

UNITED STATES OF AMERICA 137 FERC ¶ 62,235  
FEDERAL ENERGY REGULATORY COMMISSION

Marseilles Land and Water Company

Project No. 13351-000

ORDER ISSUING ORIGINAL LICENSE

(December 15, 2011)

**INTRODUCTION**

1. On December 30, 2008, Marseilles Land & Water Company (Marseilles L&W or licensee) filed, pursuant to Part I of the Federal Power Act (FPA),<sup>1</sup> an application for an original license to construct, operate, and maintain its proposed Marseilles Lock and Dam Hydroelectric Project No. 13351 (Marseilles Lock and Dam Project or project). The 10.26-megawatt (MW) project would utilize the head potential created by the existing U.S. Army Corps of Engineers (Corps) Marseilles Lock and Dam, located on the Illinois River, a navigable waterway of the United States,<sup>2</sup> in the city of Marseilles, LaSalle County, Illinois.<sup>3</sup> The project would not occupy any federal lands.
2. As discussed below, I am issuing an original license for this project.

**BACKGROUND**

3. The Commission published public notice of the application on June 11, 2009,<sup>4</sup> setting August 10, 2009, as the deadline for filing protests and motions to intervene. The

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<sup>1</sup> 16 U.S.C. §§ 791a-825r (2006).

<sup>2</sup> *See* 13 AR 84 (June 30, 1933).

<sup>3</sup> Because the project would utilize the head potential of the Corps' existing Marseilles Dam and because the Marseilles River is a navigable waterway, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2006), requires that it be licensed.

<sup>4</sup> Marseilles L&W filed the license application and two prior preliminary permit applications in competition with three preliminary permit applications filed for the site by the city of Marseilles, Illinois. After Commission staff issued a notice accepting the license application on June 11, 2009, Commission staff dismissed five competing preliminary permit applications (three by the city of Marseilles, Illinois and two by Marseilles L&W) without prejudice by order issued June 23, 2009. Staff determined that

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city of Marseilles, Illinois (City of Marseilles), filed a motion to intervene in the proceeding on February 25, 2009, before the notice was issued.<sup>5</sup> Mr. Robert L. Davis, as Commissioner of Accounts and Finance for the city of Marseilles, filed comments on July 21, 2009.

4. On March 3, 2010, the Commission issued public notice that the application was ready for environmental analysis and soliciting comments, recommendations, terms and conditions, and prescriptions. The Illinois Department of Natural Resources (Illinois DNR) filed comments and recommendations on April 29, 2010. The U.S. Department of the Interior (Interior) responded by letter filed on May 3, 2010, stating that it had no comments. Marseilles L&W did not file reply comments.

5. An Environmental Assessment (EA) was prepared by Commission staff and issued on November 10, 2011.

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

#### **PROCEDURAL MATTER**

7. The Commission's regulations provide that, after July 23, 2005, a license applicant seeking to use the Commission's traditional licensing process (TLP), rather than the default integrated licensing process (ILP) must request authorization from the Commission to do so.<sup>6</sup> In its February 25, 2009 filing, as renewed in an August 10, 2009 motion, City of Marseilles argued that the Commission should reject Marseilles L&W's license application on the grounds that Marseilles L&W should have been required to follow the consultation procedures required by the Commission's ILP,<sup>7</sup> rather than those

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the permit applications proposed to use in whole or in part the same water resources as the license application and failed to substantiate the technical, environmental, and economic aspects of the proposals; staff therefore followed the Commission's policy, articulated in *Dennis V. McGrew*, 32 FERC ¶ 61,229 (1985), of dismissing permit applications without prejudice to the applications' automatic reinstatement in the event the license application is subsequently dismissed, denied, or withdrawn. *Marseilles Land and Water Company et al.*, 127 FERC ¶ 62,229, *reh'g denied Marseilles Land and Water Company*, 129 FERC ¶ 61,140 (2009)(rehearing order).

<sup>5</sup> The motion was timely and unopposed, and therefore, automatically granted under Rule 214 (c)(1) of the Commission's regulations. 18 C.F.R. § 385.214(c) (2011).

<sup>6</sup> 18 C.F.R. § 5.3(a)(2) (2011).

<sup>7</sup> 18 C.F.R. Part 5 (2011).

under the Commission's TLP.<sup>8</sup> For its part, Marseilles L&W had asserted that, because it had previously held a preliminary permit to study the development of a project using all of the available capacity at the Marseilles Lock and Dam and engaged in extensive consultation under the permit,<sup>9</sup> it should not be subject to a limitation on the choice of licensing process.<sup>10</sup>

8. I agree with Marseilles L&D that its development and consultation efforts prior to July 23, 2005 were sufficient to allow it to proceed under the TLP without further authorization from the Commission. Although the project for which the developer ultimately filed a license application was different in significant respects from that proposed in its permit application, such alteration in project design is an expected result of the permit process. I also note that none of the resource agencies or other stakeholders voiced any objection to Marseilles L&D using the TLP, and the objection the City has raised appears to be procedural (that is, intended to protect its competitive position), rather than substantive.

## PROJECT DESCRIPTION

### A. Existing Corps Facilities

9. The proposed hydropower project would generate electricity using the head potential created by the Marseilles Lock and Dam which is owned and operated by the Corps. The dam is a 600-foot-long concrete structure with eight, 60-foot-wide by 30-foot-high tainter gates, and a 30-foot-wide chute for passing ice. The associated lock is a chamber that is 110 feet by 600 feet, with a maximum lift of 24 feet. The length of the lock canal is approximately 2 miles. The Marseilles Dam impounds a reservoir approximately 24 miles long, with surface area of 1,450 acres. The pool is maintained at a target elevation of 483.25 feet above mean sea level (msl) with variations between elevations 482.7 and 484.8.

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<sup>8</sup> *Ibid.*

<sup>9</sup> A preliminary permit for the site was issued to Marseilles L&W on April 8, 2005 for a 3-year term expiring on March 31, 2008. *Marseilles Land and Water Company*, 111 FERC ¶ 62,037 (2005). Marseilles L&W subsequently filed a notice of its intent to file a development application for Project No. 12552 on May 26, 2005, followed by an Initial Consultation Package on July 13, 2005, and a draft license application on March 28, 2008.

<sup>10</sup> See December 20, 2008, license application at 1-3.

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10. The proposed hydropower project would use two existing headraces<sup>11</sup> (North Head Race and South Head Race) which are located just upstream of the right abutment of the Marseilles Dam and owned by the Marseilles Water Power, LLC. Each headrace has gated control structures (north head gate and south head gate) owned and operated by the Corps. The north head gate consists of a 62-foot-long earthen non-overflow section and a 182-foot-long concrete section containing two tainter gates, each 60 feet wide by 16 feet high. The south head gate consists of a 35-foot-long earthen non-overflow section and a 31-foot-long concrete section containing one 60-foot-wide by 16-foot-high tainter gate. Currently the head gates are maintained in a closed position.

### **B. Current Lock and Dam Operation**

11. The Corps' Marseilles Lock and Dam facility is operated run-of-the-river with no provision for storage (i.e., total inflow to the facility approximates total outflow from the facility). For navigational purposes, the Corps' Marseilles Dam provides a minimum channel depth of 9 feet from the dam upstream to the Corps' Dresden Island Dam, a distance of about 27 river miles. Water levels are controlled at the Lock Control House located about 2.5 miles downstream from Marseilles Dam. The pool is maintained at a target elevation of 483.25 msl with variations between elevations 482.7 and 484.84 msl.

12. The Corps allows 1,000 cubic feet per second (cfs) of water to be released downstream of the Marseilles Dam via leakage through the dam's tainter gates. The Corps also diverts about 500 cfs at the dam to the lock canal for lockages.

### **C. Proposed Hydropower Project Facilities**

13. Marseilles L&W proposes to refurbish and use the two existing headraces to divert up to 8,000 cfs of flow from the Illinois River above the dam and channel it to a proposed powerhouse. Each headrace has existing gated control structures (head gates) that are owned by the Corps and would be operated by Marseilles L&W pursuant to an agreement with the Corps. The South Head Race would be shortened from approximately 1,700 feet long to 170 feet long by constructing a bulkhead retaining wall immediately downstream of the south head gates, so that inflow through the South Head Race would be diverted into the North Head Race. The combined flow would follow the approximately 2,470-foot-long North Head Race (which will be refurbished) to a new 136-foot-long, 76-foot-wide, 60-foot-high reinforced concrete powerhouse located about 2,300 feet from the point the two flows would converge. A five-section inclined trashrack with a total length of 208 feet and height of 30 feet would be placed along the upstream powerhouse face. The proposed powerhouse would be equipped with stop logs for dewatering a single unit at a time, and would contain four Kaplan horizontal pit-type generating units, each with

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<sup>11</sup> A headrace is an open channel that conveys water to a powerhouse.

an installed capacity of 2.565 MW for a total installed capacity of 10.26 MW. Flows from the powerhouse would enter a proposed, 69-foot-long, 116- to 200-foot-wide tailrace, extending from the powerhouse draft tubes to a point in the Illinois River approximately 1,800 feet downstream from the Marseilles Dam.

14. Power generated by the project would be converted to 34 kilovolts (kV) and carried by a 400-foot-long, 34-kV underground transmission line to an Illinois Power substation located west of the proposed powerhouse. Access to the powerhouse would be provided by a new, 400-foot-long road. Access to the headraces would be provided by a new access road generally running along the length of the north and south headraces.

