

155 FERC ¶ 62,075
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Alaska Village Electric Cooperative, Inc.

Project No. 13272-004

ORDER ISSUING ORIGINAL LICENSE

(Issued April 29, 2016)

INTRODUCTION

1. On November 1, 2013, the Alaska Village Electric Cooperative, Inc (AVEC), 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 525-kilowatt (kW) Old Harbor Hydroelectric Project (Old Harbor Project or project) No. 13272.
2. The project will be constructed on East Fork Mountain Creek and will transfer water into a powerhouse on Lagoon Creek Tributary, near the town of Old Harbor, Kodiak Island Borough, Alaska. The project intake and a portion of the penstock will be located on about 7.74 acres of federal land within the Kodiak National Wildlife Refuge (Refuge) managed by the U.S. Department of the Interior's (Interior) Fish and Wildlife Service (FWS) and approximately 3.24 acres of Old Harbor Native Corporation land that is subject to a conservation easement administered by the FWS and the State of Alaska.²
3. As discussed below, this order issues an original license for the Old Harbor Project, authorizing an installed capacity of 262 kW.

BACKGROUND

4. On June 10, 2014, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing, soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, terms and conditions, and prescriptions.³ The notice set August 11, 2014, as the deadline for filing motions to intervene, comments, recommendations, terms and conditions, and prescriptions. The Alaska Department of

¹ 16 U.S.C. §§ 791(a)-825(r) (2012).

² Because the project will occupy lands of the United States, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2012), requires that it be licensed.

³ 79 *Fed. Reg.* 34,523 (2014).

Fish and Game (Alaska Fish and Game) filed a timely motion to intervene,⁴ comments, and recommendations. FWS filed comments and terms and conditions.

5. An Environmental Assessment (EA) was prepared by Commission staff with the cooperation of the FWS and issued on October 28, 2015, analyzing the impacts of the proposed project and alternatives to it. No comments were filed on the 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. The project is located on the southeastern portion of Kodiak Island, Alaska. Kodiak Island is a mountainous and largely undeveloped island 250 miles south of Anchorage. The Refuge is approximately 1.9 million acres and encompasses the southwestern two-thirds of Kodiak Island.⁵ The project area will include portions of both the Mountain Creek Basin and the neighboring Lagoon Creek Basin. The project diversion structure will be located on East Fork Mountain Creek, approximately 7 miles upstream of the confluence of the mainstem of Mountain Creek with Barling Bay Creek. The project will transfer water into Lagoon Creek Tributary, which flows into the 4.51-mile-long Lagoon Creek, which in turn flows into the tidally-influenced Salt Lagoon near the Town of Old Harbor.

B. Proposed Project Facilities

8. The proposed project will consist of a diversion weir, intake, penstock, powerhouse, tailrace, Swimming Pond,⁶ a constructed-tailwater channel to convey project flows from Swimming Pond to the perennial section of Lagoon Creek Tributary, an access road and trail, and transmission line. The intake, penstock, tailrace, and constructed-tailwater channel are designed to accommodate a total maximum hydraulic capacity of 11.8 cubic feet per second (cfs).

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) (2015).

⁵ <http://www.fws.gov/refuge/Kodiak/>

⁶ Swimming Pond is an approximately 3.9-acre natural pond with a water level that correlates to the ground water level in the area and fluctuates without any apparent inflow or outflow, except during high run off events.

9. The diversion weir will include an integral spillway to divert water from East Fork Mountain Creek into the penstock. The weir will range in height from approximately 4 feet at the spillway to 6 feet elsewhere and will span approximately 100 feet across the creek floodplain. The intake will include a screening system consisting of a trash rack, diversion gates, and secondary screens.

10. A 10,150-foot-long buried penstock, consisting of 7,400 feet of 18 to 20-inch-diameter polyethylene pipe leading to 2,750 feet of 16-inch-diameter steel pipe will convey water from the intake to the project powerhouse. AVEC will install a flow control mechanism between the diversion and powerhouse to control the volume of flow diverted at the intake and to limit rapid changes in flow downstream of the project.

11. The powerhouse will consist of an approximately 30-foot by 35-foot by 16-foot high metal building designed to house two 262-kW Pelton turbines, a 480-volt, three-phase synchronous generator, and switchgear. A water bypass system in the powerhouse will be used to route flows around the turbines to the tailrace during turbine maintenance.

12. The tailrace will convey project flows approximately 0.1 mile from the powerhouse to the 3.9-acre Swimming Pond. A new 1,100-foot-long, 8-foot-wide constructed-tailwater channel will convey project flows from Swimming Pond to the perennial section of Lagoon Creek Tributary.

13. An approximately 2.2-mile-long project access trail will be constructed between the intake and the powerhouse and an approximately 5,720-foot-long powerhouse access road will extend from the powerhouse to an existing community road.

14. A 1.2-mile-long, 12.47-kilovolt (kV) three-phase overhead power line will be constructed from the powerhouse to the existing power distribution system in Old Harbor.

C. Proposed Operation

15. AVEC will operate the project automatically, diverting flows of up to 5.9 cfs year-round from East Fork Mountain Creek, which is the maximum hydraulic capacity for one of the project turbines. AVEC will use a flow control mechanism between the diversion and the powerhouse to control the volume of flow diverted at the intake and to limit rapid changes in flow downstream. Streamflows greater than those diverted for power will spill over the diversion weir and continue downstream in East Fork Mountain Creek. A water bypass system in the powerhouse will be used to route flows to the tailrace during turbine maintenance.

16. The project will generate an average of 2,300 megawatt-hours (MWh) annually. A more detailed project description is contained in Ordering Paragraph B.

D. Project Boundary

17. The proposed project boundary encloses a total of 15.09 acres, including 7.74 acres of federal land within the Refuge managed by FWS and about 3.24 acres of Old Harbor Native Corporation land that is subject to a conservation easement administered by both the FWS and the State of Alaska. All of the project's features discussed above are included in the project boundary. The proposed project boundary only includes a portion of Swimming Pond, located below the tailrace. Although Swimming Pond is not a constructed project feature, it does serve an important project function, routing project outflows to Lagoon Creek Tributary, and will need to be maintained throughout the license term. Therefore, Article 203 requires the licensee to revise the Exhibit G drawings to include the entire extent of Swimming Pond within the project boundary.

E. Proposed Environmental Measures

1. Compliance Monitoring

18. To ensure and document compliance with the provisions of the license, AVEC proposes to employ an environmental compliance monitor during project construction and, if deemed necessary by an agency or AVEC, will hold an annual project review meeting throughout the term of the license to discuss the project, project reports, and compliance with the license.

2. Geology and Soils

19. To minimize erosion during project construction, AVEC proposes to stockpile overburden and soil from excavations outside of wetlands and develop a storm water pollution prevention plan for the collection and routing of storm water.

20. To minimize erosion and sedimentation during project construction and operation, AVEC proposes to develop an erosion and sedimentation control plan to include turbidity monitoring during construction.

3. Aquatic Resources

21. To protect aquatic resources, AVEC proposes to design the tailrace to allow dissolved gas concentrations to equilibrate with the atmosphere before entering Swimming Pond and develop a fish exclusion plan for the tailrace in consultation with Alaska Fish and Game.

22. To protect fish habitat, AVEC proposes to design the constructed-tailwater channel to include substrate, large woody debris, and other habitat suitable for salmon and to provide an adequate water depth for fish passage between Lagoon Creek Tributary and Swimming Pond.

23. To protect coho salmon and their associated habitat, AVEC proposes to consult with Alaska Fish and Game on the appropriate period to build the constructed-tailwater channel.
24. To prevent rapid flow fluctuations and protect aquatic resources in Lagoon Creek Tributary, AVEC proposes to limit the ramping rate of flow releases during project start-up and shut-down from the project to 5 cfs per hour.
25. To protect aquatic resources from any petroleum product spills, AVEC proposes to develop a fuel and hazardous substance spill prevention and control plan.

4. Terrestrial Resources

26. To prevent bird strikes, AVEC proposes to install bird diverters on the project's power line and guy wires.
27. To prevent bird electrocutions, AVEC proposes to outfit the project's power poles with perch posts.
28. To protect birds during project construction, AVEC proposes to construct the project between April 15 and July 15 to avoid disturbing nesting birds and conduct any blasting within 0.5 mile of an eagle nest during November-January to avoid the bald eagle breeding season.
29. To protect bald eagles during project construction, AVEC proposes to: (1) monitor and report to the FWS any newly established bald eagle nests during the construction period; and (2) consult with FWS prior to conducting any blasting within 0.5 mile, and construction work within 660 feet of any identified bald eagle nests.
30. To minimize bear encounters during construction and maintenance activities, AVEC proposes to develop a bear safety plan.
31. To avoid impacts to mountain goats, AVEC proposes to minimize the use of helicopters or airplanes near mountainsides adjacent to East Fork Mountain Creek and, if mountain goats are observed, maintain a 1,500-foot vertical or horizontal clearance to the extent that it can be accomplished safely.
32. To minimize long-term effects to local wildlife populations, AVEC proposes to revegetate excess soil piles and disturbed areas with a native seed mix recommended by the Plant Materials Center, Alaska Division of Agriculture.
33. To prevent the spread of invasive plants, AVEC proposes to develop an invasive species management plan prior to commencement of any construction activities.

