

155 FERC ¶ 62,076  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Tygart LLC

Project No. 12613-004

ORDER ISSUING ORIGINAL MAJOR LICENSE

(Issued April 29, 2016)

**INTRODUCTION**

1. On April 30, 2013, Tygart LLC (Tygart) filed, pursuant to Part I of the Federal Power Act (FPA),<sup>1</sup> an application for a license to construct, operate, and maintain the Tygart Hydroelectric Project No. 12613 (Tygart Project or project). The proposed 30-megawatt (MW) project will be located at the U.S. Army Corps of Engineers' (Corps) Tygart Dam on the Tygart River in the community of Grafton in Taylor County, West Virginia. The project will occupy approximately one acre of federal land administered by the Corps.<sup>2</sup>
2. As discussed below, this order issues an original license for the Tygart Project.

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

<sup>2</sup> The project would be located at the Corps' existing Tygart Dam and would occupy lands of the United States. Therefore, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2012), requires that the project be licensed. In addition, the Tygart Project will be located on the Tygart River, a tributary of the Monongahela River, a navigable waterway of the United States. *See Noah Corporation*, 48 FERC ¶ 61,366 (1989) (stating that the Monongahela River is a navigable waterway of the United States). Tributaries of navigable waterways are Commerce Clause streams within the meaning of section 23(b)(1) of the FPA. *See F.P.C. v. Union Electric Co.*, 381 U.S. 90, 94-96 (1965). Since the project is located on a stream over which Congress has jurisdiction under the Commerce Clause, affects interstate commerce through its connection to an interstate power grid, and was constructed after 1935, it is required to be licensed by the Commission pursuant to section 23(b)(1) of the FPA. *See* 16 U.S.C. § 817(1) (2012).

## BACKGROUND

3. On August 14, 2013, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing; indicating that the application was ready for environmental analysis; and setting October 13, 2013, as the deadline for filing motions to intervene and protests, comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions. The City of Grafton, West Virginia; the West Virginia Division of Natural Resources (West Virginia DNR); the U.S. Department of the Interior (Interior); and the Corps filed comments and recommendations in response to the notice. The West Virginia DNR and landowners Kenneth Wayne Parker and Diane C. Parker filed timely motions to intervene.<sup>3</sup>

4. An Environmental Assessment (EA) was prepared by Commission staff and issued on February 10, 2014, analyzing the impacts of the proposed project and alternatives to it. The Corps and the West Virginia DNR filed comments on the EA on March 14, 2014, and February 28, 2014, respectively.

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

## PROJECT DESCRIPTION

### A. Existing Corps Facilities

6. The Tygart Project will use the existing Tygart Dam, which is owned and operated by the Corps and is not part of the licensed project. The dam consists of a 230-foot-high by 1,921-foot-long concrete gravity structure with a 489-foot-long ogee-type uncontrolled spillway in the central portion of the structure. At the spillway crest elevation of the dam of 1,166.45 feet North American Vertical Datum 1988 (NAVD88), the dam's impoundment, known as Tygart Lake, extends 13.1 miles upriver, covers 3,430 acres, and has a total storage capacity of 289,600 acre-feet. At the minimum pool elevation of 1,009.45 feet, the impoundment has a surface area of 620 acres and a net capacity of approximately 11,200 acre-feet. The spillway section is equipped with ten sluices that are used to regulate discharge from the dam, eight of which are controlled by slide gates, and two of which are controlled by ring-jet valves.

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<sup>3</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2015).

## **B. Current Corps Operation**

7. Tygart Dam was originally authorized for navigation (low-flow augmentation) and subsequent legislation added flood control, water supply, water quality, fish and wildlife, and recreation as project purposes.<sup>4</sup> The dam is currently operated in a modified run-of-river mode to augment flows downstream of the dam during dry periods to improve water quality and recreational uses. The Corps maintains the impoundment at a pool elevation of 1,093.5 feet NAVD88 from May through September. The impoundment is drawn down during October and November in order to maintain an elevation of 1,029.5 to 1,039.5 feet NAVD88 from mid-November through March. Spring fill occurs during March and April. During the summer, the Corps releases water from the dam based on operational criteria that attempt to maximize recreational use while minimizing effects on downstream water temperature and dissolved oxygen levels.

## **C. Proposed Project Facilities**

8. The project will be constructed adjacent to and utilize the head created by Tygart Dam. It will include the following facilities: (1) a new 15-foot-wide by 21-foot-high steel intake structure fitted with a trashrack and closure system to be installed on the upstream end of the existing power supply conduit;<sup>5</sup> (2) a new 14.5-foot-diameter, 270-foot-long steel penstock that will pass through the existing power conduit, and then bifurcate into two penstocks (one 14.5 feet in diameter and 110 feet long, the other 10.5 feet in diameter and 150 feet long); (3) a new 121-foot-long by 99-foot-wide concrete powerhouse containing two vertical Francis-type turbine-generator units with a combined capacity of 30 megawatts; (4) a new excavated 60-foot-wide by 160-foot-long tailrace extending from the powerhouse to the river immediately downstream of the existing stilling basin; (5) a new 1.55-mile-long, 138-kilovolt (kV) transmission line; and (6) two new switchyards. The average annual generation of the proposed project is estimated to be 108,600 megawatt-hours (MWh).

## **D. Proposed Project Operation**

9. The project will operate in a run-of-release mode using flows made available by the Corps. The project will operate when flows made available to it by the Corps are between 250 cubic feet per second (cfs) (the minimum hydraulic capacity of the project) and 3,000 cfs (the maximum hydraulic capacity of the project). After passing through the powerhouse, project flows will discharge directly into the Tygart River immediately

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<sup>4</sup> See October 11, 2013 Corps' comments.

<sup>5</sup> The conduit was built in the original construction of the dam to accommodate the possibility of future hydroelectric generation and currently remains plugged.

below the Corps' stilling basin. Project operation will be automatically controlled from a remote facility.

### **E. Project Boundary**

10. The proposed project boundary encloses the project intake structure, penstocks, powerhouse, tailrace, switchyards, and the transmission line. The proposed intake structure and proposed powerhouse area would be accessed using an existing service road. The project boundary encloses about one acre of land owned and managed by the Corps, and approximately seven acres of privately owned land, including land needed for the transmission line right-of-way.

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

11. To alleviate potential impacts associated with soil contamination, Tygart proposes to implement construction and post-construction soil erosion and sedimentation control plans.

12. To insure that entrainment and impingement are minimized, Tygart proposes to install trashracks with 2-inch spacing on the intake and to maintain an intake velocity of 2 feet per second or less.

13. To monitor potential project effects on the local fishery, Tygart proposes to survey the reservoir and tailwater fish populations prior to project construction and during the second and seventh year of operation.

14. To monitor dissolved oxygen (DO) and total dissolved gasses (TDG), Tygart proposes to install a water quality gage downstream of the project.

15. To maintain state water quality standards, Tygart proposes to install a forebay oxygen diffuser system, if needed, to meet the state's DO requirement of 6.0 milligrams per liter (mg/l).

16. To maintain water quality and aquatic habitat, Tygart proposes to make requests to the Corps to release a minimum flow of 100-cfs into the stilling basin.

17. To protect bald eagle habitat, Tygart proposes to implement the U.S. Fish and Wildlife Service's (FWS) National Bald Eagle Management Guidelines dated May 2007.<sup>6</sup>

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<sup>6</sup> See FWS' National Bald Eagle Management Guidelines, May 2007  
<https://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf>

18. To protect wildlife habitat, Tygart proposes to limit construction activities to previously disturbed areas, and attempt to avoid potential wildlife habitat when siting the transmission line corridor.
19. To minimize impacts to terrestrial habitat, Tygart proposes to implement best management practices for minimizing the spread of invasive plants.
20. To enhance recreation opportunities at the project, Tygart proposes to develop a recreation plan that includes measures designed to support angling in the project tailrace.<sup>7</sup>

## **SUMMARY OF LICENSE REQUIREMENTS**

21. As summarized below, this license, which authorizes the installation of 30 MW of new, renewable energy generation capacity, requires most of Tygart's proposed environmental measures and the additional mandatory and staff-recommended measures described below.
22. To protect and enhance aquatic resources, water quality, and recreation opportunities, the license includes the West Virginia Department of Environmental Protection's (West Virginia DEP) section 401 water quality certification conditions for aquatic resources, water quality, and recreation, which are described in the next section.
23. To monitor water quality, the license requires Tygart to develop a water quality monitoring plan that includes continuous monitoring of DO and water temperature at the project intake and at a location downstream of the project for 24 months after the project begins operation.
24. To clarify Tygart's responsibilities for operation of the project relative to the Corps' operation of Tygart Dam, the license requires an operation compliance monitoring plan.
25. To improve Tygart's proposed fish monitoring plan, the license requires Tygart to omit the survey during the seventh year of operation and include an additional survey based on the results of the initial surveys conducted before construction and during the second year of operation.
26. To minimize construction- and operation-related impacts to bald eagles, osprey, and other raptors, the license requires Tygart to develop an avian protection plan that incorporates the National Bald Eagle Management Guidelines and the Avian Power Line Interaction Committee guidelines.

