141 FERC ¶ 62,125
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Oswegatchie River Hydroelectric Project Project No. 2713-082

ORDER ISSUING NEW LICENSE

(November 26, 2012)

INTRODUCTION

1. On December 30, 2010, Erie Boulevard Hydropower, L.P. (Erie) filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),[1] an application for a new license to continue operation and maintenance of the Oswegatchie River Hydroelectric Project No. 2713 (Oswegatchie Project or project). The project's authorized capacity being licensed is 28.56 megawatts (MW). The project has six developments located along a 90-mile stretch of the Oswegatchie River in St. Lawrence County, New York.[2] The project does not occupy any federal lands.

2. As discussed below, this order issues a new license for the project.

BACKGROUND

3. The Commission issued the original license for the project on January 10, 1983, and the license will expire on December 31, 2012.[3]

[1] 16 U.S.C. §§ 797(e) and 808 (2006).

[2] The Oswegatchie River is navigable from its mouth on the St. Lawrence River at Ogdensburg, to Cranberry Lake (about river mile 110), including the reach of the river where the project is located. *See Groveton Papers Co.*, 19 FERC ¶ 62,047 (1982). Therefore, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1)(2006), requires the project to be licensed.

[3] *See Niagara Mohawk Power Corp.*, 22 FERC ¶ 62,020, at 63,036 (1983). The project was originally licensed to Niagara Mohawk Power Corporation for a period of 50 years effective January 1, 1963. On July 26, 1999, the project was transferred from Niagara Mohawk Power Corporation to Erie Boulevard Hydropower, L.P *See Niagara*

(continued)

4. On February 18, 2011, Erie filed a settlement agreement (Settlement) signed by multiple stakeholders and intended to resolve, among the signatories, all issues related to relicensing the Oswegatchie Project.[4] On February 28, 2011, the Commission issued a public notice of the Settlement that was published in the *Federal Register*, soliciting comments.[5] The notice set March 30, 2011, as the deadline for filing comments.[6]

5. On April 21, 2011, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing; soliciting motions to intervene and protests; indicating the application was ready for environmental analysis; and soliciting comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.[7] The notice set June 20, 2011, as the deadline for filing motions to intervene, comments, final recommendations, terms and conditions, and prescriptions. The U.S Department of the Interior (Interior) and the New York Department of Environmental Conservation (New York DEC) filed timely notices of intervention, comments, recommendations, and terms and conditions.[8]

6. An Environmental Assessment (EA) was prepared by Commission staff and issued on October 18, 2011, analyzing the impacts of the proposed project, including the Settlement, and alternatives. Interior filed comments on the EA on November 4, 2011. Erie and New York DEC filed comments on the EA on November 17, 2011. Substantive comments on the EA are discussed below. The interventions, comments,

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Mohawk Power Corp., 88 FERC ¶ 62,082 (1999).

[4] Signatories of the Settlement are Erie, Adirondack Mountain Club, Adirondack Park Agency, Clifton-Fine Economic Development Corporation (5 Ponds Subcommittee), St. Lawrence County, New York State Department of Environmental Conservation, New York State Council of Trout Unlimited, and the U.S. Department of the Interior's Fish and Wildlife Service and National Park Service.

[5] 76 *Fed. Reg.* 12,103 (March 4, 2011).

[6] Comments supporting the Settlement were filed by the New York Department of Environmental Conservation, the U.S. Department of the Interior, and New York State Council of Trout Unlimited.

[7] 76 *Fed. Reg.* 23,799 (April 28, 2011). Commission staff also held scoping meetings on March 25 and March 26, 2008, in Canton, New York.

[8] Under Rule 214(a) of the Commission's Rules of Practice and Procedure, Interior and New York DEC became parties to the proceeding upon timely filing of their notices of intervention. *See* 18 C.F.R. § 385.214(a) (2012).

recommendations, and prescriptions have been fully considered in determining whether, and under what conditions, to issue this license.

PROJECT DESCRIPTION

A. Project Facilities

7. The 28.56-MW Oswegatchie Project consists of six developments: Browns Falls, Flat Rock, South Edwards, Oswegatchie, Heuvelton, and Eel Weir (listed from upstream to downstream). Each development includes a dam, powerhouse, and impoundment and is described in more detail below.

Browns Falls Development

8. The Browns Falls Development is located at river mile[9] (RM) 96.9 and consists of: (1) a 941-foot-long, 69-foot-high concrete gravity dam that includes a 192.2-foot-long ogee spillway section with a crest elevation of 1,347 feet above mean sea level (msl) and 2-foot-high seasonal flash boards; a 130.5-foot-long abutment section with a timber parapet wall and a 70-foot-long abutment section on the east side of the spillway; a 27.6-foot-long deep gate section on the west side of the spillway with a 6-foot-wide, 7.0-foot-high log sluice gate opening and two 6-foot-high, 5.5-foot-wide deep-sluice slide gates; a 62-foot-long intake section on the west side of the spillway; and a 458.7-foot-long abutment section on the west side of the spillway; (2) a 168-acre impoundment with a gross storage capacity of 3,234 acre-feet and a normal maximum pool elevation of 1,349 feet msl; (3) a 62-foot-long, 41.3-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 11-foot-wide, 15-foot-high head gates; (4) a 12-foot-diameter, 6,000-foot-long steel pipeline; (5) a 40-foot-diameter, 70-foot-high surge tank; (6) two 8-foot-diameter, 142-foot-long steel penstocks; (7) a 74-foot-long, 53-foot-wide concrete-brick powerhouse containing two vertical Francis turbine-generating units rated at 7.5 MW each for a total installed capacity of 15.0 MW; (8) a 100-foot-long concrete-lined tailrace; (9) a 123-foot-long, 6.6-kilovolt (kV) transmission line connecting the powerhouse to the regional grid; and (10) appurtenant facilities.

9. The Browns Falls Development creates a 7,500-foot-long bypassed reach. There are no project recreation facilities at this development.

Flat Rock Development

[9] In this order, river mile is defined as the distance in miles along the Oswegatchie River's course, starting from its confluence with the St. Lawrence River.

10. The Flat Rock Development is located at RM 95.5 and consists of: (1) a 658-foot-long, 70-foot-high concrete gravity dam that includes a 229-foot-long ogee spillway section with a crest elevation of 1,080 feet msl and a 7-foot-wide, 4-foot-high sluice gate opening; a 120-foot-long earthen embankment section with a concrete core wall on the east side of the spillway; a 95-foot-long abutment section with a timber parapet wall on the east side of the spillway; a 66-foot-long intake section on the west side of the spillway; a 14-foot-long deep gate section on the west side of the spillway with a 6-foot-high, 5-foot-wide deep-sluice slide gate; and a 134-foot-long abutment section on the west side of the spillway; (2) a 159-acre impoundment with a gross storage capacity of 2,646 acre-feet and a normal maximum pool elevation of 1,080 feet msl; (3) a 66-foot-long, 42-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 16-foot-high, 14.25-foot-wide head gates; (4) an 85-foot-long, 66-foot-wide concrete-brick powerhouse containing two vertical Francis turbine-generating units rated at 2.09 and 2.98 MW, for a total installed capacity of 5.07 MW; (5) a 25-foot-long concrete-walled tailrace; (6) a 30-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (7) appurtenant facilities.

11. The Flat Rock powerhouse is integral with the dam; therefore, there is no bypassed reach at this development. Erie operates and maintains a boat launch and picnic area at the Flat Rock Development.

South Edwards Development

12. The South Edwards Development is located at RM 87.1 and consists of: (1) a 214.5-foot-long, 48-foot-high dam that includes an 88-foot-long, 48-foot-high concrete gravity ogee spillway section with a crest elevation of 843.2 feet msl and 2-foot-high seasonal flash boards; a 13.5-foot-long abutment section and a 17-foot-long abutment section with an 8-foot-wide, 6.0-foot-high log sluice gate on the east side of the spillway; a 46-foot-long intake section on the west side of the spillway; and a 50-foot-long abutment section on the west side of the spillway; (2) a 510-foot-long earthen embankment and a 240-foot-long earthen embankment located upstream on the west side of the dam, each with concrete core walls and 10-inch-high flashboards; (3) a 79.2-acre impoundment with a gross storage capacity of 1,003 acre-feet and a normal maximum pool elevation of 845.2 feet msl; (4) a 46-foot-long, 33.5-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 6-foot-wide, 11-foot-high head gates; (5) a 10-foot-diameter, 1,106-foot-long fiberglass pipeline; (6) a 4-foot-diameter butterfly valve and a 4-foot-diameter, 30-foot-long pipe connecting to the fiberglass pipeline and containing a minimum flow submersible Flygt turbine-generating unit rated at 0.24 MW; (7) a 10-foot-diameter, 51-foot-high riser and a 16-foot-diameter, 23-foot-high surge tank with a 4-foot-diameter, 63-foot-long overflow pipe connecting to the fiberglass pipeline; (8) a 78-foot-long, 45-foot-wide concrete powerhouse containing three horizontal Francis turbine-generating units rated at 1.0 MW, 1.0 MW, and 0.68 MW, for a total installed capacity of 2.92 MW, including the 0.24-MW minimum flow

turbine-generating unit; (9) an 880-foot-long, 480-volt transmission line connecting the 0.24-MW minimum flow turbine to the powerhouse and a 3,917-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (10) appurtenant facilities.

13. The South Edwards Development creates a 1,500-foot-long bypassed reach. There are no project recreation facilities at this development.

Oswegatchie Development

14. The Oswegatchie Development is located at RM 86.6 and consists of: (1) a 160-foot-long, 12-foot-high dam that includes an 80-foot-long, 12-foot-high concrete gravity spillway section with a crest elevation of 758.6 feet msl and a 10-foot-wide, 2.6-foot-deep minimum flow notch with a crest elevation of 756 feet msl; a 30-foot-long bedrock outcrop section on the west side of the spillway; and a 50-foot-long intake section on the west side of the spillway; (2) a 6-acre impoundment with a gross storage capacity of approximately 23 acre-feet and a normal maximum pool elevation of 758.6 feet msl; (3) a 50-foot-long, 23-foot-high gated intake structure that includes two trashracks, one with a 2.5-inch clear bar spacing and one with a 1-inch clear bar spacing, and two 8-foot-high, 8-foot-wide head gates; (4) a 6.5-foot-diameter, 75.5-foot-long steel penstock and a 6.5-foot-diameter, 65-foot-long steel penstock; (5) a 30-foot-long, 26-foot-wide concrete-masonry powerhouse containing two vertical Canadian Hydro Components turbine-generating units rated at 1.035 MW each for a total installed capacity of 2.07 MW; (6) a 2,227-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (7) appurtenant facilities.

15. The Oswegatchie Development creates a 350-foot-long bypassed reach. There are no project recreation facilities at this development.

Heuvelton Development

16. The Heuvelton Development is located at RM 12 and consists of: (1) a 285-foot-long, 19-foot-high concrete gravity dam and spillway with a crest elevation of 276.5 feet msl topped with two 28-foot-long, 11.1-foot-high inflatable rubber bladder gates with crest elevations of 286.7 feet msl and four 28-foot-long, 11.1-foot-high tainter gates with crest elevations of 286.7 feet msl; (2) a 239-acre impoundment with a gross storage capacity of 405 acre-feet and a normal maximum pool elevation of 286.7 feet msl; (3) a 70-foot-long, 21.25-foot-high gated intake structure that includes a trashrack with 3.5-inch clear bar spacing and two 12.5-foot-high, 22-foot-wide head gates; (4) a 67-foot-long, 37-foot-wide brick powerhouse containing two vertical Francis turbine-generating units rated at 0.52 MW for a total installed capacity of 1.04 MW; (5) a 62-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (6) appurtenant facilities.

17. The Heuvelton powerhouse is integral with the dam; therefore, there is no bypassed reach at this development. Erie operates and maintains a picnic area at the Heuvelton Development.

Eel Weir Development

18. The Eel Weir Development is located at RM 5.1 and consists of: (1) a 1,122-foot-long, 26-foot high dam that includes a 774-foot-long, 26-foot-high Ambursen spillway section with a crest elevation of 272.0 feet msl and a 3-foot-high, 6-foot-wide log sluice gate opening and two 16.17-foot-high, 13.50-foot-wide deep-sluice slide gates; a 120.5-foot-long abutment section on the east side of the spillway; a 117.5-foot-long intake section on the east side of the spillway; and a 110-foot-long earthen embankment section on the west side of the spillway; (2) a 96-acre impoundment with a gross storage capacity of 136.0 acre-feet and a normal maximum pool elevation of 272 feet msl; (3) 117-foot-long, 21.75-foot-high gated intake structure that includes a trashrack with 3.5-inch clear bar spacing, two 15.5-foot-high, 12.25-foot-wide head gates, and two 12-foot-high, 10.25-foot-wide head gates; (4) a 117-foot-long, 55-foot-wide brick-and-tile powerhouse containing two propeller-type turbine-generator units rated at 1.0 MW and one vertical Francis turbine-generator unit rated at 0.46 MW, for a total installed capacity of 2.46 MW; (5) a 127-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (6) appurtenant facilities.

19. The Eel Weir powerhouse is integral with the dam; therefore, there is no bypassed reach at this development. Erie operates and maintains a canoe portage route at the Eel Weir Development.

B. Project Boundary

20. The existing project boundary around the Browns Falls Development includes 551.9 acres of land and encloses all of the facilities described above for the Browns Falls Development. The project boundary at this development extends approximately two miles upstream of the dam and includes lands around the dam and impoundment. Downstream of the dam, the project boundary includes lands around the powerhouse, transmission line, the bypassed reach, and the tailrace to a point approximately 180 feet downstream of the powerhouse.

21. The existing project boundary around the Flat Rock Development includes 205.99 acres of land and encloses all of the facilities described above for the Flat Rock Development, except portions of the impoundment. The project boundary at this development extends approximately 1.27 miles upstream of the dam and includes lands around the dam and most of the impoundment. Downstream of the dam, the project boundary extends to include lands around the powerhouse, transmission line, and tailrace to a point approximately 3,800 feet downstream of the powerhouse.

22. The existing project boundary around the South Edwards and Oswegatchie developments includes 149.93 acres of land and encloses all of the facilities described above for the South Edwards and Oswegatchie developments, except portions of the impoundments and the primary transmission lines. At these developments, the project boundary extends approximately 1.3 miles upstream of the South Edwards dam and includes lands around the South Edwards dam and most of the impoundment. Between the South Edwards dam and the Oswegatchie dam, the project boundary includes lands around the South Edwards bypassed reach, powerhouse, tailrace, and the Oswegatchie dam and most of the impoundment. Downstream of Oswegatchie dam, the project boundary includes lands around the powerhouse, and bypassed reach to a point 30 feet downstream of the powerhouse.

23. The existing project boundary around the Heuvelton Development includes 220.4 acres of land and encloses all of the facilities described above for the Heuvelton Development, except portions of the impoundment and the primary transmission line. The project boundary at this development extends approximately 2.2 miles upstream of the dam and includes the lands around the dam and most of the impoundment. Downstream of the dam, the project boundary includes lands around the dam, and powerhouse to a point approximately 15 feet downstream of the powerhouse.

24. The existing project boundary around the Eel Weir Development includes 205.08 acres of land and encloses all of the facilities described above for the Eel Weir Development, except portions of the impoundment. The project boundary at this development extends approximately 1.7 miles upstream of the dam and includes the lands around the dam and most of the impoundment. Downstream of the dam, the project boundary includes lands around the dam, transmission line and powerhouse, to a point approximately one mile downstream of the powerhouse.

25. No federal or tribal lands are within the project boundary. The project boundary is discussed further below.

C. Current Project Operation

26. The four upstream developments (i.e., Browns Falls, Flat Rock, South Edwards, and Oswegatchie) are operated as peaking facilities, while the two downstream developments (i.e., Heuvelton and Eel Weir) operate in a run-of-river mode. Combined, the six developments generate approximately 129,096 megawatt-hour (MWh) annually.

Browns Falls Development

27. Erie maintains 2-foot flashboards at the Browns Falls Development from the late spring through the fall, typically reinstalling any failed flashboards as soon as possible after the spring run-off (i.e., between late March and mid-May). Erie estimates that approximately half of the flashboards fail each year due to ice and high flows.

28. During peaking operations, Erie fluctuates the Browns Falls impoundment daily between elevations 1,349 and 1,346 feet msl when the flashboards are installed and elevations 1,347 and 1,344 feet msl when the flashboards are not installed. Fluctuations greater than 3 feet occur infrequently and fluctuations greater than 4 feet are rare. The current license does not limit impoundment fluctuations.

29. From April 1 to September 30, Erie provides a required minimum flow of 30 cubic feet per second (cfs) or inflow, whichever is less, to the bypassed reach through one of the two deep-sluice slide gates or over the spillway. From October 1 to March 31, the minimum flow is reduced to 15 cfs.

