

167 FERC ¶ 62,030

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Flambeau Hydro, LLC

Project No. 2684-010

ORDER ISSUING SUBSEQUENT LICENSE

(April 15, 2019)

**INTRODUCTION**

1. On April 26, 2017, Flambeau Hydro, LLC (Flambeau Hydro) filed, pursuant to Part I of the Federal Power Act (FPA),<sup>1</sup> an application for a subsequent license to continue the operation and maintenance of the Arpin Dam Project No. 2684 (Arpin Project or project). The 1,450-kilowatt (kW) project is located on the Chippewa River, in Sawyer County, Wisconsin.<sup>2</sup> The project does not occupy federal land.
2. As discussed below, this order issues a subsequent license for the Arpin Project.

**BACKGROUND**

3. The Federal Power Commission, predecessor to the Federal Energy Regulatory Commission (FERC or Commission), issued the original license for the Arpin Project on June 3, 1969,<sup>3</sup> with an effective date of May 1, 1969 and an expiration date of April 30, 2019.
4. On December 13, 2017, the Commission issued a public notice accepting the application for filing, soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments,

---

<sup>1</sup> 16 U.S.C. §§ 791(a) – 825(r) (2012).

<sup>2</sup> The Chippewa River is a navigable waterway of the United States. *See North Central Power Co.*, 41 F.P.C. 682 (1969); *In re Electric Light & Power Co.*, 12 F.P.C. 59 (1953). Therefore, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2012), requires the project to be licensed.

<sup>3</sup> *North Central Power Co.*, 41 F.P.C. 682 (1969).

recommendations, terms and conditions, and prescriptions.<sup>4</sup> The notice set February 12, 2018 as the deadline for filing motions to intervene, protests, comments, recommendations, terms and conditions, and prescriptions. The Wisconsin Department of Natural Resources (Wisconsin DNR) and U.S. Department of the Interior (Interior) filed notices of intervention, comments, and recommendations.<sup>5</sup> The intervenors do not oppose the project.

5. Commission staff issued an Environmental Assessment (EA) on June 28, 2018, analyzing the effects of the proposed project and alternatives to it. The U.S. Environmental Protection Agency (EPA), National Park Service (Park Service), and Wisconsin DNR filed comments on the EA.

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

## **PROJECT DESCRIPTION**

### **A. Project Area**

7. The Arpin Project is located on the main stem of the Chippewa River, near the Village of Radisson in Sawyer County, Wisconsin. The Chippewa River is formed by two major tributaries, the East Fork of the Chippewa River and the West Fork of the Chippewa River, which join at Lake Chippewa to form the main stem of the river. The main stem of the Chippewa River flows southwest for approximately 183 miles from Lake Chippewa in Sawyer County, Wisconsin to the Mississippi River in Pepin County, Wisconsin. The Chippewa River Basin has a total drainage area of about 9,500 square miles.

8. There are eight existing FERC-licensed hydroelectric projects on the main stem of the Chippewa River. The Arpin Project is located at river mile 169.6, between the Chippewa Reservoir Project (FERC Project No. 8286) at Lake Chippewa and the Holcombe Project (FERC Project No. 1982). From the Holcombe Project, the Chippewa River flows about 111 miles to the Mississippi River. Land in the vicinity of the Arpin Project is primarily forest, with some agricultural, commercial, and residential land nearby.

---

<sup>4</sup> 82 Fed. Reg. 60,394 (December 20, 2017).

<sup>5</sup> Under Rule 214(a) of the Commission's Rules of Practice and Procedure, Wisconsin DNR and Interior became parties to the proceeding upon timely filing of their notices of intervention. 18 C.F.R. § 385.214(a) (2018).

## B. Project Facilities

9. The Arpin Project includes a stone masonry dam that consists of three sections, listed from west to east: (1) a 742.5-foot-long west dam section that includes a 45-foot-long spillway section with two timber stoplog spillway bays, a 318.9-foot-long overflow section with a crest elevation of 1,227.55 North American Vertical Datum of 1988 (NAVD88), and two non-overflow sections with a combined length of 378.6 feet; (2) a 452.2-foot-long middle dam section that includes a 53.1-foot-long spillway section with two steel vertical lift gates, a 237.9-foot-long overflow section with a crest elevation of 1,227.65 feet NAVD88, and two non-overflow sections with a combined length of 161.2 feet; and (3) a 319.8-foot-long east dam section that includes a 44.4-foot-long spillway section with two tainter gates, a 108-foot-long overflow section with a crest elevation of 1,227.8 feet NAVD88, and two non-overflow sections with a combined length of 167.4 feet. The dam abuts two natural islands in the Chippewa River; a 2.5-acre island located between the east and middle dam sections, and an 11-acre island located between the west and middle dam sections. The dam impounds approximately 202 surface acres<sup>6</sup> at a normal maximum water surface elevation of 1,227.22 feet NAVD88.<sup>7</sup>

10. From the impoundment, water passes through a 37-foot-long, 11.5-foot-wide concrete canal headworks structure on the eastern side of the impoundment and enters a 3,200-foot-long, 56-foot-wide power canal. Water exits the power canal through a 13.5-foot-long, 48-foot-wide concrete intake structure that includes two 9-foot-wide steel gates and a 44-foot-wide trashrack with 1.5-inch to 1.75-inch clear bar spacing. From the intake structure, water flows through three 79-foot-long penstocks to the powerhouse. The powerhouse contains two 600-kW and one 250-kW vertical Francis turbine-generator units, for a total installed capacity of 1,450 kW. Water is discharged back into the Chippewa River through three 14-foot-long draft tubes and a 130-foot-long concrete tailrace.

11. A 15-foot-long, 2.4-kilovolt (kV) underground generator lead line transmits electricity generated by the project from the three generators to a substation containing three 2.4/22.9-kV step-up transformers. A 3,645-foot-long above-ground transmission

---

<sup>6</sup> The original license describes the size of the impoundment as 294 surface acres at an elevation of 1,227.22 feet NAVD88. *See North Central Power Co.*, 41 F.P.C. 682 at Ordering Paragraph (B)(ii) (1969). However, Flambeau Hydro filed geographically-referenced data on April 5, 2018 showing that the actual impoundment size is 202 surface acres at an elevation of 1,227.22 feet NAVD88.

<sup>7</sup> The original license authorizes a maximum impoundment elevation of 1,227.22 NAVD88. *Id.* *See* EA at 10 for additional information on datum conversion.

line connects the transformers to the local distribution system. A more detailed description of the project facilities is contained in Ordering Paragraph (B)(2).

12. Project recreation facilities include a boat ramp located on the southwestern corner of the project impoundment, a fishing access area located on the western shore of the bypassed reach, a canoe portage trail located between the power canal and tailrace, a fishing access area located on the northern bank of the tailrace, and a picnic and fireplace area located on the island between the west and middle dam sections.

### **C. Project Boundary**

13. The current project boundary encompasses approximately 225 acres of land and water,<sup>8</sup> including the impoundment up to a contour elevation of 1,227.22 feet NAVD88, the power canal, tailrace, and land associated with the dam, powerhouse, generator lead line, substation, transmission line, recreation facilities, and appurtenant facilities.

14. Flambeau Hydro proposes to expand the project boundary to include the following approximately 76 acres of additional land and water: a 2.5-acre island between the east and middle dam sections, a 9-acre parcel of land on the island between the middle and west dam sections, a 1.5-acre island within the project impoundment, an approximately 11.5-acre area of forested land on the west bank of the impoundment that abuts River Road and the boat ramp access road, an approximately 7-acre area on the east bank of the impoundment that extends south along the power canal and includes a portion of Birch Lane, and approximately 44.5 acres of land and water downstream of the project dam, including the bypassed channels and surrounding shorelines.

### **D. Current Project Operation**

15. The Arpin Project is manually operated in a run-of-river mode by on-site staff, such that outflow from the project approximates inflow. As required by the current license, Flambeau Hydro limits fluctuations in the project impoundment to 1 foot below the maximum water surface elevation of 1,227.22 feet NAVD88 from June 1 through March 31, and 6 inches below the maximum water surface elevation from April 1 through May 31. Flambeau Hydro also maintains a continuous minimum flow of 40

---

<sup>8</sup> The original license issued by the Commission on June 3, 1969 does not specify a total project boundary acreage. *See North Central Power Company*, 41 FPC ¶ 682-689. Commission staff estimates that the existing project boundary encompasses approximately 225 acres based on project features identified in the original license order and the revised Exhibit K drawing that was approved by the Commission on December 10, 1981. *See North Central Power Company, Inc.*, 17 FERC ¶ 62,387 (1981). *See EA* at page 11, note 8 for additional information on the existing project boundary.

cubic feet per second (cfs) or inflow, whichever is less, from a tainter gate on the east dam section.