15. To promote recreation, Marseilles L&W would construct a boat ramp, a boat trailer parking lot, two barrier-free tailrace fishing platforms, barrier-free pathways and ramps to the fishing platforms, two barrier-free restrooms, a fish cleaning station, a marina, and a marina center.<sup>12</sup>

#### **D. Project Boundary**

16. Marseilles L&W proposes a project boundary that encompasses about 18.5 acres of land and includes all of the project facilities: the headraces, powerhouse, tailrace, access roads, recreation facilities, and all but a portion of the proposed primary transmission line. Facilities owned by the Corps – the dam, reservoir, and head gates – are not proposed to be within the boundary. Marseilles L&W proposes that a separate project boundary, enclosing a 0.9-acre area about 600 feet to the west of the proposed powerhouse, be set aside for a potential future substation.

17. The proposed project boundary starts about 100 feet downstream from the head gates, roughly follows the eastern retaining wall of the North Head Race up to the elevation 485 msl contour line where it turns in a westerly direction to about 140 feet east of the State Highway No. 186 Bridge. From there, the boundary turns south for a short distance then follows the retaining wall of the North Head Race for about 550 feet where it begins to parallel Commercial Street for about 100 feet. At this point, the boundary line turns south until it meets the North Head Race retaining wall and follows it to the end, near the proposed powerhouse. From there, the boundary line turns north, parallel to the project entrance road, then west parallel to Commercial Street, then south parallel to the project entrance road, then enclosing a small area for a proposed museum, then south a short distance to the powerhouse where it turns east for about 240 feet following the outline of the proposed powerhouse and tailrace. From there, the boundary line turns southeast for about 30 feet, then turns northwest to meet the south retaining wall of the North Head Race and continues in an easterly direction to a point about 230 feet east of

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<sup>12</sup> The marina center would function as an office for marina operations.

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the State Highway No. 186 Bridge. At this point the boundary line follows the proposed access road up to the Illinois River, turns east for about 50 feet then north for about 125 feet and finally crosses the North and South Head Races to the starting point to complete a full loop. No federal or tribal lands are enclosed within the proposed project boundary.

### **E. Proposed Project Operations**

18. The Marseilles Lock and Dam Project would operate in a run-of-the-release (ROR) mode<sup>13</sup> and use the 17 feet of head created by the existing Marseilles Dam. Water for the project would come from excess flows otherwise not used by the Corps to: (a) divert an estimated 500 cfs to operate the lock; (b) allow 1,000 cfs leakage under the tainter gates and into the Illinois River; and (c) ensure a minimum 9-foot navigation channel depth in the 24-mile-long reservoir.

19. The powerhouse would be operated remotely. Inflows would be varied to maintain the upstream pool elevation of 483.25 msl for river flows of up to 9,500 cfs (the sum of the maximum North Head Race capacity of 8,000 cfs, the tainter gate leakage flow in Illinois River of about 1,000 cfs, and the flows for the lock operation of about 500 cfs). This elevation would be achieved with sensors placed just upstream of the Marseilles Dam. The sensors would be connected to a computerized system that would constantly adjust the powerhouse discharge to maintain the upstream pond at elevation 483.25 msl. In emergency situations (such as extreme flood conditions), the Corps would override Marseilles L&W's control of the powerhouse operation either by switching off the powerhouse and/or closing the head gates, and taking full control of the Marseilles Dam releases.

### **F. Proposed Measures**

20. In addition to the proposed operations described above, Marseilles L&W proposes to: (1) develop and implement during construction a soil and erosion control plan; (2) install at the intake to the powerhouse, a trashrack having a clear bar spacing of 2.0 inches and a maximum intake approach velocity of 2.0 feet per second to minimize entrainment and impingement of fish; (3) develop and implement a stormwater pollution prevention plan; (4) conduct any clearing of vegetation outside of the primary raptor seasons to avoid any potential effects to birds and other wildlife that are present; (5) implement its proposed "Wetland Mitigation Plan" that addresses the loss of wetlands in the North and South Head Races from construction, and enhances existing wetland functions and values in the project area through the construction of new wetlands at the

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<sup>13</sup> Run-of-release operation is defined here as operating the hydroelectric project by utilizing, without storage, flows authorized by the Corps. The flows would be diverted to the proposed hydropower project through the Corps' head gates.

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North and South Head Races; (6) monitor wildlife and vegetation in the North and South Head Race areas after wetland mitigation areas are constructed for a period of 5 years; (7) conduct any tree clearing for construction prior to the roosting period of Indiana bats (April 15 to September 15); (8) develop and implement a recreation plan with provisions to operate and maintain (a) two barrier-free tailrace fishing platforms, (b) a boat ramp, (c) boat trailer parking, (d) a fish cleaning station, (e) two barrier-free restroom facilities, (f) barrier-free pathways from the parking area to the fishing platforms, (g) a marina, and (h) a marina center; (9) construct, operate, and maintain a museum (Boyce Marseilles Museum); and (10) design and construct the powerhouse and the Boyce Marseilles Museum in a classical revival style.

### **SUMMARY OF LICENSE REQUIREMENTS**

21. As summarized below, this license authorizes 10.26 MW of renewable energy and requires a number of measures to protect or enhance aquatic, terrestrial, wetland, recreation, and cultural resources at the project.

22. To reduce erosion and the movement of contaminated soil during project construction, the license requires the development and implementation of an erosion and sediment control plan with, among other things, provisions to: (a) identify prior to construction, and properly dispose of, contaminated sediments; (b) implement downstream contaminant monitoring, if contaminated soils are discovered; (c) identify measures to protect aquatic resources from the effects of re-suspending contaminated soils during construction; and (d) identify chemical and hazardous substances spill prevention measures to be implemented during construction.

23. To prevent erosion and sedimentation after the completion of project construction, the license requires the development and implementation of a post-construction erosion and sediment control plan with provisions for implementing site remediation measures.

24. The license requires the development and implementation of an operation compliance monitoring plan to ensure that hydropower project operations would not affect the Corps' ability to continue: (a) providing a 1,000-cfs minimum flow to the Illinois River downstream of the Marseilles dam from leakage through the dam's tainter gates; (b) operating its lock; and (c) providing sufficient reservoir depths for commercial navigation.

25. To protect water quality in project-affected reaches of the Illinois River, the license requires Marseilles L&W to develop and implement a Dissolved Oxygen (DO) Monitoring Plan with provisions for monitoring DO levels at three locations in the Illinois River for the term of the license to ensure that project operation does not adversely affect DO levels. The license also requires Marseilles L&W to identify measures that would be taken in the event that monitoring shows that project operation adversely affects DO levels.

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26. To reduce fish mortality from entrainment and impingement during project operations, the license requires Marseilles L&W to install a trashrack with a clear bar spacing of no more than 2 inches and a maximum intake approach velocity of 2 feet per second. The license also requires Marseilles L&W to routinely clean the trashrack to ensure that debris does not accumulate on the trashrack and cause the approach velocity to exceed 2 feet per second.
27. To determine if freshwater mussels are present in project-affected reaches of the Illinois River, the license requires the development of a freshwater mussel survey to be conducted prior to the start of construction.
28. To protect any discovered freshwater mussels from project construction and operation, the license requires the development and implementation of a freshwater mussel protection plan if the pre-construction mussel survey shows that mussels are present in the project-affected reaches of the Illinois River. Mussels and river turbidity levels would be monitored immediately prior to initiating any in-river construction activities and continue for 2 years after project operation commences.
29. To enhance wetland functions and values in the North and South Head Races during project construction and operation, the license requires Marseilles L&W to implement a wetlands mitigation plan, which includes measures for constructing new wetlands in the North and South Head Races, monitoring wildlife and vegetation, and implementing invasive plant control measures.
30. To protect wildlife and terrestrial resources in the project area during project construction, operation, and maintenance, the license requires Marseilles L&W to develop and implement a wildlife and riparian management plan that includes specific procedures for conducting tree-clearing in riparian areas and provisions for minimizing project construction effects on raptors and migratory birds, and the re-vegetation of project lands.
31. To protect any federally listed Indiana bats in the project area during construction, the license requires the development and implementation of an Indiana Bat Protection Plan that includes provisions to survey the construction area prior to construction for bat use, and implement the measures stipulated in the U.S. Fish and Wildlife Service's (FWS) "Indiana Bat Recovery Plan."
32. To enhance recreational opportunities, the license requires the construction, operation, and maintenance of two barrier-free tailrace fishing platforms, a parking lot for cars, barrier-free pathways and ramps to the fishing platforms, two barrier-free restrooms, a fish cleaning station, and trash receptacles.



33. To enhance the aesthetics in the project area, the license approves Marseilles L&W's proposal to construct the powerhouse in a classic revival style, as depicted in exhibits F-4 and F-5.

34. To protect cultural resources, the license requires Marseilles L&W to implement the October 11, 2011 Programmatic Agreement (PA) among the Commission, Advisory Council on Historic Preservation (Advisory Council), and the Illinois State Historic Preservation Officer (Illinois SHPO). The PA includes provisions for the development of a Historic American Building Survey/Historic American Engineering Record (HABS/HAER) document to mitigate affected historic properties from project construction, and the development and implementation of a Historic Properties Management Plan (HPMP) for historic properties affected by project operations.

### **WATER QUALITY CERTIFICATION**

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

36. On March 23, 2011, the Marseilles L&W submitted its application for section 401 Water Quality Certification (WQC), which was received by Illinois Environmental Protection Agency (Illinois EPA) on the same day. On June 3, 2011, the Illinois EPA issued WQC for the Marseilles Lock and Dam Project that includes thirteen conditions, which are set forth in Appendix A to this order and incorporated into the license (see Ordering Paragraph D).

