

158 FERC ¶ 62,079UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Gresham Municipal Utilities

Project No. 2464-015

ORDER ISSUING SUBSEQUENT LICENSE

(Issued February 7, 2017)

INTRODUCTION

1. On June 10, 2013, Gresham Municipal Utilities (Gresham) filed, pursuant to Part I of the Federal Power Act (FPA),¹ an application for a subsequent license to continue operation and maintenance of the Weed Dam Hydroelectric Project No. 2464 (Weed Project or project). The project is located on the Red River, downstream of the Village of Gresham in Shawano County, Wisconsin.² The project does not occupy federal land.
2. As discussed below, this order issues a subsequent license for the project. The project's authorized capacity being licensed is 620 kilowatts (kW).

BACKGROUND

3. The Commission issued the original license for the project on July 13, 1965,³ and that license expired on June 30, 2015. Project operation has continued pursuant to section 9(b) of the Administrative Procedures Act,⁴ pending disposition of Gresham's relicense application.
4. On April 9, 2014, the Commission issued a public notice in the Federal Register accepting the application for filing, indicating the application was ready for environmental analysis, and setting June 9, 2014, as the deadline for motions to intervene, protests, comments, recommendations, preliminary terms and conditions, and

¹ 16 U.S.C. §§ 791(a) – 825(r) (2012).

² The Red River is a navigable waterway of the United States. *See Village of Gresham, Wisconsin*, 34 F.P.C. 33 (1965). Therefore, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1)(2012), requires the project to be licensed.

³ *Village of Gresham, Wisconsin*, 34 F.P.C. 33 (1965). The original license was made effective July 1, 1965, for a period of 50 years.

⁴ 5 U.S.C. § 558 (C) (2012).

preliminary fishway prescriptions.⁵ The Wisconsin Department of Natural Resources (Wisconsin DNR) and U.S. Department of the Interior (Interior) filed notices of intervention, comments, and recommendations.⁶ No motions to intervene in opposition or protests were filed.

5. Commission staff issued an Environmental Assessment (EA) on July 21, 2016, analyzing the effects of the project and alternatives. The U.S. Environmental Protection Agency (EPA) and the Stockbridge-Munsee Community Band of Mohican Indians (Stockbridge-Munsee Tribe) filed comments on the EA.

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

PROJECT DESCRIPTION

A. Project Area

7. The Red River originates in Langlade County, near Phlox, Wisconsin, flows southeast across the Stockbridge-Munsee Tribal Reservation, through Upper Red Lake, and then into Lower Red Lake in Gresham, Wisconsin. The Weed Project is located on the southeast portion of Lower Red Lake. The Red River then flows approximately 12 miles east to its confluence with the Wolf River.

B. Project Facilities

8. The Weed Project consists of the 268-acre Lower Red Lake reservoir with a gross storage capacity of 1,200 acre-feet at a normal pool elevation of 897.2 feet National Geodetic Vertical Datum (NGVD). The reservoir is impounded by a 1,506-foot-long dam with a maximum crest elevation of 902.2 feet NGVD. The dam includes two earthen embankments, a reinforced concrete intake structure with two penstocks, a concrete spillway structure containing four Tainter gates, and an emergency spillway. Water flows to the penstocks from the reservoir via the intake structure to the project's concrete powerhouse containing a 120-kW turbine generator unit and a 500-kW turbine generator unit for a total capacity of 620 kW. Gresham provides a minimum flow of 7 cubic feet per second (cfs) to the 700-foot-long bypassed spillway channel using a 16-inch-diameter steel pipe located at the west end of the gated concrete spillway.

⁵ 79 Fed. Reg. 21,220 (April 15, 2014).

⁶ Under Rule 214(a) of the Commission's Rules of Practice and Procedure, Wisconsin DNR and Interior became parties to the proceeding upon timely filing of their notices of intervention. 18 C.F.R. § 385.214(a) (2016).

9. Project power is transported over a 100-foot-long transmission line to a project substation located directly south of the powerhouse. A more detailed description of the project appears in ordering paragraph (B)(2).

10. Project recreation facilities include: (1) Riverside Park, located on the northwest shoreline of the reservoir; (2) the Geider Road access area, located on the west shoreline of the northernmost inlet of the reservoir; and (3) the Red River walk-in site, with its entrance located immediately downstream of the project dam on the south shoreline of the Red River.

C. Project Boundary

11. The existing project boundary is delineated by contour elevation 899.2 feet NGVD along the Lower Red Lake reservoir shoreline. The project boundary also includes sections of various lengths and bearings surrounding the dam, penstock, powerhouse, transmission line, and substation.

12. Gresham proposes to modify the project boundary to enclose the Geider Road access area. At Riverside Park, Gresham proposes to remove from the project boundary athletic fields and other buildings that do not support project-related recreation opportunities or otherwise serve a project purpose. The project boundary is discussed further below.

D. Current Project Operation

13. Gresham operates the Weed Project in a run-of-river mode, such that outflow from the project approximates inflow. Therefore, there is minimal fluctuation of the reservoir water surface elevation. In operating run-of-river, Gresham targets a reservoir water surface elevation of 897.2 feet NGVD ± 3 inches⁷ through various combinations of adjustments to the turbine wicket gates and spillway Tainter gates. In addition, while diverting flow for generation, Gresham maintains a minimum flow of at least 7 cfs in the bypassed spillway channel using a steel pipe submerged within the gated concrete spillway. Gresham operates the project remotely by means of a Supervisory Control and Data Acquisition system with programmable logic control.

14. Under extreme low-flow conditions, when river inflows are 10 cfs or less, Gresham ceases project generation, and all inflow passes downstream into the project's bypassed spillway channel via the steel pipe submerged within the gated concrete spillway. Under high-flow conditions, when river inflows exceed the 7 cfs minimum flow plus the two turbines' combined hydraulic capacity of approximately 330 cfs, one or

⁷ *Gresham Municipal Utilities*, 131 FERC ¶ 62,245 (2010).

more of the spillway's four Tainter gates are opened to allow the excess flow to pass downstream into the bypassed spillway channel. The Tainter gates also pass the entire river flow when the powerhouse is taken offline for maintenance or for other reasons.

