BEFORE THE
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FirstLight Hydro Generating Co. Northfield Mountain Pumped Storage Project	)))))	Project 2485-063

RESPONSE OF
THE UNITED STATES DEPARTMENT OF THE INTERIOR
TO COMMENTS OF LICENSE APPLICANT

On April 7, 2014, Firstlight Hydro Generating Company (Applicant) submitted comments to the Federal Energy Regulatory Commission (Commission) concerning the study dispute resolution process initiated by the U.S. Fish and Wildlife Service on March 13, 2014 in the above-noted docket. Although that process is ongoing and not concluded, the Department replies herein to certain comments made by the Applicant concerning the scope of the Department's authority under the Federal Power Act (FPA), and particularly to Applicant's urging of the Commission to rule on the scope of that authority. The study in question is the Service's request for collection of studies of entrainment at the Northfield Pumped Storage Project (Project) of American shad eggs and larvae.

Applicant's main points may be summarized as follows:

1) American shad eggs and larvae do not need to pass upstream and downstream of the Project to complete their life cycles, and therefore the Department may not prescribe measures for their passage
2) It is not clear what type of structure or device would facilitate upstream and downstream passage of American shad eggs and larvae, therefore the Department may not prescribe operational restrictions at the Project to prevent entrainment.
3) Therefore the study is not relevant to the Department's FPA authority to prescribe fishways.
4) Therefore the Commission should not treat the study request as an appropriate subject for a formal study dispute under the Commission's regulations.

See Comments of Firstlight, pp. 4-5 (April 7, 2014). The Department views each of these points as erroneous, and addresses them in turn, beginning with the last of them, as the most immediate concern.

As to the fourth and final point of the Applicant's comments, the Commission has thus

far treated properly the study request as appropriate under the Commission's regulations at 18 C.F.R. § 5.14. This is consistent with the Commission's regulations and authority. The Commission's regulations require that an agency requesting formal study resolution explain how the request satisfies the criteria set forth in 18 C.F.R. § 5.9(b). 18 C.F.R. § 5.14(b). These include the relevant resource management goals of agencies with jurisdiction over the resource to be studied, but not an explanation of the basis for the requesting agency's jurisdiction. See 18 C.F.R. § 5.9(b)(2). Neither Section 5.14 nor Section 5.9 require the agency to explain to the Commission, or the Commission to rule on, whether the study is within the scope of an agency's jurisdiction. This is for the very good reason that the Commission is not empowered to rule on whether the Department (or other agencies, such as state agencies with authority under § 401 of the Clean Water Act) is acting within its jurisdiction. Escondido Mut. Water Co. v. La Jolla Band of Mission Indians, 466 U.S. 765, 777 (1984); American Rivers v. FERC, 201 F.3d 1186, 1207 (9th Cir. 1999); City of Tacoma v. FERC, 460 F.3d 53, 67 (D.C. Cir. 2006). Therefore the Commission has acted entirely appropriately in declining to rule that the formal study dispute resolution process is unavailable in this matter on the grounds urged by the Applicant, as to do so would be to inappropriately rule on the scope of the Department's authority.

Substantively, moreover, the Department wishes to note its view that a prescription for operational or structural measures to protect eggs and larvae of American shad passing the Project is entirely within the scope of its authority under § 18 of the FPA to prescribe fishways, as defined by Congress in the Energy Policy Act of 1992. Pub. Law No. 102-486, § 1701(b).

First, eggs and larvae must pass the Project successfully to complete their life cycle. American shad eggs, upon spawning and fertilization, either sink to the bottom and become lodged under rocks and boulders, or are swept by currents to nearby pools (Chittenden 1969). Shad eggs are slightly heavier than water. Although semi-buoyant, they may remain suspended by prevailing currents and tides (ASMFC 2009). In a study done by Marcy (1976), shad eggs in the lower Connecticut River were calculated to have drifted 1.6 to 6.4 km from where they had spawned and were distributed almost equally between the surface and the bottom.

Newly hatched larvae remain near the river bottom until the yolk sac is absorbed (Maxfield 1953; Cave 1978), after which they are transported by river currents into eddies and backwater areas where current velocities are greatly reduced (Cave 1978; Crecco et al. 1983). Ross et al. (1993) determined that American shad eggs and prolarvae drift nearer to the substratum whereas postlarvae occupy a higher position in the water column (Marcy 1976). A study by Bilkovic et al. (2002) found that larvae were carried farther downstream than eggs.

From this scientific information, it is clear that American shad eggs and larvae drift

downstream; the extent depending on factors such as spawning location, river flow, substrate and life stage. This is effectively the earliest stage of their downstream migration to the sea. Therefore, unless all shad spawning in the Turners Falls Pool do so downstream of the Project intake, and sufficiently far downstream that they cannot be entrained during pumping operations, there are American shad in these early life stages passing by the Project throughout the spawning season. They must successfully pass the Project to mature, migrate downstream, and complete their life cycle.