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<sup>7</sup> See November 26, 2013 letter from Tygart responding to comments on the final license application.

27. To reduce the introduction and spread of noxious weeds due to project construction and operation, the license requires Tygart to develop an invasive plant management plan.
28. To mitigate for project effects at the Tygart Dam tailrace, the license requires Tygart to improve parking, install trash receptacles, and provide restrooms at the informal tailrace access area located on the west side of the Tygart River provided that Tygart is able to obtain sufficient rights to construct and maintain these amenities.
29. To protect any cultural resources that may be discovered during construction or operation of the project, the license requires Tygart to immediately stop construction or any land-clearing activity and immediately consult the West Virginia State Historic Preservation Office (West Virginia SHPO) for further guidance.

### **WATER QUALITY CERTIFICATION**

30. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>8</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>9</sup>

31. In a letter dated October 3, 2013, Tygart applied to the West Virginia DEP for a section 401 water quality certification (certification) for the Tygart Project.<sup>10</sup> The West Virginia DEP received this request on October 4, 2013. On July 7, 2014, the West Virginia DEP filed a letter requesting additional information from Tygart on the proposed recreational facilities. On October 1, 2014, Tygart simultaneously withdrew its application and submitted a new application that was received by the West Virginia DEP the same day.<sup>11</sup> West Virginia DEP timely issued the certification for the project on October 1, 2015. The certification includes 12 conditions that are set forth in Appendix A of this order and incorporated into the license by Ordering Paragraph (D). Article 401

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<sup>8</sup> 33 U.S.C § 1341(a)(1) (2012).

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

<sup>10</sup> On behalf of Tygart, LLC, Kleinschmidt Associates filed this correspondence on October 4, 2013.

<sup>11</sup> See correspondence filed by West Virginia DEP on October 2, 2014.

requires the licensee to file the water quality monitoring reports required by certification condition 1.

32. The certification includes requirements to: (1) monitor water quality entering the intake, at the discharge into the powerhouse tailrace, upstream of the project's discharge in the vicinity of the Corps' outlet works, and downstream of the project's discharge after mixing during each year of project operation; (2) construct and maintain a bathhouse/restroom at Grafton City Park; (3) provide annual monetary reimbursement to the West Virginia DNR for fish lost due to entrainment mortality; (4) construct a fishing pier at the informal tailrace access area on the left bank downstream of Tygart Dam; (5) construct a fishing pier at the Grafton City Park on the right bank; (6) extend the existing Grafton City Park boat ramp by 30 feet and construct two parking spaces at the ramp; (7) construct a walkway from the existing boat ramp to the fishing pier required by condition 5; and (8) install four ¾-inch stainless steel connectors to the tailrace retaining walls to enable the attachment of nets for future fish entrainment evaluations. Conditions 9 through 12 are general and administrative.

### **COASTAL ZONE MANAGEMENT ACT**

33. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>12</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 6 months of its receipt of the applicant's certification.

34. The State of West Virginia does not have a Coastal Management Program. Therefore, CZMA consistency certification is not required for the Tygart Project.

### **SECTION 18 FISHWAY PRESCRIPTION**

35. 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.

36. No agency filed fishway prescriptions or requested a reservation of the Commission's authority under section 18 of the FPA.

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

<sup>13</sup> 16 U.S.C. § 811 (2012).

## THREATENED AND ENDANGERED SPECIES

37. Section 7(a)(2) of the Endangered Species Act of 1973<sup>14</sup> (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

38. The project area may provide summer maternity, roosting, and foraging habitat for the federally endangered Indiana bat. Tygart surveyed for rare, threatened, and endangered species in August 2011. No Indiana bats were found, but suitable habitat was identified. In the EA, staff recommended that Tygart develop a bat protection plan that includes limiting tree clearing in accordance with FWS guidelines.<sup>15</sup> Staff concluded that with the measures that would be included in a bat protection plan, construction and operation of the Tygart Project would not be likely to adversely affect the Indiana bat.<sup>16</sup> Subsequent to the issuance of the EA, the northern long-eared bat was listed as a threatened species under the ESA.<sup>17</sup> Northern long-eared bats may occur in Taylor County, West Virginia. Although this species was not specifically included in staff's analysis, the habitat requirements and potential project-related effects are comparable to those identified for the Indiana bat.

39. In response to staff's February 24, 2014 request for concurrence, FWS stated that there may be summer foraging and roosting habitat, as well as winter habitat, for the endangered Indiana bat in the project area.<sup>18</sup> However, FWS stated that projects in West Virginia that (1) affect 17 acres or less of suitable forest habitat, and (2) that occur more than 5 miles from any known Indiana bat hibernaculum, or (3) that occur more than 2.5 miles from any known maternity roost or summer capture site are unlikely to result in direct or indirect impacts to the species and that tree removal associated with such projects can occur at any time of the year. Because the Tygart Project would require the removal or temporary disturbance of about 3.5 acres of upland forest and 1 acre of

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

<sup>15</sup> See U.S. Fish and Wildlife Service's Range-wide Indiana Bat Protection and Enhancement Plan Guidelines <http://www.fws.gov/frankfort/pdf/INBATPEPGuidelines.pdf>.

<sup>16</sup> See EA at 92.

<sup>17</sup> The northern long-eared bat was federally listed on April 2, 2015, with an effective date of May 4, 2015. 80 Fed. Reg. 17,974-18,033 (2015).

<sup>18</sup> See letter filed on April 23, 2014.

agricultural land, construction would not occur within the hibernacula or summer-use buffers described above, and would not require work in the vicinity of any caves or mine portals, FWS concurred with Commission staff that the project is not likely to adversely affect the Indiana bat. Therefore, no further action under the ESA is required for the federally listed Indiana bat.

40. In email correspondence to Commission staff filed January 28, 2016, FWS noted that no conservation measures are required as part of the final 4(d) rule<sup>19</sup> providing for the conservation needs of the northern long-eared bat unless impacts: (1) occur within 0.25 mile of known northern long-eared bat hibernacula; or (2) cut or destroy known, occupied maternity roost trees or any other trees within a 150-foot radius around known, occupied maternity trees during the pup season (June 1 to July 31). FWS stated that the Tygart Project would fall outside of these buffers. FWS stated that because project plans for the Tygart Project have not changed, the project does not occur in any threatened or endangered species known-use areas, and the project proponent is proposing less than 17 acres of tree clearing, its previous concurrence applies (letter filed on April 23, 2014). Therefore, no further action under the ESA is required for the federally listed northern long-eared bat.

#### **NATIONAL HISTORIC PRESERVATION ACT**

41. Under section 106 of the National Historic Preservation Act<sup>20</sup> and its implementing regulations,<sup>21</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing on the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

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<sup>19</sup> Under section 4(d) of the ESA, the Secretary of the Interior has discretion to issue regulations deemed necessary and advisable to provide for the conservation of a designated species. On January 14, 2016, FWS issued a final rule pursuant to section 4(d) that establishes measures for the conservation of the northern long-eared bat, a bat species that occurs in 37 states. 81 Fed. Reg. 19,000-022 (2016).

<sup>20</sup> 54 U.S.C. § 306108. Pub. L. 113-287, 128 Stat. 3188 (2014). (The National Historic Preservation Act was recodified in Title 54 in December 2014.)

<sup>21</sup> 36 C.F.R. Part 800 (2015).

42. As part of the licensing process, Tygart conducted a Phase I Cultural Resources Study. The study resulted in the identification of nine sites within the project's area of potential effect that could have cultural significance to the area. One site, Tygart Dam, is currently listed on the National Register. A second site that had been previously recorded was subsequently deemed ineligible for listing. In a letter dated May 30, 2013, the West Virginia SHPO stated that the seven remaining cultural resource sites were not eligible for inclusion on the National Register.<sup>22</sup> The West Virginia SHPO stated that the project would have a conditional no adverse effect if the powerhouse was constructed with materials that were complementary to the surrounding buildings, structure, and landscape.

43. In a letter dated June 5, 2013, Tygart agreed to the West Virginia SHPO conditions.<sup>23</sup> Tygart proposes to construct the powerhouse on a scale similar to nearby buildings and structures. Tygart also proposes to use construction and landscape materials that are complementary to the existing structures and landscape. In the EA,<sup>24</sup> staff recommended that once construction materials have been selected, Tygart must forward a written description of the materials and a photo simulation of the building to the West Virginia SHPO for approval. Article 411 of this license requires Tygart to provide documentation to the Commission within 60 days of completion of construction detailing the use of materials and the landscape.

44. In the EA,<sup>25</sup> staff determined that constructing and operating the project would not affect historic properties. However, because it is possible that unknown archaeological or cultural resources could be discovered during project maintenance or operation, Article 412 requires Tygart to stop work and consult with the West Virginia SHPO and the Corps if previously unidentified archaeological or cultural resources are discovered during project construction, maintenance, or operation. Article 413 requires Tygart to consult with the West Virginia SHPO and the Corps prior to conducting any maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities that do not require Commission approval but could affect cultural resources.

