161 FERC ¶ 62,228
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Hawks Nest Hydro, LLC Project No. 2512-075

ORDER ISSUING NEW LICENSE

(Issued December 22, 2017)

INTRODUCTION

1. On December 29, 2015, Hawks Nest Hydro, LLC (Hawks Nest Hydro) filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),[1] an application for a new license to continue operation and maintenance of the Hawks Nest Hydroelectric Project No. 2512 (Hawks Nest Project or project). The 102-megawatt (MW) project is located on the New River, just upstream of the confluence of the New and Gauley Rivers, near the Town of Ansted in Fayette County, West Virginia.[2] The project does not occupy federal land.

2. As discussed below, this order issues a new license for the project.

BACKGROUND

3. The Commission issued a new license for the project on December 11, 1987, with an effective date of January 1, 1988, that expires December 31, 2017.[3]

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[1] 16 U.S.C. §§ 797(e) and 808 (2012).

[2] The New River is a navigable waterway of the United States. *See Re Union Carbide Corp.*, 32 F.P.C. 770, *reh'g denied*, 32 F.P.C. 1298 (1964). Therefore, section 23(b)(1) of the FPA, 16 U.S.C. §817(1) (2012), requires the project to be licensed.

[3] *Elkem Metals Company,* 41 FERC ¶ 62,289 (1987). The original license for the project was issued on March 9, 1967, with an effective date of January 1, 1938. *Union Carbide Corporation*, 37 F.P.C. 517 (1967). The original license and new license issued in 1987 included the Hawks Nest Development and Glen Ferris Development, located immediately downstream of the Hawks Nest Development on the Kanawha River, under a single project number (P-2512). The Glen Ferris Project (P-14439) is being relicensed concurrently with the Hawks Nest Project, but as a separate project.

4. On April 6, 2016, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing, indicating the application was ready for environmental analysis, and setting June 6, 2016[4] as the deadline for filing motions to intervene, protests, comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.[5] The U.S. Department of the Interior (Interior) filed a notice of intervention.[6] Timely motions to intervene were filed by American Whitewater and WVA Manufacturing, LLC (WVAM).[7] West Virginia Professional River Outfitters (WVPRO) filed a late motion to intervene, which was granted.[8]

5. Interior filed comments, recommendations, and preliminary terms and conditions. American Whitewater, WVAM, WVPRO, and James F. Holly, Jr. filed comments. Hawks Nest Hydro and WVAM filed reply comments on July 20, 2016, and Interior filed reply comments on October 5, 2016. On October 13, 2016, Interior and American Whitewater each filed comments clarifying their previous comments and recommendations. On November 16, 2016, Hawks Nest Hydro filed a reply to Interior's October 5 comments.

6. A draft Environmental Assessment (EA)[9] was prepared by Commission staff and issued on December 9, 2016, analyzing the effects of the proposed project and alternatives to it. Comments on the draft EA were filed by: American Whitewater; Coastal Canoeists; WVPRO; Hawks Nest Hydro; WVAM; the U.S. National Park

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[4] The Commission's Rules of Practice and Procedure provide that if a filing deadline falls on a Saturday, Sunday, holiday, or other day when the Commission is closed for business, the filing deadline does not end until the close of business on the next business day. 18 C.F.R. § 385.2007(a)(2) (2017). Because the 60-day filing deadline fell on a Sunday (i.e., June 5, 2016), the filing deadline was extended until the close of business on Monday, June 6, 2016.

[5] 81 Fed. Reg. 22,587 (April 18, 2016).

[6] Under Rule 214(a) of the Commission's Rules of Practice and Procedure, Interior became a party to the proceeding upon timely filing of its notice of intervention.

[7] Timely, unopposed motions to intervene are granted by operation of Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2017).

[8] Secretary's November 15, 2016 Notice Granting Late Intervention; 18 C.F.R. § 385.2014 (2017).

[9] The EA also considered the effects of the Glen Ferris Project (P-14439).

Service (Park Service); Carolina Canoe Club, Conewago Club, Foothills Paddling Club, SUP Kentucky, West Virginia Wildwater Association; Interior; West Virginia Division of Natural Resources (West Virginia DNR); and over 180 individuals.

7. Commission staff issued a final EA on October 20, 2017. Comments on the final EA were filed by American Whitewater.

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

PROJECT DESCRIPTION

A. Project Area

9. The Hawks Nest Project is located within the New-Kanawha River watershed. The Kanawha River and its major tributary, the New River, drain approximately 12,200 square miles in North Carolina, Virginia, and West Virginia. The New River originates in North Carolina at the confluence of the North Fork New River and the South Fork New River. The New River flows into Virginia where it is joined by the Little River, and then into West Virginia where it is joined by the Bluestone and Greenbrier Rivers. The Hawks Nest Project is located on the New River, a few miles upstream from its confluence with the Gauley River, where the rivers combine to form the Kanawha River.

B. Project Facilities

10. The Hawks Nest Project includes a 948-foot-long concrete-gravity dam with 14 ogee-type spillway bays. The spillway bays extend almost the entire length of the dam. Each bay is topped by a 25-foot-high by 50-foot-wide Stoney-type steel lift gate,[10] and the bays are separated by 9-foot-wide concrete piers. An operating deck stretches the entire length of the dam above the spillway and is supported by the concrete piers.

11. The reservoir impounded by the dam extends upstream approximately 6.9 miles in a narrow valley with an average width of approximately 500 feet. The reservoir has a surface area of 243 acres and a gross storage capacity of 7,323 acre-feet at a normal pool elevation of 819.0 feet.[11]

12. Water from the reservoir is conveyed to the powerhouse through a 16,240-foot-long tunnel that extends from an intake near the dam on the north abutment to a powerhouse downstream on the New River, thus creating an approximately

[10] A Stoney-type gate is a gate that moves on a train of rollers within a gate guide.

[11] All elevations are provided in National Geodetic Vertical Datum of 1929.

5.5-mile-long bypassed reach. At a point approximately 60 percent of the distance from the intake to the powerhouse, the tunnel connects to a 600-foot-long and 170-foot-wide above-ground surge basin. At its downstream end, the tunnel is connected by a vertical steel riser to a 116-foot-diameter, 56-foot-high surge tank. The tunnel ends at the powerhouse penstock system, which includes a main 30-foot-diameter, 107-foot-long, steel penstock that connects to a manifold leading to five steel penstocks, each 14 feet in diameter and of varying lengths of 42 to 132 feet. Four of the five penstocks are connected to identical turbines in the powerhouse, while the fifth penstock is closed with a steel and concrete bulkhead. Water flows through the tunnel, the penstock system, and the powerhouse, and is then discharged into an excavated tailrace in the New River.

13. The 210-foot-long by 74.5-foot-wide powerhouse, located on the north bank of the New River, contains four identical turbine-generator units, each with a rated capacity of approximately 25.5 MW. Each of the vertical Francis turbines has a minimum hydraulic capacity of 800 cubic feet per second (cfs) and a maximum hydraulic capacity of 2,540 cfs, with a total project maximum hydraulic capacity of approximately 10,000 cfs.

14. The project's electrical transmission equipment consists of an outdoor substation located next to the powerhouse, containing transformers, circuit breakers, and disconnecting switches. The project generates power at 25 hertz (Hz), and electricity generated at the project is transmitted by two parallel, approximately 5.5-mile-long, 69-kilovolt (kV) transmission lines that connect the substation at the powerhouse to the Alloy Substation located at WVAM's alloy plant[12] in Alloy, West Virginia. In addition to being an interconnection point for WVAM's alloy plant, the Alloy Substation is also an interconnection point for the regional grid. To date, all power produced at the Hawks Nest Project remains dedicated to the alloy plant currently owned by WVAM.

15. Project recreation facilities include: (1) the Cotton-Hill Bridge Day-Use Area that provides access to hiking, fishing, and boating along the Hawks Nest bypassed reach (Cotton Hill site),[13] and (2) the Hawks Nest Tailrace Fishing Access site, a day-use facility adjacent to the Hawks Nest powerhouse that provides angler access and a tailrace catwalk fishing platform (Hawks Nest Tailrace site).

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[12] The alloy plant is a metallurgical manufacturing facility that produces silicon metal and silicon-based alloys.

[13] The Cotton Hill site occupies land owned by the licensee and land deeded to West Virginia DNR. However, through an agreement with Hawks Nest Hydro, the entire site is operated and maintained by West Virginia DNR.

C. Project Boundary

16. The existing project boundary generally encompasses the 12.5-mile reach of the New River from approximately the Marr Branch confluence to a point approximately 2,700 feet downstream of the Hawks Nest powerhouse. This reach includes the Hawks Nest reservoir and the 5.5-mile-long bypassed reach between the dam and the powerhouse. The project boundary also encloses the transmission lines and the two recreation facilities noted above.

17. Hawks Nest Hydro proposes the following adjustments to the project boundary: (1) remove Highway 16 from the project boundary, a total of 12.1 acres, because the public roadway is not necessary for project purposes; (2) add 2.15 acres on the north side of the reservoir upstream of Mill Creek and add 0.42 acre on the south side of the reservoir across from Mill Creek to encompass the normal operating range of the reservoir (819.5 feet); and (3) remove 4.96 acres (mostly water) and add 0.91 acre (mostly water) at the downstream end of the project boundary so that the boundary crosses the river on a straight line and follows the shoreline (at elevation 655 feet) on the north side of the river.

D. Current Project Operation

18. Hawks Nest Hydro operates the project in a run-of-river mode, whereby outflow from the project approximates inflow, thereby maintaining a normal pool elevation of 819.0 feet under low to moderate flow conditions. The reservoir is not typically operated more than 0.5 foot above the normal pool level. A minimum flow of 100 cfs is released at the dam into the bypassed reach as required by Article 404 of the current license. Flows of up to approximately 10,000 cfs (maximum hydraulic capacity of the project) are passed to the powerhouse via the tunnel for power generation. Excess flows above the powerhouse capacity are released into the bypassed reach using the spillway gates to maintain the normal pool elevation of the impoundment.