16. The project has a minimum hydraulic capacity of 53 cfs and a maximum hydraulic capacity of 664 cfs. When inflow exceeds 664 cfs, excess water is spilled into the bypassed reach by passing flows through the tainter gates at the east dam section and the vertical lift gates at the middle dam section to maintain the water surface elevation at or below the maximum elevation of 1,227.22 feet NAVD88 in the project impoundment.

17. Project generation flows bypass: (a) a 1,004-foot-long west channel, located immediately downstream of the west dam section; (b) an 812-foot-long middle channel located immediately downstream of the middle dam section; (c) a 748-foot-long east channel located immediately downstream of the east dam section; and (d) a 4,270-foot-long main channel that begins at the confluence of the west, middle, and east channels and continues downstream to the outflow of the project tailrace.

18. The project's average annual generation is approximately 7,336 megawatt-hours (MWh).

#### **E. Proposed Environmental Measures**

19. Flambeau Hydro proposes to continue operating the project in a run-of-river mode, with a maximum water surface elevation of 1,227.22 feet NAVD88 in the impoundment.

20. To protect aquatic resources in the bypassed reach, Flambeau Hydro proposes to continue releasing a minimum flow of 40 cfs or inflow, whichever is less, to the east channel of the bypassed reach.

21. To protect aquatic resources in the impoundment, Flambeau Hydro proposes to continue limiting impoundment fluctuations to 1 foot below the maximum water surface elevation from June 1 through March 31, and 6 inches below the maximum water surface elevation from April 1 through May 31.

22. To provide recreation opportunities at the project, Flambeau Hydro proposes to continue to operate and maintain the existing public boat ramp, the fishing access area on the western shore of the bypassed reach, the canoe portage trail, and the fishing access area on the northern bank of the tailrace. Flambeau Hydro also proposes to discontinue operation and maintenance of the picnic and fireplace area located on the island between the west and middle dam sections.

23. To protect cultural resources, Flambeau Hydro proposes to implement the statewide programmatic agreement (PA) for Wisconsin and adjacent portions of Michigan,<sup>9</sup> and develop a historic properties management plan (HPMP).

### **SUMMARY OF LICENSE REQUIREMENTS**

24. This license, which authorizes 1,450 kW of renewable energy generation capacity, requires the proposed measures noted above, with the staff-recommended modifications and additional measures described below, and with the conditions included in Wisconsin DNR's water quality certification (Appendix A). Combined, these measures will protect and enhance aquatic resources, terrestrial resources, recreational resources, cultural resources, and threatened and endangered species.

25. To document that project operation is in compliance with the operational requirements of the license, the license requires the development of an operation compliance monitoring plan that includes the following provisions: (1) a description of how Flambeau Hydro will document compliance with the operational requirements of the license; (2) installation, operation, and maintenance of: (a) a staff gauge in the impoundment to document water surface elevations; (b) a staff gauge in the tailrace to document discharges from the powerhouse; and (c) automatic water level recorders to record headwater and tailwater elevations; (3) a description of the specific locations of all gages and other measuring devices; and (4) standard operating procedures to be implemented outside of normal operating conditions.

26. To help ensure that Flambeau Hydro reports deviations from the operational requirements of the license and evaluates the extent of any environmental effects associated with a deviation, the license requires reporting procedures based on the duration of the event, and any observed or reported effects of the deviation.

27. To protect fish and aquatic habitat, the license requires Flambeau Hydro to develop a debris management plan for removing and sorting debris that collects on project structures, passing organic debris downstream, and removing and disposing of trash.

---

<sup>9</sup> The full name of the PA is "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer, for Managing Historic Properties that May Be Affected by New and Amended Licenses Issuing for the Continued Operation of Existing Hydroelectric Projects in the State of Wisconsin and Adjacent Portions of the State of Michigan."

28. To protect the federally threatened northern long-eared bat, the license requires Flambeau Hydro to avoid tree removal at the project unless the tree poses a threat to human life or property, or removal occurs outside of the pup season (June 1 through July 31).

29. To provide recreation opportunities during the term of the license, the license requires the development of a recreation management plan that includes the following measures: (1) continued operation and maintenance of the existing public boat ramp, the fishing access area on the western shore of the bypassed reach, the canoe portage trail, and the fishing access area on the northern bank of the project tailrace; and (2) installation of a picnic table at the boat ramp and a picnic table at the fishing access area located on the western shore of the bypassed reach.

### **WATER QUALITY CERTIFICATION**

30. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>10</sup> the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency has either issued a water quality certification (certification) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification must become a condition of any federal license for the project.<sup>11</sup>

31. On January 30, 2018, Flambeau Hydro applied to Wisconsin DNR for a certification for the Arpin Project. Wisconsin DNR received the request for certification on February 1, 2018. Wisconsin DNR issued a certification for the project on November 12, 2018. Nine of the ten conditions (conditions 1 through 4, and 6 through 10) are general or administrative and are not discussed further.

32. Condition 5 of the certification requires Flambeau Hydro to consult with Wisconsin DNR in developing nine management plans, including a woody debris management plan, invasive species management plan, recreation management plan, operation management plan, drawdown management plan, wildlife and lands management plan, fishery management plan, water quality management plan, and mussel management plan. The condition only provides a list of the nine management plans, and does not include any specific information on the measures that would be implemented by the plans. Because Condition 5 only includes a list of plans without descriptions, there is not enough information in the certification regarding whether or not to recommend

---

<sup>10</sup> 33 U.S.C. § 1341(a)(1) (2012).

<sup>11</sup> *Id.* § 1341(d).

including Condition 5 in this license. However, Condition 5 is included in the license because it is mandatory under section 401 of the CWA.

33. The ten conditions of the certification are set forth in Appendix A of this order and incorporated into the license by ordering paragraph (E).

### **COASTAL ZONE MANAGEMENT ACT**

34. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>12</sup> 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 six months of its receipt of the applicant's certification.

35. On March 20, 2017, Flambeau Hydro requested concurrence from the Wisconsin Coastal Resources Management Program to confirm that a consistency review for the project is unnecessary because it is not located in Wisconsin's designated coastal area, which extends to 15 counties on the state boundary with Lake Superior and Lake Michigan. In correspondence dated March 20, 2017, the Wisconsin Coastal Resources Management Program stated that because the project is located outside of the state-designated coastal management zone, a coastal zone consistency review is not required.<sup>13</sup>

### **SECTION 18 FISHWAY PRESCRIPTIONS**

36. Section 18 of the FPA<sup>14</sup> 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 Commerce or the Secretary of the Interior, as appropriate.

37. By letter filed February 12, 2018, Interior requested that the Commission reserve authority to prescribe fishways. Consistent with Commission policy, Article 404 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Arpin Project.

---

<sup>12</sup> 16 U.S.C. § 1456(c)(3)(A) (2012).

<sup>13</sup> See Flambeau Hydro's April 26, 2017 license application at Appendix E-16.1.

<sup>14</sup> 16 U.S.C. § 811 (2012).



## THREATENED AND ENDANGERED SPECIES

38. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.<sup>15</sup> Based on the U.S. Fish and Wildlife Service's (FWS) Information for Planning and Consultation (IPaC) website, four species have the potential to occur in the project vicinity: the federally threatened northern long-eared bat (*Myotis septentrionalis*) and Canada lynx (*Lynx canadensis*), and the federally endangered gray wolf (*Canis lupus*) and sheepsnose mussel (*Plethobasus cyphus*).<sup>16</sup>

### A. Northern Long-Eared Bat

39. FWS finalized an ESA section 4(d) rule for the northern long-eared bat in January 2016.<sup>17</sup> The ESA section 4(d) rule focuses on minimizing the effects of disturbances on known northern long-eared bat hibernacula and the effects of tree removal on roosting northern long-eared bats, including maternity colonies, located within the zone associated with the spread of white-nose syndrome. In the programmatic biological opinion for the section 4(d) rule,<sup>18</sup> FWS found that incidental take of the northern long-eared bat is not prohibited unless the action: (1) affects a northern long-eared bat hibernaculum or could alter the entrance or the environment of a hibernaculum; (2) includes the removal of a known, occupied maternity roost tree or any trees within 150 feet of a known, occupied maternity roost tree during the pup season (June 1 – July 31); or (3) includes the removal of any trees within 0.25 mile of a northern long-eared bat hibernaculum at any time of year. In addition, removal of hazardous trees for the protection of human life and property is not prohibited under the section 4(d) rule.

---

<sup>15</sup> 16 U.S.C. § 1536(a)(2012).

<sup>16</sup> See Commission staff's February 4, 2019 memorandum on Interior's official list of threatened and endangered species, as accessed through the IPaC database (<https://ecos.fws.gov/ipac/>) on February 1, 2019.