E. Proposed Environmental Measures

15. In addition to continuing to operate the project in a run-of-river mode, Gresham proposes the following environmental measures.
16. To minimize erosion in the project tailrace due to high near-bank stress resulting from flow exiting the powerhouse and due to recreational use at the Red River walk-in site, Gresham proposes to prepare an erosion management plan to describe the potential erosion factors observed in the tailrace and identify mitigation measures.
17. To protect aquatic resources, Gresham proposes to continue to provide a minimum flow of 7 cfs to the bypassed spillway channel.
18. To minimize the spread of invasive species and noxious weeds during project maintenance and operation, Gresham proposes to prepare an invasive species management plan.
19. To guide the operation and maintenance of the project's recreation facilities, Gresham proposes to prepare a recreation plan.
20. To enhance recreation, Gresham proposes to: (1) install a fishing dock and benches at the Riverside Park boat landing; and (2) develop a picnic area at the Red River walk-in site.
21. Gresham proposes to install fencing and signage at a non-project informal beach access site located downstream of the dam on the north bank of the river to eliminate use of the site due to erosion concerns, and direct recreationists to the project's Red River walk-in site, located across the river.
22. To protect cultural resources, Gresham proposes to implement the Historic Properties Management Plan (HPMP) filed on November 29, 2011.

SUMMARY OF LICENSE REQUIREMENTS

23. As summarized below, the license, which authorizes 620 kW of renewable energy, requires measures to protect or enhance environmental resources. The requirements include Gresham's proposed measures with some staff modifications and additions, as indicated below.
24. To ensure compliance with the operational requirements of this license, the license requires an operation compliance monitoring plan.

25. To protect water quality, the license requires Gresham to prepare a tailrace channel erosion management plan to monitor stream bank stability in the project tailrace and to prepare an erosion and sediment control plan for the ground-disturbing activities associated with the proposed recreation improvements.
26. To minimize the spread of invasive species during project operation and maintenance, the license requires Gresham to prepare an invasive species monitoring plan.
27. To minimize project effects on northern long-eared bat habitat, the license requires Gresham to limit tree clearing or tree removal to the period November 1 through March 31.
28. To maintain and enhance recreation resources, the license requires that the proposed recreation plan include: (1) the proposed measures at the Riverside Park and Red River walk-in site; and (2) formalizing the existing informal parking area, constructing new paths to connect the parking area with the existing canoe/kayak launch and swimming area, and installing directional signage at the Red River walk-in site.
29. To protect cultural resources, the license requires Gresham to implement the final HPMP, filed on November 29, 2011. The HPMP was developed pursuant to a statewide Programmatic Agreement (PA) for hydropower projects in Wisconsin and adjacent portions of Michigan.

WATER QUALITY CERTIFICATION

30. Under section 401(a) of the Clean Water Act (CWA),⁸ the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state certifying agency either has issued a water quality certification (certification) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification must become a condition of any federal license that authorizes construction or operation of the project.⁹
31. On May 9, 2014, Gresham applied to Wisconsin DNR for certification for the Weed Project. Wisconsin DNR received the certification application on May 12, 2014. To date, Wisconsin DNR has not acted on the request. Therefore, because Wisconsin

⁸ 33 U.S.C. § 1341(a)(1) (2012).

⁹ *Id.* § 1341(d).

DNR did not act within 1 year from the receipt of the request, certification is deemed waived.¹⁰

COASTAL ZONE MANAGEMENT ACT

32. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),¹¹ 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.

33. By letter filed December 2, 2013, the Wisconsin Coastal Management Program stated that because the project is located outside of the state-designated coastal management zone and unlikely to affect coastal resources, a coastal zone consistency review is not required.

SECTION 18 FISHWAY PRESCRIPTIONS

34. Section 18 of the FPA¹² provides that the Commission must require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of Commerce or the Secretary of the Interior as appropriate.

35. By letter filed June 4, 2014, Interior requested that the Commission reserve authority to prescribe fishways. Consistent with Commission policy, Article 403 of the license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Weed Project.

THREATENED AND ENDANGERED SPECIES

36. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)¹³ requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

¹⁰ *Id.* § 803(a)(2)(B).

¹¹ *Id.* § 1456(c)(3)(A).

¹² 16 U.S.C. § 811 (2012).

¹³ *Id.* § 1536(a).

37. By letter filed May 21, 2014, U.S. Fish and Wildlife Service (FWS) identified four federally-listed species occurring within Shawano County: (1) the threatened northern long-eared bat (*Myotis septentrionalis*); (2) the endangered snuffbox mussel (*Epioblasma triquetra*); (3) the endangered Karner blue butterfly (*Lycaeides melissa samuelis*); and (4) a non-essential experimental population of the whooping crane (*Grus americana*).¹⁴ According to FWS's Information, Planning, and Conservation System, the endangered gray wolf (*Canis lupus*) also occurs within Shawano County.

38. Staff determined in the EA¹⁵ that licensing the project will have no effect on the whooping crane, Karner blue butterfly, snuffbox mussel, or gray wolf because each species requires specialized habitat that either does not occur within the project boundary or would not be affected by project-related activities. Therefore, no further consultation under the ESA is required for these species.

39. Gresham proposes to manage the tree berm¹⁶ at the Red River walk-in site to maintain views from the access site to and from the river. Tree clearing associated with this proposed maintenance has the potential to affect habitat that could be used for summer roosting by the northern long-eared bat. Staff determined in the EA¹⁷ that licensing the project with its recommended measure to limit tree clearing or tree removal to the period November 1 through March 31 is not likely to adversely affect the northern long-eared bat. FWS concurred with this finding by letter filed August 24, 2016. Therefore, no further action under the ESA is required for these species. Article 407

¹⁴ Section 10(j) of the ESA authorizes listed species to be released as experimental populations outside their currently occupied range to further species conservation. 16 U.S.C. § 1539(j) (2012). A “nonessential experimental population” is a reintroduced population whose loss would not be likely to appreciably reduce the likelihood of survival of the species in the wild. *Id.* § 1539(j)(2)(B)-(C). For section 7 consultation purposes, section 10(j) of the ESA requires that any “nonessential experimental population” located outside a National Park or National Wildlife Refuge System unit be treated as a proposed species. *Id.* § 1539(j)(2)(C)(i). On June 26, 2001, the FWS reintroduced whooping cranes (*Grus americana*) as a nonessential experimental population into historic habitat in the eastern United States with the intent to establish a migratory flock that would summer and breed in Wisconsin and winter in west-central Florida. *See* 66 Fed. Reg. 33,903 (June 26, 2001).