19. During low-flow periods, the available powerhouse flow is apportioned to two turbine-generator units, rather than sending all the flows to a single unit. Although this results in a less efficient output generation, the continuous generation of two turbine-generator units is necessary to provide the needed reactive power and voltage support to the 25-Hz power system used at the WVAM alloy plant.[14]

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[14] *See infra* P 95.

20. Under the current license, the project is operated to maintain a water level ramping rate of not greater than 1 foot-per-hour[15] for discharges into the Hawks Nest bypassed reach between March 1 and October 31 when river flows into the reservoir are less than 12,600 cfs and flows in the bypassed reach are 2,600 cfs or less.[16]

21. During high flows, the spillway gates on the dam are operated as needed to pass inflow in excess of the powerhouse capacity. At the normal reservoir elevation, each spillway gate has a maximum discharge capacity of about 23,900 cfs. The discharge capacity of the spillway with all the spillway gates fully opened at normal maximum operating level is approximately 334,600 cfs.

E. Proposed Operation and Environmental Measures

22. Hawks Nest Hydro proposes to continue to operate the project in run-of-river mode, and maintain the existing ramping rate to protect downstream public safety and aquatic resources.

23. To protect and enhance water quality and aquatic resources, Hawks Nest Hydro proposes to: (1) continue to release a 100-cfs minimum flow into the Hawks Nest bypassed reach, and provide additional seasonal minimum flows of 50 cfs (July-February), 200 cfs (March-April), and 150 cfs (May-June), if available, into the bypassed reach after releasing the 100-cfs minimum flow into the bypassed reach and passing 1,600 cfs[17] to the powerhouse for generation; (2) develop a streamflow monitoring plan for any new minimum flow targets that may be required for the bypassed reach; and (3) provide an annual payment to West Virginia DNR to compensate for entrainment losses of fish at the project, and prepare, every 5 years, a report on activities completed by West Virginia DNR through the annual fish compensation payment.

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[15] The ramping rate is measured at the existing United States Geological Survey (USGS) gage (No. 380649081083301) located downstream of the dam in the vicinity of the Cotton Hill Bridge.

[16] Order Approving and Modifying Ramping Rate Plan and Amending Mode of Operation, 52 FERC ¶ 62,244 (1990).

[17] As discussed above, s*ee supra* P 19, the continuous generation of two-turbine generator units is necessary to provide needed power to the WVAM alloy plant. Therefore, a flow of 1,600 cfs is needed to operate two turbine-generator units, as the rated minimum flow capacity of each turbine-generator unit is 800 cfs.

24. To protect bald eagles and their habitat on project lands, Hawks Nest Hydro proposes to conduct routine right-of-way/transmission corridor maintenance and hazardous tree/vegetation removal in accordance with the U.S. Fish and Wildlife Service's (FWS') May 2007 National Bald Eagle Management Guidelines, including consultation with the FWS in the event bald eagles are documented at or in the vicinity of the project.

25. To protect threatened and endangered species, Hawks Nest Hydro proposes to implement the updated Running Buffalo Clover Management Plan, filed with the license application, and continue to monitor and maintain the endangered running buffalo clover plant population on project lands.

26. To enhance recreation opportunities, Hawks Nest Hydro proposes to:[18] (1) provide 6-hour scheduled recreation flow releases of 2,200 to 2,500 cfs into the Hawks Nest bypassed reach, after 1,600 cfs has been provided to the powerhouse, on nine weekend days in March, June, July, and August, as follows: two days of weekend releases in March (the last two weekends); and seven days of weekend releases in June, July, and August (starting generally the last weekend of June); (2) develop and maintain a website to provide bypassed reach flow information to improve awareness of whitewater boating opportunities; (3) design, construct, and maintain improvements at the Cotton Hill site to include a seasonal toilet/changing facility, new picnic facilities, and parking and signage improvements; (4) provide a one-time payment of $50,000 to West Virginia DNR for improvements or enhancements to the Cotton Hill site, including accommodations for improved boating access near Cotton Hill Bridge; (5) open an existing trail to biking and hiking traffic, beginning approximately 1,000 feet downstream of the mouth of Mill Creek, near Hawks Nest State Park, and continuing downstream to the Hawks Nest Dam, where the trail would connect with the access road between Hawks Nest Dam and the Cotton Hill site, and provide, upstream of the Hawks Nest Dam boat barrier, an accommodation for carryable boat portage using the newly opened trail; (6) develop a boater take-out site on the New River in the Gauley Bridge area downstream of the powerhouse; (7) maintain the existing Hawks Nest Tailrace site; (8) provide $25,000 annually to West Virginia DNR to maintain and enhance recreation facilities located on lands deeded to West Virginia DNR, and prepare, every 5 years, a report on the activities completed by West Virginia DNR during the previous period and anticipated for the next 5 years through the annual recreation funding; and (9) update the existing Recreation

[18] Hawks Nest Hydro revised its proposals for whitewater flow releases and recreation access facilities several times during the licensing proceeding. Hawks Nest Hydro's final revision was filed on October 3, 2017. This license refers to and considers Hawks Nest Hydro's October 3, 2017 revision as its current proposal.

Management Plan describing recreation facilities and access within and immediately adjacent to the project boundary.

27. To protect cultural resources, Hawks Nest Hydro proposes to implement the Historic Properties Management Plan (HPMP) filed with the license application.

SUMMARY OF LICENSE REQUIREMENTS

28. This license, which authorizes 102 MW of renewable energy generation capacity, requires most of the proposed measures noted above, except the proposed minimum flow for the bypassed reach. The license also requires certain additional staff-recommended measures described below; and the conditions included in the West Virginia Department of Environmental Protection (West Virginia DEP) water quality certification (certification) (Appendix A). Combined, these measures will protect water quality, fisheries resources, recreation, cultural, and socioeconomic resources at the project.

29. To protect water quality and aquatic resources, the license requires Hawks Nest Hydro to develop an operation compliance monitoring plan, which includes the provisions of the proposed bypassed reach streamflow monitoring plan and provisions for monitoring compliance with proposed run-of-river operation and ramping rate restrictions, as well as bypassed reach minimum flows and recreation releases;

30. To avoid disturbance to bald eagles, the license requires Hawks Nest Hydro to develop a bald eagle protection plan.

31. To protect federally listed bat species and migratory bird species, the license requires Hawks Nest Hydro to limit tree clearing associated with maintenance activities and recreation use enhancements to between November 15 and March 31.

32. To enhance whitewater boating opportunities at the project, the license requires Hawks Nest Hydro to develop a recreation flow release plan that implements the proposed scheduled whitewater releases into the bypassed reach.

33. To protect recreational resources, the license requires Hawks Nest Hydro to develop a recreation management plan that includes the proposed recreation amenities and site improvements, as well as provisions for the operation and maintenance of all project recreation facilities.

34. To protect cultural and historic resources at the project, the license requires Hawks Nest Hydro to implement the HPMP filed with the license application, in accordance with the programmatic agreement (PA) executed on September 8, 2017.

WATER QUALITY CERTIFICATION

35. Under section 401(a)(1) of the Clean Water Act (CWA),[19] 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.[20]

36. On June 1, 2016, Hawks Nest Hydro applied to the West Virginia DEP for section 401 certification for the Hawks Nest Project, which West Virginia DEP received on June 2, 2016. West Virginia DEP issued a certification for the project on June 2, 2017, which was appealed by Hawks Nest Hydro and American Whitewater on June 16, 2017. West Virginia DEP issued a modified certification on August 14, 2017.[21] The modified certification includes 20 conditions, which are set forth in Appendix A of this order and incorporated into the license by ordering paragraph (D). Four of the conditions (conditions 17 through 20) are general or administrative in nature and are not discussed further.

37. The remaining 16 conditions require Hawks Nest Hydro to: (1) operate the project in a run-of-river mode (condition 1); (2) maintain a minimum flow of 300 cfs in the Hawks Nest bypassed reach from March 1 through June 30, and a minimum flow of 250 cfs for all other months (condition 2); (3) maintain a stage gage in the vicinity of the Cotton Hill Bridge and make the flow information available via the internet in real-time based on a stage-flow relationship, and verify the stage-flow relationship using actual USGS readings annually (condition 3); (4) develop and maintain a public website with information on flows in the bypassed reach, including links to available gages and applicable conversions or calculations to derive real-time flow information (condition 4); (5) open an existing trail to biking and hiking traffic, beginning approximately 1,000 feet downstream of the mouth of Mill Creek, near Hawks Nest State Park, and continuing downstream to the Hawks Nest Dam, where the trail would connect with the access road between Hawks Nest Dam and the Cotton Hill site, and provide, upstream of the Hawks Nest Dam boat barrier, an accommodation for carryable boat portage using the newly opened trail (condition 5); (6) provide a one-time payment of $50,000 to West Virginia DNR for improvements or enhancements to the Cotton Hill site (on lands owned by West

[19] 33 U.S.C. § 1341(a)(1) (2012).

[20] 33 U.S.C. § 1341(d) (2012).

[21] The modified certification was filed with the Commission on August 15, 2017.

Virginia DNR or Hawks Nest Hydro), including accommodations for improved boating access near the Cotton Hill Bridge (condition 6); (7) design, construct, and maintain improvements at the Cotton Hill site, including recreation amenities and parking and signage improvements (condition 7); (8) maintain the existing Hawks Nest Tailrace site (condition 8); (9) develop a take-out location on the New River in the Gauley Bridge area, to be maintained using funding required in condition 10 (condition 9); (10) provide $25,000 annually to West Virginia DNR to maintain and enhance recreation facilities located on lands deeded to West Virginia DNR (condition 10); (11) develop an updated recreation management plan, describing access to recreation facilities and procedures and protocols related to the scheduled recreation flow releases (condition 11); (12) conduct an annual meeting with West Virginia DEP, West Virginia DNR, WVAM, whitewater community, and other interested parties to schedule the recreation releases identified in condition 13 (condition 12); (13) provide 6-hour scheduled recreation flow releases of 2,200 to 2,500 cfs into the Hawks Nest bypassed reach, after 1,600 cfs has been diverted to the powerhouse,[22] on nine weekend days in March, June, July, and August, as follows: two days of weekend releases in March (the last two weekends); and seven days of weekend releases in June, July, and August (starting generally the last weekend of June) (condition 13); (14) prepare a report upon examining short duration spiking flow increases in the bypassed reach,[23] which includes potential remedies for reduction of spiking flows (condition 14); (15) maintain the existing ramping rate restriction for the bypassed reach (condition 15); and (16) provide monetary compensation for entrainment losses of fish due to project operation (condition 16).