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<sup>22</sup> Tygart included a copy of the May 30, 2013 correspondence in a July 19, 2013 additional information filing.

<sup>23</sup> Tygart included a copy of the June 5, 2013 correspondence in a July 19, 2013 additional information filing.

<sup>24</sup> See EA at 93.

<sup>25</sup> See EA at 93.

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

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

46. In response to the August 14, 2013 public notice that the project was ready for environmental analysis, West Virginia DNR filed eight recommendations<sup>28</sup> under section 10(j). Two recommendations are outside the scope of section 10(j) and are discussed in the next section. This license includes conditions consistent with five of the remaining six recommendations that are within the scope of section 10(j) including: (1) monitoring water temperature and DO for 24 months after startup of project operation at the project intake and downstream of the project and maintain state water quality standards for DO at the downstream location (Article 405);<sup>29</sup> (2) preparing a sediment and erosion control plan for construction and operation of the project (Article 302 and Article 404); (3) designing, monitoring, and maintaining trashrack intake velocities no greater than 2.0 feet per second (Article 406); (4) developing a plan to verify the intake velocities (Article 403); and (5) developing a plan to monitor flows through the project, including a provision to provide flow information at the existing U.S. Geological Survey gage located downstream of the project if the gage is terminated in the future (Article 403).

47. If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, section 10(j)(2) requires the Commission and the agencies to attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory

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

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

<sup>28</sup> West Virginia DNR filed their recommendations on October 11, 2013. The City of Grafton filed identical recommendations on the same day.

<sup>29</sup>The Tygart Dam tailwaters are designated as Category B2-trout waters. The DO criteria for B2 waters is not less than 7.0 mg/l in spawning areas and in no case less than 6.0 mg/l. *See* West Virginia Department of Environmental Protection Requirements Governing Water Quality Standards (Title 47 CSR2), effective June 27, 2011.

responsibilities of such agencies.<sup>30</sup> If the Commission still does not adopt a recommendation, it must explain how the recommendation is inconsistent with Part I of the FPA or other applicable law and how the conditions imposed by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources.

48. The EA did not recommend adopting West Virginia DNR's recommendation to implement a fish monitoring plan that would include fish surveys in the reservoir and tailwater prior to project construction and during the 2<sup>nd</sup>, 7<sup>th</sup>, and 12<sup>th</sup> years of operation.<sup>31</sup> The purpose of West Virginia DNR's fish monitoring plan would be to evaluate whether the reservoir and tailwater fisheries are adequately protected under the proposed project operation. Staff concluded that conducting the surveys in the 7<sup>th</sup> and 12<sup>th</sup> years of operation would only be necessary based on the results of the pre-construction and 2<sup>nd</sup>-year surveys and that requiring such surveys may be inconsistent with the substantial evidence standard of section 313(b) of the FPA. Staff instead recommended that Tygart develop and implement a fish monitoring plan in which the surveys would be conducted prior to project construction and during the 2<sup>nd</sup> year of operation, with a provision for additional surveys based on the results of the initial surveys (Article 407).

49. West Virginia DNR responded to staff's determination on February 28, 2014. It did not concur with staff's preliminary determination, stating that it may take several years for impacts resulting from project-related entrainment mortality to be revealed in the fish survey information.<sup>32</sup> The agency asked that it be involved in evaluating the adequacy of the licensee's fish monitoring plan, interpreting fish survey data, and determining the need for additional surveys. It did not request a meeting to resolve the inconsistencies.

50. Article 407 requires a fish monitoring plan that includes a pre-construction survey, a survey during the 2<sup>nd</sup> year of operation, and a provision for additional surveys if warranted by the survey results. The information generated from these surveys will be used to evaluate the effects of project-related entrainment mortality on the fishery and determine the need for additional protective measures and/or additional fish surveys. Article 407 also requires Tygart to consult with the West Virginia DNR in developing the plan and provide West Virginia DNR an opportunity to comment on the adequacy of the

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<sup>30</sup> 16 U.S.C. § 803(j)(2) (2012).

<sup>31</sup> See EA at 96-97.

<sup>32</sup> In its March 14, 2014 comments on the EA, the Corps supported West Virginia DNR's concerns regarding staff's proposed fish monitoring plan.

survey data and need for additional surveys. As such, the fish monitoring plan will adequately protect the local fishery.

51. For the above reasons, in accordance with FPA section 10(j)(2)(A), West Virginia DNR's recommendation is inconsistent with the substantial evidence standard of section 313(b) of the FPA. In accordance with section 10(j)(2)(B) of the FPA, the measures required by this license will adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources affected by this project.

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

52. Section 10(a)(1) of the FPA<sup>33</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. West Virginia DNR Recommendations**

53. West Virginia DNR (and the City of Grafton) made two recommendations under section 10(j) that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife. Consequently, these recommendations are not considered under section 10(j) of the FPA. Instead, these recommendations are considered under the broad public-interest standard of section of 10(a)(1) of the FPA.

##### **1. Recreation Enhancements**

54. Currently, there is an informal tailrace access area on the left (west) shoreline of the Tygart River downstream of the stilling basin near the terminus of Maple Avenue. The Grafton City Park and boat launch area is located on the right (east) shoreline about 600 feet downstream of the stilling basin. Recreation opportunities available on both shorelines would be affected for about a year while the project is under construction. Once project operation begins, the flow velocities near the informal tailrace access area may increase turbulence near the west shoreline. Thus, West Virginia DNR (and the City of Grafton) recommends that Tygart prepare a recreation enhancement plan to construct and maintain improved access along the east and west banks of the Tygart River below the dam. Suggested measures to be incorporated into the plan include the following improvements at Grafton City Park: an angler access trail from the Grafton City Park boat launch to the project tailrace, a fishing pier located in the vicinity of the tailrace,

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<sup>33</sup> 16 U.S.C. § 803(a)(1) (2012).

improvements to the Grafton City Park boat launch ramp, restroom facilities, parking, and solid waste receptacles. Recommendations for improvements on the west side of the river include a grouted path leading to a fishing pier. In its comments on the license application, the Corps states that the flow conditions created by the project may create tailwater conditions suitable for recreational fishing which could create a dangerous environment without proper recreational infrastructure in place.<sup>34</sup> In a letter filed on November 26, 2013, Tygart proposes to develop a recreation plan, which would include measures designed to promote angling in the project tailrace.<sup>35</sup>

55. In the EA, staff recommended that Tygart develop a recreation enhancement plan to provide parking, trash receptacles, and restroom amenities at the existing informal tailrace access area on the west bank based on public interest and the change in conditions associated with project operation. However, staff did not recommend the trails or fishing pier below the dam on the east bank at the Grafton City Park in part because of insufficient demand.<sup>36</sup>

56. In its comments on the EA, West Virginia DNR states that desktop modeling of the tailrace during project operation indicates that a new flow pattern could affect fish distribution in the project tailwater. West Virginia DNR states that improving fishing access to the west bank would provide a recreational benefit. In its comments on the EA, the Corps concurred with West Virginia DNR's comments on the EA.

57. If this license requires Tygart to provide and maintain the proposed recreation enhancements at the informal west bank tailrace area, the area would be brought within the project boundary, and Tygart would have to obtain sufficient property rights in the land in question (i.e., title in fee or the right to use in perpetuity) to ensure that it could construct, operate, and maintain the access area and facilities through the term of its license.<sup>37</sup> However, the west bank access area, near the terminus of Maple Avenue, appears to be located, at least partially, on state parklands within Tygart Lake State

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<sup>34</sup> See letter filed on October 11, 2013.

<sup>35</sup> In response to comments on the final license application, Tygart proposes to develop a recreation enhancement plan.

<sup>36</sup> See EA at 95.

<sup>37</sup> See Article 5 of Standard Form L-6, entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters and Lands of the United States" attached to this order.

Park.<sup>38</sup> To the extent that this is the case, if the parklands in question were designated as such prior to 1992 (i.e., the date of enactment of the Energy Policy Act of 1992),<sup>39</sup> section 21 of the FPA prohibits the use of eminent domain to acquire rights to these lands,<sup>40</sup> and Tygart would have to acquire such rights through negotiation.

58. Article 410 of this license requires Tygart, within two years of license issuance, to provide the following amenities at the informal tailrace access area on the west bank: parking to accommodate use during April and October,<sup>41</sup> trash receptacle(s), and restrooms, provided that Tygart can obtain the necessary rights from the state for construction, operation, and maintenance of these amenities. While it appears that the informal tailrace access facilities recommended by staff, West Virginia DNR, the Corps, and the City of Grafton would be constructed on state-owned land, Tygart must confirm property ownership at the informal tailrace access area prior to any ground-disturbing activities. Once the rights for development are confirmed and the facilities are constructed, Tygart must revise Exhibit G to include the informal tailrace access area in the project boundary.

