

**FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D.C. 20426**

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300**



Docket No.: P-13124

ROBERT A WILKINSON
CEO
Copper Valley Electric Association, Inc.
PO Box: 45
Glennallen, AK 99588-0045

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Copper Valley Electric Association, Inc.

Project No. 13124-003

ORDER ISSUING ORIGINAL LICENSE

(August 1, 2013)

INTRODUCTION

1. On August 30, 2011, Copper Valley Electric Association, Inc. (Copper Valley) filed, pursuant to Part I of the Federal Power Act (FPA),¹ an application for an original license to construct, operate, and maintain the proposed Allison Creek Hydroelectric Project No. 13124 (Allison Creek Project or project). The 6.5-megawatt (MW) project will be located on Allison Creek near the city of Valdez, Alaska. The project will not occupy any federal lands.²

2. As discussed below, this order issues an original license for the Allison Creek Project.

BACKGROUND

3. On December 9, 2011, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing, soliciting motions to intervene and protests, and soliciting comments and terms and conditions, recommendations, and prescriptions.³ The notice set February 7, 2012, as the deadline for filing motions to intervene, comments, recommendations, terms and conditions, and prescriptions.

4. The Alaska Department of Fish and Game (Alaska DFG) filed a timely motion to intervene and does not oppose the project.⁴ The National Marine Fisheries Service

¹ 16 U.S.C. §§ 791(a) – 825(r) (2006).

² Allison Creek flows into Valdez Bay, a navigable waterway. The applicant has requested that the project be licensed pursuant to the Commission's authority under section 4(e) of the FPA.

³ 76 *Fed. Reg.* 78628 (December 19, 2011).

⁴ Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's Rules of Practice and Procedure. 18 C.F.R. §385.214 (c) (2012).

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(NMFS), U.S. Fish and Wildlife Service (FWS), and Alaska DFG filed comments and recommendations. Copper Valley filed reply comments and modifications to its proposal. Copper Valley's filing included correspondence from NMFS, FWS, and Alaska DFG clarifying the agencies' recommendations regarding minimum flow releases, ramping rates, the biotic monitoring plan, the erosion and sediment control plan, and mitigation escrow account.

5. A draft Environmental Assessment (EA) was prepared by Commission staff and issued on December 28, 2012, analyzing the impacts of the proposed project and alternatives to it. Alaska DFG, Alyeska Pipeline Service Company (Alyeska), and Copper Valley filed comments on the draft EA. On June 21, 2013, Commission staff issued a final EA.

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

PROJECT DESCRIPTION AND OPERATION

A. Project Area

7. Allison Creek basin is located within the coastal Chugach Mountain Range, which intercepts moisture from the Gulf of Alaska and hosts numerous glaciers as a result of heavy, wet snows. The basin is approximately 6 miles in length and up to approximately 1.4 miles wide, and includes Allison Lake which is the headwater of Allison Creek. The headwaters at the south end of the narrow basin are fed by glaciated peaks of up to 4,900 feet in elevation. Allison Lake has a surface area of 247 acres and is located at an elevation of 1,364 feet above mean sea level. Allison Creek flows approximately 2.3 miles northward from the outlet of Allison Lake down to tidewater at Port Valdez.

B. Proposed Project Facilities and Operation

8. The project will consist of the following new features: a 16-foot-high, 130-foot-wide diversion structure with an integrated spillway located about 1.9 miles upstream of the mouth of Allison Creek and 2,350 feet downstream from the outlet of Allison Lake; a Coanda⁵ screened intake at the spillway conveying flows to the powerhouse; a 42-inch-diameter, 500-foot-long buried and 7,200-foot-long above-ground steel penstock traversing the existing grade; a powerhouse containing two Pelton-type, horizontal access turbine generator units with a total installed capacity of 6.5 MW; a 120-foot-long tailrace

⁵ A Coanda screen is also known as an overflow sieve (or weir) screen and is designed to minimize debris clogging by maintaining enough water flow over the screen surface to sweep any solids off the end of the screen.

extending from the west side of the powerhouse to Allison Creek via a concrete channel and the existing creek bed; a 550-foot-long access road; a parking area; a 3.8-mile-long, 34.5-kilovolt (kV) transmission line interconnecting to an existing substation; and appurtenant facilities.

9. Copper Valley also proposes to build a temporary access route for the construction of the penstock, and restore and revegetate the route to natural conditions after construction is completed.
10. The project will be operated in a run-of-river mode and bypass about 7,500 feet of Allison Creek. The project would have a minimum and maximum hydraulic capacity of 4 cubic feet per second (cfs) and 80 cfs, respectively. All flows greater than the maximum hydraulic capacity will spill over the spillway section. Minimum flow releases will be made at the diversion dam. The estimated annual generation for the project is 23,300 megawatt-hours (MWh). A more detailed project description is contained in Ordering Paragraph B.

C. Project Boundary

11. The proposed project boundary will enclose all of the project facilities listed above. The project would not occupy any lands of the United States.

D. Proposed Environmental Measures

Operation and Design-Related Features

12. Copper Valley proposes to: (1) operate the project in a run-of-river mode to protect aquatic resources in the impoundment and downstream of the project; (2) release a minimum flow of 2 cfs at the diversion dam into the bypassed reach when the project is operating to protect the aquatic resources in the bypassed reach; (3) provide seasonal releases at the diversion dam to maintain a 10-cfs minimum flow in the lower bypassed reach from June 16 through October 31, and 8 cfs from November 1 through June 15, when the project is operating to protect the aquatic resources in the bypassed reach; (4) ramp project startup and shutdown flows at 20 cfs per hour in the lower bypassed reach during non-emergency events to protect the aquatic resources; (5) minimize the footprint of the area to be used to place fill material and consolidate project facilities to a small area of impact to protect wetlands; (6) mark and light the new powerline, guy wires, structures, and communication towers to reduce bird attraction and potential bird strikes as part of an Avian Protection Plan; (7) use natural products and colors for project features to blend them with the natural environment; and (8) develop a Terrestrial Connectivity Plan to prevent the penstock from becoming a barrier to wildlife movement.

