

UNITED STATES OF AMERICA 134 FERC ¶ 62,202
FEDERAL ENERGY REGULATORY COMMISSION

Mahoning Creek Hydroelectric Company, LLC

Project No. 12555-004

ORDER ISSUING ORIGINAL LICENSE
(MAJOR PROJECT)

(March 4, 2011)

INTRODUCTION

1. On July 27, 2009, Mahoning Creek Hydroelectric Company, LLC (Mahoning Hydro) filed, pursuant to Part I of the Federal Power Act (FPA),¹ an application for an original license to construct, operate, and maintain its proposed Mahoning Creek Hydroelectric Project No. 12555. The 6.0-megawatt (MW) project will be connected to the U.S. Army Corps of Engineers (Corps) Mahoning dam which is located on Mahoning Creek in Armstrong County, Pennsylvania. The project will occupy about 1.0 acre of federal land under the jurisdiction of the Corps.² As discussed below, I am issuing an original license for this project.

BACKGROUND

2. The Commission issued public notice of the application, accepting the license application, soliciting motions to intervene and protests, and soliciting comments, final recommendations, terms and conditions, and prescriptions on September 3, 2009.³ No motions to intervene were filed. The Corps, the U.S. Department of the Interior (Interior), and the County of Armstrong, Pennsylvania filed comments on the application.⁴

¹ 16 U.S.C. §§ 791a - 825r (2006).

² Because the project would be located at the Corps' Mahoning dam and would occupy lands of the United States, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2006), requires that it be licensed.

³ 74 Fed. Reg. 46756 (2009).

⁴ Pennsylvania State Representative Donna Oberlander and State Senator Don White filed comments in support of the Mahoning Project.

Project No. 12555-004

- 2 -

3. An Environmental Assessment (EA) was prepared by Commission staff and issued on March 23, 2009. The Corps and the Pennsylvania Fish and Boat Commission (Pennsylvania F&BC) filed comments and recommendations on the EA. Mahoning Hydro filed reply comments, and the Corps filed a response to Mahoning Hydro's reply comments.

4. In response to comments filed on the EA, a Supplemental EA was prepared by Commission staff and issued on October 20, 2010. The Corps filed comments and recommendations on the Supplemental EA.

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

PROJECT DESCRIPTION

A. Existing Corps Facilities

6. The existing Mahoning dam and reservoir were constructed by the Corps beginning in 1939 and became operational in 1941. The dam was designed with two conduits built into the south abutment of the dam for future hydropower development. The Corps project consists of: a 162-foot-high, 926-foot-long dam with a 192-foot-long spillway section equipped with five 29-foot-high, 30-foot-long vertical lift gates (i.e., sluice gates), impounding a 5-mile-long, 280-acre reservoir with a normal pool elevation of 1,077 feet mean sea level (msl); and a 192-foot-wide, 950-foot-long stilling basin⁵ regulated by a 180-foot-long flat-crested stilling basin weir and located downstream of the dam.

B. Current Dam Operation

7. The Mahoning dam is one of 16 flood control projects in the Corps' Pittsburgh District used to provide flood protection to the lower Allegheny River Valley and the upper Ohio River. The Corps operates the dam in a modified run-of-river mode to augment flow during dry periods to maintain downstream water quality and as water supply for domestic, industrial, and recreational uses. The Corps maintains the summer pool elevation at 1,100 feet msl \pm 0.5 foot, and during the fall, the pool level is lowered to elevation 1,075 feet msl to provide flood storage capacity. There is no specified minimum flow released at the dam by the Corps; however, the Corps indicates that it is necessary to release a minimum discharge of approximately 35 to 45 cfs during cold periods to prevent freezing of the ring jet, a valve that releases water through the dam.

⁵ The stilling basin is a concrete structure that dissipates the energy of water released from the dam and protects the riverbed from erosion.

C. Hydropower Project Facilities

8. The proposed project will include: (1) a new 50-foot-high intake structure attached to the upstream face of the dam, equipped with removable trashracks (with 1-inch spacing), dewatering bulkhead panels, and a vertical slide gate; (2) a new lining on the existing (currently plugged), 108-inch-diameter conduit that passes through the dam; (3) a new buried 1,090-foot-long, 120-inch-diameter penstock on the left (south) bank, bifurcating into two new 110-foot-long, 96-inch-diameter penstocks; (4) a new powerhouse located approximately 100 feet downstream of the existing stilling basin weir and containing two new Kaplan turbine generator units with a total installed capacity of 6.0 MW; (5) a new 40-foot-wide, 150-foot-long, 10-foot-deep tailrace; (6) a new 2.2-mile-long, 25-kilovolt transmission line; (7) a new 100-foot-long bridge spanning a small stream and connected to a refurbished existing 0.5-mile-long access road; and (8) appurtenant facilities.

D. Project Boundary

9. The proposed project boundary encloses all the hydropower project facilities described in section C above, including the proposed transmission line, bridge, and refurbished access road. Article 310 requires Mahoning Hydro to file revised Exhibit G drawings that modify the project boundary to enclose a proposed fishing pier and access ramp upon their completion. The project boundary is discussed further below.

E. Proposed Project Operation

10. Mahoning Hydro proposes to operate the project in a run-of-release mode, using flows released by the Corps in accordance with the current dam operation established by the Corps. Mahoning Hydro indicates that the Corps intends to maintain a minimum flow in the bypassed reach (described below) and suggests that 30-cfs may be appropriate.⁶ We discuss potential minimum flow releases to the bypassed reach below.

11. Project flows will be diverted to the powerhouse through the proposed intake structure which will be located at the existing, but currently plugged, conduit through the dam. Flows exiting the conduit will enter a single, 120-inch-diameter penstock located

⁶ In the license application, Mahoning Hydro proposes a 30-cfs minimum flow in the bypassed reach. However, because Mahoning Hydro did not include facilities in its proposed project design to release a minimum flow and it appears that Mahoning Hydro intends for any minimum flow to be released through facilities owned and operated by the Corps, the 30-cfs minimum flow identified by Mahoning Hydro is essentially a recommendation for a minimum flow in the bypassed reach and is not part of Mahoning Hydro's proposal.