5. Recreation and Land Use

34. To minimize traffic-related erosion, AVEC proposes to install gates to limit motor vehicle use of the intake access trail and an existing ATV trail to authorized vehicles only.

35. To inform the public about access on the Refuge, AVEC proposes to install signs at the powerhouse.

6. Cultural Resources

36. To protect historic resources during project construction, AVEC proposes to consult with the Alaska State Historic Preservation Officer (SHPO), FWS, and Village of Old Harbor if any historic properties or human remains are identified during construction activities.

SUMMARY OF LICENSE REQUIREMENTS

37. As discussed in more detail below, this license, which authorizes the installation of 262 kW of new, renewable energy generation capacity, generally requires the measures proposed above with some minor modifications. The license also requires additional staff-recommended measures to facilitate Commission oversight of the license.

38. To protect aquatic resources and maintain fish passage, the license requires AVEC to develop a constructed-tailwater channel habitat design and monitoring plan that: (1) incorporates AVEC's proposal to design the constructed-tailwater channel to provide suitable salmon habitat; and (2) includes annual monitoring of the channel for a three-year period following the commencement of project operation to evaluate the effectiveness of the design in providing salmonid habitat and identify whether, after project operations commence, the physical features of the constructed-tailwater channel change in ways that could negatively impact migrating or rearing fish.

39. To protect fisheries resources, the license requires AVEC to develop a ramping rate plan that incorporates AVEC's proposed ramping rate limitation of 5 cfs per hour and describes how AVEC will document compliance with it.

40. To protect aquatic resources, the license requires AVEC to restrict the establishment of permanent facilities within 100-feet of streams, except for the diversion weir, stream crossing, and areas adjacent to the constructed-tailwater channel.

41. To protect wildlife resources, the license requires AVEC to: (1) develop an avian protection plan that provides a specific design for AVEC's proposed measures to minimize avian electrocutions and collisions consistent with current avian protection guidelines, (2) adjust its construction schedule by two weeks to avoid vegetative clearing

between May 1 and August 1 to protect nesting birds, (3) minimize helicopter disturbance to protect mountain goats, and (4) modify its Bear Safety Plan to notify agencies in the event of any bear-human conflicts and implement mitigation measures if bear-denning sites might be affected by construction activity.

42. If a previously unidentified cultural resource is discovered during project operation, maintenance, or other project-related activities, the license requires AVEC to stop all land-clearing and land-disturbing activities and consult with the Alaska SHPO, FWS (if the cultural resource is on lands under their jurisdiction), and Old Harbor Tribal Council (if the cultural resource is aboriginal).

WATER QUALITY CERTIFICATION

43. Under section 401(a)(1) of the Clean Water Act (CWA),⁷ 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.⁸

44. In a letter filed on July 16, 2014, the Alaska Department of Environmental Conservation waived its right to issue a 401 water quality certificate for licensing the Old Harbor Project.

COASTAL ZONE MANAGEMENT ACT

45. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),⁹ 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.

46. The State of Alaska does not have a Coastal Zone Management Program. Therefore, a CZMA consistency certification is not required.

⁷ 33 U.S.C. § 1341(a)(1) (2012).

⁸ 33 U.S.C. § 1341(d) (2012).

⁹ 16 U.S.C. § 1456(c)(3)(A) (2012).

SECTION 4(e) FINDINGS AND CONDITIONS

47. Section 4(e) of the FPA provides that the Commission can issue a license for a project located within a federal reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. The project intake and a portion of the penstock will be located on about 7.74 acres of federal land within the Kodiak National Wildlife Refuge.

48. Staff has reviewed the National Wildlife Refuge System Administration Act of 1966, which established the purposes for FWS lands, and the presidential Executive Order 8857 that created the Kodiak National Wildlife Refuge “for the purpose of protecting the natural feeding and breeding ranges of the brown bears and other wildlife on Uganik and Kodiak Islands.” There is no evidence or allegation in this proceeding to indicate that licensing of the Old Harbor Project would interfere with the purposes of the Kodiak National Wildlife Refuge. Therefore, this license, as conditioned, will not interfere or be inconsistent with the purposes for which the Kodiak National Wildlife Refuge was created.

49. FPA section 4(e) further requires that Commission licenses for projects located within federal reservations must include all conditions that the Secretary of the department under whose supervision the reservation falls shall deem necessary for the adequate protection and utilization of such reservation. The Kodiak National Wildlife Refuge is managed by Interior’s FWS.

50. FWS filed 55 conditions under section 4(e) of the FPA on September 10, 2015, and filed modified conditions on October 21, 2015.¹⁰ Both filings state that the section 4(e) conditions “mirror those terms and conditions that FWS would stipulate in a Right-of-Way permit that FWS would issue for this portion of the project, if the project is approved.” It is not clear why FWS would submit as section 4(e) conditions the identical conditions that it would include in any FWS special use permit. Moreover, some of the conditions are confusing. For example, condition 4 states that “[t]his permit is granted pursuant to Title XI and subject to outstanding rights, if any, in third parties,” and other conditions refer to “the permit herein granted.” However, there is no indication that FWS actually has issued such a permit, and, except as discussed below, because the conditions were submitted under section 4(e) of the FPA, they are set forth in Appendix A of this order and incorporated into the license by Ordering Paragraph (E).

51. The conditions include administrative requirements and a number of general conditions regarding the use of Best Management Practices in carrying out construction and maintenance activities. The conditions also require project-specific measures,

¹⁰ The October 21 filing modified condition 30.

including requirements to: (1) obtain a surety bond to cover the cost of potential future restoration activities (condition 10); (2) consult with FWS about the location, installation, and maintenance of gates (which can be located outside the Refuge) to prevent unauthorized access to the Refuge, including annual monitoring of the gates to evaluate their effectiveness at preventing access (condition 29); (3) develop a vegetation management plan (condition 30); (4) provide an environmental compliance monitor during the construction phase of the project (condition 31); (5) develop a hazardous substance spill prevention plan (condition 32); (6) develop a storm-water pollution prevention plan (condition 33); (7) restrict vegetative clearing between May 1 and August 1 to protect nesting birds (condition 37); (8) adhere to specific requirements for limiting human-wildlife interactions (conditions 45 and 50); (9) not disturb or destroy eagle nests, or construct permanent facilities within 0.25 mile of an established nest (condition 46); (10) implement specified mitigation measures if bear denning sites could be affected by construction activities (condition 50); and (11) carry out initial construction activities during wintertime conditions when the ground is frozen (condition 51).

52. Conditions 1, 2, and 3 require AVEC to make “rental” payments to FWS for the use and occupancy of its lands. However, FPA section 10(e)(1) requires that “the licensee shall pay to the United States reasonable annual charges *in an amount to be fixed by the Commission* ... for recompensing [the United States] for the use, occupancy, and enjoyment of its lands or other property ...” (Emphasis added.) Requiring double payment for the use of federal lands would be not only unenforceable by the Commission, but also unlawful. Accordingly, because they are contrary to law, conditions 1, 2, and 3 are removed from Appendix A of this license.

53. Other section 4(e) conditions, or parts thereof, although included in Appendix A, are not enforceable by the Commission. For example, the last sentence of condition 14 provides: “Because of the special hazards inherent to the activities authorized, grant of this permit imposes liability without fault for each occurrence of injury and damage to the land and property of the United States up to a maximum of \$5,000,000.00.” Under section 10(c) of the FPA, licensees are liable for all damages to the property of others by the construction, maintenance, or operation of the project. However, because the Commission does not have the authority to establish monetary limits to said liability, it would be unable to enforce this part of the condition. As another example, condition 17 provides: “In the installation, operation and maintenance of the project, Permittee will not discriminate against any employee or applicant for employment because of race, creed, color, sexual orientation or national origin and shall require an identical provision to be included in all subcontracts.” AVEC’s obligation to comply with non-discriminatory practices exists independent of its project license, and the Commission has no statutory role in enforcing such practices as they apply to AVEC.

54. Some of the final 4(e) conditions contemplate unspecified long-term changes to project operations or facilities without Commission notification for approval. Therefore,

Article 401 of this license requires the licensee to obtain Commission authorization, granted after the filing of an application to amend or surrender the license, prior to implementing such changes.

SECTION 18 FISHWAY PRESCRIPTION

55. Section 18 of the FPA¹¹ provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

56. No fishway prescriptions, or requests for reservation of authority to prescribe fishways under section 18 of the FPA, have been filed.

THREATENED AND ENDANGERED SPECIES

57. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)¹² 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.

58. Two federally listed species could occur in marine habitats located 0.75 mile downstream of the project: the northern sea otter and Steller's eider.¹³ Impacts to these species' marine habitats from hazardous substances or erosion associated with the project would be unlikely due to the implementation of the soil erosion and sediment control (Article 403) and fuel and hazardous substance spill prevention and control (Article 406) plans. Further, impacts to Steller's eider from collisions with the transmission line would also be unlikely due to the installation of bird diverters that will increase the visibility of the line (Article 408).

59. By telephone memo filed August 18, 2011, Commission staff designated AVEC as its non-federal representative for the purpose of conducting informal consultation under section 7 of the ESA. AVEC requested concurrence from FWS with its determination that the proposed project would not likely adversely affect the Steller's eider or northern

¹¹ 16 U.S.C. § 811 (2012).