Construction-Related Measures

13. To minimize erosion and sedimentation, Copper Valley proposes to implement an Erosion and Sediment Control Plan (ESCP) to protect water quality by using best management practices (BMPs); and develop the following plans: a Storm Water Pollution Prevention Plan, a Construction Water Quality Monitoring Plan, and a Blasting Plan.
14. To protect aquatic habitat, Copper Valley proposes to develop and implement Phase I of a Biotic Monitoring Plan that provides for the presence of a qualified Environmental Compliance Monitor (ECM) on-site during all construction phases to monitor turbidity upstream and downstream of construction involving instream work.
15. To protect wetlands along Allison Creek, Copper Valley proposes to: revegetate slopes and disturbed surfaces; implement sediment prevention measures along the toe of all fill areas adjacent to wetlands or waters; prevent sediments from entering fill areas adjacent to wetlands or waters; use only clean sand and gravel for fill; and stockpile material only in disturbed areas and/or uplands.
16. To protect wildlife, Copper Valley proposes to develop an Avian Protection Plan with provisions to: restrict vegetation clearing from May 1 through July 15 to protect migratory birds; avoid project activities within 660 feet of active bald eagle nests; and limit activities, blasting, and helicopter traffic from April 10 through August 10 in the vicinity of known bald eagle nests to avoid disturbance.

Operation-Related Measures

17. To protect water quality in Allison Creek, Copper Valley proposes to develop and implement, as part of the proposed ESCP: a Fire Protection Plan; a Hazardous Materials Containment/Fuel Storage Plan; and a Spill Prevention, Control, and Containment Plan (Spill Plan).
18. To protect aquatic habitat in Allison Creek, Copper Valley proposes to: (1) install and maintain two streamflow gages in the bypassed reach, one immediately downstream of the diversion dam and the second at a location immediately upstream of the powerhouse discharge location, and collect and analyze data from the gages to document compliance with minimum flow release and ramping rate requirements; and (2) develop and implement Phase II of a Biotic Monitoring Plan to monitor fish stranding and habitat connectivity in the bypassed reach.⁶

⁶ On December 5, 2012, Alaska DFG filed a clarification on the contents of the Biotic Monitoring Plan as agreed upon by Copper Valley, Alaska DFG, FWS, and
(continued)

19. To protect vegetation, Copper Valley proposes to develop and implement a Vegetation Management Plan that includes restoring the temporary penstock access route and other disturbed areas, and managing noxious weeds and invasive species.
20. To protect wildlife, Copper Valley proposes to develop and implement a Scavenger and Waste Management Plan to minimize the risk of human-wildlife interactions and attraction of scavengers by prohibiting construction workers from feeding wildlife, using modern garbage-handling procedures, and training contractor personnel on the Scavenger and Waste Management Plan.
21. To enhance existing recreation opportunities, Copper Valley proposes to implement a Recreation Management Plan that includes an interpretive display near the Valdez Civic Center.⁷
22. To provide for public safety and security, and protection of fish and wildlife resources in the project area, Copper Valley proposes to develop and implement a Public Safety and Access Plan (Safety Plan) that includes a gate at the temporary penstock access route and signage to discourage public access to project construction areas, the penstock access route, and Alaska Department of Natural Resources' land near the Valdez Marine Terminal.
23. Copper Valley proposes to protect cultural resources in the event that they are inadvertently discovered during project construction and operation.

SUMMARY OF LICENSE REQUIREMENTS

24. As summarized below, this license, which authorizes 6.5 MW of renewable energy, requires a number of measures to protect and enhance geology and soils, water quality, fisheries, terrestrial, cultural, aesthetic, and recreation resources at the project.
25. To control erosion and sedimentation, and protect water quality, this license requires Copper Valley to use BMPs and to develop and implement its ESCP.

NMFS. Copper Valley and the agencies agreed that the Biotic Monitoring Plan was to consist only of measures to document continued fish use of the bypassed reach downstream of the barrier falls, approximately 1,000 feet upstream of the proposed powerhouse, through presence/absence surveys in the summer and fall.

⁷ Copper Valley proposed to evaluate additional recreation measures after license issuance. We note that any proposed measures should be filed with the Commission as an amendment for approval.

26. To protect fisheries and aquatic habitat in Allison Creek, the license requires Copper Valley to implement its proposals to operate the project in a run-of-river mode, maintain minimum flow releases and ramping rates in the bypassed reach, construct and maintain streamflow gages in the bypassed reach, and develop and implement a two-phase Biotic Monitoring Plan that will provide for aquatic resources monitoring and protection during the construction and operation phases of the project. As recommended by staff, the license also requires Copper Valley to: (1) revise the Biotic Monitoring Plan to include a sampling protocol and annual monitoring reports; (2) develop an Operation Compliance Monitoring Plan; (3) provide failsafe measures to ensure uninterrupted minimum instream flow releases to the bypassed reach in the event of a powerhouse shutdown; (4) develop the final tailrace design in consultation with the agencies to avoid the potential for adult salmonid injury in the project tailrace; and (5) notify the Commission, Alaska DFG, and FWS within 10 days of any instances of non-compliance with any license requirement that would affect fish or wildlife resources at the project.
27. To protect vegetation resources, the license requires Copper Valley to revise its Vegetation Management Plan to include the wetland protection measures proposed by Copper Valley along with additional staff-recommended measures including: cleaning and inspecting construction equipment off-site prior to entry into the project area; manage noxious weeds and invasive species; use native plants and seeds in areas to be revegetated; monitor revegetated areas with measures to address invasive and noxious weeds should they be found; and develop an implementation and monitoring schedule. The license requires the temporary access route to be revegetated.
28. To protect wildlife resources, this license requires Copper Valley to: revise its Avian Protection Plan to include designing and constructing the transmission line to adhere to the most current Avian Power Line Interaction Committee (APLIC) standards; survey for harlequin duck nests prior to construction-related activities; develop and implement a Bear Safety, Scavenger, and Waste Management Plan; maintain a 1,500-foot vertical or horizontal clearance from observed mountain goats when using helicopters; and develop and implement a Penstock Location and Grade Plan with provisions for wildlife movement under the project penstock.
29. To enhance recreation, the license requires Copper Valley to construct an interpretive display near the Valdez Civic Center.
30. To provide for public safety and security and protection of fish and wildlife resources, the license requires Copper Valley to revise its Safety Plan to include an implementation schedule, and signage to discourage fishing, hunting, and trapping in the project area by project personnel to avoid over-harvest.
31. To minimize the visual effects of construction and reduce the visibility of project facilities from nearby public roads and recreation sites, and from the city of Valdez, this

license requires Copper Valley to avoid the use of reflective materials and highly contrasting colors in the finished appearance of the penstock and powerhouse, and use natural products and colors that blend with the natural environment.

32. This license requires Copper Valley to protect cultural resources in the event that they are inadvertently discovered during project construction and operation.

WATER QUALITY CERTIFICATION

33. Under section 401(a)(1) of the Clean Water Act (CWA),⁸ 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 water quality certification shall become a condition of any federal license that authorizes construction or operation of the project.⁹

34. On May 20, 1999, the Alaska Department of Environmental Conservation (Alaska DEC) filed a letter with the Commission waiving all water quality certifications for FERC jurisdictional hydroelectric projects.¹⁰ As a result, we consider the certification for the proposed Allison Creek Project to be waived.