<sup>17</sup> FWS, 2016. *Endangered and Threatened Wildlife and Plants; 4(d) Rule for the Northern Long-Eared Bat*. 81 Fed. Reg. 9, 1900-1922 (January 14, 2016). Section 4(d) of the ESA directs FWS to issue regulations deemed "necessary and advisable to provide for the conservation of threatened species." See 16 U.S.C. § 1533(d) (2012).

<sup>18</sup> FWS, 2016. *Programmatic biological opinion on final 4(d) rule for the northern long-eared bat and activities excepted from take prohibitions*. U.S. Fish and Wildlife Service, Midwest Regional Office.

40. In the EA, Commission staff determined that although there is no known northern long-eared bat population within the project boundary, suitable habitat for the northern long-eared bat is present, and maternity roosts have been documented in Sawyer County.<sup>19</sup> Therefore, Commission staff concluded that the northern long-eared bat could be affected by project maintenance activities that disturb northern long-eared bat habitat, such as activities that require tree removal in the project vicinity.

41. In the EA, Commission staff recommended a seasonal tree clearing restriction at the project from June 1 to July 31 to avoid disturbing the northern long-eared bat.<sup>20</sup> With this measure in place, staff concluded that the project would not be likely to adversely affect the northern long-eared bat and that prohibited take of northern long-eared bats would not occur during the term of the new license.<sup>21</sup> Article 406 requires that Flambeau Hydro avoid tree removal at the project unless the tree poses a threat to human life or property, or the removal occurs outside of the northern long-eared bat pup season from June 1 through July 31.

### **B. Canada Lynx, Gray Wolf, and Sheepnose Mussel**

42. Staff determined in the EA that relicensing the project will have no effect on the Canada lynx, and no adverse effect on the gray wolf or sheepnose mussel. In the EA, staff concluded that relicensing the project would have no effect on the Canada lynx because the project lacks suitable lynx habitat and Canada lynx are not known to inhabit the area.<sup>22</sup>

43. The EA found that although the gray wolf has been observed in the project area, relicensing the project is not likely to adversely affect the gray wolf because there is no indication that project operation and maintenance are currently affecting the gray wolf, and none of the proposed action alternatives include any changes to project operation that would affect the gray wolf, or its habitat and food availability.

---

<sup>19</sup> EA at 36-37.

<sup>20</sup> EA at 40.

<sup>21</sup> On June 29, 2018, staff requested concurrence with this determination on the northern long-eared bat in writing within 30 days. FWS did not respond to Commission staff's request for concurrence for this species in its July 23, 2018 letter. Therefore, staff presumes that the determination is informed by the best available information and that our responsibilities under section 7(a)(2) with respect to the northern long-eared bat are fulfilled through FWS's 2016 programmatic biological opinion.

<sup>22</sup> EA at 40.

44. The EA also found that although the sheepnose mussel has the potential to occupy habitat in the impoundment and bypassed reach, relicensing the project is not likely to adversely affect the sheepnose mussel because the proposed action alternatives would continue run-of-river operation and minimum flow releases into the bypassed reach, and the project would not alter sheepnose mussel habitat downstream of the dam relative to existing conditions.

45. By letter filed July 23, 2018, FWS concurred with staff's findings that the project may affect, but is not likely to adversely affect, the gray wolf and sheepnose mussel. Therefore, no further action under the ESA is required for these species.

### **NATIONAL HISTORIC PRESERVATION ACT**

46. Under section 106 of the National Historic Preservation Act (NHPA)<sup>23</sup> and its implementing regulations,<sup>24</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places, defined as historic properties, and afford the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Office (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

47. To satisfy these responsibilities for licensing actions in Wisconsin and Michigan, the Commission executed a statewide PA with the Advisory Council, the Wisconsin SHPO, and the Michigan SHPO on December 16, 1993.<sup>25</sup> The PA requires Flambeau Hydro to implement an HPMP within one year of the effective date of this license. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 408 requires Flambeau Hydro to implement the PA and file an HPMP with the Commission for review and approval within six months of the effective date of this license.

---

<sup>23</sup> Section 106 of the National Historic Preservation Act of 1966, as amended, 54 U.S.C. § 306108, Pub. L. No. 113-287, 128 Stat. 3188 (2017).

<sup>24</sup> 36 C.F.R. Part 800 (2018).

<sup>25</sup> The PA is implemented for all hydroelectric projects in Wisconsin and Michigan's Upper Peninsula that may affect properties included in, or eligible for inclusion in, the National Register of Historic Places.

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

48. Section 10(j)(1) of the FPA<sup>26</sup> requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,<sup>27</sup> to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

49. In response to the December 13, 2017 public notice that the project was ready for environmental analysis, Interior filed three recommendations under section 10(j).<sup>28</sup> One recommendation is outside the scope of section 10(j) and is discussed in the next section. This license includes conditions consistent with the two recommendations that are within the scope of section 10(j): (1) operate the project in run-of-river mode and release a minimum flow of 40 cfs through the east dam section (Article 402); and (2) develop an operation compliance monitoring plan (Article 403).

### **SECTION 10(a)(1) OF THE FPA**

50. Section 10(a)(1) of the FPA<sup>29</sup> requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

#### **A. Fish Entrainment Protection**

51. Interior filed one recommendation under section 10(j) that is not a specific measure for protecting, mitigating damages to, or enhancing fish and wildlife. Consequently, this recommendation is not considered under section 10(j) of the FPA, but is considered under the broad public-interest standard of section 10(a)(1).<sup>30</sup>

---

<sup>26</sup> 16 U.S.C. § 803(j)(1) (2012).

<sup>27</sup> 16 U.S.C. §§ 661 *et seq.* (2012).

<sup>28</sup> Interior filed the recommendations on February 12, 2018.

<sup>29</sup> 16 U.S.C. § 803(a)(1) (2012).

<sup>30</sup> *See* EA at 74, explaining that the statement, “or through some other action” renders the recommendation open-ended, non-specific, and uncertain as to the type and

52. Interior recommended, generally, that the licensee address the potential for fish entrainment “either through physical exclusion, with narrow spaced trash racks, or through some other action.”<sup>31</sup>

53. In the EA, staff evaluated the potential for entrainment by considering the fish species present at the project, the existing bar spacing of the trashrack (1.5 to 1.75 inches), the approach velocity in front of the trashrack, the angle of the trashrack, and the amount of debris loading on the trashrack. Staff found that the even though the existing trashrack would not physically exclude juvenile and small adult fish from being entrained at the project’s intake, the flow velocity at the trashrack could be readily avoided by all adult fish species that are known to occur in the project impoundment.<sup>32</sup>

54. Although Interior did not recommend a specific measure for addressing entrainment at the project, staff analyzed the potential effects of installing a trashrack with narrower spacing on fish in the project impoundment. In the EA, staff analyzed fish entrainment and impingement using a hypothetical trashrack with 1-inch clear bar spacing. Given the healthy and diverse fish community in the impoundment, the lack of documented entrainment or impingement-related fish kills, and low flow velocities at the trashrack, staff concluded that a trashrack with 1-inch clear bar spacing would not substantially reduce mortality or otherwise significantly benefit fish; therefore, the \$60,689 annualized cost of replacing the existing trashrack with a 1-inch trashrack would not be justified. For these reasons, staff did not recommend measures for reducing fish entrainment at the project.

55. In its July 30, 2018 comments, Wisconsin DNR states that the fish entrainment evaluation in the EA incorrectly assumes that fish will attempt to avoid downstream passage through the project’s turbines. Wisconsin DNR states that the majority of fish are likely to try to go downstream and therefore will not turn away from the project’s intake and swim upstream. Wisconsin DNR recommends that the Commission consider that some fish are trying to migrate downstream, which may cause entrainment or impingement at the project.

56. While it is possible that fish could intentionally swim into the project’s intake structure in an attempt to move downstream, there is nothing in the project record to indicate that such movement, if occurring, is resulting in significant entrainment-related fish kills. Wisconsin DNR does not provide any new information or evidence to suggest that entrainment-related fish kills are occurring at the project such that replacing the

---

cost of measure to implement.

<sup>31</sup> See Interior’s February 12, 2018 Comments at 3.

<sup>32</sup> EA at 27-30.

existing trashrack with one having narrower spacing would have substantial benefits. Therefore, this license does not require replacement of the trashracks or implementation of other measures to reduce entrainment at the project.

## **B. Project Operation**

57. To protect aquatic resources at the project, Flambeau Hydro proposes to continue to operate the project in a run-of-river mode and limit fluctuations in the impoundment to 1 foot below the maximum water surface elevation of 1,227.22 feet NAVD88 from June 1 through March 31, and 6 inches below the maximum water surface elevation from April 1 through May 31. Flambeau Hydro also proposes to maintain a continuous minimum flow of 40 cfs or inflow, whichever is less, from the east dam section. As discussed above, operating the project in run-of-river mode and maintaining a minimum flow of 40 cfs in the bypassed reach are consistent with FWS's section 10(j) recommendations.

