

147 FERC ¶ 62,035  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

BOST3 Hydroelectric LLC

Project No. 12756-003

ORDER ISSUING ORIGINAL MAJOR LICENSE

(April 14, 2014)

**INTRODUCTION**

1. On July 26, 2010, as amended on November 20, 2013, BOST3 Hydroelectric LLC (BOST3) 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 Red River Lock and Dam No. 3 Hydroelectric Project No. 12756 (Lock and Dam No. 3 Project or project). The 36.2-megawatt (MW) project will be located at the U.S. Army Corps of Engineers' (Corps) Lock and Dam No. 3, on the Red River near the town of Colfax, in Natchitoches Parish, Louisiana. The project will occupy approximately 61.8 acres of federal land administered by the Corps.<sup>2</sup>
2. As discussed below, this order issues an original license for the Lock and Dam No. 3 Project.

**BACKGROUND**

3. On March 10, 2011, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing and soliciting motions to intervene and protests.<sup>3</sup> The notice set May 9, 2011, as the deadline for filing motions to intervene and protests. No motions to intervene or protests were filed.

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

<sup>2</sup> The project would utilize the head potential of the Corps' existing Red River Lock and Dam and would occupy lands of the United States. Further the Red River is a navigable waterway of the United States. *See Cities of Minden, Natchitoches, and Ruston, Louisiana*, 31 FERC ¶ 61,344 (1985) (stating that the Red River in Louisiana is a navigable waterway). For any of these reasons, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2012), requires that the project be licensed.

<sup>3</sup> 76 *Fed. Reg.* 52, 14653-14654 (2011).

4. On May 11, 2012, the Commission issued a public notice that was published in the *Federal Register* on May 18, 2012, indicating the application was ready for environmental analysis and soliciting comments, recommendations, terms and conditions, and prescriptions.<sup>4</sup> The notice set July 10, 2012, as the deadline for filing comments, recommendations, terms and conditions, and prescriptions. The U.S. Department of the Interior (Interior) filed comments and recommendations.

5. An Environmental Assessment (EA) was prepared by Commission staff and issued on June 28, 2013, analyzing the impacts of the proposed project and alternatives to it. The U.S. Fish and Wildlife Service (FWS), the U.S. Environmental Protection Agency (EPA), and the Louisiana Department of Wildlife and Fisheries (Louisiana DWF) filed comments on the EA.

6. On November 20, 2013, BOST3 amended the application to replace its proposed 6.5-mile-long transmission line with 2,550 feet of transmission line and a switching station to be located within the project boundary, approximately 1,050 feet downstream of the powerhouse.<sup>5</sup>

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

## PROJECT DESCRIPTION

### A. Existing Corps Facilities

8. The Corps' Lock and Dam No. 3 is one of the five Corps' locks and dams that comprise the J. Bennett Johnston Waterway, authorized by Congress in 1968 to stabilize river banks; straighten river bends; and maintain a 9-foot-deep, 200-foot-wide channel for navigation.<sup>6</sup> Lock and Dam No. 3 consists of: (1) a 40-foot-high by 423-foot-long concrete gravity dam with six 60-foot-wide Tainter gates; (2) a 305-foot-long overflow weir; (3) a 9,500-acre reservoir (Pool 3) at a normal surface elevation of 95 feet National Geodetic Vertical Datum (NGVD); and (4) an 84-foot-wide by 685-foot-long navigation lock on the northeast bank of the Red River. The Corps maintains 10 picnic tables, a

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<sup>4</sup> 77 *Fed. Reg.* 29626–29627 (2012).

<sup>5</sup> The modified transmission line route will be much shorter and constructed in developed areas already considered in staff's EA. Therefore, the environmental effects of the amended application will be less than those described in staff's EA and no additional environmental analysis is required.

<sup>6</sup> Lock and Dam No. 3 is located at river mile 116.5 on the Red River.

restroom, and parking on the west bank of the Red River where the proposed project powerhouse, tailrace, and construction laydown area will be located.

### **B. Current Corps Operation**

9. The Corps currently operates Lock and Dam No. 3 in a run-of-river mode to maintain water levels within Pool 3 at 95 feet NGVD. Six Tainter gates in the dam control water levels and releases. Baffle blocks in the stilling basin aerate water released by the Tainter gates.

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

10. The Lock and Dam No. 3 Project will consist of the following new facilities: (1) a 635-foot-long excavated headrace channel to convey water from the upstream Pool No. 3 into the powerhouse; (2) a 301-foot-long by 90-foot-wide concrete powerhouse located on the right (west) abutment of the Lock and Dam; (3) a 36.2-MW horizontal Kaplan bulb turbine/generator unit; (4) an 820-foot-long excavated tailrace channel to discharge water from the powerhouse to the downstream Pool No. 2 of the Corps' Lock and Dam No. 2;<sup>7</sup> (5) a 2,550-foot-long, 230-kilovolt transmission line<sup>8</sup> and a 340-foot-long by 220-foot-wide switching station ; (6) a 1,000-foot-long gravel access road from the powerhouse to the switching station; and (7) appurtenant facilities.

### **D. Project Boundary**

11. The Corps' dam and reservoir are not included in the project boundary.

12. The proposed project boundary encloses the headrace channel, powerhouse, tailrace channel, transmission line, switching station, access road to the switching station, appurtenant facilities, and portions of the Corps' west bank recreation site. Of the 62 acres within the project boundary, 61.8 acres are federal land administered by the Corps and 0.2 acre is land owned by the Central Louisiana Electric Company that will be used to connect the project transmission line to Central Louisiana Electric Company's transmission line.

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<sup>7</sup> The Corps' Lock and Dam No. 2 is also known as the John H. Overton Lock and Dam. A license to construct and operate Overton Lock and Dam Project No. 13160 was issued on April 2, 2014 (*Red River Hydro LLC*, 147 FERC ¶ 62,008).

<sup>8</sup> The transmission line has two segments: a 1,050-foot-long segment extending from the powerhouse to the switching station, and a 1,500-foot-long segment connecting the switching station to Central Louisiana Electric Company's existing 230 kV transmission line.

### **E. Proposed Project Operation**

13. BOST3 proposes to operate the hydropower project in a run-of-release mode using flows made available by the Corps. The proposed project will not have the capability to store water, and its operation will not change reservoir elevations or the amount or timing of flows released from the dam. River flows between 2,860 cubic feet per second (cfs) and 19,087 cfs will be used for power generation. Flows less than 2,860 cfs and in excess of 19,087 cfs (less any flow used by the navigation locks) will be discharged through the Corps' gate system.

### **F. Proposed Environmental Measures**

14. To ensure the visual compatibility of project facilities, BOST3 proposes to design the powerhouse with an architectural treatment compatible with the Corps' nearby facilities.

15. To minimize soil erosion and sedimentation into the Red River during project construction, BOST3 proposes to develop and implement a soil erosion and sediment control plan, which would include covering disturbed areas with topsoil, seeding with grass, and implementing best management practices (BMPs) for stormwater control.

16. To ensure that project discharges during generation meet the state water standard for dissolved oxygen (DO) of 5 milligrams per liter (mg/L) in the Red River, BOST3 proposes to monitor water temperatures and DO concentrations in the project intake and tailrace hourly and to provide aeration if needed.

17. To prevent the spread of invasive species following site construction, BOST3 proposes to conduct an invasive species survey within 2 years of starting project operation and develop a control plan for any invasive species that are identified in the project boundary.