COASTAL ZONE MANAGEMENT ACT

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

36. On July 7, 2011, by Alaska State law, the federally-approved Alaska Coastal Management Program expired, resulting in a withdrawal from participation in the

⁸ 33 U.S.C. § 1341(a)(1) (2006).

⁹ 33 U.S.C. § 1341(d) (2006).

¹⁰ See License Application, Volume 2, Appendix B.

¹¹ 16 U.S.C. § 1456(c)(3)(A) (2006).

CZMA's National Coastal Management Program. The CZMA Federal consistency provision, section 307, no longer applies in Alaska.

SECTION 18 FISHWAY PRESCRIPTION

37. Section 18 of the FPA¹² 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 Interior (Interior) or the Secretary of Commerce, as appropriate.

38. By letter filed April 6, 2012, Interior requested that the Commission reserve authority to prescribe fishways. Consistent with Commission policy, Article 409 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Allison Creek Project.

ESSENTIAL FISH HABITAT

39. Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act¹³ requires federal agencies to consult with the Secretary of Commerce regarding any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH) identified under the Act. Under section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS is required to provide EFH Conservation Recommendations for actions that would adversely affect EFH.¹⁴ Under section 305(b)(4)(B) of the Act, an agency must, within 30 days after receiving recommended conservation measures from NMFS or a Regional Fishery Management Council, describe the measures proposed by the agency for avoiding, mitigating, or offsetting the effects of the agency's activity on EFH.^{15, 16}

¹² 16 U.S.C. § 811 (2006).

¹³ 16 U.S.C. § 1855(b)(2) (2006).

¹⁴ 16 U.S.C. § 1855(b)(4)(A) (2006).

¹⁵ 16 U.S.C. § 1855(b)(4)(B) (2006).

¹⁶ The measures recommended by the Secretary of Commerce are advisory, not prescriptive. However, if the federal agency does not agree with the recommendations of the Secretary of Commerce, the agency must explain its reasons for not following the recommendations.

40. EFH is determined by identifying spatial habitat and habitat characteristics that are required for each federally managed fish species through a cooperative effort by NMFS, regional fishery management councils, and federal and state agencies. There is no essential fish habitat in the vicinity of the project. As such, no consultation with NMFS is required.

THREATENED AND ENDANGERED SPECIES

41. Section 7(a)(2) of the Endangered Species Act of 1973¹⁷ requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

42. There are no federally listed threatened or endangered species that are known to occur in the project area.

43. We conclude that licensing of the Allison Creek Project, as proposed with staff-recommended measures, would have no effect on federally-listed threatened and endangered species.

NATIONAL HISTORIC PRESERVATION ACT

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

45. The proposed project's area of potential effects (APE) was inventoried for cultural resources by Copper Valley in 2009, 2010, and 2011. The inventories found no cultural resources located within the APE. On October 17, 2011, Copper Valley sent a letter informing the Alaska SHPO that there are no significant cultural resources located within the proposed project's APE. On November 9, 2011, the Alaska SHPO returned

¹⁷ 16 U.S.C § 1536(a) (2006).

¹⁸ 16 U.S.C. § 470 *et seq.* (2006).

¹⁹ 36 C.F.R. Part 800 (2010).

Copper Valley's letter with a "No Historic Properties Affected" stamp. This letter was filed with the Commission on November 14, 2011. Commission staff concurs with the Alaska SHPO's finding that no historic properties would be affected by the proposed project, but recommends that Copper Valley consult with the Alaska SHPO if any new cultural resources are discovered. Article 418 requires this measure.

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

46. Section 10(j)(1) of the FPA²⁰ 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 Act²¹ to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

47. In response to the December 9, 2011 public notice that the project was ready for environmental analysis, NMFS, FWS, and Alaska DFG filed a total of 22 recommendations under section 10(j).²² Five of the recommendations were determined to be outside the scope of section 10(j) and are discussed in the next section.

48. Of the 17 recommendations that are within the scope of 10(j), this license includes conditions consistent with all 17: (1) bypassed reach minimum flow releases (Article 402); (2) a diversion instream flow release plan²³ (Article 405); (3) ramping rates (Article 404); (4) run-of-river operation (Article 401) and stream gage installation, monitoring, and recording (Article 405); (5) Phase II of the Biotic Monitoring Plan (Article 407); (6) instream flow failsafe provisions (Article 403); (7) final tailrace design (Article 406); (8) notification and timing of instream work (Article 304); (9) an ESCP (Article 304); (10) turbidity monitoring during construction (Article 407); (11) a Spill Plan (Article 304); (12) locating clearings and roads 100 feet from the high water mark of Allison Creek (Article 304); (13) constructing the transmission line in accordance with the most current APLIC standards (Article 411); (14) a Bear Safety Plan (Article 413); (15) maintenance

²⁰ 16 U.S.C. § 803(j)(1) (2006).

²¹ 16 U.S.C. §§ 661 *et seq.* (2006).

²² FWS filed their recommendations on April 4, 2012. NMFS and Alaska DFG filed their recommendations on April 6, 2012.

²³ The provisions in the diversion instream flow release plan (Item 2) and stream gage installation, monitoring, and recording (Item 4) are incorporated into the Operation Compliance Monitoring Plan required by Article 405. *See EA* at 99.

of a 1,500-foot vertical or horizontal helicopter clearance in the presence of mountain goats (Article 414); (16) a Penstock Location and Grade Plan (Article 415); and (17) restricting access and land use to minimize access to fish and wildlife resources (Article 307).

SECTION 10(a)(1) OF THE FPA

49. Section 10(a)(1) of the FPA²⁴ requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

A. FWS and Alaska DFG Recommendations

50. FWS and Alaska DFG made five recommendations under section 10(j) that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife. Consequently, these recommendations are considered under the broad public-interest standard of section 10(a)(1).

51. Three of the agencies' recommended measures were also recommended by staff in the EA²⁵ and are included in the license. These measures require Copper Valley to: (1) notify the Commission, FWS, and Alaska DFG of non-compliance events (Article 408); (2) provide an ECM during project construction (Article 407); and (3) allow Alaska DFG representatives access to the site for environmental inspections (Article 4).

52. FWS and Alaska DFG recommended that Copper Valley coordinate and consult with agency representatives on the need for an annual project review meeting and conduct such meetings as needed. FWS and Alaska DFG stated that an annual meeting would be an effective means to review fish and wildlife issues and to ensure compliance with license requirements. In the EA, staff recommended that Copper Valley consult with FWS and Alaska DFG when developing environmental post-licensing plans and monitoring.²⁶ Because FWS and Alaska DFG will be consulted in the development of environmental plans and monitoring reports, this license does not include a requirement for an annual project review meeting.