Project No. 12555-004

- 4 -

on the left (south) bank of the river downstream of the dam. Flows from the penstock will be divided between two 96-inch-diameter penstocks and then pass through the two powerhouse turbines before being discharged into Mahoning Creek downstream of the stilling basin weir. The project will create a 1,050-foot-long bypassed reach that will include the entire length of the 950-foot-long stilling basin and a 100-foot-long section of Mahoning Creek.

12. The operational range of each of the two turbines will be from 79 to 438 cfs; therefore, the minimum and maximum hydraulic capacity of the project will be 79 and 876 cfs, respectively. The project will have an estimated annual generation of 20,000 megawatt-hours. Mahoning Hydro will fully automate project operation (i.e. start, run, and shut down of the turbines) and control the project from a remote facility.

F. Proposed Measures

13. In addition to the proposed operations described above, Mahoning Hydro proposes to: (1) prepare a shoreline stability plan and employ best management practices to address stream bank and tailrace scour and erosion; (2) provide natural or forced air ventilation in the new turbine draft tubes to mitigate any project effects on dissolved oxygen (DO); (3) install water quality monitoring equipment and a data collection system on the intake structure and downstream of the powerhouse to monitor and report DO, water temperature, and total dissolved gas, and inform the Corps of any project effects; (4) include trashracks with a 1-inch clear spacing to maintain an average approach velocity of 1 foot per second (fps) and limit fish entrainment at the proposed intake structure; (5) reseed or landscape around the powerhouse and penstock route to reduce erosion; (6) provide a fishing pier and access ramp in the stilling basin, with fish attraction structures, an interpretive display, and stairs leading from the pier to the shoreline to enhance recreational opportunities; (7) design and construct the powerhouse to blend into the existing environment; and (8) implement a historic properties management plan (HPMP) to manage any historic properties potentially effected by the project.

SUMMARY OF LICENSE REQUIREMENTS

14. As summarized below, this license authorizes 6.0 MW of renewable energy and requires a number of measures to protect and enhance fish, wildlife, recreation, cultural, and aesthetic resources at the project.

15. To reduce erosion and sedimentation and minimize hazardous materials from entering the creek during project construction and operation, the license requires a soil erosion and sedimentation control plan that will include Mahoning Hydro's proposed

measures for erosion and sediment control, as well as designate specific sites for fuel storage and fueling and measures for maintaining on-site sanitation facilities.

16. To protect fish and aquatic resources in Mahoning Creek, the license requires Mahoning Hydro to implement a water quality monitoring plan that includes the proposed measures for monitoring water quality, as well as establishing DO and water temperature criteria and protocols for modifying project operations if the criteria are violated. Further, the license requires Mahoning Hydro to file a design plan to ensure that the proposed intake structure will achieve a 1 fps average approach velocity and limit fish entrainment.

17. To avoid adverse effects of project construction on existing riparian and wetland habitat located downstream of Mahoning dam, the license requires Mahoning Hydro to develop and implement a wetland protection plan.

18. To enhance recreation access and fishing opportunities, the license requires Mahoning Hydro to construct the proposed fishing pier and access ramp in the stilling basin, with fish attraction structures, an interpretive display, and stairs leading from the pier to the shoreline. This license requires Mahoning Hydro to submit a recreation and aesthetics plan for providing the proposed fishing access improvements within six months of license issuance, and to minimize effects on visual resources by designing and constructing the powerhouse to blend into the existing environment, as proposed.

19. To protect cultural resources, this license requires Mahoning Hydro to implement a Programmatic Agreement (PA) executed on November 16, 2010, between the Commission and the State Historic Preservation Officer (SHPO). The PA requires the licensee to develop a Historic Properties Management Plan (HPMP) that provides for the consideration, management, and protection of both known and newly discovered historic properties during construction, operation, and maintenance of the project.

WATER QUALITY CERTIFICATION

20. Under section 401(a)(1) of the Clean Water Act (CWA),⁷ the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification by failing to act on a request for

⁷ 33 U.S.C. § 1341(a)(1) (2006).

Project No. 12555-004

- 6 -

certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.⁸

21. On October 30, 2009, Mahoning Hydro applied to the Pennsylvania Department of Environmental Protection (Pennsylvania DEP) for certification for the Mahoning Creek Project. Pennsylvania DEP received this request on November 2, 2009,⁹ and did not act on the application within one year.¹⁰ Therefore, the certification is deemed waived.

COASTAL ZONE MANAGEMENT ACT

22. 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 180 days of its receipt of the applicant's certification. The project is located in the Allegheny River drainage, outside of Pennsylvania's two coastal zones (Lake Erie and Delaware Estuary). In an email filed March 8, 2010, the Pennsylvania DEP indicated that the project is located outside of the coastal zones and will not affect coastal resources. Therefore, no consistency certification is required.

SECTION 18 FISHWAY PRESCRIPTIONS

23. Section 18 of the FPA¹² provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions or reservations of authority were filed under section 18 of the FPA.

⁸ 33 U.S.C. § 1341(d) (2006).

⁹ See Kleinschmidt Associates letter filed November 3, 2009.

¹⁰ To date, Pennsylvania DEP has not acted on the certification request.

¹¹ 16 U.S.C. § 1456(c)(3)(A) (2006).

¹² 16 U.S.C. § 811 (2006).

THREATENED AND ENDANGERED SPECIES

24. Section 7(a)(2) of the Endangered Species Act of 1973,¹³ requires federal agencies to ensure 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.

25. Although there is potential Indiana bat non-hibernation habitat located at the project, it is located across the creek from the site of project construction. In the EA,¹⁴ staff concluded that the project is not likely to adversely affect the Indiana bat. The U.S. Fish and Wildlife Service (FWS) concurred with this finding by letter filed May 10, 2010.