38. Certification conditions 6 and 10 require Hawks Nest Hydro to provide monetary compensation to West Virginia DNR for improvement and maintenance of recreation lands and facilities. In the EA, staff recommended accommodations for improved boating access (certification condition 6), and maintenance of a take-out site (certification conditions 9 and 10). However, staff did not recommend the funding requirements in certification conditions 6 and 10, because there are not specific measures provided for the entire funding amounts. Where specific measures are provided (e.g., provisions for improved boating access and maintenance of a take-out site), staff did not recommend an associated cost cap, because a licensee's obligation to complete a measure required by its

[22] West Virginia DEP in a September 19, 2017 filing providing the basis for its certification conditions, notes that 1,600 cfs is the minimum flow desired by WVAM.

[23] Flow spikes include short duration increases in flow due to sudden changes in power demand, unit trips, or other conditions beyond Hawks Nest Hydro's direct control.

license should not be limited to a particular dollar amount.[24] However, because the certification conditions are mandatory, West Virginia DEP's certification conditions 6 and 10 are included in this license.

39. The 20 conditions of the certification are set forth in Appendix A of this order and incorporated into the license by ordering paragraph (D). Article 401 requires the licensee to file, for Commission approval, certain plans and reports required by the certification conditions, as appropriate.

COASTAL ZONE MANAGEMENT ACT

40. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),[25] the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within six months of its receipt of the applicant's certification.

41. The state of West Virginia does not have a coastal zone management program. Therefore, no consistency certification is required.

SECTION 18 FISHWAY PRESCRIPTION

42. Section 18 of the FPA[26] 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.

43. By letter filed June 3, 2016, Interior requests that the Commission reserve authority to prescribe fishways. Consistent with Commission policy, Article 403 of this

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[24] Final EA at 113-114, and 187-188. *See Virginia Electric Power Co.*, 110 FERC ¶ 61,241 (2005) and *Portland General Electric Co. and Confederated Tribes of the Warm Springs Reservation of Oregon*, 111 FERC ¶ 61,450 (2005). *See also Settlements in Hydropower Licensing under Part I of the Federal Power Act*, 116 FERC ¶ 61,270, at P 21 (2006).

[25] 16 U.S.C. § 1456(c)(3)(A) (2012).

[26] 16 U.S.C. § 811 (2012).

license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Hawks Nest Project.

THREATENED AND ENDANGERED SPECIES

44. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)[27] requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

45. There are six listed terrestrial species that are known to occur, or are considered to potentially occur, within the project area: running buffalo clover (*Trifolium stoloniferum*), Virginia spiraea (*Spiraea virginiana*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), and rusty patched bumble bee (*Bombus affinis*). No designated or proposed critical habitat for these species occurs within the project boundary.

46. A population of running buffalo clover is known to occur within the project boundary. In the EA,[28] staff concluded that implementing Hawks Nest Hydro's Running Buffalo Clover Management Plan, filed with the license application, would minimize effects on running buffalo clover, and determined that relicensing the project with additional staff-recommended measures would not be likely to adversely affect running buffalo clover. Article 405 approves the Running Buffalo Clover Management Plan and requires its implementation.

47. In the EA,[29] staff determined that the project would have no effect on Virginia spiraea, because the last documented observation of Virginia spiraea at the project occurred in 1961 and West Virginia's database lists the species as extirpated. In addition, no evidence of Virginia spiraea was observed at the project during Hawks Nest Hydro's field studies.

48. Habitat suitable for the three federally listed bat species occurs within the project boundary, and the presence of the Indiana bat and northern long-eared bat has been documented at the project during field studies. No Virginia big-eared bats have been

[27] 16 U.S.C. § 1536(a) (2012).

[28] Final EA at 179.

[29] Final EA at 102.

documented. In the EA,[30] staff concluded that habitat for the bat species would not be affected by continued project operation or maintenance activities, and that, with implementation of Interior's recommendation to conduct any necessary tree removal activities related to maintenance or recreation facility enhancements between November 15 and March 31, relicensing the project would not be likely to adversely affect federally listed bats or their habitats.

49. Interior concurred with staff's determinations for running buffalo clover and the bat species by letter filed March 3, 2017. In its March 3 letter, Interior also states that the project falls within the known range of the rusty patched bumble bee and that a queen bee was documented several miles from the project in 1996. However, Interior states that because the documented occurrence is from 1996, it is not part of the extant population.[31] Further, Interior states that the proposed activities associated with the relicensing should not alter potential habitat for the species in a manner that would result in adverse effects if populations are found in the future. In the EA,[32] staff determined that the project would have no effect on the rusty patched bumble bee.

50. Based on this information, relicensing the Hawks Nest Project will have no effect on the Virginia spiraea or rusty patched bumble bee. In addition, the project would not be likely to adversely affect running buffalo clover, Indiana bat, northern long-eared bat, or Virginia big-eared bat, to which Interior concurs. Therefore, no further action under the ESA is required for any of the above-listed species.

NATIONAL HISTORIC PRESERVATION ACT

51. Under section 106 of the National Historic Preservation Act (NHPA)[33] and its implementing regulations,[34] federal agencies must take into account the effect of any

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[30] Final EA at 179-180.

[31] Only those occurrences documented since 2000 are considered extant populations.

[32] Final EA at 102.

[33] Section 106 of the National Historic Preservation Act of 1966, as amended, 54 U.S.C. § 306108, Pub. L. No. 113-287, 128 Stat. 3188 (2014). (The National Historic Preservation Act was recodified in Title 54 in December 2014.)

[34] 36 C.F.R. Part 800 (2017).

proposed undertaking on properties listed or eligible for listing in 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 (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

52. To satisfy these responsibilities, the Commission executed a Programmatic Agreement (PA) with the West Virginia SHPO on September 8, 2017, and invited Hawks Nest Hydro to concur with the stipulations of the PA.[35] The PA requires Hawks Nest Hydro to implement the HPMP filed with the license application on December 29, 2015. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 409 requires Hawks Nest Hydro to implement the PA and HPMP.

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

53. Section 10(j)(1) of the FPA[36] 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[37] to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

54. On June 3, 2016, in response to the April 6, 2016 public notice that the project was ready for environmental analysis, Interior filed six recommendations under section 10(j). Two of the recommendations are outside the scope of section 10(j) and are discussed in the next section. The following three recommendations are within the scope of section 10(j) and are required by the license: (1) operate the project in a run-of-river mode (certification condition 1), (2) develop a streamflow monitoring plan to ensure compliance with any minimum flow targets in the bypassed reach (Article 402), and (3) limit tree removal activities to the period between November 15 and March 31 for the protection of migratory birds and federally listed bat species (Article 406). The

[35] September 27, 2017 Commission staff transmittal of the executed PA.

[36] 16 U.S.C. § 803(j)(1) (2012).

[37] 16 U.S.C. §§ 661 *et seq.* (2012).

remaining recommendation that is within the scope of section 10(j), but not included in this license, is discussed below.

55. If the Commission believes that any section 10(j) 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 responsibilities of such agencies.[38] 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.

56. Commission staff made an initial determination that Interior's recommended minimum flows for the Hawks Nest bypassed reach may be inconsistent with the comprehensive planning standard of section 10(a)(1) and the public interest standard of section 4(e) of the FPA. By letter dated December 20, 2016, Commission staff advised Interior of its preliminary determination and attempted to resolve the apparent inconsistency. Staff held a 10(j) meeting with Interior via teleconference on March 8, 2017, to attempt to resolve the inconsistency. However, the inconsistency was not resolved, and Interior did not wish to revise its minimum flow recommendation.[39]

57. Interior states its recommended minimum flows for the Hawks Nest bypassed reach, which are 10 percent of mean monthly reservoir inflows and range from 367 to 1,870 cfs, provide what should be considered the minimum protection of aquatic resources. With regard to priority of flows, Interior recommends that the licensee first provide the existing minimum flow of 100 cfs, then provide 1,600 cfs to the powerhouse for generation to support the alloy plant, and then provide the remainder of the minimum flow (i.e., 267 to 1,770 cfs).

58. In the EA,[40] staff determined that the rate of increase in total wetted habitat for fish in the bypassed reach declines at flows greater than 300 cfs, and that there is little increase in wetted habitat for important fishery species, such as smallmouth bass, at flows higher than 250 to 300 cfs. Staff concluded that a continuous minimum flow of 250 cfs

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[38] 16 U.S.C. § 803(j)(2) (2012).

[39] *See* Summary of 10(j) Meeting filed on March 24, 2017.

[40] Final EA at 195.

from July through February and 300 cfs from March through June, as required by certification condition 2, would provide comparable habitat to that provided under Interior's recommendation, but would allow Hawks Nest Hydro to produce more power compared to Interior's recommendation.[41] In addition, the staff-recommended minimum flows (i.e., certification condition 2) would always be available because inflows would only be allocated to the powerhouse after the prescribed minimum flow is satisfied, which differs from Interior's recommended flow regime of only providing additional flow (beyond the existing baseline 100 cfs) to the bypassed reach when reservoir inflows exceed 1,700 cfs. Therefore, staff concluded, pursuant to sections 4(e) and 10(a), that the staff-recommended minimum flows would provide the appropriate balance between flows needed for aquatic resources and flows needed for project generation, and thus, would be in the public interest.