58. Continuing to operate the project in a run-of-river mode will minimize impoundment fluctuations associated with project operation.<sup>33</sup> One benefit of minimizing impoundment fluctuations is that it protects shallow, near-shore habitat where many of the fish species in the impoundment spawn. Limiting fluctuations to 6 inches during the spring fish spawning season of April 1 through May 31 will provide additional protection by reducing the likelihood of fish nests being dewatered or abandoned during the spawning season.

59. To protect aquatic resources in the project vicinity, Article 402 of this license requires Flambeau Hydro to: (1) operate the project in a run-of-river mode with a normal maximum elevation of 1,227.22 feet NGVD88, and maintain a discharge from the project so that all outflows approximate the sum of inflows to the project on an instantaneous basis; (2) limit impoundment level fluctuations to 1 foot below the maximum water surface elevation from June 1 through March 31, and 6 inches below the maximum water surface elevation from April 1 through May 31; and (3) release a continuous minimum flow of 40 cfs, or inflow if less, from the east dam section into the bypassed reach. Article 402 allows planned, short-term deviations from the operational requirements of the license (*i.e.*, for minor or routine maintenance activities) after mutual agreement among the licensee and the resource agencies. The article specifies reporting procedures the licensee must follow regarding such planned deviations. Article 402 also includes reporting requirements that the licensee must follow in the event of unplanned deviations, based on the duration of the event, and any observed or reported effects of the deviation. Under the article, unplanned deviations that do not exceed three hours in duration (from the time the deviation starts until the time compliance is resumed) and for which there are

---

<sup>33</sup> EA at 23.

no observed or reported environmental effects, do not need to be reported to the Commission individually, but can instead be included in an annual report that describes these minor incidents.

### **C. Operation Compliance Monitoring**

60. To document that project operation is in compliance with the license's operation requirements, Interior recommended that Flambeau Hydro develop an operation compliance monitoring plan that includes the following provisions: (1) methods for accurately documenting inflow to the project and discharge from the project; (2) installation of a staff gauge in the impoundment that shows the impoundment operating band stipulated in the license; (3) installation of a staff gauge in the tailrace to document discharges from the powerhouse; and (4) installation of automatic water level recorders to record headwater and tailwater elevations.

61. In the EA, Commission staff recommended Interior's section 10(j) recommendation and found that the measures typically included in an operation compliance monitoring plan would help document Flambeau Hydro's compliance with the operational provisions of the license, including run-of-river operation, minimum flows, and impoundment elevation limits.<sup>34</sup> In addition to Interior's measures, Commission staff recommended that the operation compliance monitoring plan include standard operating procedures to be implemented outside of normal operating conditions for the protection of aquatic resources, including during: (1) scheduled facility shutdowns, impoundment drawdowns, and impoundment refilling; and (2) emergency conditions, such as unscheduled facility shutdowns and maintenance, in order to minimize project effects on environmental resources.<sup>35</sup>

62. Consistent with Interior's section 10(j) recommendation and staff's recommendation in the EA, Article 403 requires Flambeau Hydro to develop an operation compliance monitoring plan that includes: (1) a detailed description of how the licensee will document compliance with the operational requirements of the license; (2) installing, operating, and maintaining: (a) a staff gauge in the impoundment that shows the minimum and maximum water surface elevations of 1,226.22 and 1,227.22 feet NAVD88, respectively; (b) a staff gauge in the tailrace to document discharges from the powerhouse; and (c) automatic water level recorders to record headwater and tailwater elevations; (3) a description of the specific locations of all gages and other measuring devices; (4) standard operating procedures to be implemented outside of normal

---

<sup>34</sup> EA at 66.

<sup>35</sup> EA at 65-66.

operating conditions; and (5) a schedule for installing and operating the monitoring equipment.

#### **D. Fish Stranding Assessment**

63. In the EA, Commission staff analyzed the effects of Flambeau Hydro's proposed 40-cfs minimum flow on aquatic habitat in the bypassed reach, including effects on habitat quantity and quality, fish stranding, and fluctuations resulting from spillage.<sup>36</sup> Staff concluded that maintaining the minimum flow release of 40 cfs would continue to provide fish habitat varying from fair to excellent and would continue to prevent fish stranding in the bypassed reach for all evaluated species, except for lake sturgeon.

64. In its comments on the EA, Wisconsin DNR states that Commission staff's evaluation of the proposed 40-cfs minimum flow does not fully consider the effects of rapidly fluctuating flows on fish standing in the bypassed reach. Wisconsin DNR states that it has observed stranded and dead fish in the west channel of the bypassed reach, and that maintaining minimum flows in the east channel of the bypassed reach does not address minimum flows that are needed in the middle and west channels of the bypassed reach. Wisconsin DNR also states that Flambeau Hydro's stranding assessment does not account for stranding that occurs during the spring season, including the impact of fish stranding on lake sturgeon that are using the bypassed reach in the spring. Wisconsin DNR indicates that it will require a formal plan in the section 401 certification for rescuing stranded fish and may consider releases from other locations besides just the east dam section.

65. The EA included an analysis of habitat quality in the west, middle, east, and main channels of the bypassed reach across a range of minimum flows (from 30 to 50 cfs), and considered the potential for lake sturgeon stranding during the spring season.<sup>37</sup> The EA explains that all but one of the pools surveyed in the middle channel of the bypassed reach during Flambeau Hydro's fish stranding survey maintained a connection to the main channel at a minimum flow release of 40 cfs, suggesting that if fish in the west, middle, and east channels were in danger of stranding due to falling water levels, almost all of the fish in those sub-channels, with the exception of larger sturgeon, could avoid

---

<sup>36</sup> EA at 23-25.

<sup>37</sup> The EA's analysis is based on a minimum flow study conducted by Flambeau Hydro, where Flambeau Hydro measured water surface elevations throughout the entire lengths of the west, middle, east, and main channels, and stream bed and water surface elevations at 10 representative cross sections in the west, middle, east, and main channels (one in each of the three sub-channels and seven in the main channel). See EA at 23.



stranding by swimming downstream to the main channel.<sup>38</sup> With specific regard to sturgeon, Commission staff noted in the EA that because sturgeon require a greater swimming depth than the other species in the river, sturgeon could become stranded in the bypassed reach even at minimum flows as high as 50 cfs.<sup>39</sup> As stated in the EA, several adult lake sturgeon were captured and relocated during the sturgeon spawning survey in the spring of 2016 because they had become stranded in pools in the bypassed reach, presumably after they accessed spawning habitat under high flows and then were unable to leave the areas after flows receded. Altogether, the potential for fish stranding in the bypassed reach appears to be highest following periodic high flow events in the Chippewa River.

66. Although fish stranding is known to occasionally occur in certain portions of the bypassed reach during the spring season as noted above, there is no evidence in the record to suggest that stranding is having a significant effect on fish populations in the project vicinity, including populations of sturgeon. Therefore, this license does not require Flambeau Hydro to develop measures to reduce fish stranding at the project.

#### **E. Fish and Mussel Enhancement**

67. In its letter filed July 23, 2018, FWS concurred with Commission staff's determination that issuing a subsequent license for the Arpin Project may affect, but is not likely to adversely affect the sheepsnose mussel. However, FWS states that Arpin Dam is a barrier to upstream fish movement in the Chippewa River, and a fish and mussel enhancement plan that incorporates a fish transfer and mussel reintroduction program to areas upstream of the project could be beneficial to the recovery and conservation of sheepsnose mussel populations in the Chippewa River Basin.

68. The EA acknowledges that suitable sheepsnose mussel habitat may exist in the project vicinity and that potential host fish species are known to occur in the project vicinity.<sup>40</sup> However, the nearest documented occurrence of sheepsnose mussel is approximately 50 miles downstream of the project and there is no indication that sheepsnose mussel populations are restricted by habitat availability or that the project dam is reducing the reproduction, numbers, or distribution of the species.<sup>41</sup> Because habitat availability does not appear to be a limiting factor for survival, reproduction, or

---

<sup>38</sup> *Id.*

<sup>39</sup> EA at 24 and 25.

<sup>40</sup> EA at 41-42.

<sup>41</sup> EA at 31.

distribution of mussel and fish species at the project, the benefits of a fish and mussel enhancement plan would most likely be minimal. Therefore, this license does not require Flambeau Hydro to develop a fish transfer and reintroduction program for sheepnose mussel at the project.

## **F. Debris Management**

69. Debris and trash that accumulates at the project's 44-foot-wide trashrack could increase fish entrainment and impingement by increasing the flow velocity at the trashracks.<sup>42</sup> In the EA, Commission staff recommended that Flambeau Hydro develop a debris management plan to minimize project effects on aquatic organisms and ensure that desirable organic material is reintroduced to the Chippewa River downstream of the dam.<sup>43</sup> In its comments on the EA, Wisconsin DNR requests a more detailed description of the types of debris, as well as the seasonal variations and frequency of the cleaning of the trashracks. Consistent with Wisconsin DNR's request, Article 405 of this license requires Flambeau Hydro to file a debris management plan with provisions that identify the frequency and methods for managing organic debris and trash at the project, including provisions for: (1) removing and sorting organic debris and trash that collects on project structures; (2) passing organic debris downstream of the project; and (3) removing and disposing of trash.