NATIONAL HISTORIC PRESERVATION ACT

26. Under section 106 of the National Historic Preservation Act (NHPA)¹⁵ and its implementing regulations,¹⁶ federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the SHPO to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

27. To satisfy these responsibilities, the Commission executed a Programmatic Agreement (PA) with the Pennsylvania State Historic Preservation Officer and invited Mahoning Hydro to concur with the stipulations of the PA. Mahoning Hydro did not respond. The PA requires the licensee to prepare and implement an HPMP for the term of any new license issued for this project. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 406 requires the licensee to implement the PA and to file the HPMP with the Commission within one year of license issuance.

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

¹³ 16 U.S.C. § 1536 (a) (2006).

¹⁴ See EA at section 3.3.4 page 34.

¹⁵ 16 U.S.C. § 470 *et seq.* (2006).

¹⁶ 36 C.F.R. Part 800 (2010).

28. Section 10(j)(1) of the FPA¹⁷ requires the Commission, when issuing a license, to include conditions based on recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act¹⁸ to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

29. Neither FWS nor Pennsylvania F&BC filed section 10(j) recommendations for the Mahoning Project.

SECTION 10(a)(1) OF THE FPA

A. Reservoir Water Quality

30. Currently the Corps releases water through the dam’s ring jet, spillway sluice gates, or a combination of the two structures. In comments on the EA, the Corps expressed concern that the stratification patterns of the reservoir may change as a result of the project intake being shallower than the ring jet, which withdraws water from a deeper point in the reservoir.

31. To address this potential effect, Mahoning Hydro proposed to monitor water quality in the reservoir. The regulating (or operating) plan required by Article 307, the run-of-release operating mode required by Article 401, and the water quality monitoring plan required by Article 402, will provide information and operational flexibility to the Corps that will allow the Corps to adjust the proportion of deep and surface water releases from the reservoir or eliminate generation if reservoir monitoring indicates significant changes in the stratification patterns.

B. Geology and Soils

32. In the EA, staff recommended that Mahoning Hydro develop and implement a soil erosion and sediment control plan that, in part, includes measures to reduce the risk of soil and water resource contamination from hazardous materials during project construction. In comments on the EA, the Corps requested that the term hazardous material be defined because the presence of toxic or radioactive materials within the project area will require a Phase I sediment engineering investigation.

¹⁷ 16 U.S.C. § 803(j)(1) (2006).

¹⁸ 16 U.S.C. § 661 *et seq.* (2006).

33. In the EA,¹⁹ staff expressed concern about hazardous materials related to fuel storage, fueling vehicles, and on-site sanitation facilities. To address hazardous materials during project construction, Article 302 requires Mahoning Hydro to prepare a soil erosion and sediment control plan that includes designating specific sites for fuel storage and fueling, and measures for maintaining on-site sanitation facilities. There is no information in the record to suggest that other hazardous materials are present in the project area.

C. Fish Entrainment

34. In comments on the EA and Supplemental EA, the Corps states that fish entrainment at the project may adversely affect the fish communities in the reservoir and downstream of the dam. The Corps indicates that it will require Mahoning Hydro to perform fisheries surveys upstream and downstream of the dam as part of the agreements required by Articles 305 and 307.

35. In the Supplemental EA, staff estimated that the passage survival of fish entrained at the project would likely exceed 90 percent. However, staff concluded that Mahoning Hydro's intake structure design, including trashracks with a 1-inch clear spacing and approach velocities of 1 foot-per-second or less, would limit entrainment and adequately protect the fish community in the project area.²⁰ To ensure that the intake structure is designed appropriately to protect fisheries resources, Article 403 requires Mahoning Hydro to prepare an intake structure design plan in consultation with the Corps and for Commission approval.

D. Compliance with Non-Degradation Criteria

36. In comments on the Supplemental EA, the Corps states that it will use fisheries surveys and water quality monitoring data to determine compliance with water quality non-degradation criteria. The Corps provided examples of non-degradation criteria to include maintaining DO greater than 5.0 mg/l at reservoir depths exceeding 25 feet or maintaining outflow water temperatures below 80 degrees Fahrenheit. The Corps indicates that it will require modifications to project flow releases if non-degradation criteria are violated.

37. Data to determine compliance with its non-degradation criteria will be provided to the Corps by the water quality monitoring required by Article 402 of this license.

¹⁹ See EA at section 3.3.1 page 18.

²⁰ See Supplemental EA at section 3.3.2 pages 21 and 22.

E. Mussel and Macroinvertebrate Surveys

38. In 2007, Mahoning Hydro conducted mussel and macroinvertebrate surveys downstream of the stilling basin weir and found two species of mussels and a low abundance and diversity of macroinvertebrates. No federally or state-listed species were reported. The researchers concluded that the low abundance and diversity of macroinvertebrate species likely resulted from the presence of algal mats and low flow conditions during the survey period.

39. In comments on the EA and Supplemental EA, the Corps suggested that the surveys do not accurately characterize the mussel and macroinvertebrate communities at the project based on comparisons with prior surveys conducted by the Corps in the project area.

40. While the results of the surveys conducted by Mahoning Hydro are not consistent with prior surveys conducted by the Corps, the surveys were conducted by experienced biologists using accepted methodologies and the results likely represent conditions at the time of sampling. Staff's analysis of potential project effects on mussels and macroinvertebrates considered the results of the surveys conducted by Mahoning Hydro, as well as all other available information on mussels and macroinvertebrates in the project area. Therefore, because staff's analysis considered all mussel and macroinvertebrate species that could be present in the project area, not just the species found in the survey conducted by Mahoning Hydro, and implementation of the water quality monitoring plan required by Article 402 of this license will prevent any degradation of water quality that could adversely affect any mussel and macroinvertebrate communities present at the project, there is no need for additional surveys.

F. Habitat in the Stilling Basin and Mahoning Creek

41. In the Supplemental EA, staff concluded that project operation would reduce water velocities in the stilling basin and may improve habitat for species such as sunfish and bass, which prefer pool habitat.²¹ Staff also concluded that habitat downstream of the project tailrace would be unchanged compared to existing conditions.

