

163 FERC ¶ 62,230

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

North East Wisconsin Hydro, LLC

Project No. 2744-043

ORDER ISSUING NEW LICENSE

(Issued June 29, 2018)

INTRODUCTION

1. On February 28, 2013, North East Wisconsin Hydro, LLC (NEW Hydro) 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 Menominee and Park Mill Hydroelectric Project No. 2744 (Menominee and Park Mill Project or project). The 4.348-megawatt (MW) project is located on the Menominee River in Menominee County, Michigan, and Marinette County, Wisconsin.² The project does not occupy federal land.

2. As discussed below, this order issues a new license for the Menominee and Park Mill Project.

BACKGROUND

3. The Commission issued the original license for the Menominee and Park Mill Project on March 11, 1985, which expired on February 28, 2015.³ Since then, NEW Hydro has operated the project under an annual license pending the disposition of the new license application.

¹ 16 U.S.C. §§ 797(e) and 808 (2012).

² The Menominee River is a navigable waterway of the United States. *See Michigan Wisconsin Power Co.*, 3 F.P.C. 449 (1943). Therefore, section 23(b)(1) of the FPA, 16 U.S.C. §817(1) (2012), requires the project to be licensed.

³ *Menominee Company*, 30 FERC ¶ 62,264 (1985). The license was made effective March 1, 1985, for a period of 30 years.

4. On June 12, 2015, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing, indicating the application was ready for environmental analysis, and setting August 11, 2015, as the deadline for filing motions to intervene, protests, comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.⁴ The Michigan Department of Environmental Quality (Michigan DEQ), Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Department of the Interior (Interior) filed notices of intervention.⁵ The Michigan Hydro Relicensing Coalition (Michigan HRC)⁶ filed a timely unopposed motion to intervene.⁷

5. Interior filed comments, recommendations, and preliminary terms and conditions. Michigan HRC, Wisconsin DNR, Michigan DNR, and Michigan DEQ filed comments and recommendations.

6. Staff issued an environmental assessment (EA) on September 13, 2017, analyzing the effects of the proposed project and alternatives to it. Comments on the EA were filed by the Citizens Advisory Committee for the Lower Menominee River Area of Concern (Citizens Advisory Committee), Michigan HRC, the National Park Service (Park Service), NEW Hydro, U.S. Environmental Protection Agency (EPA), and U.S. Fish and Wildlife Service (FWS).

7. The interventions, comments, and recommendations have been fully considered in determining whether, and under what conditions, to issue this license.

⁴ 80 Fed. Reg. 35,337 (June 19, 2015).

⁵ Under Rule 214(a) of the Commission's Rules of Practice and Procedure, Michigan DEQ, Michigan DNR, Wisconsin DNR, and Interior became parties to the proceeding upon filing timely notices of intervention. 18 C.F.R. § 385.214(a) (2017).

⁶ Michigan HRC includes Anglers of the Au Sable, Inc.; Great Lakes Council, Inc. of the Federation of Fly Fishers, Inc.; Michigan Council of Trout Unlimited; and Michigan United Conservation Clubs.

⁷ Timely, unopposed motion to intervene are automatically granted pursuant to Rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2017).

PROJECT DESCRIPTION AND OPERATION

Project Area

8. The Menominee River originates at the confluence of the Michigamme and Brule Rivers about 10 miles northeast of the City of Iron Mountain, Michigan. The 116-mile-long Menominee River drains into the Green Bay portion of Lake Michigan.

Project Facilities

9. The Menominee and Park Mill Project consists of the Park Mill and Menominee developments, which are described below from upstream to downstream. A more detailed description of the project appears in ordering paragraph (B)(2).

Park Mill Development

10. The Park Mill development includes a 538.58-foot-long and 22-foot-high concrete gravity dam consisting of: (1) two uncontrolled overflow spillway sections topped with flashboards; (2) two Tainter gate-controlled spillway sections; and (3) a non-operating fishway.

11. The reservoir impounded by the Park Mill dam has a surface area of 539 acres and a gross storage capacity of 3,788 acre-feet at a normal maximum water surface elevation of 610.43 feet National Geodetic Vertical Datum of 1929 (NGVD 29).

12. Water from the Park Mill reservoir is conveyed to the powerhouse through a 2,300-foot-long power canal that diverts water around a 2,200-foot-long section of the Menominee River (bypassed reach). One of the Tainter gate-controlled spillway sections noted above is located at the entrance to the power canal.

13. The powerhouse contains six generating units with a total installed capacity of 2.274 MW. Water from the Park Mill powerhouse, which is located on the south bank of the Menominee River, is discharged directly into the reservoir for the Menominee development. A 4,630-foot-long, 24.9-kilovolt (kV) overhead transmission line connects to a project substation that supplies power to NEW Hydro's distribution lines.

14. A downstream fish passage facility provides fish passage from the Park Mill reservoir to the Menominee reservoir. The facility, which is located at the downstream end of the power canal, and adjacent to the Park Mill powerhouse, includes a fish guidance rack, guidance ramp, and fish bypass structure. The 2013 Fish Passage

Operation Settlement Agreement (2013 Settlement Agreement)⁸ and the 2016 Fish Passage Operation Plan describe how the fish passage facility operates, and provide operational guidance until new guidance is provided by the implementation team,⁹ in coordination with NEW Hydro.

15. The Park Mill development includes a canoe portage, located on the north side of Park Mill dam that is owned and operated by NEW Hydro.

Menominee Development

16. The Menominee development includes a 486.5-foot-long and 24-foot-high earthen and concrete dam consisting of: (1) an uncontrolled concrete gravity overflow spillway; (2) a Tainter gate-controlled concrete gravity spillway; (3) a concrete gravity non-overflow section; and (4) an earthen embankment with a concrete core.

17. The reservoir impounded by the Menominee dam has a surface area of 143 acres and a gross storage capacity of 350 acre-feet at a normal maximum water surface elevation of 593.53 feet NGVD 29.

18. Water from the Menominee reservoir flows directly to a powerhouse forebay. The 204-foot-long concrete and brick powerhouse is integral to the north end of the dam and contains six generating units with a total installed capacity of 2.274 MW. Water from the Menominee powerhouse is discharged downstream into the Menominee River. A 568-foot-long, 24.9-kV underground transmission line connects to a project substation that supplies power to NEW Hydro's distribution lines.

19. The development also includes downstream and upstream fish passage facilities.¹⁰ The downstream fish passage facility provides passage from the Menominee reservoir to the Menominee River downstream of the dam. The entrance to the downstream fish passage facility is located adjacent to, and south of, the Menominee powerhouse. The facility includes a guidance ramp and a fish bypass structure.

⁸ The 2013 Settlement Agreement was signed by NEW Hydro, FWS, Michigan HRC, Michigan DNR, Wisconsin DNR, and River Alliance of Wisconsin (River Alliance).

⁹ The implementation team includes FWS, Wisconsin DNR, Michigan DNR, Michigan HRC, and River Alliance.

¹⁰ The 2013 Settlement Agreement and the 2016 Fish Passage Operation Plan describe how the fish passage facilities currently operate.

20. The upstream fish passage facility, which provides passage for lake sturgeon, consists of a fish lift located in an unused turbine bay in the north end of the Menominee powerhouse. The facility includes attraction flow equipment, a guidance ramp, an elevator, and fish sorting and holding tanks. Lake sturgeon collected at the fish lift are sorted, trucked upstream, and released into the Park Mill reservoir.

21. The Menominee development includes three recreation facilities: (1) the Menominee canoe portage, located in the City of Marinette, Wisconsin; (2) the 11th Avenue boat launch, located at the west end of 11th Avenue in the City of Menominee, Michigan; and (3) NEW Hydro Fisherman's Park and tailrace fishing site, located at the northwest side of the Hattie Street bridge in the City of Menominee, Michigan. These facilities are owned and operated by NEW Hydro.

Project Boundary

22. The current project boundary encloses the Menominee and Park Mill developments' powerhouses, dams, reservoirs, transmission lines, and all of the project recreation sites.

Current Project Operation

23. The project operates in a run-of-river mode, such that outflow from the project approximates inflow, as required by Article 37 of the current license.¹¹ To achieve run-of-river, NEW Hydro maintains the Park Mill reservoir water surface elevation at 610.43 feet NGVD 29 \pm 0.3 foot, and maintains the Menominee reservoir water surface elevation at 593.53 feet NGVD 29 \pm 0.3 foot. During normal operation, the turbine wicket gates are automatically monitored and adjusted by a programmable logic controller¹² to maximize generation and to maintain the normal reservoir water surface elevation. To respond to larger flow rates, each reservoir is equipped with a high water level trigger that initiates the automatic operation of a Tainter gate.

Park Mill Development

24. The Park Mill development operates when flows in the Menominee River are between the minimum hydraulic capacity of one turbine, 138 cubic feet per second (cfs), and the combined maximum hydraulic capacity of all six turbines, 2,309 cfs.

¹¹ *Menominee Company*, 30 FERC ¶ 62,264 (1985).

¹² The project's programmable logic controller system continuously monitors the reservoir elevation and makes adjustments to the Tainter gates and turbine wicket gates based upon a custom program to maintain run-of-river operation.

25. Flood operation occurs when flows in the Menominee River exceed the combined maximum hydraulic capacity of all six turbines, which is 2,309 cfs. Flood operation is initiated when Tainter gate number 1, the southernmost gate, automatically opens to convey the flow exceeding that needed for generation. If additional discharge capacity is needed, the remaining Tainter gates are opened. Reservoir water surface elevations greater than 610.93 feet NGVD 29 result in flow over the uncontrolled spillway sections.

26. Drought operation occurs when flows in the Menominee River are less than 138 cfs. If drought conditions occur, all turbines are taken off line and Tainter gate number 1 is used to maintain the normal reservoir water surface elevation of 610.43 feet NGVD 29.

Menominee Development

27. The Menominee development operates when flows in the Menominee River are between the minimum hydraulic capacity of one turbine, 350 cfs, and the combined maximum hydraulic capacity of all four turbines, 2,622 cfs.