18. To mitigate impacts to wetlands, BOST3 proposes to prepare a wetland mitigation plan in consultation with the Corps.

19. To mitigate for the closure and relocation of the Corps' west bank recreation facilities, BOST3 proposes to: (1) minimize the time the Corps' recreation site is closed during project construction; (2) place signage in appropriate locations to inform the public of the site closures and direct them to other nearby recreation sites; (3) relocate the recreation site about 1,000 feet west of its current location; and (4) enhance the recreation site by adding five picnic tables, a fish cleaning station, and improved bank fishing access.

20. To protect cultural resources BOST3 proposes to cease construction activities if cultural resources are discovered; notify appropriate entities of any such discovery; and identify measures to avoid, minimize, or mitigate any adverse effects.

## SUMMARY OF LICENSE REQUIREMENTS

21. This license, which authorizes 36.2 MW of renewable energy, requires BOST3's proposed environmental measures. The license also requires the following additional staff-recommended measures to protect and enhance fish, wildlife, and recreation resources.
22. To ensure the soil erosion and sediment control measures are effectively controlling turbidity levels, this license requires BOST3 to monitor turbidity levels in the Red River during construction and take corrective actions if needed.
23. To ensure that project operation does not decrease DO levels downstream of the project, the license requires BOST3 to file a detailed DO monitoring plan that defines the conditions that will trigger supplemental aeration.
24. To minimize adverse effects on fish and mussels during cofferdam construction and dewatering, the license requires BOST3 to develop a cofferdam fish salvage plan, and freshwater mussel relocation plan.
25. To prevent the spread of zebra mussels, the license requires BOST3 to develop a zebra mussel monitoring and control plan that defines methods to control zebra mussels if found on project structures.
26. To prevent the spread of invasive vegetation, the license requires BOST3 to prepare a revegetation management plan that includes provisions to use BMPs during construction activities to prevent the introduction of invasive species, revegetate disturbed areas as soon as practicable, and monitor areas of ground disturbance annually until desirable vegetation is established and any invasive plants have been controlled.
27. To protect birds from potential electrocution and collision hazards, the license requires BOST3 to construct the project's transmission line in accordance with Avian Power Line Interaction Committee (APLIC) guidelines.
28. To ensure the relocated recreation facilities meet the Corps' requirements, the license requires BOST3 to file, prior to construction, a recreation facility relocation plan with provisions for detailed construction plans, construction schedule, and post-construction reporting documenting that the relocated recreation facilities meet the Corps' standards for recreation facilities.

## WATER QUALITY CERTIFICATION

29. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>9</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>10</sup>

30. On March 27, 2010, BOST3 applied to the Louisiana Department of Environmental Quality (Louisiana DEQ) for water quality certification for the Lock and Dam No. 3 Project. On December 20, 2010, the Louisiana DEQ issued certification for the Lock and Dam No. 3 Project. The certification does not include any terms or conditions.

## COASTAL ZONE MANAGEMENT ACT

31. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>11</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 6 months of its receipt of the applicant's certification.

32. The Louisiana Department of Natural Resources (Louisiana DNR) Office of Coastal Management manages Louisiana's Coastal Zone Management Program. Louisiana's coastal zone boundary extends 16 to 32 miles inland from the Gulf Coast and generally follows the Intracoastal Waterway. By letter of December 17, 2010, the Louisiana DNR notified BOST3 that the project is neither within the Louisiana coastal zone nor within a geographic area in which the Louisiana DNR would review licenses for consistency with the Coastal Zone Management Program.<sup>12</sup> Therefore, no consistency certification is required.

## SECTION 18 FISHWAY PRESCRIPTION

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<sup>9</sup> 33 U.S.C. § 1341(a)(1) (2012).

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

<sup>11</sup> 16 U.S.C. § 1456(c)(3)(A) (2012).

<sup>12</sup> See BOST3 Hydroelectric LLC's filing of April 15, 2011.

33. Section 18 of the FPA<sup>13</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.

34. By letter filed June 28, 2012, the Secretary of the Interior requested that the Commission reserve authority to prescribe fishways. Consistent with the Commission's policy, Article 405 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Lock and Dam No. 3 Project.

### **THREATENED AND ENDANGERED SPECIES**

35. Section 7(a)(2) of the Endangered Species Act of 1973<sup>14</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.

36. There are two federally listed species with the potential to occur in the project area: the endangered pallid sturgeon and the endangered interior least tern. Critical habitat has not been designated for either species in the Red River. In the EA,<sup>15</sup> staff determined that, with its recommended measures, licensing the Lock and Dam No. 3 Project is not likely to adversely affect the pallid sturgeon and would have no effect on the interior least tern. The FWS concurred with these findings by letter filed July 26, 2013.

37. In comments on the EA, Louisiana DWF stated that, because of its endangered status at both the federal and state level, the interior least tern should not be disturbed during its breeding season and its habitat should be protected from any impacts at all times. Louisiana DWF requested notification if any interior least terns are observed near the project area. As discussed in the EA,<sup>16</sup> FWS determined that there is currently no suitable nesting habitat for interior least tern in the immediate proximity of the project.<sup>17</sup> As noted above, FWS concurred with staff's determination that licensing the project would have no effect on interior least terns. Consequently, there is no basis for requiring

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<sup>13</sup> 16 U.S.C. § 811 (2012).

<sup>14</sup> 16 U.S.C. § 1536(a) (2012).

<sup>15</sup> See EA at 7-8 and 78-81.

<sup>16</sup> See EA at 80-81.

<sup>17</sup> See FWS's filing of June 28, 2012.

the licensee to monitor for and report the occurrence of interior least terns near the project.

## **NATIONAL HISTORIC PRESERVATION ACT**

38. Under section 106 of the National Historic Preservation Act (NHPA)<sup>18</sup> and its implementing regulations,<sup>19</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the SHPO to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

39. By letter of July 2, 2010, the Louisiana SHPO determined that no known historic properties will be affected by the proposed project.<sup>20</sup> This effect determination could change if new information comes to the Louisiana SHPO's attention.<sup>21</sup> In the EA,<sup>22</sup> staff reached the same conclusion.

40. If previously unidentified cultural resources are discovered, BOST3 proposes to cease activities and consult with the Louisiana SHPO, the Corps, the Coshatta Tribe of Louisiana, and the Caddo Nation. If a discovered resource is determined to be eligible for the National Register of Historic Places, Article 412 requires BOST3 to develop a Historic Properties Management Plan for Commission approval.

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

41. Section 10(j)(1) of the FPA<sup>23</sup> requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and

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<sup>18</sup> 16 U.S.C. § 470 *et seq.* (2012).

<sup>19</sup> 36 C.F.R. Part 800 (2013).

<sup>20</sup> The SHPO also agreed that BOST3's changes to the project transmission line will have no effect on known historic properties (*See* telephone conference summary filed January 23, 2014).

<sup>21</sup> *See* BOST3 Hydroelectric LLC's filing of March 1, 2011.

<sup>22</sup> *See* EA at 97-98.

<sup>23</sup> 16 U.S.C. § 803(j)(1) (2012).



wildlife agencies pursuant to the Fish and Wildlife Coordination Act,<sup>24</sup> to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

42. Neither FWS nor Louisiana DNR filed section 10(j) recommendations for the Lock and Dam No. 3 Project.

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

43. Section 10(a)(1) of the FPA<sup>25</sup> requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

#### **A. Project Operation**

44. BOST3 proposes to operate the project in a run-of-release mode with flow releases controlled by the Corps. In the EA,<sup>26</sup> staff concluded that run-of-release operation will protect aquatic resources and near-shore habitats. Article 401 requires the licensee to operate in a run-of-release mode.