²⁴ 16 U.S.C. § 803(a)(1)(2006).

²⁵ See EA at 39-40 and 100.

²⁶ See EA at 104.

53. FWS and Alaska DFG also recommended that Copper Valley establish a \$50,000 interest-bearing escrow account for mitigation of unanticipated effects on fish, wildlife, and water quality resources. Because this license contains a standard reopener provision (Article 15) that could be used to address unanticipated effects, and because the Commission favors specific license measures rather than funds to support unspecified activities, this license does not include this recommended measure.

B. Minimum Flow Failsafe Provisions

54. In addition to its section 10(j) recommendations (discussed above), Alaska DFG recommended a failsafe flow delivery mechanism at the project's diversion (Article 403) to ensure provision for minimum flows to the bypassed reach. In comments on the draft EA, Alaska DFG also recommended that a failsafe flow delivery mechanism be built into the powerhouse, not just at the project's diversion, to protect aquatic resources downstream from the powerhouse. In the EA, staff concluded that the minimum flow and failsafe provisions at the diversion would prevent Allison Creek from dewatering downstream of the powerhouse due to unforeseen circumstances.²⁷ The constant delivery of minimum flows from the diversion would provide a stable amount of flow to protect fishery resources downstream of the powerhouse. Therefore, an additional instream flow failsafe provision for the powerhouse, as recommended by Alaska DFG, is not needed.

C. Vegetation Management

55. Copper Valley proposes to develop and implement a Vegetation Management Plan with provisions to restore temporary access routes and other disturbed areas, and manage weed/invasive species, but did not provide specific measures that would be included in the plan. In the EA,²⁸ staff recommended that the plan include: cleaning and inspecting equipment off-site to protect against the introduction of invasive species; using native plants and seeds in areas to be revegetated; and developing a monitoring plan for the revegetated areas to ensure that the effort was a success and that invasive species are not present, with measures to address invasive and noxious weeds should they be found. These measures would reduce the risk of the introduction and spread of invasive plant species in the project area, while promoting native vegetation. Monitoring would ensure the success of these efforts. Staff also recommended that measures to protect wetlands be incorporated into the Vegetation Management Plan. Article 410 requires Copper Valley to revise the Vegetation Management Plan to include the additional provisions.

²⁷ See EA at 99-100.

²⁸ See EA at 55.

D. Harlequin Ducks

56. Harlequin ducks are species of concern under the Migratory Bird Treaty Act. Harlequin ducks had been observed in the project area, and the project footprint contains areas of high quality or essential habitat for the harlequin duck, but breeding activity in the area has not been confirmed.²⁹ In the EA,³⁰ staff recommended, and Article 412 of this license requires, that Copper Valley conduct a survey for harlequin duck nests prior to construction, specifically in the location of the diversion structure and the 500-foot-long buried segment of the penstock, and avoid the active nests during the construction of the diversion structure and penstock.

E. Comprehensive Bear Safety, Scavenger, and Waste Plan

57. Copper Valley proposes to develop a Scavenger and Waste Management Plan to reduce the risk of attracting scavengers and other wildlife to the project site. The Scavenger and Waste Management Plan would include regulations prohibiting construction workers from feeding wildlife, modern garbage-handling procedures, and a training program for contractor personnel.

58. FWS and Alaska DFG recommended that Copper Valley develop and implement a Bear Safety Plan to include: (1) measures to minimize conflicts when bears are present; (2) measures to minimize encounters and avoid areas frequented by bears; (3) measures for keeping construction sites and refuse areas clean of substances that attract bears; (4) installation of bear-resistant garbage receptacles and other measures during construction; and (5) procedures to deal with problem bears. Alaska DFG also recommended that it be notified of any bear-human conflicts.

59. In its comments on the draft EA, Copper Valley stated that it would incorporate bear safety measures into its proposed Scavenger and Waste Management Plan, and that the revised plan would cover wildlife-human conflicts involving bears, as well as the other wildlife (i.e., coyotes, foxes, gulls, and ravens). However, Copper Valley did not provide details on the measures in its proposed Scavenger and Waste Management Plan or specify the additional bear safety measures. Staff recommended in the EA,³¹ and Article 413 requires, a Bear Safety, Scavenger, and Waste Management Plan that incorporates the provisions specified in the Bear Safety Plan recommended by FWS and

²⁹ See EA at 58-59.

³⁰ See EA at 101.

³¹ See EA at 101-102.

Alaska DFG, and specific measures for Copper Valley's proposed Scavenger and Waste Management Plan.

F. Recreation and Aesthetic Resources

60. Article 305 requires Copper Valley to document the installation of the interpretive display near the Valdez Civic Center when it files as-built drawings.

61. To minimize the temporary effects of construction activities on recreation users in the project vicinity, staff recommended in the EA³² and Article 416 requires Copper Valley to conduct construction-related activities away from developed recreation sites as much as possible, particularly along Dayville Road;³³ schedule project-related construction traffic to avoid peak times of recreational use; minimize helicopter use to the extent practicable; and use flight paths and staging areas that are least disruptive to recreational users.

62. To minimize the visual effects of construction and reduce the visibility of project facilities from nearby public roads and recreation sites, and from the city of Valdez, Copper Valley proposes to use natural products and appropriate colors for various elements to help them blend in with the natural environment. Staff recommended in the EA,³⁴ and Article 417 requires, that Copper Valley avoid the use of reflective materials and highly contrasting colors in the finished appearance of the penstock and powerhouse, and use natural products and colors that blend with the natural environment.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

63. 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

64. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 202 requires the filing of these drawings.

³² See EA at 103.

³³ Dayville Road circles the eastern portion of Port Valdez and provides access to all recreation sites and facilities along the south shore.

³⁴ See EA at 82.

C. Amortization Reserve

65. The Commission requires that for original licenses for major projects, non-municipal licensees must set up and maintain an amortization reserve account after the first 20 years of operation of the project under license. Article 203 requires the establishment of the account.

D. Headwater Benefits

66. 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. Project Land Rights Progress Report

67. The project will occupy 41.75 acres of private and state land. Exhibits G-2 through G-4 of the license application show lands that Copper Valley will use for project purposes. Standard Article 5, set forth in Form L-11, requires Copper Valley to acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project, within 5 years. To monitor compliance with Article 5, Article 205 requires Copper Valley to file no later than 4 years after license issuance, a report detailing its progress in acquiring title in fee or the necessary rights to all lands within the project boundary for the remaining term of license. The report shall include specific documentation on the status of the rights that have been acquired as of the filing date of the progress report, and a plan and schedule to acquire all remaining rights prior to the five-year deadline.