¹⁵ *See* EA at 64-66.

¹⁶ The tree berm is a linear strip of trees, approximately 20-30 feet wide, located along the bank on the southeast side of the Red River walk-in site.

¹⁷ *See* EA at 64-65.

requires the implementation of the staff-recommended bat avoidance and protection measures.

NATIONAL HISTORIC PRESERVATION ACT

40. Under section 106 of the National Historic Preservation Act (NHPA),¹⁸ and its implementing regulations,¹⁹ 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 (defined as historic properties) and 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 Office (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

41. To satisfy these responsibilities 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, 1993.²⁰ Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA.

42. The PA requires Gresham to implement its HPMP, filed on November 29, 2011, for the term of the license. Article 409 requires Gresham implement the PA and HPMP.

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

43. Section 10(j)(1) of the FPA²¹ requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,²² to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

¹⁸ 54 U.S.C. § 306108, Pub. L. No. 113-287, 128 Stat. 3188. (2016).

¹⁹ 36 C.F.R. pt. 800 (2016).

²⁰ 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 of Historic Places.

²¹ 16 U.S.C. § 803(j)(1) (2012).

²² *Id.* §§ 661 et seq.

44. On June 4, 2014, Interior filed comments and recommendations in response to the April 9, 2014 public notice that the project was ready for environmental analysis. Interior filed 17 recommendations under section 10(j). Five recommendations are outside the scope of section 10(j) and are discussed in the next section. Of the 12 recommendations that are within the scope of section 10(j), this license includes conditions consistent with five: (1) run-of-river operation (Article 401); (2) continue to release a minimum flow of 7 cfs in the bypassed spillway channel (Article 401); (3) operation compliance monitoring (Article 402); (4) install staff gages upstream and downstream of the project (Article 402); and (5) monitor invasive species (Article 406).

45. If the Commission believes that any such 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.²³ 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.

46. In the EA,²⁴ Commission staff made an initial determination that the remaining seven Interior recommendations may be inconsistent with either the substantial evidence standard of section 313(b) of the FPA or with the comprehensive planning standard of section 10(a)(1) and the public interest standard of section 4(e) of the FPA: (1) maintain the reservoir such that the target headwater elevation (i.e., 897.2 feet NGVD) does not fluctuate beyond ± 0.30 foot; (2) not fluctuate the impoundment the full ± 0.30 foot range within a 24-hour period; (3) return any deviations outside of ± 0.30 foot range to the reservoir target elevation as soon as possible; (4) as a provision of an operation compliance monitoring plan, install automatic digital water level and flow recorders both upstream and downstream of the project; (5) modify or replace the current turbines or discontinue use of the larger of the two turbines under conditions that could produce rapid or frequent fluctuations in flow downstream; (6) install trashracks with 1-inch clear horizontal spacing between the trashrack bars; and (7) maintain average normal intake approach velocities no greater than 2 feet per second.

47. By letter issued July 26, 2016, Commission staff advised Interior of its preliminary determination and attempted to resolve the apparent inconsistencies. In response, FWS,

²³ 16 U.S.C. § 803(j)(2) (2012).

²⁴ See EA at 119-124.

on behalf of Interior, sent an email to staff filed September 22, 2016, stating that it did not need a meeting and accepted staff's determinations and recommendations for the Weed Project. Therefore, the inconsistencies are resolved and the license requires the following measures: (1) maintain the reservoir at a target elevation such that the headwater elevation does not fluctuate beyond ± 0.25 foot (i.e., ± 3 inches) (Article 401); (2) report any deviations outside of the ± 0.25 foot range to the Commission and resource agencies as soon as possible, but no later than 10 days after each such incident (Article 401); and (3) as a provision of an operation compliance monitoring plan, continue to: (a) record headwater elevations using the existing ultrasonic water surface elevation sensor, (b) record turbine output, (c) calculate flows through the project, and (d) record tailwater elevations using an automatic water level recording device (Article 402).

SECTION 10(a)(1) OF THE FPA

48. Section 10(a)(1) of the FPA²⁵ 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. Interior's Recommendations

49. Interior filed five recommendations that are not within the scope of 10(j) because they are measures that either do not specifically provide for the protection, mitigation, and enhancement of fish and wildlife resources, or cannot be defined until the occurrence of future events, and therefore in essence, reserve authority to approve resource protection actions. Consequently, these recommendations are not considered under section 10(j) of the FPA, but are considered under the broad public-interest standard of section 10(a)(1).

Project Operation

50. Fluctuations in reservoir levels and flows downstream of hydropower projects have the potential to adversely affect water quality and aquatic resources by contributing to shoreline erosion; increasing water turbidity; dewatering macroinvertebrates, mussels, fish, and fish nests; and preventing the establishment of aquatic vegetation that can provide cover and forage for fish. To protect aquatic resources, Gresham proposes to continue to operate the project in a run-of-river mode and maintain a reservoir water surface elevation of 897.2 feet NGVD ± 3 inches. Interior recommends that Gresham

²⁵ 16 U.S.C. § 803(a)(1) (2012).

report any deviations outside the reservoir target elevation to FWS via email within 2 hours of discovery. As discussed in the EA,²⁶ it is unclear what added benefit such a short reporting period would have in protecting potentially affected resources. Therefore, the license does not adopt this recommendation.

51. In the EA,²⁷ staff concluded that in the event of a deviation from run-of-river operation, returning to run-of-river operation first, and then contacting the resource agencies and the Commission as soon as possible, but no later than 10 days after the deviation, would enable Gresham to focus its efforts on resolving any such issue while still providing notification. Therefore, Article 401 requires these deviation reporting measures.

52. Interior recommends that Gresham consult with the resource agencies prior to any planned reservoir operations outside of the reservoir target elevation range. Consistent with the Commission's general practice, Article 401 allows the licensee to modify the target reservoir elevation range for short periods upon mutual agreement among the licensee and the resource agencies.

53. Interior recommends that, as a provision of an operation compliance monitoring plan, Gresham provide flow information on a public website. Interior also recommends that Gresham make the flow information available in electronic format upon request. Providing flow information on a public website is unnecessary at this project for our compliance purposes or for recreation-related reasons; therefore, the license does not require this recommended measure. However, in the EA,²⁸ staff concluded that an operation compliance monitoring plan with a provision for Gresham to provide compliance data (e.g., headwater and tailwater elevations) in electronic format to the resource agencies and the Commission upon request, would assist the Commission in verifying compliance with the operational requirements of any license issued for the project. Article 402 requires this measure.