#### **B. Water Quality**

45. Because the project will operate on releases dictated by the Corps, there would be no change in reservoir levels or downstream flows. Consequently, the proposed run-of-release operation is unlikely to cause DO concentrations in the Red River downstream of the project to fall below 5 mg/L.<sup>27</sup> Nonetheless, BOST3 proposes to cease generation under low DO conditions until the discharge reaches at least 5 mg/L.<sup>28</sup> BOST3 also proposes to monitor hourly water temperature and DO concentrations<sup>29</sup> in the project

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<sup>24</sup> 16 U.S.C. §§ 661 *et seq.* (2012).

<sup>25</sup> 16 U.S.C. § 803(a)(1) (2012).

<sup>26</sup> *See* EA at 53.

<sup>27</sup> A DO concentration of 5 mg/L or greater is the current state standard.

<sup>28</sup> *See* BOST3 additional information response filed November 7, 2011 at 2.

<sup>29</sup> Project operations are not expected to affect water temperatures because the high flow and turnover rates in Pool 3 are not likely to allow for significant stratification.

intake and tailrace during project operations and provide aeration<sup>30</sup> if monitoring indicates that DO concentrations fall below 5 mg/L for extended periods of time. However, BOST3 did not define its monitoring program in detail or explain what conditions would trigger the installation and operation of aeration systems. In the EA,<sup>31</sup> staff recommended that BOST3 provide a detailed monitoring program, including conditions that would trigger aeration. Article 402 requires the licensee to develop and file a water quality management plan that provides these details.

46. Construction activities, including dredging, excavating, and disposal of excavated material could disturb soils and river sediments and elevate turbidity levels in the water column and downstream of the project. In the EA,<sup>32</sup> staff recommended site-specific erosion and sediment control measures and monitoring turbidity levels during construction to ensure that control measures are meeting their objectives and permit the licensee to identify and take corrective actions as needed. Article 302 requires the licensee to develop and implement site-specific erosion and sediment control measures to minimize erosion. Article 402 requires the licensee to develop specific turbidity monitoring and reporting procedures.

47. In comments on the EA, Louisiana DWF recommended measures to avoid water quality degradation caused by project construction and operation in the Mississippi and Atchafalaya Rivers during the spawning season for pallid sturgeon, which typically extends from May through August. In the EA,<sup>33</sup> staff concluded that the effects of project construction and operation on water quality would be minor. Furthermore, as discussed above, this license includes measures to ensure water quality effects are minimized and localized (e.g., development and implementation of erosion and sediment control plan and water quality management plan). Consequently, water quality effects

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However, because water temperature and DO are directly related, and natural, seasonal-increases in water temperature can lead to DO concentrations that fall to levels below the 5-mg/L state standard, monitoring water temperature at the project would help to determine if any water temperature exceedances causing DO concentrations below 5 mg/L are the result of project operation.

<sup>30</sup> BOST3 proposes providing aeration by curtailing generation to increase spill or by installing and operating compressors to inject air into the turbine draft tube.

<sup>31</sup> See EA at 131.

<sup>32</sup> See EA at 31-32, 43, and 130-131.

<sup>33</sup> See EA at 42-45.

are not expected to extend 200 miles downstream to the Atchafalaya or Mississippi Rivers.<sup>34</sup> Therefore, additional protection measures are not required by this license.

### **C. Freshwater Mussel Relocation Plan**

48. BOST3 proposes to use cofferdams to isolate construction areas (e.g., powerhouse excavation area, appurtenant facilities) from the river and to pump water from behind the dam to permit excavation and construction. Constructing the cofferdam and dewatering the construction area could adversely affect freshwater mussels, if present. BOST3 did not conduct mussel surveys because reports indicated that mussel fauna in the main stem were generally lacking, and no entity recommended mussel protection measures during pre-filing consultation or in response to the Commission's Ready for Environmental Analysis notice.

49. However, native mussels were found in the vicinity of the proposed construction areas at the downstream Overton Lock and Dam Hydroelectric Project (Overton Project) No. 13160, suggesting that native mussels might also be found at the Red River No. 3 Project. In its comments on the EA, EPA recommended implementing a mussel relocation plan.

50. Native mussel populations are declining in the Red River<sup>35</sup>, and any construction-related adverse effects on native mussel populations would be minimized by surveying for mussels prior to constructing the cofferdam and relocating any native mussels found in the construction area to suitable habitat. Staff estimates that the annualized cost of implementing a mussel relocation plan would be \$1,900. The benefits of reducing project-related impacts to mussels justify this minor cost. Therefore, Article 403 requires the licensee to develop a freshwater mussel relocation plan.

### **D. Cofferdam Fish Salvage Plan**

51. Game fish that occur at the project, such as sunfish, catfish, and perch, could be trapped behind the cofferdam during construction.

52. BOST3 did not propose any measures to minimize these effects on fish and no entity recommended such measures during pre-filing consultation or in response to the Commission's Ready for Environmental Analysis notice. In comments on the EA, EPA recommended implementing a cofferdam fish salvage plan.

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<sup>34</sup> The Red River does not empty into the Mississippi River. Therefore, project construction and operation would not affect water quality in the Mississippi River.

<sup>35</sup> See EA at 50-52.

53. Although cofferdam construction would have an adverse effect on aquatic biota and habitat, these effects would be minor and short-term. Removing and returning fish safely to the river during the dewatering of the construction area would be a relatively simple task, would help prevent or minimize the mortality of any fish trapped within the cofferdam when it is dewatered at the start of construction, and would preserve larger juvenile and adult game fish sought by anglers. Staff estimates that the annualized cost of developing and implementing a cofferdam fish salvage plan would be \$1,900. The benefits of reducing project-related impacts to fish would justify the cost; therefore, Article 404 of this license requires BOST3 to develop a cofferdam fish salvage plan.

#### **E. Fish Passage and Entrainment**

54. In comments on the EA, EPA recommended that BOST3 develop and implement: (1) a plan to minimize the effects of turbine entrainment and mortality; and (2) a study on fish movement upstream and downstream of the project, including fish use of the powerhouse tailrace. In its comments on the EA, Louisiana DWF recommended monitoring and reporting the number and species of entrained fish, especially sensitive, threatened, or endangered species. Louisiana DWF and EPA also stated their concern with the cumulative effects of constructing and operating multiple hydroelectric projects on the Red River.

55. As discussed in the EA,<sup>36</sup> fish passage is currently possible through the lock system and under the Tainter gates when river levels are high and the head differential between the upstream and downstream pools is relatively low. The project will not operate under high flow conditions, and therefore will not alter lock operations or affect fish passage.

56. Diverting the river flow through the turbines has the potential to subject fish to entrainment-related injury and mortality. However, as discussed in the EA, fish mortality rates under existing conditions in which fish die after hitting baffle blocks in the spillway stilling basin are likely higher than what is expected through the project turbines. Several characteristics of the turbines (e.g., low head, large diameter, wide blade spacing, and a low rotational speed) indicate there will be a high rate of fish survival through the turbines and a low incidence of impingement.<sup>37</sup> Further, the rates of fish entrainment and mortality should result in little impact to the populations relative to the fecundities of the fish species present at the project, even when considering the cumulative mortality effects associated with the operation of the Red River No. 5, Red

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<sup>36</sup> See EA at 53-58.

<sup>37</sup> See EA at 55-56.

River No. 4, and Overton Projects.<sup>38</sup> Therefore, developing and implementing a plan to minimize the effects of turbine entrainment and mortality as well as monitoring and reporting the number and species of entrained fish is not warranted. Similarly, developing and implementing a study on upstream and downstream fish passage is not warranted. Consequently, the license does not require these measures.