F. Project Financing

68. To ensure that there are sufficient funds available for project construction, operation, and maintenance, Article 206 requires Copper Valley to file for Commission approval documentation of project financing for the construction, operation, and maintenance of the project at least 90 days before starting any ground-disturbing activities that are associated with the project.

G. Use and Occupancy of Project Lands and Waters

69. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 419 allows Copper Valley to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

H. Start of Construction

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

I. Cofferdam Construction

71. Article 302 requires Copper Valley to provide the Commission's Division of Dam Safety and Inspections Portland Regional Office (D2SI-PRO) with cofferdam construction drawings for approval.

J. Review of Final Plans and Specifications

72. Article 303 requires Copper Valley to provide the Commission's D2SI-PRO with final contract drawings and specifications, together with a supporting design report consistent with the Commission's engineering guidelines, and the following plans: a Quality Control and Inspection Program; a Temporary Construction Emergency Action Plan; and a Blasting Plan.

73. Article 304 requires Copper Valley to file a soil Erosion and Sediment Control Plan and include the following plans: a Storm Water Pollution Prevention Plan; a Fire Protection Plan; a Hazardous Materials Containment/Fuel Storage Plan; and a Spill Prevention, Control, and Containment Plan.

74. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as built. Article 305 provides for the filing of these drawings.

K. Temporary Penstock Access Route

75. Article 306 requires Copper Valley to file a plan for the construction of the temporary penstock access route, including a description of how the access route will be constructed and an implementation schedule.

STATE AND FEDERAL COMPREHENSIVE PLANS

76. Section 10(a)(2)(A) of the FPA³⁵ requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving,

³⁵ 16 U.S.C. § 803(a)(2)(A) (2006).

developing, or conserving a waterway or waterways affected by the project.³⁶ Under section 10(a)(2)(A), federal and state agencies filed 67 comprehensive plans that address various resources in Alaska. Of these, the staff identified and reviewed 10 comprehensive plans that are relevant to this project.³⁷ No conflicts were found.

CONSERVATION EFFORTS

77. Section 10(a)(2)(C) of the FPA³⁸ requires the Commission to consider the electricity consumption improvement programs of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively. Copper Valley operates a remote isolated electric system and will sell the project's power to its members within the Copper basin and Valdez community. Copper Valley has energy conservation tips and information about its energy efficiency program on its website.³⁹ In addition, Copper Valley has a conservation and energy efficiency program for its other hydroelectric project, Solomon Gulch (FERC No. 2742). Therefore, staff anticipates that Copper Valley will set up such a program for the Allison Creek project to make an effort to conserve electricity, and will comply with section 10(a)(2)(C) of the FPA.

SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT

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

NEED FOR POWER

79. To assess the need for power, staff assessed the needs in the operating region in which the project is located. Copper Valley operates a remote isolated electric system,⁴⁰

³⁶ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2012).

³⁷ The list of applicable plans can be found in section 5.5 of the EA for the project.

³⁸ 16 U.S.C. § 803(a)(2)(C) (2006).

³⁹ <http://www.cvea.org/energyInfo/energyTips.htm>.

⁴⁰ The project does not fall within a North American Electric Reliability Council region; therefore, statistics for energy consumption and projected capacity needs were obtained from Copper Valley.

and the only other electric energy alternative available would be from the Solomon Gulch Project or diesel generation. Typically, the 12-MW Solomon Gulch Project provides about 50 percent of Copper Valley's generation. The remaining 50 percent is generated with fossil fuel from a cogeneration facility or diesel plants in Glennallen and Valdez. The Allison Creek Project could potentially offset about 11 percent of generation currently provided by diesel. The project's power and contribution to the region's diversified generation mix will help meet a need for power in the region and reduce Copper Valley's dependence on diesel generation.

PROJECT ECONOMICS

80. In determining whether to issue a license for a hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,⁴¹ 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.

81. In applying this analysis to the Allison Creek Project, two options were considered: Copper Valley's proposal and the project as licensed herein. As proposed by Copper Valley, the levelized annual cost of operating the project is \$3,775,542, or \$162.04/MWh. The proposed project would generate an estimated average of 23,300 MWh of energy annually. When staff multiplies its estimate of average generation by the alternative power cost of \$219.00/MWh,⁴² staff calculates a total value of the project's power of \$5,103,000 in 2013 dollars.⁴³ To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the value of the project's power.⁴⁴ Therefore, in the first year of operation, the project would cost \$1,327,458 or \$56.96/MWh, less than the likely alternative cost of power.

⁴¹ 72 FERC ¶ 61,027 (1995).

⁴² The alternative power cost is from the License Application filed August, 2011.

⁴³ Cost values provided in the EA in 2011 were escalated to 2013 dollars (\$2013) using the Consumer Price Index.

⁴⁴ Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA at 88.

(continued)

82. As licensed herein with the staff measures, the levelized annual cost of operating the project would be about \$3,781,763, or \$162.31/MWh. Based on the same estimated average generation of 23,300 MWh, the project would produce power valued at \$5,103,000 when multiplied by the \$219.00/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$1,312,237 or \$56.69/MWh, less than the likely cost of alternative power.

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

COMPREHENSIVE DEVELOPMENT

84. Sections 4(e) and 10(a)(1) of the FPA⁴⁵ require the Commission to give equal consideration to power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

85. 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 Allison Creek 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.

86. Based on my independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, I have selected the Allison Creek Project with staff-recommended measures, and find that it is best adapted to a comprehensive plan for improving or developing Allison Creek.

⁴⁵ 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

87. This alternative was selected because: (1) issuance of an original license will serve to provide a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational and aesthetic resources, and historic properties; and (3) the 6.5 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

88. Section 6 of the FPA⁴⁶ provides that original licenses for hydropower projects shall be issued for a period not to exceed 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.⁴⁷

89. This license requires an extensive amount of new construction, including: (1) a diversion structure with a spillway; (2) an intake structure; (3) a penstock; (4) a powerhouse; (5) a substation; (6) a transmission line; and (8) an access road. Consequently, a license term of 50 years for the Allison Creek Project is appropriate.

The Director orders:

(A) This license is issued to Copper Valley Electric Association, Inc. (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate and maintain the Allison Creek Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interest in those lands, enclosed by the project boundary shown by Exhibit G filed August 30, 2011:

<u>Exhibit G Drawing</u>	<u>FERC No. 13124-</u>	<u>Description</u>
G-1	11	Project Boundary

⁴⁶ 16 U.S.C. § 799 (2006).