28. Flood operation occurs when flows in the Menominee River exceed the combined maximum hydraulic capacity of all four turbines, which is 2,622 cfs. Flood operation is initiated when Tainter gate number 1, the northernmost gate, automatically opens to convey the flow exceeding that needed for generation. If additional discharge capacity is needed, the remaining Tainter gates are opened. Reservoir water surface elevations greater than 593.93 feet NGVD 29 result in flow over the uncontrolled spillway.

29. Drought operation occurs when flows in the Menominee River are less than 350 cfs. If drought conditions occur, all turbines are taken off line and Tainter gate number 1 is used to maintain the normal reservoir water surface elevation of 593.53 feet NGVD 29.

PROPOSED OPERATION AND ENVIRONMENTAL MEASURES

30. NEW Hydro Power proposes to continue to operate the project in a run-of-river mode, maintaining the Park Mill reservoir water surface elevation at 610.43 feet NGVD 29 \pm 0.3 foot, and maintaining the Menominee reservoir water surface elevation at 593.53 feet NGVD 29 \pm 0.3 foot.

31. To protect aquatic resources, NEW Hydro proposes to develop a drought operation plan to be implemented when flows in the Menominee River are less than 138 cfs at the Park Mill development, or when flows measured at the Menominee development are less than 350 cfs. The plan would include ceasing project generation at each development when the above listed flows occur, and releasing flows through the respective Tainter gate at each dam. Project generation would be brought back in service when flows increase to the levels needed to operate the respective development.

32. With respect to the existing fish passage facilities, under the 2013 Settlement Agreement, NEW Hydro proposes to continue to fund the fish passage facilities, and operate and maintain the fish passage facilities through a fish passage operation plan.¹³
33. To safely pass lake sturgeon upstream and downstream of the project, NEW Hydro proposes to continue to implement a 2012 Memorandum of Understanding (2012 MOU)¹⁴ that requires NEW Hydro to design, install, operate, and maintain fish passage facilities at the project.
34. To protect fishery resources in the reservoirs during planned and emergency drawdowns, NEW Hydro proposes to develop a reservoir drawdown plan that would include consulting with Michigan DNR, Michigan DEQ, Wisconsin DNR, and FWS in advance of any reservoir drawdown.
35. To monitor dissolved oxygen (DO) and temperature, NEW Hydro proposes to develop a water quality monitoring plan for these two parameters in the bypassed reach of the Menominee reservoir and in the Menominee River downstream of the Menominee dam.
36. To document that project operation is in compliance with the license's operating requirements, NEW Hydro proposes to develop an operation compliance monitoring plan.
37. To manage woody debris, NEW Hydro proposes to continue to remove large woody debris collected from the project trashracks and transport it to an off-site location, while small woody debris would be placed in the river downstream of the Menominee dam.
38. To minimize the spread of invasive plants, NEW Hydro proposes to develop an invasive species monitoring plan that would assess changes in the distribution or abundance of invasive plant species at the project, and include criteria for implementing control measures.
39. To minimize the effects of project maintenance on nesting bald eagles at the project, NEW Hydro proposes to: (1) maintain a buffer of at least 660 feet between project maintenance and bald eagle nests; (2) restrict maintenance, including clearing or

¹³ The 2013 Settlement Agreement requires a fish passage operation plan. The 2016 Fish Passage Operation Plan is the most recent version of the plan.

¹⁴ On January 10, 2012, NEW Hydro entered a Memorandum of Understanding with the same signatories to the 2013 Settlement Agreement. *Supra* note 10.

landscaping activities, during the nesting season, which occurs from January to August, if project maintenance would occur within 660 feet of a nest; and (3) maintain landscape buffers to screen project activity from a nest.

40. To enhance recreation resources at the project, NEW Hydro proposes to implement the Recreation Plan, filed on February 28, 2013, which contains provisions for: (1) operating and maintaining the existing project recreation facilities; (2) upgrading and maintaining non-project recreation facilities owned by local municipalities that are located within the project boundary;¹⁵ (3) improving the existing boat ramp, and installing a new boat dock and a seasonal portable toilet at the 11th Avenue boat launch; (4) improving the boat dock, and installing a picnic table and a seasonal portable toilet at the 18th Avenue boat launch; (5) installing picnic tables and a seasonal portable toilet at Mason Park; (6) installing interpretive signage; and (7) developing a recreation brochure.

41. To protect cultural resources, NEW Hydro proposes to implement the statewide Programmatic Agreement (PA) for Wisconsin and adjacent portions of Michigan, executed on December 16, 1993,¹⁶ and develop a historic properties management plan (HPMP).

SUMMARY OF LICENSE REQUIREMENTS

42. This license, which authorizes 4.348 MW of renewable energy generation capacity, requires most of the proposed measures noted above with the staff-recommended modifications and additional measures described below. The license does not include NEW Hydro's proposed: (1) drought operation plan; (2) funding component of the 2013 Settlement Agreement and components of the 2013 Settlement Agreement that have already been implemented as a result of constructing and operating the fish

¹⁵ The non-project recreation facilities that NEW Hydro proposes to maintain include the 18th Avenue boat launch, owned and operated by the City of Menominee; Mason Park, owned and operated by Menominee County; Cox Landing, owned and operated by the City of Marinette; and the Menominee dam tailrace fishing site, owned by the City of Marinette and maintained by NEW Hydro.

¹⁶ The full name of the PA is "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer, for managing Historic Properties that May Be Affected by New and Amended Licenses Issuing for the Continued Operation of Existing Hydroelectric Projects in the State of Wisconsin and Adjacent Portions of the State of Michigan," executed on December 16, 1993.

passage facilities; (3) water quality monitoring plan; and (4) the measures in the 2012 MOU.

43. To protect fishery resources in the reservoirs and the Park Mill power canal during drawdowns, the license requires NEW Hydro to modify its proposed reservoir drawdown plan to include additional detail on: (1) how planned drawdowns of the project reservoirs and power canal would be conducted, including drawdown frequency and duration, and measures proposed for minimizing drawdown effects on fish migration and spawning; (2) measures for the removal, salvage, and disposition of any stranded fish; and (3) a provision to notify resource agencies and the Commission of any emergency drawdowns.

44. To document that project operation is in compliance with the license's operating requirements, the license requires NEW Hydro to modify its proposed operation compliance monitoring plan to include measures to: (1) verify run-of-river operation by using the automatic level recorders and staff gages in the reservoirs; and (2) verify flows needed to operate the fish passage facilities.

45. To ensure that appropriate methods are implemented to minimize the spread of invasive plant species, the license requires NEW Hydro to modify its proposed invasive species monitoring plan to include: (1) a description of the methods proposed for monitoring invasive plants; (2) the proposed frequency of monitoring; and (3) the proposed criteria to be used to determine when control measures will be implemented.

46. To protect roosting northern long-eared bats, the license requires NEW Hydro to avoid cutting trees that have a diameter of 3 inches or more from April 1 through October 31.

47. To maintain and enhance recreation resources at the project, the license requires NEW Hydro to modify its proposed Recreation Plan, to: (1) provide conceptual drawings for the proposed boat dock and interpretive signage; (2) review the Recreation Plan after every 6 years to determine whether or not modifications are necessary; and (3) remove the provisions for upgrading and maintaining non-project recreation facilities that are located within the project boundary and for the development of a recreation brochure.

WATER QUALITY CERTIFICATION

48. Under section 401(a)(1) of the Clean Water Act (CWA),¹⁷ the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency has either issued a water quality certification (certification) for the project or has waived certification by failing to act on a

¹⁷ 33 U.S.C. § 1341(a)(1) (2012).

request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification must become a condition of any federal license for the project.¹⁸

49. On February 3, 2015, NEW Hydro applied to the Wisconsin DNR for certification for the Menominee and Park Mill Project, which Wisconsin DNR received on February 9, 2015. On June 17, 2016, Wisconsin DNR issued a certification for the project with 11 conditions. Because Wisconsin DNR failed to act on the application within one year, it waived its certification authority.¹⁹ Once the one-year deadline has passed, the water quality conditions are not mandatory and acceptance of the conditions is a matter within the Commission's discretion.²⁰ Here, ten of the eleven certification conditions in Wisconsin DNR's waived certification are administrative in nature and therefore are not discussed further and are not included in this license. The remaining water quality condition, condition 6 (subsections a through f) is considered under section 10(a)(1) of the FPA.²¹

50. On March 28, 2013, NEW Hydro applied to the Michigan DEQ for certification for the project. In a letter filed March 17, 2015, Michigan DEQ acknowledged it had missed the one-year timeframe in which to act on the request for certification. Because Michigan DEQ failed to act on the application within one year, the certification is deemed waived.

51. On August 26, 2015, Michigan DEQ filed recommendations for the project, and requested that they be considered in lieu of its certification. These recommendations are considered below under section 10(a)(1) of the FPA.²²

¹⁸ 33 U.S.C. § 1341(d) (2012).

¹⁹ 33 U.S.C. § 1341(a)(1) (2012); 18 C.F.R. § 4.34(b)(5)(iii) (2017); *see also State of Cal. Ex. rel. State Water Resources Control Board v. FERC*, 966 F.2d 1541, 1554 (9th Cir. 1992) (Commission's rule requiring states to act on a request for certification within one year of receipt of the request is fully consistent with the letter and intent of section 401(1)(a)(1) of the Clean Water Act).

²⁰ See *Central Vermont Public Service Corporation*, 113 FERC ¶ 61,167 at P 20 (2005).

²¹ 16 U.S.C. § 803(a)(2)(b) (2012).

²² *Id.*

COASTAL ZONE MANAGEMENT ACT

52. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),²³ the Commission cannot 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 6 months of its receipt of the applicant's certification.

53. In a letter filed March 7, 2013, the Wisconsin Coastal Management Program stated that it had no comments on the project and would not be conducting a federal consistency review.

54. In a letter filed March 7, 2013, Michigan DEQ stated that the project is within Michigan's coastal management boundary and as long as any requirements of a new license are maintained, there would be no adverse effects to coastal resources. Therefore, Michigan DEQ states that the project is consistent with Michigan's Coastal Management Program.