59. Therefore, Interior's recommendation is inconsistent with the comprehensive planning standard of sections 4(e) and 10(a) of the FPA, and 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

60. Section 10(a)(1) of the FPA[42] 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.

61. The remaining two 10(j) recommendations filed by Interior that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife, and therefore considered under the broad public interest standard of section 10(a)(1) of the FPA. The West Virginia DEP water quality certification conditions are also discussed below.

A. Consultation on Tree-clearing Activities

62. Interior recommends that the licensee, prior to any tree-clearing activities, consult with the FWS regarding potential impacts to any new occurrences of federally listed

[41] Final EA at 158-169, table 25.

[42] 16 U.S.C. § 803(a)(1) (2012).

threatened or endangered species not known to be present at the project (e.g., Virginia big-eared bat). In the EA,[43] staff concluded that upland forested habitats for bats would not be affected by normal project operation or maintenance activities and that limiting any necessary tree-removal activities at the project to between November 15 and March 31, as recommended by Interior, would avoid killing or injuring federally listed bat species. Article 406 requires the seasonal limitation on tree-clearing activities, and therefore, there is no need to include Interior's recommendation for additional consultation as a requirement of this license.

B. Eastern Hellbender

63. Interior recommends that the licensee coordinate with the FWS if eastern hellbender is discovered in the project area as this species has the potential to be listed in the near future under the ESA. Despite the hellbender's potential to occur in the project area, surveys targeting hellbender during the summer of 2013 found no evidence of the species (no live specimens or burrows observed) in the littoral zones of the project reservoir or the bypassed reach.[44] Therefore, this license does not adopt this recommendation.

C. Bald Eagles

64. Interior recommends that the licensee coordinate with the FWS in the event bald eagles are documented at or in the vicinity of the project. Hawks Nest Hydro proposes to conduct routine right-of-way/transmission corridor maintenance and hazardous tree/vegetation removal in accordance with the FWS' May 2007 National Bald Eagle Management Guidelines. In the event a bald eagle nest is observed within the Hawks Nest Project boundary in the future, Hawks Nest Hydro proposes to consult with the FWS on management measures that could be taken to avoid disturbance or other impacts to the species. In the EA,[45] staff concluded that developing a bald eagle protection plan that includes the provisions of Interior's recommendation and Hawks Nest Hydro's proposed measures, including filing, for Commission approval, a summary of consultation and any recommended mitigation measures, would protect the bald eagle and its habitat. Article 404 requires a bald eagle protection plan.

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[43] Final EA at 179-180.

[44] Final EA at 42.

[45] Final EA at 178-179.

D. Fish Passage

65. Interior recommends that the licensee consider the provision of fish passage at the project in order to allow the safe, timely and effective upstream and downstream passage of fish, namely American eel and skipjack herring.[46] As described in the EA,[47] there is no recent evidence that American eel, or other populations of diadromous fishes, are present in the project area. Therefore, due to the current lack of migratory populations in the immediate vicinity of the project, staff did not recommend provisions for fish passage at the project.[48] Consequently, this license does not include this measure. However, as discussed above, Article 403 reserves the Commission's authority to require fishways that may be prescribed by Interior.

E. Monetary Compensation for Fish Mortality

66. Hawks Nest Hydro proposes, and Interior recommends (10(j) recommendation 4) monetary compensation to West Virginia DNR for entrainment losses of fish at the project. In addition, West Virginia DEP certification condition 16 requires financial compensation for fish killed by project operation. Because entrainment and turbine mortality would be low (less than 10 percent) and are not expected to exert appreciable impact or damages to fish populations at the project, staff did not find justification for requiring entrainment mitigation.[49] Nevertheless, certification condition 16 and its requirement to provide monetary compensation for fish losses is included in this license because it is a mandatory condition. However, because compensation would constitute damages, and the Commission has no authority to adjudicate claims for or require payment of damages,[50] the condition may not be enforceable.

F. Running Buffalo Clover

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[46] After making its recommendation, Interior filed a letter with the Commission on October 5, 2016 stating that the need for passage for skipjack herring is a moot point given the species' status as introduced (as opposed to native) above Kanawha Falls.

[47] Final EA at 41-42.

[48] Final EA at 187.

[49] Final EA at 186-187.

[50] *See, e.g.*, *City of Jackson, Ohio, and Certain Ohio Municipalities*, 105 FERC ¶ 61,136, P 11 (2003).

67. Hawks Nest Hydro proposes, and Interior recommends (10(j) recommendation 7), to continue to implement running buffalo clover protection and management activities in accordance with an approved running buffalo clover management plan, under the direction of West Virginia DNR and in consultation with the FWS. Hawks Nest Hydro filed a Running Buffalo Clover Management Plan with its license application on December 29, 2015. As discussed above in the ESA section, Article 405 requires implementation of this plan.

G. Scheduled Recreation Flow Releases

68. Currently, there are no scheduled recreation flow releases at the project. Consistent with certification condition 13, Hawks Nest Hydro proposes and staff recommends, nine 6-hour releases of 2,200 cfs to 2,500 cfs into the Hawks Nest bypassed reach, with two days of weekend releases during the last two weekends of March and seven days of weekend releases in June, July, and August, beginning on the last weekend of June. Under this schedule, recreation flows would be released only after 1,600 cfs is first provided to the powerhouse for generation.

69. In its comments on the final EA, American Whitewater states that more scheduled releases should be required at the project and that staff might have overestimated generation loss and, therefore, overestimated the costs associated with American Whitewater's original proposal of 41 recreation releases. In its comments, American Whitewater requests, in addition to the staff-recommended nine releases, six releases in April and four releases during the first half of May.

70. In the EA, staff estimated generation losses from the proposed and recommended recreational releases based on a conservative assumption that all scheduled releases would result in a loss in generation at the maximum amount of flow within the ranges proposed or recommended, even though actual generation loss would depend on flow availability the day of the release.[51] Although staff noted in the EA that providing

[51] Final EA at E-13. Also, as noted in the final EA (table 25, pages 158-169), the generation loss would be 7,160 megawatt-hours (MWh) for the 41 releases, compared to a loss of 1,800 MWh for the nine releases recommended by staff. Although the footnote "q" in table 25 only notes that the 7,160 MWh loss was calculated based on a flow of 2,500 cfs for each release, the generation loss was in fact estimated for a flow of 2,500 cfs for releases between March and May, and for a flow of 2,000 cfs for releases between June and October (consistent with American Whitewater's proposal).

recreation releases in the spring and early summer was feasible,[52] it would likely still have some effect on generation.[53] In addition, West Virginia DEP states that releases in May and June are "believed seriously detrimental to spawning and recruitment success for smallmouth bass."[54] Thus, in determining the appropriate balance between the non-power resources with power resources, staff concluded that the nine scheduled releases, as proposed by Hawks Nest Hydro and required by certification condition 13, would enhance recreation opportunities that do not currently exist, would occur in the height of the recreation season when temperatures are warmer, and would avoid affects to smallmouth bass spawning.[55] However, it is expected that there will be available, unscheduled recreation flows at times in April and May,[56] which boaters will be informed of with the implementation of the flow-notification website. For these reasons, this license does not require scheduled recreation releases in April and May. The scheduled releases required by this license will provide a class III whitewater boating experience[57] at the intermediate boating level sought by American Whitewater, WVPRO, and private boaters during Hawks Nest Hydro's whitewater study.[58]

71. The certification states that the seven summer releases should generally occur during the last weekend of June and weekends in July and August, with no make-up days

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[52] Final EA at 124.

[53] Final EA at 122, table 15. Consistent with table 15, project inflows exceed the full capacity of the powerhouse (i.e., 10,000 cfs) by 2,000 to 2,500 cfs between approximately one-third to one-half of the time in April and May based on historical daily inflows from 1954-2014.

[54] West Virginia DEP's September 19, 2017 comments (explaining the basis for the modified certification conditions).

[55] Final EA at 181-182.

[56] Final EA at 122, table 15. The availability of flows in the bypassed reach is expected to remain the same in April and May under the project operation required by this license.

[57] The International Scale of River Difficulty is a rating system used to compare rivers around the world. It uses a class I (easy) to class VI (expert) ranking depending upon the difficulty of the rapids on the river.

[58] Final EA at 110-112 and 128.

beyond the last weekend of August. The certification does not include a specific release schedule or additional parameters to determine the timing of the releases. Therefore, in the draft articles in the EA,[59] staff recommended that the summer releases occur on consecutive weekends as early in the release season as possible in order to take advantage of the time when flows are more likely to be available. Article 407 requires that the summer releases occur on consecutive weekends.

72. Many factors (e.g., time of year, flow levels, public access) contribute to providing a successful flow release program; therefore, staff recommended in the EA[60] that Hawks Nest Hydro develop a recreation flow release plan that incorporates the following provisions: (1) procedures and protocols related to scheduled recreation flow releases (certification condition 11); (2) a flow information website (certification condition 4); (3) annual meetings to schedule releases (certification condition 12); (4) a provision for monitoring use during the releases; (5) post-release evaluations held at the conclusion of each of the first three years of releases, including consultation with local outfitters and appropriate agencies regarding any recommended changes to river access, flow information, instream flows, or changes needed due to high/low participation; (6) every six years thereafter, convene a meeting with the consulting entities to discuss any recommended changes to the plan that may be needed; and (7) a report summarizing the consultation and including recommendations, if any, that would result in changes to the recreation flow release plan. Article 407 of this license requires the recreation flow release plan.

H. Recreation Facility Management

73. In addition to maintaining the two existing project recreation facilities (Cotton Hill site and Hawks Nest Tailrace site), Hawks Nest Hydro proposes, and the certification requires, the following recreation enhancements at the project: (1) maintain a stage gage in the vicinity of the Cotton Hill Bridge for providing real-time flow information in the bypassed reach via the internet on a website to facilitate whitewater boating opportunities (certification conditions 3 and 4); (2) open an existing trail to biking and hiking traffic, beginning approximately 1,000 feet downstream of the mouth of Mill Creek, near Hawks Nest State Park, and continuing downstream to the Hawks Nest Dam, where the trail would connect with the access road between Hawks Nest Dam and the Cotton Hill site, and provide, upstream of the Hawks Nest Dam boat barrier, an accommodation for carryable boat portage using the newly opened trail (certification condition 5); (3) provide accommodations for improved boating access near the Cotton Hill Bridge (certification condition 6); (4) make improvements at the Cotton Hill site (e.g., toilet

[59] Final EA at Appendix A.