30. When flows exceed the maximum hydraulic capacity of the turbines (i.e., 880 cfs) and the required minimum flows, Erie operates the development at its maximum capacity and the impoundment is maintained at or slightly below the top of the flashboards or at or slightly below the top of the spillway crest, if flashboards are not installed. Flows in excess of the maximum hydraulic capacity and required minimum flows are released through the deep-sluice slide gates and/or over the spillway into the bypassed reach.

Flat Rock Development

31. During peaking operations, Erie fluctuates the Flat Rock impoundment daily between elevations 1,080 and 1,077 feet msl. Fluctuations greater than 3 feet occur infrequently and fluctuations greater than 4 feet are rare. The current license does not limit impoundment fluctuations.

32. Erie provides a required year-round minimum base flow of 160 cfs, or inflow, whichever is less, downstream of the development. The minimum base flow is primarily routed through the powerhouse. If the primary route is not available, then the minimum base flow is released through the deep-sluice slide gate, and/or over the spillway.

33. When flows exceed the maximum hydraulic capacity of the turbines (i.e., 1,223 cfs) and the required minimum flow, Erie operates the development at its maximum capacity and the impoundment is maintained at or slightly below the top of the spillway crest. Flows in excess of the maximum hydraulic capacity and required minimum flow are released through the deep-sluice slide gate and/or over the spillway.

South Edwards Development

34. Erie maintains 2-foot flashboards at the South Edwards Development from approximately May 31 to October 15.

35. During peaking operations, Erie fluctuates the South Edwards impoundment daily between elevations 845.2 and 842.2 feet msl when the flashboards are installed and between elevations 843.2 and 840.2 feet msl when the flashboards are not installed.

Fluctuations greater than 3 feet occur infrequently and fluctuations in excess of 6 feet are rare. The current license does not limit impoundment fluctuations.

36. Erie provides a required year-round minimum flow of 60 cfs, or inflow, whichever is less, to the bypassed reach through the minimum flow turbine or over the spillway. Erie also provides a required year-round minimum base flow of 160 cfs, or inflow, whichever is less, downstream of the development. The 160-cfs minimum base flow is provided through a combination of releases from the powerhouse and the minimum flow unit. If these routes are not available, then the minimum base flow is released over the spillway.

37. When flows exceed the maximum hydraulic capacity of the turbines (i.e., 745 cfs) and the required minimum flow, Erie operates the development at its maximum capacity and the impoundment is maintained at or slightly below the top of the flashboards or at or slightly below the top of the spillway crest, if flashboards are not installed. Flows in excess of the maximum hydraulic capacity and required minimum flow are released over the spillway.

Oswegatchie Development

38. During peaking operations, Erie fluctuates the Oswegatchie impoundment between elevations 758.6 and 758.2 feet msl. The current license does not limit impoundment fluctuations.

39. Erie provides a required year-round minimum flow of 40 cfs, or inflow, whichever is less, to the bypassed reach through the minimum flow notch in the dam. Erie also provides a required year-round minimum base flow of 160 cfs, or inflow, whichever is less, downstream of the development. The 160-cfs minimum base flow is provided through a combination of releases from the powerhouse and the notch in the dam. If these routes are not available, then the minimum base flow is released over the spillway.

40. When flows exceed the maximum hydraulic capacity of the turbines (i.e., 740 cfs) and the required minimum bypassed reach flow, Erie operates the development at its maximum capacity and the impoundment is maintained at or slightly below the top of the spillway crest. Flows in excess of the maximum hydraulic capacity and required minimum flow are released over the spillway.

Heuvelton Development

41. Erie operates the Heuvelton Development in run-of-river mode and maintains a normal impoundment elevation of 286.7 feet msl with minimal impoundment fluctuation. The current license does not limit impoundment fluctuations.

42. Erie provides a required year-round minimum base flow of 275 cfs, or inflow, whichever is less, downstream of the development. The 275-cfs minimum base flow is

primarily released through the powerhouse; however, if this route is not available, then the minimum base flow is released over the spillway.

43. At inflows up to 200 cfs (the minimum hydraulic capacity), the development does not operate and all flow is released over the spillway. At inflows between 200 cfs and 992 cfs (the maximum hydraulic capacity), all inflow is routed through the powerhouse for generation. At inflows greater than 992 cfs, the project operates at its maximum hydraulic capacity and all excess flows are released over the spillway.

Eel Weir Development

44. Erie operates the Eel Weir Development in run-of-river mode and maintains a normal impoundment elevation of 272 feet msl with minimal impoundment fluctuation. The current license does not limit impoundment fluctuations.

45. Erie provides a required a year-round minimum base flow of 325 cfs, or inflow, whichever is less, downstream of the development. The 325-cfs minimum base flow is primarily released through the powerhouse; however, if this route is not available, then the minimum base flow is released over the spillway.

46. At inflows up to 220 cfs (the minimum hydraulic capacity), the development does not operate and all flow is released over the spillway. At inflows between 220 cfs and 2,840 cfs (the maximum hydraulic capacity), all inflow is routed through the powerhouse for generation. At inflows greater than 2,840 cfs, the project operates at its maximum hydraulic capacity and all excess flows are release over the spillway.

D. New Project Facilities

47. Erie proposes no new capacity-related construction at the project. However, Erie proposes to replace the existing, 2-foot-high seasonal flashboards at the Browns Falls and South Edwards developments with new crest control devices that will include 2-foot-high inflatable rubber dams or 2-foot-high, year-round flashboards. Erie also proposes to install trashracks with 1-inch clear spacing over the full length and height of the existing intake opening or trashrack overlays with 1-inch clear spacing from March 15 through November 30 of each year at the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir developments. Erie proposes to construct new upstream and downstream fishways at the Heuvelton and Eel Weir developments to facilitate the movement of lake sturgeon, American eel, and other fish species.

48. Erie also proposes to construct or improve portage routes around each project dam; improve two existing informal parking areas and provide a picnic table at the Browns Falls Development; install an accessible picnic table, parking space, and seasonal floating dock, as well as an educational kiosk at the Flat Rock Development; construct a day-use area with parking and two picnic tables, a foot trail, and a car-top boat launch at

the South Edwards Development; and construct a boat launch and parking area at the Heuvelton Development. These measures are discussed in more detail below.

E. Relicensing Proposal

49. Erie proposes to operate the Oswegatchie Project according to the terms of the Settlement (the substantive portions are attached to this license as Appendix C), which contains measures for the protection, mitigation, and enhancement of aquatic, terrestrial, and recreational resources affected by the project. These measures are briefly noted below and would be implemented at each of the developments, unless specifically stated otherwise.

50. Section 2.13 of the Settlement describes Erie's proposal to develop and implement a plan to protect eagle and osprey nests within or adjacent to the project boundary.

51. Section 2.14 of the Settlement describes Erie's proposal to develop and implement a plan to discourage the introduction and spread of invasive species.

52. Section 3.1 of the Settlement describes Erie's proposal for daily impoundment fluctuation limits to protect fish habitat. Specifically, Erie proposes to limit daily fluctuations to 0.4 foot at the Oswegatchie Development; 0.5 foot at the Heuvelton and Eel Weir developments; 2 feet at the Browns Falls and Flat Rock developments from March 15 through July 14 and 4 feet for the remainder of the year; and 2 feet at the South Edwards Development from March 15 through July 14 and 6 feet for the remainder of the year.

53. Section 3.2 of the Settlement describes Erie's proposal to provide minimum base flows to protect and enhance aquatic habitat and water quality downstream of the Flat Rock, South Edwards, Oswegatchie, Heuvelton, and Eel Weir developments. Specifically, Erie proposes to maintain a minimum base flow of 160 cfs from the tailraces of the Flat Rock, South Edwards, and Oswegatchie developments, 275 cfs from the tailrace of the Heuvelton Development, and 325 cfs from the tailrace of the Eel Weir Development.[10]

[10] Section 3.2.1 of the Settlement and Condition 10 of the water quality certification specify that minimum base flows will be provided "from the Project's tailraces;" however, they do not specify where the minimum base flows would be measured. We assume the minimum base flows would be measured downstream of the project tailraces and would include flow contributions from the Browns Falls, South Edwards, and Oswegatchie bypassed reaches. In any event, monitoring and measurement of the minimum base flows will be specified in the stream flow and water level monitoring plan proposed in section 3.9 of the Settlement and required by condition 12 of

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54. Section 3.3 of the Settlement describes Erie's proposal to provide year-round minimum flows to protect and enhance aquatic habitat and water quality in the bypassed reaches of the Browns Falls, South Edwards, and Oswegatchie developments. Specifically, Erie proposes to maintain minimum bypassed reach flows of 30 cfs at the Browns Falls Development, 60 cfs at the South Edwards Development, and 40 cfs at the Oswegatchie Development.

55. Section 3.4 of the Settlement describes Erie's proposal to replace the existing 2-foot-high seasonal flashboards at the Browns Falls and South Edwards developments with new year-round crest control devices.

56. Section 3.5 of the Settlement describes Erie's proposal to implement a plan to deploy and monitor common loon nesting platforms seasonally on the Browns Falls, Flat Rock, South Edwards, and Oswegatchie impoundments.

57. Section 3.6 of the Settlement describes Erie's proposal to reduce fish entrainment and impingement by replacing the existing trashracks at the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir developments with permanent trashracks with 1-inch clear spacing or installing overlays with 1-inch clear spacing over the existing trashracks from March 15 to November 30.

58. Sections 3.6.1.2 and 3.6.1.3 of the Settlement describe Erie's proposal to construct fishways for upstream and downstream fish passage at the Heuvelton and Eel Weir developments

59. Section 3.7 of the Settlement describes Erie's proposal to implement a Trout Stocking and Monitoring Plan to stock trout and monitor water temperatures within the Browns Falls bypassed reach.

60. Section 3.8 of the Settlement describes Erie's proposal to implement a Recreation Management Plan (RMP)[11] that includes: (a) allowing public access to all lands within the project boundary;[12] (b) posting signs to indicate the locations of project recreational facilities and restricted areas; (c) constructing or improving portage routes, from take-out

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the water quality certification.

[11] A draft RMP was filed on April 1, 2011.

[12] For public safety, Erie proposes to restrict public access from lands and facilities specifically related to hydroelectric generation, including but not limited to, dams, dikes, gates, intake structures, water conveyance structures, powerhouses, substations, transmission lines, and fenced areas.

to put-in locations, at each dam; (d) continuing operation and maintenance of existing project recreational facilities during the recreation season;[13] and (e) developing an online and/or paper brochure that describes available recreational opportunities and historical information at the project developments.

61. Section 3.9 of the Settlement describes Erie's proposal to develop and implement a plan to monitor water levels in the impoundments and stream flows in the bypassed reaches and Oswegatchie River and ensure compliance with the proposed fluctuation limits and minimum flows.

SUMMARY OF LICENSE REQUIREMENTS

62. As summarized below, this license, which authorizes 28.56 MW of renewable energy, requires a number of measures to protect and enhance fisheries resources, water quality, terrestrial resources, recreation, and cultural resources at the project.

63. To protect water quality and aquatic habitat in the Oswegatchie River, this license requires Erie to implement the daily impoundment fluctuation limits and provide the minimum bypassed reach and base flows proposed by Erie and described above, develop and implement Erie's proposed streamflow and water level monitoring plan, and develop and implement a plan to control erosion and sedimentation from ground-disturbing construction activities.

64. To protect and enhance fisheries resources, this license requires Erie to develop and implement a plan for installing new permanent trashracks with 1-inch clear spacing or installing trashrack overlays with a 1-inch clear spacing from March 15 to November 30 at the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir developments. To facilitate fish passage, this license requires Erie to design, construct, operate, and maintain upstream and downstream fishways at the Heuvelton and Eel Weir developments. To enhance the trout population in the Browns Falls bypassed reach, this license requires Erie to implement the Trout Stocking and Monitoring Plan.

65. To minimize the potential for the introduction and spread of invasive plant species, this license requires Erie to develop and implement an invasive species management plan.

66. To protect eagles and ospreys, this license requires Erie to develop and implement a plan to protect osprey and eagle nests in the project vicinity from the effects of project-related activities.

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[13] Generally, the recreation season in the project area is from Memorial Day through Labor Day.

67. To enhance habitat for common loons, this license requires Erie to implement a plan to seasonally deploy and monitor common loon nesting platforms on the Browns Falls, Flat Rock, South Edwards, and Oswegatchie impoundments.

68. To enhance recreational opportunities at the project, this license requires Erie to implement and file an RMP that includes the measures proposed by Erie and described above, and plans for installing parallel boat slides on steep portions of the portage routes at the Flat Rock and South Edwards developments.

69. To protect cultural resources, this license requires Erie to implement the Programmatic Agreement Between the Federal Energy Regulatory Commission and the New York State Office of Parks, Recreation, and Historic Preservation for Managing Historic Properties that may be Affected by Issuing a License to Erie Boulevard Hydropower, L.P. for the Continued Operation of the Oswegatchie Hydroelectric Project in St. Lawrence County, New York (FERC No. 2713) executed on January 6, 2012, including but not limited, to the Historic Properties Management Plan (HPMP) for the project dated December 2010 (filed December 30, 2010).

WATER QUALITY CERTIFICATION

70. Under section 401(a)(1) of the Clean Water Act (CWA),[14] the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.[15]

71. On May 9, 2011, Erie applied to New York DEC for water quality certification for the Oswegatchie Project, which New York DEC received May 11, 2011. On May 8, 2012, New York DEC issued the water quality certification for the Oswegatchie Project. On June 27, 2012, Erie filed a letter stating that it had questions and comments pertaining to the water quality certification and it planned to meet with New York DEC to address its questions and concerns. On October 24, 2012, the New York DEC issued a modified water quality certification for the Oswegatchie Project. The changes to the original water quality certification are minor, non-substantive editorial corrections. Moreover, the changes were made in response to Erie's concerns, and Erie does not object to the changes. This order therefore includes the revised certification.

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[14] 33 U.S.C. §1341(a)(1) (2006).

[15] *Id*. §1341(d) (2006).

72. The certification contains 38 conditions, 13 of which (conditions 7 through 19) require certain provisions of the Settlement. Nine of the conditions (conditions 21 through 29) relate to construction activities and require developing various plans and monitoring turbidity. The remaining 16 conditions (1-6, 20, and 30-38) are general or administrative and are not discussed further.

73. Condition 7 states that the certification "includes and incorporates" the Settlement "to the extent that the [Settlement] pertains to the applicant's compliance with New York State water quality standards necessary and appropriate for the issuance of and compliance with this [certification]." This condition does not, however, specify which sections of the Settlement would meet this definition. It is therefore presumed that the sections of the Settlement specifically required by the other certification conditions are the only ones required by the certification. Conditions 8 to 18 specifically require sections 2.14 and 3.1 to 3.9 of the Settlement, which are described above. Condition 19 requires the licensee notify the New York DEC if any state-listed species are identified during operation, maintenance, or construction activities consistent with section 2.12 of the Settlement.

74. Condition 21 prohibits in-water maintenance activities from March 15 to July 15 of each year to minimize effects on spawning fish.

75. Condition 22 prohibits drawing down or dewatering the impoundments from October 1 to July 15 to protect hibernating reptiles and spawning fish.

76. Condition 23 requires the licensee to install and maintain turbidity control structures while conducting any dredging activities.

77. Condition 24 requires the licensee to sample sediment for contaminants prior to disturbing it or removing it from project waters.

78. Condition 25 requires the licensee to submit a design plan before installing any cofferdams, temporary access roads, ramps, or other structures that encroach on the banks of the Oswegatchie River to ensure compliance with water quality standards.

79. Condition 26 requires the licensee to file an erosion and sediment control plan 60 days prior to commencing any major construction or maintenance activities within the project boundary that could adversely affect water quality.

80. Condition 27 requires the licensee to implement erosion and sediment control measures during operation, construction, or maintenance activities that may result in sediment or contaminants entering any wetland or waterbody.

81. Condition 28 requires the licensee to monitor turbidity during any maintenance or construction activities to ensure that turbidity levels upstream of the work area do not exceed turbidity levels 100 feet downstream of the work area.

82. Condition 29 requires the licensee to continuously maintain adequate river flow immediately downstream of a work site.

83. All 38 conditions of the certification are set forth in Appendix A of this order and incorporated into the license by ordering paragraph (D). Article 401 requires the licensee to file, for Commission approval, plans and reports required by the certification conditions, notify the Commission of emergencies and other activities, and file amendment applications, as appropriate.

COASTAL ZONE MANAGEMENT ACT

84. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),[16] the Commission can not issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within six months of its receipt of the applicant's certification.

85. Because the Oswegatchie Project is located outside New York's coastal zone and would not affect coastal resources, the New York Department of State, Division of Coastal Resources found that a consistency certification is not required.[17]

SECTION 18 FISHWAY PRESCRIPTIONS

86. Section 18 of the FPA[18] provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or Secretary of Commerce, as appropriate.