57. Regarding EPA's recommended study of fish use of the powerhouse tailrace, there is no information in the record to suggest that such a study is warranted. Excavating the tailrace and passing water through the turbines will alter habitat conditions in the tailrace and will likely make some areas more favorable and other areas less favorable as habitat for certain fish species. However, such effects are expected to be minor and would not extend more than about 500 to 1,000 feet downstream.<sup>39</sup> Consequently, the license does not require this measure.

#### **F. Invasive Species and Aquatic Nuisance Species**

58. Invasive species can reduce fish and wildlife habitat quality and out-compete native species. BOST3 proposes to conduct invasive species surveys within 2 years of starting project operation and to develop a control plan for any invasive species identified within the project boundary. In an e-mail to BOST3 dated July 20, 2011, FWS recommended that invasive species within the proposed project areas be controlled (if necessary).<sup>40</sup>

59. BOST3's proposed timeframe for treating invasive plants could allow invasive species to become established before any treatment is applied, which could facilitate the spread of the species and complicate control.<sup>41</sup> Preventing the establishment of invasive species minimizes the need for subsequent control. Successfully preventing colonization of disturbed areas by invasive plants begins with using best management practices during construction to prevent their introduction and revegetating disturbed areas as quickly as practicable to prevent colonization. Even so, invasive species may become

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<sup>38</sup> The Red River Lock and Dam No. 4 (FERC Project No. 12757) and Red River Lock and Dam No. 5 (FERC Project No. 12758) are pending license applications before the Commission. The license for the Overton Project (FERC Project No. 13160) was issued April 2, 2014 (*Red River Hydro LLC*, 147 FERC ¶ 62,008).

<sup>39</sup> See EA at 53 and 56.

<sup>40</sup> See BOST3 filing of November 7, 2011, Appendix to Responses to Additional Information Request.

<sup>41</sup> See EA at 73 and 132.

established and need control to prevent spreading. Therefore, in the EA,<sup>42</sup> staff recommended that BOST3: (a) describe BMPs it would follow to prevent the spread of invasive plants during project construction; (b) revegetate the disturbed areas as soon as practicable; (c) monitor vegetation establishment until disturbed areas are successfully revegetated; (d) treat any invasive species within one year of revegetating disturbed sites; (e) establish criteria that defines when revegetation and control of invasive species is successful; (f) develop an implementation schedule; and (g) develop a reporting schedule for filing monitoring results with the Commission. Article 408 requires the licensee to to prepare a revegetation management plan that includes these provisions.

60. In comments on the EA, Louisiana DWF recommended monitoring for aquatic nuisance species in addition to invasive species. In comments on the EA, EPA recommended developing and implementing a plan to control the spread of zebra mussels at the project facilities and surrounding area.

61. Zebra mussels can affect submerged components and conduits of project facilities, including trash racks, raw water distribution systems, penstocks, turbine bearing cooling systems, diffuser plates, monitoring instrumentation, and drains and sumps. During project operation, water surface fluctuations could facilitate settlement of zebra mussels on these structures which could lead to colonization.

62. Although Zebra mussels have not been documented in the Red River near the project area, they have been reported in the lower Mississippi River Basin and in the Atchafalaya River Basin into which the Red River drains and barge traffic is exchanged. In addition, zebra mussels were found in the vicinity of the Corps' Lock and Dam No. 2 in 2010.<sup>43</sup>

63. Because zebra mussels likely are or will be present in the vicinity of the Lock and Dam No. 3 Project in the foreseeable future, developing and implementing a monitoring and control plan will minimize or prevent the spread of zebra mussels on project facilities. Staff estimates that the annualized cost of implementing the zebra mussel monitoring and control plan would be \$3,830, and concludes that the benefits of minimizing the spread of zebra mussels justify the cost. Article 406, therefore, requires the licensee to develop and implement a zebra mussel monitoring and control plan.

## **G. Wetland Protection**

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<sup>42</sup> See EA at 72-74.

<sup>43</sup> Zebra mussels located near the Corps' Lock and Dam No. 2 may have originated from barge traffic. Barges can facilitate the spread of zebra mussels, and barge traffic is exchanged among the Red, Mississippi, and Atchafalaya Rivers.

64. BOST3 identified 5.1 acres of palustrine emergent wetland within the proposed headrace channel that could be impacted by project development. Construction impacts could include dredging or filling within the wetland, which could affect wetland functions including water retention and wildlife habitat. However, the full extent of such impacts cannot be determined until BOST3 prepares the final project design and construction plan. To protect wetland resources from adverse effects during project construction, BOST3 proposes to consult with the Corps and develop a wetland mitigation plan following the completion of the construction plan. In the EA,<sup>44</sup> staff recommended BOST3 develop and implement a wetland mitigation plan. Article 407 requires the licensee to develop and implement a wetland mitigation plan in consultation with the Corps and the Louisiana DWF.

#### **H. Avian Protection**

65. The proposed above-ground 2,500-foot-long, 230-kV transmission line could pose a risk of electrocution or collision to bald eagles and other birds with broad wing spans. In the EA,<sup>45</sup> staff recommended that BOST3 develop and implement an avian protection plan with provisions to construct the project's transmission lines following APLIC guidelines to minimize these risks. Article 409 requires the licensee to develop and implement an avian protection plan including these provisions.

#### **I. Recreation Resources**

66. Because construction of the project will require the permanent use of lands occupied by the Corps' existing west bank recreation facilities, BOST3 proposes to relocate these facilities to Corps-owned land within 1,000 feet of their current location and upgrade them by increasing the number of sheltered picnic facilities from 10 to 15, installing a fish cleaning facility, and providing bank fishing access. Following construction, the Corps would operate and maintain the facilities. To minimize the effects of project construction on recreation, BOST3 proposes to limit the duration that the recreation facilities are closed. BOST3 also proposes to place signage in appropriate locations to inform the public of closures and direct them to other nearby recreation sites. In the EA,<sup>46</sup> staff recommended that BOST3 implement these measures and prepare a report in consultation with the Corps and the Red River Waterway Commission demonstrating that the recreation facilities were designed and constructed

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<sup>44</sup> See EA at 129.

<sup>45</sup> See EA at 132-133.

<sup>46</sup> See EA at 133-134.

in a manner that meets the Corps' standards for recreation facilities. Article 410 requires the licensee to develop a recreation facility relocation plan that includes these measures.

## **J. Cumulative Effects**

67. In comments on the EA, EPA recommended a more detailed cumulative effects analysis on fisheries and mussels, expressing concern that developing multiple hydroelectric projects on the Red River may have a cumulative effect on these resources. EPA indicates additional information is needed, but does not explain what information it desires. Louisiana DWF also commented on the potential cumulative impacts resulting from multiple hydroelectric projects on the Red River.

68. As discussed above and in the EA,<sup>47</sup> turbine-related injuries and mortality due to operation of the proposed project could contribute to mortality associated with the operation of the proposed Red River Lock and Dam No. 5, Red River Lock and Dam No. 4, and Overton Projects. However, staff analysis shows that the overall effects of turbine entrainment on the resident fish populations at each of these projects are expected to be minimal and would not rise to a significant level when considered together.<sup>48</sup>

69. Native freshwater mussels and their habitat in the Red River have been affected by river impoundment, the introduction of invasive species, and changes in water quality. If native mussels are present, project construction could contribute to cumulative effects on freshwater mussels by causing mortality and a minor loss of mussel habitat. Project operation may also result in lower DO levels which could reduce habitat quality for native mussels. However, this license includes measures to minimize potential adverse effects, including measures to control erosion (Article 302), to ensure adequate DO levels (Article 402), and to relocate mussels from the construction area if needed (Article 403). Consequently, no additional analysis is needed to support a licensing decision and a finding of no significant impact as recommended by EPA.