[60] Final EA at 182-185.

facilities, picnic facilities, and improvements to parking and signage) (certification condition 7); and (5) establish a take-out location on the New River in the Gauley Bridge area (certification condition 9).

74. In its comments on the final EA, American Whitewater states that pedestrian access to the dam from Cotton Hill and from Mill Creek both require traversing long distances that make access difficult for groups carrying rafts, persons with disabilities, and others that have a difficult time carrying boats. American Whitewater requests that the Commission follow its draft EA recommendation and reinstate the post-licensing study of the shuttle and vehicular access options that would allow boaters access to a put-in location at the base of the dam.

75. In the final EA, staff recommended multiple access improvements that will provide increased opportunities for a variety of recreational users.[61] First, providing improved river access at the Cotton Hill site would allow rafters and kayakers the opportunity to access the bypassed reach without having to walk 1.25 miles to the dam. In addition, maintaining the access road to the dam as a pedestrian-friendly trail, would continue to provide boaters access to the top section of the bypassed reach. And lastly, opening the trail above the dam would create additional upstream access via Mill Creek and provide a third option for paddlers to access the bypassed reach by portaging around the dam, as well as provide unimpeded access for hikers and bikers past the dam towards Mill Creek, and eventually to the New River Gorge Bridge.[62] While some boaters may not be able to carry their boats around the dam or along the dam access road in order to enter the bypassed reach immediately below the dam, the improved access at the Cotton Hill site will allow boaters to enter the bypassed reach without having to traverse a long distance. The provision of three access options with varying degrees of difficulty will allow boaters to choose which site provides the best option for accessing the bypassed reach. Adding vehicular access as a fourth option would increase safety risks for hikers and bikers and unnecessarily increase the operation and maintenance cost of providing access.

76. In its comments on the final EA, American Whitewater states that the Cotton Hill site has inadequate parking to accommodate the recreational use that will likely increase with the addition of picnic facilities, restrooms, a trailhead, and changing rooms. American Whitewater states that the topography limits expansion and overflow parking options, and that reliance on this small and limited site to meet significant anticipated

[61] Final EA at 183-184.

[62] Commission staff's September 15, 2017 memorandum to public files (explaining that the Mill Creek section of trail to be opened would connect the Cotton Hill site to the New River Gorge Bridge).

demand is unreasonable and without adequate basis. The size and space limitations at Cotton Hill will be addressed during the design of the improvements to the site. The certification requires Hawks Nest Hydro to consult with West Virginia DNR on the design of the boating access improvements at Cotton Hill. However, before any construction commences, Hawks Nest Hydro will submit the design to the Commission for review and approval, during which time the adequacy of the site design, including parking accommodations, will be evaluated.

77. Hawks Nest Hydro proposes, as required by certification condition 11, to update its recreation management plan with descriptions of the recreation facilities and access opportunities within and immediately adjacent to the project. Although certification condition 11 requires updating an existing recreation management plan, the certification condition did not identify the specific measures to be included in the plan. Therefore, staff recommended in the EA[63] that Hawks Nest Hydro's recreation management plan include: its proposed recreation enhancements; operation and management measures for the project recreation sites; an inventory of amenities at project recreation sites; and maps showing existing facilities and any proposed enhancements. Article 408 requires the plan.

I. Project Operation Compliance Monitoring

78. Hawks Nest Hydro proposes, and certification conditions 1 and 15 require, that the project operate in a run-of-river mode and maintain a seasonal ramping rate restriction. Certification condition 2 requires, and staff recommends in the EA,[64] certain minimum flows for the bypassed reach. Consistent with certification condition 13, Hawks Nest Hydro proposes to provide nine scheduled recreation releases into the bypassed reach. Although Hawks Nest Hydro proposes to develop a stream flow monitoring plan, and certification condition 3 requires maintaining a gage in the bypassed reach near the Cotton Hill Bridge and providing the information in real-time via the internet, Hawks Nest Hydro did not explain how it would document compliance with run-of-river operation, seasonal ramping rate restrictions, minimum flows, and recreation releases. In the EA,[65] staff recommended that Hawks Nest Hydro be required to develop an operation compliance monitoring plan to document compliance with the above requirements. Article 402 requires the operation compliance monitoring plan.

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[63] Final EA at 184-185.

[64] Final EA at 176-177.

[65] Final EA at 177-178.

J. Project Boundary

79. Hawks Nest Hydro proposes to remove a section of Highway 16, a total of 12.1 acres, from the existing project boundary because the highway is not needed for project purposes. In addition, Hawks Nest Hydro proposes to add 2.15 acres to the project boundary on the north side of the reservoir upstream of Mill Creek and add 0.42 acre on the south side of the reservoir across from Mill Creek to encompass the normal operating range of the reservoir (i.e., elevation 819.5 feet). Hawks Nest Hydro also proposes to remove 4.96 acres (mostly water) and add 0.91 acre (mostly water) at the downstream end of the project boundary so that the boundary crosses the river on a straight line and follows the shoreline (at elevation 655 feet) on the north side of the river. The areas to be removed from the project boundary are not needed for project purposes, and the areas to be added would allow the project boundary to encompass the normal operating range of the reservoir, as well as to generally follow the shoreline at the downstream end of the project, staff concluded in the EA that the proposed adjustments of the project boundary would be consistent with Commission policy.[66] Therefore, this order approves the removal of 17.06 acres and the addition of 3.48 acres to the project boundary. Because these adjustments are already shown in the project boundary filed with the license application (Exhibit G), the proposed project boundary is approved (Ordering Paragraph (C)).

ADMINISTRATIVE PROVISIONS

A. Annual Charges

80. 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.

B. Exhibit F and G Drawings

81. The Exhibit F and G drawings filed on December 29, 2015 are approved and made part of the license (Ordering Paragraph (C)). The Commission requires licensees to file sets of approved project drawings in electronic file format. Article 202 requires the filing of these drawings.

C. Amortization Reserve

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

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[66] Final EA at 185-186; *see* 18 C.F.R. § 4.41(h)(2) (2017).

D. Headwater Benefits

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

E. Use and Occupancy of Project Lands and Waters

84. Requiring a licensee to obtain prior Commission approval for every use and occupancy of project land would be unduly burdensome. Therefore, Article 410 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.

F. As-Built Exhibits

85. Where new construction or modifications to the project are involved (e.g., a new take-out facility on the New River near the Gauley Bridge), the Commission requires the licensee to file revised exhibits of project features as-built. Article 205 provides for the filing of these exhibits.

G. Modification of Project Facilities

86. Article 301 requires the licensee to coordinate any modifications that would affect project works or operation resulting from environmental requirements, with the Commission's Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer.

H. Commission Approval of Resource Plans and Filing of Reports

87. In Appendix A, certain conditions in the certification either do not require the licensee to file plans with the Commission or do not provide for consultation with the appropriate agencies during plan development, or to file copies of required reports with the Commission. Therefore, Article 401 requires the licensee to: (a) consult with the other agencies during plan development; (b) file the plans with the Commission for approval, and (c) file reports with the Commission.

STATE AND FEDERAL COMPREHENSIVE PLANS

88. Section 10(a)(2)(A) of the FPA,[67] 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.[68] Under section 10(a)(2)(A), federal and state agencies filed 22 comprehensive plans that address various resources in West Virginia. Of these, the staff identified and reviewed eight comprehensive plans relevant to this project.[69] No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

89. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,[70] Commission staff evaluated Hawks Nest Hydro's record as a licensee for these areas: (1) conservation efforts; (2) compliance history and ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission services; (7) cost effectiveness of plans; and (8) actions affecting the public. This order adopts staff's findings in each of the following areas.

A. Conservation Efforts

90. Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Hawks Nest Hydro sells the project's energy to WVAM's alloy plant in Alloy, West Virginia. Given the limits of its ability to influence users of the electricity generated by the project, Hawks Nest Hydro complies with section 10(a)(2)(C) of the FPA.

B. Compliance History and Ability to Comply with the New License

91. Based on a review of Hawks Nest Hydro's compliance with the terms and conditions of the existing license, Hawks Nest Hydro's overall record of making timely filings and complying with its license is satisfactory. Therefore, Hawks Nest Hydro can satisfy the conditions of a new license.

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[67] 16 U.S.C. § 803(a)(2)(A) (2012).

[68] Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2017).

[69] The list of applicable plans can be found in section 5.4 of the final EA.

[70] 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2012).

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

92. Hawks Nest Hydro's record of management, operation, and maintenance of the Hawks Nest Project pursuant to the requirements of 18 C.F.R. Part 12 and the Commission's Engineering Guidelines and periodic Independent Consultant's Safety Inspection Reports demonstrate that the project works are safe, and that there is no reason to believe that Hawks Nest Hydro cannot continue to safely manage, operate, and maintain these facilities under a new license.

D. Ability to Provide Efficient and Reliable Electric Service

93. Staff has reviewed Hawks Nest Hydro's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Staff's review indicates that Hawks Nest Hydro regularly inspects the project's turbine-generator units to ensure they continue to perform in an optimal manner, schedules maintenance to minimize effects on energy production, and since the project has been in operation, has undertaken several initiatives to ensure the project is able to operate reliably into the future. Therefore, Hawks Nest Hydro is capable of operating the project to provide efficient and reliable electric service in the future.

E. Need for Power

94. The Hawks Nest Project was built in the 1930s and provides 25-Hz power for the smelter furnaces at the alloy plant in Alloy, West Virginia. The alloy plant contains five submerged arc furnaces, two of which only operate at 25 Hz, one which only operates at 60 Hz, and two which can switch between 25 Hz and 60 Hz depending on the availability of power from the Hawks Nest Project. The alloy plant can convert a certain amount of 25-Hz power to 60-Hz power and vice versa using frequency converters.