¹² 16 U.S.C § 1536(a) (2012).

¹³ The Steller's eider is a small sea duck that breeds along the Arctic coast of Alaska. The northern sea otter is an aquatic mammal that is found year-round near Kodiak Island's rocky shoreline.

sea otter.¹⁴ By letter filed November 1, 2013, FWS concurred with AVEC's determination that the proposed project would not be likely to adversely affect the listed species and critical habitat based on AVEC implementing its proposed measures to protect water quality and install bird diverters on the transmission line. In its concurrence letter, FWS also concluded that the requirements of section 7 have been satisfied. This license requires measures to protect these species and habitat that are consistent with those in AVEC's proposal on which FWS based its concurrence. Therefore, the requirements of section 7 of the ESA have been met and no further action is required.

NATIONAL HISTORIC PRESERVATION ACT

60. Under section 106 of the National Historic Preservation Act (NHPA),¹⁵ and its implementing regulations,¹⁶ federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the 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 SHPO to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

61. On September 14, 2011, AVEC submitted a letter to the Alaska SHPO requesting its concurrence on a finding of no effect due to no historic properties being located within the project's area of potential effects. On September 21, 2011, the Alaska SHPO concurred with AVEC's finding that no historic properties would be affected by the proposed project.¹⁷ Commission staff also concurred with this finding in the EA. If cultural resources are inadvertently discovered during construction or operation of the project, Article 413 requires AVEC to cease ground-disturbing activities and consult with the Alaska SHPO, FWS, and Village of Old Harbor.

¹⁴ AVEC initially requested concurrence on a determination that the project would not affect these species, by letter dated September 14, 2011, but amended its determination to be that the project would not likely affect these species via verbal communication with FWS on December 21, 2011. *See* documentation of correspondence in Appendix E.2 of AVEC's final license application.

¹⁵ 16 U.S.C. § 470 et seq. (2012).

¹⁶ 36 C.F.R. Part 800 (2015).

¹⁷ *See* documentation of correspondence in Appendix E.2 of AVEC's final license application.

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

62. Section 10(j)(1) of the FPA¹⁸ 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 Act¹⁹ to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

63. In response to the June 10, 2014 public notice that the project was ready for environmental analysis, Alaska Fish and Game filed 18 recommendations under section 10(j).²⁰ Five recommendations are outside the scope of section 10(j) and are discussed in the next section. This license includes conditions consistent with the 13 recommendations that are within the scope of section 10(j). This includes recommendations for: (1) a powerhouse bypass system (Ordering Paragraph (B)(2)), (2) burying the penstock to maintain the wildlife migration corridor (Ordering Paragraph (B)(2)), (3) an erosion and sediment control plan (Article 403), (4) turbidity monitoring (Article 403), (5) a ramping rate requirement (Article 404), (6) a tailrace design and exclusion plan (Article 405), (7) a fuel and hazardous substances spill prevention and control plan (Article 406), (8) designing the project transmission line to minimize avian electrocution hazards (Article 408), (9) a bear safety plan (Article 410), (10) protecting mountain goats from helicopter disturbance (Article 411), (11) locating project facilities and construction corridors outside of a 100-foot-wide stream buffer, except for stream crossings and the constructed-tailwater channel (Article 203), (12) seasonal limits on instream construction (FWS Condition 51), and (13) restricting access and land use to minimize resource impacts (FWS Condition 51).

SECTION 10(a)(1) OF THE FPA

64. Section 10(a)(1) of the FPA²¹ 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,

¹⁸ 16 U.S.C. § 803(j)(1) (2012).

¹⁹ 16 U.S.C. §§ 661 *et seq.* (2012).

²⁰ Alaska Fish and Game filed the recommendations on November 20, 2014.

²¹ 16 U.S.C. § 803(a)(1)(2012).

mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

A. Alaska Fish and Game Recommendations

65. Alaska Fish and Game 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 being considered under the broad public-interest standard of section 10(a)(1).²²

66. Alaska Fish and Game recommends that AVEC develop a project operation plan that provides details on how the project will comply with the operational requirements of the license, including drawings of project equipment and notification procedures for non-compliance events. Ordering Paragraph (C) and Article 202 of this license approve the project design drawings and require AVEC to file them with the Commission. Article 304 requires AVEC to file as-built drawings of project facilities after project construction. Article 404 requires AVEC to develop a ramping rate plan that describes how AVEC will document compliance with a ramping rate limitation of 5 cfs per hour for changes in project discharge. The required ramping rate plan is to be developed in consultation with Alaska Fish and Game, National Marine Fisheries Service, and U.S. Fish and Wildlife Service, and include a provision to report to these agencies and the Commission if any deviations from the required ramping rate occur. Because the only operating requirement of the license is the ramping rate limitation, the ramping rate plan satisfies the intent of Alaska Fish and Game's recommended project operation plan.

67. Alaska Fish and Game recommends that AVEC employ an environmental compliance monitor during project construction to ensure and document compliance with the requirements of this license. AVEC also proposes this measure. In the EA,²³ staff recommended the use of an environmental compliance monitor with the authority to issue cease work and change orders in the field and document compliance with licensee conditions to ensure that the measures required by the license for the construction period are being implemented. Staff agreed with this proposed measure because the project construction site is in a remote location, and in the absence of a monitor, deviations from the license conditions may not be quickly detected. Article 402 requires the environmental compliance monitor.

68. Alaska Fish and Game recommends that AVEC hold an annual project review meeting with key stakeholders, if deemed necessary by agencies or AVEC, to discuss the

²² 16 U.S.C. § 803(a)(1) (2012).

²³ See EA at 43 and 55.

project, any reports, and compliance with the license requirements. Although, AVEC also proposes this measure, this license does not require an annual project review meeting. This license requires AVEC to conduct monitoring and file annual reports on the conditions of signs, gates, barriers, and access trails (FWS Condition 29), the effectiveness of the vegetation management plan (FWS Condition 30), and constructed-tailwater channel habitat design and monitoring plan (Article 407). While, holding an annual meeting would be a means for reviewing the results of the required monitoring and any other project issues, FWS Conditions 29 and 30 and Article 407 already have required feedback mechanisms. Specifically, FWS Condition 29 requires AVEC to promptly reporting any damage or evidence of unauthorized uses to the Kodiak Refuge and consult with the Refuge to design additional protection measures if issues are found. FWS Condition 30 requires a reporting schedule for filing monitoring results of revegetation and invasive plant management efforts with the Commission and the U.S. Fish and Wildlife Service. Article 407 requires filing of a report on the monitoring of the channel geomorphology and fish habitat in the constructed-tailwater channel. While, AVEC could choose to hold an annual meeting as part of any reporting schedule or development of an annual report, Commission staff does not see a benefit in requiring AVEC to hold an annual meeting with no specific purposes. Therefore, this license does not require an annual meeting.

69. Alaska Fish and Game recommends that its staff be allowed access to the project in order to manage fish and wildlife resources in Lagoon Creek and Mountain Creek watersheds. Standard Article 13, set forth in Form L-17 of this license, requires AVEC to provide public access to project waters and adjacent project lands owned by the licensee.

B. Constructed-Tailwater Channel Habitat Design and Monitoring Plan

70. The introduction of project flows would cause the ephemeral reach connecting Swimming Pond and the existing Lagoon Creek Tributary to become more perennial. To accommodate these increased flows, AVEC proposes to design a constructed-tailwater channel, in consultation with Fish and Game, to convey project flows between Swimming Pond and the existing Lagoon Creek Tributary. However, AVEC did not propose any maintenance or monitoring-related measures for the constructed-tailwater channel. In the EA,²⁴ staff recommended that AVEC develop a constructed-tailwater channel habitat design and monitoring plan in consultation with Alaska Fish and Game. In addition, because the introduction of project flow may alter the constructed-tailwater channel in unforeseen ways due to erosion and deposition, staff recommended that the plan include a provision for annual monitoring of the constructed-tailwater channel during the first three years of project operation to identify any effects of project operations on channel form

²⁴ See EA at 79

and aquatic habitat. The monitoring of the physical habitat parameters of the constructed-tailwater channel, including habitat unit type, length, width, depth, sinuosity, substrate, woody debris, and streambank vegetation, would ensure that the constructed-tailwater channel is conveying project flows and providing fish habitat as intended. Therefore, Article 407 of this license requires AVEC to file a constructed-tailwater channel habitat design and monitoring plan for Commission approval.

C. Bald Eagle Nest Protection

71. Blasting could be necessary in some locations during construction of the intake access trail and penstock, which could disturb nesting bald eagles. In the event a bald eagle nest is identified by the environmental compliance monitor, AVEC will avoid blasting within 0.5 mile of the nest. If blasting is required within 0.5 mile of an eagle nest, as determined by the environmental compliance monitor, AVEC proposes to limit blasting to November-January to avoid the eagle nesting season, consistent with FWS's National Bald Eagle Management Guidelines. In addition, AVEC proposes to monitor and report to the FWS any newly established bald eagle nests during the construction period to determine if additional protection measures are needed. In the EA,²⁵ staff determined that the measures proposed by AVEC would reduce the risk of nesting eagles from construction disturbance, particularly in open habitats in the project area where nests are not shielded by vegetation or topography. Therefore, Article 409 requires AVEC's proposed bald eagle protection measures.