²⁶ See EA at 108.

²⁷ See EA at 108 and 109.

²⁸ See EA at 105.

Invasive Species

54. The invasive plant species Eurasian watermilfoil and curly-leafed pondweed have been documented in the project reservoir.²⁹ Such invasive plant species can outcompete other more desirable aquatic species and can affect access to recreational facilities.

55. Gresham proposes to develop and implement an invasive species management plan to minimize the spread of invasive species during project operation and maintenance.

56. Interior recommends that Gresham develop measures to control the spread of invasive species at the project. In its comments on the EA, EPA recommends that Commission staff clarify whether measures of success will be included in the invasive species monitoring plan. EPA also encourages coordination with Wisconsin DNR to ensure that appropriate methods are included in the plan. Finally, in comments on the EA, the Stockbridge-Munsee Tribe states that the EA does not contain a management plan for Eurasian milfoil and curly pondweed.

57. In the EA,³⁰ staff recommended an invasive species monitoring plan. However, there is currently no documented significant adverse effect of invasive species on fish and wildlife or public access to recreation at the project; therefore, measures for the control of invasive species and measures of success are not being required. However, the invasive species monitoring plan required by Article 406 requires measures to mitigate the effects of invasive species if subsequent monitoring indicates that control is needed.

B. Communication/Consultation Plan

58. Wisconsin DNR recommends that Gresham prepare a communication/consultation plan to consult with the resource agencies on all aspects of hydroelectric operation and management that have the potential to affect natural resources. The plans related to fish and wildlife resources required by this license include provisions for consulting with the resources agencies. Therefore, a requirement to prepare an additional communication/consultation plan is unnecessary and is not included in this license.

C. Tailrace Channel Erosion

59. Gresham has observed erosion of the tailrace channel stream banks that it attributes, in part, to project operation. To limit the amount of sediment entering the

²⁹ See EA at 58.

³⁰ See EA at 105 and 106.

water, protect lands adjacent to the channel bank, and protect water quality and aquatic habitat, Gresham proposes to develop an erosion management plan.³¹ In the EA,³² staff determined that the erosion of the tailrace channel stream banks was due to high near-bank stress resulting from flow exiting the powerhouse and to recreational use at the Red River walk-in site. In the EA,³³ staff recommended a tailrace channel erosion management plan to describe measures that would be used to mitigate areas of stream bank determined to be unstable. In its comments on the EA, EPA recommends that the license require: (1) a schedule to develop and implement the tailrace channel erosion management plan; (2) Gresham consult with Wisconsin DNR when developing the plan; (3) that any equipment be cleaned before entering and leaving the site; and (4) that eroded areas be planted with native species as soon as practicable. Because there are currently no documented significant adverse effects of invasive plant species on fish and wildlife or public access to recreation, EPA's recommendation to require the cleaning of any equipment before entering and leaving the site is not included as a requirement of the tailrace channel erosion management plan. Article 404 requires that the tailrace channel erosion management plan include an implementation schedule, consultation with Wisconsin DNR, and the preferential use of native vegetation.

D. Construction Erosion and Sediment Control

60. Constructing the proposed recreation facility enhancements at the Red River walk-in site required by Article 408 will involve land-disturbing activities that could cause localized soil erosion and adversely affect water quality in the Red River. In the EA,³⁴ staff recommended developing an erosion and sediment control plan that, when implemented, would minimize soil and sediment runoff into the Red River during construction of these improvements. In its comments on the EA, EPA recommends that the license include: (1) a schedule to develop and implement the erosion and sediment control plan; (2) a requirement that Gresham consult with Wisconsin DNR when developing the plan; and (3) a requirement that any equipment is cleaned before entering and leaving the site. Because there are currently no documented significant adverse effects of invasive plant species, EPA's recommendation to require the cleaning of any equipment before entering and leaving the site is not included as a requirement of the

³¹ This order refers to the erosion management plan as a tailrace channel erosion management plan to better reflect its purpose.

³² See EA at 25.

³³ *Id.*

³⁴ See EA at 26.

erosion and sediment control plan. Article 405 requires that the erosion and sediment control plan include an implementation schedule and consultation with Wisconsin DNR.

E. Snuffbox Mussel

61. There are known populations of the federally endangered snuffbox mussel in Wisconsin; however, they are small, localized, and generally geographically isolated from one another.

62. In comments on the EA, the Stockbridge-Munsee Tribe states that it disagrees with staff's assessment that continued operation of the project with staff's recommended measures would have no effect on the endangered snuffbox mussel. The Stockbridge-Munsee Tribe states that the presence of the dam and project operation over the past decade have contributed to the reduction of the species and that the absence of snuffbox mussels from the mussel surveys conducted along the Red River is not proof that this species does not occur in the project area.

63. As discussed in the EA,³⁵ there are no historical records of snuffbox mussels occurring in the Red River, and Wisconsin DNR's recent mussel survey did not document any live specimens, freshly dead specimens, or relic shells of this species. Therefore, there is no need to change staff's conclusion that continued operation of the project would have no effect on this species.

F. Bald Eagle Management and Conservation

64. Wisconsin DNR recommends that Gresham comply with FWS's National Bald Eagle Management Guidelines and Conservation Measures when operating and maintaining the project. In the EA,³⁶ staff concluded that because no eagles or nesting sites have been observed in the project area, project operation and maintenance would not affect bald eagles. Therefore, this license does not require the recommended bald eagle management and conservation measures.

G. Recreation Plan

65. Fishing and boating are popular activities in the project area, and the project's recreation facilities (Riverside Park, Geider Road access area, and the Red River walk-in site) support these activities. To enhance recreation opportunities at the project, Gresham proposes to: (1) continue operating and maintaining the project recreation facilities

³⁵ See EA at 64 and 66.

³⁶ See EA at 111-112.

Riverside Park the Geider Road access area, and the swimming area, canoe/kayak put-in site, and parking area at the Red River walk-in site; (2) continue maintaining the tree berm at the Red River walk-in site; (3) install a new fishing dock and benches at the Riverside Park boat landing; and (4) develop a picnic area at the Red River walk-in site. Gresham also proposes to prepare a recreation plan for the project, but did not propose any specific measures to be included in the plan. In the EA,³⁷ staff determined that Gresham's proposed recreation measures would enhance recreation opportunities at the project and recommended that they be required in any new license that may be issued. Therefore, Article 408 requires Gresham to prepare a recreation plan that includes the proposed provisions.