⁴⁷ See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

G-2	12	Project Boundary
G-3	13	Project Boundary
G-4	14	Project Boundary

(2) Project works consisting of: (a) a 16-foot-high, 130-foot-long diversion including a 50-foot-long overflow spillway section located 10,000 feet (about 1.9 miles) upstream of the mouth of Allison Creek and 2,350 feet downstream from the outlet of Allison Lake; (b) a Coanda screened intake in the spillway section; (c) a 42-inch-diameter, 500-foot-long buried and 7,200-foot-long above-ground steel penstock traversing the existing grade; (d) a 65-foot-wide, 43-foot-long, 48-foot-high powerhouse containing two Pelton-type horizontal access turbine/generator units with a total installed capacity of 6.5 MW; (e) a 120-foot-long tailrace extending from the west side of the powerhouse to Allison Creek via a concrete channel and the existing creek bed; (f) a 550-foot-long, 24-foot-wide access road to the powerhouse; (g) a parking area; (h) a transformer located in a switchyard adjacent to the parking area; (i) a 3.8-mile-long, 34.5-kV transmission line connecting to an existing substation; and (j) appurtenant facilities.

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

Exhibit A: The following sections of Exhibit A filed on August 30, 2011:

Exhibit A, pages A-1 through A-4, entitled "Exhibit A – Project Description", describing the mechanical, electrical, and transmission equipment within the application for license.

Exhibit F: The following Exhibit F drawings filed on August 30, 2011:

<u>Exhibit F Drawing</u>	<u>FERC No. 13124-</u>	<u>Description</u>
F-1	1	Project Site Plan
F-2	2	Diversion & Intake Structure Site Plan
F-3	3	Diversion & Intake Structure Plan
F-4	4	Diversion & Intake Structure Details
F-5	5	Diversion & Intake Structure Sections
F-6	6	Penstock Plan & Profile

F-7	7	Penstock Sections & Details
F-8	8	Powerhouse Site Plan
F-9	9	Powerhouse General Arrangement
F-10	10	Transmission Structure

(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 also subject to the articles set forth in Form L-11 (October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting the Interests of Interstate or Foreign Commerce," (see 54 F.P.C. 1799 et seq.), as reproduced at the end of this order, and the following additional articles:

Article 201. Administrative Annual Charges. The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time: effective as of the date of commencement of project operation, to reimburse the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 6.5 megawatts.

Article 202. Exhibit Drawings. Within 45 days of the date of issuance of the license, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

(a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P-13124-#### through P-13124-####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's

Division of Dam Safety and Inspections (D2SI) Portland Regional Office.

(b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's D2SI Portland Regional Office. Exhibit F drawings must be separated from other project exhibits and identified as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113(c) (2012). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-13124-####, F-1, General Arrangement, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

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

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 geo-referencing 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.

(c) The licensee shall file two separate sets of the project boundary data in a geo-referenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format) with the Secretary of the Commission, ATTN: OEP/DHAC. The filing shall 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 a single file with multiple layers. The geo-referenced 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) shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-13124, 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 geo-referenced 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 shall include: FERC Project Number, data description, date of this license, and file

extension in the following format [P-13124, project boundary metadata, MM-DD-YYYY.TXT].

Article 203. Amortization Reserve. Pursuant to section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

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

Article 204. Headwater Benefits. If the licensee's project 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 those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the Commission's regulations.

Article 205. Project Land Rights Progress Report. No later than four years after license issuance, the licensee shall file a report with the Commission describing the status of acquiring title in fee or the rights for all the lands within the project boundary. The report must provide an overview map of each parcel and summary table identifying the licensee's rights over each parcel within the project boundary. The report shall also include specific supporting documentation showing the status of the land rights on all

parcels of land within the project boundary that: (1) have been acquired up to the date of filing of the report, including pertinent deeds, lease agreements, and/or bill of sale information that specifically verify the licensee's rights; and (2) the licensee's plan and schedule for acquiring all remaining project lands prior to the five-year deadline, including a history of actions taken, current owner information, the type of ownership to be acquired whether in fee or by easement, and the timeline for completing property acquisition.

Article 206. Documentation of Project Financing. At least 30 days before any land-disturbing activities, the licensee shall file with the Commission, for approval, the licensee's documentation for project financing. The documentation must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The documentation must include, at a minimum, financial statements, including a balance sheet, income statement, and a statement of actual or estimated cash flows over the license term which provide evidence that the licensee has sufficient assets, credit, and projected revenues to cover project construction, operation, and maintenance expenses, and any other estimated project liabilities and expenses.

The financial statements must be prepared in accordance with generally accepted accounting principles and signed by an independent certified public accountant. The licensee shall not commence any land-disturbing activities associated with the project before the filing is approved.

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

Article 302. Cofferdam and Deep Excavation Construction Drawings. Should construction require cofferdams or deep excavations, the licensee shall: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 303. Contract Plans and Specifications. At least 60 days prior to any land-disturbing activities, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam

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

Article 304. Erosion and Sediment Control Plan. At least 60 days prior to any land-disturbing activities, the licensee shall submit one copy of the Erosion and Sediment Control Plan (ESCP) to the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI), and develop and include the following plans: a Storm Water Pollution Prevention Plan; a Fire Protection Plan; a Hazardous Materials Containment/Fuel Storage Plan; and a Spill Prevention, Control, and Containment Plan. The ESCP shall also include provisions for: notifying Alaska Department of Fish and Game (Alaska DFG) 10 days prior to any diversion of flows during construction; constructing at the diversion site during low water periods; and locating clearings and roads 100 feet from the high water mark of Allison Creek.

The plan shall be developed after consultation with U.S. Fish and Wildlife Service, Alaska DFG, National Marine Fisheries Service, and Alyeska Pipeline Service Company. The licensee may not begin any land-disturbing activities until the D2SI-Portland Regional Engineer has reviewed and commented on the plans, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 305. As-built Drawings. Within 90 days of completion of construction of the facilities authorized by this license, the licensee shall file for Commission approval, revised Exhibits A, F, and G, and documentation of the interpretive display near the Valdez Civic Center, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer; the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 306. Temporary Penstock Access Route Plan. Within 60 days of license issuance, the licensee shall file for Commission approval, a plan to build a temporary access route for the construction of the penstock. The plan shall include, but not be limited to, the following provisions:

- (1) a description of how and where the access route will be constructed; and

- (2) an implementation schedule, including the timing of when the access route would be abandoned and the area restored in coordination with the Vegetation Management Plan (Article 410) and the Public Safety and Access Plan (Article 307).

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

The Commission reserves the right to require changes to the plan. Implementation 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 307. Public Safety and Access Plan. Within 60 days of license issuance, the licensee shall file, for Commission approval, a revised Public Safety and Access Plan. The plan shall include measures proposed in the license application filed on August 30, 2011, and the following provisions:

- (1) restrict project personnel from fishing, hunting, and trapping at the project site;
- (2) include an evaluation of public safety concerns at the project site, including designated recreation areas;
- (3) assess the need for the installation of safety devices or other safety measures;
- (4) include a description of all public safety devices and signage, as well as a map showing the location of all public safety measures; and
- (5) an implementation schedule.