87. On June 16, 2011, Interior filed fishway prescriptions for upstream and downstream passage of lake sturgeon, American eel, and other fish species at the Heuvelton and Eel Weir developments and a request to reserve authority to require fishways in the future. The prescriptions, which incorporate by reference the Settlement provisions relating to fish passage and which are consistent with the certification conditions, are attached to this order as Appendix B and incorporated into the license by ordering paragraph (E). Consistent with the Commission's policy, Article 402 of this

[16] 16 U.S.C. §1456(c)(3)(A) (2006).

[17] *See* record of communication with Matt Maraglio, New York Department of State, Division of Coastal Resources, filed January 19, 2011.

[18] 16 U.S.C. § 811 (2006).

license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Oswegatchie Project.

THREATENED AND ENDANGERED SPECIES

88. Section 7(a)(2) of the Endangered Species Act of 1973[19] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

89. In a letter filed June 16, 2012, the U.S. Fish and Wildlife Service indicated that except for occasional transient individuals, no federally-listed or proposed endangered or threatened species or critical habitat exists for such species in the project area. In the EA, staff concluded that the only federally-listed species that could occur as a transient in the project vicinity is the endangered Indiana bat; however, because this species is not expected to use habitat in the project vicinity, the project would have no effect on this species.[20] No further action under the Endangered Species Act is required at this time.

NATIONAL HISTORIC PRESERVATION ACT

90. Under section 106 of the National Historic Preservation Act (NHPA)[21] and its implementing regulations,[22] federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing on the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize adverse effects.

91. Erie conducted a series of cultural resource studies within the project's Area of Potential Effect that identified three archeologically-sensitive Slope Stability Areas (SSAs) near the Eel Weir and Heuvelton developments, as well as two separate historic sites at the Browns Falls and Flat Rock developments. The study report concluded that current ongoing project activities and operation do not appear to contribute to erosion at

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[19] *Id*. § 1536(a).

[20] *See* EA at 61.

[21] 16 U.S.C. § 470f. (2006).

[22] 36 C.F.R. Part 800 (2012).

the three SSAs or affect the archeological integrity of the two historic sites. By letter dated October 4, 2010, the New York SHPO stated that the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir hydroelectric facilities are individually eligible for listing on the National Register.

92. To protect existing archeological resources and eligible historic properties that could be affected by the project and any future project-related modifications or activities, Erie prepared and filed with the Commission a Historic Properties Management (HPMP), dated December 2010. In the EA, Commission staff determined that the proposed project would not have an adverse effect on historic properties in the project area if the HPMP is implemented.[23] On January 6, 2012, the Commission executed a Programmatic Agreement (PA) with the New York SHPO and invited Erie and Oneida to concur. Erie concurred. The PA requires Erie to implement the HPMP for the term of any new license issued for this project. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 404 requires Erie to implement the PA and its approved HPMP.

RECOMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(j) OF THE FPA

93. Section 10(j) of the FPA requires the Commission, when issuing a license, to include conditions based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act,[24] to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.[25]

94. In response to the April 21, 2011, public notice that the project was ready for environmental analysis, Interior filed eight recommendations and the New York DEC filed the same eight recommendations plus five additional recommendations under section 10(j).[26] This license includes conditions consistent with the eight recommendations made by both Interior and New York DEC, including: (1) implementing the daily impoundment fluctuation limits described in section 3.1 of the Settlement (ordering paragraph (D)); (2) replacing the existing 2-foot-high flashboards at

[23] *See* EA at 73-78.

[24] 16 U.S.C. §§ 661-667e. (2006).

[25] *Id.* U.S.C. § 803(j)(1).

[26] Interior filed its recommendations on June 16, 2011, and the New York DEC filed its recommendations on June 11, 2011.

the Browns Falls and South Edwards developments with new, year-round crest control devices as described in section 3.4 of the Settlement (ordering paragraph (D)); (3) implementing the Common Loon Nesting Platform Installation and Monitoring Plan described in section 3.5 of the Settlement (Article 406); (4) maintaining the minimum base flows from the tailraces described in section 3.2 of the Settlement (ordering paragraph (D)); (5) maintaining the minimum year-round bypassed reach flows at the South Edwards and Oswegatchie developments described in section 3.3 of the Settlement (ordering paragraph (D)); (6) maintaining the minimum year-round bypassed reach flows at the Browns Falls Development described in section 3.3 of the Settlement (ordering paragraph (D)); (7) implementing the Trout Stocking and Monitoring Plan described in section 3.7 of the Settlement (Article 407); and (8) implementing the Stream Flow and Water Level Monitoring Plan described in section 3.9 of the Settlement (ordering paragraph (D)).

95. This license also includes conditions consistent with four of the additional five recommendations made by New York DEC, including: (1) new permanent trashracks with 1-inch clear spacing or trashrack overlays with a 1-inch clear spacing from March 15 to November 30 at the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir developments, in accordance with section 3.6 of the Settlement (ordering paragraphs (D) and (E)); (2) a 40-cfs flow through the notch in the spillway for downstream fish movement at the Oswegatchie Development and new upstream and downstream fish passage facilities at the Heuvelton and Eel Weir developments as described in section 3.6 of the Settlement (ordering paragraph (D)); (3) the measures described in section 2.13 of the Settlement to protect eagles and ospreys from project operation, construction, or maintenance activities (ordering paragraph (D) and Article 405); and (4) an invasive species management plan consistent with section 2.14 of the Settlement (ordering paragraph (D)). One of New York DEC's recommendations is outside the scope of section 10(j) and is discussed in the next section.

SECTION 10(a)(1) OF THE FPA

96. Section (10)(a)(1) of the FPA[27] requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses including irrigation, flood control, water supply, recreation, and other purposes.

A. Measure Recommended by New York DEC

[27] 16 U.S.C. § 803(a)(1) (2006).

97. New York DEC's recommendation to notify the New York DEC if eagle or osprey nests are identified in or adjacent to the project boundary any time during the license term as described in section 2.13 of the Settlement is not a specific measure to protect, mitigate damages to, or enhance fish and wildlife; therefore, this measure is not considered under section 10(j) of the FPA and instead is considered under the broad public-interest standard of section 10(a)(1).[28] In the EA,[29] staff recommended this measure because it would provide the agency with information useful for addressing effects on these species from project-related activities in the project area. Article 405, therefore, requires this measure.

B. Project Boundary

98. A licensee's project boundary must enclose only those lands that are necessary for the safe and efficient operation and maintenance of the project, and for other specified project purposes, such as public recreation or protection of environmental resources.[30] Erie proposes to modify the current project boundary to: (1) enclose an existing access road and several proposed recreational facilities at the Browns Falls Development, including the portage route, signage, and put-in and take-out areas; a boat launch; a fishing access area; and two parking areas; (2) enclose an existing access road and a new portage route with signage and put-in and take-out areas at the Flat Rock Development; (3) enclose an existing access road and the primary transmission lines at South Edwards and Oswegatchie developments; and (4) enclose an existing access road, the primary transmission line, and a new portage route with put-in and take-out areas at the Heuvelton Development.

99. Erie also proposes to modify the project boundary to remove a 13.8 acre parcel of land on the south side of the upstream end of the Flat Rock impoundment, a 1.5-acre parcel downstream of the Flat Rock powerhouse, and a 33.2-acre parcel downstream of the Eel Weir powerhouse. Erie, however, did not provide any justification for removing these lands from the project boundary.

100. In addition, in the EA, staff identified multiple differences between the proposed and existing project boundary at each development.[31] In general, Erie's proposed project boundary does not align or coincide with much of the existing project boundary around

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[28] *Id.*

[29] *See* EA at 59.

[30] *See* 18 C.F.R. § 4.41(h)(2) (2012).

[31] *See* EA at B-2 to B-6

each development. Specifically, certain parcels of lands and waters, licensed in 1983, are not included in the proposed project boundary. Erie did not address these discrepancies or identify any site-specific circumstances justifying these revisions to the project boundary.

101. Therefore, this license does not approve the removal of lands and waters from the existing project boundary, and instead requires Erie to file revised Exhibit G drawings that show the project boundary enclosing all project facilities necessary for operation and maintenance of the project, including the entire length of the transmission lines, the entire impoundments up to the normal water surface elevations, and the access roads and recreational facilities proposed by Erie and described above. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission's regulations (Article 203). If Erie wishes to pursue removal from the project of areas that were approved under the previous license, it may file an amendment application, which must contain support for its request.

102. Condition 16 of the certification requires Erie to develop a 40-foot-wide, 100-foot-long gravel parking area outside of the project boundary, between the Browns Falls and Flat Rock developments (section 4.1 of the Settlement). Construction of the parking area will enhance public access to Little River and the Flat Rock impoundment. Erie would only be responsible for constructing the parking lot. The New York DEC has acquired an easement for the land where the parking lot would be constructed, will install any necessary signage, and will presumably perform any maintenance, if needed. Because adequate access to project lands and waters will be provided through other new and existing facilities and construction of the parking area will be a one-time enhancement that does not require Erie to maintain the facility, the parking area does not need to become a project facility and will not be brought into the project boundary.[32]

C. Comments on the EA

103. As noted above, Erie, Interior, and New York DEC filed comments on the EA issued on October 18, 2011. Substantive comments on the EA are addressed below.

Parallel Boat Slides

104. In its comments on the EA, Erie stated that staff's recommendation for the installation of parallel boat slides along three sections of the Flat Rock and South Edwards portage routes is unnecessary because boat slides were not recommended by the recreation stakeholder group that evaluated portage alternatives during development of

[32] See *Policy Statement on Hydropower Licensing Settlements*, 116 FERC ¶61,270 (September 21, 2006).

the Settlement and RMP. Erie also suggests that requiring the boat slides is not necessary because the signatories to the Settlement could use a river management fund included in the Settlement to install boat slides at the portages if they are needed in the future.[33]

105. In the EA, Commission staff recommended parallel boat slides for three steep sections (i.e., 170 to 305-foot-long sections with 21 to 34 degree slopes) of the Flat Rock and South Edwards portage routes.[34] The boat slides would allow through-boaters to unload their gear and safely negotiate these steep sections of the portages by pushing or pulling the boat along the route without incurring the weight of their gear. Installing the boat slides along these three steep sections of the portage routes would enhance the user experience and safety and they would be worth the estimated annual cost of $600. Therefore, Article 403 of this license requires Erie to revise its RMP to include plans for installing parallel boat slides along the three steep sections of the Flat Rock and South Edwards portage routes.

Eagle and Osprey Management Plan

106. In its comments on the EA, Erie stated that the Draft Article 012 attached to the EA is inconsistent with section 2.13 of the Settlement because it would require Erie to file an eagle and osprey management plan within six months of the effective date of the new license, whereas, in the Settlement, Erie proposes to develop the plan only after an eagle or osprey nest has been identified within or adjacent to the project boundary. Because preparation of such a plan would be unnecessary if no eagle or osprey nests are identified within or adjacent to the project boundary, Article 405 of this license requires that Erie file an eagle and osprey management plan within six months of identifying any eagle or osprey nests.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

107. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA.

B. Exhibit F Drawings

108. The Exhibit F drawings filed with the license application are approved and made part of this license (ordering paragraph (C)). The Commission requires licensees to file

[33] The river management fund is included in section 4.2 of the Settlement, which was not included as part of Erie's relicensing proposal and is not required by this license.

[34] *See* EA at 71, 72, and 103.

sets of approved project drawings on microfilm and in electronic file format. Article 202 requires filing of these drawings.

C. Amortization Reserve

109. The Commission requires that, for new major licenses, non-municipal licensees must set up and maintain an amortization reserve account upon license issuance. Article 204 requires the establishment of the account.

D. Headwater Benefits

110. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 205 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

E. Use and Occupancy of Project Lands and Waters

111. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 408 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

F. Review of Final Plans and Specifications

112. Article 301 requires the licensee to provide the Commission's Division of Dam Safety and Inspection (D2SI) New York Regional Engineer with final contract drawings and specifications prior to the start of any construction. The submittal must include a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

113. Article 302 requires the licensee to provide the Commission's D2SI New York Regional Engineer with the approved cofferdam construction drawings and specifications and the letters of approval.

114. Article 303 requires that the planning and design of project modifications shall be coordinated with the Commission's D2SI New York Regional Engineer.

115. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 304 provides for the filing of these drawings.

G. Commission Approval of Resource Plans, Notification, and Filing of Amendments

116. In Appendices A, B, and C, there are certain certification conditions and fishway prescriptions that either do not require the licensee to file plans with the Commission for approval; do not require consultation with the appropriate agencies during plan development; or require agency, but not Commission notification of emergencies and other activities. Therefore, Article 401 requires the licensee to: consult with the appropriate agencies during plan development; file the plans with the Commission for approval; notify the Commission of emergencies and other activities; and file amendment applications, as appropriate.

STATE AND FEDERAL COMPREHENSIVE PLANS

117. Section 10(a)(2)(A) of the FPA[35] requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.[36] Under section (10)(a)(2)(A), federal and state agencies filed 39 comprehensive plans that address various resources in New York. Of these, the staff identified and reviewed eight comprehensive plans that are relevant to this project.[37] No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

118. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,[38] Commission staff evaluated Erie's record as a licensee with respect to the following: (A) conservation efforts; (B) compliance history and ability to comply with the new license; (C) safe management, operation, and maintenance of the project; (D) ability to provide efficient and reliable electric service; (E) need for power; (F) transmission services; (G) cost effectiveness of plans; and (H) actions affecting the public. I accept the staff's finding in each of the following areas.

A. Conservation Efforts

119. Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance,

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[35] 16 U.S.C § 803(a)(2)(A) (2006).

[36] Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2012).

[37] The list of applicable plans can be found in section 5.5 of the EA.

[38] 16 U.S.C. §§ 803(a)(2)(C) and 808 (a) (2006).

and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Erie sells the project's energy to National Grid, a utility that promotes conservation of electricity use by its customers.

120. Staff concludes that, given the limits of its ability to influence users of the electricity generated by the project, Erie complies with section 10(a)(2)(C) of the FPA.

B. Compliance History and Ability to Comply with the New License

121. Based on a review of Erie's compliance with the terms and conditions of the existing license, staff finds Erie's overall record of making timely filings and compliance with its license is satisfactory. Therefore, staff believes Erie can satisfy the conditions of a new license.

C. Safe Management, Operation, and Maintenance of the Project

122. Staff reviewed Erie's record of management, operation, and maintenance of the project pursuant to the requirements of 18 C.F.R. Part 12 and the Commission's Engineering Guidelines and periodic Independent Consultant's Safety Inspection Reports. Staff concludes that the dams and other project works are safe, and that there is no reason to believe that Erie cannot continue to safely manage, operate, and maintain these facilities under a new license.

D. Ability to Provide Efficient and Reliable Electric Service

123. Staff reviewed Erie's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Staff's review indicates that Erie regularly inspects the project turbine generator units to ensure they continue to perform in an optimal manner, schedules maintenance to minimize effects on energy production, and since the project has been in operation, has undertaken several initiatives to ensure the project is able to operate reliably into the future. Staff concludes that Erie is capable of operating the project to provide efficient and reliable electric service in the future.

E. Need for Power

124. To assess the need for power, staff looked at the needs in the operating region in which the project is located. The project is located in the New York Control Area of the Northeast Power Coordinating Council, Inc. region of the North American Electric Reliability Council (NERC). NERC annually forecasts electrical supply and demand in the nation and the region for a ten-year period. NERC's most recent report on annual supply and demand projections indicates that, for the period 2011–2021, total summer demand is projected to increase from 32,712 megawatt (MW) to 35,192 MW, and winter demand from 24,533 MW to 26,210 MW. The project, as licensed, has the potential to

supply about 28.56 MW of this demand. Staff concludes that the project's power, low cost, and contribution to the region's diversified generation mix will help meet a need for power in the region.

F. Transmission Services

125. The project includes approximately 1.4 miles of transmission line that connects the generators at the six developments to National Grid's transmission grid. Erie is proposing no changes that would affect its own or other transmission services in the region. The project and project transmission line are important elements in providing power and voltage control to local St. Lawrence County communities and the region.

G. Cost Effectiveness of Plans

126. Erie plans to make a number of facility and operational modifications to enhance environmental resources affected by the project. Based on Erie's record as an existing licensee, staff concludes that these plans are likely to be carried out in a cost-effective manner.

H. Actions Affecting the Public

127. Erie provided extensive opportunity for public involvement in the development of its application for a new license for the Oswegatchie Project. During the previous license period, Erie implemented several measures to enhance the public use of project lands and facilities, and operated the project with consideration for the protection of downstream uses of the Oswegatchie River. Erie uses the project to help meet local power needs.

PROJECT ECONOMICS

128. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp*.,[39] the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

[39] 72 FERC ¶ 61,027 (1995).