66. Recreationists currently are causing shoreline erosion at an informal beach access site located within the project boundary on the north shore directly across from the Red River walk-in site. The informal site is not a designated project recreation facility. To address this issue, Gresham proposes, as a provision of its recreation plan for the project, to install fencing and signage around the site.

67. In comments on the EA, EPA recommends that the recreation plan include additional information on the signage proposed for the informal beach access site. To promote compliance and facilitate revegetation of the closed informal beach access area, EPA recommends the signage explain that the site is closed for revegetation.

68. In the EA,³⁸ staff concluded that closing the informal use site would permanently eliminate recreation use of the informal beach access area; however, the closure would enable the eroded area to stabilize naturally overtime, reducing the potential for erosion into the river. Therefore, as a component of the recreation plan, Article 408 requires Gresham to close the site and provide signage to explain the site closure and redirect recreationists to the Red River walk-in site.

69. Whitewater boaters frequently use the river downstream of the project. Interior recommends that Gresham install a stream gaging station downstream of the dam and provide flow data from the project to whitewater boaters via a public website for the purpose of informing boaters of flow conditions and planning whitewater excursions.

70. In the EA,³⁹ staff determined that because Gresham currently measures and records water levels downstream of the project using an existing pressure transducer,

³⁷ See EA at 71-73.

³⁸ See EA at 71-72.

³⁹ See EA at 107, 111.

there is no need for a separate stream gaging station. Therefore, this license does not require the measure.

71. In the EA,⁴⁰ staff added that posting water surface elevations and correlated flows on a public website would allow recreational users to efficiently plan for boating trips. However, there is a U. S. Geological Survey (USGS) gaging station (No. 04077630) located approximately 6 river miles upstream of the project that provides real-time flow information. Because the project operates in a run-of-river mode, conditions at the USGS gaging station would reflect conditions similar to those downstream of the project, thereby enabling boaters to efficiently plan trips. Therefore, this license does not require the recommended website.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

72. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA. Under the regulations currently in effect, projects with an authorized installed capacity of less than or equal to 1,500 kW, like this project, are not assessed an annual charge.

B. Exhibit F and G Drawings

73. Commission regulations require that licensees file Exhibit G drawings that include within the project boundary all principal project works and other features necessary for the operation and maintenance of the project.⁴¹ Gresham proposes to remove from the project boundary lands occupied by municipal athletic fields and other buildings at Riverside Park that do not support a project purpose. In the EA,⁴² staff agreed that the land was not needed for project purposes. As such, the land will not be included in the project boundary. Gresham also proposes to include a parking area at the Geider Road access area. In the EA,⁴³ staff determined that the parking area was necessary to access the facility. Therefore, the parking area is enclosed within in the project boundary.

⁴⁰ See EA at 107.

⁴¹ See 18 C.F.R. § 4.41(h)(2) (2016).

⁴² See EA at 75.

⁴³ *Id.*

74. The revised Exhibit G drawings filed on December 2, 2013, show the aforementioned changes, and therefore, are approved. The Exhibit F drawings are also approved. The Commission requires licensees to file sets of the approved Exhibit F and G drawings in electronic file format. Article 202 requires the filing of these drawings.

C. Permanent or Temporary Modifications

75. Article 301 requires that any permanent or temporary modification which may affect the project works or operations must be coordinated with the Commission's Division of Dam Safety and Inspections – Chicago Regional Office at the beginning of the planning and design phase. This includes modifications resulting from implementing the environmental requirements of the license.

D. Use and Occupancy of Project Lands and Waters

76. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 410 allows Gresham 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.

STATE AND FEDERAL COMPREHENSIVE PLANS

77. Section 10(a)(2)(A) of the FPA,⁴⁴ 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.⁴⁵ Under section 10(a)(2)(A), staff identified and reviewed seven comprehensive plans that are relevant to this project.⁴⁶ No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

78. In accordance with section 10 of the FPA,⁴⁷ and the Commission's regulations, Commission staff evaluated Gresham's record as a licensee with respect to the following:

⁴⁴ 16 U.S.C. § 803(a)(2)(A) (2012).

⁴⁵ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19(b) (2016).

⁴⁶ The list of applicable plans can be found in section 5.4, *Consistency with Comprehensive Plans*, of the EA for the project.

⁴⁷ 16 U.S.C. § 803 (2012).

(A) need for power, (B) safe management, operation, and maintenance of the project, and (C) conservation efforts. This order adopts staff's findings in each of the following areas.

A. Conservation Efforts

79. Section 10(a)(2)(C) of the FPA⁴⁸ requires the Commission to consider the electricity consumption improvement program of the applicant, 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. As a small power producer, Gresham does not generate sufficient revenues to undertake energy conservation programs beyond dispersing conservation information in brochures and other media encouraging its customers to conserve electricity. Staff concludes that Gresham's endeavors to conserve electricity and is making a satisfactory good faith effort to comply with section 10(a)(2)(C) of the FPA.

B. Need for Power

80. The project as licensed will have an authorized installed capacity of 620 kW, and generate approximately 1,487 megawatt-hours (MWh) annually. Project power is sold to Gresham's customers, thus reducing the amount of power that it must purchase as a municipal utility to meet its customer needs and helping meet part of the local need for power.

81. To assess the regional need for power, staff looked at the need in the operating region where the project is located. The project is located in the Midcontinent Independent System Operator (MISO) area which falls in the Midwest Reliability Organization (MRO) of the North American Electric Reliability Corporation (NERC). According to NERC's 2015 Long-Term Reliability Assessment, summer peak demand in the region for the planning reserve margin⁴⁹ is forecasted to range from 16.28 percent in 2016 to 11.08 percent in 2025. Thus, the MISO area is forecasted to meet its target reserve margin of 14.3 percent through the year 2020, but fall below the target reserve margin in years 2021-2025. Staff concludes that the project's power and contribution to the region's diversified generation mix will help meet a need for power in the region.

⁴⁸ 16 U.S.C. § 803(a)(2)(C) (2012).

⁴⁹ The planning reserve margin is approximately equivalent to the following: [(capacity minus demand) divided by demand]. The *planning reserve margin* replaced *capacity margin* for NERC assessments in 2009.