59. West Virginia DEP's water quality certification requires: restroom facilities at Grafton City Park (condition 2), fishing piers on the east and west banks below the dam (condition 4 and 5), extending the existing Grafton City Park boat ramp 30 feet up slope (condition 6), construction of two parking spaces at the ramp extension (condition 6), a barrier-free walkway from the ramp extension to the east side fishing pier (condition 7), and final construction plan approval by the West Virginia DEP and West Virginia DNR (condition 9). In the EA, staff recommended parking improvements, trash receptacles, and restrooms at the informal tailrace access area only.

60. In the EA, staff did not recommend the Grafton City Park recreation improvements required in the certification because there did not appear to be demand for these improvements; however, because the certification conditions are mandatory these measures are included in the license.

## 2. Installation of Stainless Steel Connectors

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<sup>38</sup> The state park boundary extends from the base of Tygart dam approximately 300 feet downstream.

<sup>39</sup> Pub. L. No. 102-486, amending section 21 of the FPA, 16 U.S.C. § 814 (2012).

<sup>40</sup> Tygart Lake State Park was established in 1945 ([www.tlspf.org](http://www.tlspf.org)).

<sup>41</sup> Tygart reported average use in April and October as 330 anglers in the license application. See page 3-114.

61. West Virginia DNR and the City of Grafton recommend that Tygart install stainless steel connectors on the tailrace walls to facilitate potential future netting surveys of fish entrainment mortality. West Virginia DNR and the City of Grafton note that only desktop studies of entrainment mortality were conducted for this project and a netting study may be needed if Tygart's fish monitoring reveals impacts to the fishery.

62. Installation of the stainless steel connectors is outside the scope of section 10(j) because installation of connectors alone is not a specific fish and wildlife measure. In the EA, Commission staff did not recommend adopting this measure because requiring the installation of stainless steel connectors would be premature in the absence of fish monitoring results that indicate a need for additional measures.<sup>42</sup>

63. In comments on the EA, West Virginia DNR notes that netting studies of entrainment may be necessary in the future and installing the connectors during construction would be less costly.

64. Although staff believes that the connectors are not justified due to the uncertain need for them, because the certification conditions are mandatory this measure is included in the license.

## **B. Project Operation**

65. Tygart proposes to operate the project in a run-of-release mode. In the EA, staff determined that operating the project in run-of-release mode would not change the Corps' existing drawdown or flow release schedules and, with the exception of the stilling basin, the magnitude and timing of flow releases would remain unchanged downstream of the dam compared to existing conditions. Further, the project would not interfere with the Corps' ability to continue to operate the Tygart Dam and impoundment for its authorized purposes. Article 402 of this license requires Tygart to operate the project in run-of-release mode.

## **C. Operation Compliance Monitoring**

66. Commission licenses for non-federal projects at Corps' dams require the licensee to develop an operating plan and a Memorandum of Agreement (MOA) with the Corps.<sup>43</sup> The operating plan must describe the mode of hydropower operation, impoundment flow

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<sup>42</sup> See EA at 94.

<sup>43</sup> Memorandum of Understanding between the United States Army Corps of Engineers and the Federal Energy Regulatory Commission on Non-federal Hydropower Projects, March 30, 2011. <http://www.ferc.gov/legal/mou/mou-usace.pdf>

diversion, regulation requirements for the Corps' project, and integration of operation of the hydroelectric facility in the Corps' emergency action plan. The MOA must describe the detailed operation of the project acceptable to the Corps and any restrictions needed to protect the purposes of the Corps' project. The operating plan and MOA are required by Article 310 of this license.

67. Tygart proposes to operate the project in a run-of-release mode, following the protocols established by the Corps, but it did not specify how it would document compliance with run-of-release operation. Article 403 of this license requires Tygart to develop an operation compliance monitoring plan as recommended by staff in the EA<sup>44</sup> and submit it at least 90 days before the start of project operation that describes how Tygart will comply with the operational requirements of this license.

#### **D. Water Quality Monitoring**

68. Monitoring conducted by the Corps and Tygart shows DO concentrations consistently in compliance with the state's water quality standards for DO. However, monitoring also indicates high levels of TDG in the proposed project's tailwater with most of it attributable to air being forced into solution due to turbulence at the Corps' outlet works and over the stilling basin weir. Tygart proposes to maintain a DO concentration of 6 mg/l downstream of the project and install a forebay oxygen diffuser system, if needed, based on the results of water quality monitoring. Tygart also proposes to install a gage downstream of the project to monitor DO and TDG.

69. In the EA, staff determined that operating the proposed project could potentially affect downstream water quality by passing water through the powerhouse rather than through the Corps' outlets, and recommended monitoring DO, water temperature, and pH.<sup>45</sup> Because any measure to increase DO such as a forebay oxygen diffuser system could increase TDG, staff also recommended monitoring TDG levels downstream of the project if and when a diffuser system is used to maintain downstream DO.

70. West Virginia DNR recommended, pursuant to section 10(j), monitoring DO and water temperature at the project intake and at a location downstream of the project for 24 months following the start of project operation. The City of Grafton recommended a similar measure. The Corps stated that it might also require monitoring in Tygart Lake and/or in the stilling basin during the first few years of operation until the project's

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<sup>44</sup> See EA at 88-89.

<sup>45</sup> pH, a measure of the relative acidity or alkalinity of water, was included in staff's monitoring recommendation because of the history of acid mine drainage degradation in the Tygart River Basin. See EA at 31 and 86-88.

effects on water quality are fully understood. In the EA, staff recommended a 24-month post start-up evaluation of the project's effects on downstream water quality.

71. Certification condition 1 requires monitoring of DO and water temperature each year of project operation from May 1 through October 31 at four locations: the intake, the discharge into the powerhouse tailrace, upstream of the project's discharge in the vicinity of the Corps' outlet works (stilling basin), and downstream of the project's discharge after mixing. In the EA, staff did not recommend monitoring beyond the 24-months, monitoring at the stilling basin, or monitoring at the discharge into the powerhouse tailrace prior to mixing.<sup>46</sup> Staff concluded that although flow into the stilling basin will be reduced under project operation, any effects on water quality in the stilling basin would be minor because of the aeration effects of the existing Corps' outlets and the relatively low retention time in the stilling basin.<sup>47</sup> Because monitoring the two locations (i.e., project intake and a location downstream of the project after mixing) should provide information necessary to determine if changes to project operation are needed, monitoring a third location (i.e., the discharge into the powerhouse tailrace) was not recommended. Nevertheless, certification condition 1 requires annual monitoring from May 1 through October 31 at all four locations. Certification condition 1 also requires the development of a water quality maintenance and operation plan. However, it does not require a post start-up evaluation of project operation, nor does it require documentation of the monitoring methods, frequency of recording, and calibration procedures that would be used for the monitoring. Therefore, Article 405 requires Tygart to develop a water quality monitoring plan consistent with certification condition 1 that does include these provisions.

72. In its comments on the EA, the Corps stated that it will require an adaptive management plan that includes compliance with a non-degradation water quality standard that would be more stringent than the state water quality criteria. The Corps expects that higher releases through the dam may be necessary to protect instream habitat and fisheries and/or to comply with the non-degradation standard, and that this would affect the final energy output of the project. The Corps believes that maintaining historic water quality conditions rather than the minimum state requirements would provide a balanced approach between the addition of hydropower and the maintenance of water quality at Tygart Dam. In the EA, staff recommended,<sup>48</sup> and certification condition 1 requires, compliance with state water quality standards. Therefore, although this license does not require compliance with a non-degradation standard, the project will operate with flows

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<sup>46</sup> See EA at 86-88.

<sup>47</sup> See EA at 31-34.

<sup>48</sup> See EA at 86-88.

that will be made available by the Corps, with the Corps having the ability to release higher flows through its outlets, and thus less to the project, if it believes that is what is needed.

73. The Corps stated that it would require turbidity monitoring prior to and during construction. In the EA,<sup>49</sup> staff concluded that most project construction would occur behind the right bank that is armored with rip rap boulders, and although there is a likelihood of short-term increases of turbidity in the vicinity of the construction, development and implementation of an erosion and sediment control plan (Article 302) that includes best management practices would ensure that aquatic resources near the site are not affected. Therefore, this license does not require turbidity monitoring prior to and during construction.

### **E. Compensatory Mitigation**

74. According to Tygart's desktop entrainment study, about 183,000 fish would be entrained through the proposed project annually. In the EA,<sup>50</sup> staff noted that Tygart's study provided conservative estimates of entrainment and did not account for the installation of 2-inch-spaced trashracks at the intake. However, in its water quality certification, West Virginia DEP indicated that Tygart has updated its entrainment estimate to 13,015 fish per year.

75. West Virginia DEP's certification condition 3 requires monetary reimbursement for fish lost due to project-related entrainment mortality. Specifically, West Virginia DEP requires an annual payment of \$37,200 to West Virginia DNR based on the revised estimate of 13,015 entrained fish. West Virginia DEP notes that the total amount may be adjusted to incorporate updated mortality estimates reflecting the final design of the turbine and screen and any future monitoring results. In addition, the payments would be adjusted every 5 years to reflect West Virginia's latest fish replacement costs.