37. The certification includes requirements to: (1) not cause violation of applicable state water quality standards; (2) provide adequate planning and supervision during project construction and cleanup procedures necessary to prevent water pollution and to control erosion; (3) ensure that any spoil material excavated, dredged or otherwise produced at the project must not be returned to the waterway; (4) ensure all areas affected by construction are mulched and seeded as soon after construction as possible, and implement measures to reduce erosion during construction; (5) implement erosion control

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<sup>14</sup> 33 U.S.C. § 1341(a)(1) (2006).

<sup>15</sup> 33 U.S.C. § 1341(d) (2006).

measures consistent with the Illinois Urban Manual;<sup>16</sup> (6) construct any proposed work using adequate control measures to prevent the transport of sediment and materials downstream; (7) enroll the entire project area into the Illinois Bureau of Land's Site Remediation Program; (8) conduct DO monitoring from representative monitoring times and points taken in the Illinois River; (9) implement measures necessary to maintain DO levels that meet the Illinois DO standard, and operate the powerhouse facility to allow the continued maintenance of at least 1,000 cfs of flow through the Marseilles Dam; (10) maintain records at the project for DO data collected as required by the WQC; (11) conduct a mussel survey in the Illinois River upstream and downstream of the immediate construction area prior to initiating any construction activities in the Illinois River; (12) obtain a National Pollution Discharge Elimination System discharge permit for the treated remedial site wastewaters and runoff; and (13) implement the Marseilles L&W's wetlands mitigation plan that was developed for the project and received by the Illinois EPA on March 23, 2011.<sup>17</sup>

### **COSTAL ZONE MANAGEMENT ACT**

38. Under section 307(c)(3)(A) of the Coastal Management Zone Act (CZMA),<sup>18</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 licensee's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of the receipt of the licensee's certification. The state of Illinois does not have a Coastal Management Program. Therefore, CZMA consistency certification is not required for the Marseilles Lock and Dam Project.

### **SECTION 18 FISHWAY PRESCRIPTION**

39. Section 18 of the FPA<sup>19</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 the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions were filed under section 18 of the FPA.

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<sup>16</sup> See Illinois EPA/U.S. Department of Agriculture, and Natural Resource Conservation Service, 2010.

<sup>17</sup> Marseilles L&W's proposed Wetlands Mitigation Plan was filed with the Commission on June 20, 2011.

<sup>18</sup> 16 U.S.C. §1456(c)(3)(A) (2006).

<sup>19</sup> 16 U.S.C. § 811 (2006).

## THREATENED AND ENDANGERED SPECIES

40. Section 7(a)(2) of the Endangered Species Act of 1973<sup>20</sup> 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.

41. There is one federally listed species with the potential to occur in the project area. FWS documented the presence of the federally listed “endangered” Indiana bat in LaSalle County, Illinois. It is possible, but unlikely, that potential Indiana bat habitat could be affected by project construction and maintenance.

42. In the EA,<sup>21</sup> staff determined that with its recommended measures, licensing the Marseilles Lock and Dam Project would not be likely to adversely affect the Indiana bat or its habitat. The staff-recommended measures include a provision for conducting any tree clearing prior to the summer use season of Indiana bats, defined in the EA as April 15 to September 15, conducting a survey of all construction areas prior to construction for bat use, and implementing the measures stipulated in the Indiana Bat Recovery Plan (FWS, 2007), in consultation with FWS.

43. The FWS concurred with this finding by letter filed on November 22, 2011, with the proviso that the dates of the Indiana bat summer use season in Illinois be slightly modified to be defined as April 1 to September 30. Article 411 requires Marseilles L&W to implement staff’s recommended Indiana bat protection measures with the FWS-recommended provision for defining the Indiana bat summer use season as April 1 to September 30.

## NATIONAL HISTORIC PRESERVATION ACT

44. Under section 106 of the National Historic Preservation Act (NHPA),<sup>22</sup> and its implementing regulations,<sup>23</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 a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer to determine whether

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<sup>20</sup> 16 U.S.C. §1536(a) (2006).

<sup>21</sup> See EA at 70.

<sup>22</sup> 16 U.S.C. § 470 *et seq.* (2006).

<sup>23</sup> 36 C.F.R. Part 800 (2011).

and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

45. To satisfy these responsibilities, the Commission executed a PA among itself, the Advisory Council, and the Illinois SHPO on October 11, 2011, and invited the Corps, the city of Marseilles, and Marseilles L&W to concur with the stipulations of the PA. Marseilles L&W and the Corps concurred. The PA requires the licensee to prepare a HABS/HAER report,<sup>24</sup> and develop and implement an HPMP for the project. Execution and implementation of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 414 requires the licensee to implement the PA, file its HABS/HAER document with the Commission within six months of license issuance, and file its HPMP with the Commission within one year of license issuance.

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

46. Section 10(j) of the FPA<sup>25</sup> requires the Commission, when issuing a license, to include conditions based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act,<sup>26</sup> to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

47. Neither the FWS nor Illinois DNR filed 10(j) recommendations for the Marseilles Lock and Dam Project.

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

48. Section 10(a) of the FPA<sup>27</sup> requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign

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<sup>24</sup> The HABS/HAER report would provide both written and photo documentation of the following structures located at or adjacent to the proposed project: Marseilles Hydro Plant, North Head Race, South Head Race, Tail Race, and Boyce Paper Mill and Hydroelectric Plant. All of these structures were associated with prior hydroelectric development of the site. *See* EA at 78-80. As noted above, the proposed project would modify and utilize the North Head Race and South Head Race.

<sup>25</sup> 16 U.S.C. § 803(j)(1) (2006).

<sup>26</sup> 16 U.S.C. § 661 et seq (2006).

<sup>27</sup> 16 U.S.C. § 803(a)(1) (2006).

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. Erosion and Sediment Control**

49. To minimize erosion and sedimentation associated with construction of the project, Marseilles L&W proposes to develop, and implement during construction, an erosion and sediment control plan. The proposed plan would contain provisions to: (1) implement best management practices and site remediation measures to reduce erosion and prevent runoff into the Illinois River; (2) implement spill prevention and contingency measures; (3) implement dust control measures; and (4) the establish permanent vegetative cover.

50. There are potentially contaminated sediments located in the Illinois River in the project vicinity. Polychlorinated biphenyls and polycyclic aromatic hydrocarbons were reported in several soil samples collected by Marseilles L&W within the project boundary. The proposed in-river construction activities for the proposed tailrace and powerhouse could disturb these contaminated sediments, resulting in the suspension of the contaminants in the water column and redistribution downstream where there could be reduced water quality.

51. In the EA, Commission staff recommended that Marseilles L&W implement the measures proposed in its erosion and sediment control plan along with additional provisions to minimize erosion and sediment runoff into the Illinois River, remediate lands disturbed during construction, and handle contaminated soils.<sup>28</sup> Article 302 requires Marseilles L&W to develop and implement a Soil Erosion and Sediment Control Plan specific to project construction and containing staff's recommended provisions for minimizing erosion and handling contaminated soils. Article 402 requires Marseilles L&W to develop and implement a Post-Construction Erosion and Control Plan with staff's recommended provisions to re-vegetate lands disturbed by project construction. Articles 302 and 402 will ensure that the effects of erosion and sedimentation from project construction, operation, and maintenance are minimized to the extent practicable.

#### **B. Run-of-Release Operation and Compliance Monitoring**

52. In the EA, Commission staff recommended adoption of Marseilles L&W's proposal to operate the project in a run-of-release mode, finding that such a hydropower project operation would protect the Corps' operation of its Marseilles Lock and Dam and

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<sup>28</sup> See EA at 101-102.

protect aquatic resources in the bypassed reach of the Illinois River.<sup>29</sup> To demonstrate compliance with a run-of-release operating mode and any other operational requirements of a license, Commission staff recommended the development and implementation of an Operation Compliance Monitoring Plan.<sup>30</sup> Article 403 requires Marseilles L&W to operate the project in a run-of-release operating mode, and Article 404 requires Marseilles L&W to develop and implement an Operation Compliance Monitoring Plan.

### **C. Dissolved Oxygen Monitoring**

53. In the EA,<sup>31</sup> Commission staff concluded that project operation could cause lower DO concentrations in the Illinois River downstream of the dam and powerhouse tailrace than what currently occurs, and therefore, could adversely affect aquatic resources in those areas. To protect aquatic resources from potentially lowered DO concentrations, staff recommended the development and implementation of a DO Monitoring Plan.<sup>32</sup> Article 405 requires staff's recommended water quality measure.

### **D. Freshwater Mussel Protection**

54. In the EA, Commission staff concluded that freshwater mussels may be present in the Illinois River at and downstream of the hydropower project, and if present, could be adversely affected by project construction and operation.<sup>33</sup> To protect freshwater mussels from project construction and operation, staff recommended the development and implementation of a Freshwater Mussel Survey Plan and Freshwater Mussel Protection Plan.<sup>34</sup> Articles 406 and 407 require staff's recommended mussel protection measures.

### **E. Fish Protection at the Project Intake**

55. Fish that swim close to a hydropower project intake can be entrained through the intake system and be subject to turbine-related injury or mortality. In the EA, staff recommended that Marseilles L&W's proposed trashrack be designed to have a clear-bar

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<sup>29</sup> See EA at 40-41 and 98.

<sup>30</sup> See EA at 102-103.

<sup>31</sup> See EA at 42-48.

<sup>32</sup> See EA at 103.