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

82. Staff has reviewed Gresham's record of management, operation, and maintenance of the project pursuant to the requirements of 18 C.F.R. Part 12 and the Commission's Engineering Guidelines. Staff concludes that the dam and other project works are safe, and that there is no reason to believe that Gresham cannot continue to safely manage, operate, and maintain these facilities under a subsequent license.

PROJECT ECONOMICS

83. In determining whether to issue a subsequent license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,⁵⁰ 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.

84. In applying this analysis to the Weed Project, Commission staff considered three options: a no action alternative, Gresham's proposal, and the project as licensed herein. Under the no action alternative, the project would continue to operate as it does now. The project has an installed capacity of 620 kW, no dependable capacity, and generates an average of 1,487 MWh of electricity annually. The average annual project cost is about \$92,754, or \$62.39/MWh. When staff multiplies its estimate of average generation by the alternative power cost of \$70.20/MWh,⁵¹ staff gets a total value of the project's power of \$104,359 in 2015 dollars. To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the value of the project's power.⁵² Therefore, the project costs \$11,606, or \$7.81/MWh, less to produce power than the likely alternative cost of power.

⁵⁰ 72 FERC ¶ 61,027 (1995).

⁵¹ The alternative power cost of \$70.20 per MWh is the cost incurred by Gresham to purchase power. This cost includes energy and capacity as well as ancillary services.

⁵² Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued July 2016.

85. As proposed by Gresham, the levelized annual cost of operating the Weed Project is \$123,459, or \$83.05/MWh. Based on the same amount of estimated average generation of 1,487 MWh and alternative power cost of \$70.20/MWh, staff gets a total value of the project's power \$104,359 in 2015 dollars. Therefore, in the first year of operation, the project would cost \$19,100, or \$12.85/MWh, more than the likely alternative cost of power.

86. As licensed herein with the staff measures, the levelized annual cost of operating the project would be about \$130,580, or \$87.84/MWh. Based on the same amount of estimated average generation of 1,487 MWh as licensed, the project would produce power valued at \$104,359 in 2015 dollars when multiplied by the \$70.20/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$26,220, or \$17.64/MWh, more than the likely cost of alternative power.

87. 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.

88. Although staff's analysis shows that the project as licensed herein would cost more to operate than the estimated cost of alternative power, it is the applicant who must decide whether to accept this license and any financial risk that it entails.

89. Although staff does not explicitly account for the effects that inflation may have on the future cost of electricity, the fact that hydropower generation is relatively insensitive to inflation compared to fossil-fueled generators is an important economic consideration for power producers and the consumers they serve. This is one reason project economics is only one of the many public interest factors the Commission considers in determining whether or not, and under what conditions, to issue a license.

COMPREHENSIVE DEVELOPMENT

90. Sections 4(e) and 10(a)(1) of the FPA⁵³ require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued must be such as in the Commission's

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

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.

91. The EA for the project contains background information, analysis of effects, and support for related license articles. Based on the record for this proceeding, including the EA and the comments thereon, licensing the Weed 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.

92. Based on Commission staff's independent review and evaluation of the Weed 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 selected and found to be best adapted to a comprehensive plan for improving or developing the Red River.

93. This alternative is selected because: (1) issuance of a subsequent license will serve to provide a beneficial, dependable, source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreation resources, and historic properties; and (3) the 620 kW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

94. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.⁵⁴ This license authorizes no new construction or new capacity, and only a minor amount of new environmental measures. Consequently, a 30-year license for the Weed Dam Hydroelectric Project is appropriate.

The Director orders:

(A) This license is issued to Gresham Municipal Utilities (licensee), for a period of 30 years, effective the first day of the month in which this order is issued to operate and maintain the Weed Dam Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference

⁵⁴ See *Consumers Power Company*, 68 FERC ¶ 61,077, at 61,383-84 (1994).

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 those lands, enclosed by the project boundary shown by Exhibit G filed on December 2, 2013.

<u>Exhibit G Drawing</u>	<u>FERC No. 2464-</u>	<u>Description</u>
G-1	1010	Project Boundary
G-2	1011	Project Boundary

(2) Project works consisting of: (a) a reservoir with a surface area of 268 acres and a gross storage capacity of 1,200 acre-feet at normal pool elevation of 897.2 feet National Geodetic Vertical Datum (NGVD); (b) a 1,506-foot-long earth and concrete dam, consisting of (i) a 700-foot-long north earth embankment with a minimum crest elevation of 902.2 feet NGVD, (ii) a 22-foot-long north concrete dam with a crest elevation of 902.2 feet NGVD, (iii) a 20-foot-long reinforced concrete intake with two bays, one for each penstock intake, having a crest elevation of 902.2 feet NGVD, (iv) a 64-foot-long concrete spillway with a crest elevation of 902.2 feet NGVD, including four steel Tainter gates each 14 feet wide by 5 feet high, (v) a 700-foot-long south earth embankment with a minimum crest elevation of 902.2 feet NGVD, and (vi) a 150-foot-long grass-lined emergency spillway located at the end of the south earth embankment having a crest elevation of 899.2 feet NGVD at its lowest section; (c) two steel trash racks protecting the intake bays, one 11.5 feet high by 8.67 feet wide and the other 10.5 feet high by 6.67 feet wide; (d) two buried steel penstocks, one 56.5 feet long with a 78-inch diameter and the other 60.5 feet long with a 48-inch diameter; (e) a 35-foot-long by 21.5-foot-wide powerhouse containing one 120-kilowatt (kW) and one 500-kW turbine-generators for a total installed capacity of 620 kW; (f) a 300-foot-long by 30-foot-wide tailrace channel; (g) a 100-foot-long, 2.4-kilovolt (kV) transmission line; (h) a 40-foot-long by 30-foot-wide substation stepping-up the generated power from 2.4 kV to 7.2 kV; and (i) appurtenant facilities.

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

Exhibit A: Amended Exhibit A filed on December 2, 2013.