SECTION 18 FISHWAY PRESCRIPTIONS

55. Section 18 of the FPA²⁴ 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 the Secretary of Commerce, as appropriate.

56. No fishway prescriptions or reservations of authority were filed.

THREATENED AND ENDANGERED SPECIES

57. Section 7(a)(2) of the Endangered Species Act of 1973²⁵ (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species or to result in the destruction or adverse modification of their designated critical habitat.

58. There are seven federally listed species that occur in Marinette County, Wisconsin, and Menominee County, Michigan: (1) the federally endangered Kirtland's warbler (*Setophaga kirtlandii*); (2) the endangered Hine's emerald dragonfly

²³ 16 U.S.C. § 1456(c)(3)(A) (2012).

²⁴ 16 U.S.C. § 811 (2012).

²⁵ 16 U.S.C. § 1536(a)(2) (2012).

(*Somatochlora hineana*); (3) the endangered gray wolf (*Canis lupis*); (4) the threatened rufa red knot (*Calidris canutus rufa*); (5) the threatened dwarf lake iris (*Iris lacustris*); (6) the threatened Canada lynx (*Lynx canadensis*); and (7) the threatened northern long-eared bat (*Myotis septentrionalis*).

A. Kirtland's Warbler, Hine's Emerald Dragonfly, Gray Wolf, Rufa Red Knot, Dwarf Lake Iris, and Canada Lynx

59. In the EA,²⁶ Commission staff determined that the project would have no effect on the Kirtland's warbler, rufa red knot, dwarf lake iris, Hine's emerald dragonfly, Canada lynx, and gray wolf because each species requires specialized habitat or environmental conditions that do not occur at the project. Therefore, no further action under the ESA is required for these species.

B. Northern Long-Eared Bat

60. FWS listed a 4(d) rule for northern long-eared bat in January 2016 (i.e., Programmatic Biological Opinion).²⁷ The 4(d) rule focuses on preventing the effects of disturbances to known northern long-eared bat hibernacula and the effects of tree removal on roosting northern long-eared bats, including maternity colonies, located within the zone associated with the spread of white-nose syndrome. Under the 4(d) rule, a take that is incidental to tree removal is permitted if it: (1) occurs more than 0.25 mile from a known, occupied hibernacula; or (2) avoids cutting or destroying known, occupied maternity roost trees or any trees within a 150-foot radius around a known, occupied maternity tree during the pup season (June 1 to July 31).

61. In the EA,²⁸ Commission staff determined that although there is no known documentation of northern long-eared bat populations within the project boundary, FWS's Information for Planning and Consultation system indicates that the northern long-eared bat has the potential to occur within Marinette County, Wisconsin, and Menominee County, Michigan. In addition, habitat for the northern long-eared bat is present in the project boundary; therefore, it is probable that the bat has used project land. Staff also concluded that the northern long-eared bat could be affected by tree removal and periodic clearing of vegetation that may include bat habitat during routine maintenance.

²⁶ EA at 68-69.

²⁷ Section 4(d) of the ESA directs FWS to issue regulations deemed "necessary and advisable to provide for the conservation of threatened species." 16 U.S.C. § 1533(d).

²⁸ EA at 69-70.

62. In the EA,²⁹ Commission staff determined that if NEW Hydro avoids the removal of trees equal to or greater than 3 inches in diameter from April 1 to October 31, this avoidance would reduce the likelihood of disturbing any northern long-eared bats in undocumented maternity roosts within 150 feet of the canoe portages. Further, Commission staff determined that continued operation and maintenance of the project may affect the northern long-eared bat, but any incidental take that may result is not prohibited per the conservation measures for the species issued by the FWS under section 4(d) of the ESA.³⁰ Article 408 requires that NEW Hydro restrict cutting trees from April 1 through October 31.

NATIONAL HISTORIC PRESERVATION ACT

63. Under section 106 of the National Historic Preservation Act (NHPA),³¹ as implemented in regulations,³² federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register) and must afford the Advisory Council on Historic Preservation (Advisory Council) 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 any adverse effects.

64. To satisfy these responsibilities under section 106 for licensing actions in Wisconsin and Michigan, the Commission executed a statewide PA with the Advisory Council, the Wisconsin SHPO, and the Michigan SHPO on December 16, 1993.³³ The PA requires NEW Hydro to implement an HPMP within one year of license issuance to

²⁹ *Id.*

³⁰ On September 15, 2017, staff requested concurrence with this determination on the northern long-eared bat in writing within 30 days, noting that if FWS did not respond within 30 days, staff will presume that the determination is informed by the best available information and that our responsibilities under 7(a)(2) with respect to the northern long-eared bat are fulfilled through FWS' January 5, 2016, Programmatic Biological Opinion. FWS did not respond to Commission staff's request for concurrence.

³¹ Section 106 of the National Historic Preservation Act of 1966, as amended, 54 U.S.C. § 306108, Pub. L. No. 113-287, 128 Stat. 3188 (2017).

³² 36 C.F.R. Part 800 (2017).

³³ The PA is implemented for all hydroelectric projects in Wisconsin and Michigan's Upper Peninsula that may affect properties included in, or eligible for, the National Register.

be effective for the term of this license. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 410 requires NEW Hydro to implement the PA and file an HPMP within one year of license issuance.

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

65. Section 10(j)(1) of the FPA requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies under the Fish and Wildlife Coordination Act,³⁴ to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.³⁵

66. On August 7, 2015, in response to the June 12, 2015 public notice that the project was ready for environmental analysis, Interior filed nine recommendations under section 10(j). One aspect of Interior's recommendation regarding 2013 Settlement Agreement is outside the scope of section 10(j) and is discussed in the next section.³⁶

67. Michigan DNR and Wisconsin DNR filed recommendations that, although not filed under section 10(j), were the same as those filed by Interior under section 10(j). These recommendations are: (1) develop an operation compliance monitoring plan; (2) implement a fish passage operation plan; and (3) install automatic water level recorders to verify elevations at the project.

68. The following six recommendations are within the scope of section 10(j) and are required by the license: (1) operate the project in a run-of-river mode (Article 401);

³⁴ 16 U.S.C. §§ 661 *et seq.* (2012).

³⁵ 16 U.S.C. § 803(j)(1) (2012).

³⁶ Staff divided Interior's recommendation to incorporate the entire 2013 Settlement Agreement into the license into two separate recommendations. The first recommendation, discussed in PP 68, 71, 73-74, covers all components of the 2013 Settlement Agreement except for the funding component of the settlement. The Fish Passage / Protection Fund provisions in the 2013 Settlement Agreement is not a valid 10(j) recommendation because it is not a specific measure to protect, mitigate damages to, or enhance fish and wildlife. Staff therefore considered the settlement's funding provisions under the broad public interest standard of section 10(a)(1) of the FPA and is discussed below at PP 77-81.

(2) develop an operation compliance monitoring plan (Article 402);³⁷ (3) as a provision of an operation compliance monitoring plan, employ mechanisms to accurately document inflow to and discharge from the project, including flows in and out of the fish passage facilities (Article 402); (4) as a provision of an operation compliance monitoring plan, install staff gages at each project reservoir to show the operating band stipulated in Article 401 (Article 402); (5) as a provision of an operation compliance monitoring plan, include an implementation schedule that is developed in consultation with FWS (Article 402); and (6) operate and maintain fish passage facilities at the project, as defined in the fish passage operation plan, a component of the 2013 Settlement Agreement (Article 405).³⁸ The remaining recommendations that are within the scope of section 10(j), but not included in this license, are discussed below.

69. If the Commission believes that any section 10(j) recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, section 10(j)(2) requires the Commission and the agencies to attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies.³⁹ If the Commission still does not adopt a recommendation, it must explain how the recommendation is inconsistent with Part I of the FPA or other applicable law and how the conditions imposed by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources.

70. Interior recommends that the provisions of the 2013 Settlement Agreement that require the construction and maintenance of fish passage facilities be included in any new license. Also, Interior recommends that automatic water level recorders be installed in the tailwaters of both developments to verify that the project operates in a run-of-river mode.⁴⁰ As discussed in the EA and below,⁴¹ these two recommendations are inconsistent with the comprehensive planning standard of section 10(a)(1) and the public interest standard of section 4(e) of the FPA.

³⁷ Wisconsin DNR also recommends an operation compliance monitoring plan (water quality condition 6b).

³⁸ Wisconsin DNR also recommends a fish passage operation plan (water quality condition 6f). The fish passage facilities are currently being operated under the 2016 Fish Passage Operation Plan.

³⁹ 16 U.S.C. § 803(j)(2) (2012).

⁴⁰ Michigan DNR also recommends this measure.

⁴¹ EA at 103-108.

71. With respect to the 2013 Settlement Agreement, because the fish passage facilities described in the settlement are constructed and operating,⁴² staff determined that only the fish passage operation plan component of the settlement was needed to ensure that NEW Hydro operates and maintains the fish passage facilities.

72. Regarding the second recommended condition, Commission staff determined in the EA that other methods exist to verify that the project operates in a run-of-river mode, making automatic water level recorders in the tailwaters unnecessary.⁴³ In the EA, staff recommended modifying the proposed operation compliance monitoring plan to install an automatic water level recorder and staff gage in each reservoir to provide continuous documentation of headwater elevations. Staff's recommended measures, and the continued use of existing reservoir elevation and minimum flow monitoring equipment at each development, will be sufficient to document operational compliance.

73. By letter issued September 15, 2017, staff advised Interior of its preliminary determinations that staff was not recommending the entire 2013 Settlement Agreement or the automatic tailwater recorders, and invited Interior to request a meeting, telephone or video conference, or other additional procedures to attempt to resolve the preliminary determination of inconsistency. In response, FWS filed a letter on November 28, 2017, stating that they do not request a meeting, telephone or video conference, or other additional procedures to attempt to resolve the preliminary determination of inconsistency, and have no further comments. Therefore, the inconsistency between Interior's recommendations on these two issues and the FPA remains unresolved.