EXEMPTION OF THE FERC FORM 80 RECREATION REPORT

72. The FERC Form 80 Recreation Report (Form 80) collects recreation usage data on recreation facilities at projects through the term of their licenses. Because the project will only occupy a total of approximately 15.1 acres of land, and recreation at the project site is limited to an ATV trail and a lightly used footpath,²⁶ the Old Harbor Project has little potential for recreation facilities. Therefore, the licensee is exempt from filing the Form 80 during the term of its license (Article 412).

ADMINISTRATIVE PROVISIONS

A. Annual Charges

73. The Commission collects annual charges from licensees for administration of the FPA. Under the regulations currently in effect, projects with authorized installed

²⁵ See EA at 54-55.

²⁶ See EA at 60.

capacity of less than or equal to 1,500 kW, like this project, will not be assessed an annual charge (Article 201).

B. Exhibit F and G Drawings

74. The Commission requires licensees to file sets of approved project drawings in electronic file format. The Exhibit F drawings filed with the application are approved, and Article 202 requires the filing of these drawings. The Exhibit G drawings are not approved because the proposed project boundary does not include the full extent of Swimming Pond, which is used by the project to convey project flows from the tailrace to the constructed-tailwater channel portion of Lagoon Creek Tributary. Therefore, Article 203 requires the filing of revised Exhibit G drawings.

C. Project Land Rights Progress Report

75. The project will occupy 15.09 acres of land, 7.33 acres of which are non-federal lands. Exhibit G-2 filed as part of the application for license identifies land ownership. Standard Article 5, set forth in Form L-17, requires the licensee to acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project, within five years. In order to monitor compliance with Article 5, Article 204 requires the licensee to file no later than four 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. The report must include specific documentation on the status of the rights that have been acquired as of the filing date of the progress report, and a plan and schedule to acquire all remaining rights prior to the five-year deadline.

D. Project Financing

76. To ensure that there are sufficient funds available for project construction, operation, and maintenance, Article 205 requires the licensee to file for Commission approval documentation of project financing for the construction, operation, and maintenance of the project at least 90 days before starting any construction associated with the project.

E. Use and Occupancy of Project Lands and Waters

77. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 414 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

F. Start of Construction

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

G. Review of Final Plans and Specifications

79. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer 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, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

80. Article 303 requires the licensee to provide the Commission's D2SI-Portland Regional Engineer with cofferdam construction drawings, as appropriate.

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

82. To provide for the safety of the public at or near the project site, Article 305 requires the licensee to provide to the Commission a Public Safety Plan.

83. Article 306 requires that any permanent or temporary modification which may affect the project works or operations shall be coordinated with the Commission's D2SI-Portland Regional Engineer at the beginning of the planning and design phase. This includes those modifications resulting from license environmental requirements.

STATE AND FEDERAL COMPREHENSIVE PLANS

84. Section 10(a)(2)(A) of the FPA²⁷ requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.²⁸ Under section 10(a)(2)(A), federal and state agencies filed 92 comprehensive plans that address

²⁷ 16 U.S.C. § 803(a)(2)(A) (2012).

²⁸ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2015).

various resources in Alaska. Of these, staff identified and reviewed six comprehensive plans that are relevant to this project.²⁹ No conflicts were found.

CONSERVATION EFFORTS

85. Section 10(a)(2)(C) of the FPA³⁰ 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, taking into account the published policies, restrictions, and requirements of state regulatory authorities. AVEC is a non-profit electric cooperative that serves its members in 56 communities throughout interior and western Alaska.³¹ AVEC will sell the project's power directly to the Old Harbor community on a system not connected to the grid.

86. In Alaska, the high cost of energy encourages conservation. AVEC encourages members to be efficient in their personal electricity use, and is currently in the process of increasing the operating efficiency of its power plant facilities and distribution lines. Staff concludes that AVEC is making a good faith effort to conserve energy in compliance with section 10(a)(2)(C) of the FPA.

SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT

87. Staff has reviewed AVEC'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

88. To assess the need for power, staff looked at the needs of the Old Harbor Community. Old Harbor, like most rural Alaskan communities, relies on a small set of diesel generators and barged-in diesel fuel to supply its power needs. In 2010, the AVEC power plant consumed 58,000 gallons of diesel fuel to generate 807,000 kilowatt-hours (kWh).

²⁹ The list of applicable plans can be found in section 5.4 of the EA for the project.

³⁰ 16 U.S.C. § 803(a)(2)(C) (2012).

³¹ See <http://avec.org/>.

89. AVEC proposes to install two 262-kW Pelton turbines, with the first turbine installation occurring at the time of initial construction and the second turbine being installed when “demand warrants an additional turbine.” Section 13 of the FPA states that a “licensee shall within the time fixed in the license complete and put into operation such part of the ultimate development as the Commission shall deem necessary to supply the reasonable needs of the then available market.” Commission staff estimate that the first turbine will meet AVEC’s energy demands for the next 40 years (see section 1.2.2 *Need for Power* of the EA). Therefore, only AVEC’s proposed installation of the first turbine is being authorized by this license. If and when there is an established need for additional power, AVEC can apply for a license amendment to increase power production at the project. The amendment application would be noticed for public comment, and depending upon the extent of the amendment request, analyzed under a National Environmental Policy Act (NEPA) process.

90. With a single unit installed, the project would be capable of generating an average of about 2,300,000 kWh of energy.

91. Based on information from the Alaska Energy Authority, Old Harbor’s energy demand from 2008 through 2012 grew at 5.9 percent. AVEC estimates future energy demand to average about 2.5 percent growth. If these estimates are accurate, the 2,300,000 kWh of average annual generation from the project’s initial generating unit will be capable of meeting AVEC’s energy demands for the next 40 years.

92. The project would displace generation from non-renewable sources. Displacing the operation of non-renewable facilities will avoid some emissions, thus creating an environmental benefit. Staff concluded that power from the Old Harbor Project would help meet a need for power in the Old Harbor community in both the short and long-term.

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PROJECT ECONOMICS

93. 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.*,³³ 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

³² EA at 5

³³ 72 FERC ¶ 61,027 (1995).

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.

94. In applying this analysis to the Old Harbor Project, two options were considered: AVEC's proposal and the project as licensed herein. With a single unit, the average annual project cost would be \$683,000 or about \$297/MWh. The average annual cost of alternative power would be \$328,000 or about \$143/MWh. Overall, the project would produce power at a cost which is \$355,000, or \$154/MWh, more than the cost of alternative power.

95. As licensed herein with the staff measures and mandatory conditions, the average annual project cost will be \$683,850 or about \$297/MWh. The average annual cost of alternative power will be \$328,000 or about \$143/MWh. Overall, the project will produce power at a cost which is \$355,850, or \$154/MWh, more than the cost of alternative power.³⁴

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

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

COMPREHENSIVE DEVELOPMENT

98. Sections 4(e) and 10(a)(1) of the FPA³⁵ 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 must be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

³⁴ EA at 70.

³⁵ 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

99. 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 Old Harbor 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.

100. Based on an independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the proposed Old Harbor Project, with the staff-recommended measures, will be best adapted to a comprehensive plan for improving or developing East Fork Mountain Creek and the Lagoon Creek Tributary.

101. This alternative was selected because: (1) issuance of an original license will serve to provide a beneficial and dependable source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational and aesthetic resources, and historic properties; and (3) the 262 kW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

102. Section 6 of the FPA³⁶ 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; 40-year terms for projects with a moderate amount of redevelopment or new construction; and 50-year terms for projects with extensive redevelopment or new construction.³⁷

103. This license requires an extensive amount of new construction, including: (1) a diversion structure with an intake, (2) a penstock, (3) a powerhouse, (4) a tailrace, (5) a constructed-tailwater channel, (6) an access road and trail, and (7) a transmission line. Consequently, a license term of 50 years for the Old Harbor Project is appropriate.

The Director orders:

(A) This license is issued to the Alaska Village Electric Cooperative, Inc. (licensee), for a period of 50 years, effective the first day of the month in which this order

³⁶ 16 U.S.C. § 799 (2012).

³⁷ See *City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

is issued, to construct, operate, and maintain the Old Harbor Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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

(2) Project works consisting of: (a) a new 100-foot-long, diversion weir located on East Fork Mountain Creek with an integrated spillway, ranging in height from 4 feet at the spillway to 6 feet elsewhere; (b) an intake with a screening system that consists of a trash rack, diversion gates, and secondary screens; (c) a new 10,150-foot-long buried penstock to convey water from East Fork Mountain Creek to the proposed project powerhouse in the Lagoon Creek basin; (d) a new flow control mechanism located between the diversion and powerhouse to control the volume of flow diverted at the weir and intake; (e) a new 30-foot by 35-foot by 16-foot-high powerhouse containing one 262-kW Pelton turbine; (f) a new water bypass system located in the powerhouse to bypass the project turbines and route flows to the tailrace during turbine maintenance; (g) a new 700-foot-long tailrace to convey water from the powerhouse to the nearby Swimming Pond; (h) a new 1,100-foot-long constructed-tailwater channel to convey project flows from Swimming Pond to Lagoon Creek Tributary; (i) a new 5,720-foot-long, 24-foot-wide access road between the City of Old Harbor and the powerhouse; (j) a new 11,500-foot-long, 10-foot-wide access trail between the intake and powerhouse; (k) a new 6,550-foot-long transmission line from the powerhouse to the existing power distribution system in the City of Old Harbor; and (l) appurtenant facilities.