<sup>33</sup> See EA at 54-55.

<sup>34</sup> See EA at 103-104.

spacing of 2 inches and a maximum approach velocity of 2 feet per second.<sup>35</sup> Article 408 requires staff's recommended fish protection measures, and Article 409 requires the development and implementation of a Trashrack Debris Removal Plan to maintain a maximum approach velocity of 2 feet per second.

#### **F. Wetland Mitigation**

56. Marseilles L&W proposes to remove sediment within the North and South Head Races in order to reconstruct existing head race civil structures and construct a new powerhouse. To protect wetland resources from adverse effects during project construction, Marseilles L&W proposes a Wetland Mitigation Plan that addresses the impacts of project construction to the 3.8-acres of existing wetlands in the North and South Head Races, and proposes to create 2.87 acres of new wetlands at the project site. The plan also includes provisions for monitoring wildlife, vegetation, and invasive plants, after the new wetlands are constructed, but does not include provisions for a thorough assessment of the success of specific treatment methods of invasive plants; nor does the plan allow for any adjustments to treatment methods that prove to be unsuccessful in controlling invasive plants in the newly constructed wetland. In the EA, staff recommended that the plan be revised to incorporate success criteria and additional procedures for controlling invasive plants to be implemented if success criteria are not achieved, and additional monitoring provisions.<sup>36</sup> Article 410 requires Marseilles L&W to revise the Wetland Mitigation Plan to include staff's recommended wetland protection measures.

#### **G. Wildlife and Riparian Management**

57. In the EA,<sup>37</sup> staff concluded that construction of the project would likely cause some permanent and temporary losses of riparian vegetation. In addition, staff concluded that construction of the project, specifically in riparian areas around the North and South Head Races and the recreation facilities, may temporarily displace wildlife, including migratory birds and raptors. Therefore, staff recommended that Marseilles L&W develop and implement a Wildlife and Riparian Management Plan that includes provisions for protecting raptors, migratory birds, and riparian habitat. Article 412 requires staff's recommended wildlife and riparian management measures.

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<sup>35</sup> See EA at 98.

<sup>36</sup> See EA at 107.

<sup>37</sup> See EA at 105-106

## H. Recreation Enhancements

58. Bank fishing is a popular activity in the project area, although there are no formal fishing facilities along the north bank of the Illinois River. As part of its proposed recreation plan, Marseilles L&W plans to construct and maintain two barrier-free tailrace fishing platforms, which would enable anglers to have a fishing experience comparable to bank fishing. Also the recreation plan includes provisions to construct and maintain barrier-free ramps and pathways to the fishing platforms, restroom facilities, a fish cleaning station, and trash receptacles, all of which would enhance the recreational experience at the project.

59. In the EA, Commission staff recommended that Marseilles L&W revise its proposed recreation plan to provide for a car parking lot for anglers using the fishing platforms. Staff also recommended that the recreation plan include a schedule for the construction of the recreation facilities and a discussion of how the needs of the disabled were considered in the planning and design of all of the required recreation facilities.<sup>38</sup> Article 413 includes these staff-recommended measures.

60. Marseilles L&W also proposes to construct, operate, and maintain a marina, boat ramp, and a marina center. In the EA, Commission staff did not recommend these facilities because the marina and boat ramp would be located in very close proximity to the tailrace releases, which may make it unsafe to launch a boat. In addition, the Illinois River is difficult to navigate at the proposed location. Finally, there was no evidence that the existing marinas and boat ramps in the vicinity of the project are over-capacity.<sup>39</sup> Therefore, the license does not include conditions for constructing, operating, and maintaining the proposed marina, boat ramp, or marina center.

## I. Aesthetics

61. In the EA, Commission staff recommended adoption of Marseilles L&W's proposal to design and construct the project's powerhouse, as shown by exhibits F-4 and F-5, in a classic revival style.<sup>40</sup> Commission staff concluded that the proposed architectural style would blend with the existing landscape. Ordering Paragraph E requires the implementation of Marseilles L&W's design, as shown by exhibits F-4 and F-5, for the project's powerhouse.

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<sup>38</sup> See EA at 108.

<sup>39</sup> See EA at 108.

<sup>40</sup> See EA at 75 and 98.



## **J. Boyce Marseilles Museum**

62. Marseilles L&W proposes to construct and maintain the Boyce Marseilles Museum. The proposed museum would feature the life of William D. Boyce,<sup>41</sup> the development of Marseilles L&W, and the history of the city of Marseilles, Illinois. In the EA, Commission staff determined that the proposed Boyce Marseilles Museum would not serve a project purpose, because it would focus mostly on the life of Mr. Boyce, the development of Marseilles L&W, and the development of the city of Marseilles, none of which directly relate to the history of hydropower in the area or the two historic districts that could be affected by the proposed project.<sup>42</sup> Therefore, the proposed Boyce Marseilles Museum is not included as a condition of the license.

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

63. The Commission collects annual charges from licensees for administration of the FPA and the utilization of surplus water or water power from a government dam. Article 201 provides for the collection of these funds.

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

64. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic format. Article 202 requires the filing of the approved exhibit F drawings (F-1, F-2, F-4, F-5, and F-6).

65. The exhibit F-3 filed as part of the application for the license does not conform to the Commission's regulations and is not approved, because the drawing does not show elevation and section views of the trashrack and the associated dimensions. Therefore, Article 203 requires Marseilles L&W to file a revised exhibit F-3 to show the elevation and section views of the trashrack, and the proper dimensions and features of the trashrack.

66. The exhibit G drawings filed as part of the application for license do not conform to Commission regulations and are not approved. Exhibits G-1, G-2, G-3, G-5, and G-6 do not fully enclose the proposed primary transmission line within the project boundary. In addition, exhibits G-1, G-2, G-3, G-5, and G-6 enclose facilities that are not needed to carry out project purposes, including a secondary project boundary area for a future substation, the proposed Boyce Marseilles Museum and associated parking lot, and the

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<sup>41</sup> William Boyce was the founder of the Boy Scouts of America. *See* EA at 78.

<sup>42</sup> *See* EA at 110.

proposed marina, marina center, and boat ramp. As discussed above, there is no evidence demonstrating a project-related need for the future substation, museum, boat ramp, marina, or marina center.<sup>43</sup> Also, exhibits G-1 and G-4 show the proposed project boundary enclosing the Corps' head gates; however, these are federal facilities that would be retained by the Corps, and therefore, should not be within the project boundary.<sup>44</sup>

67. Project boundaries designate the geographic extent of the lands, waters, works, and facilities for which the licensee must hold the rights necessary to carry out the project purposes.<sup>45</sup> Article 204 requires the licensee to file revised exhibit G drawings showing the transmission line enclosed within the project boundary, and excluding the secondary project boundary area reserved for a future substation, the proposed Boyce Marseilles Museum and associated parking lot, marina, marina center, and boat ramp, and the Corps' head gates, for the reasons noted above.

### **C. Amortization Reserve**

68. The Commission requires that for original licenses for major projects, non-municipal licensees must set up and maintain an amortization reserve account after the first 20 years of operation of the project under license. Article 205 requires the establishment of the account.

### **D. Headwater Benefits**

69. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 206 requires the licensee to reimburse such entities for these benefits.

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

70. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 415 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses

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<sup>43</sup> See EA at 109.

<sup>44</sup> *Ibid.*

<sup>45</sup> See, e.g., 18 C.F.R. § 4.41(h)(2) (2011); and *Wisconsin Public Service Corporation*, 104 FERC ¶ 61,295 at P 16 (2003). A project boundary does not change property rights: title to lands within the boundary can be owned by someone other than the licensee, so long as the licensee holds necessary property interests and permits to carry out project purposes.

must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

#### **F. Review of Final Plans and Specifications**

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

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

73. Article 303 requires the licensee to provide the Commission's D2SI-CRO with the licensee-reviewed and approved cofferdam construction drawings.

74. Article 304 requires the licensee to provide the Commission's D2SI-CRO with a project owner's dam safety program to ensure the licensee's acknowledgement of the responsibility for the safety of the project and outline other roles and responsibilities for the dam safety staff.

75. Article 305 requires the licensee to provide the Corps and the Commission's D2SI-CRO with a plan and schedule to address the deteriorated condition of the North and South Head Race channels and associated features (e.g., retaining walls) within the project boundary.

76. Where new construction or modifications to a project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 306 provides for the filing of these drawings.

#### **G. Project Financing**

77. To ensure that there are sufficient funds available for project construction, operation, and maintenance, Article 307 requires Marseilles L&W to file for Commission approval a project financing plan for the construction, operation, and maintenance of the project at least 90 days before starting any ground-disturbing activities that are associated with the project.

## **H. Conditions for Projects at Corps Dams**

78. Pursuant to a March 2011 Memorandum of Understanding between the Commission and the Department of the Army, seven special articles are included in licenses for hydroelectric projects to be developed at Corps facilities. The articles are incorporated in this license as Articles 308 through 314.

## **I. Project Land Rights Progress Report**

79. The project will occupy 18.5 acres of land. The exhibit G-5 filed as part of the application for license identifies land that the applicant owns or intends to purchase. Standard Article 5 set forth in L-Form 4 requires the licensee to 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, within five years. In order to monitor compliance with Article 5, Article 315 requires the licensee to file no later than four years after license issuance, a report detailing its progress on acquiring title in fee or the necessary rights to all lands within the project boundary. The report shall include specific documentation on the status of the rights that have been acquired as of the filing date of the progress report, and a plan and schedule to acquire all remaining land prior to the five-year deadline.