42. In comments on the Supplemental EA, the Corps disagrees with staff's conclusions, noting that water quality, velocity, and retention time in the stilling basin will be affected by project operation and habitat downstream of the project tailrace will

²¹ See Supplemental EA at section 3.2.2 page 18.

be changed because discharge from the project tailrace will concentrate stream flows on one side of Mahoning Creek.

43. In general, staff's conclusions in the Supplemental EA are consistent with the Corps' descriptions of project effects in the stilling basin. In the Supplemental EA, staff reported that project operation would reduce the flow and velocities in the stilling basin,²² which would correspond to an increase in the retention time. Staff concluded that these changes would not affect the overall quality of the habitat in the stilling basin or its ability to support the current fisheries. In the Supplemental EA, staff reported that the habitat in the stilling basin was categorized as suboptimal in Mahoning Hydro's 2007 habitat assessment (due to the lack of any riffles or runs) and will remain suboptimal with the proposed project.²³ Staff also concluded that the project effects on the habitat in the stilling basin would not reduce its ability to support the existing fisheries, which includes a spring put-and-take trout fishery and resident bass and sunfish. Additionally, in the Supplemental EA staff concluded that the project could affect DO and water temperatures in the stilling basin, which is consistent with the Corps' conclusion and is the basis for the water quality monitoring plan required by Article 402 of this license.

44. Staff's conclusion that habitat downstream of the project tailrace will be unchanged is based on Mahoning Hydro's proposal to use flows released by the Corps in accordance with the current dam operation; therefore, total flow releases from Mahoning dam will not change as a result of project operation and stream flow, depths, velocities, and substrate downstream of the project tailrace will be unchanged. However, as the Corps points out, the location of the powerhouse and tailrace on the left bank of Mahoning Creek will result in a localized redistribution of flows in the immediate area of the confluence of the project tailrace and Mahoning Creek. Because this redistribution of flows would be localized, it is not likely to significantly affect habitat or aquatic resources in Mahoning Creek and any necessary modifications to the design or excavation of the project tailrace to minimize these potential effects can be addressed by the Corps through Article 303 of this license or its Section 404 permit review process.

G. Minimum Flow Analysis

45. In comments on the EA and Supplemental EA, the Corps states that there is insufficient information to determine an appropriate minimum flow for protecting water quality and habitat in the reservoir, bypassed reach, and Mahoning Creek downstream of the project tailrace. Additionally, the Corps recommends that Mahoning Hydro conduct a flow study in the stilling basin using the instream flow incremental methodology (IFIM).

²² See Supplemental EA at section 3.3.2 page 17.

²³ See Supplemental EA at section 3.2.2 page 18.

46. As indicated above, water quality in the reservoir, bypassed reach, and Mahoning Creek downstream of the project tailrace may change as a result of project operation; however, water quality will be monitored as part of the water quality monitoring plan required by Article 402 of this license and this information will be used to modify project operations if any adverse effects on water quality are identified.

47. Because project operations will not modify the quantity of flow releases from Mahoning dam, habitat in the reservoir (i.e., reservoir levels and fluctuations) and Mahoning Creek downstream of the project tailrace (i.e., depth, velocity, and substrate) will be unchanged, other than the localized redistribution of flows at the confluence of the tailrace and Mahoning Creek (described above).

48. In regard to habitat in the stilling basin, staff determined in the Supplemental EA that an IFIM study is not necessary.²⁴ The stilling basin is a confined channel regulated by a weir at the downstream end; therefore, there will be no substantial changes in water depth, channel width, or substrate associated with changes in flow releases from Mahoning dam. Water velocity is the only habitat parameter that will be affected by changes in flow releases to the stilling basin and these effects can be estimated based on the dimensions of the stilling basin. In the Supplemental EA, staff estimated that the minimum flows recommended by Mahoning Hydro (i.e., 30 cfs) and the Corps (i.e., 150 cfs) would result in average water velocities in the stilling basin of 0.033 fps and 0.167 fps, respectively.²⁵ These slow velocities confirm staff's conclusion (described above) that during project operation, the stilling basin will primarily consist of pool habitat over the entire range of minimum flows being considered and an IFIM study is unnecessary to predict the effects of project operations on habitat in the stilling basin.

49. Approximately 100 feet of Mahoning Creek between the stilling basin weir and the project tailrace will be bypassed by the project. This section of Mahoning Creek is flanked on both sides by concrete retaining walls that extend downstream from the weir and consists primarily of pool habitat. Because this reach is primarily pool habitat, the effects of project operation and corresponding reductions in flow will be similar to the project effects on the stilling basin, with some reduction in water velocities, but little or no change in stream depths, channel widths, or substrate. Therefore, an IFIM study is unnecessary to predict the effects of project operations on habitat in this portion of the bypassed reach.

H. Powerhouse Location

²⁴ See Supplemental EA at section 3.3.2 pages 17 and 18.

²⁵ See Supplemental EA at section 3.3.2 page 17.

50. In its license application, Mahoning Hydro proposed to construct the new powerhouse about 100 feet downstream of the existing stilling basin weir, and create a new 40-foot-wide, 150-foot-long, 10-foot-deep tailrace. The Corps states that the economic and environmental impacts of other alternatives were not addressed in the Supplemental EA, notably locating the powerhouse upstream of the stilling basin weir. However, in the Supplemental EA, staff indicate that Mahoning Hydro evaluated locating the powerhouse nearer to the dam and adjacent to the stilling basin and concluded it was infeasible because there is insufficient space to construct a powerhouse and the associated reduction in static hydraulic head would reduce power generation by about 11.5 percent.²⁶

I. Recreation

51. In its license application, Mahoning Hydro proposed to construct a fishing pier and access ramp on the north side (right bank) of the stilling basin or at an existing fishing area also located on the north side (right bank) immediately downstream from the dam. In comments on the Supplemental EA, the Corps states that changes in flows in the stilling basin may warrant locating the fishing pier on the south side (left bank) of the stilling basin. Article 405 of this license requires Mahoning Hydro to prepare a recreation and aesthetics plan that includes consultation with the Corps on the design and location of the new fishing pier and access ramp.