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

Exhibit A: The following sections of Exhibit A filed on November 1, 2013:

Exhibit A, pages A-1 through A-10, entitled "Exhibit A – Project Description," excluding the description of a second turbine which is not approved by this license.

Exhibit F: The following Exhibit F drawings filed on November 1, 2013:

| <u>Exhibit F Drawing</u> | <u>FERC No. 13272</u> | <u>Description</u> |
|--------------------------|-----------------------|-----------------------------------|
| Sheet F-1 | 1 | Project Vicinity Map |
| Sheet F-2 | 2 | Project Community Map |
| Sheet F-3 | 3 | Pipeline Trail – Plan and Profile |
| Sheet F-4 | 4 | Pipeline Trail – Plan and Profile |

| | | |
|------------|----|---|
| Sheet F-5 | 5 | Pipeline Trail – Plan and Profile |
| Sheet F-6 | 6 | Pipeline Trail – Plan and Profile |
| Sheet F-7 | 7 | Pipeline Trail – Plan and Profile |
| Sheet F-8 | 8 | Pipeline Trail – Plan and Profile |
| Sheet F-9 | 9 | Pipeline Trail – Plan and Profile |
| Sheet F-10 | 10 | Pipeline Trail – Plan and Profile |
| Sheet F-11 | 11 | Pipeline Trail – Plan and Profile |
| Sheet F-12 | 12 | Pipeline Trail – Plan and Profile |
| Sheet F-13 | 13 | Pipeline – Plan and Profile |
| Sheet F-14 | 14 | Tailrace – Plan and Profile |
| Sheet F-15 | 15 | Tailrace – Plan and Profile |
| Sheet F-16 | 16 | Powerhouse Access Road – Plan and Profile |
| Sheet F-17 | 17 | Powerhouse Access Road – Plan and Profile |
| Sheet F-18 | 18 | Powerhouse Access Road – Plan and Profile |
| Sheet F-19 | 19 | Powerhouse Access Road – Plan and Profile |
| Sheet F-20 | 20 | Powerhouse Access Road – Plan and Profile |
| Sheet F-21 | 21 | Powerhouse Access Road – Plan and Profile |
| Sheet F-22 | 22 | Intake Site Plan |
| Sheet F-23 | 23 | Diversion Wall and Intake – Plan and Profile |
| Sheet F-24 | 24 | Intake – Sections and Details |
| Sheet F-25 | 25 | Intake Access Trail and Pipeline – Typical Sections |
| Sheet F-26 | 26 | Intake Access Trail and Pipeline – Typical Sections |
| Sheet F-27 | 27 | Intake Access Trail and Pipeline – Typical Sections |
| Sheet F-28 | 28 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-29 | 29 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-30 | 30 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-31 | 31 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-32 | 32 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-33 | 33 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-34 | 34 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-35 | 35 | Intake Access Trail and Pipeline – Cross Sections |

| | | |
|------------|----|---|
| Sheet F-36 | 36 | Intake Access Trail and Pipeline – Cross Sections |
| Sheet F-37 | 37 | Powerhouse – Site Plan |
| Sheet F-38 | 38 | Powerhouse – Section |
| Sheet F-39 | 39 | Tailrace – Details |
| Sheet F-40 | 40 | Powerhouse – Access Road and Electrical |

(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 and F described above are approved and made part of this license. Exhibit G drawings filed as part of the application for license do not conform to Commission regulations and are not approved.

(D) The following sections of the FPA are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the conditions submitted by the U.S. Fish and Wildlife Service under section 4(e) of the FPA, as those conditions are modified by this order and set forth in Appendix A to this order.

(F) This license is also subject to the articles set forth in Form L-17 (October, 1975), entitled “Terms and Conditions of License for Unconstructed Minor Project Affecting Lands of the United States,” (see 54 F.P.C. 1792 et seq.), as reproduced at the end of this order, and the following additional articles:

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

- (a) Effective as of the date of commencement of project construction, to reimburse the United States for the cost of administration of Part 1 of the Federal Power Act. The authorized installed capacity for that purpose is 262 kilowatts. Under the regulations currently in effect, projects with authorized installed

capacity of less than or equal to 1,500 kW will not be assessed an annual charge; and

- (b) To recompense the United States for the use, occupancy and enjoyment of 7.74 acres of lands (other than for transmission line right-of-way).

Article 202. Exhibit F Drawings. Within 45 days of the date of issuance of this license, as directed below, the licensee must file two sets of the approved exhibit drawings in electronic file format on compact disks with the Secretary of the Commission, ATTN: OEP/DHAC.

Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-13272-001 through P-13272-040) must be shown in the margin below the title block of the approved drawing. Exhibit F drawings must be segregated from other project exhibits, and identified as (CEII) material under 18 C.F.R. § 388.113(c). Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-13272-###, F-1, Description, MM-DD-YYYY.TIF]. All digital images of the exhibit drawings must meet the following format specification:

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

Article 203. Exhibit G Drawings. Within 90 days of the effective date of the license, the licensee must file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project, including the entire Swimming Pond. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission’s regulations. The revised Exhibit G drawings must continue to show that no project facilities, including penstock, road, and trail corridors, are located within of a 100-foot-wide stream buffer, except for the diversion weir, stream crossings, and areas adjacent to the constructed-tailwater channel that will connect Swimming Pond to Lagoon Creek Tributary.

Article 204. Project Land Rights Progress Report. No later than four years after license issuance, the licensee must file a report with the Commission describing the status of acquiring title in fee or the rights for all the lands within the project boundary. The

report must provide an overview map of each parcel and summary table identifying the licensee's rights over each parcel within the project boundary. The report must also include specific supporting documentation showing the status of the land rights on all parcels of land within the project boundary that: (1) have been acquired up to the date of filing of the report, including pertinent deeds, lease agreements, and/or bill of sale information that specifically verify the licensee's rights; and (2) the licensee's plan and schedule for acquiring all remaining project lands prior to the five-year deadline, including a history of actions taken, current owner information, the type of ownership to be acquired whether in fee or by easement, and the timeline for completing property acquisition.

Article 205. Documentation of Project Financing. At least 90 days before starting construction, the licensee must file with the Commission, for approval, the licensee's documentation for project financing. The documentation must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The documentation must include, at a minimum, financial statements, including a balance sheet, income statement, and a statement of actual or estimated cash flows over the license term which provide evidence that the licensee has sufficient assets, credit, and projected revenues to cover project construction, operation, and maintenance expenses, and any other estimated project liabilities and expenses.

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

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

Article 302. Contract Plans and Specifications. At least 60 days prior to the start of any construction, the licensee must 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 to the D2SI-Portland Regional Engineer must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-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 303. *Cofferdam and Deep Excavation Construction Drawings.* Should construction require cofferdams or deep excavations, the licensee must: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-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 304. *As-built Drawings.* Within 90 days of completion of construction of the facilities authorized by this license, the licensee must file for Commission approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy must 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 305. *Public Safety Plan.* At least 60 days prior to the start of construction, the licensee must 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 a Public Safety Plan. The plan must include an evaluation of public safety concerns at the project site and assess the need for the installation of safety devices or other safety measures. The submitted plan must include a description of all public safety devices and signage, as well as a map showing the location of all public safety measures. For guidance on preparing public safety plans the licensee can review the *Guidelines for Public Safety at Hydropower Projects* on the FERC website.

Article 306. *Project Modification Resulting from Environmental Requirements.* If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 401. *Commission Approval and Filing of Amendments.* Some of the U.S. Fish and Wildlife Service (FWS) final 4(e) conditions contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. For example, Condition 19 requires modification or adaption of project facilities as deemed necessary by FWS. These changes may not be implemented without

prior Commission authorization granted after the filing of an application to amend or surrender the license.

Article 402. *Environmental Compliance Monitor.* At least 30 days before the start of any land disturbance or land clearing activities, the licensee must designate a qualified environmental compliance monitor to be on-site during project construction and have the authority to:

- (1) Issue cease work orders in the field, as applicable and deemed necessary;
- (2) Document compliance of the licensee with the conditions of the license;
- (3) Have the authority to suspend and recommence activities, as appropriate, if the activity deviates from requirements of this license.

The environmental compliance monitor must have a background in the biological sciences with experience in water quality monitoring and erosion/sediment control measures. The licensee must consult with Alaska Fish and Game and the U.S. Fish and Wildlife Service on the details of the environmental compliance monitor, including qualifications, duties, and responsibilities. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations prior to finalizing the position details. The selection, responsibilities, and authority of the environmental compliance monitor must also be consistent with U.S. Fish and Wildlife Service Condition 31.