95. The 25-Hz integrated system between the Hawks Nest Project and the alloy plant is an insulated electric system tied to the regional 60-Hz system, operated by the Appalachian Power Company, by frequency converters at the Alloy Substation, which is located at the alloy plant. A certain amount of real power[71] can be transferred from the 60-Hz system to the 25-Hz system through the frequency converters. However, reactive

[71] Real power is the energy that is capable of performing work in electrical devices. It is also called "active power."

power[72] cannot be transferred through the frequency converters. Any reactive power demand at 25 Hz needs to be totally supported by a reactive power source at 25 Hz. Some 25-Hz electricity must always be available to provide the proper short-circuit levels for the frequency converters. In addition, large submerged arc furnaces at the alloy plant are strongly fluctuating consumers of reactive power, and reactive power requirements can fluctuate significantly during the smelting process with the tendency for the furnace's reactive and real power requirements to become more unstable as the molten metal accumulates in the furnace prior to extraction from the furnace.[73] The critical voltage regulation of the 25-Hz system is maintained by continuous generation from two Hawks Nest turbine-generator units, providing a minimum generation (i.e., real power) and needed reactive power.

96. The project is located in the PJM[74] region of the North American Electric Reliability Corporation (NERC). To assess the need for power, staff also looked at the need for power in the operating region in which the project is located. NERC annually forecasts electrical supply and demand in the national and regional level for a 10-year period. NERC's most recent report on annual supply and demand projections for the PJM region indicates that total summer demand is projected to grow at an annual average compound rate of 0.73 percent over the 10-year planning period from 2017-2026. Therefore, the project will help continue to meet the alloy plant's power needs, and displace the need for power in the PJM region.

F. Transmission Services

97. The project includes two parallel approximately 5.5-mile-long, 69-kV transmission lines that extend from a substation at the Hawks Nest powerhouse to the Alloy Substation at the alloy plant, with the Alloy Substation being an interconnection point for the regional grid. Hawks Nest Hydro is proposing no changes that would affect its own or other transmission line services in the region.

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[72] Reactive power is needed to maintain the voltage as well as electric and magnetic fields in electrical equipment.

[73] *See* Hawks Nest Hydro's August 14, 2017 response to Commission staff's May 23, 2017 additional information request.

[74] A regional transmission organization that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.

G. Cost Effectiveness of Plans

98. Hawks Nest Hydro plans to make a number of recreation facility improvements and enhancements of environmental resources affected by the project. Based on Hawks Nest Hydro's record as an existing licensee, these plans are likely to be carried out in a cost-effective manner.

H. Actions Affecting the Public

99. Hawks Nest Hydro provided opportunities for public involvement in the development of its application for a new license for the Hawks Nest Project. In addition, during the previous license period, Hawks Nest Hydro operated the project in a manner that provided recreation opportunities and facilities to the surrounding community and visitors to the area.

PROJECT ECONOMICS

100. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,[75] 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.

101. In applying this analysis to the Hawks Nest Project, staff considered three options: no-action alternative, Hawks Nest Hydro's proposal, and the project as licensed herein. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 102 MW, and generates an average of 544,253 megawatt-hours (MWh) of electricity annually. The average annual project cost is about $19,092,810, or $35.08/MWh. When an estimate of average generation is multiplied by the alternative power cost of $30.00/MWh,[76] the total value of the project's power is

[75] 72 FERC ¶ 61,027 (1995).

[76] The alternative power cost is based on a flat rate of $30/MWh for selling project power to the alloy plant.

$16,327,590 in 2017 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.[77] Therefore, the project costs $2,765,220, or $5.08/MWh, more to produce power than the likely alternative cost of power.

102. As proposed by Hawks Nest Hydro, the levelized annual cost of operating the project is $19,234,020, or $35.76/MWh. The proposed project would generate an average of 537,861 MWh of energy annually. Multiplying the estimate of average generation by the alternative power cost of $30.00/MWh, yields a total value of the project's power of $16,135,830 in 2017 dollars. Therefore, in the first year of operation, the project would cost $3,098,190, or $5.76/MWh, more than the likely alternative cost of power.

103. As licensed herein with mandatory conditions and staff measures, the levelized annual cost of operating the project will be about $19,285,820, or $36.24/MWh. The proposed project will generate an average of 532,110 MWh of energy annually. When this estimate of average generation is multiplied by the alternative power cost of $30.00/MWh, the result is a total value of the project's power of $15,963,300 in 2017 dollars. Therefore, in the first year of operation, project power will cost $3,322,520, or $6.24/MWh, more than the likely alternative cost of power.

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

105. 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

106. Sections 4(e) and 10(a)(1) of the FPA[78] require the Commission to give equal consideration to the power development purposes and to the purposes of energy

[77] Details of staff's economic analysis for the project as licensed herein, and for the various alternatives, are included in the final EA. All costs here have been escalated by staff to 2017 dollars.

[78] 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

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.

107. 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 Hawks Nest 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.

108. Based on an independent review and evaluation of the Hawks Nest Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the final EA, the proposed Hawks Nest Project, with the mandatory conditions and staff-recommended modifications and measures, is best adapted to a comprehensive plan for improving or developing the New River.

109. This alternative was selected because: (1) issuance of a new license will serve to maintain a beneficial and dependable source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreation, cultural, and socioeconomic resources; and (3) the 102 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

110. Section 15(e) of the FPA[79] provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. In comments filed on November 20, 2017, American Whitewater argues that the license term for the project should be limited to 30 years.

111. On October 19, 2017, the Commission established a 40-year default license term policy for original and new licenses, effective as of October 26, 2017.[80] The Policy Statement provides for exceptions to the 40-year default license term under certain

[79] 16 U.S.C. § 808(e) (2012).

[80] *Policy Statement on Establishing License Terms for Hydroelectric Projects*, 160 FERC 161 ¶ 61,078 (2017) (Policy Statement); 82 Fed. Reg. 49,501 (2017).

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

112. The first exception to the 40-year default license term applies to the Hawks Nest Project. There are eight existing FERC-licensed hydroelectric projects in the New-Kanawha River Basin.[81] Immediately downstream of the Hawks Nest Project is the Glen Ferris Project, which is being relicensed concurrently with the Hawks Nest Project. Downstream of the Hawks Nest and Glen Ferris Projects are the London-Marmet Hydroelectric Project No. 1175 and Winfield Hydroelectric Project No. 1290, which both have license terms that expire on January 31, 2064, in approximately 46 years. As explained in the Policy Statement, it has been the Commission's policy to coordinate, to the extent feasible, license terms for projects in the same river basin.[82] Therefore, in order to coordinate the license terms for the Hawks Nest, Glen Ferris, London-Marmet, and Winfield Projects, the license expiration date for the Hawks Nest Project is set at January 31, 2064.

113. Because the term of the current license does not expire until December 31, 2017, this license order is not effective until January 1, 2018.[83]

The Director Orders:

(A) This license is issued to Hawks Nest Hydro, LLC (licensee) to operate and maintain the Hawks Nest Hydroelectric Project, effective January 1, 2018, and expiring January 31, 2064. 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.

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[81] *See* table H-1 in Exhibit H of the application.

[82] Policy Statement at 3.

[83] For this reason, the various deadlines in the license articles are measured from the January 1, 2018 effective date of this license, rather than from the order issuance date.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibits G-1, G-2, G-3, and G-4 filed on December 29, 2015:

Exhibit G Drawing	FERC Drawing Number P-2512-	Description
G-1	11	Project Boundary Map
G-2	12	Project Boundary Map
G-3	13	Project Boundary Map
G-4	14	Project Boundary Map

(2) Project works consisting of: (1) a 948-foot-long concrete-gravity dam with a crest elevation of 795.0 feet National Geodetic Vertical Datum of 1929 (NGVD29); (2) 14 ogee-type spillway bays extending almost the entire length of the dam, each with a 25-foot-high by 50-foot-wide Stoney-type steel lift gate and separated by 9-foot-wide concrete piers; (3) a 243-acre reservoir with a gross storage capacity of 7,323 acre-feet at a normal pool elevation of 819.0 feet NGVD29; (4) an intake structure located on the north abutment and consisting of a 110-foot-wide by 50-foot-high trashrack structure and a Stoney-type 42-foot-high by 50-foot-wide bulkhead intake gate; (5) a 16,240-foot-long tunnel that runs along the north side of the river to convey water from the intake to the powerhouse downstream on the New River; (6) a 600-foot-long by 170-foot-wide surge basin located at a point in the tunnel approximately 60 percent of the distance from the intake to the powerhouse; (7) a 116-foot-diameter and 56-foot-high differential surge tank located at the downstream end of the tunnel; (8) a main 30-foot-diameter, 107-foot-long, steel penstock connecting to a manifold leading to five steel penstocks, each 14 feet in diameter, and of varying lengths of up to 132 feet; (9) a 210-foot-long by 74.5-foot-wide powerhouse containing four turbine-generator units, each with a rated capacity of approximately 25.5 megawatts; (10) a substation/switchyard located next to the powerhouse containing four 6.9/69-kilovolt (kV) step-up transformers; (11) two parallel approximately 5.5-mile-long, 69-kV transmission lines; and (12) 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 Exhibit A (Pages 23 through 32 of the license application) filed on December 29, 2015.

Exhibit F: The following Exhibit F drawings filed on December 29, 2015:

Exhibit F Drawing	FERC Drawing Number P-2512-	Description
F-1	1	Tunnel Location and Sections
F-2	2	Dam General Plan and Downstream Elevation
F-3	3	Dam Upstream Elevation, East Cut-Off Wall Sections and Spillway Sections
F-4	4	Tunnel Intake Masonry Details, Sectional Plan
F-5	5	Tunnel Intake Masonry Details, Sectional Elevation
F-6	6	Surge Basin General Plan and Longitudinal Section
F-7	7	Surge Tank and Tunnel Connection Plan and Elevation
F-8	8	Manifold and Penstocks Steel and Concrete Casing
F-9	9	Powerhouse Cross Section
F-10	10	Powerhouse Longitudinal Section

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

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

(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-3, (October 1975), entitled "Terms and Conditions of License for Constructed Major Project

Affecting Navigable Waters of the United States" (*see* 54 F.P.C. 1792 *et seq*.), as reproduced at the end of this order, and the following additional articles:

Article 201. *Administrative Annual Charges*. The licensee must pay the United States annual charges, effective the first day of the month in which the license becomes effective, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purposes of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 102 megawatts.