74. For the reasons discussed above, this license does not adopt the 2013 Settlement Agreement wholesale, nor does the license include the requirement to construct and maintain fish passage facilities or the installation of automatic water level recorders. Consistent with staff's recommendation in the EA, the license requires a fish passage operation plan (Article 405) and an operation compliance monitoring plan (Article 402).

75. In accordance with section 10(j)(2)(B) of the FPA, the operation compliance monitoring plan and other fisheries measures required by this license (e.g., Articles 402, 404, and 405), will adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources affected by this project.

⁴² *Id.* at 103-104.

⁴³ *Id.* at 96-97.

SECTION 10(a)(1) OF THE FPA

76. Section 10(a)(1) of the FPA⁴⁴ requires that any project for which the Commission issues a license 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. Funding

77. To guide the operation and maintenance of the existing fish passage facilities, NEW Hydro proposes to implement the 2013 Settlement Agreement,⁴⁵ which requires that NEW Hydro submit two percent of its gross revenue in each quarter to a Fish Passage / Protection Fund based on the combined sales of electricity from the developments. As described in the 2013 Settlement Agreement, the Fish Passage / Protection Fund can be used to support activities identified in the fish passage operation plan. In addition, NEW Hydro proposes to contribute \$4,000 annually for operation and maintenance of the fish passage operation plan.

78. Interior recommends that the terms and conditions of the proposed 2013 Settlement Agreement, including the Fish Passage / Protection Fund, be included in a new license for the project. Interior states that maintaining the fund would assure continued financial resources to help cover the evolving operation and maintenance needs of the fish passage facilities. Michigan DNR and Michigan HRC also recommend implementing the 2013 Settlement Agreement, including the fund.

79. In its comments on the EA, FWS states that the \$4,000 annual cost for operation and maintenance of the fish passage facilities was provided as an example, and is not a set cost of the fish passage operation plan, which is revised annually.

80. In its comments on the EA, Michigan DNR states that the \$4,000 annual cost was intended as a placeholder and should not be a requirement of this license for operating and maintaining fish passage facilities at the project. Michigan DNR also notes that the 2013 Settlement Agreement allows for modifications of the facilities based on information gained from operation and maintenance.

⁴⁴ 16 U.S.C. § 803(a)(1) (2012).

⁴⁵ NEW Hydro did not propose the 2013 Settlement Agreement in its license application filed on February 28, 2013, but did so in a letter filed on April 25, 2017.

81. As discussed in the EA,⁴⁶ NEW Hydro is responsible for operating and maintaining the fish passage facilities as project facilities. Whether NEW Hydro performs the work needed to keep the facilities operating by itself or hires some other entity to perform the work, the costs of operating the fish passage facilities are NEW Hydro's responsibility.⁴⁷ Therefore, this license does not require the Fish Passage/Protection Fund component of the 2013 Settlement Agreement or require the annual amount of \$4,000 for the fish passage operation plan.

B. 2012 Memorandum of Understanding

82. NEW Hydro proposes and Interior recommends that the 2012 MOU continue to be implemented. The 2012 MOU contains stipulations to design, install, operate, and maintain fish passage structures to enable lake sturgeon, and potentially other fish species in the future, to pass safely upstream and downstream of the Park Mill and Menominee developments. Michigan DNR stated in its comments on the EA that it considers the 2012 MOU to be completed.

83. As discussed in the EA,⁴⁸ the fish passage facilities have been constructed and are operating as project facilities; therefore, the 2012 MOU is moot and the license does not require it.

C. Annual Review of Management Plans

84. Wisconsin DNR recommends that NEW Hydro conduct an annual meeting with Wisconsin DNR to review license conditions and management plans for the project.

85. As the stated purpose of the meeting is general in nature, it is unclear how requiring the licensee to hold such an annual meeting as a condition of the license would specifically benefit fish and wildlife resources affected by the project. Moreover, if there are unforeseen or unanticipated adverse project effects on fish and wildlife resources during the license term, Wisconsin DNR could petition the Commission to reopen the license to consider additional measures pursuant to Standard Article 15 of Form L-3. Therefore, there is no need for a license condition requiring NEW Hydro to annually consult with Wisconsin DNR. However, this license does not prevent NEW Hydro from voluntarily meeting with Wisconsin DNR.

⁴⁶ EA at 58-59.

⁴⁷ *Id.*

⁴⁸ *Id.* at 59.

D. Reservoir and Park Mill Power Canal Drawdowns

86. Reservoir and canal drawdowns can adversely affect aquatic resources in reservoirs, canals, and downstream from a project's powerhouses and dams. NEW Hydro proposes to develop a reservoir drawdown plan for the project. As part of the plan, NEW Hydro proposes to consult with Michigan DNR, Michigan DEQ, Wisconsin DNR, and FWS in advance of any reservoir drawdown, but did not propose any other specific measures. Wisconsin DNR recommends (water quality condition 6b) that reservoir drawdowns should be included in an operation compliance monitoring plan for the project, but, likewise, does not provide specific measures regarding a drawdown plan. Michigan DNR and Michigan HRC recommend that NEW Hydro consult with Michigan DNR, Wisconsin DNR, Michigan DEQ, and FWS on maintenance and emergency drawdowns and on any maintenance work or repair involving drawdowns of the reservoirs.

87. As discussed in the EA,⁴⁹ Commission staff determined that the proposed reservoir drawdown plan needed to contain measures that would ensure that flows downstream of the project reservoirs are kept near natural flow levels as drawdowns and refills occur. Staff recommended that the plan include measures to limit the frequency of drawdowns, identify drawdown and refill rates, and address any stranding of fish. Staff also recommend managing the timing of drawdowns so that they occur when there would be minimal effects to aquatic resources, such as before or after fish migrations and spawning activities.

88. In the EA,⁵⁰ Commission staff noted that the intake power canal for the Park Mill development is typically drawn down every year or every other year for maintenance activities. However, NEW Hydro's proposed drawdown plan does not include measures that appear to apply to the power canal, which supports a population of resident fish and is used by migrating lake sturgeon. Therefore, staff recommend that the plan be modified to include the power canal.⁵¹

89. Article 404 requires that NEW Hydro prepare a reservoir and Park Mill power canal drawdown plan for the project that includes the staff recommended measures.

⁴⁹ *Id.* at 44.

⁵⁰ *Id.*

⁵¹ *Id.*

E. Water Quality Monitoring Plan

90. A 2011 survey conducted by NEW Hydro indicated that temperature, DO, and pH, were usually within levels that are consistent with those specified by Michigan and Wisconsin's water quality standards. NEW Hydro proposes to develop a water quality monitoring plan, but does not propose any measures for the plan. Wisconsin DNR (water quality condition 6a), Michigan DEQ, and Michigan HRC recommend that NEW Hydro develop a water quality monitoring plan.

91. In its comments on the EA, Michigan DNR recommends that NEW Hydro implement a water quality monitoring plan with the following measures: (1) hourly collection of DO measurements from June to the end of September; (2) hourly collection of water temperature data throughout the year; and (3) collecting information required in items (1) and (2) for a five year period. If after five years NEW Hydro can demonstrate that DO and water temperature are not an issue at the project, Michigan DNR states that NEW Hydro can apply to the state to change the monitoring plan to collecting DO every five years.

92. In the EA,⁵² staff determined that a water quality monitoring plan was not needed for the project. With the exception of relatively infrequent and short-lived instances of low DO and high pH in project waters, water quality conditions are consistent with state standards.⁵³ Also, as discussed in the EA, staff determined that the low DO was most likely the result of the natural diurnal oxygen cycle associated with photosynthesis and respiration by the abundant plants occurring in the reservoirs, and not related to project operation. For these reasons, this license does not require NEW Hydro to implement a water quality monitoring plan.

F. Woody Debris and Trash Management

93. NEW Hydro proposes to continue its current methods of handling woody debris that accumulates on the trashracks at each development. At the Park Mill development, garbage and man-made items are taken to a landfill. Large woody debris is cut up and hauled to an off-site location, along with weeds, grass, and other organic materials. No debris is placed into the Menominee reservoir from the Park Mill dam. At the Menominee development, garbage and man-made items are taken to a landfill. Large woody debris is cut up and hauled off-site, while weeds, grass, and small pieces of woody debris are placed in the river downstream of the Menominee dam.

⁵² EA at 36-41.

⁵³ *Id.* at 37-41.

94. Wisconsin DNR recommends (water quality condition 6c) a woody debris passage plan, but does not provide specific measures.

95. In its comments on the EA, EPA recommends that weeds, grass, and small woody debris be hauled off site. EPA states that passing weeds and grass downstream would not supply aquatic habitat and may decrease DO levels in the river when they decompose. In comments on the EA, Michigan DNR recommends that NEW Hydro continue its existing protocol for woody debris management.

96. The weeds and grass described by EPA are aquatic vegetation that naturally occur in the Menominee River. Passing these materials downstream is a normal function of a stream, and the quantities passed downstream are not likely to cause reductions in DO. Current water quality conditions in the Menominee River downstream of the Menominee dam, and near the dam, are consistent with state water quality standards and improving in river reaches further downstream.⁵⁴ As discussed in the EA,⁵⁵ staff determined that NEW Hydro's current methods help maintain aquatic habitat in the Menominee River downstream of the project, and that a woody debris plan is not needed. Therefore, this license does not require a plan; rather, Article 403 requires that NEW Hydro continue its current protocol.

G. Alternative Fish Passage Equipment

97. Lake sturgeon selected for upstream passage at the Menominee fish lift are transferred into the Park Mill reservoir by truck and trailer. New Hydro proposes to install two cameras at the entrance to the fish lift and a water temperature sensor at the Menominee development during each lake sturgeon spawning migration period. In its comments on the EA, Michigan DNR states that: (1) there could be alternatives to the current practice of passing fish upstream by using trucks; and (2) technological advancements may provide alternatives to the existing devices that are used to monitor and conduct fish passage operations.

98. As discussed in the EA,⁵⁶ it is the responsibility of NEW Hydro to operate and maintain the fish passage facilities at the project to successfully pass lake sturgeon upstream and downstream past the project. Therefore, NEW Hydro will be responsible for whatever changes are needed over the term of the license to ensure that fish passage facilities and ancillary equipment (e.g., transport truck, cameras, antennas, etc.) are

⁵⁴ *Id.* at 36-42.