76. Providing compensatory mitigation for fish losses at the project would not provide a direct, project-related benefit to aquatic resources. In addition, such compensation would constitute damages, and the Commission has no authority to adjudicate claims for or require payment of damages.<sup>51</sup> Further, the fish monitoring plan, discussed previously in the 10(j) section of this order, will determine effects on the fishery and whether additional protective measures are warranted (e.g., additional fish stocking). However,

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<sup>49</sup> See EA at 34.

<sup>50</sup> See EA at 43-44.

<sup>51</sup> See, e.g., *Lansing Board of Water and Light*, 74 FERC ¶ 61,260 (1996).

because the certification conditions are mandatory West Virginia DEP's certification condition 3 is included in the license.

### **F. Avian Protection**

77. Tygart has proposed to limit construction activities to previously disturbed areas, consider the location of potential wildlife habitat when siting the transmission line corridor, and follow FWS' *National Bald Eagle Management Guidelines* during construction. FWS states that the *National Bald Eagle Management Guidelines* must be incorporated as required measures in an avian protection plan.<sup>52</sup> In the EA,<sup>53</sup> staff found that wildlife would likely not be affected by construction in the powerhouse area because most of the habitat in that area has previously been disturbed or is currently developed. However, installing the 1.55-mile-long transmission line would require the removal or temporary disturbance of about 3.5 acres of upland forest and about one acre of agricultural land. Additionally, during project operation, the proposed transmission line and two new switchyards pose a potential risk of electrocution and collision to raptors such as the bald eagle and osprey. Therefore, staff recommended that Tygart develop a protection plan that includes its proposed measures, and the bald eagle protection measures set forth in FWS' *National Bald Eagle Management Guidelines*, and measures to protect raptors from collision and electrocution hazards as specified in (1) *Avian Protection Plan Guidelines: A Joint Document prepared by the Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) and U.S. Fish and Wildlife Service 2005*; (2) *APLIC's Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*; and (3) *APLIC's Reducing Avian Collisions with Power Lines: The State of the Art in 2012*, or the most current editions of these documents. Article 408 of this license requires Tygart to consult with the Corps, FWS, and West Virginia DNR in developing the avian protection plan.

### **G. Invasive Plant Management**

78. Construction of the project could increase the introduction and spread of noxious weeds in the project area.<sup>54</sup> After construction is complete, maintenance of the transmission line corridor would also require activities that may increase the introduction and spread of noxious weeds. To reduce the introduction and spread of noxious weeds, staff recommended that Tygart develop an invasive plant management plan. Article 409 of this license requires the plan.

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<sup>52</sup> See letter filed April 18, 2014.

<sup>53</sup> See EA at 90-91.

<sup>54</sup> See EA at 91.

## H. Cumulative Effects

79. In its comments on the EA, the Corps disagrees with staff's conclusion that no resources would be cumulatively affected by the Tygart Project. It is concerned that the Tygart Project, along with other proposed downstream hydropower projects, could have a cumulative effect on downstream DO concentrations. The Corps states that the Commission should conduct a cumulative effects assessment that considers the potential hydropower developments in the Monongahela, Allegheny, and Ohio River basins.

80. In the EA,<sup>55</sup> staff noted that effects of the Tygart Project on DO concentration would be mitigated, if needed, by a forebay oxygen diffusion system to ensure compliance with state standards. In addition, the Tygart River flows freely for 23 miles from Tygart Dam until it joins the West Fork River to form the Monongahela River. Approximately 14 miles downstream from this confluence, the first of several proposed hydropower projects, the Opekiska Lock and Dam Hydroelectric Project (P-13753), may be constructed at Corps-owned dams on the Monongahela River.<sup>56</sup> It is expected that any effect of the Tygart Project on DO would be localized and would attenuate as the water flows downstream, especially in the free-flowing section of the Tygart River which contains several rapids and short waterfalls. As such, any effects of the Tygart Project on DO would be minor and would not likely contribute to cumulative effects on the Monongahela River.

## I. Additional Comments from the Corps

81. In its comments on the EA, the Corps states that Tygart Dam was originally authorized for navigation (low-flow augmentation), with subsequent legislation adding flood control, water supply, water quality, fish and wildlife, and recreation as purposes. The Corps argues that, as the Tygart Dam was authorized to affect navigable waters by improving navigation conditions, the Commission should require Standard Form L-6 for projects affecting navigable waters and lands of the United States, which includes the requirement for the licensee to furnish power free of cost to the United States for the operation and maintenance of navigation facilities, which the Corps states would include the Tygart Dam.

82. Because the project occupies federal lands and may have an effect on downstream navigable waters of the United States, this license is subject to the conditions set forth in

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

<sup>56</sup> License applications for six proposed projects on the Monongahela River (FERC Project Nos. 13753, 13762, 13763, 13766, 13771, 13767) are pending before the Commission.

Standard Form L-6, entitled “Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters and Lands of the United States.”<sup>57</sup>

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

83. 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 Tygart Project will occupy about one acre of federal land administered by the Corps. The Commission does not assess a land use charge for a licensee’s use of federal lands adjoining or pertaining to federal dams or other structures as in the case here.<sup>58</sup> Rather, it assesses the charge for the use of a government dam.<sup>59</sup>

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

84. The Commission requires licensees to file sets of approved Exhibit F drawings in electronic file format. Article 202 requires the filing of these drawings.

85. Tygart revised the transmission line route in its filing on November 26, 2013, but did not provide a revised Exhibit G drawing reflecting the revised transmission line route. Therefore, Exhibit G must be revised to include the revised transmission line route. Article 203 requires this filing. Additionally, parking improvements, trashcan(s), and restroom facilities are to be constructed at the informal tailrace access area on the west side of the Tygart River within two years of license issuance. Provided Tygart obtains all necessary rights to the land needed for construction of these facilities, a revised Exhibit G incorporating the tailrace access area improvements into the project boundary must be filed with the Commission. Article 410 requires this filing.

### **C. Amortization Reserve**

86. 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.

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<sup>57</sup> See Ordering paragraph (E) of this license.

<sup>58</sup> 18 C.F.R. § 11.2(a) (2015).

<sup>59</sup> 18 C.F.R. § 11.3 (2015).

#### **D. Headwater Benefits**

87. Some projects directly benefit from headwater improvements that were 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**

88. 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 the date the license was issued. The project will occupy approximately seven acres of privately owned land and approximately one acre of land managed by the Corps. The Exhibit G filed with the license application and the revised transmission line route filed on November 26, 2013 identified the lands for which the applicant intends to acquire the rights necessary for the construction, operation, and maintenance of the project. In addition, this order requires that the informal tailrace access area be included in the project boundary. 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 all lands within the project boundary. The report must 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**

89. 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**

90. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 414 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. As-built Exhibit Drawings**

91. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 208 provides for the filing of these drawings.

## **I. Start of Construction**

92. 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.

93. Section 13 of the FPA requires the licensee to commence construction within two years from the issuance date of the license, which deadline may be extended once but no longer than for two additional years.<sup>60</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>61</sup> Therefore, the burden is on the licensee to obtain these approvals 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.

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

94. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer with final contract drawings and specifications and a supporting design document, a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

95. Article 303 requires the licensee to provide the Commission's D2SI-New York Regional Engineer with cofferdam and deep excavation construction drawings.

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<sup>60</sup> 16 U.S.C. § 806 (2012). Under FPA section 13, failure to timely commence project construction will result in termination of the license.

<sup>61</sup> *See, e.g.*, Article 207, documentation of project financing; Article 302, approval of contract plans and specifications; Article 306, Corps' approval of facility design and construction; Article 310, Corps' approval of project operation plan; and Article 312, Corps' written approval of construction plans.

96. Article 304 requires the licensee to provide the Commission's D2SI-New York Regional Engineer with a public safety plan.

97. Article 305 requires the licensee to coordinate with the Commission's D2SI-New York Regional Engineer on any modifications that may affect project works or operation resulting from license environmental requirements.

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

98. Pursuant to a 2011 Memorandum of Understanding between the Commission and the Department of the Army,<sup>62</sup> seven special articles are included in licenses for hydroelectric projects to be developed at Corps facilities. The articles are incorporated in this license as Articles 306 through 312.

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

99. Section 10(a)(2)(A) of the FPA,<sup>63</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>64</sup> Under section 10(a)(2)(A), staff identified and reviewed eight comprehensive plans that are relevant to this project.<sup>65</sup> No inconsistencies were found.

### **APPLICANT'S PLANS AND CAPABILITIES**

100. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,<sup>66</sup> Commission staff evaluated Tygart's proposals in these areas: (A) conservation efforts; (B) safe management, operation, and maintenance of the project; and (C) need for power. I accept the staff's findings in each of the following areas.

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<sup>62</sup> Memorandum of Understanding between United States Army Corps of Engineers and Federal Energy Regulatory Commission on Non-federal Hydropower Projects, March 2011. <http://www.ferc.gov/legal/mou/mou-usace.pdf>.

<sup>63</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

<sup>64</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2015).

<sup>65</sup> The list of applicable plans can be found in section 5.5 of the EA for the project.