## **J. Financial Assurance Plan**

80. In order to ensure that the Commission can require appropriate public safety and environmental protection measures, Article 316 requires the licensee to file a Financial Assurance Plan for Commission approval. The plan requires the licensee to identify those project features that would be removed, secured in-place, or otherwise modified to ensure public safety and any other measures needed to protect environmental resources in the event the licensee cannot complete project construction or is unable to operate the project once construction is completed. In order to ensure that the licensee has the financial resources to comply with future dam safety or compliance orders, Article 316 also requires the licensee to obtain a bond or equivalent financial instrument to ensure the licensee has the financial means necessary to implement the Financial Assurance Plan, as directed by the Commission.<sup>46</sup>

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<sup>46</sup> Marseilles L&W's primary representative, Mr. Lee Mueller, is also the primary licensee representative for the licensed Sanford Hydroelectric Project No. 2785 where insufficient funding was given as the reason for failing to make timely dam safety repairs ordered by the Commission's Chicago Regional Engineer. *See* letter to Mr. Lee Mueller dated February 8, 2010 in response to Mr. Mueller's January 4, 2010 filing. In addition, we have continually needed to remind Mr. Mueller of his license obligations, including retaining sufficient project land rights, for other licensed projects for which he is a

(continued)

### **K. Filing of Amendment Applications**

81. Illinois EPA's Condition 13 of the WQC (Appendix A) contemplates unspecified long-term changes to a wetland mitigation plan upon Illinois EPA's approval. Article 401 requires Marseilles L&W to receive Commission approval before making such changes.

### **STATE AND FEDERAL COMPREHENSIVE PLANS**

82. Section 10(a)(2)(A) of the FPA<sup>47</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>48</sup> Under section 10(a)(2)(A), federal and state agencies filed seven comprehensive plans that address various resources in Illinois. Commission staff reviewed all seven of these plans.<sup>49</sup> No conflicts were found.

### **SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT**

83. Staff reviewed Marseilles L&W's preliminary plans to build the project as described in the license application. Staff concludes that the project works will be safe when constructed, operated, and maintained in accordance with the Commission's standards and oversight and the provisions of this license.

### **NEED FOR POWER**

84. To assess the need for power, Commission staff looked at the needs in the operating region in which the project is located. The project will be located in the ReliabilityFirst Corporation (ReliabilityFirst) of the North American Electric Reliability Corporation. According to information from ReliabilityFirst, the projected peak demand

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licensee representative. *See e.g.*, letter to Mr. Mueller dated April 19, 2010 for the Sanford Hydroelectric Project (P-2785), and letter dated October 4, 2010 for the Sanford, Edenville (P-10808), Secord (P-10809), and Smallwood (P-10810) projects. For these reasons, we find that there is a reasonable possibility that the licensee could find itself in the position of having insufficient funds or project land rights to continue constructing or operating the Marseilles Project in the absence of a Financial Assurance Plan.

<sup>47</sup> 16 U.S.C. § 803(a)(2)(A) (2006).

<sup>48</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2011).

<sup>49</sup> The list of applicable plans can be found in section 5.5 of the EA for the project.

for the ReliabilityFirst region would grow at an annual rate of 1.2 percent from 2010 through 2019 (ReliabilityFirst 2010). Also, ReliabilityFirst projects the summer peak load demand for energy to grow at an annual rate of 1.7 percent over the next 10 years.<sup>50</sup> The project would have an installed capacity of 10.26 MW, and would generate an average of 55,000 megawatt-hours (MWh) annually of this demand. Commission staff concluded that the project's power and contribution to the region's diversified generation mix will help meet a need for power in the region.

## PROJECT ECONOMICS

85. In determining whether to issue a license for a hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>51</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 issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

86. In applying this analysis to the Marseilles Lock and Dam Project, Commission staff considered Marseilles L&W's proposal and the project as licensed herein. As proposed by Marseilles L&W, the levelized annual cost of operating the Marseilles Lock and Dam Project is \$4.97 million, or \$90.39/MWh. The proposed project would generate an estimated average of 55,000 MWh of energy annually. When staff multiplied the estimated average generation by the alternative power cost of \$82.12/MWh,<sup>52</sup> staff calculated the total value of the project's power at \$4.52 million in 2011 dollars. To determine the current economic benefits of the proposed project, staff subtracts the project's cost from the value of the project's power.<sup>53</sup> Therefore, in the first year of

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<sup>50</sup> See EA at 2.

<sup>51</sup> 72 FERC ¶ 61,027 (1995).

<sup>52</sup> The alternative power cost of \$82.12 per MWh is obtained using the licensee's value for energy, \$72 per MWh, and staff's assumption for capacity value of \$159 per kW-year which was applied to the project's dependable capacity of 3.5 MW.

<sup>53</sup> Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA at 83-91.

operation, the project would cost \$0.46 million or \$8.30/MWh more than the likely alternative cost of power.

87. As licensed herein, the levelized annual cost of operating the project would be about \$4.82 million, or \$87.58/MWh. Based on an estimated average annual generation of 55,000 MWh as licensed, the project would produce power valued at \$4.52 million when multiplied by the \$82.12/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$0.30 million or \$5.46/MWh more than the likely cost of alternative power.

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

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

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

## **COMPREHENSIVE DEVELOPMENT**

91. Sections 4(e) and 10(a)(1) of the FPA<sup>54</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 shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

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<sup>54</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

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92. The EA for the project contains background information, analysis of effects, and support for related license articles. I conclude based on the record of this proceeding, including the EA and the comments thereon, that licensing the Marseilles Lock and Dam 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.

93. Based on an independent review and evaluation of the Marseilles Lock and Dam Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, I find that issuance of a license for the proposed Marseilles Lock and Dam Project, with the conditions attached hereto, will serve the public interest because it is best adapted to a comprehensive plan for improving or developing the Illinois River.

94. I selected this alternative because: (1) issuance of an original license will serve to provide a beneficial, dependable, and an inexpensive source of electrical energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 10.26 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

### LICENSE TERM

95. Section 6 of the FPA,<sup>55</sup> provides that original licenses for hydropower projects shall be issued for a period not to exceed 50 years. It is the Commission's general policy to issue a 50-year license for projects located at a federal dam.<sup>56</sup> Accordingly, this license is issued for a term of 50 years.

#### The Director orders:

(A) This original license is issued to Marseilles Land and Water Company (licensee) for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Marseilles Lock and 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:

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<sup>55</sup> 16 U.S.C. § 799 (2006).

<sup>56</sup> See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).



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

(2) Project works consisting of the following non-U.S. Army Corps of Engineers-owned facilities: (1) the existing 2,470-foot-long, 80- to 200-foot-wide "North Head Race," which would be refurbished for project generation purposes; (2) the existing 1700-foot-long, 160-foot-wide "South Head Race," which would be shortened to a length of 170 feet for project generation purposes; (3) a new 208-foot-long, 30-foot-high inclined trashrack placed in the forebay, just upstream of the powerhouse; (4) a new 136-foot-long, 76-foot-wide, 60-foot-high powerhouse containing four horizontal Kaplan generating units, each with an installed capacity of 2.565 megawatts (MW) for a total installed capacity of 10.26 MW; (5) a new 69-foot-long, 116- to 200-foot-wide tailrace; (6) a new, estimated 400-foot-long, 34-kilovolt underground transmission line connecting the powerhouse with a nearby Illinois Power substation; and (7) appurtenant facilities.

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

Exhibit A: Pages A-1 through A-5 of exhibit A filed on August 10, 2011:

Exhibit F: The following exhibit F drawings filed on August 10, 2011:

<u>Exhibit F Drawing</u>	<u>FERC No.</u> <u>13351-</u>	<u>Description</u>
Exhibit F-1	1	Project Site Plan
Exhibit F-2	2	Plan View of Proposed Powerhouse
Exhibit F-4	4	Powerhouse Section & Elevation
Exhibit F-5	5	Powerhouse Section & Elevation
Exhibit F-6	6	Ramp Retaining Wall Plan & Section

(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

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project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The exhibits A, F-1, F-2, F-4, F-5, and F-6 described above are approved and made part of the license. Exhibit F-3 and exhibit G filed as part of the application for the license do not conform to Commission regulations and are not made part of this license.

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

(E) The licensee's proposal to construct the powerhouse in a classic revival style, as shown by exhibits F-4 and F-5, is approved and made part of this license.

(F) This license is also subject to the articles set forth in Form L-4 (Oct. 1975), entitled, "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters of the United States" (see 54 FPC 1799 *et seq.*), as set forth in this order, including the following additional articles:

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

(1) reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 10.26 megawatts; and

(2) recompensing the United States for the utilization of surplus water or water power from a government dam.

Article 202. Exhibit F Drawings. Within 45 days of the date of issuance of the license, the licensee shall file the approved exhibit F drawings (F-1, F-2, F-4, F-5, and F-6) in aperture card and electronic file formats.

(a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P-13351-#### through P-13351-####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper

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left corner of each aperture card.

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

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

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

Article 203. Exhibit F-3 Drawing. Within 90 days from the date of license issuance, the licensee shall file, for Commission approval, a revised Exhibit F-3 showing elevation and section views, and the dimensions of the trashrack, including a clear-bar spacing of no more than 2 inches as required by Article 408, and specifying a maximum approach velocity of 2 feet per second as also required by Article 408. The exhibit F drawing must comply with sections 4.39 and 4.41 of the Commission’s regulations, 18 C.F.R. §§ 4.39 and 4.41 (2011).