⁵⁵ *Id.* at 50-51.

⁵⁶ *Id.* at 56-60.

installed or maintained to successfully support the passage of lake sturgeon. The measures in the fish passage operation plan, as required by Article 405, provide the flexibility needed to address changes that may be needed for successful operation of the fish passage facilities.

99. Michigan DNR and Michigan HRC recommend that NEW Hydro conduct studies to test the effectiveness of the fish bypass facility at the Park Mill development and the Menominee fish lift.

100. As discussed in the EA,⁵⁷ the fish passage facility has successfully passed lake sturgeon upstream and downstream of the project. Since the fish passage facility began operation in 2016, 68 lake sturgeon have been passed upstream. Therefore, this license does not require NEW Hydro to conduct effectiveness studies of the existing fish passage facilities.

H. Drought Operation Plan

101. When flows in the Menominee River are less than 138 cfs at the Park Mill development, the minimum hydraulic capacity of one turbine at the development, NEW Hydro ceases generation at the development and discharges flows through a Tainter gate. Similarly, when river flows reaching the Menominee development are less than 350 cfs, the minimum hydraulic capacity of one turbine at the development, NEW Hydro ceases generation at the development and discharges flows through a Tainter gate. NEW Hydro propose to develop a drought operation plan that would require the mode of project operation described above.

102. As discussed in the EA,⁵⁸ the project is not a consumptive user of the water, and due to its inability to store or divert water from the river, the project will not have the ability to exacerbate any drought effects on aquatic resources because it operates in a run-of-river mode. Thus, this license does not require a drought operation plan.

I. Bald Eagle Protection

103. Nesting bald eagles have been documented within less than a mile from the Park Mill dam. The operation of machinery during maintenance of the project has the potential to disturb nesting bald eagles during nest building, incubation, and fledging phases of their reproductive cycle. To prevent adverse effects on bald eagles, NEW Hydro proposes to: (1) maintain a buffer of at least 660 feet between project

⁵⁷ *Id.* at 53-54.

⁵⁸ *Id.* at 42-43.

maintenance and bald eagle nests; (2) restrict maintenance, including clearing or landscaping activities, during the nesting season, which occurs from January to August, if project maintenance would occur within 660 feet of a nest; and (3) maintain landscape buffers to screen project activity from a nest.

104. In the EA,⁵⁹ staff recommended NEW Hydro's proposal because the measures would help ensure that any effects to bald eagles and their nests caused by project maintenance would be minimized. Therefore, Article 407 requires the measures.

J. Invasive Species Monitoring

105. Invasive plants can displace native plant species, adversely affect water quality, and interfere with access to recreation facilities. Terrestrial and aquatic invasive plants, including Eurasian water milfoil, curly-leaf pondweed, and purple loosestrife, occur within the project boundary. NEW Hydro proposes to develop an invasive species monitoring plan, but has not provided any details or specific measures.

106. Michigan DNR and Michigan HRC recommend holding an annual meeting to discuss invasive species removal, and Michigan DEQ and Wisconsin DNR recommend (water quality condition 6d) the development of an invasive species monitoring plan.

107. In their comments on the EA, Michigan DNR and Citizens Advisory Committee recommend that NEW Hydro develop an invasive species monitoring plan that addresses invasive plant species within the project boundary. In EPA's comments on the EA, it requests specific measures for inclusion in the invasive species monitoring plan, such as providing descriptions of control approaches, measures of success, and pesticides to be applied.

108. In the EA,⁶⁰ Commission staff recommended an invasive species monitoring plan that contain measures that would ensure the protection of native vegetation, wildlife habitat, and recreational resources by minimizing adverse effects associated with the proliferation of Eurasian water-milfoil and other invasive plants within the project boundary. Because NEW Hydro provided no details about specific measures for an invasive species monitoring plan, Commission staff recommend that the plan should include the following measures: (1) a description of the proposed monitoring methods; (2) the proposed frequency of monitoring; (3) the proposed criteria to be used to determine when control measures would be implemented; and (4) a schedule for filing

⁵⁹ *Id.* at 64.

⁶⁰ *Id.* at 65-66.

monitoring reports.⁶¹ Article 406 requires an invasive species monitoring plan with staff's recommended measures.

109. In its comments on the EA, Citizens Advisory Committee recommends that the Army Corps of Engineers' (Corps) be involved in efforts to manage invasive species. As discussed in the EA,⁶² the Corps has recently implemented control measures for invasive plant species on Blueberry and Little Blueberry islands, islands located within the project boundary, to enhance avian habitat.⁶³ Therefore, consulting with the Corps will aid in the development of the invasive species monitoring plan. Article 406 requires that NEW Hydro prepare the plan after consultation with Corps.

K. Recreation Plan

110. Recreation facilities at the project include fishing access sites, boat launches, picnic areas, and canoe portages. NEW Hydro proposes to implement a Recreation Plan that contains provisions for: (1) operating and maintaining the existing project recreation facilities (i.e., the Park Mill Canoe Portage, Menominee Canoe Portage, 11th Avenue Boat Launch, and Fisherman's Park and tailrace fishing site); (2) upgrading and maintaining non-project recreation facilities owned by local municipalities that are located within the project boundary; (3) improving the existing boat ramp, and installing a new boat dock and a seasonal portable toilet at the 11th Avenue boat launch; (4) improving the boat dock, and installing a picnic table and a seasonal portable toilet at the 18th Avenue boat launch; (5) installing picnic tables and a seasonal portable toilet at Mason Park; (6) installing interpretive signage; and (7) developing a recreation brochure to provide information on recreation facilities in the project boundary. Wisconsin DNR recommends (water quality condition 6e) the development of a recreation plan.

111. In the EA,⁶⁴ staff determined that most of NEW Hydro's proposed measures in the Recreation Plan would enhance recreation resources at the project and recommended that

⁶¹ *Id.*

⁶² EA at 62-63.

⁶³ The Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, as reauthorized and amended by the National Invasive Species Act of 1996, as well as the River and Harbor Act of 1958, direct the Corps to develop environmentally sound control methods to prevent, monitor, and control introductions of non-indigenous aquatic nuisance species. Completion of recent efforts at Blueberry and Little Blueberry islands helps support the Corps' mission to control invasive species in the Menominee River area.

⁶⁴ EA at 73-76.

the proposed plan be implemented. However, staff also recommended certain modifications to measures in the Recreation Plan, as discussed below.

Operation and Maintenance of Recreation Facilities

112. Although the 18th Avenue boat launch, Mason Park, Cox Landing, and Menominee dam tailrace fishing site provide access to project land and water, they are non-project recreation facilities owned and maintained by local municipalities. There is nothing in the record that indicates that the municipalities would not continue to operate and maintain these facilities over the term of a new license, and, as such, there would be no current benefit to requiring NEW Hydro to maintain them.

113. If conditions change and the municipalities are no longer able to maintain the recreation facilities, federal or state agencies could petition the Commission to reopen the license to consider additional recreation facilities pursuant to Standard Article 17. Therefore, this license does not require NEW Hydro to upgrade, operate, and maintain any non-project recreation facilities.

Conceptual Drawings

114. The proposed Recreation Plan does not include conceptual drawings for the proposed dock at the 11th Avenue boat launch or the proposed interpretive signage. In the EA,⁶⁵ staff recommended conceptual drawings for these proposed measures to ensure that the amenities would be suitably constructed or installed. Therefore, Article 409 requires the staff-recommended measure.

Plan Updates

115. The project's recreation facilities have a low to moderate use capacity; however, recreation use of the facilities has increased over 300 percent since 2008. In the EA,⁶⁶ staff determined that recreation use may continue to increase over the term of any license issued for the project. Therefore, Commission staff determined that consulting with Wisconsin DNR, Michigan DNR, the Park Service, River Alliance, and Michigan HRC every six years, and reviewing the proposed Recreation Plan every 12 years to determine if updates were needed, would help NEW Hydro determine whether facility improvements or modifications to the Recreation Plan are necessary.

⁶⁵ *Id.* at 75.

⁶⁶ *Id.* at 75-76.

116. In comments on the EA, Michigan DNR and the Park Service recommend that NEW Hydro review the Recreation Plan for potential facility improvements or modifications every six years, given the increase in recreation use.

117. Reviewing the plan for any needed updates every six years, after consultation with the above-listed stakeholders, will help determine whether facility improvements or modifications to the Recreation Plan are necessary. Therefore, staff recommends revising the staff alternative recommended in the EA to require this measure. Article 409 requires that NEW Hydro consult with the aforementioned stakeholders and review the Recreation Plan every six years.

Recreation Brochure

118. In the EA,⁶⁷ Commission staff concluded that NEW Hydro's proposed recreation brochure would be redundant with the proposed interpretive signage, and consequently, would not provide any other information to recreationists. Further, staff asserted that because litter is a known issue at the recreation sites, the recreation brochure may become another item inappropriately discarded.⁶⁸

119. In comments on the EA, Michigan HRC and the Park Service disagree with Commission staff's conclusion and recommend a recreation brochure. Michigan HRC states that recreation brochures can be helpful to the public for navigating project waters and lands. The Park Service states that the brochures would be distributed at several locations, including tourism facilities, libraries, and outfitters in Menominee County, Michigan, and Marinette County, Wisconsin. The Park Service recommends that the brochures be distributed in sustainable, weather-resistant containers affixed to or near the interpretive signage. The Park Service also recommends that the content of the recreation brochure include a map of the river, the project's location, project recreation facilities, and a history of the area to increase awareness about the Menominee River and its role in power generation, as well as inform the public about project recreation facilities. Further, the Park Service offered to review the brochure during its development.

120. While Michigan HRC and the Park Service recommend content for a recreation brochure, they do not provide any justification for the necessity of the recreation brochure, or how the brochure would supplement the required interpretive signage. As such, Commission staff maintains that the recreation brochure would be redundant with the interpretive signage. Therefore, this license does not require NEW Hydro to develop a recreation brochure.