## **G. Project Recreation**

### **1. Recreation Facilities**

70. Flambeau Hydro proposes to continue operation and maintenance of the following existing project recreation facilities: (1) a boat ramp located on the southwestern corner of the project impoundment to provide impoundment access for motorized and non-motorized boats; (2) a fishing access area located on the western shore of the bypassed reach; (3) a canoe portage trail that crosses from the power canal to the project tailrace; and (4) a fishing access area located on the northern bank of the tailrace.

71. Flambeau Hydro proposes to discontinue operation and maintenance of the 2-acre picnic and fireplace area located on the island between the west and middle dam sections. Because the picnic and fireplace area is located on an island that is relatively close to the middle dam section, site access is limited to boaters that are able to navigate across the impoundment from the boat ramp to the island, while maintaining a safe distance from the dam. Separately, the isolated nature of the facility can make the site difficult to

---

<sup>42</sup> EA at 32.

<sup>43</sup> EA at 66.

maintain.<sup>44</sup> Based on these factors, staff determined in the EA that discontinuing the operation and maintenance of the picnic and fireplace area as a formal project recreation facility would not significantly affect recreation opportunities at the project.<sup>45</sup> To ensure that members of the public have access to picnic areas at the project, staff recommended installing a picnic table at the public boat ramp and the fishing access area that is located on the western shore of the bypassed reach.

72. To continue to provide recreation opportunities at the project, Article 407 of this license requires the following: (1) continued operation and maintenance of the boat ramp, the fishing access area on the western shore of the bypassed reach, the canoe portage trail, and the fishing access area on the northern bank of the tailrace; and (2) installation of a picnic table at the boat ramp and a picnic table at the fishing access area in the bypassed reach.

## **2. Recreation Access**

73. In its July 19, 2018 comments on the EA, the Park Service states that the EA did not account for existing whitewater boating opportunities at the project, or include a description of an existing whitewater recreation feature referred to as “Belille Falls,” which is located immediately downstream of the Arpin Dam. The Park Service states that the existing informal access routes to the whitewater feature are steep and unevenly graded. The Park Service recommends improved access to the bypassed reach for whitewater boaters during higher flows and the installation of signage along River Road to direct boaters to the whitewater access point.

74. The Park Service has not provided any information regarding the frequency of whitewater recreation use in the bypassed reach. In the license application, Flambeau Hydro states that it is unaware of any whitewater usage at the project. Flambeau Hydro states that staff have “not witnessed any whitewater paddlers utilizing any of the bypass[ed] channels at any time.”<sup>46</sup> Based on the lack of documented whitewater use at the project, this license does not require measures to improve access to whitewater features in the bypassed reach.

## **3. Information on Project Recreation Facilities**

75. In its comments on the EA, the Park Service recommends that Flambeau Hydro update the recreation plan every six years, in consultation with local, state, and federal

---

<sup>44</sup> EA at 46- 47.

<sup>45</sup> EA at 46.

<sup>46</sup> See Flambeau Hydro’s April 26, 2107 license application at E-16.

agencies. The Park Service also recommends that Flambeau Hydro include information about the project on its website and on a kiosk at the project boat ramp, including a map of the project and its recreation facilities, a map of the bypassed reach (including canoe put-in/take-out locations and portage routes), safety warnings for boating the bypassed reach, and other pertinent information about the natural resources of the project.

76. Recreation facilities at the Arpin Project are generally underutilized, with the canoe portage facility having the highest average use (20 percent capacity utilization), followed by the fishing access area at the tailrace (15 percent capacity utilization) and the boat ramp (7 percent capacity utilization).<sup>47</sup> The Park Service has not provided any information indicating that recreation users need additional information to access and utilize recreation opportunities in the vicinity of the project. In addition, 18 C.F.R. §§ 8.1 and 8.2 of the Commission's regulations require licensees to publicize specific recreation use and availability information to the public for its licensed project through newspaper notices, project signage, its local office, and any existing licensee website. For instance, following issuance of the license, the licensee must publish a notice in a local newspaper of license conditions relating to recreation use at the project. The requirements in sections 8.1 and 8.2 of the Commission's regulations will provide a variety of ways for the public to receive information on recreation and public access. Therefore, this license does not require Flambeau Hydro to provide information about the project and its recreation facilities at a kiosk or on a website, as requested by the Park Service.

## **H. Climate Change**

77. In its July 19, 2018 comments on the EA, EPA recommends that the Commission considers resiliency and adaptation measures to ensure that the project will maintain its structural integrity and safe operating conditions under changing heat and precipitation conditions over the life of the license.

78. An analysis of the available mean flow data from the Chippewa River<sup>48</sup> shows that the mean annual flow has not changed significantly in the last 31 years. For example, the 5-year average of mean annual flow from 1982 to 1986 was 954 cfs, compared to 965 cfs from 2013 to 2017. This suggests that there is no ongoing long-term effect, including changing precipitation conditions, on the mean annual flow in the Chippewa River.

79. Should conditions change in the future, the Commission's regulations and the requirements of this license include measures that will help ensure the project maintains

---

<sup>47</sup> EA at 44.

<sup>48</sup> Flow in the Chippewa River is recorded by the U.S. Geological Survey gage no. 05356000, which is located approximately 10 miles upstream of the project.

its structural integrity and safe operating conditions over the term of the license. Under the Commission's regulations, licensees are required to use sound and prudent engineering practices in any action relating to the design, construction, operation, maintenance, use, repair, or modification of a water power project or project works.<sup>49</sup> Flambeau Hydro also maintains a contact list of local emergency management authorities to notify during flood events or if the dam is in danger of failing.

### **I. Project Boundary**

80. Project boundaries enclose the project works that are to be licensed and include "only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources."<sup>50</sup>

81. The original license describes the size of the impoundment as 294 surface acres. Flambeau Hydro proposes to decrease the size of the project impoundment to 202 surface acres, to reflect updated geographically-referenced elevation measurements that were filed with the Commission on April 5, 2018.<sup>51</sup> Because the requested change only reflects an updated survey, and not a change to the normal maximum water surface elevation, this revision to the project boundary would not affect environmental, recreational, or cultural resources.

82. As noted above, the existing project boundary encompasses approximately 225 acres of land and water, including the impoundment up to a contour elevation of 1,227.22 feet NAVD88,<sup>52</sup> the power canal, tailrace, and land associated with the dam, powerhouse, generator lead line, transmission line, recreation facilities, and appurtenant facilities.<sup>53</sup> The land in the project boundary includes the shoreline of the 2.5-acre island located between the east and middle dam sections and the shoreline of the 11-acre island located

---

<sup>49</sup> See 18 C.F.R. § 12.5 (2018).

<sup>50</sup> 18 C.F.R. § 4.41(h)(2) (2018).

<sup>51</sup> See Flambeau Hydro's August 13, 2018 response to Commission staff's June 11, 2018 request for additional information.

<sup>52</sup> The original license describes the size of the impoundment as 294 surface acres. However, in response to staff's additional information request, Flambeau Hydro states that updated geographically-referenced elevation measurements confirm that the project impoundment is 202 surface acres. See Flambeau Hydro's August 13, 2018 response to Commission staff's June 11, 2018 request for additional information.

<sup>53</sup> See *supra* note 8.

between the west and middle dam sections (up to a contour elevation of 1,227.22 feet NAVD88), which are used to form the project impoundment. The land in the project boundary also includes a 2-acre picnic and fireplace area on the 11-acre island. The remainder of the 2.5-acre and 11-acre islands that adjoin the project impoundment are excluded from the current project boundary. Similarly, the 90-acre island that is in the bypassed reach is not included within the current project boundary, except for the land associated with the transmission line corridor, canoe portage, and service road.

83. Flambeau Hydro proposes to modify the project boundary by adding approximately 76 acres of land and water, including the bypassed channels, the islands that adjoin the project impoundment, an island within the project impoundment, an area of forested land on the west bank of the impoundment, and additional land and water around existing project features. Flambeau Hydro has indicated that this land would serve a project purpose of “fish and wildlife enhancement,” as well as providing a shoreline buffer along the bypassed reaches of the project.

84. Project boundaries enclose the project works that are to be licensed and include “only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources.”<sup>54</sup> In the EA, staff found that the additional land and water that Flambeau Hydro proposes to add to the project boundary is not needed for project operation, flood control, recreation, the protection of fish and wildlife, or other developmental and non-developmental interests of the project.<sup>55</sup> Land in the project vicinity is mostly forested and appears to provide substantial habitat opportunities for fish and wildlife resources. Therefore, this license does not approve the addition of 76 acres of land and water to the project boundary.