## **K. 404 Permitting Requirements**

70. In comments on the EA, EPA states that a 404 permit from the Corps will be required if project construction would result in a discharge of dredge or fill material into the Red River. EPA then states that the final EA should include a more detailed

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<sup>47</sup> See EA at 24, 45, and 53-58.

<sup>48</sup> See also final EA for the Overton Hydroelectric Project No. 13160 at 43-44, issued October 11, 2013.



evaluation of impacts to waters of the U.S., should discuss compliance with section 404 of the Clean Water Act, and should discuss any coordination with the Corps.

71. It is unclear why EPA is commenting on behalf of the Corps in this case; nevertheless, the EA states that project construction will require the excavation of about 1,042,287 cubic yards of river bed and of that, 273,600 cubic yards would be re-used as project-fill material. As discussed above, the EA describes and this license requires measures to minimize adverse effects of these activities on water quality and aquatic resources.<sup>49</sup> BOST3 is responsible for obtaining the necessary permits, including a section 404 permit from the appropriate agencies for project activities. However, BOST3 need not obtain a section 404 permit from the Corps prior to issuance of the license.

## **EXEMPTION OF THE FERC FORM 80 RECREATION REPORT**

72. The Licensed Hydropower Development Recreation Report (Form 80) collects recreation usage data on recreation facilities at projects through the term of their licenses. Because the Corps will continue to own and maintain the recreation facilities at the project and the project will have little or no potential for recreation once it is in operation, the licensee is exempt from filing the Form 80 during the term of its license (Article 411).

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

73. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA and use of a government dam. As noted, the Lock and Dam No. 3 Project will occupy 61.8 acres of federal land administered by the Corps. The Commission does not assess a land use charge for a licensee's use of federal lands adjoining or pertaining to federal dams or other structures.<sup>50</sup> Rather, it assesses the charge on the use of surplus water or water power from a government dam.<sup>51</sup>

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

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<sup>49</sup> See EA at 28-32.

<sup>50</sup> 18 C.F.R. § 11.2 (a) (2013).

<sup>51</sup> 18 C.F.R. § 11.3 (2013).

74. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. The Exhibit F drawings are being approved and Article 202 requires the filing of these drawings.

75. The Exhibit G drawings filed with the license application do not include a surveyor's stamp, lack at least three reference points on all drawings showing the project boundary, utilize a local coordinate system, and include unnecessary background aerial imagery. The licensee explains the use of the local coordinate system by stating that accurate survey information is unavailable and a tentative project boundary is being used. While the lack of accurate survey information influences the development of the project boundary, it does not preclude the use of common, widely available coordinate systems, such as latitude and longitude or state plane systems. The Exhibit G drawings filed with the license application also enclose recreation facilities which are, and will continue to be, owned and maintained by the Corps. Because these will not be project facilities, they need not be enclosed within the project boundary. Therefore, the Exhibit G drawings should be revised to include a surveyor's stamp and a minimum of three reference points on each drawing, remove the aerial imagery, use a commonly available coordinate system, and remove from the project boundary the lands underlying the Corps' relocated recreation facilities. Article 203 requires BOST3 to file revised Exhibit G drawings.

### **C. Amortization Reserve**

76. 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 204 requires the establishment of the account.

### **D. Headwater Benefits**

77. Some projects directly benefit from headwater improvements constructed by other licensees, the United States, or permittees. Article 205 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

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

78. The project will occupy 61.8 acres of land administered by the Corps and about 0.2 acre of land owned by the Central Louisiana Electric Company. The Exhibit G filed as part of the application identifies these lands. Standard Article 5 set forth in Form L-6 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 of license issuance (i.e. Central Louisiana Electric Company's land). In order to monitor compliance with

Article 5, Article 206 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 the 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.

#### **F. Project Financing**

79. To ensure that there are sufficient funds available for project construction, operation, and maintenance, Article 207 requires the licensee to file for Commission approval documentation of project financing for the construction, operation, and maintenance of the project at least 90 days before starting any construction associated with the project.

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

80. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 413 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

#### **H. Start of Construction**

81. 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.

82. Section 13 of the FPA requires the licensee to commence construction within two years from the issuance date of the license, which the deadline may be extended once, but for no longer than for two additional years.<sup>52</sup> Furthermore, the licensee must obtain all of the necessary approvals from the Corps and the Commission prior to the start of project construction.<sup>53</sup> Therefore, the burden is on the licensee to obtain these approvals

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<sup>52</sup> 16 U.S.C. § 806 (2012). Under section 13, failure to timely commence project construction will result in termination of the license.

<sup>53</sup> See, e.g., Article 207, documentation of project financing; Article 302, approval of contract plans and specifications; Article 309, Corps' approval of facility design and construction; Article 313, Corps' approval of project operation plan; and Article 315, Corps' written approval of construction plans.

and commence construction within the time frames required under section 13 and as specified in this license. The licensee is expected to work diligently with the Corps and other relevant entities to secure the necessary approvals to allow it to timely commence project construction and pursue it to completion.

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

83. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer with final contract drawings and specifications, a supporting design report consistent with the Commission's engineering guidelines, a quality control and inspection program, a temporary emergency action plan, and a soil erosion and sediment control plan.

84. Article 303 requires the licensee to provide the Commission's D2SI-Atlanta Regional Engineer with approved cofferdam and deep excavation construction drawings.

85. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 304 provides for the filing of these drawings.

86. To demonstrate awareness of the roles and responsibilities of project licensees and their staff for the safety of the project, Article 305 requires the licensee to submit a Project Owner's Dam Safety Program to the Commission's D2SI-Atlanta Regional Engineer.

87. Article 306 requires the licensee to submit a Public Safety Plan for the project to the Commission's D2SI-Atlanta Regional Engineer.

88. Article 307 requires the licensee to notify and coordinate with the Commission's D2SI-Atlanta Regional Engineer on any proposed modifications to the water retaining and/or conveyance features of the project resulting from the environmental requirements of the license to ensure that these modifications do not adversely affect the project works, dam safety, or project operation.

89. Article 308 requires the licensee to provide the Commission's D2SI-Atlanta Regional Engineer with an independent consultant inspection report.

### **J. Conditions for Project at Corps Dams**

90. Pursuant to a 2011 Memorandum of Understanding between the Commission and the Department of the Army,<sup>54</sup> seven special articles are included in licenses for

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<sup>54</sup> Memorandum of Understanding between the United States Army Corps of  
(continued)

hydroelectric projects to be developed at Corps facilities. The articles are incorporated in this license as Articles 309 through 315.

## **STATE AND FEDERAL COMPREHENSIVE PLANS**

91. Section 10(a)(2)(A) of the FPA,<sup>55</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>56</sup> Under section 10(a)(2)(A), federal and state agencies filed nine comprehensive plans that address various resources in Louisiana. Of these, staff identified and reviewed three comprehensive plans relevant to this project.<sup>57</sup> No conflicts were found.

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

92. Staff reviewed BOST3's preliminary plans to build the project as described in the license application. The project will be safe when constructed, operated, and maintained in accordance with the Commission's standards and provisions of this license.