For guidance on preparing public safety plans, the licensee can review the Guidelines for Public Safety at Hydropower Projects on the FERC website.

The licensee shall file one copy of the plan with the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer and two copies with the

Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI).

Article 401. Run-of-River Operation. The licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in Allison Creek. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows in the project tailrace approximate the sum of inflows to the project.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Alaska Department of Fish and Game, and U.S. Fish and Wildlife Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. Bypassed Reach Minimum Instream Flow Releases. The licensee shall provide a flow release at the diversion dam into the project bypassed reach that is sufficient to meet the following requirements when the project is operating:

- (1) 2 cubic feet per second (cfs) as measured at the streamflow gage constructed immediately downstream of the diversion dam (required by item (2) of Article 405);
- (2) 10 cfs from June 16 through October 31 as measured at the streamflow gage constructed in the lower bypassed reach immediately upstream of the powerhouse discharge location (required by item (2) of Article 405); and
- (3) 8 cfs from November 1 through June 15 as measured at the streamflow gage constructed in the lower bypassed reach immediately upstream of the powerhouse discharge location (required by item (2) of Article 405).

The flow requirements may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Alaska Department of Fish and Game, and U.S. Fish and Wildlife Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Minimum Flow Failsafe Provision. Within 90 days of license issuance, the licensee shall file for Commission approval, a Minimum Flow Failsafe Provision Plan to ensure maintenance of uninterrupted flows in the bypassed reach as required by Article 402. The plan shall include, but not be limited to, a detailed description of the design and operation of the equipment that will provide an uninterrupted flow release from the diversion dam into the bypassed reach in the event of

powerhouse shutdown.

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

The Commission reserves the right to require changes to the plan. Implementation 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 404. Ramping Rates. The licensee shall maintain a ramping rate of no more than 20 cubic feet per second per hour in the lower bypassed reach as measured at the streamflow gage installed immediately upstream of the powerhouse discharge location as required by item (2) of Article 405.

The ramping rate requirement may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Alaska Department of Fish and Game, and U.S. Fish and Wildlife Service. If the ramping rate is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 405. Operation Compliance Monitoring. Within one year of license issuance, the licensee shall file for Commission approval, an Operation Compliance Monitoring Plan that describes how the licensee shall document compliance with the operational requirements of this license. The plan shall include, but not be limited to, the following provisions:

- (1) a detailed description of how the licensee will document compliance with run-of-river operation as required by Article 401;
- (2) a provision for installation of two streamflow gages in the bypassed reach of Allison Creek, one immediately downstream of the diversion dam and one in the lower bypassed reach, immediately upstream of the powerhouse discharge location including, at a minimum: (a) the specific locations of the gages; (b) the gaging equipment, (c) a description of how the gages will be calibrated; (d) a detailed description of the streamflow monitoring interval; and (e) an

implementation schedule;

- (3) a detailed description of any flow records or other methods that will be used to document compliance with the minimum instream flow release requirements of Article 402 and ramping rate requirements of Article 404; and
- (4) a provision to file an operation compliance monitoring report by March 31 of the first complete year following initial project operation and continuing annually by March 31 each year thereafter that documents compliance with the operational requirements of Articles 401, 402, 403, and 404 of this license.

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

The Commission reserves the right to require changes to the plan. Implementation 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 406. Final Tailrace Design Plan. Within 90 days of license issuance, the licensee shall file for Commission approval, a Final Tailrace Design Plan that describes how the project will be designed to avoid the potential for adult salmonid injury in the project tailrace. The plan shall include, but not be limited to, the following provisions:

- (1) a detailed description of the design of the tailrace; and
- (2) an implementation schedule for construction of the tailrace.

The plan shall be developed after consultation with Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the

licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation 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 407. Biotic Monitoring Plan.

Phase I - during project construction

At least 30 days prior to any ground-disturbing or land-clearing activities, the licensee shall designate a qualified environmental compliance monitor (ECM) to be on-site during project construction and monitor turbidity upstream and downstream of the construction during instream work, as proposed in the license application filed on August 30, 2012, and the reply to comment letter filed on May 22, 2012, as Phase I of a Biotic Monitoring Plan.

The ECM shall:

- (1) have the authority to issue cease work and change orders in the field, as deemed necessary; and
- (2) document compliance of the licensee with the construction-related conditions of the license. The ECM shall monitor turbidity daily during ground-disturbing activities. If turbidity 100 feet downstream of construction areas measures greater than 25 nephelometric turbidity units higher than values obtained upstream of the construction area, then related construction activities shall cease immediately, sediment sources shall be located, and appropriate sediment control measures shall be implemented and monitored for effectiveness. Turbidity data shall be available for inspection upon request by the Commission, Alaska Department of Fish and Game (Alaska DFG), and Alyeska Pipeline Service Company.

The licensee shall consult with Alaska DFG and U.S. Fish and Wildlife on the details of the ECM position, including qualifications, duties, and responsibilities. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to finalizing the position details.

Phase II – for up to the first five years after the start of project operation

Within one year of license issuance, the licensee shall file with the Commission

for approval, Phase II of its proposed Biotic Monitoring Plan. The plan shall include, but not be limited to:

- (1) a sampling protocol and schedule to detail the effectiveness of project operations in preventing fish stranding and maintaining aquatic habitat connectivity by documenting fish presence/absence downstream of the barrier falls in the project bypassed reach both during the summer after ice-breakup and runoff and in the fall;
- (2) triggers that will result in the termination of monitoring prior to the fifth year after the start of project operations; and
- (3) provisions for filing an annual monitoring report, developed in consultation with the agencies consulted in the development of the plan, that summarizes the previous year's results and any measures proposed to minimize fish stranding or enhance habitat connectivity.

The plan shall include documentation of consultation with Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, and National Marine Fisheries Service; copies of comments on the completed plan after it has been prepared and provided to the agencies; and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. Project operation 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. If the results of the monitoring indicate that changes in structures or operations are necessary to prevent fish stranding or provide habitat connectivity in the bypassed reach, the Commission may direct the licensee to make such modifications.

Article 408. Notification of Non-Compliance Event. Within 48 hours of the detection of a non-compliance event that may affect fish or wildlife resources at the project, the licensee shall notify Alaska Department of Fish and Game and U.S. Fish and Wildlife Service of the non-compliance event via telephone. The licensee shall file a detailed written description of the event with the Commission no later than 10 days following the detection of the event.