129. In applying this analysis to the Oswegatchie Project, three options were considered: no-action, Erie's proposal, and the project as licensed herein. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 28.56 MW, has a dependable capacity of 27.25 MW, and generates an average of 129,096 MWh of energy annually. The levelized annual cost of operating the Oswegatchie Project is $8,278,620, or 64.13/MWh. When the estimate of average generation is multiplied by the alternative power cost of $75.29/MWh,[40] the total value of the project's power is $9,719,638 in 2010 dollars. To determine whether the project is currently economically beneficial, the project's cost is subtracted from the value of the project's power.[41] Therefore, the project costs $1,441,018, or $11.16/MWh, less than the likely alternative cost of power.

130. As proposed by Erie, the levelized annual cost of operating the project would be $9,089,000, or $70.95/MWh. Based on an estimated average generation of 128,113 MWh and the alternative power cost of $75.29/MWh, the total value of the project's power would be $9,645,628. Therefore, in the first year of operation, the project would cost $556,628, or $4.34/MWh, less than the likely cost of alternative power

131. As licensed herein with the mandatory conditions and staff measures, the levelized annual cost of operating the project will be about $9,091,040, or $70.96/MWh. Based on an estimated average generation of 128,113 MWh as licensed, the project will produce power valued at $9,645,628, when multiplied by the $75.29/MWh value of the project's power. Therefore in the first year of operation, project power will cost $554,588, or $4.33/MWh, less than the likely cost of alternative power.

132. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid changes in system load, and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back on line.

COMPREHENSIVE DEVELOPMENT

[40] The alternative power cost of $75.29 per MWh is based on regional off-peak and on-peak market price and EIA fuel cost data.

[41] Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued October 18, 2011.

133. Sections 4(e) and 10(a)(1) of the FPA[42] require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

134. The EA for the Oswegatchie Project contains background information, analysis of effects, and support for related license articles. Based on the record of this proceeding, including the EA and the comments thereon, licensing the Oswegatchie Project as described in this order would not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of this license.

135. Based on staff's independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the proposed Oswegatchie Project, with the staff-recommended measures, is best adapted to a comprehensive plan for improving or developing the Oswegatchie River.

136. This alternative was selected because: (1) issuance of a new license will serve to maintain a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 28.56 MW of electric capacity available comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

137. Section 15(e) of the FPA[43] provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive

[42] 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

[43] *Id*. § 808(e).

measures.[44] This license requires a moderate amount of new construction, including: (1) constructing upstream and downstream fishways at the Heuvelton and Eel Weir developments; (2) installing trashracks or overlays with 1-inch clear spacing at the Browns Falls, Flat Rock, South Edwards, Heuvelton, and Eel Weir developments; (3) constructing canoe portages at all six developments; (4) constructing a day-use area and car-top boat launch at the South Edwards Development; and (5) constructing a boat launch and parking area at the Heuvelton Development. Because this license requires a moderate amount of new construction, this license is for a term of 40 years. Furthermore, because the term of the current license does not expire until December 31, 2012, this license order is not effective until January 1, 2013.[45]

The Director Orders:

(A) This license is issued to Erie Boulevard Hydropower, L.P. (licensee), for a period of 40 years, effective January 1, 2013, to operate and maintain the Oswegatchie River Hydroelectric Project (project). This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in these lands, described in the project description and the project boundary discussion of this order.

(2) Project works which include:

Browns Falls Development

The Browns Falls Development consists of: (1) a 941-foot-long, 69-foot-high concrete gravity dam that includes a 192.2-foot-long ogee spillway section with a crest elevation of 1,347 feet above mean sea level (msl) and 2-foot-high seasonal flash boards; a 130.5-foot-long abutment section with a timber parapet wall and a 70-foot-long abutment section on the east side of the spillway; a 27.6-foot-long deep gate section on the west side of the spillway with a 6-foot-wide, 7.0-foot-high log sluice gate opening and two 6-foot-high, 5.5-foot-wide deep-sluice slide gates; a 62-foot-long intake section

[44] *See* Consumers Power Co., 68 FERC ¶ 61,077, at 61,383-84 (1994).

[45] For this reason, the various deadlines in the license articles are measured from the January 1, 2013, effective date of this license rather than from the order issuance date.

on the west side of the spillway; and a 458.7-foot-long abutment section on the west side of the spillway; (2) a 168-acre impoundment with a gross storage capacity of 3,234 acre-feet and a normal maximum pool elevation of 1,349 feet msl; (3) a 62-foot-long, 41.3-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 11-foot-wide, 15-foot-high head gates; (4) a 12-foot-diameter, 6,000-foot-long steel pipeline; (5) a 40-foot-diameter, 70-foot-high surge tank; (6) two 8-foot-diameter, 142-foot-long steel penstocks; (7) a 74-foot-long, 53-foot-wide concrete-brick powerhouse containing two vertical Francis turbine-generating units rated at 7.5 MW each for a total installed capacity of 15.0 MW; (8) a 100-foot-long concrete-lined tailrace; (9) a 123-foot-long, 6.6-kilovolt (kV) transmission line connecting the powerhouse to the regional grid; and (10) appurtenant facilities.

Flat Rock Development

The Flat Rock Development consists of: (1) a 658-foot-long, 70-foot-high concrete gravity dam that includes a 229-foot-long ogee spillway section with a crest elevation of 1,080 feet msl and a 7-foot-wide, 4-foot-high sluice gate opening; a 120-foot-long earthen embankment section with a concrete core wall on the east side of the spillway; a 95-foot-long abutment section with a timber parapet wall on the east side of the spillway; a 66-foot-long intake section on the west side of the spillway; a 14-foot-long deep gate section on the west side of the spillway with a 6-foot-high, 5-foot-wide deep-sluice slide gate; and a 134-foot-long abutment section on the west side of the spillway; (2) a 159-acre impoundment with a gross storage capacity of 2,646 acre-feet and a normal maximum pool elevation of 1,080 feet msl; (3) a 66-foot-long, 42-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 16-foot-high, 14.25-foot-wide head gates; (4) an 85-foot-long, 66-foot-wide concrete-brick powerhouse containing two vertical Francis turbine-generating units rated at 2.09 and 2.98 MW, for a total installed capacity of 5.07 MW; (5) a 25-foot-long concrete-walled tailrace; (6) a 30-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (7) appurtenant facilities.

South Edwards Development

The South Edwards Development consists of: (1) a 214.5-foot-long, 48-foot-high dam that includes an 88-foot-long, 48-foot-high concrete gravity ogee spillway section with a crest elevation of 843.2 feet msl and 2-foot-high seasonal flash boards; a 13.5-foot-long abutment section and a 17-foot-long abutment section with an 8-foot-wide, 6.0-foot-high log sluice gate on the east side of the spillway; a 46-foot-long intake section on the west side of the spillway; and a 50-foot-long abutment section on the west side of the spillway; (2) a 510-foot-long earthen embankment and a 240-foot-long earthen embankment located upstream on the west side of the dam, each with concrete core walls and 10-inch-high flashboards; (3) a 79.2-acre impoundment with a gross storage capacity of 1,003 acre-feet and a normal maximum pool elevation of 845.2 feet msl; (4) a 46-foot-

long, 33.5-foot-high gated intake structure that includes a trashrack with 2.5-inch clear bar spacing and two 6-foot-wide, 11-foot-high head gates; (5) a 10-foot-diameter, 1,106-foot-long fiberglass pipeline; (6) a 4-foot-diameter butterfly valve and a 4-foot-diameter, 30-foot-long pipe connecting to the fiberglass pipeline and containing a minimum flow submersible Flygt turbine-generating unit rated at 0.24 MW; (7) a 10-foot-diameter, 51-foot-high riser and a 16-foot-diameter, 23-foot-high surge tank with a 4-foot-diameter, 63-foot-long overflow pipe connecting to the fiberglass pipeline; (8) a 78-foot-long, 45-foot-wide concrete powerhouse containing three horizontal Francis turbine-generating units rated at 1.0 MW, 1.0 MW, and 0.68 MW, for a total installed capacity of 2.92 MW, including the 0.24-MW minimum flow turbine-generating unit; (9) an 880-foot-long, 480-volt transmission line connecting the 0.24-MW minimum flow turbine to the powerhouse and a 3,917-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (10) appurtenant facilities.

Oswegatchie Development

The Oswegatchie Development consists of: (1) a 160-foot-long, 12-foot-high dam that includes an 80-foot-long, 12-foot-high concrete gravity spillway section with a crest elevation of 758.6 feet msl and a 10-foot-wide, 2.6-foot-deep minimum flow notch with a crest elevation of 756 feet msl; a 30-foot-long bedrock outcrop section on the west side of the spillway; and a 50-foot-long intake section on the west side of the spillway; (2) a 6-acre impoundment with a gross storage capacity of approximately 23 acre-feet and a normal maximum pool elevation of 758.6 feet msl; (3) a 50-foot-long, 23-foot-high gated intake structure that includes two trashracks, one with a 2.5-inch clear bar spacing and one with a 1-inch clear bar spacing, and two 8-foot-high, 8-foot-wide head gates; (4) a 6.5-foot-diameter, 75.5-foot-long steel penstock and a 6.5-foot-diameter, 65-foot-long steel penstock; (5) a 30-foot-long, 26-foot-wide concrete-masonry powerhouse containing two vertical Canadian Hydro Components turbine-generating units rated at 1.035 MW each for a total installed capacity of 2.07 MW; (6) a 2,227-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (7) appurtenant facilities.

Heuvelton Development

The Heuvelton Development consists of: (1) a 285-foot-long, 19-foot-high concrete gravity dam and spillway with a crest elevation of 276.5 feet msl topped with two 28-foot-long, 11.1-foot-high inflatable rubber bladder gates with crest elevations of 286.7 feet msl and four 28-foot-long, 11.1-foot-high tainter gates with crest elevations of 286.7 feet msl; (2) a 239-acre impoundment with a gross storage capacity of 405 acre-feet and a normal maximum pool elevation of 286.7 feet msl; (3) a 70-foot-long, 21.25-foot-high gated intake structure that includes a trashrack with 3.5-inch clear bar spacing and two 12.5-foot-high, 22-foot-wide head gates; (4) a 67-foot-long, 37-foot-wide brick powerhouse containing two vertical Francis turbine-generating units rated at 0.52 MW

for a total installed capacity of 1.04 MW; (5) a 62-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (6) appurtenant facilities.

Eel Weir Development

The Eel Weir Development consists of: (1) a 1,122-foot-long, 26-foot high dam that includes a 774-foot-long, 26-foot-high Ambursen spillway section with a crest elevation of 272.0 feet msl and a 3-foot-high, 6-foot-wide log sluice gate opening and two 16.17-foot-high, 13.50-foot-wide deep-sluice slide gates; a 120.5-foot-long abutment section on the east side of the spillway; a 117.5-foot-long intake section on the east side of the spillway; and a 110-foot-long earthen embankment section on the west side of the spillway; (2) a 96-acre impoundment with a gross storage capacity of 136.0 acre-feet and a normal maximum pool elevation of 272 feet msl; (3) 117-foot-long, 21.75-foot-high gated intake structure that includes a trashrack with 3.5-inch clear bar spacing, two 15.5-foot-high, 12.25-foot-wide head gates, and two 12-foot-high, 10.25-foot-wide head gates; (4) a 117-foot-long, 55-foot-wide brick-and-tile powerhouse containing two propeller-type turbine-generator units rated at 1.0 MW and one vertical Francis turbine-generator unit rated at 0.46 MW, for a total installed capacity of 2.46 MW; (5) a 127-foot-long, 2.4-kV transmission line connecting the powerhouse to the regional grid; and (6) appurtenant facilities

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F shown below:

Exhibit A: The following section of Exhibit A filed on December 30, 2010:

Exhibit A - Description of Project, pages 19 through 42.

Exhibit F: The following sections of Exhibit F filed on December 30, 2010:

Exhibit F Drawing	FERC No. 2713-	Description
Sheet F-1	1001	Browns Falls Development General Plan, Dam, Spillway, Intake and Pipeline Plan, Profile, Elevations and Sections
Sheet F-2	1002	Browns Falls Development Powerhouse and Surge Tank Plan, Elevations and Section
Sheet F-3	1003	Flat Rock Development Dam and Spillway Plan, Elevations and Sections
Sheet F-4	1004	Flat Rock Development General Plan, Powerhouse Elevations and Section

Exhibit F Drawing	FERC No. 2713-	Description
Sheet F-5	1005	South Edwards Development General Plan, Dam, Spillway Intake and Pipeline Plan, Profile, Elevations and Sections
Sheet F-6	1006	South Edwards Development Powerhouse and Surge Tank Plan, Elevations and Sections
Sheet F-7	1007	South Edwards Development Minimum-flow Turbine Plan and Elevation
Sheet F-8	1008	Oswegatchie Development General Plan, Dam and Intake
Sheet F-9	1009	Oswegatchie Development Plan, Sections and Elevations
Sheet F-10	1010	Heuvelton Development Detail Dam, and Intake Plan and Sections
Sheet F-11	1011	Heuvelton Development Powerhouse Plan, Section and Elevations
Sheet F-12	1012	Eel Weir Development General Plan, Dam, Intake and Spillway Plan, Elevations and Sections
Sheet F-13	1013	Eel Weir Development Powerhouse Plan, Elevations and Sections

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibits A and F described above are approved and made part of this license. The Exhibit G drawings filed as part of the application for license do not conform to the Commission's regulations and are not approved.

(D) This license is subject to the conditions submitted by New York State Department of Environmental Conservation under section 401(a)(1) of the Clean Water Act, 33 U.S.C. §1341(a)(1) (2006), as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the conditions submitted by the Secretary of the Interior under Section 18 of the Federal Power Act, as those conditions are set forth in Appendix B to this order.

(F) This license is also subject to the articles set forth in Form L-3 (Oct. 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting

Navigable Waters of the United States" (*see* 54 F.P.C. 1799 et seq.), as reproduced at the end of this order, including the following additional articles:

Article 201. *Administrative Annual Charges*. The licensee shall pay the United States annual charges, effective the first day of the month in which the license becomes effective, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purposes of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 28,560 kilowatts.

Article 202. *Exhibit F Drawings*. Within 45 days of the effective date of this license, the licensee shall file the approved Exhibit F drawings in aperture card and electronic file formats.

(a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P-2713-1001 through P-2713-1013) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office.

(b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office. Exhibit F drawings must be identified as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113(c) (2012). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-2713-1001, F-1, Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY – black & white raster file
FILE TYPE – Tagged Image File Format (TIFF), CCITT Group 4
RESOLUTION – 300 dpi desired (200 dpi min)
DRAWING SIZE FORMAT – 24" X 36" (min), 28" X 40" (max)
FILE SIZE – less than 1 MB desired

Article 203. *Exhibit G Drawings*. Within 90 days of the effective date of the license, the licensee shall file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all principal project works necessary for the operation and maintenance of the project, including all new recreation facilities required by this license and the Browns Falls impoundment up to the normal maximum water surface elevation of 1,349 feet mean sea level (msl), the Flat Rock impoundment up to the normal maximum water surface elevation of 1,080 feet msl, the South Edwards impoundment up to the normal maximum water surface elevation of 845.2 feet msl, the Oswegatchie impoundment up to the normal maximum water surface elevation of 758.6 feet msl, the Heuvelton impoundment up to the normal maximum water surface elevation of 286.7 feet msl, and the Eel Weir impoundment up to the normal maximum water surface elevation of 272 feet msl. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission's regulations.

Article 204. *Amortization Reserve.* Pursuant to section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee shall maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 205. *Headwater Benefits*. If the licensee's project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater

improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license. The benefits shall be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. *Contract Plans and Specifications.* At least 60 days prior to the start of any construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal to the D2SI-New York Regional Engineer must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-New York Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 302. *Cofferdam and Deep Excavations Construction Drawings.* Before starting construction, the licensee, in consultation with New York Department of Environmental Conservation, shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of cofferdams and deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 303. *Project Modification Resulting From Environmental Requirements*. The planning and design of any permanent or temporary modification which may affect the project works or operations shall be coordinated as early as feasible with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer. This includes those modifications resulting from license environmental requirements.

The licensee shall notify the D2SI-New York Regional Engineer of the proposed modifications at the beginning of the planning and design phase. This schedule is to allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 304. *As-built Drawings.* Within 90 days of completion of construction of the facilities authorized by this license, the licensee shall file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities

as built, including any new permanent trashracks and the new upstream and downstream fish passage facilities at the Heuvelton and Eel Weir developments. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer, the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 401. *Commission Approval, Notification, and Filing of Amendments*.

a) Requirement to File Plans for Commission Approval

Various conditions of this license in the New York State Department of Environmental Conservation (New York DEC) water quality certification (Appendix A) and the U.S. Department of the Interior's (Interior) section 18 prescription (Appendix B) require the licensee to: (1) prepare plans for approval by the New York DEC or Interior and implement specific measures without prior Commission approval, or (2) prepare and file plans for Commission approval, but do not specify a due date for filing. Each such plan shall be submitted to the Commission for approval by the due date listed below. These plans are listed below.