## **NEED FOR POWER**

93. To assess the need for power, staff looked at the needs in the operating region in which the project is located. Project power will be used to meet regional electrical demand. The project will be located in the Southwest Power Pool (SPP) region of the North American Electric Reliability Corporation (NERC). According to NERC, total internal demand is projected to increase at an average rate of 1 percent a year over the 10-year planning period from 2013–2022. 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**

94. In determining whether to issue a license for a hydroelectric project, the Commission considers a number of public interest factors, including the economic

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Engineers and the Federal Energy Regulatory Commission on Non-federal Hydropower Projects, March 2011. <http://www.ferc.gov/legal/mou/mou-usace.pdf>.

<sup>55</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

<sup>56</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2013).

<sup>57</sup> The list of applicable comprehensive plans can be found in section 5.5 of the EA at 135.

benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>58</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.

95. In applying this analysis to the Lock and Dam No. 3 Project, we have considered three options: no action, BOST3's proposal, and the project as licensed herein. Under the no action alternative, the project would not be built. As proposed by BOST3, the levelized annual cost of constructing and operating the Lock and Dam No. 3 Project is \$14,133,677, or \$81.8/megawatt-hour (MWh). The proposed project would generate an average of 172,779 MWh of energy annually. When the estimate of average generation is multiplied by the alternative power cost of \$41.29/MWh,<sup>59</sup> the total estimated value of the project's power is \$7,134,044 in 2013 dollars. To determine whether the proposed project is currently economically beneficial, the project's cost is subtracted from the value of the project's power.<sup>60</sup> Therefore, in the first year of operation, the project would cost \$6,999,633, or \$40.51/MWh, more than the likely alternative cost of power.

96. As licensed herein with staff measures, the levelized annual cost of operating the project would be about \$14,142,912, or \$81.86/MWh. Based on the same amount of estimated average generation of 172,779 MWh as proposed, the project would produce power valued at \$7,134,044 when multiplied by the \$41.29/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$7,008,868, or \$40.57/MWh, more than the likely cost of alternative power.

97. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system

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<sup>58</sup> 72 FERC ¶ 61,027 (1995).

<sup>59</sup> The alternative power cost of \$41.29/MWh includes the value of dependable capacity and energy and is based on information obtained from U.S. Energy Information Administration fuel cost data for 2013.

<sup>60</sup> Staff's economic analysis for the project has been modified since the issuance of the EA on June 28, 2013, to include the Zebra Mussel Control Plan (Article 406), the Cofferdam Fish Salvage Plan (Article 404), and the Freshwater Mussel Relocation Plan (Article 403) recommended by EPA, as well as BOST3's increased capital costs (\$6,437,000) associated with its modifications to its proposed transmission facilities.

(ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid changes in system load; and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back online.

98. 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 applicant who must decide whether to accept this license and any financial risk that entails.

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

## **COMPREHENSIVE DEVELOPMENT**

100. Sections 4(e) and 10(a)(1) of the FPA<sup>61</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.

101. The EA for the project contains background information, analysis of effects, and support for related license articles. Based on the record of this proceeding, including the EA and the comments thereon, licensing the Red River Lock and Dam No. 3 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.

102. Based on an independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the proposed Red River Lock and Dam No. 3 Project, with the

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<sup>61</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

staff-recommended measures, is selected and found to be best adapted to a comprehensive plan for improving or developing the Red River.

103. This alternative is selected because: (1) issuing an original license will serve to provide a beneficial and dependable source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 36.2 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

### LICENSE TERM

104. Section 6 of the FPA,<sup>62</sup> provides that original licenses for hydropower projects shall be issued for a period not to exceed 50 years. It is Commission policy to issue a 50-year license for a project located at a federal dam.<sup>63</sup> Accordingly, this license is issued for a term of 50 years.

#### The Director orders:

(A) This license is issued to BOST3 Hydroelectric LLC (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Red River Lock and Dam No. 3 Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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

(2) Project works consisting of: (1) a 635-foot-long excavated headrace channel to convey water from the upstream Pool No. 3 of the Red River into the powerhouse; (2) a 301-foot-long by 90-foot-wide concrete powerhouse located on the west abutment of the Corps' Lock and Dam No. 3; (3) a 36.2-MW horizontal Kaplan bulb turbine/generator unit; (4) an 820-foot-long excavated tailrace channel to discharge water from the powerhouse to the downstream Pool No. 2 of the Corps' Lock and Dam No. 2; (5) a 1,050-foot-long 230-kilovolt (kV) transmission line extending from the powerhouse to a 340-foot-long by 220-foot-wide switching station, and a 1,500-foot-

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<sup>62</sup> 16 U.S.C. § 799 (2012).

<sup>63</sup> See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).



long, 230-kV overhead transmission line connecting the switching station to Central Louisiana Electric Company's existing 230-kV transmission line; (6) a 1,000-foot-long gravel access road from the powerhouse to the switching station, 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: The following sections of Exhibit A filed on November 20, 2013:

Section (1), pages A-2 and A-3, describing the "Proposed Powerhouse", "Headrace Channel", "Tailrace Channel"; and the mechanical, electrical, and transmission equipment.

Exhibit F: The following Exhibit F drawings filed on January 20, 2011, and April 13, 2012.

<u>Exhibit F Drawing</u>	<u>FERC No. 12756-</u>	<u>Description</u>
Sheet F-1	1	Site Plan
Sheet F-1A	2	Aerial Site Plan
Sheet F-2	3	Powerhouse Section Through Bulb Turbine
Sheet F-3	4	Powerhouse Roof Level Elevation 118.9
Sheet F-4	5	Powerhouse Operating Floor Level Elevation 72.2
Sheet F-5	6	Powerhouse Turbine- Generator Level Elevation 1.6
Sheet F-6	7	Headrace Channel Plan
Sheet F-7	8	Headrace Riverside Channel Training Wall
Sheet F-8	9	Headrace Landside Channel Training Wall
Sheet F-9	10	Headrace Landside Retaining Wall
Sheet F-10	11	Tailrace Channel Plan

<u>Exhibit F Drawing</u>	<u>FERC No. 12756-</u>	<u>Description</u>
Sheet F-11	12	Tailrace Riverside Channel Training Wall
Sheet F-12	13	Tailrace Landside Channel Training Wall
Sheet F-13	14	Tailrace Landside Retaining Wall
Sheet F-15	16	Cofferdam & Seepage Cutoff Wall

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

(C) Exhibits A and F described above are approved and made part of the license. The Exhibit G drawing filed as part of the application for license does not conform to Commission regulations and is not approved.

(D) This license is also subject to the articles set forth in Form L-6 (Oct. 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters and Lands of the United States" (*See 54 F.P.C. 1792 et seq.*), as reproduced at the end of this order, and the following additional articles:

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

(a) effective as of the date of commencement of project construction, to reimburse the United States for the cost of administration of Part 1 of the Federal Power Act. The authorized installed capacity for that purpose is 36.2 megawatts.

(b) to recompense the United States for the use of a government dam.

Article 202. Exhibit F Drawings. Within 45 days of the date of issuance of the license, the licensee shall remove the background aerial imagery and file the approved exhibit drawings 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-12756-

##### through P-12756-#####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards 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 (D2SI)-Atlanta Regional Engineer.

(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 D2SI-Atlanta Regional Engineer. Exhibit F drawings must be identified as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113(c) (2013). 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-12756-#####, F-1, Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file  
 FILE TYPE – Tagged Image File Format (TIFF), CCITT Group4  
 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 G Drawings. Within 90 days of the date of issuance of the license, the licensee shall file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary only the principal project works necessary for operation and maintenance of the project. The Exhibit G drawings must include a surveyor's stamp and at least three reference points on each drawing, remove the aerial imagery, use a commonly available coordinate system, and remove the lands underlying the U.S. Army Corps of Engineers' relocated recreation facilities. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission's regulations.