Article 204. Exhibit G Drawings. Within 90 days of the effective date of the license, the licensee shall file, for Commission approval, revised exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project, including the project’s entire underground transmission line. The revised exhibit G drawings must exclude the lands designated by the licensee for a future substation, the Boyce Marseilles Museum and associated parking lot, marina, marina center, and boat ramp, because these facilities are not needed to carry out project purposes, and the U.S. Army Corps of Engineers’ (Corps) Marseilles Lock and Dam head gates because these are federal facilities to be retained by the Corps. The exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission’s regulations, 18 C.F.R. §§ 4.39 and 4.41 (2011).

Article 205. Amortization Reserve. Pursuant to section 10(d) of the FPA, after the

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

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

Article 206. Headwater Benefits. If the licensee's project is directly benefited by the construction work of another licensee, a permittee, or of the United States of a storage reservoir or other headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the Commission's regulations, 18 C.F.R. § 11 (2011).

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

Article 302. Contract Plans and Specifications. At least 60 days prior to start of construction, the licensee shall submit one copy of its final contract plans and specifications and supporting design report to the Commission's Division of Dam Safety and Inspections (D2SI)—Chicago Regional Engineer, and two copies

to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-Chicago Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

The Soil Erosion and Sediment Control Plan, to be implemented during construction, shall be based on actual site geological, soil, and groundwater conditions, and on project design, and shall include, at a minimum, the following: (1) spill prevention and contingency measures; (2) dust control measures; (3) measures to ensure that any excavated material would not be returned to the waterway and would be deposited in a self-contained area if dredged or excavated material cannot be used for fill; (4) identification of the location of contaminated sediments within the proposed project boundary and at any in-river dredging or excavation sites, quantification in cubic yards of the amount of contaminated sediments to be moved, and identification of where and how these contaminated sediments would be handled and disposed; (5) identification of measures that would be employed to control the suspension and downstream movement of contaminated sediments in the Illinois River; (6) identification of the frequency of contaminant monitoring (e.g., daily, weekly, monthly, or twice per month); (7) identification of whether mechanical or hydraulic measures would be used to remove contaminated sediments; and (8) an implementation schedule.

The licensee shall prepare the Soil Erosion and Sediment Control Plan after consultation with the Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the U.S. Army Corps of Engineers. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

Article 303. Cofferdam Construction Drawings and Deep Excavations. Before starting construction, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensee shall submit one copy to the Commission's Division of Dam Safety and

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Inspections (D2SI)-Chicago Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. *Project Owner's Dam Safety Program.* Within 90 days from the issuance date of the license, the licensee shall submit to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer, an Owner's Dam Safety Program which among other items demonstrates a clear acknowledgement of the project owner's responsibility for the safety of the project, an outline of the roles and responsibilities of the dam safety staff, and access of the dam safety official to the Chief Executive Officer (CEO). For guidance on what constitutes a good dam safety program the Licensee should reference the Taum Sauk Stipulation and Consent Agreement on the FERC-D2SI website at: <http://www.ferc.gov/industries/hydropower/safety/projects/taum-sauk.asp>.

Article 305. *Project Site Conditions.* Within 90 days from the issuance date of the license, the licensee shall furnish the U.S. Army Corps of Engineers and the Commission's Division of Dam Safety and Inspections-Chicago Regional Engineer, a plan and schedule to address the deteriorated condition of the North and South Head Race channels and associated features (e.g. retaining walls) within the project boundary.

Article 306. *As-Built Drawings.* Within 90 days of completion of all construction activities authorized by this license, the licensee shall file for Commission approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer; the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 307. *Project Financing Plan.* At least 90 days before starting construction, the licensee shall file with the Commission, for approval, three copies of a project financing plan. The plan must show that the licensee has acquired the funds, or commitment for funds, necessary to construct, operate, and maintain the project in accordance with the license. The plan must include, at a minimum, financial statements, including a balance sheet, income statement, and a statement of actual or estimated cash flows over the license term which provide evidence that the licensee has sufficient assets, credit, and projected revenues to cover project construction, operation, and maintenance expenses, and any other estimated project liabilities and expenses.

The financial statements must be prepared in accordance with generally accepted accounting principles and signed by an independent certified public accountant. The licensee shall not start any on-site project construction or ground-disturbing activities that are associated with the project, before the project financing plan is approved.

Article 308. Facility Design and Construction. The design and construction of those permanent and temporary facilities, including reservoir impounding cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of the Government project shall be done in consultation with and subject to the review and approval of the Corps' District Engineer. The Corps' review of the cofferdams will be in addition to the licensee's review and approval of the final plans and shall in no way relieve the licensee of responsibility and liability regarding satisfactory performance of the cofferdams.

Within 90 days from the issuance date of the license, the licensee shall furnish the Corps and the Commission's Division of Dam Safety and Inspections—Chicago Regional Engineer, a schedule for submission of design documents and the plans and specifications for the project. If the schedule does not afford sufficient review and approval time, the licensee, upon request of the Corps, shall meet with the Corps and the Commission's staff to revise the schedule accordingly.

Article 309. Review of Contractor Designs. Before starting construction, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations, other than those approved according to Article 308, and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file with the Corps, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 310. Agreement with Corps. The licensee shall within 90 days from the issuance date of the license, enter into an agreement with the Corps to coordinate its plans for access to and site activities on lands and property administered by the Corps so that the authorized purposes, including operation of the Federal facilities, are protected. In general, the agreement shall not be redundant with the Commission's requirements contained in this license, shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under which studies and construction will be conducted. The agreement shall be mainly composed of reasonable arrangements for access to the Corps site to conduct studies and construction activities, such access rights to be

conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations. Should the licensee and the Corps fail to reach an access agreement, the licensee shall refer the matter to the Commission for resolution.

Article 311. Periodic and Continuous Inspections by the Corps. The construction, operation, and maintenance of the project works that, in the judgment of the Corps may affect the structural integrity or operation of the Corps project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation and maintenance deficiencies or difficulties detected by the Corps inspection shall be immediately reported to the Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer. Upon review, the D2SI-Chicago Regional Engineer shall refer the matter to the licensee for appropriate action. In cases when construction, operation, or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps project, the Corps inspector has the authority to stop construction or maintenance while awaiting the resolution of the problem. The licensee shall immediately inform the D2SI-Chicago Regional Engineer of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee shall not resume construction, operation, or maintenance activities until notified by the D2SI-Chicago Regional Engineer that the problem or situation has been resolved.

Article 312. Regulating (or Operating) Plan. The licensee shall at least 60 days prior to start of construction, submit for approval a regulating plan to the Corps, describing (a) the designed mode of hydropower operation, (b) reservoir flow diversion and regulation requirements for operation of the Corps project during construction as established by the Corps, and (c) integration of the operation of the hydroelectric facility into the Corps' emergency action plan. In addition, the licensee, prior to start of power plant operation, shall enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the powerhouse acceptable to the Corps. The MOA shall specify any restrictions needed to protect the primary purposes of the Corps project for navigation, recreation, water quality, and flood control. The Commission's Division of Dam Safety and Inspection (D2SI)-Chicago Regional Engineer shall be invited to attend meetings regarding the agreement. The MOA shall be subject to revision by mutual consent of the Corps and licensee as experience is gained by actual project operation. Should the licensee and the Corps fail to reach an agreement, the matter will be referred to the Director, Office of Energy Projects (OEP) for resolution. Copies of the regulating plan and signed MOA between the Corps and the licensee and any revision thereof shall be furnished to the Director, OEP and the D2SI-Chicago Regional Engineer.



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Article 313. No Claim. The licensee shall have no claim under this license against the United States arising from the effect of any changes made in the operation or reservoir levels of the Corps' project.

Article 314. Corps' Written Approval. The licensee shall file with the Commission, and provide two copies to the Commission's Division of Dam Safety and Inspections (D2SI)–Chicago Regional Office, all correspondence between the licensee and the Corps. The D2SI–Chicago Regional Engineer shall not authorize construction of any project work until the Corps' written approval of construction plans and specifications.

Article 315. Project Land Rights Progress Report. No later than four years after license issuance, the licensee shall file a report with the Commission describing the status of acquiring title in fee or the rights for all the lands within the project boundary. The report must provide an overview map of each parcel and summary table identifying the licensee's rights over each parcel within the project boundary. The report shall also include specific supporting documentation showing the status of the land rights on all parcels of land within the project boundary that: (1) have been acquired up to the date of filing of the report, including pertinent deeds, lease agreements, and/or bill of sale information that specifically verify the licensee's rights; and (2) the licensee's plan and schedule for acquiring all remaining project lands prior to the five-year deadline, including a history of actions taken, current owner information, the type of ownership to be acquired whether in fee or by easement, and the timeline for completing property acquisition.

Article 316. Financial Assurance Plan. Within 120 days from the issuance date of this license, the licensee shall file, for Commission approval, a Financial Assurance Plan that identifies those project facilities that would be removed, secured in-place, or otherwise modified to ensure public safety and any other measures needed to protect environmental resources in the event the licensee cannot complete project construction or is unable to operate the project once construction is completed. The plan shall include an itemized cost estimate prepared by a registered engineer for each proposed measure contained in the plan.

Subsequent to Commission approval of the Financial Assurance Plan and at least 90 days before starting any ground-disturbing activities, the licensee shall file documentation that the licensee has obtained a bond or equivalent financial instrument that ensures the licensee has the financial means necessary to implement the Financial Assurance Plan. The implementation of the plan and the determination of measures necessary to render the site safe for the public and to protect environmental resources shall be at the direction of the Commission. The licensee shall maintain the bond or equivalent financial instrument throughout the term of the license. The licensee shall file annually by January 1 of each year a report documenting that the bond or equivalent

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financial instrument will remain in effect for the ensuing year.

