS) are stated to be outlined in the Recovery Plan for Atlantic salmon (USFWS and NMFS 2019). This document does not exist, at least as a publicly distributed document. For our purposes here, it is assumed that the similarly named document dated 2018 is the intended reference.
- 2) It is stated that the FPAS is required to "identify upstream and downstream fish passage alternatives for the Green Lake Project and to estimate the capital, operational, and maintenance costs of each alternative in consideration of the unique, site-specific constraints that may be at issue for this project" and further "Information in the Pre-Application Document (PAD) is not sufficient to evaluate whether or not fish passage measures are practical and, if they are, what improvements would be necessary..." However the Notice of Dispute states "This study would not require any field work, but would require a desktop evaluation of alternatives by a qualified engineer." The information available to such an engineer, without new field work, is the information in the PAD, other Project documents filed with FERC, and NMFS and USFWS documents on fish passage and Atlantic salmon restoration. This already available information includes flow curves, site information, as-built project drawings, power production, financial information for the Project, and fish passage technical requirements. It appears that NMFS is stating that they need the already available information collected, analyzed and summarized for use by NMFS staff. FERC staff appear to recognize the existence of the available data and to understand it.
- 3) NMFS states: "Currently, the project prevents upstream and downstream passage of fish in Reed Brook." Reed Brook is located in Kingfield, ME, about 100 miles west of Ellsworth. The Project is located on Reeds Brook. Also, technically, the FPAS is requested to provide information on fish passage past the Green Lake dam. Fish passage within Reeds Brook itself is the subject of another study, one that is included in the Projects study plans.
- 4) NMFS points out "We disagree with FERC that we have not referenced any site-specific information relevant to the evaluation of passage feasibility... we indicated that the limited flow available in the system, as well as multiple water needs (...) make it difficult to understand how much water was available for both upstream and downstream fish passage. Further, we specified that, 'flow information is needed in order to ascertain whether or not there is adequate flow available to allow for fish passage measures..." Refer to the Flow Issues section and Appendix B above. The basic information used for this section of the document was gotten from the PAD.
- 5) The following NMFS statements in the NMFS Dispute document argue that data from other local dams is applicable to the Green Lake dam:
 - a. "These methods have been used successfully in other hydroelectric project license proceedings."
 - b. "Similarly, we know that options have been implemented at other projects to prevent the spread of invasive species,"
 - c. "Alternatively, some fishways in the state of Maine have jumps installed at the entrance..."

The following NMFS statements argue the opposite:

- d. "we would have to rely on the transferability of general information from other projects with vastly different characteristics to inform our regulatory obligations..."
- e. "These site-specific considerations make it impractical to rely on best professional judgement and existing scientific literature alone to determine both the appropriateness and reasonable design of a fishway at the project."
- f. "FERC suggests that information available from other dams could inform the feasibility of fish passage at Green Lake. However, FERC does not provide information on how we and other stakeholders might use information from these dams..."

It appears that NMFS' view of existing information or projects varies greatly depending on how it aligns with their objectives. What is done on other projects provides proof for them that the Green Lake Project must do something NMFS wants. If other project information would indicate that Green Lake should not do something NMFS wants, then that information can't be used because of "site specific" differences between projects.

REFERENCES:

(USFWS/NMFS 2018) U.S. Fish and Wildlife Service and NMFS, 2018. *Recovery plan for the Gulf of Maine Distinct Population Segment of Atlantic salmon (Salmo salar)*. 74 pp.

(NMFS Study Requests) National Marine Fisheries Service Comments and Study Requests dated July 26, 2019

(NMFS PSP Comments) Comments of the Proposed Study Plan for the Green Lake Hydroelectrical Project /FERC No. 7189 – December 12, 2019 – FERC 20191212-5057(33908466)

(NMFS Dispute) Notice of Formal Dispute of FERC's Study Plan Determination for the Green Lake Hydroelectric Project (P-7189) and comments on FERC's Study Plan Determination – FERC 20200225-5160(33993973)

(USFWS 2017) Fish Passage Engineering Design Criteria – <u>Fish Passage Engineering Design Criteria</u>

(PAD) Green Lake Project 7189 PAD Volume I Public

(PSP) 2019-09-13 Green Lake Proposed Study Plan

(RSP) 2020-01-11 Green Lake Revised Study Plan