<sup>66</sup> 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2012).

### **A. Conservation Efforts**

101. Section 10(a)(2)(C) of the FPA requires<sup>67</sup> the Commission to consider the applicant's electricity consumption improvement program, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Tygart plans to sell the project's energy through a long-term contract to a major utility or significant buyer. Staff concludes that, given the limits of its ability to influence users of electricity generated by the project, Tygart complies with section 10(a)(2)(C) of the FPA.

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

102. Staff reviewed Tygart'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.

### **C. Need for Power**

103. To assess the need for power, staff looked at the needs in the operating region in which the project is located. The North American Electric Reliability Corporation (NERC) annually forecasts electrical supply and demand nationally and regionally for a 10-year period.<sup>68</sup> The NERC prepares seasonal and long-term assessments to examine the current and future reliability, adequacy, and security of the North American bulk power system. For these assessments, the bulk power system is divided into 20 assessment areas, both within and across eight regional entity boundaries. The Tygart Project will be located in the Pennsylvania-New Jersey-Maryland (PJM) assessment area in the NERC's 2015 Reliability Assessment. According to NERC's 2015 long-term reliability assessment, the total internal demand for the PJM region is projected to grow at a compound annual growth rate of 0.93 percent for summer and 0.82 percent for winter during the period from 2016 through 2025. Project power will help the state of West Virginia attain its goal of meeting 25 percent of the state's electricity needs from renewable sources by 2025 in accordance with its Renewable Portfolio Standard by providing power that displaces generation from non-renewable sources. Staff concludes

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<sup>67</sup> 16 U.S.C. § 803(a)(2)(C) (2012).

<sup>68</sup> The NERC is an international regulatory authority established to evaluate and improve reliability of the bulk power system in North America. NERC develops and enforces reliability standards; annually assesses seasonal and long-term (10-year) reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel.

that the project's power and contribution to the region's diversified generation mix will help meet a need for power in the region.

## PROJECT ECONOMICS

104. In determining whether to issue a license for a hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>69</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.

105. In applying this analysis to the Tygart Project, two options are considered: Tygart's proposal, and the project as licensed herein. As proposed by Tygart, the levelized annual cost of constructing and operating the Tygart Project is \$7,165,110, or \$65.98/megawatt-hour (MWh). The proposed project would generate approximately 108,600 MWh annually. When the estimate of average generation is multiplied by the alternative power cost of \$64.74/MWh,<sup>70</sup> the total estimated value of the project's power is \$7,030,764 in 2015 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>71</sup> Therefore, in the first year of operation, the project would cost \$134,346 or \$1.24/MWh, more than the likely alternative cost of power.

106. As licensed herein with the mandatory conditions and staff measures, the levelized annual cost of constructing and operating the project would be about \$7,246,490, or \$67.14/MWh. Based on the amount of estimated average generation of 107,938 MWh as licensed herein, the project would produce power valued at \$6,987,906 when multiplied

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<sup>69</sup> 72 FERC ¶ 61,027 (1995).

<sup>70</sup> The alternative power cost of \$64.74/MWh is based on a base energy rate of 44.74/MWh obtained from the April 2015 Energy Information Administration fuel cost data for natural gas plus a capacity rate of \$10/MWh and a renewable credit of \$10/MWh provided by Tygart in its application.

<sup>71</sup> Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA. All costs here have been escalated by staff to July 2015 dollars.

by the \$64.74/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$258,584 or \$2.40/MWh, more than the likely cost of alternative power.

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

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

109. 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**

110. Sections 4(e) and 10(a)(1) of the FPA<sup>72</sup> require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued must be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

111. 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 Tygart 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.

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<sup>72</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

112. Based on Commission staff's 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 Tygart Project, with the staff-recommended measures and mandatory conditions, is selected and found to be best adapted to a comprehensive plan for improving or developing the Tygart River.

113. This alternative was selected because: (1) issuance of an original license will serve to provide a beneficial and dependable source of electric energy; (2) the required environmental measures will protect fish and wildlife resources, water quality, and recreational resources; and (3) the 30 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

### **LICENSE TERM**

114. Section 6 of the FPA,<sup>73</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>74</sup> Accordingly, this license is issued for a term of 50 years.

#### The Director orders:

(A) This license is issued to Tygart 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 Tygart Hydroelectric 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 new 15-foot-wide by 21-foot-high steel intake structure fitted with a trashrack and closure system on the upstream end of the existing right (looking downstream) power supply conduit;<sup>75</sup> (2) a new 14.5-foot-

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<sup>73</sup> 16 U.S.C. § 799 (2012).

<sup>74</sup> See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

<sup>75</sup> The conduit was built in the original construction of the dam to accommodate the possibility of future hydroelectric generation and currently remains plugged.

diameter, 270-foot-long steel penstock that would pass through the existing 15-foot-diameter, 170-foot-long power conduit, and then bifurcate into 14.5-foot-diameter, 110-foot-long and 10.5-foot-diameter, 150-foot-long penstocks; (3) a new 121-foot-long by 99-foot-wide concrete powerhouse containing two vertical Francis-type turbine-generator units having a total combined capacity of 30 megawatts; (4) a new excavated 60-foot-wide by 160-foot-long tailrace that would extend from the powerhouse to the river immediately downstream of the existing stilling basin; (5) a new 1.55-mile-long, 138-kilovolt (kV) transmission line;<sup>76</sup> (6) two new switchyards;<sup>77</sup> 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 section of Exhibit A filed on April 29, 2013:

Section 3.0, pages 2 through 5, entitled “Proposed Project Facilities” describing the intake, penstock, powerhouse, turbines, generators, switchyards, and appurtenant facilities within the application for license, and the licensee’s July 19, 2013 filed responses to staff’s additional information request nos. 4, 5, 7, and 8 on Exhibit A.

Exhibit F: The following Exhibit F drawings filed on April 29, 2013 (Sheet F-1 to F-8) and July 19, 2013 (Sheet F-9):

<u>Exhibit F Drawing</u>	<u>FERC No.</u>	<u>Description</u>
	<u>12613-</u>	
Sheet F-1	1	Project Site Overview
Sheet F-2	2	Intake Section and Elevation
Sheet F-3	3	Penstock Plan and Profile
Sheet F-4	4	Penstock Plan and Profile
Sheet F-5	5	Tailrace Excavation
Sheet F-6	6	Powerhouse Plan

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<sup>76</sup> In response to comments on the final license application, Tygart revised the 1.54-mile-long transmission line route in its filing on November 26, 2013. The revised transmission line route will be approximately 1.55 miles long.

<sup>77</sup> In response to the Commission’s May 30, 2013 additional information request, Tygart filed a letter on July 19, 2013 confirming that construction of the project will include two new switchyards.

<u>Exhibit F Drawing</u>	<u>FERC No.</u>	<u>Description</u>
Sheet F-7	<u>12613-</u> 7	Powerhouse Plan
Sheet F-8	8	Powerhouse Section
Sheet F-9	9	Penstock Sections

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

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

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

(E) 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. Annual Charges. The licensee must 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 by which the licensee is required to commence project construction, or as that date may be extended, but in no case longer than four years after license issuance, 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 30,000 kilowatts.

(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 this license, as directed below, the licensee must file two sets of the approved exhibit drawings in electronic file format on compact discs with the Secretary of the Commission, ATTN: OEP/DHAC.

Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-12613-1 through P-12613-9) must be shown in the margin below the title block of the approved drawing. Exhibit F drawings must be segregated from other project exhibits, and identified as **(CEII) material under 18 CFR §388.113(c)**. Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-12613-#####, F-1, Description, MM-DD-YYYY.TIF].

All digital images of the exhibit drawings must meet the following format specification:

IMAGERY – black & white raster file  
FILE TYPE – Tagged Image File Format (TIFF), CCITT Group 4  
(also known as T.6 coding scheme)  
RESOLUTION – 300 dots per inch (dpi) desired, (200 dpi min)  
DRAWING SIZE FORMAT – 22” x 34” (min), 24” x 36” (max)  
FILE SIZE – less than 1 megabyte desired

Article 203. Exhibit G Drawings. Within 90 days of the date of issuance of this license, the licensee must file, for Commission approval, a revised Exhibit G drawing enclosing within the project boundary all principal project works necessary for operation and maintenance of the project, including the revised transmission line route. The Exhibit G drawing must comply with sections 4.39 and 4.41(h) of the Commission’s regulations.

Article 204. Amortization Reserve. Pursuant to section 10(d) of the Federal Power 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 must 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, must 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 must be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, must be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account must be maintained until further order of the Commission.

The annual specified reasonable rate of return must 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 must 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 must be their respective weighted average costs for the year, and the cost of common equity must 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 must 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 must 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 must 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 must 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 must not commence project construction associated with the project before the filing is approved.

Article 208. *As-built Exhibits.* Within 90 days of completion of construction of the facilities authorized by this license, the licensee must file for Commission approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as built.