85. In its comments on the EA, the Park Service recommends that the project boundary be extended to include a 200-foot riparian buffer zone on each side of the river and the 90-acre island in the bypassed reach. The Park Service states that including these areas within the project boundary would conserve important habitat and provide potential recreation opportunities in the future.

86. The Park Service has not identified why habitat conservation and additional recreation opportunities are needed at this time. As discussed above, multiple recreation opportunities are available in the project vicinity, and the recreation facilities at the project are underutilized. In addition, land in the project vicinity is mostly forested and appears to provide an adequate shoreline buffer and substantial habitat opportunities for

---

<sup>54</sup> 18 C.F.R. § 4.41(h)(2) (2018).

<sup>55</sup> EA at 48.

fish and wildlife resources. Therefore, this license does not approve of the addition of a 200-foot riparian buffer and the 90-acre island to the project boundary.

87. Finally, because, as noted above, the license does not require Flambeau Hydro to continue operating and maintaining the 2-acre picnic and fireplace area, it no longer serves a project purpose,<sup>56</sup> and this license removes the 2-acre picnic and fireplace area from the project boundary.

88. Article 204 of this license requires Flambeau Hydro to file revised Exhibit G drawings of the project boundary that exclude: (1) approximately 76 acres of land and water that Flambeau Hydro proposes to add to the project boundary; and (2) the 2-acre picnic and fireplace area.

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

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

### **B. Exhibit A Project Description**

90. Commission regulations require that licensees file an Exhibit A as part of the license application to describe the project. The Exhibit A filed on April 26, 2017 and revised on November 29, 2017, does not identify the correct impoundment surface area of 202 acres.<sup>57</sup> Article 202 requires the filing of a revised Exhibit A that identifies the project impoundment surface area as 202 acres.

### **C. Exhibit F and G Drawings**

91. Section 4.39 of the Commission's regulations requires each drawing to have a title, numerical and graphical scale, and other pertinent information concerning the drawing in a space in the lower right hand corner of each sheet.<sup>58</sup> The Exhibit F drawings filed on April 26, 2017 and revised on September 20, 2017 do not include titles. Article

---

<sup>56</sup> See *supra* P 71.

<sup>57</sup> See *supra* P 81.

<sup>58</sup> See 18 C.F.R. §§ 4.39 and 16.20 (2018).

203 requires the licensee to file revised Exhibit F drawings that are in conformance with sections 4.39 and 4.41 of the Commission's regulations.

92. Section 4.41 of the Commission regulations requires that licensees file an Exhibit G map showing a project boundary enclosing all project works and other features necessary for the operation and maintenance of the project, or for other project purposes, such as recreation, shoreline control, or protection of environmental resources.<sup>59</sup> The Exhibit G drawings filed on April 5, 2018 include 78 acres of land and water that are not needed for project purposes.<sup>60</sup> Article 204 requires the licensee to file revised Exhibit G drawings that are in conformance with sections 4.39 and 4.41 of the Commission's regulations, and that exclude: (1) the additional 76 acres of land and water proposed by Flambeau Hydro, and (2) the 2-acre former recreation facility located on the island between the middle and west dam sections.

#### **D. Modifications of Project Facilities**

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

#### **E. Use and Occupancy of Project Lands and Waters**

94. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 409 allows Flambeau Hydro to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

#### **F. Commission Approval of Resource Plans, Notification, and Filing of Amendments**

95. In Appendix A of this order, certification Condition 5 does not require the licensee to file plans with the Commission and does not provide for consultation with the appropriate agencies during plan development. Therefore, Article 401 requires the

---

<sup>59</sup> See 18 C.F.R. §§ 4.41 and 16.20 (2018).

<sup>60</sup> See *supra* P 88.



licensee to consult with the other agencies during plan development and to file the plans with the Commission for approval.

## STATE AND FEDERAL COMPREHENSIVE PLANS

96. Section 10(a)(2)(A) of the FPA,<sup>61</sup> 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.<sup>62</sup> Under section 10(a)(2)(A), Commission staff identified and reviewed 14 comprehensive plans that are relevant to this project.<sup>63</sup> No conflicts were found.

## APPLICANT'S PLANS AND CAPABILITIES

97. In accordance with section 10 of the FPA,<sup>64</sup> and the Commission's regulations, Commission staff evaluated Flambeau Hydro's record as a licensee with respect to the following: (A) conservation efforts; (B) need for power; and (C) safe management, operation, and maintenance of the project. This order adopts staff's findings in each of the following areas.

### A. Conservation Efforts

98. Section 10(a)(2)(C) of the FPA<sup>65</sup> requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Flambeau Hydro sells all project power to North Central Power Company, a utility. Staff concludes that, given the limits of its ability to influence users of the electricity generated by the project, Flambeau Hydro complies with section 10(a)(2)(C) of the FPA.

### B. Need for Power

99. To assess the need for power, staff looked at the needs in the operating region in which the project is located. The Arpin Project is located within the Midcontinent

---

<sup>61</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

<sup>62</sup> Comprehensive plans are defined at 18 C.F.R. § 2.19(b) (2018).

<sup>63</sup> The list of applicable plans can be found in section 5.4 of the EA.

<sup>64</sup> 16 U.S.C. § 803 (2012).

<sup>65</sup> *Id.* § 803(a)(2)(C).

Independent System Operator, Inc. (MISO) assessment area and the Midwest Reliability Organization region of the North American Electric Reliability Corporation (NERC). The Arpin Project provides capacity for regional power demand in the MISO assessment area by providing 1,450 kW of capacity for regional power demand.

100. NERC forecasts annual electrical supply and demand nationally and regionally for a 10-year period. NERC's 2017 Long-Term Reliability Assessment designates summer as the peak season for the reserve margin in the MISO assessment area. The anticipated reserve margin is forecasted to range from 19.23 percent in 2018 to 14.56 percent in 2027. The MISO assessment area is forecasted to meet MISO's reference margin level of 15.8 percent through the year 2022, but fall below the reference margin level beginning in 2023 and continuing through 2027. The project's power will help meet the regional need for power.

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

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

## **PROJECT ECONOMICS**

102. In determining whether to issue a subsequent license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>66</sup> 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 effective 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.

---

<sup>66</sup> 72 FERC ¶ 61,027 (1995).

103. In applying this analysis to the Arpin Project, Commission staff considered three options: a no action alternative, Flambeau Hydro's proposal, and the project as licensed herein.<sup>67</sup>

104. Under the no action alternative, the project would continue to operate as it does now. The project has an installed capacity of 1,450 kW and generates an average of 7,336 MWh of electricity annually. The average annual project cost is about \$352,489, or \$48.05/MWh. When staff multiplies its estimate of average generation by the alternative power cost of \$57.60/MWh,<sup>68</sup> staff gets a total value of the project's power of \$422,554 in 2018 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. Therefore, the project costs \$70,065, or \$9.55/MWh, less to produce power than the likely alternative cost of power.

105. As proposed by Flambeau Hydro, the levelized annual cost of operating the Arpin Project would be about \$352,995, or \$48.12/MWh. Based on the same amount of estimated average generation of 7,336 MWh and alternative power cost of \$57.60/MWh, staff gets a total value of the project's power of \$422,554 in 2018 dollars. Therefore, the project would cost \$69,559, or \$9.48/MWh, less than the likely alternative cost of power.

106. As licensed herein with Commission staff measures, the levelized annual cost of operating the project would be about \$354,856, or \$48.37/MWh. The proposed project would generate an average of 7,336 MWh of energy annually. When the estimate of average generation is multiplied by the alternative power cost of \$57.60/MWh, the total value of the project's power is \$422,554 in 2018 dollars. Therefore, in the first year of operation, the project would cost \$67,698, or \$9.23/MWh, less than the likely cost of alternative power.

107. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid changes in system load; and to respond rapidly to a major utility system or regional

---

<sup>67</sup> Details of Commission staff's economic analysis for the project as licensed herein, and for the other two alternatives, are included in section 4 of the EA.

<sup>68</sup> The alternative power cost of \$57.60 per MWh is based on Flambeau Hydro's estimate of the marginal cost for the North Central Power Company to produce the equivalent power generated by the project (*i.e.*, avoided cost).

blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back online.

## **COMPREHENSIVE DEVELOPMENT**

108. Sections 4(e) and 10(a)(1) of the FPA<sup>69</sup> require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued must be such as in the Commission's 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.

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

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

111. This alternative is selected because: (1) issuance of a subsequent license will serve to maintain a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreation resources, and historic properties; and (3) the 1,450 kW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

## **LICENSE TERM**

112. On October 19, 2017, the Commission established a 40-year default license term policy for original and new licenses, effective as of October 26, 2017.<sup>70</sup> The Policy

---

<sup>69</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

<sup>70</sup> *Policy Statement on Establishing License Terms for Hydroelectric Projects*, 161 FERC ¶ 61,078 (2017) (Policy Statement).