⁶⁷ *Id.* at 74-75.

⁶⁸ *Id.* at 75.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

121. The Commission collects annual charges from licensees for administration of Part I of the FPA. Article 201 provides for the collection of these annual charges.

Exhibit A Project Description

122. Commission regulations require that licensees file an Exhibit A that is a description of the project. The Exhibit A project description filed by NEW Hydro on February 28, 2013, does not include: (1) the project's fish passage facilities; (2) the correct lengths of the project's transmission lines; and (3) the crest length of the side overflow spillway at the downstream end of the power canal adjacent to the powerhouse. In addition, the Exhibit A: (1) provides elevations that are inconsistent with those contained in a June 5, 2015 filing; (2) incorrectly identifies the fishway at the Menominee dam as abandoned; and (3) provides an incorrect width to the abandoned fishway at the Park Mill dam. Therefore, Exhibit A is not approved. Article 202 requires NEW Hydro to file a revised Exhibit A.

Exhibit F Drawings

123. Commission regulations require that licensees file Exhibit F drawings that consist of general design drawings of the principal project works. The drawings must show all major project structures in sufficient detail to provide a full understanding of the project.⁶⁹ The Exhibit F drawings filed by NEW Hydro on February 28, 2013, do not: (1) include the project's fish passage facilities; and (2) provide profiles (side views) of the Park Mill dam, including the dam at the entrance to the power canal. In addition, the Exhibit F drawings: (1) provide an incorrect profile of the Menominee dam;⁷⁰ and (2) incorrectly label the fishway at the Menominee dam as abandoned. Therefore, Exhibit F is not approved. Article 203 requires NEW Hydro to file revised Exhibit F drawings.

Exhibit G Drawings

124. The Exhibit G-1, G-2, and G-3 drawings filed by NEW Hydro on February 28, 2013, do not include: (1) the project's fish passage facilities; (2) the map

⁶⁹ 18 C.F.R. § 4.41(g)(1) (2017).

⁷⁰ The profile shows flashboards on top of the dam. The flashboards have been eliminated and the crest of the spillway raised.

projection; and (3) a sketch showing the entire project that indicates the portion of the project depicted on that sheet. Also, for the Exhibit G-1 drawing, the project boundary line is not distinguishable from the other lines. In addition, the Exhibit G-2 and G-3 drawings: (1) include a horizontal scale that is incorrect because it uses meters but is labeled as feet; (2) provide a project boundary line type in the legends that does not match the line type used on the drawings; (3) do not identify the vertical datum; (4) do not include the contour elevations or the courses and distances that describe the project boundary; and (5) do not include the reference point coordinates. Therefore, the Exhibit G drawings are not approved. Article 204 requires NEW Hydro to file revised Exhibit G drawings.

Amortization Reserve

125. The Commission requires that for new major licenses, non-municipal licensees set up and maintain an amortization reserve account upon license issuance. Article 205 requires the establishment of the account.

Headwater Benefits

126. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 206 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

Use and Occupancy of Project Lands and Waters

127. Requiring a licensee to obtain prior Commission approval for every use and occupancy of project land would be unduly burdensome. Therefore, Article 411 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.

H. Modification of Project Facilities

128. Article 301 requires the licensee to coordinate with the Commission's Division of Dam Safety and Inspections – Chicago Regional Office about any proposed modifications resulting from environmental requirements that would affect project works, dam safety, or project operation.

STATE AND FEDERAL COMPREHENSIVE PLANS

129. Section 10(a)(2)(A) of the FPA⁷¹ 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.⁷² Under section 10(a)(2)(A), Commission staff identified 13 comprehensive plans that are relevant to this project.⁷³ No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

130. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,⁷⁴ Commission staff evaluated NEW Hydro's record as a licensee for these areas: (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. This order adopts staff's findings in each of the following areas.

A. Conservation Efforts

131. Section 10(a)(2)(C) of the FPA⁷⁵ requires the Commission to consider the applicant's electricity consumption improvement program, including its plans, performance, 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. NEW Hydro sells all project power to Wisconsin Public Service Company, which is responsible for promoting conservation of electricity use by its customers. Given the limits of its ability to influence users of electricity generated by the project, NEW Hydro complies with section 10(a)(2)(C) of the FPA.

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

132. Based on a review of NEW Hydro's compliance with the terms and conditions of the existing license, NEW Hydro's overall record of making timely filings and

⁷¹ 16 U.S.C. § 803(a)(2)(A) (2012).

⁷² Comprehensive plans are defined at 18 C.F.R. § 2.19 (2017).

⁷³ The list of applicable plans can be found in section 5.4 of the EA.

⁷⁴ 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2012).

⁷⁵ *Id.* § 803(a)(2)(C).

compliance with its license is satisfactory. Therefore, NEW Hydro can satisfy the conditions of a new license.

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

133. Commission staff reviewed NEW Hydro's record of management, operation, and maintenance of the Menominee and Park Mill Project pursuant to the requirements of Part 12 of the Commission's regulations and the Commission's Engineering Guidelines. Staff concludes that the dams and other project works are safe and that there is no reason to believe that NEW Hydro cannot continue to safely manage, operate, and maintain these facilities under a new license.

D. Ability to Provide Efficient and Reliable Electric Service

134. Commission staff reviewed the NEW Hydro'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 NEW Hydro maintains formal procedures for assuring satisfactory operation of the generating units and associated equipment to ensure they continue to perform in an optimal manner and to minimize effects on energy production. Therefore, NEW Hydro is capable of operating the project to provide efficient and reliable electric service in the future.

E. Need for Power

135. To assess the need for power, staff looked at the needs in the assessment area in which the project is located. The Menominee and Park Mill Project serves the Midcontinent Independent System Operator, Inc. (MISO), a sub-region entity of the Midwest Reliability Organization (MRO), a region of the North American Electric Reliability Corporation (NERC), by providing 4.348 MW of capacity for local and regional power demand.

136. NERC annually forecasts electrical supply and demand nationally and regionally for a 10-year period. NERC's 2016 Long-Term Reliability Assessment designates summer as the peak season for the reserve margin in the MISO assessment area. The anticipated reserve margin is forecasted to range from 18.09 percent in 2017 to 9.07 percent in 2026. The MISO assessment area is forecasted to meet MISO's reference margin level of 15.2 percent through the year 2021, but fall below the reference margin level beginning in 2022 and continuing through 2026. Therefore, the project's power will help meet the regional need for power.

F. Transmission Services

137. The project includes a 4,630-foot-long, 24.9-kV overhead transmission line that connects the Park Mill development transformer to the regional grid and a 568-foot-long, 24.9-kV underground transmission line that connects the Menominee development

transformer to the regional grid. NEW Hydro proposes no changes that would affect its own or other transmission services in the region.

G. Cost Effectiveness of Plans

138. NEW Hydro does not propose to change project operation or add new project facilities, but it does propose to develop and implement a number of plans to enhance environmental resources affected by the project. Based on NEW Hydro'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

139. NEW Hydro provided opportunity for public involvement in the development of its application for a new license for the Menominee and Park Mill Project. In addition, during the previous license period, NEW Hydro provided recreation facilities to enhance the public use of project land. NEW Hydro uses the project to help meet local power needs.

PROJECT ECONOMICS

140. 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 Corporation*,⁷⁶ 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. In applying this analysis to the Menominee and Park Mill Project, staff considered three options: a no-action alternative, NEW Hydro's proposal, and the project as licensed herein.⁷⁷

141. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 4.348 MW and generates an average of

⁷⁶ 72 FERC ¶ 61,027 (1995).

⁷⁷ Details of Commission staff's economic analysis for the project as licensed herein, and for the other two alternatives, are included in section 4.0 of the EA.

28,000 MWh of electricity annually. The average annual project cost is about \$1,060,360, or \$37.87/MWh. When an estimate of average generation is multiplied by the alternative power cost of \$61.26/MWh,⁷⁸ the total value of the project's power is \$1,715,280 in 2017 dollars. To determine whether the proposed project is currently economically beneficial, the project's cost is subtracted from the value of the project's power. Therefore, the project costs \$654,920, or \$23.39/MWh, less to produce power than the likely alternative cost of power.

142. As proposed by NEW Hydro, the levelized annual cost of operating the project is \$1,108,520, or \$39.59/MWh. The proposed project would generate an average of 28,000 MWh of energy annually. The estimate of average generation is multiplied by the alternative power cost of \$61.26/MWh, a total value of the project's power is \$1,715,280, in 2017 dollars. Therefore, in the first year of operation, the project would cost \$606,760, or \$21.67/MWh, less than the likely alternative cost of power.

143. As licensed herein with staff measures, the levelized annual cost of operating the project is \$1,085,560, or \$38.77/MWh. The proposed project would generate an average of 28,000 MWh of energy annually. The estimate of average generation is multiplied by the alternative power cost of \$61.26/MWh, a total value of the project's power is \$1,715,280, in 2017 dollars. Therefore, in the first year of operation, the project would cost \$629,720, or \$22.49/MWh, less than the likely alternative cost of power.

144. 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

145. Sections 4(e) and 10(a)(1) of the FPA⁷⁹ require the Commission to give equal consideration to the purposes of power development and of energy conservation; the

⁷⁸ The energy portion of the power cost (\$31.45/MWh of the \$61.26 per MWh) is based on the *Annual Energy Outlook 2017* published by the Energy Information Administration, May 2017 (\$31.45/MWh). The capacity portion of the power value was based on the annual cost of the hydro-equivalent combined-cycle capacity, which staff estimated to be about \$192/kilowatt-year.

⁷⁹ 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

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 must 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.

146. The EA for the 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 Menominee and Park Mill 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.

147. Based on Commission staff's independent review and evaluation of the Menominee and Park Mill Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the project as licensed herein, is best adapted to a comprehensive plan for improving or developing the Menominee River.