Article 403. *Soil Erosion and Sediment Control Plan.* The licensee must include the following as part of the Soil Erosion and Sediment Control Plan required by Article 302:

- (1) The measures required by U.S. Fish and Wildlife Service Conditions 33 and 51;
- (2) A map showing the location of any construction staging, lay down, and spoil storage areas in relation to project features; and
- (3) Site specific measures to be employed during construction to minimize erosion, stabilize slopes, and to minimize the quantity of sediment likely to result from site access, project construction, and spoil-disposal;
- (4) A description of turbidity monitoring to be done during project construction in Lagoon Creek Tributary, including:

- a. estimation of a baseline range for natural conditions using pre-construction turbidity samples;
- b. sampling turbidity daily in the existing channel of Lagoon Creek Tributary, at a location approximately 100 feet downstream of the lower end of the constructed-tailwater channel; and
- c. a plan to cease construction activities, locate sediment sources, and implement appropriate sediment control measures if turbidity exceeds 25 nephelometric turbidity units above natural conditions. This plan must include notification and consultation with Alaska Fish and Game, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Commission if turbidity levels are exceeded.

(5) An implementation schedule.

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

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

Article 404. Ramping Rate Plan. The licensee must limit changes in project discharge to a ramping rate of no more than 5 cubic feet per second (cfs) per hour, spread evenly over a one hour period (e.g., 1 cfs every 12 minutes). At least 90 days before the start of project operations, the licensee must file with the Commission, for approval, a ramping rate plan that describes how the licensee will document compliance with the required ramping rate limitation.

The plan must include, at a minimum, the following:

- (1) A detailed description of how the licensee will document compliance with the required ramping rate;

- (2) A description of any periodic maintenance or calibration procedures necessary to ensure that the flow control valve and water bypass system work properly;
- (3) Protocols for recording and maintaining project discharge data;
- (4) A provision to report, as soon as possible, any deviations from the required ramping rate with Alaska Fish and Game, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Commission;
- (5) The steps to be taken when the ramping rate needs to be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods of time for project maintenance; and
- (6) A schedule for implementing the plan.

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

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

Article 405. Tailrace Fish Exclusion Plan. At least six months before the start of land-disturbing activities, the licensee must file with the Commission, for approval, a tailrace fish exclusion plan detailing the design of the project tailrace such that it: (1) minimizes fish attraction and possible injury caused by fish swimming upstream into project works, and (2) minimizes risk of gas super-saturation in project outflows.

The licensee must prepare the plan after consultation with Alaska Fish and Game, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by

the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information. The plan must also include a schedule for implementing the provisions of the plan.

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

Article 406. Fuel and Hazardous Substance Spill Prevention and Control Plan. At least six months before the start of any land-clearing or land disturbing activities, the licensee must file with the Commission, for approval, a fuel and hazardous substances spills prevention and control plan.

The plan must include, at a minimum, the following:

- (1) The measures required by U.S. Fish and Wildlife Service Conditions 32, 38, and 53;
- (2) A description of how oil, fuels, lubricant products, and other hazardous liquid substances will be transported, stored, handled, and disposed of in a safe and environmentally acceptable manner;
- (3) A provision to store and/or stockpile fuels and hazardous materials above the Ordinary High Water Mark, and ensure that no fueling or servicing of equipment occurs below the Ordinary High Water Mark;
- (4) A description of the equipment and procedures to be used in the event of a spill to ensure the proper containment and cleanup of any hazardous substances to minimize impacts on water quality and aquatic resources in the project area;
- (5) A provision to notify the Commission, Alaska Fish and Game, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service as soon as possible, but no later than 24 hours after discovering an accidental spill of hazardous substances; and
- (6) A provision to file a report with the Commission within 10 days of a hazardous substance spill that identifies: (a) the location of the spill; (b) the type and quantity of hazardous material spilled; (c) any corrective actions

that have been undertaken to clean up the spill; and (d) any measures taken to ensure similar spills do not occur in the future.

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

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

Article 407. *Constructed-Tailwater Channel Habitat Design and Monitoring Plan.* At least six months before the start of construction of the 1,100-foot-long constructed-tailwater channel between Swimming Pond and the existing channel in Lagoon Creek Tributary, the licensee must file with the Commission, for approval, a constructed-tailwater channel habitat design and monitoring plan.

The plan must include, at a minimum, the following:

- (1) Conceptual drawings of the constructed-tailwater channel;
- (2) A description of physical features of the constructed-tailwater channel including length, width, depth, sinuosity, dominant and subdominant substrate, habitat unit types (pools, riffles), woody debris, and streambank vegetation;
- (3) A description of how the constructed-tailwater channel will provide suitable habitat for juvenile rearing and passage of coho salmon;
- (4) A schedule for building the constructed-tailwater channel during a period that that is protective of coho salmon;
- (5) A provision for monitoring channel geomorphology and fish habitat in the constructed-tailwater channel between Swimming Pond and the existing channel of Lagoon Creek Tributary for one year following the

commencement of project operations, including:

- a. documenting the as-built physical features of the constructed-tailwater channel including length, width, depth, sinuosity, dominant and subdominant substrate, habitat unit types (pools, riffles), woody debris, streambank vegetation;
- b. monitoring for any changes in the channel attributes listed in (5)(a) from prior-year status;
- c. assessing whether any changes in the constructed-tailwater channel affect the quality of fish habitat or connectivity between Swimming Pond and Lagoon Creek Tributary;
- d. documenting any fish in the constructed-tailwater channel that are observed incidentally during habitat monitoring surveys; and
- e. filing a final report with the Commission on the results of monitoring, including any comments and/or recommendations from Alaska Fish and Game, National Marine Fisheries Service, and U.S. Fish and Wildlife on the need for continued monitoring and changes in project structures or operations. AVEC should allow at least 30 days for these agencies to comment on a draft report and make recommendations before filing the final report with the Commission.

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

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

Article 408. *Avian Protection Plan*. At least six months before the start of any land-disturbing or land-clearing activities associated with project construction, the

licensee must file with the Commission, for approval, an avian protection plan to protect birds from electrocution and collision hazards.

The plan must include, at a minimum, the following:

- (1) Conceptual design drawings of the power poles that provides for adequate separation of energized conductors, groundwires, and other metal hardware, or other measures to protect birds from electrocution, consistent with the guidelines provided in Avian Power Line Interaction Committee's (APLIC) *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*;
- (2) A detailed description of the devices to be installed on the transmission line to minimize avian collisions, including type of device and spacing between devices, consistent with the guidelines provided in APLIC's *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*;
- (3) Provisions for notifying agencies if dead or injured birds are detected over the license term; and
- (4) An implementation schedule.

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

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

Article 409. Construction Timing to Protect Nesting Birds. The licensee must construct the project according to the following restrictions, in addition to the measures required by U.S. Fish and Wildlife Service Conditions 37 and 46:

- (1) In the event a bald eagle nest is identified by the environmental compliance monitor, avoid blasting within 0.5 mile of the nest. If blasting is required within 0.5 mile of an eagle nest, blasting must take place in winter (November-January); and
- (2) Report any newly established bald eagle nests in the project area to the U.S. Fish and Wildlife Service during the construction period.

Article 410. Bear Safety Plan. At least six months before the start of any land-disturbing or land-clearing activities associated with project construction, the licensee must file with the Commission, for approval, a bear safety plan.

The plan must include, at a minimum, the following:

- (1) Measures specified in U.S. Fish and Wildlife Service Conditions 41, 45, and 50;
- (2) Measures to be implemented when bears are present during project construction and operation to minimize possible conflict;
- (3) Measures to minimize encounters and avoid areas frequented by bears;
- (4) Measures for keeping construction sites and refuse areas clean of substances that attract bears;
- (5) Installation of bear-resistant garbage receptacles and other measures during construction;
- (6) Procedures to deal with problem bears; and
- (7) Notification of Alaska Department of Fish and Game in the event of any bear-human conflicts.

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

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

Article 411. Mountain Goat Avoidance. To protect mountain goats during project construction, operation, and maintenance, the licensee must minimize helicopter disturbance by maintaining a 1,500-foot vertical or horizontal clearance from observed mountain goats when in the project area.

Article 412. FERC Form 80 Exemption. There is little potential for recreation facilities within the project boundary. Therefore, the licensee is exempt from 18 § C.F.R. 8.11, the filing of the FERC Form 80 recreation report, for the Old Harbor Hydroelectric Project.

Article 413. 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 must stop all land-clearing and land-disturbing activities in the vicinity of the resource and consult with the Alaska State Historic Preservation Office (SHPO), U.S. Fish and Wildlife Service (if the cultural resource is on lands under its jurisdiction), and Old Harbor Tribal Council (if the cultural resource is aboriginal) to determine the need for any cultural resource studies or measures. If no studies or measures are needed, the licensee must file with the Commission documentation of its consultation with the Alaska SHPO, and depending on the lands involved, with the U.S. Fish and Wildlife Service, and if the finds are aboriginal, with Old Harbor Tribal Council, accordingly.

If a discovered cultural resource is determined to be eligible for the National Register of Historic Places (National Register), the licensee must file for Commission approval a Historic Properties Management Plan (HPMP) prepared by a qualified cultural resource specialist after consultation with the Alaska SHPO, and other appropriate consulting parties. In developing the HPMP, the licensee must 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 must include the following items: (1) a description of each discovered property, indicating whether it is listed in or eligible to be listed in the National Register; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating adverse effects; (4) documentation of consultation; and (5) a schedule for implementing mitigation and conducting additional studies. The Commission reserves the right to require changes to the HPMP.