Statement provides for exceptions to the 40-year default license term under certain circumstances: (1) establishing a shorter or longer license term if necessary to coordinate license terms for projects located on the same river basin; (2) deferring to a shorter or longer license term explicitly agreed to in a generally-supported comprehensive settlement agreement; and (3) establishing a longer license term upon a showing by the license applicant that substantial voluntary measures were either previously implemented during the prior license term, or substantial new measures are expected to be implemented under the new license.

113. Because none of the above exceptions apply in this case, a 40-year license for the Arpin Project is appropriate. In addition, because the term of the current license does not expire until April 30, 2019, this license order is not effective until May 1, 2019.<sup>71</sup>

The Director orders:

(A) This license is issued to Flambeau Hydro, LLC (licensee), for a period of 40 years, effective May 1, 2019, to operate and maintain the Arpin Dam Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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

(2) Project works consisting of: (1) a stone masonry dam consisting of three sections that include, from west to east: (a) an approximately 742.5-foot-long, 19-foot-high west dam section that includes: (i) a 258.1-foot-long non-overflow section; (ii) a 45-foot-long spillway section that includes a 16.9-foot-wide, 10.5-foot-high timber stoplog spillway bay and a 15.9-foot-wide, 6.52-foot-high timber stoplog spillway bay; (iii) an approximately 318.9-foot-long overflow section with a crest elevation of 1,227.55 feet North American Vertical Datum of 1988 (NAVD88); and (iv) a 120.5-foot-long non-overflow section; (b) an approximately 452.2-foot-long, 18-foot-high middle dam section that includes: (i) a 97.7-foot-long non-overflow section; (ii) a 53.1-foot-long spillway section that includes a 19.2-foot-wide, 6.84-foot-high steel vertical lift gate and a 19.6-foot-wide, 8.96-foot-high steel vertical lift gate; (iii) an approximately 237.9-foot-long overflow section with a crest elevation of 1,227.65 feet NAVD88; and (iv) a 63.5-foot-long non-overflow section; and (c) an approximately 319.8-foot-long, 16-foot-high east dam section that includes: (i) a 25.5-foot-long non-overflow section; (ii) a 108-foot-long

---

<sup>71</sup> For this reason, the various deadlines in the license articles are measured from the May 1, 2019 effective date of this license, rather than from the order issuance date.

overflow section with a crest elevation of 1,227.8 feet NAVD88; (iii) a 44.4-foot-long spillway section that includes 16.3- and 15.9-foot-wide tainter gates; and (iv) a 141.9-foot-long non-overflow section; (2) an approximately 202-acre impoundment with a normal maximum water surface elevation of 1,227.22 feet NAVD88; (3) a 37-foot-long, 11.5-foot-wide, 14-foot-high concrete, canal headworks structure; (4) an approximately 3,200-foot-long, 56-foot-wide, 6-foot-deep power canal; (5) a 13.5-foot-long, 48-foot-wide, 14.4-foot-high concrete intake structure that includes two 9-foot-wide, 11-foot-high steel stop gates and a 44-foot-wide, 14.4-foot-high trashrack with 1.5- to 1.75-inch clear bar spacing; (6) three 79-foot-long, 8-foot-diameter steel penstocks; (7) a 52-foot-long, 24-foot-wide, 25-foot-high cement block powerhouse containing two 600-kilowatt (kW) and one 250-kW vertical Francis turbine-generator units for a total installed capacity of 1,450-kW; (8) three approximately 14-foot-long, 9-foot-diameter draft tubes; (9) an approximately 130-foot-long, 77-foot-wide, 7-foot-deep concrete tailrace; (10) a 15-foot-long, 2.4-kilovolt (kV) underground generator lead line; (11) a substation containing three 2.4/22.9-kV step-up transformers; (12) a 3,645-foot-long, 22.9-kV above-ground transmission line; and (13) appurtenant facilities.

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

Exhibit A: Pages A-1 through A-8 of the Exhibit A filed on April 26, 2017 and revised on November 29, 2017, excluding the description of the impoundment surface area. The updated impoundment surface area information was filed on August 13, 2018.

Exhibit F: The following drawings filed on April 26, 2017 and revised on September 20, 2017:

<u>Exhibit F Drawing</u>	<u>FERC Drawing Number P-2684-</u>	<u>Description</u>
F-1	1001	Plan, Sections and Elevation of Dam, Canal Headworks, Power Canal, and Powerhouse
F-2	1002	Plan and Section of Powerhouse
F-3	1003	Plan and Section of Powerhouse
F-4	1004	Section of Dam Gates, Spillways, and Sluiceways
F-5	1005	Section and Elevation of Dam
F-6	1006	Elevation of Dam
F-7	1007	Plan and Section of Dam Spillways and Abutments
F-8	1008	Plan and Section of Dam Gates

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

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

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

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

(E) This license is subject to the conditions submitted by the Wisconsin Department of Natural Resources under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1) (2012), as those conditions are set forth in Appendix A to this order.

(F) This license is also subject to the articles set forth in Form L-9 (Oct. 1975), entitled, "Terms and Conditions of License for Constructed Minor Project Affecting Navigable Waters of the United States" (*see* 54 F.P.C. 1792 *et seq*), as reproduced at the end of this order, and the following additional articles:

Article 201. *Administrative Annual Charges.* The licensee must pay the United States annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with the provisions of the Commission's regulations in effect from time to time, for the purposes of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 1,450 kilowatts (kW). Under the regulations currently in effect, projects with an authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge.

Article 202. *Exhibit A Project Description.* Within 90 days of the effective date of this license, the licensee must file, for Commission approval, a revised Exhibit A describing all principal project works necessary for operation and maintenance of the project. The revised Exhibit A must reflect a project impoundment size of 202 acres, and must comply with section 4.61 of the Commission's regulations, 18 C.F.R. § 4.61 (2018).

Article 203. *Exhibit F Drawings.* Within 90 days of the effective date of the license, the licensee must file, for Commission approval, revised Exhibit F drawings F-

1001 through F-1008 that include descriptive titles for each sheet. The Exhibit F drawings must comply sections 4.39 and 4.41 of the Commission's regulations, 18 C.F.R. §§ 4.39 and 4.41 (2018).

Article 204. Exhibit G Drawings. Within 90 days of the effective date of the license, the licensee must file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project. The revised Exhibit G drawings must exclude the approximately 76 acres of land and water proposed to be included by Flambeau Hydro, including the 2.5-acre island between the east and middle dam sections, a 9-acre parcel of land on the island between the middle and west dam sections, a 1.5-acre island within the project impoundment, an approximately 11.5-acre area of forested land on the west bank of the impoundment that abuts River Road and the boat ramp access road, an approximately 7-acre area of land on the east bank of the impoundment that extends south along the power canal and includes a portion of Birch Lane, and approximately 44.5 acres of land and water downstream of the project dam, including the bypassed channels and surrounding shorelines. The revised Exhibit G drawings must also exclude the 2-acre former recreation facility located on the island between the middle and west dam sections. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission's regulations.

Article 301. Project Modification Resulting From Environmental Requirements. If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections – Chicago Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 401. Commission Approval and Reporting Requirement to File Plans.

The licensee must file with the Commission the following plans, as required by Wisconsin Department of Natural Resources (Wisconsin DNR) water quality certification Condition 5: (1) woody debris management plan, (2) invasive species management plan, (3) recreation management plan, (4) operations management plan, (5) drawdown management plan, (6) wildlife and lands management plan, (7) fishery management plan, (8) water quality management plan, and (9) mussel management plan.

Within 18 months of the effective date of this license, the licensee must file these plans with the Commission for approval. The filings must include documentation that the licensee developed the plans in consultation with, and has received approval from, the Wisconsin DNR, U.S. Fish and Wildlife Service, and National Park Service, as appropriate. The Commission reserves the right to make changes to any plan filed. The licensee must not implement the plan prior to Commission approval. Upon Commission



approval, the plan becomes a requirement of the license, and the licensee must implement the plan or changes in project operation or facilities, including any changes required by the Commission.

Article 402. Project Operation. The licensee must operate the Arpin Dam Project as follows:

(1) operate in a run-of-river mode with a normal maximum elevation of 1,227.22 feet National Geodetic Vertical Datum of 1988 (NGVD88). In doing so, the licensee must act to minimize the fluctuation of the impoundment surface elevation by maintaining a discharge from the project so that all outflows approximate the sum of inflows to the project on an instantaneous basis;

(2) limit impoundment level fluctuations to 1 foot below the maximum water surface elevation from June 1 through March 31, and 6 inches below the maximum water surface elevation from April 1 through May 31; and

(3) release a continuous minimum flow of 40 cubic feet per second, or inflow if less, from the east dam section into the bypassed reach.