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

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

The Soil Erosion and Sediment Control Plan (construction) must be developed after consultation with the Corps, the West Virginia Division of Natural Resources, and the West Virginia Department of Environmental Protection. The licensee must include with the plan: documentation of consultation including copies of recommendations on the completed plan, specific descriptions of how the entities' comments are accommodated by the plan, and an explanation for any recommendation not adopted.

The plan must include:

- (a) a description of the site conditions;
- (b) a description of measures to control erosion, stabilize streambanks, prevent slope instability, and minimize the quantity of sediment entering project waters during project construction;

- (c) detailed descriptions, design drawings, and specific locations of all control measures;
- (d) a description of the measures for storing and disposing of spoils and the locations of any spoil disposal areas;
- (e) a description of methods for revegetating disturbed areas, including a description of the native plant species used, planting densities, temporary soil stabilization techniques, and fertilization procedures or other requirements; and
- (f) requirements for inspection and maintenance of erosion and sediment control measures to ensure proper function.

Article 303. *Cofferdam and Deep Excavation Construction Drawings.* Should construction require cofferdams or deep excavations, the licensee must: (1) have a Professional Engineer who is independent from the construction contractor, review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these copies must 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. *Public Safety Plan.* At least 60 days prior to start of construction, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these copies must be a courtesy copy to the Commission's Director, D2SI) of a Public Safety Plan. The plan must 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 should 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 305. *Project Modification Resulting from Environmental Requirements.* If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 306. 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 must 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 must furnish the Corps and the Commission's Division of Dam Safety and Inspections – New York Regional Engineer, a schedule for submission of design documents and the plans and specifications for the project. If the schedule does not afford sufficient review and approval time, the licensee, upon request of the Corps, must meet with the Corps and FERC staff to revise the schedule accordingly.

Article 307. Review of Contractor Designs. The licensee must review and approve the design of contractor-designed cofferdams and deep excavations, other than those approved according to Article 303 (*Cofferdam and Deep Excavation Construction Drawings*), prior to the start of construction and must ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee must file with the 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 308. Agreement with Corps. The licensee must 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 must not be redundant with the Commission's requirements contained in this license, must 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 must 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 must refer the matter to the Commission for resolution.

Article 309. 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 must be immediately reported to the Division of Dam Safety and Inspection (D2SI)-New York Regional Engineer. Upon review, the D2SI-New York Regional Engineer shall refer the matter to the licensee for appropriate action. In cases when construction, operation, or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps project, the Corps inspector has the authority to stop construction or maintenance while awaiting the resolution of the problem. The licensee must immediately inform the D2SI-New York Regional Engineer of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee must not resume construction, operation, or maintenance activities until notified by the D2SI-New York Regional Engineer that the problem or situation has been resolved.

Article 310. *Regulating (or Operating) Plan.* The licensee must at least 60 days prior to start of construction, submit for approval a regulating 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, must enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the powerhouse acceptable to the Corps. The MOA must specify any restrictions needed to protect the primary purposes of the Corps project for navigation (low-flow augmentation), flood control, water supply, water quality, fish and wildlife, and recreation. The Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer must be invited to attend meetings regarding the agreement. The MOA must be subject to revision by mutual consent of the Corps and licensee as experience is gained by actual project operation. Should the licensee and the Corps fail to reach an agreement, the matter will be referred to the Director, Office of Energy Projects (OEP), for resolution.

Copies of the regulating plan and signed MOA between the Corps and the licensee and any revisions thereof must be filed with the Commission, and a copy sent to the D2SI-New York Regional Engineer.

Article 311. *No Claim.* The licensee must 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 312. *Corps' Written Approval.* The licensee must provide the Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer two copies of all correspondence between the licensee and the U.S. Army Corps of Engineers (Corps). The D2SI-New York Regional Engineer shall not authorize construction of any project

work until the Corps' written approval of construction plans and specifications have been received by the D2SI-New York Regional Engineer.

Article 401. Requirements to File Reports. Certification condition 1 in the West Virginia Department of Environmental Protection's (West Virginia DEP) certification requires the licensee to file annual water quality monitoring reports with the West Virginia DEP and the West Virginia Division of Natural Resources (West Virginia DNR). The reports will document compliance with the requirements of this license and may have bearing on future actions. Each such report must also be submitted to the Commission. The schedule to file the reports is shown in the following table:

West Virginia DEP Certification Condition No. (Appendix A of this license order)	Description	Date Due to Commission
Condition 1	Water Quality Monitoring Reports	Within 45 days of filing with West Virginia DEP and West Virginia DNR

Article 402. Run-of-Release Operation. The licensee must 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 310. Run-of-release operation may be temporarily modified if required by operating emergencies beyond the control of the licensee. If operation of the project causes a deviation from the Corps' flow constraints, the licensee must notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Operation Compliance Monitoring Plan. At least 90 days prior to the start of project operation, the licensee must prepare and file with the Commission, for approval, a project operation compliance monitoring plan consistent with the measures required in certification condition 1 in Appendix A pertaining to water quality maintenance and project operation. The plan must include, but not be limited to, the following:

- (1) provisions to monitor compliance with the operational requirements of the license, including the operating plan required by Article 310 and operating the project in a run-of release mode as required by Article 402;
- (2) a provision for monitoring flows and intake velocities, including a description of monitoring locations, equipment or measuring devices, methods, frequency of recording, quality assurance and quality control, and calibration procedures;

- (3) a provision to provide flow information at the downstream existing U.S. Geological Survey gage location if the gage is terminated in the future;
- (4) a description of criteria/benchmarks (e.g., water quality, flow, velocity, etc.) to be used for modifications in project operation or control measures, including a description of modifications to project operation or other enhancement measures, including forebay oxygen diffusers, that will be implemented;
- (5) a provision to maintain a log of project operation; and
- (6) a schedule of reporting any deviations from the operational requirements of this license during normal operation and in the event of an emergency.

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

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

Article 404. *Operation Soil Erosion and Sediment Control Plan.* At least 60 days prior to any ground-disturbing activity, the licensee must file with the Commission for approval a plan to manage erosion and sedimentation in the powerhouse tailrace area during operation of the proposed project. The plan must include but is not limited to:

- (1) a description of the site conditions;
- (2) a description of measures to control erosion, stabilize stream banks, prevent slope instability, and minimize the quantity of sediment entering the powerhouse tailrace area during project operation;
- (3) requirements for inspection and maintenance of erosion and sediment control measures to ensure proper function; and

- (4) measures to monitor erosion and sedimentation in the powerhouse tailrace area after the project is operational.

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

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

Article 405. Water Quality Monitoring Plan. At least 90 days before commencing project operation, the licensee must prepare and file for Commission approval a water quality monitoring plan consistent with the monitoring requirements of certification condition 1 in Appendix A. The plan must include, but not be limited to, the following:

- (1) a description of monitoring locations, methods, frequency of recording, equipment, maintenance and calibration procedures to be used for continuous monitoring of water temperature and dissolved oxygen (DO) at the project intake, and water temperature, DO, pH, and total dissolved gas (TDG) (TDG would be monitored if and when a forebay oxygen diffuser system is used), in the Tygart River downstream of the project;
- (2) a provision to implement a 24-month post-startup evaluation of water quality and project operation based on monitoring at the project intake and the location downstream of the project after mixing of flow released from the project with flow released from the U.S. Army Corps of Engineers' (Corps) outlet;
- (3) a description of water quality criteria that would initiate consultation with the West Virginia Department of Environmental Protection (West Virginia DEP), the West Virginia Division of Natural Resources (West Virginia DNR), and the Corps for possible modifications to project operation or other enhancement measures, including the forebay oxygen diffuser system;

- (4) a provision of providing monitoring data available in real time via the internet;
- (5) a provision for annually reporting the monitoring data to the West Virginia DEP, West Virginia DNR, and the Corps;
- (6) a provision for reporting deviations of any of the water quality requirements, as required by this plan and the water quality certification, with the Commission within 10 days from the date that the data becomes available identifying the deviation. The report must identify the date(s) of the noncompliance, duration and severity of the deviation, any environmental impacts resulting from the incident and how determined, measures that were implemented to correct the deviation, and measures implemented to prevent further similar incidents. Also, the licensee must include data surrounding the dates of the incident and any comments received from the West Virginia DEP, West Virginia DNR, and the Corps concerning the incident and the licensee's response to the comment or recommendation; and
- (7) an implementation schedule.

The plan must be prepared after consultation with West Virginia DEP, West Virginia DNR, and the Corps. The licensee must 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 must 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 must include the licensee's reasons, based on project specific reasons.

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

Article 406. Intake Trashrack Design Plan. At least 90 days before the start of any ground-disturbing activities, the licensee must file for Commission approval, detailed design drawings of the proposed trashrack structure to limit the entrainment of resident fish. This filing must include, but not be limited to the following:

- (1) design drawings showing the depth, dimensions, and orientation of the intake structure and trashracks on Tygart Dam;
- (2) specifications of the size of the openings between the trashrack bars (not to exceed 2 inches) and of the maximum intake approach velocity not to exceed

- 2.0 feet per second as measured 1 foot in front of the trashracks;
- (3) descriptions of any trashrack removal, maintenance, or cleaning procedures;  
and
- (4) a description of the methods and a schedule for construction and installation of the trashrack.