Article 202. *Exhibit Drawings.* Within 45 days of the effective date of this license, as directed below, the licensee must file two sets of the approved exhibit drawings and geographic information system (GIS) data in electronic file format on compact disks.

(1) 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-2512-1 through P-2512-14) must be shown in the margin below the title block of the approved drawing. The licensee must file two separate sets of exhibit drawings in electronic format on compact disks with the Secretary of the Commission, ATTN: OEP/DHAC. Exhibit F drawings must be segregated from other project exhibits, and identified as **Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. §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-2512-1, F-1, Tunnel Location and Sections, 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 minimum)
DRAWING SIZE FORMAT – 22” x 34” (minimum), 24” x 36” (maximum)
FILE SIZE – less than 1 megabyte desired

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points (i.e., latitude and longitude coordinates, or state plane coordinates). The points must be arranged in a triangular format for GIS georeferencing the project boundary drawing to the polygon data, and must be based on a standard map coordinate system. The spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) must be identified on the drawing and

each reference point must be labeled. In addition, each project boundary drawing must be stamped by a registered land surveyor.

(2) The licensee must file two separate sets of the project boundary GIS data on compact disks with the Secretary of the Commission, ATTN: OEP/DHAC. The data must be in a georeferenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format). The filing must include both polygon data and all reference points shown on the individual project boundary drawings. An electronic boundary polygon data file(s) is required for each project development. Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The georeferenced electronic boundary data file must be positionally accurate to ±40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) must include: FERC Project Number, data description, date of this license, and file extension in the following format [P-2512, boundary polygon/or point data, MM-DD-YYYY.SHP]. The data must be accompanied by a separate text file describing the spatial reference for the georeferenced data: map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum (i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name must include: FERC Project Number, data description, date of this license, and file extension in the following format [P-2512, project boundary metadata, MM-DD-YYYY.TXT].

Article 203. *Amortization Reserve*. Pursuant to section 10(d) of the Federal Power Act, 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. The licensee must set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee must deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee must set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee must maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves must be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee’s long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios must be the weighted average cost of long-term debt and preferred stock 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 204. *Headwater Benefits.* If the licensee's project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the prior license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee must reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 205. *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. *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 – 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 401. *Commission Approval and Reporting*.

(a) Requirement to File Plan.

The licensee must file with the Commission the following plan as required by the West Virginia Department of Environmental Protection (West Virginia DEP) water quality certification (certification).

West Virginia DEP Certification Condition No.	Plan Name	Commission Due Date
11	Recreation Management Plan	Within 18 months of the effective date of the license

The licensee must file the plan with the Commission for approval. The filing must include documentation that the licensee developed the plan in consultation with, and has received approval from, the West Virginia DEP and the West Virginia Division of Natural Resources (West Virginia DNR), as appropriate. The Commission reserves the right to make changes to any plan filed. The licensee must not implement the plan prior to Commission approval. Upon Commission approval, the plan becomes a requirement of the license, and the licensee must implement the plan or changes in project operation or facilities, including any changes required by the Commission.

(b) Requirement to File Report.

The licensee must file with the Commission the following report as required by the West Virginia DEP certification.

West Virginia DEP Certification Condition No.	Report Name	Commission Due Date
14	Report on Short Duration Spiking Flow Increases in the Bypassed Reach	Within 18 months of the effective date of the license

The licensee must file with the Commission documentation of any consultation with the West Virginia DEP and the West Virginia DNR regarding the report, and copies of any comments and recommendations made by the agencies. The Commission reserves the right to require changes to project operation or facilities based on the information contained in the report and any other available information.

Article 402. *Operation Compliance Monitoring*. Within six months of the effective date of this license, the licensee must file with the Commission, for approval, an Operation Compliance Monitoring Plan for the project. The plan must include, but not necessarily be limited to, the following:

(1) provisions to monitor compliance with the operational requirements of the license, including operating the project in a run-of-river mode (West Virginia Department of Environmental Protection's (West Virginia DEP) water quality certification (certification) condition 1); providing the required minimum flows to the Hawks Nest bypassed reach (certification condition 2); maintaining the ramping rate restrictions (certification condition 15); ensuring that recreation flow releases are of the appropriate magnitude and duration (certification condition 13); and continuing to maintain a real-time stage gage in the vicinity of the Cotton Hill Bridge (certification condition 3);

(2) a description of the steps the licensee will take to ensure run-of-river operation continues during planned and emergency shutdowns;

(3) a description of all gages or recording devices that will be used to monitor operation compliance, including the method of calibration of each gage and/or measuring device, and the frequency of recording;

(4) a provision to maintain a log of project operation;

(5) a provision for reporting any deviations during normal operation and in the event of an emergency, along with proposed actions that will be taken to avoid reoccurrence of the deviation; and

(6) an implementation schedule.

The licensee must prepare the plan after consultation with the U.S. Fish and Wildlife Service, U.S. Geological Survey, West Virginia DEP, and 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. Implementation of the plan must not begin until the plan is approved by the Commission. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 403. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 404. *Bald Eagle Protection.* Within six months of the effective date of this license, the licensee must file with the Commission, for approval, a plan to minimize impacts to bald eagle habitat. The bald eagle protection plan must include, at a minimum, provisions to: (1) conduct routine right-of-way/transmission corridor maintenance and minimal hazardous tree/vegetation removal consistent with the May 2007 U.S. Fish and Wildlife Service's (FWS') National Bald Eagle Management

Guidelines; and (2) consult with FWS' West Virginia Field Office and the West Virginia Division of Natural Resources (West Virginia DNR) if a nest is discovered and file, for Commission approval, a summary of consultation and any recommended mitigation measures.

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

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

Article 405. *Running Buffalo Clover Management*. The Running Buffalo Clover Management Plan, filed December 29, 2015, is approved and made part of this license and may not be amended without prior Commission approval. Upon the effective date of this license, the licensee must implement the Running Buffalo Clover Management Plan.

Article 406. *Timing of Tree Clearing During Maintenance.* To minimize impacts to federally listed bat species, including the Indiana bat, northern long-eared bat, and Virginia big-eared bat, and migratory bird species, the licensee must limit tree clearing associated with maintenance activities and recreation use enhancements to between November 15 and March 31.

Article 407. *Recreation Flow Releases.* Within six months of the effective date of this license, the licensee must file, for Commission approval, a recreation flow release plan, consistent with West Virginia Department of Environmental Protection's (West Virginia DEP) water quality certification condition 11 (procedures and protocols related to scheduled recreation flow releases), that includes certification conditions 4 (flow notification website), 12 (recreation flow release scheduling), and 13 (recreation release numbers and flow amounts). The plan must also include the following additional measures:

(1) A provision for scheduling summer releases on consecutive weekends as early in the release season as possible to take advantage of the time when adequate flows are more likely to be available.

(2) Guidelines for participant safety while recreating within the bypassed reach. Guidelines must be posted on the flow notification website.

(3) A provision for post-release evaluation meetings to be held at the conclusion of each of the first 3 years of releases. If, as a result of consultation with the entities listed in this article, the licensee determines that revisions to the recreation flow release plan are necessary, the licensee must submit a revised plan for Commission approval by December 31 of the third year of the scheduled recreation releases. Additionally, every six years following the initial three year evaluation period, and throughout the term of the license (years 9, 15, 21, 27, 33, 39, and 45), a similar evaluation of the recreation flow release plan for the previous six years must be held with the consulting entities. Within 30 days of each 6-year evaluation meeting, the licensee must file with the Commission a report that summarizes the meeting and include recommendations, if any, to change the scheduled recreation flows or the recreation flow release plan. Hawks Nest Hydro must submit a revised plan for Commission approval if it proposes any changes to the plan.

(4) A provision for posting the schedule of releases for the upcoming season on its flow notification website by March 1, prior to the start of the scheduled releases. To the extent that such information is available, the licensee must post a range of 1- to 3-day forecasts of flow levels in the bypassed reach when flows are not scheduled for recreation. Any reduction or cancellation of a scheduled flow release must also be posted on the flow notification website.

The licensee must prepare the plan after consultation with the West Virginia Division of Natural Resources, West Virginia DEP, WVA Manufacturing, LLC, American Whitewater, and West Virginia Professional River Outfitters. 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 agency comments are accommodated by the plan. The licensee must allow a minimum of 30 days for 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 and schedule. Implementation and/or modification of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 408. *Recreation Management*. Within six months of the effective date of this license, the licensee must file, for Commission approval, a recreation management

plan, consistent with West Virginia Department of Environmental Protection's (West Virginia DEP) water quality certification conditions 11 (updated recreation management plan), 3 (maintenance of the stage gage at Cotton Hill), 4 (providing flow information in the bypassed reach via a website), 5 (through-access and portage), 6 (improved boating access at Cotton Hill), 7 (facility improvements at Cotton Hill), 8 (maintenance of the existing tailrace fishing access area), and 9 (take-out location). The recreation management plan must also include the following: provisions for ongoing operation and maintenance of the sites, an inventory of amenities at the sites, and maps showing existing facilities and any proposed enhancements.

The plan must also include a provision for consultation every six years, consistent with Form 80 timing, with the entities listed in this article, regarding the need for additional measures. If any revisions to the recreation management plan are needed, the licensee must file an updated plan by the end of the same year the Form 80 is due, for Commission approval, which includes a description of the recommended modifications with a schedule for implementing said modifications.