Certification Condition No.	**Interior Section 18 Prescription No.**	**Plan Name**	**Date Due to Commission**
12		Stream Flow and Water Level Monitoring Plan	Within 9 months of the effective date of the license
13		Trashrack Installation Monitoring Plan	At least 12 months prior to installing trashracks or overlays at any development
14	11.9	Heuvelton and Eel Weir Final Fishway Design Plans	At least 18 months prior to construction of the fishways
14		Heuvelton and Eel Weir Final Fishway Effectiveness Testing Plans	At least 6 months prior to implementing the plans
17		Invasive Species	Within 6 months of the effective date of the

Certification Condition No.	Interior Section 18 Prescription No.	Plan Name	Date Due to Commission
		Management Plan	license
26		Soil Erosion and Sediment Control Plan	At least 60 days prior to commencing any ground-disturbing activities

The licensee shall include with each plan filed with the Commission documentation that the licensee developed the plan in consultation with New York DEC and Interior and has received approval from the New York DEC and Interior as appropriate. The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in project operations or facilities, including any changes required by the Commission.

(b) Requirement to Notify the Commission of Emergencies and Other Activities.

Certain conditions of New York DEC's water quality certification in Appendix A require the licensee to notify New York DEC of modifications to project operation for emergencies or other activities and, when possible, receive New York DEC approval prior to modifying project operation for such activities. The Commission shall be notified prior to implementing such modifications, if possible, or in the event of an emergency, as soon as possible but no later than 10 days after each such incident. The conditions that discuss events requiring notification are listed below.

Certification Condition No.	License requirement
6	Notification of Emergencies
8	Unexpected exceedance in impoundment elevation
10	Unexpected reductions in baseflow release
11	Unexpected reductions in bypassed flows
14	Suspensions in fish passage structure operations.
29	Failure to maintain adequate river flows downstream of work sites

(c) Requirement to File Amendment Applications

Certain conditions in Appendix A and certain prescriptions in Appendix B appear to contemplate New York DEC and Interior, respectively, ordering unspecified long-term changes to project operations or facilities based on new information or results of studies or monitoring required by the certification or prescription, but do not appear to require Commission approval for such changes. Such changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license.

Article 402. *Reservation of Authority to Prescribe Fishways*. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 403. *Recreation Management Plan*. Within six months of the effective date of this license, the licensee shall file with the Commission, for approval, a revised Recreation Management Plan (RMP). The plan shall include the measures described in the RMP, filed April 1, 2011, and plans for installing parallel boat slides (wooden or metal) along: (1) the 21-degree upward-sloped, 305-foot-long section of the Flat Rock portage; (2) the 23-degree downward-sloped, 170-foot-long section of the Flat Rock portage; and (3) the 34-degree downward-sloped, 181-foot-long section of the South Edwards portage. The boat slides shall be designed and installed using the standards and designs presented in the National Park Service's Logical Lasting Launches (2004) Chapter X, Portages Around Dams.

Article 404. *Programmatic Agreement and Historic Properties Management Plan*. The licensee shall implement the "Programmatic Agreement (PA) Between the Federal Energy Regulatory Commission and the New York State Office of Parks, Recreation, and Historic Preservation for Managing Historic Properties that may be Affected by a Issuing a License to Erie Boulevard Hydropower, L.P. for the Continued Operation of the Oswegatchie Hydroelectric Project in St. Lawrence County, New York (FERC No. 2713)," executed on January 6, 2012, including but not limited to the Historic Properties Management Plan (HPMP) for the project dated December 2010 (filed December 30, 2010). In the event that the PA is terminated, the licensee shall continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the PA is terminated, the licensee shall obtain approvals from or make notifications to the Commission and the New York SHPO where the HPMP calls upon the Licensee to do so.

Article 405. *Eagle and Osprey Management Plan*. Within six months of

identifying any eagle or osprey nests in or adjacent to the project boundary, the licensee shall file with the Commission, for approval, an eagle and osprey management plan. The plan shall include, but not be limited to, the following measures to avoid the destruction or disturbance of eagle and osprey nests:

(a) a protocol for notifying the New York State Department of Environmental Conservation (New York DEC) and U.S. Fish and Wildlife Service (FWS) if any additional eagle or osprey nests are identified in or adjacent to the project boundary at any time during the license term;

(b) descriptions of methods for surveying for eagle and osprey nests prior to any tree clearing activities within the project boundary;

(c) procedures for consulting with New York DEC and FWS prior to any tree clearing activities if a nest is identified in or adjacent to areas proposed for tree clearing, and

(d) descriptions of any spatial or temporal restrictions for construction and land clearing activities that may occur near identified nests.

The plan shall be developed in consultation with the New York DEC and FWS. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the resource agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. *A Common Loon Nesting Platform Installation and Monitoring Plan.* The Common Loon Nesting Platform Installation and Monitoring Plan, included as Appendix A of the settlement agreement filed on February 18, 2011, is approved and made part of this license. The licensee shall implement the Common Loon Nesting Platform Installation and Monitoring Plan on the effective date of this license.

Article 407. *Browns Falls Bypassed Reach Trout Stocking and Monitoring Plan*. The Browns Falls Bypassed Reach Trout Stocking and Monitoring Plan, included as Appendix B of the settlement agreement filed on February 18, 2011, is approved and made part of this license. The licensee shall implement the Browns Falls Bypassed Reach Trout Stocking and Monitoring Plan on the effective date of this license.

Article 408. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(G) The licensee shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on manners relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(H) This order constitutes final agency action. Any party may file a request for

rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright
Director
Office of Energy Projects

Form L-3

(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MAJOR PROJECT AFFECTING NAVIGABLE WATERS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the

region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall

make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission any direct in the

interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail

to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable

modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of

passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 27. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 28. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

APPENDIX A

New York Department of Environmental Conservation
Water Quality Certification Conditions
Filed October 24, 2012

1. Conformance with Plans: All activities authorized by this permit shall be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application and licensing Settlement.

2. State Not Liable for Damage: The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

3. Precautions Against Contamination of Waters: All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

4. No Interference with Navigation: There shall be no unreasonable interference with navigation by the work herein authorized.

5. State May Require Site Restoration: If any work authorized by this certificate has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the New York State Department of Environmental Conservation (the Department) may with appropriate authority require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

6. Notification Requirements for Emergencies: In addition to the emergency provisions described in the Settlement (see subsections 3.1.2, 3.2.2, 3.3.2, 3.4.2, 3.6.3), the following procedures shall apply to all activities conducted at the project in response to an emergency:

Prior to commencement of emergency activities, the certificate holder shall notify the Department and receive approval in advance of the work commencing. If circumstances require that emergency activities be taken immediately such that prior notice to the Department is not possible, then the Department shall be notified by the certificate holder within 24 hours of commencement of the emergency activities. In either case,

notification shall be by certified mail or other written form of communication, including fax and electronic mail. This notification shall be followed within 24 hours by submission of the following information:

a. a description of the action;
b. location map and plan of the proposed action;
c. reasons why the situation is an emergency.

All notifications, requests for emergency authorizations and information submitted to support such requests shall be sent to the contacts listed in Special Condition 31.

7. Offer of Settlement: This certificate includes and incorporates the Oswegatchie River Hydroelectric Project's Offer of Settlement ("Settlement") dated January 21, 2011, to the extent that the Settlement provides for or requires the certificate holder to comply with New York State water quality standards and the conditions of this certificate.

OPERATING CONDITIONS

8. Project Operations and Impoundment Fluctuations: Upon issuance and acceptance of the new FERC license or by January 1, 2013 (whichever occurs later) the certificate holder shall operate project reservoirs in accordance with the Settlement (see Section 3.1). The following chart summarizes daily impoundment fluctuations under normal operations as agreed to in the Settlement:

Normal Impoundment Fluctuation

Impoundment	Normal Impoundment Fluctuation
Browns Falls	4.0 feet measured in the downward direction from top of crest of spillway (1,347 feet msl) or flashboards (1,349 feet msl) from July 15 through March 14 and 2.0 feet measured in the downward direction from top of crest of spillway or crest control device from March 15 through July 14
Flat Rock	4.0 feet measured in downward direction from top of crest of spillway (1,080 feet msl) from July 15 through March 14 and 2.0 feet measured in downward direction from top of crest of spillway from March 15 through July 14
South Edwards	6.0 feet measured in the downward direction from top of crest of spillway (843.2 feet msl) or flashboards (845.2 feet msl) from July 15 through March 14 and 2.0 feet measured in downward the direction from top of crest of spillway or crest control device from March 15 through July 14
Oswegatchie	0.4 foot measured in downward direction from top of crest of spillway (758.6 feet msl)

Heuvelton	0.5 foot measured in downward direction from the top of the tainter gate crest or equivalent (286.7 feet msl)
Eel Weir	0.5 foot measured in downward direction from top of crest of spillway (272 feet msl)

Alternate impoundment operation plans (including, but not limited to drawdown and refilling rates and procedures) shall be reviewed and receive written approval by the Department prior to being implemented. The certificate holder shall report any unexpected exceedance in impoundment elevation fluctuation beyond those specified in this certificate to the Department within 24 hours of the incident. Emergencies shall be dealt with in accordance with Natural Resource Permit Condition #6 of this certificate.

9. Seasonal Impoundment Fluctuation: In accordance with the Settlement (see section 3.4), by December 31, 2016 the certificate holder shall replace the existing seasonal 2-foot high flashboards associated with the Browns Falls and South Edwards developments with crest control devices (e.g. 2-foot-high rubber dams and/or 2-foot-high flashboards intended to remain in place on a year-round basis). If year-round flashboards are installed, the flashboards shall be designed to fail when the flashboards are overtopped in excess of 2 feet of river flow. Modification or replacement of the existing seasonal flashboards will be scheduled and performed in consultation with the New York DEC, the FWS, and the APA.

10. Base Flows: The certificate holder shall maintain base flows (or inflow to the respective impoundment, whichever is less) from the Project's tailraces in accordance with the Settlement (Section 3.2). The following chart summarizes base flow requirements below for each development as agreed to in the Settlement:

OSWEGATCHIE RIVER HYDROELECTRIC PROJECT BASE FLOWS

Development	Base flow[1,2]
Browns Falls	NA[3]
Flat Rock	160 cfs
South Edwards	160 cfs
Oswegatchie	160 cfs
Heuvelton	275 cfs
Eel Weir	325 cfs

1. Or inflow to the respective impoundment, whichever is less.
2. All base flows shall be established and monitored in accordance with the Stream-Flow and Water-Level Monitoring Plan as described in Section 3.9 of this Offer of Settlement and Condition 12 of this certificate.

3. Given that the Browns Falls Development flows directly into the Flat Rock impoundment, the Parties to the Settlement agree that establishing a base flow for the Browns Falls Development is not necessary.

Any alternate baseflow release plans shall be reviewed and receive written approval by the Department prior to being implemented by the certificate holder. The certificate holder shall report any unexpected reductions in baseflow to the Department within 24 hours of the incident. If inflow into a respective impoundment reduces baseflow beyond the values listed above, the certificate holder will notify the Department within 24 hours of reduction of flow. In addition, the certificate holder will notify the Department within 24 hours of returning the baseflow to the required flows. Emergencies shall be dealt with in accordance with Natural Resource Permit Condition #6 of this certificate.

11. Bypassed Flows: The certificate holder shall maintain bypass flows in accordance with the Settlement (Section 3.3). Upon license issuance the certificate holder shall continue to provide year round bypass flows of 60 cfs in the South Edwards development and 40 cfs to the Oswegatchie development. Changes to the existing bypassed flows at Browns Falls shall commence upon issuance of a new FERC license or by April 1, 2013, whichever occurs later. The following table (as listed in the Settlement) summarizes bypass flow requirements below for each development as agreed to in the Settlement:

OSWEGATCHIE RIVER HYDROELECTRIC PROJECT
BYPASS FLOWS

Development	Bypass Flows[1,2]
Browns Falls	30 cfs
South Edwards	60 cfs[3]
Oswegatchie	40 cfs

1. All bypass flows shall be provided on a year-round basis.
2. All bypass flows shall be established and monitored in accordance with the Stream-Flow and Water-Level Monitoring Plan as described in Section 3.9 of the Offer of Settlement and Condition 12 of this certificate.
3. The flows in the South Edwards bypassed reach shall be provided by an existing minimum flow unit or other means (e.g., pipeline discharge) as determined by the certificate holder.

Alternate bypass flow release plans shall be reviewed and receive written approval by the Department prior to being implemented by the certificate holder. The certificate holder shall report any unexpected reductions in bypass flows to the Department within 24 hours of the incident. In addition the certificate holder will notify the Department within 24 hours of returning the bypass flow to the required flows. Emergencies shall be dealt

with in accordance with Natural Resource Permit Condition #6 of this certificate.

12. Flow and Water Level Monitoring: Within 9 months of date license issuance, the certificate holder shall develop an approvable stream flow and water level monitoring plan (SFWLMP). The SFWLMP shall include gages, monuments, pins, and or equipment to determine head pond elevations, bypass flows, baseflows and a means of independent verification of flows and water levels by Department. Upon receiving the Department's written approval, and no later than 18 months after license issuance, the certificate holder shall install all water level and flow monitoring equipment and verify flows/water levels associated with the monitoring equipment. Additionally, the certificate holder shall continue to fund the USGS gage at Flat Rock, and within 24 months of license issuance, upgrade the gage to provide real time data on the USGS website (http://waterdata.usgs.gov/ny/nwis/current/?type=flow), for the term of the license. The certificate holder may discontinue funding of the Flat Rock USGS gage (USGS gage) granted it provides another means of access to equivalent real-time data to the Department, the US Fish and Wildlife Service (FWS), and the general public. If the certificate holder chooses to discontinue the funding of the USGS gage, it will consult with the Department and FWS on the adequacy of the alternative means of realtime data and obtain the agencies' written approvals before discontinuing funding the USGS gage. Flow and water level monitoring at the Project shall be performed as provided for in the Settlement, (in particular, Section 3.9).

13. Fish Protection: Fish protection provisions (e.g. 1-inch clear-spaced trashracks) shall be provided for as required by with the Settlement (see Section 3.6). The Oswegatchie Development currently has year-round trashracks with 1- inch spacing installed. The certificate holder shall continue to provide and maintain such trashracks as a fish protection measure at the Oswegatchie Development. Additionally, trashrack modifications shall be performed at each of the remaining developments of the Project. These trashrack modifications shall be provided on either year-round or seasonal basis in accordance with the following schedule (as listed in the Settlement):

OSWEGATCHIE RIVER HYDROELECTRIC PROJECT

SCHEDULE FOR MODIFICATION OF TRASHRACKS

Development	Date for Trashrack Modification
Browns Falls	December 31, 2019 through December 31, 2023[1]
Flat Rock	December 31, 2019 through December 31, 2023[1]
South Edwards	December 31, 2019 through December 31, 2023[1]
Heuvelton	December 31, 2017
Eel Weir	December 31, 2013

1. The certificate holder shall modify/replace the trashracks for the Browns Falls, Flat Rock, and South Edwards developments based on a schedule of modifying one set of trashracks every 2 years. Installation of the first trashrack project would be by December 31, 2019 and the last installation no later than December 31, 2023. Therefore, between the three sets of trashracks, one set will be modified/replaced by December 31, 2019, one set will be modified/replaced by December 31, 2021, and the final set will be modified/replaced by December 31, 2023. However, it will be at the certificate holder's discretion as to the order of modifying each of the three developments.

If trashrack modifications are implemented on a seasonal basis, the reduced clear spacing must be provided annually from March 15 through November 30 and performed in accordance with the trashrack installation monitoring plan (TRIMP). The TRIMP shall be developed in consultation with the Department and the FWS at least 12 months prior to seasonal trashrack modifications at any Development (see Settlement Section 3.6).