Article 204. Amortization Reserve. Pursuant to section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus

earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

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

Article 205. Headwater Benefits. If the licensee's project is directly benefited by the construction work of another licensee, a permittee, or of the United States on 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.

Article 206. 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 207. Documentation of Project Financing. At least 90 days before starting construction, the licensee shall file with the Commission, for approval, the licensee's documentation for the project financing. The documentation must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The documentation 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 commence project construction associated with the project before the filing is approved.

Article 301. *Start of Construction.* The licensee shall commence construction of the project works within 2 years from the issuance date of the license and shall complete construction of the project within 5 years from the issuance date of the license.

Article 302. *Contract Plans and Specifications.* At least 60 days prior to the start of any construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal to the D2SI-Atlanta Regional Engineer 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-Atlanta Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 303. *Cofferdam and Deep Excavation Construction Drawings.* Should construction require cofferdams or deep excavations, the licensee shall: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdams and deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta 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 and deep excavation construction drawings and specifications and the letters of approval.

Article 304. *As-built Drawings.* Within 90 days of completion of construction of the facilities 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. The Exhibit F and G drawings must be free of aerial imagery in the background. A courtesy copy shall be filed with the Commission's Division of Dam Safety and

Inspections (D2SI)-Atlanta Regional Engineer, the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 305. *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)-Atlanta Regional Engineer, a Project Owner's Dam Safety Program which, at a minimum, shall demonstrate 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. For guidance on preparing a Project Owner's Safety Program, the licensee should reference the information posted on the FERC website.

Article 306. *Public Safety Plan.* Within 60 days from the issuance date of this order, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI) of a Public Safety Plan. The plan shall include an evaluation of public safety concerns at the project site, including designated recreation areas, and assess the need for the installation of safety devices or other safety measures. The submitted plan shall include a description of all public safety devices and signage as well as a map showing the location of all public safety measures. For guidance on preparing public safety plans the licensee can review the *Guidelines for Public Safety at Hydropower Projects* on the FERC website.

Article 307. *Project Modification Resulting From Environmental Requirements.* Any permanent or temporary modification which may affect the project works or operations shall be coordinated with the Commission's Division Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer at the beginning of the planning and design phase. This includes those modifications resulting from license environmental requirements. The schedule is to allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 308. *Inspection by Independent Consultant.* In accordance with Part 12, Safety of Water Power Projects and Project Works, of the Commission's Regulations, the initial independent consultant's inspection must be completed and the report on it filed no later than five years from the date of first commercial operation.

Article 309. *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 U.S. Army Corps of Engineers' (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-Atlanta 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 Commission staff to revise the schedule accordingly.

Article 310. Review of Contractor Designs. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations, other than those approved according to Article 309, prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file with the Director, Division of Dam Safety and Inspections with a copy to the Commission's Regional Engineer, and U.S. Army Corps of Engineers, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 311. Agreement with Corps. The licensee shall within 90 days from the issuance date of the license, enter into an agreement with the U.S. Army Corps of Engineers (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, and 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 312. Periodic and Continuous Inspections by the Corps. The construction, operation and maintenance of the project works that in the judgment of the U.S. Army Corps of Engineers (Corps) may affect the structural integrity or operation of the Corps project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation, and maintenance deficiencies or difficulties detected by the Corps inspection shall be immediately reported to the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer. Upon review, the D2SI-Atlanta 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 immediately shall inform the D2SI-Atlanta 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-Atlanta Regional Engineer that the problem or situation has been resolved.

Article 313. *Regulating (or Operating) Plan.* The licensee shall, at least 60 days prior to start of construction, submit for approval a Regulating (or Operating) Plan to the U.S. Army Corps of Engineers (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. The Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta 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 shall be referred to the Director, Office of Energy Projects (OEP) for resolution. Copies of the Regulating (or Operating) Plan and signed MOA between the Corps and the licensee and any revision thereof shall be furnished to the Director, OEP and the D2SI-Atlanta Regional Engineer.

Article 314. *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 U.S. Army Corps of Engineers project.

Article 315. *Corps' Written Approval.* The licensee shall provide the Commission's Division of Dam Safety and Inspections (D2SI)-Atlanta Regional Engineer two copies of all correspondence between the licensee and the U.S. Army Corps of Engineers (Corps). The D2SI-Atlanta Regional Engineer shall not authorize construction of any project work until the Corps' written approval of construction plans and specifications has been received by the D2SI-Atlanta Regional Engineer.

Article 401. *Run-of-Release Operation.* The licensee shall operate the project in a run-of-release mode, meaning the licensee must not deviate from the flow constraints, including flow releases, established by the U.S. Army Corps of Engineers (Corps) according to Article 313, *Regulating (or Operating) Plan.*



Run-of-release operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, the Corps, Louisiana Department of Wildlife and Fisheries, and the U.S. Fish and Wildlife Service, or as directed by the Corps to accommodate the authorized purpose for the Corps' facilities. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. *Water Quality Management Plan.* Within six months of license issuance, or at least 90 days prior to commencing land-disturbing activities, whichever comes first, the licensee shall file with the Commission for approval, a Water Quality Management Plan to monitor turbidity during construction and dissolved oxygen (DO) during generation. The licensee shall maintain turbidity levels at or below 150 nephelometric turbidity units (NTU) during project construction in the Red River, and dissolved oxygen (DO) levels at or above 5 milligrams per liter (mg/L) as measured immediately downstream of the project's tailrace during periods of generation. If turbidity levels during construction should rise above 150 NTU due to project-related construction activities, the licensee shall take immediate action to correct the problem.

In addition, the plan shall include but not necessarily be limited to, the following: (1) turbidity and DO monitoring methods, including sampling equipment, sampling locations, and data recording procedures; (2) DO concentration and duration criteria triggering the installation and operation of aeration compressors to maintain DO concentrations at or above 5 mg/L during generation; (3) monitoring methods to verify DO concentrations after the installation of the aeration system is complete; (4) frequency and duration of turbidity and DO monitoring; and (5) a schedule for filing an annual report with the monitoring results and corrective action taken on or before November 1 of each year monitoring takes place to the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Louisiana Department of Environmental Quality, the Louisiana Department of Wildlife and Fisheries, and the Commission.

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

Article 403. *Freshwater Mussel Relocation Plan.* Within six months of license issuance, or at least 180 days prior to commencing construction of the cofferdam, whichever comes first, the licensee shall file with the Commission for approval, a Freshwater Mussel Relocation Plan to minimize adverse effects to mussels.

The plan shall include, but not necessarily be limited to, the following: (1) a provision for a qualified malacologist experienced with the fauna of the region and a field

biologist to perform collection and relocation of mussels prior to the start of in-water construction activities, if they occur; (2) procedures to relocate any affected mussels to suitable habitat prior to beginning cofferdam construction and dewatering the work area; (3) a description of survey procedures (i.e., survey methods, sampling equipment, sampling locations, and data recording procedures) for locating any mussel beds in the area affected by cofferdam construction and dewatering as well as suitable habitat outside the construction footprint to which mussels can be relocated, if they occur; (4) a provision for recording the location, numbers (relative abundance), and species of mussels collected, and the locations of any relocated mussels; (6) a provision for filing mussel survey reports by March 31 following each year that surveying occurs with the Commission, U.S. Army Corps of Engineers (Corps), Louisiana Department of Wildlife and Fisheries (Louisiana DWF), and U.S. Fish and Wildlife Service (FWS) upon conducting any mussel survey; (7) identification of the personnel that would conduct the mussels surveys and the qualifications of those individuals; and (8) an implementation schedule.