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

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

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

may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

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

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

Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

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

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

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

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

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

(H) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2014). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing must constitute acceptance of this order.

Ann F. Miles
Director
Office of Energy Projects

Form L-17
(October, 1975)

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

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

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

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

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

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

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

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

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

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may 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 7. 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 8. 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 9. 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 10. 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 11. 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 12. 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 13. 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 14. 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 the 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 15. 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 16. Timber on lands of the United State cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project

construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 17. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 18. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 19. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 20. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 21. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil

disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 22. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 23. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 24. 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 25. 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 26. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

APPENDIX A

**U.S. Fish and Wildlife's 4(e) Conditions
Old Harbor Hydroelectric Project, FERC No. 13272
Filed October 21, 2015**

RENT:

- ~~1. The Permittee is required to make a rental payment in advance for use and occupancy of lands. The annual rental amount will be established by the U.S. Fish and Wildlife Service (Service) Annual Fee Schedule (Fee Schedule) or by an Office of Valuation Services approved appraisal.~~
- ~~2. Payment(s) shall be payable to the Service and forwarded to the attention of the Chief, Division of Realty and Conservation Planning, 1011 East Tudor Road, MS 211, Anchorage, Alaska 99503. Payment by credit card can be made by calling the Collections Officer at (907) 785-3566.~~
- ~~3. Rental rates may be reviewed and adjusted by the Service at any time not less than five (5) years after the grant of the permit or the last revision of charges. Should the Fee Schedule be adjusted, then the rental rate would be adjusted accordingly. The Service will furnish a notice in writing to the Permittee of intent to impose new charges commencing with the ensuing charge year. The revised charges will be effective unless the Permittee files an appeal according to 50 C.F.R. 29.22.~~

TERMS AND CONDITIONS:

4. As the Authorized Officer, the Refuge Manager will monitor compliance with right-of-way permit (permit) stipulations on behalf of the Service.
5. This permit is granted pursuant to Title XI and subject to outstanding rights, if any, in third parties.
6. Permittee, by accepting this permit, agrees to the terms and conditions contained in the permit and to requirements of 50 CFR 29 and 36 CFR 43.
7. Unless otherwise provided, the Permittee shall not remove any material, earth, or stone for construction or other purpose, except that stone or earth necessarily removed from the right-of-way in the construction of a project may be used elsewhere along the same right-of-way in the construction of the same project.
8. Prior to beginning any activity authorized under this permit, the Permittee shall submit to the Refuge Manager a plan of development describing all activities

anticipated to be carried out under the authority of this right-of-way permit during the coming year, including but not limited to: clearing, construction, and restoration. The plan shall provide sufficiently detailed information to allow the Refuge Manager to effectively monitor activities to be carried out under the plan. Receipt of the plan will be acknowledged in writing by the Refuge Manager. Once approved, a plan of development will be effective for one year. Subsequent plans of development shall be submitted annually for approval, and shall be received by the Refuge office 60 days before the expiration of the current plan. No activities may be carried out under this permit, unless they are described in a current plan of development.

9. Written notice shall be provided to the Refuge Manager 60 days prior to the beginning of construction. Clearing and construction will not begin until the Permittee, contractors, and key employees attend a pre-construction meeting with the Refuge Manager to discuss the extent of the project, work schedules, equipment and materials involved, staging of materials, and responsibilities of each party.
10. Prior to commencement of any activities authorized by this permit, the Permittee shall provide to the Service, (attention Chief, Division of Realty and Conservation Planning) a surety bond. This bond shall meet the requirements of 31 U.S.C. §§ 9301-9309. The bond will remain in place for the life of the project. The bond amount is calculated to cover the anticipated cost of restoration activities.
11. Permittee shall comply with State and Federal laws applicable to the project within which the permit is granted, and to the lands included in the right-of-way, and lawful existing regulations thereunder.
12. Permittee will not disturb or remove any public land survey monument or project boundary monument; unless Permittee requests and receives from the Service approval of measures Permittee will take to perpetuate the location of aforesaid monument.
13. The Permittee will rebuild and repair such roads, fences, structures, and trails as may be destroyed or altered by construction work and will build and maintain suitable crossings for all roads and trails that intersect the works constructed, maintained, or operated under the permit.
14. Permittee shall pay the United States the full value for all damages to the lands or other property of the United States caused by Permittee, its employees, contractors, or employees of the contractors, outside of permitted activities or areas. Permittee shall indemnify the United States against any liability for

damages to life, person or property arising from the use of the lands under the permit. Where the permit involves lands that are under the exclusive jurisdiction of the United States, the Permittee or its employees, contractors, or agents of the contractors, will be liable to third parties for injuries incurred concerning the right-of-way. Because of the special hazards inherent to the activities authorized, grant of this permit imposes liability without fault for each occurrence of injury and damage to the land and property of the United States up to a maximum of \$5,000,000.00.

15. The Permittee will notify promptly the Chief, Division of Realty and Conservation Planning of the amount of merchantable timber, if any, which will be cut, removed, or destroyed in the construction and maintenance of the project, and will pay the United States in advance of construction such sum of money as the Service may determine to be the full stumpage value of the timber to be so cut, removed, or destroyed.
16. The Chief, Division of Realty and Conservation Planning, and the Refuge Manager shall be kept informed of Permittee's principal place of business and the names and addresses of its principal officers.
17. In the installation, operation, and maintenance of the project, Permittee will not discriminate against any employee or applicant for employment because of race, creed, color, sexual orientation or national origin and shall require an identical provision to be included in all subcontracts.
18. Grant of the permit is subject to the express condition that the exercise thereof will not unduly interfere with the management, administration, or disposal by the United States of the land affected thereby. The Permittee agrees and consents to the occupancy and use by the United States, its grantees, permittees, or lessees, of any part of the right-of-way not actually occupied for the purpose of the granted rights to the extent that it does not interfere with the full and safe utilization thereof by the Permittee. The Permittee also agrees that authorized representatives of the United States will have the right of access to the right-of-way for making inspections and monitoring the construction, operation and maintenance of facilities.
19. The permit herein granted shall be subject to the express covenant that any facility constructed thereon will be modified or adapted, if such is found by the Service to be necessary, without liability or expense to the United States, so that such facility will not conflict with the use and occupancy of the land for any authorized works which may hereafter be constructed thereon under the authority of the United States. Any such modification will be planned and scheduled so as not to interfere unduly with or to have minimal effect upon continuity of energy and delivery

requirements.

20. The permit herein granted is only for the specific use described and may not be construed to include the further right to authorize any other use within the right-of-way unless approved in writing by the Service.
21. The Permittee is responsible for ensuring that all persons working for the Permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
22. By accepting this permit, the Permittee agrees to reimburse the United States for reasonable and documented costs incurred by the Service in processing the permit application, issuing the permit, and monitoring the installation, construction, operation, maintenance, termination and removal of facilities within or adjacent to the right-of-way. Reimbursement of such expenses shall be according to the Collection Agreement executed by the Permittee and the Service.
23. The Permittee is responsible for obtaining all necessary State and Federal permits and submitting copies to the Refuge Manager prior to the start of construction.
24. Upon completion of construction, the Permittee will file two copies each of a certification of completion and as-built drawings of the completed facilities with the Chief, Division of Realty and Conservation Planning, as proof of construction.
25. All or part of this permit may be terminated by the Service, for failure to comply with any or all of the terms or conditions of the grant, or for abandonment. In the event of noncompliance or abandonment, the Service will notify the Permittee in writing of its intention to suspend or terminate the grant 60 days from the date of the notice, stating the reasons therefore, unless before that time the Permittee completes such corrective actions as are specified in the notice. The Service may grant an extension of time within which to complete corrective actions when, in its judgment, extenuating circumstances not within the Permittee's control such as adverse weather conditions, disturbances to wildlife during breeding periods or periods of peak concentration, or other compelling reasons warrant. Failure to take corrective action within the 60 day period will result in suspension or termination of the permit. This procedure shall also apply in case of abandonment, a rebuttable presumption of abandonment is raised by deliberate failure of the Permittee to use for any continuous 2 year period the permit for the purpose for which it was granted or renewed.
26. Within 90 days after abandonment, or upon expiration or other termination of this permit, a restoration plan will be submitted by the Permittee to the Refuge Manager for approval. Termination includes permits that terminate under the

terms of the grant. The Refuge Manager will provide guidance to the Permittee for developing a restoration plan. All structures, facilities, equipment, gravel, utility lines and all other installations covered by this permit will be removed from the right-of-way. Restoration activities will be conducted as specified in the approved restoration plan. Permittee shall restore the land to its original condition to the satisfaction of the Refuge Manager. Final inspection of the site will be by the Refuge Manager or his designee and will be at the expense of the Permittee.