Article 401. Filing of Amendment Applications. Illinois Environmental Protection Agency's Condition 13 of the Water Quality Certificate (Appendix A) contemplates unspecified long-term changes to a required plan for the purpose of mitigating environmental impacts. These changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license.

Article 402. Post-Construction Soil and Erosion Control Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a Post-Construction Soil and Erosion Control Plan. The plan shall include, but not necessarily be limited to, the following: (1) measures to ensure that disturbed areas are mulched, seeded, and maintained until the establishment of 80-percent permanent vegetative cover and (2) an implementation schedule.

The licensee shall prepare the Post-Construction Soil and Erosion Control Plan after consultation with the Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the U.S. Army Corps of Engineers. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

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

Article 403. Run-of-Release Operation. The licensee shall operate the project in a run-of-release mode meaning that the licensee shall not deviate from the flow constraints, including those for flow diversions into the project headraces, established by the U.S. Army Corps of Engineers (Corps) for operation of the hydroelectric project. If operation of the project causes a deviation from the Corps' flow constraints and authorized diversions, the licensee shall notify the Commission and the Corps as soon as possible, but no later than 10 days after each such incident.

Article 404. Operation Compliance Monitoring Plan. At least 90 days before the start of project operation, the licensee shall file with the Commission, for approval, an Operation Compliance Monitoring Plan that describes how the licensee will comply with the operational requirements of this license.

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The plan shall include, but not necessarily be limited to, the following: (1) a provision to monitor compliance with run-of-release operation as required by Article 403 and a description of the procedures the licensee will implement to comply with the minimum flow stipulation of Appendix A, Condition 9; (2) a description of all gages or recording devices that would be used to monitor operation compliance; (3) the method of calibration of each gage and/or measuring device; (4) the frequency of recording for each gage and/or measuring device; (5) procedures for recording, maintaining, and sharing a database of project operations data with the U.S. Army Corps of Engineers (Corps); (6) a gage calibration plan for all equipment that would be used for compliance monitoring; and (7) an implementation schedule.

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

The Commission reserves the right to require changes to the plan and schedule. Project operation shall not begin until the licensee is notified by the Commission that the plan and schedule are approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 405. Dissolved Oxygen Monitoring Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a Dissolved Oxygen (DO) Monitoring Plan to monitor project operational effects on DO levels in the Illinois River.

The DO monitoring plan shall include, but not necessarily be limited to, the following: (1) the provisions specified in conditions 8 and 10 of the Water Quality Certificate (Appendix A); (2) identification of potential measures to implement if DO levels in the project-affected waters of the Illinois River fall below state water quality standards; (3) identification of the equipment to be used to conduct the DO monitoring; (4) the frequency that the equipment will be calibrated to ensure it is functioning properly; (5) a provision to file a report of the monitoring results with the Commission consistent with the monitoring schedule specified in condition 8 of the Water Quality Certificate; and (6) an implementation schedule.

The licensee shall prepare the plan after consultation with the Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the U.S. Army

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

The Commission reserves the right to require changes to the plan and schedule. Land-disturbing or land clearing activities shall not begin until the licensee is notified by the Commission that the plan and schedule are approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 406. Freshwater Mussel Survey Plan. Within 180 days of license issuance, the licensee shall file for Commission approval, a plan to conduct a freshwater mussel survey in the project-affected waters of the Illinois River to determine if any mussels are present that could be adversely affected by project construction.

In addition to the provisions specified in condition 11 of the Water Quality Certificate (Appendix A), the plan shall include, but not necessarily be limited to, the following: (a) delineation of the sampling area; (b) identification of the sampling equipment to be used in the survey (e.g., brails, and diving /hand picking); (c) identification of the frequency of sampling; (d) an indication of how the captured mussels are to be handled (e.g., returned to the same location or preserved); (e) a provision for recording the location, numbers (relative abundance), and species of sampled mussels, and the colony size and location of any mussel beds found during the survey; (f) a provision for recording the characteristics of the sediments and depth and flow of water where any mussel beds are sampled; (g) provisions for relocating mussels, if necessary, in the event that adverse effects on an area inhabited by mussel species cannot be avoided; (h) identification of the entity that would conduct the survey and the qualifications of those individuals that would identify mussels that are captured; (i) a provision for filing a report of the survey results, including a map showing the locations of any mussel beds that are detected during the survey, with the Illinois Department of Natural Resources (Illinois DNR), Illinois Environmental Protection Agency (Illinois EPA), U.S. Army Corps of Engineers (Corps), and the Commission; and (j) an implementation schedule. The survey report shall be filed at least 90 days before commencing on-site construction or land-disturbing activities.

The licensee shall prepare the plan after consultation with the Illinois DNR, Illinois EPA, and the Corps. The licensee shall include with the plan, documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the

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

The Commission reserves the right to require changes to the plan and schedule. The plan shall not be implemented until the licensee is notified by the Commission that the plan and schedule are approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 407. Freshwater Mussel Protection Plan. If mussels are detected during the survey required by Article 406, the licensee shall include with the filing of its survey report, a Freshwater Mussel Protection Plan.

The plan shall include, but not necessarily be limited to, the following: (a) a provision for monitoring mussels immediately prior to commencing land-disturbing or in-river project construction activities and continuing for two years after project operation commences; monitoring activities include observing mussel beds for signs of burial by disturbed sediments and direct removal by construction activities; (b) a provision for monitoring turbidity in the project-affected reaches during project construction; (c) identification of the specific mussel and turbidity monitoring methodologies and frequency of monitoring, including a monitoring schedule; (d) identification of any protection, mitigation, and enhancement measures, including potential translocation sites for mussels facing immediate adverse effects; (e) a provision to control and monitor the suspension and downstream movement of any contaminated sediments once construction is completed and continuing for 2 years after project operation commences; (f) a provision to identify measures to be implemented if contaminant monitoring shows that any contaminates suspended in the water column exceed levels specified by state water quality standards; and (g) an implementation schedule.

The licensee shall prepare the plan after consultation with the Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the U.S. Army Corps of Engineers. The licensee shall include with the plan, documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan and schedule. The plan shall not be implemented until the licensee is notified by the Commission that the plan and schedule are approved. Upon Commission approval, the licensee shall

implement the plan and schedule, including any changes required by the Commission.

Article 408. Trashrack Design. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file for Commission approval, detailed design drawings of the licensee's proposed trashrack to reduce the entrainment of fish together with a schedule to construct/install the trashrack before commercial operation of the project.

The filing shall include, but not necessarily be limited to: (1) specification that the trashrack have clear-bar spacing (i.e., size of opening between trashrack bars) of no more than 2 inches; (2) specification of a maximum intake approach velocity that does not exceed 2 feet per second; and (3) a description of the methods and schedule for installing the trashrack.

The licensee shall prepare the drawings and schedule after consultation with the Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the U.S. Army Corps of Engineers. The licensee shall include with the drawings and schedule, documentation of consultation, copies of comments and recommendations on the completed drawings after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the drawings. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the drawings and schedule. Project operation shall not begin until the licensee is notified by the Commission that the filing is approved. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.

Article 409. Trashrack Debris Removal Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file for Commission approval, a Trashrack Debris Removal Plan for the purpose of designating the steps the licensee will take to clean the trashrack to prevent exceedance of the trashrack's maximum intake approach velocity required by Article 408.

The plan shall include, but not necessarily be limited to, the following: (a) identification of measures to ensure that debris does not clog or accumulate on the trashrack; (b) identification of measures or actions that ensure prompt removal of debris that accumulates on the trashrack; (c) identification of where and how the debris removed from the trashrack will be disposed; and (d) an implementation schedule.

The licensee shall prepare the plan after consultation with the Illinois Department

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of Natural Resources, Illinois Environmental Protection Agency, and U.S. Army Corps of Engineers. The licensee shall include with the plan, documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan and schedule. Land-disturbing and land-clearing activities shall not begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 410. Wetland Mitigation Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a Revised Wetland Mitigation Plan that includes the provisions of the Wetland Mitigation Plan filed June 20, 2011, and the following additional provisions for the treatment of invasive plants in the project wetland mitigation areas: (1) the identification of baseline conditions of invasive plants; (2) the identification of success criteria for the control of invasive plants; (3) the identification of biological triggers and additional procedures necessary for controlling invasive plants to be implemented, including descriptions of any proposed treatment options, if success criteria are not achieved; (4) reporting results of treatment methods and any adjustments of those methods to the Commission in the monitoring reports specified in the June 20, 2011 Wetland Mitigation Plan and condition 13 of the Water Quality Certificate (Appendix A); and (5) an implementation schedule.

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

The Commission reserves the right to require changes to the plan and schedule. Land-disturbing and land-clearing activities shall not begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 411. Indiana Bat Protection Plan. Within 180 days of license issuance, the licensee shall file an Indiana Bat Protection Plan for Commission approval for the protection of Indiana bats during project construction, operation, and maintenance.

The plan shall include, but not necessarily be limited to, the following provisions: (1) surveying the construction area prior to the commencement of land-disturbing or land-clearing activities for Indiana bat use and filing a report documenting the results of the findings regarding Indiana bat usage at least 90 days prior to the start of land-disturbing or land-clearing activities; (2) incorporation of measures consistent with the U.S. Fish and Wildlife Service's 2007 Indiana Bat Recovery Plan; (3) only conducting tree clearing in the project area prior to or after the roosting period of Indiana bats (the roosting period is April 1 to September 30); and (4) an implementation schedule.