The plan must be prepared after consultation with the U.S. Army Corps of Engineers and the West Virginia Division of Natural Resources. The licensee must 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 must 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 must include the licensee's reasons, based on project-specific reasons.

The Commission reserves the right to require changes to the proposed facilities and schedule. Project operation must not begin until the plan is approved by the Commission. Upon Commission approval, the licensee must implement the proposal, including any changes required by the Commission.

Article 407. Fish Monitoring Plan. Within 6 months of license issuance, the licensee must file with the Commission for approval, a plan to monitor the fish population in Tygart Lake and the project's tailwaters. The plan must include one survey prior to project construction, one survey during the second year of operation, and a provision for additional surveys based on previous results. The plan must describe the timing and frequency of fish sampling, metrics to evaluate the fishery (e.g., size-class distribution of walleye), environmental data to collect during the surveys, and details of the initial survey report(s). The plan must also include a provision to make all data and reports available to the West Virginia Division of Natural Resources (West Virginia DNR) and the U.S. Army Corps of Engineers (Corps) so they may comment on the adequacy of the surveys, the need for additional monitoring, and any recommended additional measures to address project effects on the fish population.

The plan must be developed after consultation with West Virginia DNR and the Corps. The licensee must include with the plan an implementation schedule, a reporting provision for the monitoring results that includes any recommendations for additional measures, 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 must allow a minimum of 30 days for the entities to comment and to make

recommendations before filing the plan with the Commission. The filing must include an explanation for any recommendations not adopted.

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

If the results of the monitoring indicate that changes in project structures or operations, including alternative flow releases, are necessary to protect fish resources, the Commission may direct the licensee to modify project structures or operations.

Article 408. Avian Protection Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval, an avian protection plan, to minimize construction and operation related impacts to bald eagles, osprey, and other raptors and to protect birds from collision and electrocution hazard due to interaction with the project's transmission lines and switchyard equipment.

The plan must include the licensee's proposed measures to limit construction activities to previously disturbed areas, consider the location of potential habitat when siting the transmission line corridor, and follow *U.S. Fish and Wildlife Services' National Bald Eagle Management Guidelines May 2007*. The plan must also include provisions for implementing site-specific measures to reduce the risk of electrocution or collision with powerlines and other electrical equipment for bald eagles, osprey, and other raptors in accordance with the following guidelines: (1) *Avian Protection Plan Guidelines: A Joint Document prepared by the Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) and U.S. Fish and Wildlife Service*; (2) *APLIC's Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*; and (3) *APLIC's Reducing Avian Collisions with Power Lines: The State of the Art in 2012*, or the most current editions of these documents.

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

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

Article 409. Invasive Plant Management Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee must file with the Commission for approval, an invasive plant management plan to reduce the introduction and spread of noxious weeds in the project area.

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

(1) a description of methods for surveying and mapping existing invasive plant and noxious weed species within the project boundary;

(2) a description of the best management practices to be followed to minimize the spread of invasive plant and noxious weed species within the project boundary during construction and maintenance of the project;

(3) a monitoring program to evaluate the success of invasive plant and noxious weed control efforts, including criteria that define when control of invasive plant and noxious weed species is successful;

(4) a reporting schedule for filing monitoring results with the Commission and the consulting agencies; and

(5) an implementation schedule.

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

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

Article 410. Informal Access Area Improvements. Within two years of license issuance, the licensee must develop the following recreation infrastructure at the informal tailrace access area: parking to accommodate angler use in April and October, trash receptacle(s), and restrooms (provided the rights to develop these facilities are obtained). Within 90 days of completion, the licensee must file with the Commission documentation showing the completed facilities and must include site plan drawings showing a revised Exhibit G incorporating these facilities into the project boundary. The licensee is responsible for the operation and maintenance of these facilities for the term of the license.

Article 411. Aesthetic Resources. To the extent feasible, in the design of project facilities, the licensee must use materials and non-reflective colors that blend with the existing landscape. Within 60 days of the completion of construction, the licensee must provide documentation, including descriptions and photographic evidence, to the Commission detailing the use of materials and landscape reflecting adherence to this article.

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

If a discovered cultural resource is determined to be eligible for the National Register of Historic Places (National Register), the licensee must file for Commission approval a historic properties management plan (HPMP) prepared by a qualified cultural resource specialist after consultation with the West Virginia SHPO and the Corps. In developing the HPMP, the licensee must use the Advisory Council on Historic Preservation and the Commission's *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects*, dated May 20, 2002. The HPMP must include the following items: (1) a description of each discovered property, indicating whether it is listed on or eligible for listing on 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 mitigation and conducting additional studies. The Commission reserves the right to require changes to the HPMP.

The licensee must 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. Protection of Cultural Resources. Prior to implementing any project modifications not specifically authorized by this license, including but not limited to maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities, the licensee must consult with the West Virginia State Historic Preservation Office (West Virginia SHPO) to determine the effects of the activities and the need for any cultural resource studies or measures. If no studies or measures are needed, the licensee must file with the Commission documentation of its consultation with the West Virginia SHPO.

If the West Virginia SHPO determines that a project modification affects an historic property, the licensee must file for Commission approval an historic properties management plan (HPMP). The HPMP must be prepared by a qualified cultural resource specialist after consultation with the West Virginia SHPO. In developing the HPMP, the licensee must use the Advisory Council on Historic Preservation and the Commission's *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects*, dated May 20, 2002. The HPMP must include the following items: (1) a description of each discovered property, indicating whether it is listed on or eligible for listing on 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 mitigation and conducting additional studies. The Commission reserves the right to require changes to the HPMP.

The licensee must not implement any project modifications, other than those specifically authorized in this license, until informed by the Commission that the requirements of this article have been fulfilled.

Article 414. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee must have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee must also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic,

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

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

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee must file 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 must consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

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

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed must not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the

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

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

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

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

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

(G) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2015). 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.

Ann F. Miles  
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.

**APPENDIX A**

**Water Quality Certification Conditions for the Tygart Hydroelectric Project Issued  
by the West Virginia Department of Environmental Protection on September 30,  
2015**

1. The licensee shall monitor water entering the intakes, point discharge into the powerhouse raceway, upstream of the proposed project in the vicinity of the USACE outlet works, and downstream of the project after mixing. The licensee shall monitor for dissolved oxygen (DO) and temperature. Monitoring shall be conducted each year from May 1 through October 31. The water quality monitoring information shall be made available to resource agencies, and a monitoring report shall be provided each year of operation to the WVDEP and WVDNR by March 1 of the following year. Prior to operation, a water quality maintenance and operation plan shall be prepared, submitted to WVDEP and WVDNR for approval, outlining steps that will be taken in the event that these parameters are not in compliance with West Virginia Water Quality Standards (47CSR2).
2. The licensee shall construct and maintain a bathhouse/restroom on the grounds of Grafton City Park, preferably constructed of brick or block, minimum 594 sq. feet (representative drawing attached).
3. Consistent with fish mortality calculations from the initial desktop model, monetary reimbursement for fish lost due to entrainment mortality will be provided in the amount of \$37,200 annually to WVDNR. Provided, this amount may be adjusted to incorporate the updated mortality estimations, reflecting the final design of the turbine and screen, and any future monitoring study results. Regardless, the operative amount will be adjusted every 5 years to reflect WVDNR's latest fish replacement costs.
4. Prior to construction of the hydropower facility, an American Disabilities Act (ADA) compliant fishing pier will be constructed on the left (west) descending bank to offset the loss of recreation associated with construction.
5. A fishing pier compliant with the ADA will be constructed on the right (east) descending bank.
6. The existing boat ramp will be extended thirty (30) feet up slope, and two (2) ADA compliant parking spaces will be constructed at the edge of the extension (representative drawing attached).
7. An ADA compliant grouted walkway will be constructed from the existing boat ramp to the fishing pier (right descending).
8. During construction, four ¾ inch stainless steel connectors will be installed to the retaining walls to facilitate attachment of collection devices for future fish entrainment evaluations. The location of the top connectors on the retaining walls

will be 2 feet below the top and 2 feet from the east end of the wall. The two bottom connectors will be located 6 inches above the bottom of the wall and two feet from the east end of the wall. The 2 top connectors will be directly across from each other; and the 2 bottom connectors will be directly across from each other. This configuration will provide the most options for net connections or connecting other types of collecting devices.

9. Final Construction Plans for the bathhouse, fishing piers, boat ramp upgrade, and grouted walkway will be submitted and approved by the WVDEP and WVDNR prior to construction. With the exception of condition number 4 above, this mitigation will be constructed prior to or simultaneous with construction of the hydropower facility.
10. Any modifications to the FERC license must be recertified.
11. The licensee is responsible for obtaining National Pollution Discharge Elimination System (NPDES) permits, and compliance with Water Quality Standards as contained in West Virginia Legislative Rule §47CSR2, Requirements Governing Water Quality Standards.
12. Violation of any of the conditions listed above shall negate this water quality certification.