J. Wetland Protection

52. In the EA, staff determined that the proposed access road refurbishment and proposed bridge could adversely affect wetlands in proximity to the road corridor needed for project construction. Staff also noted that clearing and fill associated with project construction could interfere with the natural drainage of flows into two existing wetlands. In the EA, staff recommended a wetland protection plan to address these potential effects.²⁷ Article 404 of this license requires Mahoning to prepare a wetland protection plan that includes measures to avoid and protect wetlands that may be affected by project construction.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

²⁶ See Supplemental EA at section 2.4 pages 11 and 12.

²⁷ See EA at section 3.3.3 page 32.

53. The Commission collects annual charges from licensees for the administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA and use of a government dam. As noted, the Mahoning Project will occupy about 1.0 acre of federal land administered by the Corps. The Commission does not assess a land use charge for a licensee's use of federal lands adjoining or pertaining to federal dams or other structures.²⁸ Rather, it assesses a charge on the use of the federal facilities.²⁹

B. Exhibit F and G Drawings

54. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Mahoning Hydro's proposed Exhibit F drawings of the principal project works and Exhibit G project boundary drawings filed July 27, 2009, are approved by Ordering Paragraph C and Article 202 requires the filing of these drawings. The locations of the proposed fishing pier and access ramp have not been finalized and require further agency consultation. Article 405 requires a recreation and aesthetics plan that includes establishing the location of the proposed fishing pier and access ramp in consultation with the agencies and Commission approval prior to implementation of the plan. Article 310 requires the filing of as-built Exhibit G drawings enclosing the fishing pier and access ramp within the project boundary.

C. Amortization Reserve

55. The Commission requires that for new major licenses, licensees must set up and maintain an amortization reserve account upon license issuance. Article 203 requires the establishment of the account.

D. Headwater Benefits

56. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 204 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

E. Use and Occupancy of Project Lands and Waters

57. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 407 allows the licensee to grant permission, without prior Commission approval, for the use and

²⁸ See 18 C.F.R. § 11.2(a) (2010).

²⁹ See 18 C.F.R. § 11.3 (2010).

occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

F. Review of Final Plans and Specifications

58. Article 301 requires the licensee to commence construction of the project within two years from the issuance date of the license and to complete construction within five years of the issuance date of the license.

59. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspection New York Regional Office (D2SI-NYRO) with final contract drawings and specifications—together with a supporting design report consistent with the Commission's engineering guidelines. Article 302 also requires the licensee to provide the Commission's D2SI-NYRO with a quality control and inspection program, a temporary emergency action plan, and a soil erosion and sediment control plan.

60. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 310 provides for the filing of these drawings.

G. Conditions for Projects at Corps Dams

61. Pursuant to a 1981 Memorandum of Understanding between the Commission and the Department of the Army, seven special articles are included in this license for the hydroelectric projects to be developed at Corps facilities. The articles require review and approval of project designs and specifications and procedures for the construction, operation, and maintenance of the project by the Commission and Corps and are incorporated in this license as Articles 303 through 309.

H. Project Financing

62. To ensure completion of project construction once begun, Article 311 requires the licensee to file for Commission approval at least 90 days before the start of construction a project financing plan that shows that the licensee has acquired the funds or commitment for funds necessary to construct the project in accordance with the license.

STATE AND FEDERAL COMPREHENSIVE PLANS

63. Section 10(a)(2)(A) of the FPA,³⁰ 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.³¹ Under section 10(a)(2)(A), staff identified and reviewed 5 comprehensive plans that are relevant to this project.³² No conflicts were found.

CONSERVATION EFFORTS

64. Sections 10(a)(2)(C) of the FPA³³ requires the Commission to consider the electricity consumption improvement programs 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. Mahoning Hydro will sell the project's power into the PJM Interconnection LLC (PJM) grid. PJM is a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states, and provides opportunities for end-use customers to realize the value for reducing their demand for electricity.³⁴

65. Staff concludes that, given the limits of its ability to influence users of the electricity generated by the project, Mahoning Hydro will comply with section 10(a)(2)(C) of the FPA.

SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT

66. Staff reviewed Mahoning Hydro's preliminary plans to build the project as described in the license application. The project will be safe when constructed, operated, and maintained in accordance with the Commission's standards and provisions of this license.

NEED FOR POWER

³⁰ 16 U.S.C. § 803(a)(2)(A) (2006).

³¹ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2010).

³² The list of applicable plans can be found in section 5.5 of the environmental assessment for the project.

³³ 16 U.S.C. § 803(a)(2)(C) (2006).

³⁴ See <http://www.pjm.com/markets-and-operations>.

67. To assess the need for power, staff looked at the needs in the operating region in which the project is located. Project power will be used to meet regional electrical demand. The project will be located in the Reliability First Corporation region of the North American Electric Reliability Council (NERC). According to NERC, summer peak demand in the region is expected to increase at an average rate of 1.4 percent per year over the 10-year planning period from 2009-2018. The project's power and contribution to the region's diversified generation mix will help meet a need for power in the region.

PROJECT ECONOMICS

68. In determining whether to issue a license for a 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.*,³⁵ 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.

69. In applying this analysis to the Mahoning Project, staff considered two options: Mahoning Hydro's proposal and the project as licensed herein. As proposed by Mahoning Hydro, the levelized annual cost of operating the project is \$1,701,790, or \$85.09/MWh. The proposed project would generate an estimated average of 20,000 MWh of energy annually. When we multiply our estimate of average generation by the alternative power cost of \$70.78/MWh,³⁶ we get a total value of the project's power of \$1,415,600 in 2010 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.³⁷ Therefore, in the first year of operation, the project would cost \$286,190, or \$14.31/MWh, more than the likely alternative cost of power.

³⁵ 72 FERC ¶ 61,027 (1995).

³⁶ The alternative power cost of \$70.78/MWh is based on EIA fuel cost data.