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

The Commission reserves the right to require changes to the plan. Project construction shall not begin until the licensee is notified by the Commission that the Freshwater Mussel Relocation Plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 404. Cofferdam Fish Salvage Plan. At least 90 days prior to the start of project construction of the cofferdams or dewatering of any areas, the licensee shall file, with the Commission for approval, a cofferdam fish salvage plan to be implemented during construction activities. Cofferdam construction or dewatering of areas shall not begin until the plan is filed with the Commission.

The plan shall include, but not be limited to, the following: (1) procedures for protecting and salvaging any entrapped fishes while pumping; (2) procedures for removing any fishes prior to draining the area enclosed by the cofferdam, and returning these fishes safely to the river; and (3) a provision to report any stranded fish and actions taken to the resource agencies and the Commission.

The licensee shall prepare the plan after consultation with the U.S. Army Corps of

Engineers, Louisiana Department of Wildlife and Fisheries, and the U.S. Fish and Wildlife Service. 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. Project construction shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 405. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 406. *Zebra Mussel Monitoring and Control Plan.* Within six months of license issuance, or at least 90 days prior to the start of any ground-disturbing activities, whichever comes first, the licensee shall file with the Commission for approval, a Zebra Mussel Monitoring and Control Plan.

The plan shall include, but not be limited to, the following: (1) a description of practices to be followed to minimize the spread of zebra mussels; (2) a procedure and schedule for monitoring for the establishment of zebra mussels during project operation; and (3) methods that will be used to control zebra mussels if found on project structures. The licensee shall submit reports to the Louisiana Department of Wildlife and Fisheries (Louisiana DWF), the U.S. Army Corps of Engineers (Corps), and the Commission by March 31 following each year that monitoring occurs that include (1) a record of zebra mussel observations at the project and control methods used during the prior year, (2) documentation of consultation, and copies of any comments and recommendations made by the Louisiana DWF and the Corps, and (3) specific descriptions of how these agencies' comments are accommodated by the annual report.

The licensee shall prepare the plan after consultation with the Corps and Louisiana DFW. 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. Project construction shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

In-water construction activities shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 407. Wetland Mitigation Plan. Within six months of license issuance or at least 90 days prior to the start of any ground-disturbing activities, whichever comes first, the licensee shall file with the Commission, for approval, a wetland mitigation plan to mitigate the effects of project construction on wetlands. The plan shall include: (1) conceptual design drawings showing the location of the headrace channel and affected wetlands, including proposed clearing and fill areas; (2) the total acreage of affected wetlands; (3) a description of the measures to mitigate effects on wetlands; and (4) an implementation schedule.

The plan shall be prepared after consultation with the U. S. Army Corps of Engineers and the Louisiana Department of Wildlife and Fisheries. 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 entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific information.

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

Article 408. Revegetation Management Plan. Within six months of license issuance or at least 90 days prior to land-disturbing activities, whichever comes first, the licensee shall file with the Commission for approval, a Revegetation Management Plan to establish vegetation in disturbed areas and prevent the spread and establishment of invasive plants. The plan shall include, but not be limited to, the following: (1) a description of best management practices to be followed to prevent the spread of invasive plants during project construction; (2) methods and a schedule for revegetating disturbed areas; (3) procedures and a schedule for controlling invasive species that may become

established in revegetated areas, with such treatment occurring not later than one year after revegetating the disturbed sites; (4) a monitoring program to evaluate the success of revegetation and invasive plant control efforts, including criteria that defines when revegetation and control of invasive species is successful; and (5) a reporting schedule for filing monitoring results with the Commission.

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

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

Article 409. *Avian Protection Plan.* The licensee shall construct and maintain the project transmission line in accordance with Avian Power Line Interaction Committee (APLIC) guidelines provided in the *Avian Power Line Interaction Committee's (APLIC) Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 and Reducing Avian Collisions with Power Lines: The State of the Art in 2012*,

Article 410. *Recreation Facility Relocation Plan.* Within one year of license issuance, the licensee shall file, with the Commission for approval, a recreation facility relocation plan to relocate the U.S. Army Corp of Engineers' (Corps) existing Red River Lock and Dam No. 3 west bank recreation site to an area owned by the Corps within 1,000 feet of its current location, and to add five picnic tables, a fish cleaning station, and an improved bank fishing access to the Corp's facilities.

The plan shall include, but not be limited to, a construction schedule, signage informing the public of the site closure and directing them to alternative recreation sites during construction, and detailed drawings specifying the type and location of the new recreation facilities. The plan shall also include a provision for post-construction reporting to verify the facility has been installed according to the Corps' specifications

The licensee shall prepare the plan after consultation with the Corps and the Red River Waterway Commission. 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 above entities, and specific descriptions of how the

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

The Commission reserves the right to require changes to the plan based on information contained in the plan and any other available information. No construction shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. FERC Form 80 Exemption. Upon the effective date of the license, the licensee is exempt from 18 C.F.R. § 8.11, the filing of the Licensed Hydropower Development Recreation Report (Form 80), for the Red River Lock and Dam No. 3 Hydroelectric Project.

Article 412. Protection of Undiscovered Cultural Resources. If the licensee discovers previously unidentified cultural resources during the course of constructing, maintaining, or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the resources and consult with the Louisiana State Historic Preservation Office (Louisiana SHPO), the U.S. Army Corps of Engineers (Corps), the Coshatta Tribe of Louisiana, and the Caddo Nation to determine the need for any cultural resource studies or measures. If no studies or measures are needed, the licensee shall file with the Commission documentation of its consultation with the Louisiana SHPO, the Corps, the Coshatta Tribe of Louisiana, and the Caddo Nation immediately.

If a discovered cultural resource is determined to be eligible for the National Register of Historic Places (National Register), the licensee shall file for Commission approval a historic properties management plan (HPMP) prepared by a qualified cultural resource specialist after consultation with the Louisiana SHPO, the Corps, the Coshatta Tribe of Louisiana, and the Caddo Nation. In developing the HPMP, the licensee shall use the Advisory Council on Historic Preservation and the Federal Energy Regulatory Commission's *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects*, dated May 20, 2002. The HPMP shall include the following items: (1) a description of each discovered property, indicating whether it is listed in or eligible to be listed in the National Register; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating adverse effects; (4) documentation of consultation; and (5) a schedule for implementing mitigation and conducting additional studies. The Commission reserves the right to require changes to the HPMP.

The licensee shall not resume land-clearing or land-disturbing activities in the vicinity of a cultural resource discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 413. 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 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 conveyed.

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



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

(1) Before conveying the interest, the licensee 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, 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.

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

(F) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2013). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright  
Director  
Office of Energy Projects

**Form L-6**

(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION****TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED  
MAJOR PROJECT AFFECTING NAVIGABLE WATERS  
AND LANDS OF THE UNITED STATES**

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

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

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

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting

forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

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

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

thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

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

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

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

**Article 9.** The Licensee shall, after notice and opportunity for hearing, install

additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

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

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

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

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

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

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

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

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

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

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

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

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

**Article 21.** 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.** Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

**Article 27.** The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing

fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

**Article 28.** The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

**Article 29.** The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

**Article 30.** The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

**Article 31.** In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

**Article 32.** The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its

jurisdiction.

**Article 33.** The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

**Article 34.** The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

**Article 35.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 36.** 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 37.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

Document Content(s)

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