14. Fish Passage: The certificate holder shall provide fish passage facilities and appropriate channel excavation (modifications) as required by the Settlement (see Section 3.6). The following table summarizes fish passage requirements at each development:

Oswegatchie River Hydroelectric Project
Fish Passage Requirements Summarization[1]

Development	Upstream fish passage	Downstream fish passage	Installation Deadline	Approval of Plans by New York DEC, FWS, FERC Prior to Implementation	Separate Upstream Eel Passage	Fish Passage Operation
Browns Falls	None	None	NA	NA	NA	NA
Flat Rock	None	None	NA	NA	NA	NA
South Edwards	None	None	NA	NA	NA	NA
Oswegatchie	None	Maintain existing 40 cfs flow through a notch in the spillway to provide for downstream fish movement	NA	NA	NA	Year-round
Heuvelton	Fishway for upstream and downstream fish passage designed to move lake sturgeon,	Fishway for upstream and downstream fish passage designed to move lake sturgeon, American eel,	12/31/17	1. Final design plans due to agencies 18 months prior to construction. Agencies shall approve no later than 1 year prior	To be determined based on the results of the effectiveness testing. [2]	Seasonal basis: March 15-November 30

	American eel, and other fish species	and other fish species		to construction 2. Effectiveness testing plan following approval of final design. Agencies shall provide approval no later than 6 months prior to implementing the effectiveness testing plan.		
Eel Weir	Fishway for upstream and downstream fish passage designed to move lake sturgeon, American eel, and other fish species	Fishway for upstream and downstream fish passage designed to move lake sturgeon, American eel, and other fish species	12/31/15	1. Final design plans due to agencies 18 months prior to construction. Agencies shall approve no later than 1 year prior to construction. 2. Effectiveness testing plan following approval of final design. Agencies shall provide approval no later	To be determined based on the results of the effectiveness testing. [2]	Seasonal basis: March 15-November 30

				than 6 months prior to implementing the effectiveness testing plan.		

[1] Although the table summarizes fish passage requirement, Section 3.6 of the Settlement is fully incorporated into this certificate. The certificate holder shall include any requirements dictated in the Settlement regarding planning, constructing and operating the fish passage facilities.

[2] Although the upstream fishway structure will be expected to pass American eel, the certificate holder shall construct a standard eel ladder if the effectiveness testing demonstrates that eels cannot effectively use the structure. Any fishway constructed for the sole purpose of upstream passage of American eel shall be installed no later than one year after an upstream eel passage facility is completed at the downstream Ogdensburg Project (FERC No. 9821), or within one year of the determination (based on the testing) that an eel ladder is needed, whichever is later.

Eel Weir Development

By December 31, 2015, the certificate holder shall construct a fishway for upstream passage and a downstream fish passage structure associated with the Eel Weir Development in order to move lake sturgeon (*Acipenser fulvescens*), American eel (*Anguilla rostrata*), and other fish species upstream and downstream of the development. The certificated holder shall operate the passage structures annually on a seasonal basis from March 15 through November 30. The fish passage final designs will be based on the conceptual designs presented in the license application and shall be developed by the certificate holder in conjunction with the Department and the FWS. The certificate holder shall provide final design plans 18 months prior to construction and the Department will make a final determination on whether to approve the final design plans no later than 1 year prior to construction.

The certificate holder shall perform effectiveness testing of the upstream and downstream passage facilities in accordance with the Fishway Effectiveness Testing Plan (Effectiveness Plan) during the second field season (2017) following construction of the structures. The Effectiveness Plan shall focus primarily on American eel and lake sturgeon and will be developed in conjunction with the Department and the FWS following approval of the final design plans. The Department will make a final determination on whether to give final approval to the Effectiveness Plan at least 6 months prior to implementation of effectiveness testing pursuant to the Effectiveness Plan. Based on the results of the effectiveness testing, the certificate holder may be required to modify structures or operations. Although the upstream fishway structure will be expected to pass American eel, the certificate holder will construct a standard eel ladder if the effectiveness testing demonstrates that eels cannot effectively use the structure. Any fishway constructed for the sole purpose of upstream passage of American eel will be installed no later than one year after an upstream eel passage facility is completed at the downstream Ogdensburg Project (FERC No. 9821), or within one year of the determination (based on the testing) that an eel ladder is needed, whichever is later.

Heuvelton Development

By December 31, 2017, the certificate holder shall construct a fishway for upstream passage and a downstream fish passage structure associated with the Eel Weir Development intended to move lake sturgeon (*Acipenser fulvescens*), American eel (*Anguilla rostrata*), and other fish species upstream and downstream of the development. The certificated holder shall operate the passage structures annually on a seasonal basis from March 15 through November 30. The fish passage final designs will be based on the conceptual designs presented in the license application and shall be developed by the certificate holder in conjunction with the FWS and the Department. The certificate holder shall provide final design plans 18 months prior to construction and the Department will

make a final determination on whether to approve the final design plans no later than 1 year prior to construction.

The certificate holder shall perform effectiveness testing of the upstream and downstream passage facilities in accordance with the Fishway Effectiveness Testing Plan (Effectiveness Plan) during the second field season (2019) following construction of the structures. The Effectiveness Plan shall focus primarily on American eel and lake sturgeon and will be developed in conjunction with the Department and the FWS following approval of the final design plans. The Department will make a final determination on whether to give final approval to the Effectiveness Plan at least 6 months prior to implementation of the effectiveness testing. Based on the results of the effectiveness testing, the certificate holder may be required to modify structures or operations. Although the upstream fishway structure will be expected to pass American eel, the certificate holder will construct a standard eel ladder if the effectiveness testing demonstrates that eels cannot effectively use the structure. Any fishway constructed for the sole purpose of upstream passage of American eel would be installed no later than one year after an upstream eel passage facility is completed at the downstream Ogdensburg Project (FERC No. 9821), or within one year of the determination (based on the testing) that an eel ladder is needed, whichever is later.

At least 6 months prior to commencing the installation of the fish passage structures and performing river channel modifications, the certificate holder shall submit a construction and erosion and sediment control plan (ESCP) to the Department that is consistent with **Conditions #26 and 27** of this water quality certificate. The certificate holder shall obtain the Department's written approval of the ESCP before commencing work.

Alternate methods of operating fish passage facilities or installation of protection measures shall be reviewed and receive written approval from the Department prior to being implemented. Once the fish passage facilities are constructed and operational, the certificate holder shall report any unexpected suspensions in fish passage structure operations to the Department within 24 hours of incident inception. Emergencies shall be dealt with in accordance with Natural Resource Permit Condition #6 of this certificate.

15. <u>Trout Stocking</u>: The certificate holder shall stock trout and perform seasonal continuous water temperature monitoring in the Browns Falls bypassed reach on an annual basis from 2013 through 2017. The certificate holder shall also perform sampling events in 2014, 2016, and 2018 to evaluate the stocking success. The trout stocking and monitoring and reporting shall be carried out as provided for in the Settlement and Trout Stocking and Monitoring Plan (see Section 3.7 and Appendix B of the Settlement). A final data package including data from the three sampling events, summary of the five stocking events, and all water quality data (including continuous temperature data) shall be submitted to the Department within 120 days of the completion of the 2018 sampling event.

16. Public Access and Recreation: Public access and recreational opportunities shall be provided for pursuant to the Settlement, (see Section 3.8). Within 6 months of license issuance and acceptance, the certificate holder shall submit to the Department for its review and approval a Recreation Management Plan (RMP) which is consistent with the Settlement. Upon the Department's approval of the RMP, it will become part of this certificate. All recreational enhancements contained in the approved RMP shall be complete within 36 months of license issuance and acceptance.
In addition to the recreational enhancements set forth in the RMP, within five years of license issuance the certificate holder shall develop a 40 feet deep by 100 feet long gravel parking area located on property for which the Department has acquired easement rights (located along Sanford Road adjacent to Browns Falls Road near the Little River) (see Settlement section 4.1). The New York DEC will provide appropriate signage for the parking area. Given the location of the parking area in relation to the established Project boundary, this parking area will not be considered a portion of the FERC Project nor maintained by the certificate holder following initial development.

17. Invasive Species Management: As provided in the Settlement (see Section 2.14), the certificate holder shall submit an Invasive Species Management Plan (ISMP) to the Department for review and approval. The certificate holder shall submit the ISMP to the Department within 6 months of license issuance and acceptance for its review and written approval. The ISMP shall include provisions to prevent, monitor and report the introduction and spread of both aquatic and terrestrial invasive species that may be introduced or spread as a result of activities authorized under project operation, maintenance and construction. Upon the Department's approval of the ISMP it shall be incorporated into this certificate.

18. Loon Nesting Rafts: In accordance with the Settlement (see section 3.5), the certificate holder shall implement the Common Loon Nesting Platform Plan (CLNPP) (see Settlement Appendix A). The CLNPP shall be implemented upon issuance the FERC license or by May 1, 2013, whichever occurs first. The CLNPP includes details for the seasonal deployment and monitoring of loon nesting platforms on the Browns Falls, Flat Rock, South Edwards, and Oswegatchie impoundments. The platforms will be deployed and monitored starting in 2013 through 2017 as indicated in the plan. If during the 5-year monitoring period, loons use the deployed rafts for nesting, the certificate holder shall continue the seasonal deployment of the nesting rafts in accordance with the CLNPP.

19. State Listed Species

The following list is set forth in section 2.12 of the Settlement and comprises the New York State-listed threatened and endangered species, and species of special concern, identified by Erie Boulevard within the project area:

Golden eagle (*Aquila chrysaetos*) - Endangered
Lake sturgeon (*Acipenser fulvescens*) - Threatened
Eastern sand darter (*Ammocrypta pellucida*) - Threatened
Mooneye (*Hiodon tergisus)* - Threatened
Bald eagle (*Haliaeetus leucocephalus*) - Threatened
Common loon (*Gavia immer*) - Special Concern
Osprey (*Pandion haliaetus*) – Special Concern

The best usages of the waters of the Oswegatchie River, in which the Oswegatchie project is located and operates, includes the propagation and survival of fish, shellfish and wildlife (6 NYCRR Sections 701.7 and 701.8). The propagation and survival of the above-listed threatened and endangered species, and species of special concern, is directly related to maintaining compliance with these best usages. Upon identification of any additional State-listed species during operation, maintenance, or construction activities, the certificate holder shall notify the New York DEC in an appropriate and timely manner pursuant to the Environmental Conservation Law and regulations pertaining to state listed species. In addition, prior to any construction or major maintenance activities that require consultation with the New York DEC, the certificate holder will consult with the New York DEC regarding the best management practices to be performed to avoid potential impacts to State listed species.

PROJECT MAINTENANCE AND CONSTRUCTION

20. NOTE: All matters pertaining to "Project Maintenance and Construction" work affecting water quality, compliance with water quality standards, and this certificate shall be addressed to:

Regional Natural Resources Supervisor
New York State Department of Environmental Conservation
317 Washington Street
Watertown, NY 13601

21. In-Water Work Restriction: In-water maintenance activities (including but not limited to dredging, cofferdam construction or removal, etc.) involving the potential disturbance of the bed and/or banks of the Oswegatchie River, **shall not** occur from **March 15 to July 15**, in order to minimize impacts to fish spawning activities.

22. Impoundment Drawdowns/dewatering activities: Other than as provided for in Section 3.1 of the Settlement (including Table 3-1), impoundment fluctuations **shall not** occur from **October 1 to July 15**, to protect hibernating amphibians and reptiles and fish spawning activities in the impoundment. Prior to any drawdown or dewatering activities, the certificate holder shall consult with and receive the Department's written approval

regarding drawdown timing and refill rates. Impoundment drawdowns or dewatering activities shall not occur until the certificate holder has given proper prior notification to the Department as per **Condition #31**.

Impoundment drawdown/refill operations shall occur at a gradual rate (pursuant to the foresaid consultation and approval) in order not to strand aquatic species. The certificate holder shall monitor areas affected by the drawdown/refill operations or dewatering activities and return any stranded fish back to adequate water conditions.

23. Maintenance Dredging: The certificate holder shall install and maintain appropriate turbidity control structures while conducting any maintenance dredging activities in associated with the Project. Refer to **Condition #21** for in-water work restrictions.

Appropriate turbidity control structures (such as, but not limited to filter fabric (turbidity) curtains weighted across the bottom and suspended at the top by floats) shall be positioned to enclose the work site before commencing dredging. The containment method shall remain in place and in functional condition during all phases of dredging operations and remain in place until after dredging has terminated and turbidity inside the containment area no longer exceeds ambient levels. During any portion of the dredging operation or prior to containment removal, if noticeable turbidity occurs outside the containment area, work shall cease until the containment method is repaired or reinforced and is functioning properly.

24. Sediment Analysis and Disposal: The certificate holder shall sample any sediment which will be disturbed by the work or removed from the projects waters and test them for contaminants. Sampling and testing shall be accomplished according to a protocol that is consistent with the Department's Technical and Operations Guidance 5.1.9 or applicable guidelines/regulations. The sampling protocol shall include a disposal protocol based on analytical sediment sampling results and current applicable regulations/guidelines. The sampling results are required to be submitted to the Department at least 60 days prior to the commencement of dredging or work that will disturb sediment in the project waters. Dredging or other excavation cannot commence until the certificate holder also secures the Department's approval for the disposal or interim holding locations for any sediments to be removed from the project waters.

25. Placement of cofferdams, construction of temporary access roads or ramps, or other temporary structures which encroach upon the bed or banks of the Oswegatchie River or project reservoir: Before any cofferdam installation or other work commences which encroaches on the bed or banks of the Oswegatchie River, the proposed design of all such structures as they pertain to water quality, to compliance with water quality standards, and to this certificate **shall** be approved, in writing, by the Department prior to installation. The Department will conduct its review of the proposed

design within 60 days after receipt of all materials it determines are necessary for completing such review.

26. Erosion and Sediment Control Plan: At least 60 days prior to commencing any major construction or maintenance activities within the project boundary which could adversely affect water quality, the certificate holder shall submit to the Department for review and approval, an erosion and sediment control plan (the ESCP). The ESCP and work proposed therein shall meet the erosion and sediment control goals and performance standards set forth in **Condition #27**. Work shall not commence until the certificate holder receives the Department's written approval of the ESCP.

27. Erosion and Sediment Control Goals and Performance Standards: At a minimum, the certificate holder shall ensure that the ESCP provides for implementing the following erosion and sediment/contaminant control measures, are adhered to during operation, construction and/or maintenance that may result in sediments/contaminants entering any wetland or waterbody:

a) All erosion and sediment controls measures shall be installed prior to work. Site preparation work shall not be undertaken until all required erosion control measures have been installed and are functioning properly. Siltation prevention measures (e.g. silt fencing, sediment traps or settling basins) shall be installed and maintained during the project to prevent movement of silt and turbid waters from the project site and into any watercourse, stream, water body or wetland.

b) Effective erosion control measures shall be installed on the downslope of all disturbed areas (including, but not limited to construction/maintenance equipment staging areas, driveways, roads ramps or other areas where runoff would reach a waterbody) to prevent eroded material from entering any waterbody or wetland. Erosion control measures shall be maintained in a fully functional condition until the disturbed areas are fully stabilized. These erosion control measures are to be installed before commencing any other involving soil disturbance, equipment staging or major construction/maintenance activities commence.

c) Isolate in-stream work from the flow of water and prevent discolored (turbid) discharges and sediments caused by excavation, dewatering and construction/maintenance activities from entering any waterbody or wetland.

d) Exclude the use of heavy construction equipment below the mean high water line until the work area is protected by an approved structure and dewatered.

e) Stabilize any disturbed banks by grading to an appropriate slope, followed by armoring or vegetating as appropriate, to prevent erosion and sedimentation into any waterbody or wetland.

f) Minimize soil disturbance, provide appropriate grading and temporary and permanent re-vegetation of stockpiles and other disturbed areas to minimize erosion/ sedimentation potential.

g) All areas of soil disturbance resulting from project operation, construction or maintenance shall be seeded with an appropriate perennial grass, and mulched with straw immediately upon completion of the activity. Mulch shall be maintained until suitable vegetation cover is established to the Department's satisfaction.

h) Protect all waters from contamination by deleterious materials such as wet concrete, gasoline, solvents, epoxy resins or other materials used in the construction, maintenance and operation of the project.

i) Ensure the immediate and complete removal of all dredged and excavated material, debris or excess materials from operation, construction, or maintenance from the bed and banks of all water areas to a Department approved upland disposal site.

j) Ensure that all temporary fill and other materials placed in the waters of the river are completely removed, immediately upon completion of construction, unless otherwise directed by the Department.

28. Turbidity Monitoring: During activities related to maintenance or construction in or near the Oswegatchie River or project reservoir, the certificate holder will monitor the waters of the river at a point immediately upstream of project activities and at a second point no more than 100 feet downstream from any discharge point or other potential source of turbidity. The certificate holder specifically agrees that if, at any time, turbidity measurements from the downstream locations exceed the measurements from the locations upstream of the work areas, all related construction on the project will cease until the source of the turbidity is discovered and the cause is corrected. The certificate holder is required to report any events where turbidity measurements for the downstream locations exceed the measurements from the upstream locations to the Department's Region 6 Natural Resources contact person (as specified in **Condition #31**), within 24 hours of the incident.

29. Maintenance of River Flows: During all periods of maintenance and/or construction activity, the certificate holder shall continuously maintain adequate flows immediately downstream of the work site consistent with the provisions of this certificate. If adequate river flows are not maintained, the certificate holder is required to notify the Department's Natural Resources Supervisor in the Region 6 office in Watertown, within 24 hours of the incident.