³⁷ Details of staff's economic analysis for the project as license herein and for various alternatives are included in the EA issued March 2010, and the Supplemental EA issued October 2010.

70. As licensed herein with the staff measures, the levelized annual cost of operating the project would be about \$1,704,220, or \$92.52/MWh. Based on an estimated average annual generation of 18,420 MWh as licensed, the project would produce power valued at \$1,303,770, or \$70.78/MWh when multiplied by the \$70.78/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$400,450, or \$21.74/MWh, more than the likely cost of alternative power.³⁸

71. 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 their 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.

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

73. Although staff does not explicitly account for the effects 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

74. Sections 4(e) and 10(a)(1) of the FPA³⁹ require the Commission, to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

³⁸ The economic analysis for this alternative includes the Corps recommended minimum flow in the bypassed reach of 150 cfs from March 1 through June 30, and 50 cfs from July 1 through February 28.

³⁹ 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

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

76. Based on staff's independent review and evaluation of the Mahoning Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, I selected the proposed Mahoning Project, with the staff-recommended measures, and find that it is best adapted to a comprehensive plan for improving or developing Mahoning Creek.

77. I selected this alternative because: (1) issuance of an original license will allow for the development of a beneficial and dependable source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 6.0 MW of electric energy generated from this renewable resource may offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

LICENSE TERM

78. Section 6 of the FPA⁴⁰ provides that original licenses for hydropower projects shall be issued for a term not exceeding 50 years. The Commission's general policy is to license a project at a federal facility for a full 50-year term.⁴¹ Because the Mahoning Project will be located at a Corps dam, this license is issued for a period of 50 years.

The Director Orders:

(A) This original license is issued to Mahoning Creek Hydroelectric Company, LLC (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Mahoning Creek Hydroelectric Project. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

⁴⁰ 16 U.S.C. § 799 (2006).

⁴¹ See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

Project No. 12555-004

- 20 -

(1) All lands, to the extent of the licensee's interest in those lands, enclosed by the project boundary shown by Exhibit G filed July 27, 2009:

<u>Exhibit G Drawings</u>	<u>FERC No. 12555-</u>	<u>Description</u>
Map 1	6	Mahoning Creek Project Boundary
Map 2	7	Mahoning Creek Project Boundary
Map 3	8	Mahoning Creek Project Boundary

(2) Project works utilizing the Corps' Mahoning dam consisting of: (a) a new 50-foot-high intake structure attached to the upstream face of the dam, equipped with removable trashracks (with 1-inch spacing), dewatering bulkhead panels, and a vertical slide gate; (2) a new lining on the existing (currently plugged), 108-inch-diameter conduit that passes through the dam; (3) a new buried 1,090-foot-long, 120-inch-diameter penstock on the left (south) bank, bifurcating into two new 110-foot-long, 96-inch-diameter penstocks; (4) a new powerhouse located approximately 100 feet downstream of an existing stilling basin weir containing two new Kaplan turbine generator units with a total installed capacity of 6.0 MW; (5) a new 40-foot-wide, 150-foot-long, 10-foot-deep tailrace; (6) a new 2.2-mile-long, 25-kilovolt transmission line; (7) a new 100-foot-long bridge spanning a small stream connected to a refurbished existing 0.5-mile-long access road; and (8) 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: Pages 1 through 10 of Exhibit A filed on July 27, 2009.

Exhibit F: The following sections of Exhibit F filed on July 27, 2009:

<u>Exhibit F Drawings</u>	<u>FERC No. 12555-</u>	<u>Description</u>
Drawing 1	1	General Project Plan
Drawing 2	2	Powerhouse Site Plan
Drawing 3	3	Powerhouse Plan
Drawing 4	4	Powerhouse Profile and Elevation
Drawing 5	5	Intake Plan and Profile

(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

Project No. 12555-004

- 21 -

and maintenance of the project.

(C) The Exhibits A, F, and G described above are approved and made part of this license.

(D) "This license is also subject to the articles set forth in Form L-2, (Oct. 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States" (see 54 FPC 1799 *et seq.*), except for Article 20 of Form L-2 concerning the reservoir area, as reproduced at the end of this order, and the following additional articles:

Article 201. Administrative Annual Charges. The licensee shall pay the United States the following annual charges, effective as of the date of commencement of project construction, and as determined in accordance with the provisions of the Commission's regulations in effect from time to time for the purposes of:

- (1) 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 6,000 kW; and
- (2) recompensing the United States for the utilization of surplus water or water power from a government dam.

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

(a) Four sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P-12555-1 through P-12555-8) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards along with Form FERC-587 shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections, New York Regional Office. The remaining set of aperture cards (Exhibit G only) and a copy of Form FERC-587 shall be filed with the Bureau of Land Management office at the following address:

Bureau of Land Management

Project No. 12555-004

- 22 -

Branch of Lands (ES – 930)
7450 Boston Blvd.
Springfield, VA 22153
ATTN: FERC Withdrawal Recordation

(b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections, New York Regional Office. Exhibit F drawings must be segregated from other exhibits and identified as Critical Energy Infrastructure Information (CEII) material under 18 CFR §388.113(c). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-12555-1, F-1, Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

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

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.

(c) The licensee shall file two separate sets of the project boundary data in a georeferenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format) with the Secretary of the Commission, ATTN: OEP/DHAC. The filing shall include both polygon data and all reference points shown on the individual project boundary drawings. A single electronic boundary polygon data file is required for the project boundary. 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) shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-12555, boundary polygon/or point data, MM-DD-YYYY.SHP]. The filing 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

Project No. 12555-004

- 23 -

measurement (i.e., feet, meters, miles, etc.). The text file name shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-12555, project boundary metadata, MM-DD-YYYY.TXT].

In addition, for those projects that occupy federal lands, a separate geo-referenced polygon file(s) is required that identifies transmission line acreage and non-transmission line acreage affecting federal lands for the purpose of meeting the requirements of 18 CFR § 11.2. The file(s) must also identify each federal owner and federal acreage affected by the project boundary. Depending on the geo-referenced electronic file format, the polygon, point, and federal lands data can be included in a single file with multiple layers.