27. The final disposal by the United States of any tract of land traversed by a right-of-way will not be construed to be a revocation of the right-of-way in whole or in part. Such final disposition will be deemed and taken to be subject to such right-of-way unless it has been specifically canceled.
28. Any proposed transfer by assignment, lease, operating agreement or otherwise, of this permit, or any of the rights conferred by this permit, must be filed in triplicate with the Chief, Division of Realty and Conservation Planning. Additionally, it must be supported by written agreement by the transferee to comply with and be bound by the terms and conditions of the original grant and applicable amendments, if any. A \$25.00 nonreturnable service fee must accompany the proposal. No transfer will be recognized until approved in writing by the Service.
29. The licensee shall, after consultation with U.S. Fish and Wildlife Service about specific locations, install and maintain gates across intake access trail and the existing ATV trail to prevent unauthorized motorized access into the Refuge and conservation lands, and install signs at the powerhouse to inform the public about access provisions on the Refuge and conservation lands. The licensee shall also monitor the conditions of the signs, gates, barriers, and the access trails annually, promptly reporting any damage or evidence of unauthorized uses to the Kodiak Refuge. If unauthorized uses or vandalism are noted, the licensee shall consult with the Refuge to design additional protection measures.
30. At least six months before the start of any land-disturbing or land-clearing activities associated with project construction, the licensee shall file, for Federal Energy Regulatory Commission (Commission) and Service approval, a vegetation management plan. The purpose of this plan is to revegetate areas disturbed by project construction and prevent the introduction and spread of invasive species and noxious weeds during project construction and operation.

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

- (1) a description of best management practices to be followed to prevent the introduction and spread of invasive plants during project construction and operation, including provisions to clean (e.g., power wash) and inspect all

construction-related equipment and materials 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, including mid-season inspections;

- (2) procedures for piling overburden and soil from excavations outside of wetlands and in such a way as to prevent erosion;
- (3) methods and a schedule for revegetating disturbed areas and excess soil piles with native species, including locations of areas to be revegetated, types of native plant materials, native plant species and methods to be used, source of plant materials, planting densities and application rates, fertilizer formulations, use of certified weed-free seeds, and seed test results;
- (4) coordination with the refuge manager to determine a schedule and procedures for controlling invasive plant species from the Refuge's 2010 Priority Invasive Species List, or any updated list, and that may become established in revegetated areas or identified during the term of the license;
- (5) a monitoring program to evaluate the success of revegetation and invasive plant management efforts, including criteria that define when revegetation and management of target invasive species is successful for two growing seasons after completion of construction and revegetation efforts. If invasive plants are found during the initial 2-year monitoring period, remediation needs to occur and then monitored for another two growing seasons until weed-free conditions are met;
- (6) monitoring during annual site maintenance to insure identification and removal of invasive plants detected in the project area;
- (7) a reporting schedule for filing monitoring results with the Commission and the U.S. Fish and Wildlife Service; and
- (8) an implementation schedule.

The plan shall be developed after consultation with U.S. Fish and Wildlife Service, Alaska Department of Fish and Game, and Plant Materials Center, Alaska Division of Agriculture. 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.

31. During the construction phase of the project, the Refuge will require onsite monitoring of the activities. Monitors will be environmental compliance personnel, either contracted by the Service and funded through a cost reimbursable agreement with the Permittee, or contracted by a third party consultant, approved by the Refuge Manager, and paid for by the Permittee. The number of monitors will depend upon timing of actual work (whether shifts are involved) and whether various sections of the project are to undergo construction at the same time. Monitors shall be on site during all active periods of road and pipeline construction to monitor and support compliance with all permit stipulations and approved plans of development. These monitors will be the main point of contact for the Service and responsible for providing daily written progress reports to the Refuge Manager and Permittee. Monitors will also have the authority to suspend and recommence activities, as appropriate, if the activity deviates from permit stipulations or plans of development. The monitor(s) shall notify the Refuge Manager and Permittee in writing immediately following suspension of work.
32. Fuel storage, cleanup, and spill reporting will be conducted in accordance with the Service, Region 7, Fuel Storage Policy R7-4. Sorbent material in sufficient quantity to handle operation spills shall be on hand at all times for use in the event of an oil or fuel spill. The Permittee's contractor(s) will develop and have on site a Spill Prevention Control and Countermeasure Plan, as applicable. A copy of this plan will be submitted to the Refuge Manager prior to commencement of construction.
33. All excavation dewatering and storm-water sedimentation control will be performed to meet the requirements of permits issued by the U.S. Environmental Protection Agency and the Alaska Department of Environmental Conservation. Copies of these permits and a Storm-Water Pollution Prevention Plan will be submitted to the Refuge Manager prior to any construction. This plan shall include a detailed procedure for construction of stream crossings, including protocol for fluming stream water to prevent disruption of flow during trench excavation.
34. During all phases of construction, seasonal constraints and weather may require temporary suspension of activities within the right-of-way to protect public health

or safety or the environment. If the Refuge Manager determines that an immediate temporary suspension of all or a portion of activities within the right-of-way is necessary, he/she may suspend such activities without administrative proceeding.

35. Permittee shall clear and keep clear the lands within the right-of-way to the extent and in the manner directed by the Refuge Manager; and will dispose of all vegetative and other material cut, uprooted, or otherwise accumulated during the construction and maintenance of the project in such a manner as to decrease the fire hazard and also in accordance with such instructions as the Refuge Manager may specify. Any maintenance clearing activities (i.e. clearing not associated with initial construction of facilities) shall be authorized under the conditions of a specific Refuge Special Use Permit issued by the Refuge Manager. Such permits shall include those mitigation measures necessary to minimize impacts to Refuge resources.
36. Permittee will do everything reasonably within its power, both independently and on request of any duly authorized representative of the United States, to prevent and suppress fires on or near lands to be occupied under this permit, including making available such construction and maintenance forces as may be reasonably obtainable for the suppression of such fires.
37. No vegetative clearing will occur between May 1 and August 1, in order to protect nesting birds, unless authorized in writing by the Refuge Manager.
38. A Pre-project Sampling and Analysis Plan will be conducted (in coordination with the Refuge Manager) by the Permittee prior to any construction to determine the existing levels of benzene, toluene, ethylbenzene, and xylenes (BTEX) or other hazardous substances for comparison with future values as an indication of leaks or spills during the operation of the facilities. This plan may be waived at the discretion of the Refuge Manager.
39. All bulk hazardous material and all hazardous waste containers are not allowed in the right-of-way permit area.
40. Culverts used within the right-of-way permit area will be periodically inspected and maintained as required by the Refuge Manager.
41. All food wastes will not be stored in the right-of-way permit area.
42. All gray and black water or chemical toilet refuse generated at construction or production facilities will not be allowed in the right-of-way permit area.
43. All trash and non-petroleum solid waste generated at construction or production

facilities will be hauled off the Refuge and disposed in accordance with 18 AAC 60 (Solid Waste Regulations) and with 18 AAC 62 (Hazardous Waste Regulations).

44. All hazardous wastes (as defined by the Resource Conservation and Recovery Act of 1976, as amended) will be transported and disposed in accordance with regulation requirements and shall not be stored in the right-of-way permit area.
45. Any problems with wildlife shall be reported immediately to the Refuge Manager. The Permittee, contractors, and employees shall not feed animals. Wildlife shall not be harassed or intentionally approached closely enough to disrupt the animal's activity or to endanger human life. There shall be no taking of any animal except in the case of defense of life and property. In the case of a defense of life and property taking, the Permittee shall immediately contact the Alaska Department of Fish and Game and the Refuge Manager, and salvage those parts of the animal required by State regulations.
46. Disturbance and destruction of eagle nests or nesting trees is prohibited. Initial construction of permanent facilities, including roads, drill pads, and storage areas is prohibited within 1/4-mile of an established nest tree.
47. The Permittee shall be responsible for keeping the project area clean. All trash, survey lath, trail markers and other debris shall be picked up and properly disposed of during the job. At the completion of construction, a final cleanup shall be conducted by the Permittee and approved by the Refuge Manager.
48. The Permittee shall comply with the provisions of the Archeological Resources Protection Act (16 U.S.C. 470(a) (a)). The disturbance of archeological or historical sites and the removal of artifacts from Federal land are prohibited. In the event that cultural resources are found during the project, a localized work halt shall be initiated. This will be followed immediately by telephone contact to the Refuge Manager, and concurrent contact with the State Historic Preservation Officer, to evaluate the significance of any findings and establish any protective measures that may be necessary.
49. The Permittee's employees or contractors are prohibited from hunting, fishing, and trapping when access to the area is obtained by vehicle use of the right-of-way, or any other road not open to the general public.
50. Prior to clearing and construction during the bear denning season, a survey may be conducted by Refuge personnel for the purpose of identifying bear denning sites that might be affected by construction activity. If such denning sites are identified, the Refuge Manager will prescribe appropriate mitigation measures to protect

human safety and prevent adverse impacts to wildlife.

51. Initial construction activities will occur in wintertime conditions when the ground is frozen to minimize sedimentation and other potential adverse effects to wetlands, unless authorized in writing by the Refuge Manager.
52. Permittee will be responsible for dust control during all project activities.
53. Oil/diesel storage facilities are not allowed in the right-of-way permit area.
54. The Service reserves the right to grant additional rights-of-way or permits for compatible uses on or adjacent to the right-of-way permit area in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way across Federal lands.
55. Consistent with 50 C.F.R. 25.21(h), the Authorized Officer may require permit modifications at any future time to ensure compatibility with the use and occupancy of the land. Additional permit stipulations may be added over the life of the permit based on new information, technologies, or concerns.

End of Conditions.