30. Stormwater SPDES: All activities at the project requiring the disturbance of greater than one acre shall obtain coverage under the SPDES General Permit for Stormwater Discharges from Construction Activities (GP-02-01) (see http://www.dec.ny.gov/docs/water_pdf/gpsconspmt10.pdf).

31. Notifications and Department Authorizations: The Regional Natural Resources Supervisor, or other appointed Natural Resources staff shall be notified in writing at least 60 days prior to commencing any project maintenance or construction work pertaining to water quality, compliance with water quality standards or to this certificate. Additionally, the certificate holder shall contact the assigned Region 6 Natural Resources staff within 7 days prior to the activity commencing (including but not limited to all drawdowns, flashboard replacements requiring drawdowns or disruptions of flows, and all construction or maintenance activities pertaining to water quality, compliance with water quality standards or this certificate) and within 7 days after it is finished (start notification/end notification). The Department will provide the certificate holder with the Region 6 Natural Resources contact information.

The Department reserves the authority to temporarily prohibit the project operator from commencing impoundment releases or drawdowns, or conducting in-water maintenance work (including dredging) due to the Department's determination that such actions will cause the project or facility to be out of compliance with applicable water quality standards or the water quality certificate issued for the hydropower license. The project operator shall contact the Department Natural Resources staff contact person as soon as the project operator finds that water quality conditions permit the release, drawdown or in-water work to be conducted without being out of compliance with water quality standards or this certificate. The Department Natural Resources staff person will then advise the project operator if conditions permit commencing releases or drawdowns.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. Water Quality Certification The New York State Department of Environmental Conservation (“Department” or “New York DEC”) hereby certifies:

- the Department has reviewed the certificate holder's Application for Federal Hydroelectric License (hereafter referred to as "the Application") and all other available pertinent information, including the **Settlement**;

- the project will comply with Sections 301, 302, 303, 306 and 307 of the Federal Water Pollution Control Act as amended and as implemented by the limitations, standards and criteria of the state statutory and regulatory requirements set forth in 6NYCRR Section 608.9(a); and

- the project will comply with applicable New York State effluent

limitations, water quality standards and thermal discharge criteria set forth in 6NYCRR Parts 700-706.

This Water Quality Certification is issued pursuant to Section 401 of the Federal Water Pollution Control Act (33 USC 1341).

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by the Department: The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the Certificate Holder is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The certificate holder shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this certification, including the Settlement and management plans, as well as the FERC license and all pertinent maps, drawings and special conditions shall be available for inspection by Department staff at all times during such inspections at the project site or facility. Failure to produce a copy of the certification upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations: Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications for Permit Renewals or Modifications: The certificate holder shall submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application shall include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department shall be in writing.

4. Department Contacts: All contacts with the concerning this certificate, including submission of the information required by the above Natural Resource Permit Conditions and all applications for permit modification or renewal are to be submitted to:

Regional Permit Administrator
New York State Department of Environmental Conservation
317 Washington Street

Watertown, NY 13601

5. Permit Modifications, Suspensions and Revocations by the Department: The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the certificate holder to comply with any terms or conditions of the certificate;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing certificate;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfers: Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER CERTIFICATE HOLDER OBLIGATIONS

Item A: Certificate Holder Accepts Legal Responsibility and Agrees to Indemnification

The certificate holder expressly agrees to indemnify and hold harmless the DEC, its representatives, employees, and agents for all claims, suits, actions, and damages, to the extent attributable to the certificate holder's acts or omissions in connection with the certificate holder's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Certificate Holder's Contractors to Comply with Permit

The certificate holder is responsible for informing its independent contractors,

employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the certificate holder's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the certificate holder.

Item C: Certificate Holder Responsible for Obtaining Other Required Permits
The certificate holder is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the certificate holder any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

APPENDIX B

U.S. Department of the Interior
U.S. Fish and Wildlife Service
Section 18 Fishway Prescriptions
Filed June 16, 2011

11. PRELIMINARY PRESCRIPTION FOR FISHWAYS

Pursuant to Section 18 of the Federal Power Act, as amended, the Secretary of the Department of the Interior, as delegated to the Service, proposes to exercise his authority to prescribe the construction, operation, and maintenance of such fishways as deemed necessary, subject to the procedural provisions contained above.

The Service's Preliminary Prescription for Fishways reflects a number of issues and concerns related to fish restoration and passage that have been raised by the applicant, Commission staff, State resource agencies, and other parties involved in these proceedings.

Fishways shall be constructed, operated, and maintained to provide safe, timely, and effective passage for lake sturgeon, American eel, and other designated resident riverine fish species at the Licensee's expense.

To ensure the immediate and timely contribution of the fishways to the ongoing and future fish enhancement programs in the Oswegatchie River, the following are included and shall be incorporated by the Licensee to ensure the effectiveness of the fishways pursuant to Section 1701(b) of the 1992 National Energy Policy Act (P.L. 102-486, Title XVII, 106 Stat.3008).

11.1 Design Populations

11.1.1 Lake Sturgeon

No design population is available for lake sturgeon. However, the prescribed upstream and downstream fish passage systems should be capable of handling any anticipated movement by these species in addition to any other species that may use the fishways.

11.1.2 American Eel

While the Service does not have a precise estimate of the numbers of eels that would be expected to use fish passage facilities at the Project, such passage would enhance the eel stocks and help achieve overall management goals. Although upstream passage needs for eels differ from those of lake sturgeon and other riverine species, the Service believes

rock ramps or vertical slot fishways as prescribed herein should effectively pass American eel, based on recent testing at the St. Ours Dam on the Richelieu River in Quebec (P. Dumont, MNRQ, Pers. Comm.). However, should effectiveness testing discover that the fishways constructed under this prescription fail to effectively pass American eel, the Licensee shall, after consultation with, and approval by, the New York DEC and the Service, install traditional eel ladders at the appropriate locations at Eel Weir and/or Heuvelton, as necessary.

11.1.3 Other Species

There are no design populations for other fish species expected to utilize the fishways. However, the prescribed upstream and downstream fish passage systems should be capable of handling any anticipated movement by any species that may use the fishways.

11.2 Operational Flows

Upstream and downstream fishways shall be operated during the designated operational period (currently March 15 through November 30) at all times and under all river flows up to the maximum capacity of the fishways (Settlement).[1]

11.3 Scheduling

11.3.1 Construction Schedule

The timely installation of the prescribed fishway structures, facilities, or devices is a measure directly related to those structures, facilities, or devices and is necessary to ensure the effectiveness of such structures, facilities, or devices. Therefore, the Service's Prescription includes the express requirement that the Licensee (1) notify, and (2) obtain approval from, the Service for any extensions of time to comply with the provisions included in the Service's Prescriptions for Fishways. The installation of the fishway structures and other measures should comply with the following schedule (Erie 2011, Section 3.6):

Structure/Measure	Implementation Deadline
Eel Weir	
Fish Protection	December 31, 2013
Downstream Passage Facility	December 31, 2015

[1] The maximum hydraulic capacity under which each fishway can operate will be determined during the final design phase.

Upstream Passage Facility	December 31, 2015
Fishway Effectiveness Testing	December 31, 2017
Heuvelton	
Fish Protection	December 31, 2017
Downstream Passage Facility	December 31, 2017
Upstream Passage Facility	December 31, 2017
Fishway Effectiveness Testing	December 31, 2019

11.3.2 Operational Schedule

Regarding the timing of seasonal fishway operations, fishways shall be maintained and operated, at the Licensee's expense, to maximize fish passage effectiveness throughout the fish passage season for lake sturgeon, American eel, and resident riverine fish species. The upstream and downstream passage facilities will initially be operated from March 15 through November 30 of each year (Settlement Section 3.6). During the term of the license, the Service, in consultation with the New York DEC and the Licensee, may modify migration windows for specific fishway facilities based on monitoring data or other new information that becomes available.

11.4 Operational Procedures

The Licensee shall keep the fishways in proper order and shall keep fishway areas clear of trash, logs, and material that would hinder passage. Anticipated maintenance shall be performed sufficiently before a migratory period such that fishways can be tested and inspected, and will operate effectively prior to and during the migratory periods. The Licensee shall develop a Fishery Facilities Operation and Maintenance Plan (FFOMP), in consultation with the Service and the New York DEC, to document regular maintenance activities and emergency procedures. The FFOMP will include general schedules and procedures for the following:

- Routine maintenance and operation;
- Monitoring and reporting on the operation of each fish passage facility;
- Annual start-up and shutdown; and,
- Emergencies and Project outages affecting fishway operations.

Prior to the commencement of construction activities for the fish passage facilities, the FFOMP will be submitted to the Service and the New York DEC for review and preliminary approval in conjunction with the construction plans and specifications. The Service and the New York DEC will review the plan and provide comments to the Licensee within 60 days. The Service and the New York DEC will have preliminary approval of the FFOMP prior to the Licensee filing the FFOMP with the Commission for final approval.

11.5 Effectiveness Testing

The Licensee shall develop plans for, and conduct, fishway effectiveness evaluations in consultation with the Service and the New York DEC on all prescribed fishways. The Fishway Effectiveness Testing Plan (FETP) will be designed in consultation with the Service and the New York DEC and submitted to them for preliminary approval prior to filing the FETP with the Commission (Settlement Section 3.6). The FETP will be developed and approved immediately following approval of the final fishway design plans. The Service and the New York DEC will respond to the Licensee with comments on the FETP within 30 days of receipt of the proposed FETP. The FETP will be filed with the Commission for final approval (Settlement Section 3.6).

11.5.1 Effectiveness Testing of Fish Exclusion and Passage Facilities

The Licensee will conduct studies to assess the effectiveness of the fish exclusion and passage facilities and confirm that hydraulic conditions are resulting in successful passage. These studies will be geared primarily towards lake sturgeon and American eel. The effectiveness testing details will be developed after the final fishway designs have been approved. Among the types of testing that should be considered are velocity measurements in the vicinity of the trashracks, fishway entrances, and fishway exits, the use of radio tags and/or Passive Integrated Transponder tags, possibly supplemented by image capture technology to identify fish species movements and to assess conditions for exclusion from the turbine, passage through the bypasses, and upstream passage. Collection chambers, if designed into the fishways, will allow for examination of fish that have passed through the facilities to evaluate the occurrence of injuries. If radio tags are used, tracking antennae will be placed above and below both the Eel Weir and Heuvelton Dams. A certified fisheries biologist should be responsible for performing all tagging and tracking activities.

For each study, a control study should be conducted prior to the release to determine handling mortality. The control study should include no fewer than 10% of the test population. Additional effectiveness testing may be conducted utilizing video and visual monitoring. If such a system is used, an imager will detect the size, shape, number, and direction of passing fish. Fish passing through the system will be identified to species either manually and/or through video imaging.

Downstream passage monitoring should also include trashrack velocity measurements to ensure approach velocities are maintained according to the design criteria. Specific details for monitoring of the approach velocities can be developed in the FETP.

The Licensee should distribute annual reports of the monitoring results to the Service and the New York DEC, which should be followed by a meeting of the Service, the New York DEC, and the Licensee to be held prior to March 1 of the following year. The

purpose of the meeting is to discuss and evaluate monitoring results to determine if any modifications are needed. This may include modifications to the study design, sample sizes, or timing if additional testing is needed, as well as modifications to the passage facilities that may be determined to be necessary.

11.5.2 Modifications to Fish Protection and Passage Facilities Based on Results of Effectiveness Testing

The Licensee shall modify the fish protection and passage facilities to improve their effectiveness if deemed necessary by the Service in consultation with the New York DEC and the Licensee based on the results of the effectiveness testing. Such modifications may include, but are not limited to, attraction and conveyance flow velocities and volumes, structures directing conveyance flows, passage pipes, plunge pool design, ladder slope, entrance locations and design, and exit sluices. The Licensee should present a modification plan to the Service and the New York DEC for preliminary approval at least 60 days prior to submitting it to the Commission for final approval.

11.6 Inspection

The Licensee shall provide personnel of the Service, and other Service-designated representatives, access to the Project site and to pertinent Project records for the purpose of inspecting the fishways to determine compliance with the Fishway Prescription.

11.7 Hydraulic Modeling

Hydraulic modeling or computational fluid dynamics (CFD) modeling of all flow fields shall be undertaken in consultation with the Service and the New York DEC for all fishways during the fishway design phase.

11.8 Consultation

The Licensee shall develop in consultation with, and submit for approval by, the Service all functional and final design plans, construction schedules, and any hydraulic model or CFD studies for the fishways or modifications to the fishways described herein.

11.9 Fish Passage Facilities

As described in the Settlement Agreement, the Licensee shall implement the final design plans approved by the Service for the fish passage systems. As indicated above, the Licensee shall submit its final design plans to the Service and the New York DEC for review and approval.

APPENDIX C

Erie Boulevard Hydropower
Settlement Agreement Sections 2 and 3
Filed February 18, 2011

2.12 State-Listed Species

Through consultation with the New York State Department of Environmental Conservation (New York DEC) of December 10, 2010, and identified during field studies associated with project relicensing, the following state listed endangered, threatened or species of special concern (as identified in §182.2(g, h, i) of 6NYCRR Part 182) have been identified in and adjacent to the Project areas:

- Golden eagle (*Aquila chrysaetos*) - Endangered
- Lake sturgeon (*Acipenser fulvescens*) - Threatened
- Eastern sand darter (*Ammocrypta pellucida*) - Threatened
- Mooneye (*Hiodon tergisus)* - Threatened
- Bald eagle (*Haliaeetus leucocephalus*) - Threatened
- Common loon (*Gavia immer*) - Special Concern
- Osprey (*Pandion haliaetus*) – Special Concern

Because of the presence of these New York State-listed species and the potential for additional species to be present in the Project area during the term of the new license, the Licensee shall, upon identification of any additional State-listed species during operation, maintenance, or construction activities, notify the New York DEC in an appropriate and timely manner pursuant to the Environmental Conservation Law and regulations pertaining to state-listed species. In addition, prior to any construction or major maintenance activities that require consultation with the New York DEC, the Licensee will consult with the New York DEC regarding the best management practices to be performed to avoid potential impacts to State-listed species.

2.13 Eagle and Osprey Management

Prior to any tree clearing activities within the project boundary, the Licensee agrees to survey the area for eagle and osprey nests. If a nest is identified, then the Licensee will consult with the New York DEC and the U.S. Fish and Wildlife Service

(FWS) prior to any clearing activities. In addition, if during the term of this license an eagle or osprey nest is identified in or adjacent to the project boundary, the Licensee will notify the New York DEC and the FWS. If such a nest is identified, the Licensee will develop and maintain an Eagle and Osprey Management Plan, which will define spatial and temporal limits of construction and land clearing activities.

2.14 Invasive Species Management

The Parties agree that the Licensee shall develop an Invasive Species Management Plan and shall submit the plan to the New York DEC and the FWS for review and approval. The plan shall include measures to prevent the introduction and/or spread of invasive species during construction, maintenance, and operational activities, as defined by the New York DEC Office of Invasive Species Coordination. In addition, the Licensee shall install and maintain signage to be provided by the New York DEC regarding invasive species.

2.15 Fish Entrainment and Mortality

Except for the measures outlined in Section 3.6 of this Offer of Settlement, the Parties agree that, unless prescribed by DOI under Section 18 of the FPA, during the term of the license they will not request that the Commission order the Licensee to: (1) provide any additional upstream or downstream fish passage or movement structures; (2) test the effectiveness of any, or all, components of the fish movement or protection measures and/or structures; (3) make qualitative or quantitative determinations of fish entrainment and/or mortality; (4) provide compensation for any fish entrainment or mortality associated with the operation of the facility in accordance with this Offer of Settlement; (5) increase the level of protection or movement as agreed to by this Settlement Agreement for the term of the license, and/or (6) perform any activities associated with, or be responsible for any potential adverse effects (e.g., the distribution of invasive species or diseased fish) resulting from the operation of the fish passage structures defined in Section 3.6.

3.1 Daily Impoundment Fluctuation as Part of Normal Operations

3.1.1 General Agreements

Upon issuance and acceptance of a new FERC license or by January 1, 2013, whichever occurs later, the Licensee shall limit daily impoundment fluctuations as part of normal operations, as specified in Table 3-1.