Article 203. Amortization Reserve. Pursuant to section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 204. Headwater Benefits. If the licensee's project is directly benefited by the construction work of another licensee, a permittee, or the United States of a storage reservoir or other headwater improvement, the licensee shall reimburse the owner of the

Project No. 12555-004

- 24 -

headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the Commission's regulations.

Article 301. Start of Construction. The licensee shall commence construction of the project works within two years from the issuance date of the license and shall complete construction of the project within five years from the issuance date of the license.

Article 302. Contract Plans and Specifications. At least 60 days prior to start of construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI – New York Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

The Soil Erosion and Sediment Control Plan shall include, but not be limited to:

(1) a description of the best management practices to be used to stabilize streambanks and control soil erosion including a site map showing the location of cofferdam dams, training walls, armoring, rip rap, staked hay bales, geo-textile silt fence areas, excavated material stockpile area, and a temporary siltation catch basin;

(2) designation of specific sites for fuel storage and fueling vehicles;

(3) a description of the measures to be used for storage and disposal of spoil materials and the locations of any spoil disposal areas;

(4) a description of measures proposed for maintaining on-site sanitation facilities;

(5) a description of measures proposed for revegetating disturbed areas, including a description of the native plant species used, planting densities and fertilization or other requirements; and

(6) an implementation schedule.

Article 303. Facility Design and Construction. The design and construction of those permanent and temporary facilities, including reservoir impounding cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of the Government project shall be done in consultation with and

subject to the review and approval of the Corps' District Engineer. The Corps' review of the cofferdams will be in addition to the licensee's review and approval of the final plans and shall in no way relieve the licensee of responsibility and liability regarding satisfactory performance of the cofferdams. Within 90 days from the issuance date of the license, the licensee shall furnish the Corps and the Commission's Division of Dam Safety and Inspections – New York Regional Engineer, a schedule for submission of design documents and the plans and specifications for the project. If the schedule does not afford sufficient review and approval time, the licensee, upon request of the Corps, shall meet with the Corps and the Commission's staff to revise the schedule accordingly.

Article 304. *Review of Contractor Designs.* The licensee shall review and approve the design of contractor–designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file with the Director, Division of Dam Safety and Inspections (D2SI), the D2SI - New York Regional Engineer, and the Corps, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 305. *Agreement with Corps.* The licensee shall within 90 days from the issuance date of the license, enter into an agreement with the Corps to coordinate its plans for access to and site activities on lands and property administered by the Corps so that the authorized purposes, including operation of the Federal facilities, are protected. In general, the agreement shall not be redundant with the Commission's requirements contained in this license, shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under which studies and construction will be conducted. The agreement shall be mainly composed of reasonable arrangements for access to the Corps site to conduct studies and construction activities, such access rights to be conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations. Should the licensee and the Corps fail to reach an access agreement, the licensee shall refer the matter to the Commission for resolution.

Article 306. *Periodic and Continuous Inspections by the Corps.* The construction, operation and maintenance of the project works that, in the judgment of the Corps may affect the structural integrity or operation of the Corps project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation and maintenance deficiencies or difficulties detected by the Corps inspection shall be immediately reported to the Commission's Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer. Upon review, the D2SI – New York Regional Engineer shall refer the matter to the licensee for appropriate action. In cases when construction, operation, or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps project, the

Corps inspector has the authority to stop construction or maintenance while awaiting the resolution of the problem. The licensee shall immediately inform the D2SI – New York Regional Engineer of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee shall not resume construction, operation, or maintenance activities until notified by the D2SI – New York Regional Engineer that the problem or situation has been resolved.

Article 307. *Regulating (or Operating) Plan.* The licensee shall, at least 60 days prior to start of construction, submit for approval an operating plan, describing (a) the designed mode of hydropower operation, (b) reservoir flow diversion and regulation requirements for operation of the Corps project during construction as established by the Corps, and (c) integration of the operation of the hydroelectric facility into the Corps' emergency action plan. In addition, the licensee, prior to start of power plant operation, shall enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the power facilities acceptable to the Corps. The MOA shall specify any restrictions needed to protect the primary purposes of the Corps project for navigation, recreation, water quality, and flood control. The Commission's Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer shall be invited to attend meetings regarding the agreement. The MOA shall be subject to revision by mutual consent of the Corps and licensee as experience is gained by actual project operation. Should the licensee and the Corps fail to reach an agreement, the matter will be referred to the Director, Office of Energy Projects for resolution. Copies of the regulating plan and signed MOA between the Corps and the licensee and any revision thereof shall be furnished to the Director, Office of Energy Projects, and the D2SI – New York Regional Engineer.

Article 308. *No Claim.* The licensee shall have no claim under this license against the United States arising from the effect of any changes made in the operation or reservoir levels of the Corps project.

Article 309. *Corps' Written Approval.* The licensee shall provide the Commission's Division of Dam Safety and Inspections (D2SI) – New York Regional Office two copies of all correspondence between the licensee and the Corps. The D2SI – New York Regional Engineer shall not authorize construction of any project work until the Corps' written approval of construction plans and specifications, quality control and inspection program, and temporary emergency action plan have been received by the Regional Engineer.

Article 310. *As-Built Drawings.* Within 90 days of completion of all construction activities authorized by this license, the licensee shall file for Commission approval, revised Exhibits A, F, and G including the fishing pier and access ramp within the project boundary, to describe and show those project facilities as-built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI) – New York

Project No. 12555-004

- 27 -

Regional Engineer; the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 311. Project Financing Plan. At least 90 days before starting construction, the licensee shall file with the Commission, for approval, three copies of a project financing plan. The plan must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The licensee shall not start any project construction or ground-disturbing activities that are inseparably associated with the project, before the project financing plan is approved.

Article 401. Run-of-Release Operation. The licensee shall operate the project and only use flows released by the Corps or directed to be released by the Corps within the constraints established by the Corps according to Article 308.