The licensee must prepare the plan after consultation with the West Virginia Division of Natural Resources, West Virginia DEP, WVA Manufacturing, LLC, American Whitewater, and West Virginia Professional River Outfitters. 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 agency comments are accommodated by the plan. The licensee must allow a minimum of 30 days for agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

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

Article 409. *Programmatic Agreement*. The licensee must implement the "Final Programmatic Agreement Between the Federal Energy Regulatory Commission and the West Virginia State Historic Preservation Office for Managing Historic Properties that may be Affected by Issuing a New License to the Licensee for the Continued Operation of the Hawks Nest Hydroelectric Project in Fayette County, West Virginia," executed on September 8, 2017, and including but not limited to the Historic Properties Management Plan (HPMP), filed December 29, 2015, for the project. In the event that the Programmatic Agreement is terminated, the licensee must continue to implement the

provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

Article 410. *Use and Occupancy*. (a) In accordance with the provisions of this article, the licensee must have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee must also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee must take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

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

licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee must file with the Commission a 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 lands or 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 Federal Power Act, 16 U.S.C. § 825*l* (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2017). 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 must constitute acceptance of this order.

Terry L. Turpin
Director
Office of Energy Projects

Form L-3
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

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

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

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

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

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not

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

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

Article 6. 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 stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may 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 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 clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under

the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

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

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

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

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

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

discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

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

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

APPENDIX A

West Virginia Department of Environmental Protection
Water Quality Certification Conditions
Filed August 15, 2017

1. The development shall operate in a "run-of-the-river" mode.

2. The licensee will maintain a minimum flow of 300 cubic feet per second (cfs) flows into the Hawks Nest bypass reach beginning March 1 through June 30, and a minimum of 250 cfs for all other months.

3. The licensee shall continue to maintain a stage gauge in the vicinity of the Cotton Hill bridge (preferably operated by the US Geological Survey) and have the information available via the internet real-time. The stage/flow relationship (up to 3,000 cfs) must be spot-checked against actual USGS readings once annually, and updated if conditions warrant.

4. The licensee must develop and maintain a central public website for information relevant to flows in the bypass reach, including links to available gauges, applicable conversions or calculations to derive real-time flow information, and relevant forward-looking operational information (including that which may be available from upstream dams).

5. In lieu of public vehicular access from the Cotton Hill Bridge to the Hawks Nest Dam, and within 18 months of new license issuance, the licensee shall open to biking and hiking traffic the existing trail/right of way beginning approximately 1,000 feet downstream of the mouth of Mill Creek, near Hawk Nest State Park and continuing downstream to the Hawks Nest Dam. The licensee must design and construct safe passage for biking/hiking, during daylight hours, past the intake gate/dam area to allow for connection of the road/trail from the Cotton Hill bridge upstream to the mouth of Mill Creek. Upstream of the dam's boat barrier, the trail must have an accommodation for carryable boat portage. The newly opened trail portion will be approximately 0.6-mile long and maintained by Hawks Nest Hydro, LLC. With good cause, and with 30-day advanced notification to West Virginia Division of Natural Resources - Wildlife Resources Section (WVDNR-WRS), Hawks Nest Hydro, LLC may close the trail to the public temporarily if needed for facility construction/maintenance. The trail may also be closed for short duration without advanced notification for operation and maintenance activities, large equipment access, emergency, or unforeseen safety conditions and will be reopened immediately after such condition has passed. Plans must be submitted to and approved by WVDNR-WRS prior to construction.

6. Provide one-time funding of $50,000, by June 2nd following new license issuance, for improvements or enhancements to the Cotton Hill Bridge Day-Use Area (on lands owned by WVDNR-WRS or Hawks Nest Hydro, LLC) with specific improvements to be identified in consultation with WVDNR-WRS. Provided however, the improvements must include accommodations for improved boating access. This boating access shall serve in lieu of the proffered shuttle access to the dam during scheduled whitewater release.

7. Within 18 months of new license issuance, and consistent with the new license, identify, design, construct and maintain improvements to the Cotton Hill Bridge Day-Use Area parking area (on lands owned by Hawks Nest Hydro, LLC). This area is managed by WVDNR-WRS, therefore, improvements would need to be identified in consultation with WVDNR-WRS and are generally expected to include a seasonal toilet/changing facility, new picnic facilities, and improvements to parking and signage.

8. The licensee shall maintain angler access to the existing Hawks Nest Tailrace Fishing Access Area and continue to allow angler access to the bypass reach, with bypass reach access maintained by WVDNR-WRS as set forth in Condition 10 below.

9. In lieu of a take-out location at the powerhouse tailrace area the licensee shall work in conjunction with WVDNR-WRS to acquire and develop, or long term lease, a take-out location on the New River in the Gauley Bridge area within approximately 18 months of new license issuance (recognizing the goal is to have access available prior to the first scheduled whitewater releases and that actual transaction durations may be shorter or longer). Funding for the purchase/lease and development shall be provided by Hawks Nest Hydro, LLC. The amount paid shall be subject to an appraisal and be consistent with costs for other access site purchases/leases made by WVDNR-WRS. WVDNR-WRS will maintain the site with funding set forth in Condition 10 below.

10. By June 2nd of each year following new license issuance, provide annual funding in the amount of $25,000, to WVDNR-WRS for maintenance of and enhancement to recreation facilities on project-associated lands that have been deeded to, or leased by, WVDNR-WRS. This value will be adjusted for inflation annually based on the Bureau of Labor's Consumer Price Index.

11. Within 18 months of new license issuance, the licensee shall develop an updated Recreation Management Plan to be submitted to and approved by WVDNR-WRS. The plan shall describe access to recreation areas and detail facilities within the

project boundary or directly adjacent to the project boundary. The plan shall further detail procedures and protocols related to the scheduled recreation flow releases.

12. Beginning in the year of the first planned whitewater release, and by January 31st of that year, and each year thereafter, the licensee shall meet with staff of the West Virginia Department of Environmental Protection – Division of Water and Waste Management (WVDEP-DWWM), WVDNR-WRS, WV Manufacturing, whitewater community, and any other interested parties to schedule the recreational release dates and start times pursuant to Condition 13 below. Should consensus on release dates and start times not be achieved, WVDEP-DWWM retains final decision making authority.

13. Within 18 months of license issuance the licensee will provide a total of 7 (seven) planned 6 (six) hour recreational releases of 2,200 cfs to 2,500 cfs annually, generally during the last weekend of June and the weekends in July and August. These releases are contingent upon 1,600 cfs being first available for critical power generation. The goal is to achieve 7 days of weekend releases (including the possibility for July 4th) as early in the period as possible. However, if total flow approximating 3,800 cfs (2,200 cfs +1,600 cfs) is not available to satisfy a planned recreational releases as described above, there will be no make-up days beyond the last weekend of August.

    Further, the licensee shall provide 2 (two) scheduled whitewater releases during the last two weekends in March, again contingent upon 1,600 cfs being first available for critical power generation. If total flow approximating 3,800 cfs is not available, there will be no make-up days.

14. Within 18 months of new license issuance the licensee must submit to WVDEP-DWWM for review a report describing its examination of short duration spiking flow increases in the bypass reach (which may be due to sudden changes in power demand, unit trips, or other conditions beyond the licensee's direct control). The report shall contain: (a) documentation of the licensee's examination efforts, (b) alternatives considered, (c) potential remedies which may offer reduction in spiking flows, to the extent such might exist and which may be mitigated by the licensee, (d) description of the practicality or feasibility of the remedies and, (e) timeframes to effect remedies, if found by licensee's report as practical, feasible and appropriate. As interim milestones, the applicant shall: (a) meet with WVDEP-DWWM and WVDNR-WRS officials within 3 months of license issuance to review the issue, provide status on progress and discuss possible remedies, and (b) submit to WVDEP-DWWM a draft framework of the report within 12 months of issuance. WVDEP-DWWM reserves the right to require

modification of the report after consultation with the licensee.

15. The licensee shall, between March 1 and October 31, operate the project such that water levels in the Hawks Nest bypassed reach are up-ramped and down-ramped no more than 1-foot-per-hour as measured in the New River below the Hawks Nest dam, West Virginia at the US Geological Survey Gage No. 380649081083301 when reservoir inflow is less than 12,600 cubic feet per second (CFS) and flow in the bypassed reach is less than or equal to 2,600 cfs. The ramping rate may be modified, as necessary, to prevent overtopping of the project dam or the dam gates.

16. Mitigation for the incidental take of fish due to the project's operation shall be provided in an amount made payable to the WVDNR-WRS. Beginning in the year of new license issuance, payments shall be submitted to WVDNR-WRS by March 1 of each year for the previous year's payment. WVDNR-WRS will provide the applicant with the appropriate payment submission information. Monetary reimbursement will be consistent with fish entrainment calculations from the 2015 desktop entrainment analysis. The amount provided shall be based on a 2003 American Fisheries Society (AFS) Special Publication 30 Appendix A: Replacement Cost of Fish, adjusted for inflation. (As an example, a 2017 payment would be $33,969.50). This amount will be readjusted when AFS publishes new replacement values (next expected in summer 2017). Overall, the operative amount will be based on the 2015 desktop analysis and adjusted annually to reflect WVDNR-WRS's latest fish replacement costs, considering inflation (based on the Bureau of Labor's Consumer Price Index) and/or new published AFS values.

17. Any amendment to the FERC license may be subject to recertification consistent with FERC Consultation Requirements in 18 CFR §4.38(a). Further, notwithstanding the foregoing, if the 25-Hz power generated by the Hawks Nest Project is no longer needed to fulfill the current industrial end-use presently served, WVDEP-DWWM reserves the right to re-examine and modify the conditions established in this certification as they pertain to the current end-use.

18. The licensee is responsible for compliance with water quality standards as contained in Title 47CSR2 of the West Virginia Code of State Regulations, Requirements Governing Water Quality Standards.

19. The licensee is responsible for measuring and reporting Large Quantity Water Use pursuant to §22-26-1et seq of the WV Code.

20. Violation of any of the conditions listed above shall negate this water quality certification.

Document Content(s)