Second, the Department has authority to prescribe conditions for project operation. At this point in the relicensing process it is premature to determine what measures (if any) may be best to minimize entrainment. The first step is to conduct the study to determine the level of entrainment at the Project and whether it varies over the course of a pumping cycle or by the hours that pumping occurs. Study results will inform the need for any entrainment minimization measures.

If, based on study results, entrainment minimization measures are deemed necessary, there are both operational and structural measures that could be evaluated to determine their likely effectiveness at minimizing entrainment of early life stage shad. Potential operational measures include limiting the number of pumps that would operate, limiting the time of day when they operate, and/or limiting the hours that they operate. Structural measures could include fish screening, barrier nets, a Gunderboom, or other devices. If purely operational measures are more cost-effective for ensuring safe, timely, and effective passage past the project, this is well within the Department's authority to prescribe. See, e.g. S.D.Warren v. FERC, 164 Fed. Appx. 1 (D.C. Cir. 2005) (approving prescription including turbine shutdowns for downstream eel passage). Sometimes the most cost-effective "physical structures, facilities, or devices" for the passage of fish are existing project works, correctly operated, and the Department has authority to prescribe "project operations and measures related to such structures, facilities or devices, which are necessary to ensure the effectiveness of such structures, facilities, or devices for such fish." Pub. Law No. 102-486, § 1701(b).

The Department expects that the Director of Energy Projects will ultimately issue a determination on this study request with reference to the criteria of 18 C.F.R 5.9(b), applicable law, and the technical expertise of the panel, as provided by the Commission's regulations at 18 C.F.R. §5.14(l). He may ultimately approve or disapprove the study, of course, based on those criteria – though clearly the Department would urge him to approve it. However, the Commission has acted properly in not basing its decisions on a determination it has no authority to make concerning the scope of the jurisdiction of the Department. Should the Department ultimately decide that a prescription for fishways is appropriate, the Applicant should understand that this is within the authority of the Department, and that the Department will proceed in full compliance with its regulations at 43 C.F.R. part 45. If it desires to advance the argument that the Department has exceeded its authority, it may, of course, appeal to the U.S. Courts of Appeal after license

issuance. See 16 U.S.C. §825l(b); Escondido Mut. Water Co. v. La Jolla Band of Mission Indians, 466 U.S. at 777.

Respectfully submitted,

s/Andrew Tittler
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Agency Counsel

References Cited

Bilkovic, D.M., C.H. Hershner, and J.E. Olney. 2002. Macroscale assessment of Assessment of American shad spawning and nursery habitat in the Mattaponi and Pamunkey Rivers, Virginia. North American Journal of Fisheries Management 22: 1176-1192.

Cave, J.R. 1978. American shad, Alosa sapidissima, larval distribution, relative abundance and movement in the Holyoke Pool, Connecticut River, Massachusetts. Masters thesis. University of Massachusetts, Amherst, Massachusetts.

Chittenden, M.E., Jr. 1969. Life history and ecology of the American shad, Alosa sapidissima, in the Delaware River. Doctoral dissertation. Rutgers University, New Brunswick, New Jersey.

Crecco, V.A., T.F. Savoy, and L. Gunn. 1983. Daily mortality rates of larval and juvenile American shad (Alosa sapidissima) in the Connecticut River with changes in year-class strength. Canadian Journal of fisheries and aquatic Sciences 40: 1719-1728.

Greene, K.E., J.L. Zimmerman, R.W. Laney, and J.C. Thomas-Blate. 2009. Atlantic coast diadromous fish habitat: A review of utilization, threats, recommendations for conservation, and research needs. Atlantic Sttates Marine Fisheries Commission Habitat Management Series No. 9, Washington, D.C.

Maxfield, G.H. 1953. The food habits of hatchery-produced, pond-cultured shad (Alosa sapidissima) reared to a length of two inches. Chesapeake Biological Laboratory Publication No. 98, Solomons, Maryland.

Ross, R.M., T.W.H. Backman, and R.M. Bennett. Evaluation of Habitat Suitability Index Models for Riverine Life Stages of American Shad, with Proposed Models for

Premigratory Juveniles. July 1993. Biological Report 14, U.S. Fish and Wildlife Service, Washington D.C.

CERTIFICATE OF SERVICE

I hereby certify that I have caused the foregoing document to be served by regular mail upon each person designated on the official service list compiled by the Secretary in this proceeding this 1st day of May, 2014.

s/Andrew Tittler
Andrew Tittler

Document Content(s)