Exhibit F: The following Exhibit F drawings filed on June 10, 2013:

<u>Exhibit F Drawing</u>	<u>FERC No. 2464-</u>	<u>Description</u>
Sheet F-1	1001	Project Overview and Emergency Spillway
Sheet F-2	1002	Project Layout and Typical Embankment Sections
Sheet F-3	1003	General Project Plan
Sheet F-4	1004	Intake
Sheet F-5	1005	Penstock No. 1 – 78” Diameter
Sheet F-6	1006	Penstock No. 2 – 48” Diameter
Sheet F-7	1007	Powerhouse and Superstructure
Sheet F-8	1008	Gated Concrete Spillway
Sheet F-9	1009	Bypass Pipe at West Wall of Gated Concrete Spillway

(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 described above are approved and made part of the license.

(D) The following sections of the FPA are waived and excluded from the license for this minor project:

Sections 4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is also subject to the articles set forth in Form L-9 (Oct. 1975), entitled, “Terms and Conditions of License for Constructed Minor Project Affecting Navigable Waters of the United States” (see 54 FPC 1792, 1852-57), 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 the following annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with the 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 620 kilowatts (kW). Under the

regulations currently in effect, projects with an authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge.

Article 202. Exhibit Drawings. Within 45 days of the date of issuance of this license, as directed below, the licensee must file two sets of the approved exhibit drawings and geographic information system (GIS) data in electronic file format on compact disks.

(a) Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (P-2464-1001, etc.) must be shown in the margin below the title block of the approved drawing. The licensee must file two separate sets of exhibit drawings in electronic format on compact disks with the Secretary of the Commission, ATTN: OEP/DHAC. Exhibit F drawings must be segregated from other project exhibits, and identified as **Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. §388.113(c)**. Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this License, and file extension in the following format [P-2464-1001, F-1, Project Overview and Emergency Spillway, MM-DD-YYYY.TIF]. All digital images of the exhibit drawings must meet the following format specification:

IMAGERY – black & white raster file

FILE TYPE – Tagged Image File Format (TIFF) CCITT Group 4 (also known as T.6 coding scheme)

RESOLUTION – 300 dots per inch (dpi) desired, (200 dpi minimum)

DRAWING SIZE FORMAT – 22” x 34” (minimum), 24” x 36” (maximum)

FILE SIZE – less than 1 megabyte desired

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points (i.e., latitude and longitude coordinates, or state plane coordinates). The points must be arranged in a triangular format for GIS georeferencing the project boundary drawing to the polygon data, and must be based on a standard map coordinate system. The spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) must be identified on the drawing and each reference point must be labeled. In addition, each project boundary drawing must be stamped by a registered land surveyor.

(b) The licensee must file two separate sets of the project boundary GIS data on compact disks with the Secretary of the Commission, ATTN: OEP/DHAC. The data must be in a georeferenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format). The filing must include both polygon data and all reference points shown on the individual project boundary drawings. An electronic boundary polygon data file(s) is required for each project development. Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The georeferenced electronic boundary data file must be

positionally accurate to ± 40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) must include: FERC Project Number, data description, date of this License, and file extension in the following format [P-2464, boundary polygon/or point data, MM-DD-YYYY.SHP]. The data must be accompanied by a separate text file describing the spatial reference for the georeferenced data: map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum (i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name must include: FERC Project Number, data description, date of this License, and file extension in the following format [P-2464, project boundary metadata, MM-DD-YYYY.TXT].

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 as follows:

(1) in a run-of-river mode, whereby at all times, outflow from the project approximates the sum of inflows to the impoundment on an instantaneous basis. While operating run-of-river, the licensee must maintain the water surface elevation of the reservoir at 897.2 feet National Geodetic Vertical Datum ± 3 inches; and

(2) the licensee must provide a continuous minimum flow of not less than 7 cubic feet per second through an orifice plate with a 7.75-inch hole located at the end of the 16-inch-diameter culvert that connects the reservoir to the bypassed spillway channel.

The operational requirements may be temporarily modified if required by operating emergencies beyond the control of the licensee or for short periods upon mutual agreement among the licensee, U.S. Fish and Wildlife Service (FWS), and Wisconsin Department of Natural Resources (Wisconsin DNR). If the operational requirements are so modified, the licensee must notify FWS, Wisconsin DNR, and the Commission as soon as possible, but not later than 10 days after each such incident.

Article 402. Operation Compliance Monitoring. Within 6 months of license issuance, the licensee must file for Commission approval, an operation compliance monitoring plan that describes how the licensee will comply with the operational requirements and Article 6 of Form L-9 of this license.

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

- (1) a description of how the licensee will document compliance with run-of-river operation and the minimum bypassed spillway channel flow required by Article 401 of this license;
- (2) a description of the operational procedures the licensee will implement during scheduled and unscheduled project shutdowns;
- (3) a provision to maintain hourly records of project operation in an electronic format, including turbine output, on a daily basis;
- (4) a provision to operate and maintain an automatic water level recorder in the project reservoir to measure headwater elevations on an hourly basis; and devices needed to provide the minimum flow required by Article 401;
- (5) a provision to install and maintain a staff gage immediately upstream of the Weed dam in the project reservoir with the reservoir elevations required by Article 401 clearly marked on the staff gage;
- (6) a provision to operate and maintain an automatic water level recorder immediately downstream of the project to measure tailwater water elevations on an hourly basis to help document compliance with run-of-river operations;
- (7) a provision to install and maintain a staff gage immediately downstream of the project tailrace;
- (8) procedures for maintaining and calibrating all run-of-river and minimum flow monitoring equipment;
- (9) a description of the specific locations of all gages or other measuring devices; and
- (10) a provision to submit hourly monitoring data to Wisconsin Department of Natural Resources (Wisconsin DNR), U.S. Fish and Wildlife Service (FWS), and the Commission upon request.

The plan must be developed after consultation with Wisconsin DNR and FWS. 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. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 404. *Tailrace Channel Erosion Management Plan.* Within 6 months of license issuance, the licensee must file with the Commission, for approval, a plan to monitor the stream bank stability of the tailrace channel between the powerhouse discharge and the confluence with the bypassed spillway channel, a distance of approximately 300 feet, to identify the extent of project-induced erosion. Monitoring results will be used to identify areas of shoreline and bank instability caused by project operation.