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

The Commission reserves the right to require changes to the plan and schedule. The plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Land-disturbing and land-clearing activities shall not begin until the licensee is notified by the Commission that the survey report has been approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 412. Wildlife and Riparian Management Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a Wildlife and Riparian Management Plan that includes provisions for protecting wildlife and riparian resources in the project area.

The plan shall include, but not necessarily be limited to, the following: (1) identification of specific raptor and migratory bird species using project construction areas; (2) definition of the specific seasons and sensitive times pertaining to those raptor and migratory bird species when vegetation clearing and construction will be avoided (e.g. nesting, breeding, or winter foraging seasons); (3) a limitation on any vegetation clearing in the project area so that it is conducted outside of defined seasons and sensitive



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times associated with raptors and migratory birds; (4) identification of the need for any unavoidable clearing of trees and the potential effects of any construction-related disturbance of riparian habitat; (5) definition of measures that would mitigate the effects on terrestrial resources associated with any unavoidable tree clearing and disturbance of riparian habitat; (6) provisions for limiting lay down equipment to a small footprint; (7) provisions for re-vegetating areas with native species after construction; and (8) an implementation schedule.

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

The Commission reserves the right to require changes to the plan and schedule. Land-disturbing and land-clearing activities shall not begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan and schedule, including any changes required by the Commission.

Article 413. Recreation Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file for Commission approval, a Recreation Plan. The plan shall include, but not necessarily be limited to, the following: (1) final design drawings and specifications for two barrier-free tailrace fishing platforms, a parking lot for cars, barrier-free pathways and ramps to the fishing platforms, two barrier-free restrooms, a fish cleaning station, and trash receptacles; (2) a schedule for constructing the facilities; (3) provisions to operate and maintain the facilities over the term of any license issued for the project; (4) a discussion of how the needs of the disabled were considered in the planning and design of the facilities; and (5) an implementation schedule.

The licensee shall prepare the plan after consultation with the Illinois Department of Natural Resources and the U.S. Army Corps of Engineers. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-

specific information.

The Commission reserves the right to require changes to the plan. Land-disturbing and land-clearing activities shall not begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

Article 414. *Programmatic Agreement and Historic Properties Management Plan.* The licensee shall implement the “Programmatic Agreement Among the Federal Energy Regulatory Commission, Advisory Council on Historic Preservation, and the Illinois State Historic Preservation Officer for Managing Historic Properties that May be Affected by the Issuance of a License to the Marseilles Land and Water Company for the Operation of the Marseilles Lock and Dam Hydroelectric Project in LaSalle County, Illinois (FERC No. 13351-000),” executed on October 11, 2011, and included but not limited to the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) document, and the Historic Properties Management Plan (HPMP) for the project. Pursuant to the requirements of this Programmatic Agreement, the licensee shall prepare a HABS/HAER document for the Marseilles Hydro Plant, North Head Race, South Head Race, Tail Race, and Boyce Paper Mill and Hydroelectric Plant, and file it with the Commission within six months of license issuance, including documentation that the document has been accepted by the Illinois State Historic Preservation Officer (Illinois SHPO). Also, pursuant to the requirements of this Programmatic Agreement, the licensee shall file, for Commission approval, a HPMP within one year of issuance of this order. 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 shall obtain approval from the Commission and the Illinois 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 415. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under

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the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

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

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

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conveyed.

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

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

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

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

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation,

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and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

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

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

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

(G) The licensee shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on 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. § 825(1) (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2011). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright  
Director  
Office of Energy Projects

**Form L-4**  
(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION**

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

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

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

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

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

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

**Article 4.** The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any features or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

**Article 5.** The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the

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

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

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

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



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the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

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

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

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

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

**Article 13.** On the application of any person, association, corporation, Federal Agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts

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

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

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

**Article 16.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the

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Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

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

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

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

**Article 20.** The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate

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Federal, State, and local statutes and regulations.

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

**Article 22.** Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

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

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

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

**Article 26.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the

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Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

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

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

**APPENDIX A****Water Quality Certificate Conditions for the Marseilles Lock and Dam Project  
Issued by the Illinois Environmental Protection Agency on June 3, 2011**

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:
  - (a) violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulations;
  - (b) water pollution defined and prohibited by the Illinois Environmental Protection Act; or
  - (c) interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.

5. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2010).
6. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, straw bales, etc.) to prevent transport of sediment and materials downstream.
7. This certification is being issued with the understanding that the applicant will enroll the entire project area into the Bureau of Land (BOL) Site Remediation Program. Sediment and soil material being relocated within or brought into the designated boundaries of the site will be subject to review by the BOL Site Remediation Program and receive BOL approval.
8. The applicant shall conduct Dissolved Oxygen (D.O.) monitoring from representative monitoring points or samples taken in the Illinois River according to the following:
  - (a) Quarterly monitoring shall be conducted at the following three (3) locations, 1) midstream of the Illinois River approximately midway between the dam of Corps of Engineers Marseilles Lock and Dam and the powerhouse tailrace, 2) upstream of the Marseilles Lock and Dam and the intake channel to the turbines in the Marseilles Pool and 3) downstream of the powerhouse and upstream of the confluence of the lock channel waterway.
    - i) Monitoring shall be completed at mid-depth elevations.
    - ii) Monitoring shall be completed at a time just before sunrise.
    - iii) Monitoring shall be completed in the months of March, July, September and December.
    - iv) Monitoring shall be continuous if hardware allows or shall be 3 separate samples taken within the sampling month.
  - (b) Daily monitoring shall be conducted of the turbine discharge water in the tailrace in accordance with 8(a)(iii) above as follows.
    - i) Monitoring shall be conducted just before sunrise.
    - ii) Monitoring shall be continuous if hardware allows otherwise it shall be conducted using three grab samples taken during each day representing the daily minimum and mean D.O. concentrations.
  - (c) Monitoring results shall be reported 4 times per year according to the following:
    - i) The applicant shall report the dissolved oxygen results in mg/L.
    - ii) Quarterly monitoring shall be reported as a daily minimum for each monitoring location.

- iii) Daily monitoring shall be reported as a daily minimum, a daily minimum averaged over 7 days, and a daily mean averaged over 30 days.
- iv) The monitoring report shall include the date, time, location of the monitoring points, names and qualifications of individual(s) who performed the monitoring and methods of monitoring and measurement that were used.
- v) The monitoring report shall include drawings depicting the location of each monitoring point and the laboratory analysis sheets.
- vi) The monitoring results shall be submitted in a report within one month following the designated monitoring month. The subject monitoring reports shall be submitted to:

Illinois Environmental Protection Agency  
Bureau of Water  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

- 9. The applicant shall implement measures necessary to maintain dissolved oxygen levels that meet the enhanced dissolved oxygen standard adopted at 35 Ill. Adm. Code 302.206. The applicant shall operate the hydroelectric powerhouse facility to maintain flows of at least 1,000 cubic feet per second (cfs) through the dam of the Marseilles Lock and Dam.
- 10. The applicant shall maintain records at the facility for each dissolved oxygen measurement taken under this certification at the facility.
- 11. The applicant shall conduct a mussel survey in the Illinois River within the immediate construction area and in vicinity of proposed construction activities (upstream and downstream) prior to commencing construction activities within the Illinois River. The subject mussel survey and the results of the Illinois Department of Natural Resources (IDNR) approved relocation and restoration plan shall be submitted to the following address within 30 days of completion or IDNR approval:

Illinois Environmental Protection Agency  
Bureau of Water  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276



12. The applicant shall obtain a NPDES discharge permit for the treated (filtration and granular activated carbon treatment) remedial site wastewaters and runoff from the site remediation area or the construction area near the site remediation area that will be discharged to waters of the State.
13. The mitigation plan received by the Agency on March 23, 2011 shall be implemented for impacts to wetlands. Modifications to the mitigation plan must be submitted to the Agency for approval. The permittee shall submit annual reports by July 1 of each calendar year on the status of the wetland and stream mitigation. The first annual report shall include a hydric soils determination that represents the soils at the completion of initial construction for the wetland mitigation site(s), in addition it shall include water level logs representing water depth at two gauge stations at completion of construction of the open-water stream mitigation site. The permittee shall monitor the mitigation for 5 years after the completion of initial construction. A final report shall be submitted within 90 days after completion of a 5-year monitoring period. Each annual report and the final report for wetland and stream mitigation sites shall include the following: IEPA Log No., date of completion of initial construction, representative photographs, water level logs taken once every 3 months representing water depth at two gauge stations within the open-water stream mitigation site, floristic quality index, updated topographic maps, description of work in the past year, the performance standards for the mitigation as stated in the mitigation plan, and the activities remaining to complete the mitigation plan. For wetland mitigation sites containing non-hydric soils at the time of initial construction, the final report shall include a hydric soils determination that represents the soils at the end of the 5 year monitoring period. For wetland mitigation provided by purchase of wetland mitigation banking credits, in lieu of the above monitoring and reporting, the permittee shall submit written proof from the wetland mitigation bank that the wetland credits have been purchased within thirty (30) days of said purchase. The subject reports and proof of purchase of mitigation credits shall be submitted to:

Illinois Environmental Protection Agency  
Bureau of Water  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

This certification becomes effective when the Federal Energy Regulatory Commission includes the above conditions #1 through #13 as conditions of the requested Federal License issued pursuant to the Federal Power Act § 6, 16 U.S.C. § 799.

Document Content(s)

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