148. This alternative is selected because: (1) issuance of a new license will serve to maintain a beneficial and dependable source of electric energy; (2) the required environmental measures will protect or enhance fish and wildlife resources, water quality, recreation, and cultural resources; and (3) the 4.348 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

149. Section 15(e) of the FPA⁸⁰ 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. On October 19, 2017, the Commission established a 40-year default license term policy for original and new licenses, effective as of October 26, 2017.⁸¹ The Policy Statement provides for exceptions to the 40-year default license term under certain circumstances: (1) establishing a shorter or longer license term if necessary to coordinate license terms for projects located on the same river basin; (2) deferring to a shorter or longer license term explicitly agreed to in a generally-supported comprehensive settlement agreement; and (3) establishing a longer license term upon a showing by the

⁸⁰ 16 U.S.C. § 808(e) (2012).

⁸¹ *Policy Statement on Establishing License Terms for Hydroelectric Projects*, 161 FERC ¶ 61,078 (2017) (Policy Statement); 82 Fed. Reg. 49,501 (Oct. 26, 2017).

license applicant that substantial voluntary measures were either previously implemented during the prior license term, or substantial new measures are expected to be implemented under the new license.

150. Because none of the above exceptions apply in this case, a 40-year license for the Menominee and Park Mill Project is appropriate.

The Director orders:

(A) This license is issued to North East Wisconsin Hydro, LLC (licensee), to operate and maintain the Menominee and Park Mill Hydroelectric Project, effective June 1, 2018, for a period of 40 years. 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 the 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 that include:

Park Mill Development

The Park Mill development consists of: (a) a 539-acre reservoir having a gross storage capacity of 3,788 acre-feet at a normal maximum water surface elevation of 610.43 feet National Geodetic Vertical Datum of 1929 (NGVD 29); (b) a 538.58-foot-long, 22-foot-high concrete gravity dam consisting of, from north to south: (i) a 48.5-foot-long overflow spillway with a crest elevation of 607.93 feet NGVD 29 that is topped with 3-foot-high flashboards; (ii) a 168.58-foot-long spillway that is composed of seven 20-foot-wide, 13-foot-high Tainter gates with a sill elevation of 597.93 feet NGVD 29; (iii) an 18-foot-long abandoned fishway with a crest elevation of 610.93 feet NGVD 29; and (iv) a 303.5-foot-long overflow spillway with a crest elevation of 607.93 feet NGVD 29 that is topped with 3-foot-high flashboards; (c) a 100-foot-long, 22-foot-high concrete gravity dam consisting of five 16-foot-wide, 16-foot-high Tainter gates with a sill elevation of 595.23 feet NGVD 29 located at the entrance to the power canal; (d) a 2,300-foot-long power canal formed by a 2,400-foot-long, 22-foot-high earthen embankment with a 16-foot top width; (e) a 58.5-foot-long side overflow spillway with a crest elevation of 610.13 feet NGVD 29 and topped with 1-foot-high flashboards, located at the downstream end of the power canal; (f) 19.85-foot-high intake trashracks inclined 82.9 degrees from the horizontal with a 1.5-inch clear opening; (g) a 159-foot-long, 74.5-foot-wide powerhouse area, which is located within a paper manufacturing building owned by Kimberly Clark Corporation, with an operating head of 16 feet; (h) one 300 horsepower (HP) (0.225 megawatt (MW)) vertical-axis Kaplan turbine, coupled to a 0.225-MW generator; two 800 HP (0.600 MW) horizontal-axis

Francis turbines, each coupled to a 0.420-MW generator; two 700 HP (0.525 MW) vertical-axis Kaplan turbines, each coupled to a 0.430-MW generator; and one 465 HP (0.349 MW) vertical-axis Kaplan turbine, coupled to a 0.450-MW generator; for a total installed capacity of 2.274 MW; (i) a 2,200-foot-long bypassed reach; (j) a three phase 3,000 kilovolt ampere (kVA) 480 / 24,900 volt (V) step-up transformer; (k) a 4,630-foot-long, 24.9-kilovolt (kV) overhead transmission line to connect the project transformer to the grid; (l) a fish passage facility located at the downstream end of the power canal, consisting of a fish guidance rack, guidance ramp, and a fish bypass structure; and (m) appurtenant facilities.

Menominee Development

The Menominee development consists of: (a) a 143-acre reservoir having a gross storage capacity of 350 acre-feet at a normal maximum water surface elevation of 593.53 feet NGVD 29; (b) a 486.5-foot-long, 24-foot-high dam consisting of, from north to south: (i) an 8-foot-wide downstream fish passage consisting of a guidance ramp and fish bypass structure; (ii) a 150.5-foot-long concrete gravity overflow spillway with a crest elevation of 593.93 feet NGVD 29; (iii) a 293-foot-long concrete gravity spillway that is composed of twelve 20-foot-wide, 12-foot-high Tainter gates with a sill elevation of 582.43 feet NGVD 29; (iv) a 15-foot-long concrete gravity non-overflow section with a top elevation of 598.43 feet NGVD 29; and (v) a 20-foot-long earthen embankment with a concrete core; (c) 25-foot-high intake trashracks inclined 37 degrees from the horizontal with 2-inch clear bar spacing at units #8 and #9 (north) and 17-foot-high intake trashracks inclined 71.6 degrees from the horizontal with 1-inch clear bar spacing at units #4 and #5 (south); (d) a 204-foot-long concrete and brick structure integral to the north end of the dam that includes a 85-foot-long, 50.5-foot-wide powerhouse (north) and a 68-foot-long, 34-foot-wide powerhouse (south), with an operating head of 12 feet; (e) two 1,130 HP (0.848 MW) vertical-axis Kaplan turbines, each coupled to a 0.662-MW generator (north), and two 500 HP (0.375 MW) vertical-axis Kaplan turbines (south), each coupled to a 0.458-MW generator; for a total installed capacity of 2.074 MW; (f) a three phase 3,000-kVA 4,160 / 24,900 V step-up transformer; (g) a 568-foot-long, 24.9-kV underground transmission line to connect the project transformer to the grid; (h) a fish passage facility located in the powerhouse providing fish passage upstream of the Park Mill dam using a fish transport tank that is towed by a transport vehicle consisting of an attraction flow facility, a guidance ramp, a fish lift (a fish elevator), and fish sorting and holding tanks; and (i) appurtenant facilities.

(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, F and G filed as part of the application for license do not conform to Commission regulations and are not approved.

(D) This license is 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. 1792 *et seq.*), as reproduced at the end of this order, and the following additional articles:

Article 201. Administrative Annual Charges. The licensee must pay the United States annual charges, effective the first day of the month in which the license is issued, 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 4.348 megawatts.

Article 202. Exhibit A. Within 90 days of the date of issuance of this license, the licensee must file for Commission approval, a revised Exhibit A that includes the following:

(1) Park Mill Development – a description of the downstream fish passage facility from the power canal to the Menominee reservoir;

(2) Menominee Development – a description of the downstream fish passage facility from the Menominee reservoir to the Menominee tailwater;

(3) Menominee Development – a description of the upstream fish lift facility;

(4) Park Mill Development – the 0.88-mile-long segment of the overhead transmission line from the step-up transformer to the regional grid;

(5) Menominee Development – the 0.11-mile-long segment of the underground transmission line from the step-up transformer to the regional grid;

(6) at each development, elevations that are consistent with those contained in the June 5, 2015 filing;

(7) Park Mill Development – the crest length of the side overflow spillway located at the downstream end of the power canal adjacent to the powerhouse;

(8) Menominee Development – removal of “abandoned” from the description of the fishway at the Menominee dam; and

(9) Park Mill Development – a corrected width to the abandoned fishway at the Park Mill dam.

Article 203. Exhibit F Drawings. Within 45 days of the date of issuance of this license, the licensee must file for Commission approval, revised Exhibit F drawings that include the following:

(1) Park Mill Development – the downstream fish passage facility from the power canal to the Menominee reservoir;

(2) Menominee Development – the downstream fish passage facility from the Menominee reservoir to the Menominee tailwater;

(3) Menominee Development – the upstream fish lift facility;

(4) Park Mill Development – profiles (side views) of the Park Mill dam, which includes the dam at the entrance to the power canal;

(5) Menominee Development – a corrected profile (side view) of the Menominee dam to reflect the elimination of the flashboards and increased elevation of the spillway crest; and

(6) Menominee Development – correct the labeling of the fishway at the Menominee dam to remove “abandoned.”

The Exhibit F drawings must comply with sections 4.39 and 4.41(g) of the Commission’s regulations.

Article 204. Exhibit G Drawings. Within 90 days of the date of issuance of this license, the licensee must file for Commission approval, revised Exhibit G drawings that include the following:

(1) Park Mill Development – the downstream fish passage facility from the power canal to the Menominee reservoir;

(2) Menominee Development – the downstream fish passage facility from the Menominee reservoir to the Menominee tailwater;

(3) Menominee Development – the upstream fish lift facility;

(4) on each Exhibit G drawing, a description of the map projection used;

(5) on each Exhibit G drawing, a sketch showing the entire project that indicates the portion of the project depicted on that sheet;

(6) on the Exhibit G-1 drawing, make the project boundary distinguishable from the other lines;

(7) on the Exhibit G-2 and G-3 drawings, correct the horizontal scale;

(8) on the Exhibit G-2 and G-3 drawings, identify the vertical datum;

(9) on the Exhibit G-2 and G-3 drawings, include the contour elevations or the courses and distances that describe the project boundary;

(10) on the Exhibit G-2 and G-3 drawings, include the reference point coordinates; and

(11) on the Exhibit G-2 and G-3 drawings, make the project boundary line type in the legends match the line type used on the drawings.

The Exhibit G drawings must be stamped by a registered land surveyor and comply with sections 4.39 and 4.41 (h) of the Commission’s regulations.

Article 205. 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 must be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee must 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 must deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee must set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee must 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 must 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 must be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity must 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 206. 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 must 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 will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. Project Modification Resulting From Environmental Requirements. If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections – Chicago Regional Engineer. Consultation must 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 401. Project Operation. The licensee must operate the project in a run-of-river mode. In doing so, the licensee must at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that all

outflows approximate the sum of inflows to the project on an instantaneous basis. While operating run-of-river, the licensee must maintain the water surface elevation of the Park Mill reservoir at elevation 610.43 feet National Geodetic Vertical Datum of 1929 (NGVD 29) ± 0.3 foot and maintain the water surface elevation of the Menominee reservoir at 595.53 feet NGVD 29 ± 0.3 foot.