Article 402. Water Quality Monitoring Plan. At least 90 days before commencing project operation, the licensee shall prepare and file for Commission approval a water quality monitoring plan. The plan shall include, but not be limited to, the following:

(1) a description of the methods, equipment, maintenance and calibration procedures, and specific locations that will be used to continuously monitor dissolved oxygen (DO) and water temperature in the reservoir, bypassed reach, and Mahoning Creek downstream of the project tailrace;

(2) a description of DO and water temperature criteria that will initiate consultation with the Corps and possible modifications to project operation or other enhancement measures, including draft tube aeration;

(3) a description of modifications to project operation or other enhancement measures, including draft tube aeration, that will be implemented in the event the DO and water temperature criteria established in item (2) above are violated;

(4) a description of a protocol for annually reporting monitoring data to the Commission, Pennsylvania Department of Environmental Protection (Pennsylvania DEP), and the U.S. Army Corps of Engineers (Corps), and

(5) an implementation schedule.

The water quality monitoring plan shall be developed after consultation with the Pennsylvania Department of Environmental Protection and the U.S. Army Corps of Engineers. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are

Project No. 12555-004

- 28 -

accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific reasons.

The Commission reserves the right to require changes to the plan. Implementation of the plan and associated schedule shall not begin until the plan and schedule are approved by the Commission. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 403. *Intake Structure Design Plan.* At least 60 days before starting project construction, the licensee shall prepare and file for Commission approval a plan showing the licensee's proposed intake structure design for limiting fish entrainment. The plan shall include, but not be limited to, the following:

(1) design drawings showing the depth, dimensions, and orientation of the intake structure and trashracks on Mahoning dam;

(2) descriptions of measures that will be implemented to limit fish entrainment, including the use of trashracks with a 1-inch or less clear spacing and designing the intake to prevent the average trashrack approach velocity from exceeding 1 foot-per-second;

(3) descriptions of any trashrack removal, maintenance, or cleaning procedures; and

(4) an implementation schedule.

The intake structure design plan shall be developed after consultation with the Pennsylvania Fish and Boat Commission and the U.S. Army Corps of Engineers. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific reasons.

The Commission reserves the right to require changes to the plan. Implementation of the plan and associated schedule shall not begin until the plan and schedule are approved by the Commission. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 404. *Wetland Protection Plan.* At least 90 days before the start of any

Project No. 12555-004

- 29 -

land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a wetland protection plan for avoidance and protection of wetlands located near project construction activities. The plan shall include, but not be limited to, the following:

- (1) a description and design drawings showing the location of the new bridge and refurbished access road including proposed clear and fill areas;
- (2) a description of measures to avoid and protect wetlands that may be affected by project construction;
- (3) procedures for revegetating disturbed areas with native plants; and
- (4) an implementation schedule.

The wetland protection plan shall be developed after consultation with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Pennsylvania Department of Environmental Protection. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific reasons.

The Commission reserves the right to require changes to the plan. Implementation of the plan and associated schedule shall begin until the plan and schedule are approved by the Commission. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 405. Recreation and Aesthetics Plan. Within 6 months of the date of issuance this license, the licensee shall prepare and file for Commission approval a recreation and aesthetics plan. The plan shall include, but not be limited to, the following:

- (1) drawings showing the proposed design and locations of a new fishing pier and access ramp adjacent to the stilling basin, including any appropriate signage and lighting;
- (2) a discussion of ownership, operation, and management responsibilities for all project recreational facilities;
- (3) a description of and design drawings of the powerhouse and any associated features used to minimize visual impacts; and

(4) an implementation schedule.

The recreation and aesthetics plan shall be developed after consultation with the U.S. Army Corps of Engineers and the Pennsylvania Fish and Boat Commission. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific reasons.

The Commission reserves the right to require changes to the plan. Implementation of the plan and schedule shall begin until the plan and schedule are approved by the Commission. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 406. Programmatic Agreement and Historic Properties Management Plan. The licensee shall implement the “Programmatic Agreement Between the Federal Energy Regulatory Commission and the Pennsylvania State Historic Preservation Officer for Managing Historic Properties that may be Affected by Issuing a License to Mahoning Creek Hydroelectric Company, LLC for the Continued Operation of the Mahoning Creek Hydroelectric Project Armstrong County, Pennsylvania (FERC No. 12555)”, executed on November 16, 2010. Pursuant to the requirements of this Programmatic Agreement (PA), the licensee shall file, for Commission approval, a HPMP within one year of the issuance date of this order. In the event that the PA is terminated, the licensee shall continue to implement the provisions of its approved Historic Properties Management Plan (HPMP). The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

Article 407. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters, to the extent it has interests in such lands and waters, for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies, for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by

the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types 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 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir 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 reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands

subject to the conveyance, and the nature of the use for which the interest was conveyed. If no conveyance was made during the prior calendar year, the licensee shall so inform the Commission and the Regional Director in writing no later than January 31 of each year.

(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 watercraft 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 Exhibit R or 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 submit a letter to the Director, Office of Energy Projects, 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 or K 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 Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

Project No. 12555-004

- 33 -

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

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

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

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

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

(F) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2010). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright
Director

Project No. 12555-004

- 34 -

Office of Energy Projects

Project No. 12555-004

- 35 -

Form L-2
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR
UNCONSTRUCTED MAJOR PROJECT AFFECTING
LANDS 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 works shall be constructed 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.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project

Project No. 12555-004

- 36 -

boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations 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 a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any features or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work 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 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 of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission.

The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

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

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the state 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 locations 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

Project No. 12555-004

- 38 -

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

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

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

Article 12. The 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 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 Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal Agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply

or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

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

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

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

Project No. 12555-004

- 40 -

construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

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

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

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, 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. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United State cut, used, or destroyed in the

Project No. 12555-004

- 41 -

construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 23. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 24. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 25. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and

Project No. 12555-004

- 42 -

communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 26. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 27. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. 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 31. 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 32. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

Document Content(s)

P-12555-004Order.DOC.....1-43