The tailrace channel erosion management plan must include, but not necessarily be limited to, the following:

- (1) a provision to monitor the stability of the stream bank for a minimum of five consecutive years following plan approval at a minimum of once per year;
- (2) the identification of the locations that will be monitored for stream bank instability, which must include maps of the monitoring locations;
- (3) a description of the methods that will be used to monitor the stream bank stability to determine the extent and magnitude of any erosion occurring during project operation;
- (4) the monitoring frequency;
- (5) the criteria that will be used to assess whether the stream bank requires stabilization to mitigate areas of project-related erosion identified through monitoring;
- (6) the potential measures that will be used to mitigate areas of stream bank determined to be unstable;
- (7) a description of the plant material to be used to stabilize the stream bank and to revegetate the disturbed areas, with preference given to native species;

(8) a provision to notify the Commission prior to implementing any structural measures;

(9) a provision to notify the Commission in the event of the implementation of an emergency mitigation measure in the tailrace channel as soon as possible, but no later than 10 days after implementing any emergency mitigation measure; and

(10) a provision to file annual reports of bank stability monitoring results during the monitoring period with the Commission. The licensee must file the annual reports with Wisconsin Department of Natural Resources (Wisconsin DNR), for its review and comment, prior to filing the reports. The licensee must allow a minimum of 30 days for Wisconsin DNR to comment and to make recommendations before filing the report with the Commission. The reports must include: (a) a description of the measures used to stabilize the stream banks and control erosion; (b) an assessment of the effectiveness of the measures used; (c) identification of any problem areas; and (d) any recommendations, including a timeframe for implementation, for additional measures to stabilize problem areas, and/or for continued monitoring.

The licensee must prepare the plan after consultation with Wisconsin DNR. 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 Wisconsin DNR, and specific descriptions of how Wisconsin DNR's comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agency to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt an agency's 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. Erosion and Sediment Control Plan. At least 60 days prior to the start of any construction activities associated with the proposed improvements to the Red River walk-in site required by Article 408, *Recreation Plan*, the licensee must file with the Commission, for approval, an erosion and sediment control plan for construction activities associated with the proposed improvements to the Red River walk-in site.

The plan must be based on actual-site geological, soil, and ground water conditions and on project design. The plan must include, but not necessarily be limited to, the following:

(1) a detailed description of actual site conditions;

- (2) specific measures proposed to control erosion, to prevent slope instability, and to minimize the quantity of sediment resulting from project construction activities;
- (3) detailed descriptions, functional conceptual drawings and specific topographic locations of the soil erosion and sediment control measures;
- (4) details for monitoring and maintaining the effectiveness of the control measures during the construction period of the proposed improvements to the Red River walk-in site;
- (5) a detailed description of the plant material to be used to revegetate the disturbed areas, with preference given to native species; and
- (6) an implementation schedule.

The licensee must prepare the plan after consultation with Wisconsin Department of Natural Resources (Wisconsin DNR). 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 agency, and specific descriptions of how the agency comments are accommodated by the plan. The licensee must allow a minimum of 30 days for Wisconsin DNR to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt Wisconsin DNR's recommendation, the filing must include the licensee's reasons, based on geological, soil, and ground water conditions at the site.

The Commission reserves the right to require changes to the plan. Construction activities 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 406. Invasive Species Monitoring Plan. Within one year of license issuance, the licensee must file with the Commission, for approval, a plan to monitor invasive species at the project. The purpose of the plan is to document the extent of the presence of invasive species at the project, and if such species are having a significant adverse effect on fish and wildlife populations or public access, implement measures to limit their spread. The plan must include, but not necessarily be limited to, the following:

- (1) a description of the licensee's proposed monitoring methods;
- (2) the proposed frequency of monitoring;
- (3) proposed criteria to be used to determine when control measures will be implemented;

(4) a schedule for filing monitoring reports with Wisconsin Department of Natural Resources (Wisconsin DNR) and U.S. Fish and Wildlife Service (FWS) and the Commission;

(5) measures proposed to mitigate the effects of the invasive species if the monitoring reports indicate that the invasive species are having a significant adverse effect on fish and wildlife populations or public access at the project; and

(6) a description of and implementation schedule for providing public information about the species.

The licensee must prepare the plan after consultation with Wisconsin DNR and FWS. 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 407. *Northern Long-eared bat Avoidance and Protection Measures.* The licensee must implement the following measures to protect northern long-eared bat habitat:

(1) avoid the cutting, trimming, or destruction of trees on project land 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 equal or greater than 3 inches in diameter at breast height between November 1 and March 31.

Article 408. *Recreation Plan.* Within one year of license issuance, the licensee must file, for Commission approval, a recreation plan to maintain and enhance the project's recreation facilities. The plan must include the following:

(1) a provision to: (a) continue operating and maintaining Riverside Park; the Geider Road access area; and the swimming area, canoe/kayak put-in site, and parking area at the Red River walk-in site, (b) continue to maintain the river viewshed located at the tree berm within the Red River walk-in site, (c) install a

fishing dock and benches at the Riverside Park boat landing, and (d) install an fence at the informal beach access site, which is located across the river from the Red River walk-in site, to eliminate use of the site;⁵⁵

(2) a provision to: (a) develop a picnic area, upgrade the existing informal parking area by paving or with gravel, (b) construct new paths to connect the existing informal parking lot with the existing canoe/kayak launch and swimming area, and (c) provide directional signage for the existing amenities at the Red River walk-in site;

(3) a provision to install signage at the informal beach access site, including: (a) directions to the Red River walk-in site, and (b) information that states the site is closed for revegetation to prevent erosion and should not be entered;

(4) conceptual drawings of the fishing dock and benches at the Riverside Park boat landing, and paths connecting the existing informal parking lot with the existing canoe/kayak launch and swimming area at the Red River walk-in site; and

(5) an implementation schedule.

The Commission reserves the right to require changes to the plan. Installation activities pursuant to items 1(c) through 3(b) 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 409. 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, and including, but not limited to, the Historic Properties Management Plan (HPMP) for the project, filed on November 29, 2011, and approved herein. In the event that the Programmatic Agreement is terminated, the licensee shall continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

⁵⁵ The recreation facilities are described on pages E-34 and E-35 of the final license application, filed June 10, 2013, and in an April 4, 2016 filing.

Article 410. 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, to the satisfaction of the Commission's authorized representative that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee 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-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee 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.

(F) 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.

(G) 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 (2016). The filing of a request for

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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.

Ann F. Miles
Director
Office of Energy Projects

Form L-9
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE
FOR CONSTRUCTED MINOR 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. 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 be 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 7. 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 8. 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 9. 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 10. 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 11. 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 12. 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 13. 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 14. 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 the 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 15. 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 16. 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 17. 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 18. 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 19. 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.