Article 409. 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 410. Vegetation Management Plan. Within 90 days of license issuance, the licensee shall file for Commission approval, a revised Vegetation Management Plan, including the measures of the Vegetation Management Plan and the wetland protection measures proposed in the license application filed on August 30, 2011. The plan shall include the following additional provisions:

- (1) clean and inspect all construction-related equipment off-site prior to entry into the project area to ensure that equipment is free of seeds, spores, or other vegetation material that may introduce invasive species and noxious weeds to the project area;
- (2) manage noxious weeds and invasive species;
- (3) use native seeds and plants in areas to be revegetated;
- (4) monitor the revegetated areas to ensure success of the revegetation efforts, with measures to address invasive species and noxious weeds should they be found; and
- (5) an implementation and monitoring schedule.

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

The Commission reserves the right to require changes to the plan. Implementation 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.

Within 180 days after completing construction and revegetation, the licensee shall file an initial report that includes drawings and photo documentation of the temporary penstock access route and other revegetated areas. Thereafter, the licensee shall file

annual monitoring reports no later than December 31 for the first five years of the license term.

The reports documenting the results shall include:

- (1) the revegetation efforts in the previous year, including the amount of area revegetated and/or restored during the term of the monitoring report;
- (2) the success of the revegetation efforts (i.e., whether the plantings are becoming established);
- (3) noxious weed control efforts completed during the term of the report, including areas that have been treated for noxious weeds and any new areas where infestation has occurred; and
- (4) the objectives of the next year of the revegetation efforts, as applicable.

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

Article 411. Avian Protection Plan. Within 90 days of license issuance, the licensee shall file for Commission approval, a revised Avian Protection Plan to include measures proposed in the license application filed on August 30, 2011, and the additional provision to design and construct the transmission line to be consistent with the most current Avian Power Line Interaction Committee standards.

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

The Commission reserves the right to require changes to the plan. Implementation 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 412. Harlequin Duck Nest Survey. Prior to construction of the diversion structure and the 500-foot-long buried segment of the penstock, the licensee shall conduct a survey for harlequin duck nests on the lands to be cleared for these structures, and avoid disturbance of any active nests during the nesting period (mid-June to mid-August). If active harlequin duck nests are found during the survey, the licensee shall flag the nests and avoid the areas during the nesting period. The survey shall be conducted after consultation with U.S. Fish and Wildlife Service and Alaska Department of Fish and Game on the methods for surveying and avoiding the active nests.

Article 413. Bear Safety, Scavenger, and Waste Management Plan. Within 90 days of license issuance, the licensee shall file for Commission approval, a Bear Safety, Scavenger, and Waste Management Plan, including details on the measures in the Scavenger and Management Waste Plan filed with the license application on August 30, 2011, and the following provisions for bear safety:

- (1) measures for project operations when bears are present to minimize possible conflict;
- (2) measures to minimize encounters and avoid areas frequented by bears;
- (3) measures for keeping construction sites and refuse areas clean of substances that attract bears;
- (4) installation of bear-resistant garbage receptacles and other measures during construction;
- (5) procedures to deal with problem bears; and
- (6) Alaska Department of Fish and Game (Alaska DFG) notification in the event of any bear-human conflicts.

The plan shall be developed after consultation with U.S. Fish and Wildlife Service and Alaska DFG. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall

include the licensee's reasons, based on project-specific information.

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

Article 414. Mountain Goat Avoidance. To protect mountain goats during project construction, operation, and maintenance, the licensee shall minimize helicopter disturbance by maintaining a 1,500-foot vertical or horizontal clearance from observed mountain goats when in the project area.

Article 415. Penstock Location and Grade Plan. Within 90 days of license issuance, the licensee shall file for Commission approval, a Penstock Location and Grade Plan that will provide for wildlife movement under the project penstock. The plan shall include, but not be limited to, the following provisions:

- (1) an evaluation of the current elevated penstock design for the 7,200-foot-long above-ground portion of the penstock to allow animals to cross in areas less steep (i.e., 100-foot elevation change in approximately 2,000 feet of horizontal distance);
- (2) specific measures to elevate the penstock, if needed, including the height to which the penstock will be elevated; and
- (3) any additional measures that would allow wildlife to move under the penstock.

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

The Commission reserves the right to require changes to the plan. Implementation 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 416. Limits on Timing and Location of Construction Activities. To minimize the effects of construction activities on nearby recreation users, the licensee

shall conduct construction-related activities away from developed recreation sites as much as possible, particularly along Dayville Road; schedule project-related construction traffic to avoid peak times of recreational use; minimize helicopter use to the extent practicable; and use flight paths and staging areas that are least disruptive to recreational users.

Article 417. Visual Resources. To minimize visual effects of construction and reduce the visibility of project facilities from nearby public roads and recreation sites, and from the city of Valdez, the licensee shall avoid the use of reflective materials and highly contrasting colors in the finished appearance of the penstock and powerhouse, and use natural materials (such as the use of vegetative screening around the powerhouse) and colors that blend with the natural environment.

The licensee shall file photographic evidence that it has complied with this Article 30 days after completing construction.

Article 418. Protection of Undiscovered Cultural Resources. If the licensee discovers previously unidentified cultural resources during the course of constructing, maintaining, or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the resource and consult with the Alaska State Historic Preservation Office (Alaska SHPO) to determine the need for any cultural resource studies or measures. If no studies or measures are needed, the licensee shall file with the Commission documentation of its consultation with the Alaska SHPO.

If a discovered cultural resource is determined to be eligible for the National Register of Historic Places (National Register), the licensee shall file for Commission approval a historic properties management plan (HPMP) prepared by a qualified cultural resource specialist after consultation with the Alaska SHPO. In developing the HPMP, the licensee shall use the Advisory Council on Historic Preservation and the Federal Energy Regulatory Commission's *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects*, dated May 20, 2002.

The HPMP shall include the following items: (1) a description of each discovered property, indicating whether it is listed in or eligible for listing in the National Register; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating adverse effects; (4) documentation of consultation; and (5) a schedule for implementing mitigation and conducting additional studies.

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

Article 419. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance, for any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

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

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

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

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

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

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

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

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

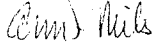
(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that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

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

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

(F) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section

313(a) of the FPA, 16 U.S.C. § 8251 (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.


 JW Jeff C. Wright
 Director
 Office of Energy Projects

FORM L-11
 (October 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED
 MAJOR PROJECT AFFECTING THE INTERESTS
 OF INTERSTATE OR FOREIGN COMMERCE

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 exhibit theretofore made a part of the license as may be specified by the Commission.

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

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

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

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

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

further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

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

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

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

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

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

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

Article 12. The 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 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 Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal Agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement

between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

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

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

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

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps,

beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

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

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

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

Article 21. 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 22. 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 23. 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.