#### Planned Deviations

Run-of-river operation, impoundment level fluctuation limits, and minimum flow releases may be temporarily modified for short periods, of up to 3 weeks, after mutual agreement among the licensee and the U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources (collectively, resource agencies). After concurrence from the resource agencies, the licensee must file a report with the Secretary of the Commission as soon as possible, but no later than 14 calendar days after the onset of the planned deviation. Each report must include: (1) the reasons for the deviation and how project operations were modified, (2) the duration and magnitude of the deviation, (3) any observed or reported environmental effects, and (4) documentation of consultation with the resource agencies. For planned deviations exceeding 3 weeks, the licensee must file an application for a temporary amendment of the operational requirements of this license, and receive Commission approval prior to implementation.

#### Unplanned Deviations

Run-of-river operation, impoundment level fluctuation limits, and minimum flow releases may be temporarily modified if required by operating emergencies beyond the control of the licensee (*i.e.*, unplanned deviations). For any unplanned deviation that lasts longer than 3 hours *or* results in visible environmental effects such as a fish kill, turbidity plume, bank erosion, or downstream flooding, the licensee must file a report as soon as possible, but no later than 14 days after each such incident. The report must include: (1) the cause of the deviation; (2) the duration and magnitude of the deviation;

(3) any pertinent operational and/or monitoring data; (4) a timeline of the incident and the licensee's response; (5) any comments or correspondence received from the resource agencies, or confirmation that no comments were received from the resource agencies; (6) documentation of any observed or reported environmental effects; and (7) a description of measures implemented to prevent similar deviations in the future.

For unplanned deviations lasting 3 hours or less that do not result in visible environmental effects, the licensee must file an annual report, by March 1, describing each incident that occurred during the prior January 1 through December 31 time period. The report must include for each 3 hours or less deviation: (1) the cause of the deviation; (2) the duration and magnitude of the deviation; (3) any pertinent operational and/or monitoring data; (4) a timeline of the incident and the licensee's response to each deviation; (5) any comments or correspondence received from the resource agencies, or confirmation that no comments were received from the resource agencies; and (6) a description of measures implemented to prevent similar deviations in the future.

Article 403. Operation Compliance Monitoring. Within six months of the effective date of the license, the licensee must file with the Commission, for approval, a plan that describes how the licensee will document compliance with the operational requirements of this license.

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

(1) a description of how the licensee will document compliance with the operational requirements of the license (as required by Article 402), including: (a) descriptions of the monitoring frequency for documenting inflow to the project, discharge from the project, and the impoundment elevations; and (b) a log for documenting inflows, outflows, and impoundment elevations;

(2) installing, operating, and maintaining: (a) a staff gauge in the impoundment that shows the minimum and maximum water surface elevations of 1,226.22 and 1,227.22 feet NAVD88, respectively; (b) a staff gauge in the tailrace to document discharges from the powerhouse; and (c) automatic water level recorders to record headwater and tailwater elevations;

(3) a description of the specific locations of all gages and other measuring devices;

(4) a description of the procedures for maintaining and calibrating monitoring equipment;

(5) standard operating procedures to be implemented outside of normal operating conditions, including during: (a) scheduled facility shutdowns, scheduled maintenance, impoundment drawdowns, and impoundment refilling; and (b) emergency conditions such as unscheduled facility shutdowns and maintenance; and

(6) a schedule for installing and operating the monitoring equipment.

The plan must be developed after consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

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

Article 404. Reservation of Authority to Prescribe Fishways. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 405. Debris Management. Within 6 months of the effective date of the license, the licensee must file with the Commission, for approval, a plan that describes how the licensee will remove and dispose of organic debris and trash at the project.

The plan must include, but not necessarily be limited to, provisions that identify the frequency and methods for:

- (1) removing and sorting organic debris and trash that collects on project structures;
  - (2) passing a portion of the collected organic debris downstream of the project;
- and
- (3) removing and disposing of all collected trash.

The plan must be developed after consultation with the Wisconsin Department of Natural Resources. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agency, and specific descriptions of how the agency's comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agency to comment and to make recommendations before filing the

plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

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

Article 406. Northern Long-eared Bat Avoidance and Protection Measures. To protect northern long-eared bat habitat, the licensee must avoid tree removal at the project unless the tree poses a threat to human life or property, or the removal occurs outside of the northern long-eared bat pup season from June 1 through July 31.

Article 407. Recreation Management Plan. Within 6 months of the effective date of the license, the licensee must file with the Commission for approval, a recreation plan that includes the following provisions:

(1) continued operation and maintenance of the boat ramp on the southwestern corner of the impoundment, the fishing access area located on the western shore of the bypassed reach, the canoe portage trail located between the power canal and tailrace, and the fishing access area located on the northern bank of the project tailrace; and

(2) installation of a picnic table at the boat ramp and a picnic table at the fishing access area that is located on the western shore of the bypassed reach.

The plan must be developed after consultation with the National Park Service and the Wisconsin Department of Natural Resources. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

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

Within 90 days of installing the picnic tables, Flambeau Hydro must file documentation with the Commission that clearly demonstrates the picnic tables have been installed.

Article 408. *Programmatic Agreement and Historic Properties Management Plan.* The licensee must implement the “Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer, for Managing Historic Properties that may be Affected by New and Amended Licenses Issuing for the Continued Operation of Existing Hydroelectric Projects in the State of Wisconsin and Adjacent Portions of the State of Michigan” (Programmatic Agreement), executed on December 16, 1993, and including but not limited to the Historic Properties Management Plan (HPMP) for the project. Pursuant to the requirements of this Programmatic Agreement, the licensee must file, for Commission approval, an HPMP within six months of the effective date of this license that is consistent with the Programmatic Agreement. When filing the HPMP for Commission approval, the licensee must include any documentation of consultation with the Wisconsin State Historic Preservation Officer (SHPO) during the development of the HPMP.

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

Article 409. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee must have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee must also have continuing responsibility to supervise and control the use and occupancies, for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project’s scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee must take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape

plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee must require multiple use and occupancy of facilities for access to project lands or waters. The licensee must also ensure, to the satisfaction of the Commission's authorized representative that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee must: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee must file with the Commission a copy of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed. No report filing is required if no conveyances were made under paragraph (c) during the previous calendar 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 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

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

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the

protection and enhancement of the project's scenic, recreational, and other environmental values.

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

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

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

(H) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2018). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing constitutes acceptance of this order.

for  
Terry L. Turpin  
Director  
Office of Energy Projects



**Form L-9**  
(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION**

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

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

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

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

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

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

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

**Article 6.** The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage,

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

**Article 7.** The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

**Article 8.** The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

**Article 9.** The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of

navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

**Article 10.** On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

**Article 11.** The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 12.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article.

This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

**Article 13.** So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

**Article 14.** In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

**Article 15.** The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

**Article 16.** Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

**Article 17.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the

record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 18.** The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

**Article 19.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

**APPENDIX A**

Wisconsin Department of Natural Resources  
Water Quality Certification Conditions  
Filed November 13, 2018

1. The licensee shall obtain and comply with all federal, state and local permits; if obtaining such permits does not conflict with FERC license requirements.
2. The licensee shall meet current State of Wisconsin water quality standards applying to this project.
3. The license shall allow the Department to inspect the project area at any time upon reasonable notification to monitor compliance with certification conditions.
4. The licensee shall work with the Department to ensure proper compliance with the state endangered species law.
5. Within one year of issuance of the new license, the Licensee shall consult with the Department to develop new management plans. The plans shall include short term and long-term goals, identify interested parties or stakeholders, and include monitoring and management as appropriate to meet the goals. The following management plan shall be developed in partnership with the licensee and the Department: Woody Debris Management Plan, Invasive Species Management Plan, Recreation Management Plan, Operations Management Plan, Drawdown Management Plan, Wildlife and Lands Management Plan, Fishery Management Plan, Water Quality Management Plan, Mussel Management Plan.
6. The Department may modify or revoke this certification if the project is not completed and maintained according to the terms of the certification, or if the Department determines the activity is detrimental to the public interest.
7. Your acceptance of this certification signifies that you have read, understood and agreed to follow all conditions of this certification.
8. This certification does not authorize any activities other than what is included in the FERC approved license articles and management plans.
9. Licensee development within the FERC project boundary shall conform to the local zoning ordinances and the standards for floodplain and shoreland development contained

in Chapters NR 115, NR 116, NR 117, Wis. Adm. Code, as long as these requirements do not conflict with FERC license requirements.

10. This State Water Quality Certification is valid for the term of the license. This State Water Quality Certification may be updated or modified throughout the term of the license, as deemed necessary by Department.



Document Content(s)

P-2684-010 Arpin License Order.DOCX.....1-48