Project operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon mutual agreement between the licensee and U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, Michigan Department of Natural Resources, and Michigan Department of Environmental Quality. If operation is so modified, the licensee must notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. Operation Compliance Monitoring Plan. Within six months of the date of issuance of this license, the licensee must file with the Commission, for approval, an Operation Compliance Monitoring Plan that describes how the licensee will document compliance with the operational requirements of this license.

The plan must include, but not necessarily be limited to, the following:

- (1) a detailed description of how the licensee will document compliance with:
 - (a) the operational requirements of the license, as required by Article 401, (b) the flows needed to operate the fish passage facilities, as required by Article 405, and (c) the provisions of the Reservoir and Park Mill Power Canal Drawdown Plan, as required by Article 404;
 - (2) a provision to install, operate, and maintain: (a) an automatic water level recorder and staff gage immediately upstream of the Park Mill dam in the Park Mill reservoir and immediately upstream of the Menominee dam in the Menominee reservoir with the staff gage at each reservoir clearly marked to show the minimum reservoir elevation, as required by Article 401;
 - (3) a description of the specific locations of all gages or other measuring devices;
 - (4) a description of the procedures for maintaining and calibrating monitoring equipment;
 - (5) a description of the frequency of recording for each gage or other measuring device;
 - (6) a provision to maintain a daily log of project operation;
 - (7) the protocols or methods to be used for reporting the monitoring data to the Commission;
 - (8) a provision for reporting to the Commission as soon as possible, but no later than 10 days after discovery, deviations from the operational requirements of the license, along with proposed actions that will be taken to avoid reoccurrence of the deviation; and

(9) an implementation schedule.

The licensee must prepare the plan after consultation with U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, Michigan Department of Natural Resources. The licensee must 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 agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must 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 must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 403. *Woody Debris and Trash Management.* The licensee must implement the following measures to manage woody debris and trash removed from the project trashracks.

At the Park Mill development:

- (1) dispose of trash and man-made materials;
- (2) dispose of large woody debris in an offsite, upland location;
- (3) dispose of aquatic vegetation and other organic materials in an offsite, upland location; and
- (4) no materials removed from the trashracks should be released into the downstream Menominee Reservoir.

At the Menominee development:

- (1) dispose of trash and man-made materials;
- (2) dispose of large woody debris in an offsite, upland location; and
- (3) place small pieces of woody debris, aquatic vegetation, and other organic materials into the Menominee River downstream of the Menominee dam.

Article 404. *Reservoir and Park Mill Power Canal Drawdown Plan.* Within six months of license issuance, the licensee must file for Commission approval, a reservoir and Park Mill power canal drawdown plan for emergency and planned reservoir and Park Mill power canal drawdowns.

The plan must include, but not necessarily be limited to, the following:

(1) provisions to limit the frequency of scheduled non-emergency drawdowns of the Menominee or Park Mill reservoirs and Park Mill power canal to those requiring maintenance and repairs of project facilities;

(2) identification of the maximum drawdown rate, drawdown depth, and refill rates that will be implemented during any drawdown (i.e., non-emergency or emergency);

(3) a description of the circumstances that would necessitate a non-emergency reservoir or power canal drawdown;

(4) an estimate of the frequency and duration of non-emergency reservoir or power canal drawdowns in an average year;

(5) a plan to address any stranding, removal, and disposition of any fish collected from any salvage operation that may occur, particularly for the power canal;

(6) a provision that ensures any non-emergency reservoir or power canal drawdowns are scheduled during periods that minimize the effects on the sensitive lifestages of species in the project-affected waters (e.g., fish spawning seasons, lake sturgeon migrations, and waterfowl nesting activities);

(7) a provision to notify Michigan Department of Natural Resources (Michigan DNR), Michigan Department of Environmental Quality (Michigan DEQ), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS) at least 90 days before the start of any planned drawdown is performed;

(8) a provision to report any emergency drawdowns to the Commission, Michigan DNR, Michigan DEQ, Wisconsin DNR, and FWS within 24 hours of any such emergency; and

(9) a provision to notify the Commission, Michigan DNR, Michigan DEQ, Wisconsin DNR, and FWS as soon as possible, but no later than 10 days after each such incident, where there is a deviation from the drawdown or reservoir refill protocols.

The plan must be developed after consultation with FWS, Wisconsin DNR, Michigan DNR, and Michigan DEQ. The licensee must 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 agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to provide recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 405. Fish Passage Operation Plan. The licensee must operate the fish passage facilities at the project by implementing the Fish Passage Operation Plan, filed on December 2, 2016. The Fish Passage Operation Plan sets operational protocols and schedules for operating and maintaining fish passage facilities, including the flows and equipment needed to operate the facilities, including the equipment used to transfer lake sturgeon collected at the fish lift for release into the Park Mill reservoir.

By February 1, annually, the licensee, after consultation with U.S. Fish and Wildlife Service, Michigan Department of Natural Resources, Wisconsin Department of Natural Resources, Michigan Hydro Relicensing Coalition, and River Alliance of Wisconsin, must review the Fish Passage Operation Plan to determine if changes to the plan are necessary. Any changes to the plan must be based on previous information gained from operating the fish passage facilities and from weather information collected on site during previous operating seasons. Within 90 days of consultation, the licensee must file a summary of the consultation, and an updated Fish Passage Operation Plan, if applicable, with the Commission. The Commission reserves the right to require changes to the plan.

Article 406. Invasive Species Monitoring Plan. Within one year of the date of issuance of this license, the licensee must file with the Commission, for approval, an invasive species management plan. Invasive species of interest include, but are not necessarily limited to, Eurasian water-milfoil, curly-leaf pondweed, and purple loosestrife. The plan must include, but not necessarily be limited to, the following:

- (1) a description of the proposed monitoring methods for invasive plant species;
- (2) the proposed frequency of monitoring;
- (3) the proposed criteria to be used to determine when control measures would be implemented; and
- (4) a schedule for filing monitoring reports with U.S. Army Corps of Engineers (Corps), Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), Michigan Department of Environmental Quality (Michigan DEQ), and the Commission.

The licensee must prepare the plan after consultation with the Corps, Michigan DNR, Wisconsin DNR, and Michigan DEQ. The licensee must 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 agencies, and specific descriptions of how the agencies are accommodated by the plan. The licensee must 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 must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is

approved. Upon Commission approval the licensee must implement the plan, including any changes required by the Commission.

Article 407. Bald Eagle Protection Measures. To protect bald eagles that are nesting within the project boundary, the licensee must:

- (1) maintain a buffer of at least 660 feet between project maintenance activities and the nest, including active and alternate nests;
- (2) restrict maintenance, including clearing or landscaping activities, during the nesting season, which occurs from January to August, if project maintenance would occur within 660 feet of a nest; and
- (3) maintain landscape buffers that screen project maintenance from the nest.

Article 408. Northern Long-Eared Bat Protection Measures. The licensee must implement the following measures to protect northern long-eared bat habitat:

- (1) avoid cutting trees equal or greater than 3 inches in diameter within the project boundary from April 1 through October 31, unless they pose an immediate threat to human life or property; and
- (2) where trees need to be removed, only remove trees between November 1 and March 31.

Article 409. Recreation Plan. Within one year of the date of issuance of this license, the licensee must file with the Commission, for approval, a revised Recreation Plan that includes the provisions of the Recreation Plan filed on February 28, 2013, with the exception of the provisions for upgrading and maintaining non-project recreation facilities that are located within the project boundary (the 18th Avenue boat launch, Mason Park, Cox Landing, and the Menominee dam tailrace fishing site) and a recreation brochure, and the following additional provisions:

- (1) continue to operate and maintain project recreation facilities, including; (a) the canoe portage at the Park Mill development; and (b) the Menominee canoe portage, 11th Avenue boat launch, and NEW Hydro Fisherman's Park and tailrace fishing site at the Menominee development;
- (2) conceptual drawings for the proposed boat dock at the 11th Avenue boat launch and interpretive signage at the recreation sites;
- (3) every six years, after consultation with Wisconsin Department of Natural Resources (Wisconsin DNR), Michigan Department of Natural Resources (Michigan DNR), National Park Service (Park Service), River Alliance of Wisconsin (River Alliance), and Michigan Hydro Relicensing Coalition (Michigan HRC), review the Recreation Plan to determine whether facility improvements or modifications are necessary, and file a summary within 90 days with the Commission;

(4) a discussion about how the needs of the disabled will be considered in the planning and design of the proposed recreation facilities; and

(5) a revised implementation schedule for all of the plan's provisions and measures.

The licensee must prepare the revised plan after consultation with Wisconsin DNR, Michigan DNR, Park Service, River Alliance, and Michigan HRC. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and accommodated by the plan. The licensee must 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 must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The licensee must not begin implementing the plan until the Commission notifies the licensee that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 410. Programmatic Agreement and Historic Properties Management Plan. The licensee must implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer for Managing Historic Properties that may be Affected by New and Amended Licenses Issuing for Continued Operation of Hydroelectric Projects in the State of Wisconsin and Adjacent Portions of the State of Michigan," executed on December 16, 1993. Pursuant to the requirements of this Programmatic Agreement, the licensee must file, within one year of license issuance, an historic properties management plan (HPMP).

The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the HPMP, the licensee must obtain approval from the Commission and the Wisconsin State Historic Preservation Officer (SHPO) and Michigan SHPO before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effects.

Article 411. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee must 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 must 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 must 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 must require multiple use and occupancy of facilities for access to project lands or waters. The licensee must also ensure that, to the satisfaction of the Commission's authorized representative, 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 must: (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-kilovolts 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 must file a copy 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 must 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 must 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 must not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee must 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 must not unduly restrict public access to project lands and 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 must 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 must not apply to any part of the public lands and reservations of the United States included within the project boundary.

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

(F) 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 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2017). 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 constitutes acceptance of this order.

Terry L. Turpin
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 may 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.

Document Content(s)

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