TABLE 3-1
OSWEGATCHIE RIVER HYDROELECTRIC PROJECT
NORMAL IMPOUNDMENT FLUCTUATION

Impoundment	Normal Impoundment Fluctuation
Browns Falls	4.0 feet measured in the downward direction from top of crest of spillway (1,347 feet msl) or flashboards (1,349 feet msl) from July 15 through March 14 and 2.0 feet measured in the downward direction from top of crest of spillway or crest control device from March 15 through July 14
Flat Rock	4.0 feet measured in the downward direction from top of crest of spillway (1,080 feet msl) from July 15 through March 14 and 2.0 feet measured in the downward direction from top of crest of spillway from March 15 through July 14
South Edwards	6.0 feet measured in the downward direction from top of crest of spillway (843.2 feet msl) or flashboards (845.2 feet msl) from July 15 through March 14 and 2.0 feet measured in downward the direction from top of crest of spillway or crest control device from March 15 through July 14
Oswegatchie	0.4 foot measured in the downward direction from top of crest of spillway (758.6 feet msl)
Heuvelton	0.5 foot measured in the downward direction from the top of the tainter gate crest or equivalent (287.6 feet msl)
Eel Weir	0.5 foot measured in the downward direction from top of crest of spillway (272 feet msl)

Normal impoundment fluctuations specified in Table 3-1 shall be defined as the maximum drawdown limit associated with the operating range necessary to achieve normal operation. The normal impoundment fluctuation limit shall be measured in the downward direction from the crest of dam, tainter gate, flashboards, or rubber dam, as appropriate, as presented in Table 3-1. Water surface elevations higher than the elevation from which any downward fluctuation is measured are considered outside of the normal impoundment fluctuation zone, and variations of such elevations are not considered as a utilization of the normal impoundment fluctuation.

3.1.2 Emergency Exceptions

Impoundment fluctuation limitations may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, and for short periods upon prior mutual agreement between the Licensee and the New York DEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC, the New York DEC, and the FWS as soon as possible, but no later than (10) business

days after each such incident.

3.1.3 Significant Hydrologic Conditions

In addition, beyond the conditions stated above, based on consultation with and written approval from the New York DEC and the FWS, the Licensee may increase the drawdown allowance on a case-by-case basis to help account for significant hydrological conditions (e.g., rain or snow-melt events). Any such additional allowances would be considered on a case-by-case basis and would be initiated by a request made by the Licensee at least five business days in advance of the proposed drawdown, or soon as the Licensee foresees the need to modify the fluctuation limitations. If granted by the New York DEC and the FWS, any additional drawdown allowances to account for significant hydrological conditions would be performed in accordance with an agreement between the New York DEC, the FWS, and the Licensee specific to the hydrological condition to be addressed by the Licensee's request.

3.2 Base Flows

3.2.1 General Agreements

As presented in Table 3-2, consistent with the existing license requirements, the Licensee shall continue to maintain the following base flows (or inflow to the respective impoundment, whichever is less) from the Project's tailraces. If, due to limited inflow into a respective impoundment, the Licensee reduces baseflow beyond the values presented in Table 3-2, the Licensee will notify the New York DEC within 24 hours of reduction of flow. In addition, within 24 hours of returning the baseflow to the established level, the Licensee will notify the New York DEC.

TABLE 3-2
OSWEGATCHIE RIVER HYDROELECTRIC PROJECT BASE FLOWS

Development	Base flow[1,2]
Browns Falls	NA[3]
Flat Rock	160 cfs
South Edwards	160 cfs
Oswegatchie	160 cfs
Heuvelton	275 cfs
Eel Weir	325 cfs

1. Or inflow to the respective impoundment, whichever is less.
2. All base flows shall be established and monitored in accordance with the Stream-Flow and Water-Level

Monitoring Plan as described in Section 3.9 of this Offer of Settlement.

3. Given that the Browns Falls Development flows directly into the Flat Rock impoundment, the Parties agree that establishing a base flow for the Browns Falls Development is not necessary.

3.2.2 Emergency Exceptions

The requirements of this base flow commitment may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee and for limited periods upon prior mutual agreement between the Licensee, the FWS, and the New York DEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC, the New York DEC, and the FWS as soon as possible, but no later than (10) business days after each such incident.

3.3 Bypass Flows

3.3.1 General Agreements

As presented in Table 3-3, the Licensee shall maintain the following bypass flows (or inflow to the respective impoundment, whichever is less) in the Project's bypassed reaches. Consistent with the existing license requirements, the Licensee shall continue to provide year round bypassed flows of 60-cfs and 40-cfs in the South Edwards and Oswegatchie bypassed reaches, respectively. The newly established 30-cfs, year-round flow in the Browns Falls bypassed reach will commence upon issuance and acceptance of a new FERC license or by April 1, 2013, whichever occurs later.

TABLE 3-3
OSWEGATCHIE RIVER HYDROELECTRIC PROJECT
BYPASS FLOWS

Development	Bypass Flows[1,2]
Browns Falls	30 cfs
South Edwards	60 cfs[3]
Oswegatchie	40 cfs

1. All bypass flows shall be provided on a year-round basis.
2. All bypass flows shall be established and monitored in accordance with the Stream-Flow and Water-Level Monitoring Plan as described in Section 3.9 of this Offer of

Settlement.

3. The flows in the South Edwards bypassed reach shall be provided by an existing minimum flow unit or other means (e.g., pipeline discharge) as determined by the Licensee.

3.3.2 Emergency Exceptions

The requirements of this bypass flow commitment may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, and for limited periods upon prior mutual agreement between the Licensee, the FWS, and the New York DEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC, the New York DEC, and the FWS as soon as possible, but no later than (10) business days after each such incident.

3.4 Seasonal Impoundment Fluctuation

3.4.1 General Agreements

By December 31, 2016, the Licensee will replace the existing seasonal 2-foot-high flashboards associated with the Browns Falls and South Edwards developments with crest control devices (e.g., 2-foot-high rubber dams and/or 2-foot-high flashboards intended to remain in place on a year-round basis) to eliminate routine seasonal fluctuation. If installed, year-round flashboards will be designed to fail when overtopped in excess of 2 feet of river flow. The scheduling of the modification or replacement of the existing seasonal flashboards will be performed in consultation with the New York DEC, the FWS, and the Adirondak Park Agency (APA).

3.4.2 Emergency Exceptions

Seasonal impoundment fluctuation limitations may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, and for limited periods upon prior mutual agreement between the Licensee, the FWS, and the New York DEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC, the New York DEC, and the FWS as soon as possible, but no later than (10) business days after each such incident.

3.5 Loon Nesting Rafts

3.5.1 General Agreements

Upon issuance and acceptance of a new FERC license or by May 1, 2013, whichever occurs later, the Licensee will implement the Common Loon Nesting Platform Installation and Monitoring Plan (see Appendix A) developed in consultation with the New York DEC, the FWS, APA, and the Biodiversity Research Institute. The plan includes details for the deployment and monitoring of loon nesting platforms to be deployed seasonally on the Browns Falls, Flat Rock, South Edwards, and Oswegatchie impoundments. The platforms will be deployed and monitored as indicated in the plan. If during the 5-year period, loons use the deployed rafts for nesting, the Licensee will continue the seasonal deployment of the nesting rafts in accordance with the plan.

3.6 Fish Protection and Passage

3.6.1 General Agreements

3.6.1.1 Fish Protection

With the exception of the Oswegatchie Development, which has year-round trashracks with 1-inch clear spacing installed, the Licensee will modify the existing trashracks associated with each development to provide trashracks with 1-inch clear spacing on a year-round or seasonal basis. The Licensee will determine if the modification to provide the reduced clear spacing will be on a year-round basis or on a seasonal basis in accordance with the schedule presented in Table 3-4. If performed on a seasonal basis, the reduced clear spacing must be provided annually from March 15 through November 30 and performed in accordance with the trashrack installation monitoring plan to be developed in consultation with the New York DEC and the FWS. This plan will include a reporting mechanism for the Licensee to notify the agencies when the seasonal trashrack installation is completed each year. The plan will include procedures to be followed if the installation is delayed by weather conditions or other factors. The plan will also include criteria to determine whether the seasonal installation is successful or whether the Licensee must revert to permanent installation. Development of the plan would occur at least 12 months prior to the installation of seasonal trashracks at any development.

TABLE 3-4
OSWEGATCHIE RIVER HYDROELECTRIC PROJECT
SCHEDULE FOR MODIFICATION OF TRASHRACKS

Development	Date for Trashrack Modification
Browns Falls	December 31, 2019 through December 31, 2023[1]
Flat Rock	December 31, 2019 through December 31, 2023[1]
South Edwards	December 31, 2019 through December 31, 2023[1]
Heuvelton	December 31, 2017
Eel Weir	December 31, 2013

1. The Licensee shall modify/replace the trashracks for the Browns Falls, Flat Rock, and South Edwards developments based on a schedule of modifying one set of trashracks every 2 years. Installation of the first trashrack project would be by December 31, 2019 and the last installation no later than December 31, 2023. Therefore, between the three sets of trashracks, one set will be modified/replaced by December 31, 2019, one set will be modified/replaced by December 31, 2021, and the final set will be modified/replaced by December 31, 2023. However, it will be at the Licensee's discretion as to the order of modifying each of the three developments.

3.6.1.2 Fish Passage

3.6.1.2.1 Upper Three Developments

The Offer of Settlement does not require any fishways for upstream passage or downstream fish passage or movement structures to be constructed at the Browns Falls, Flat Rock, or South Edwards developments.

3.6.1.2.2 Oswegatchie Development

The Offer of Settlement does not require any fishway for upstream passage to be constructed at the Oswegatchie Development. The Licensee will continue to maintain a 40-cfs flow through a notch in the spillway to provide for downstream fish movement at this development. The Offer of Settlement does not require testing of the fish movement facility at the Oswegatchie Development.

3.6.1.2.3 Eel Weir Development

By December 31, 2015, the Licensee will construct a fishway for upstream passage and a downstream fish passage structure associated with the Eel Weir Development intended to move lake sturgeon (*Acipenser fulvescens*), American eel (*Anguilla rostrata*), and other fish species upstream and downstream of the development.

The Licensee will operate the passage structures annually on a seasonal basis from March 15 through November 30. The structures to be constructed will be based upon conceptual and final designs to be developed by the Licensee in consultation with the FWS and the New York DEC. Prior to construction, the final design plans will be approved by the FWS, the New York DEC, and the Commission. The second field season following construction of the structures, the Licensee will perform effectiveness testing of the upstream and downstream structures in accordance with the Fishway Effectiveness Testing Plan (Effectiveness Plan). The Effectiveness Plan, which will focus primarily on American eel and lake sturgeon, will be developed in conjunction with the New York DEC and the FWS following approval of the final design plans. Prior to implementation of the effectiveness testing, the Effectiveness Plan will be approved by the FWS, the New York DEC, and the Commission. Based on the results of the effectiveness testing, the Licensee may be required to modify structures or operations. Although the upstream fishway structure will be expected to pass American eel, the Licensee will construct a standard eel ladder if the effectiveness testing demonstrates that eels cannot effectively use the structure. Any fishway constructed for the sole purpose of upstream passage of American eel would be installed no later than one year after an upstream eel passage facility is completed at the downstream Ogdensburg Project (FERC No. 9821), or within one year of the determination (based on the testing) that an eel ladder is needed, whichever is later.

3.6.1.2.4 Heuvelton Development

By December 31, 2017, the Licensee will construct a fishway for upstream passage and a downstream fish passage structure associated with the Heuvelton Development intended to move lake sturgeon, American eel, and other fish species upstream and downstream of the development. The Licensee will operate the passage structures annually on a seasonal basis from March 15 through November 30. The structures to be constructed will be based upon conceptual and final designs to be developed by the Licensee in consultation with the FWS and the New York DEC. Prior to construction, the final design plans will be approved by the FWS, the New York DEC, and the Commission. The second field season following construction of the structures, the Licensee will perform effectiveness testing of the upstream and downstream structures in accordance with the Effectiveness Plan. The Effectiveness Plan, which will focus primarily on American Eel and lake sturgeon, will be developed in conjunction with the New York DEC and the FWS following approval of the final design plans. Prior to implementation of the effectiveness testing, the Effectiveness Plan will be approved by the FWS, the New York DEC, and the Commission. Based on the results of the effectiveness testing, the Licensee may be required to modify structures or operations. Although the upstream fishway structure will be expected to pass American eel, the Licensee will construct a standard eel ladder if the effectiveness testing demonstrates that eels cannot effectively use the structure. Any fishway constructed for the sole purpose of upstream passage of American eel would be installed no later than one year after an

upstream eel passage facility is completed at the downstream Ogdensburg Project (FERC No. 9821), or within one year of the determination (based on the testing) that an eel ladder is needed, whichever is later.

3.6.2 Reservation of Authority

In addition to the protection and passage measures outlined in this section, the DOI will reserve its authority under Section 18 of the Federal Power Act to prescribe additional upstream or downstream fishway facilities in the future. This reservation ensures that adequate facilities for fish passage will be in place should management goals or needs change during the term of the license.

3.6.3 Emergency Exceptions

Fish passage and/or protection measures may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, and for limited periods upon prior mutual agreement between the Licensee, the FWS, and the New York DEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC, the New York DEC, and the FWS as soon as possible, but no later than (10) business days after each such incident.

3.7 Trout Stocking

3.7.1 General Agreements

In accordance with a Trout Stocking and Monitoring Plan (see Appendix B) developed in consultation with the New York DEC, the FWS, and Trout Unlimited, the Licensee will stock trout and perform seasonal continuous water temperature monitoring in the Browns Falls bypassed reach on an annual basis from 2013 through 2017. In addition to stocking the bypassed reach with trout and monitoring water temperatures, the Licensee will perform sampling events in 2014, 2016, and 2018 to evaluate the stocking success.

3.8 Recreational Enhancements

3.8.1 General Agreements

In accordance with the Recreation Management Plan, the Licensee will complete the following recreational enhancements within 36 months of license issuance and acceptance:

- Develop river access portage routes, including take-out, put-in, herd paths (where necessary), and signage for each of the six developments.
- Formalize a parking area with a picnic table in the vicinity of the Browns Falls powerhouse.
- Modify the Flat Rock boat launch area to include an Americans with Disabilities Act-compliant picnic table, parking area, and seasonal boat dock.
- Develop a parking, picnic, and car-top boat launch area to provide access to the South Edwards impoundment adjacent to Route 58. If it is determined through further design activities that this site proves infeasible, a similar recreation area will be developed adjacent to the South Edwards entrance.
- Develop a parking area and boat launch immediately upstream of the existing Heuvelton day-use area.
- Develop and install a tri-sided kiosk at the Flat Rock day use area that will present educational and historical information regarding the Oswegatchie River and hydropower. Also an online and/or paper brochure indicating available recreation opportunities and historical information at the Project developments will be developed.

3.8.2 Monitoring

This Offer of Settlement does not require the Licensee to monitor the use of any recreational facilities included in this Offer of Settlement beyond the requirements of FERC Form 80 reporting.

3.9 Stream Flow and Water Level Monitoring Plan

3.9.1 General Agreements

The Licensee shall develop the Stream Flow and Water Level Monitoring Plan in

consultation with the New York DEC and the FWS within 9 months of license issuance and acceptance. The monitoring plan shall include all gages and/or equipment to:

- Determine head pond elevations,
- Determine bypass flows,
- Determine tailrace base flows, and
- Provide an appropriate means of independent verification by the New York DEC, the FWS, and APA.

All staff gages, pins, and ancillary equipment required by the monitoring plan, including head pond gages, shall be made operational and calibrated within 18 months of license issuance and acceptance.

The monitoring plan shall contain provisions for the installation of binary staff gages at appropriate locations to permit independent verification of head pond water levels, bypass flows, and tailrace base flows. Binary staff gages will be visible to the general public.

Within 24 months of license issuance and acceptance, as part of the Stream Flow and Water Level Monitoring Plan, the Licensee shall continue to fund, as well as upgrade to real time, the Flat Rock United States Geological Service (USGS) gage for the term of the license. At the Licensee's discretion, the Licensee may discontinue funding of the Flat Rock USGS gage in lieu of providing a means of access to equivalent real-time data to the New York DEC, the FWS, and the general public. If the Licensee chooses to discontinue the funding of the Flat Rock USGS gage, the Licensee will consult with the New York DEC and FWS on the adequacy of the alternative means of real-time data and obtain the agencies' concurrence that it is acceptable before discontinuing funding the USGS gage.

3.9.2 Record-Keeping

As to be defined in the Stream Flow and Water Level Monitoring Plan, the Licensee shall keep accurate and sufficient records of the impoundment elevations and Project flows to the satisfaction of the New York DEC and shall provide such data in a format and at intervals as required by the New York DEC. Consistent with similar plans developed in consultation with the New York DEC, the Licensee anticipates that such data would be provided in spreadsheet format in intervals ranging from 15 minutes to 1 hour and in increments ranging from 0.1-foot to 1-foot. The New York DEC will provide the Licensee with a contact person to receive such information. All records will be made available for inspection at the Licensee's principal business office within New York State within 5 business days or will be provided in written form within 30 days of the

Licensee's receipt of a written request for such records by the New York DEC. Furthermore, the Licensee will provide to the New York DEC a 7-day-per-week contact person to provide immediate verification of monitored flows and responses to questions about abnormal or emergency conditions.

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