UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Copper Valley Electric Association, Inc. Project No. 13124-005

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT

(November 20, 2013)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's (Commission or FERC's) regulations, 18 Code of Federal Regulations (CFR) Part 380 (Order No. 486, 52 Federal Register 47897), the Office of Energy Projects has reviewed Copper Valley Electric Association, Inc.'s application to amend its license for the Allison Creek Hydroelectric Project (FERC Project No. 13124). The 6.5-megawatt project is located on Allison Creek near Valdez, Alaska. The project does not occupy any federal lands.

As licensed, the majority of the project's 7,000-foot-long penstock would be installed above-ground and a 4,000-foot-long temporary construction access road would be used during construction. In its amendment application, the licensee proposes to bury the entire penstock instead, including the drilling and blasting of a 700-foot-long, 16-foot-diameter tunnel through which a segment of the penstock would be routed. In addition, the licensee proposes changes to the construction access roads. Staff prepared an environmental assessment (EA) which analyzes the potential environmental effects of the proposed amendment, and concludes that amending the license, with appropriate environmental protective measures, would not constitute a major federal action that would significantly affect the quality of the human environment.

A copy of the EA may be viewed on the Commission's website at http://www.ferc.gov/docs-filing/elibrary.asp. Enter the docket number (P-13124) in the docket number field to access the document. You may also register online at http://www.ferc.gov/docs-filing/esubscription.asp to be notified via email of new filings and issuances related to this or other pending projects. For assistance, call 1-866-208-3676 or e-mail FERCOnlineSupport@ferc.gov, for TTY, call (202) 502-8659. A copy is also available for inspection and reproduction at the Commission's Public Reference Room located at 888 First Street, NE, Room 2A, Washington, D.C. 20426, or by calling (202) 502-8371.

Kimberly D. Bose,
Secretary.

ENVIRONMENTAL ASSESSMENT

FOR AMENDMENT OF LICENSE

Allison Creek Hydroelectric Project—FERC Project No. 13124

Alaska

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
888 First Street, NE
Washington, D.C. 20426

October 2013

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ACRONYMS AND ABBREVIATIONS

Alaska SHPO	Alaska State Historic Preservation Officer
APE	area of potential effects
BMP	best management practice
CFR	Code of Federal Regulations
Commission	Federal Energy Regulatory Commission
EA	environmental assessment
ESCP	Erosion and Sediment Control Plan
FERC	Federal Energy Regulatory Commission
Forest Service	U.S. Department of Agriculture, Forest Service
Licensee or Copper Valley	Copper Valley Electric Association, Inc.
NMFS	National Marine Fisheries Service

ENVIRONMENTAL ASSESSMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
Washington, D.C.

Allison Creek Hydroelectric Project
FERC Project No. 13124 – Alaska

1.0 INTRODUCTION

1.1 APPLICATION

On August 1, 2013, the Federal Energy Regulatory Commission (Commission) issued an original license for the unconstructed Allison Creek Hydroelectric Project No. 13124.[1] On September 27, 2013, Copper Valley Electric Association, Inc. (licensee) filed an application to amend its license for the Allison Creek Hydroelectric Project. In its amendment application, the licensee proposes to modify the penstock design, modify the temporary construction access roads, and construct a penstock/access tunnel. As licensed, the project will be constructed on Allison Creek at river mile1.89, about 10,000 feet upstream of the mouth of Allison Creek and 2,350 feet downstream of the outlet of Allison Lake near the city of Valdez, Alaska (Figure 1). The project does not occupy any lands of the United States.

1.2 PURPOSE OF ACTION

As licensed, the majority of the project's 7,700-foot-long penstock would be installed above-ground and an approximately 4,000-foot-long temporary construction access road would be used during construction. The purpose of the proposed amendment is to allow for the burial of the entire penstock (instead of partial burial as licensed) including the drilling and blasting of a 700-foot-long, 16-foot-diameter access tunnel through which a segment of the penstock would be routed. The licensee states that the tunnel is a critical access and design element of the project which would: reduce the use of helicopters during construction; eliminate design and operation concerns associated with construction on extreme and unstable slope conditions; facilitate ongoing maintenance and inspections; decrease the length of the lower construction access road; and improve access to the diversion structure. No changes to project operations are proposed.

[1] Order Issuing Original License, 144 FERC ¶ 62,089.

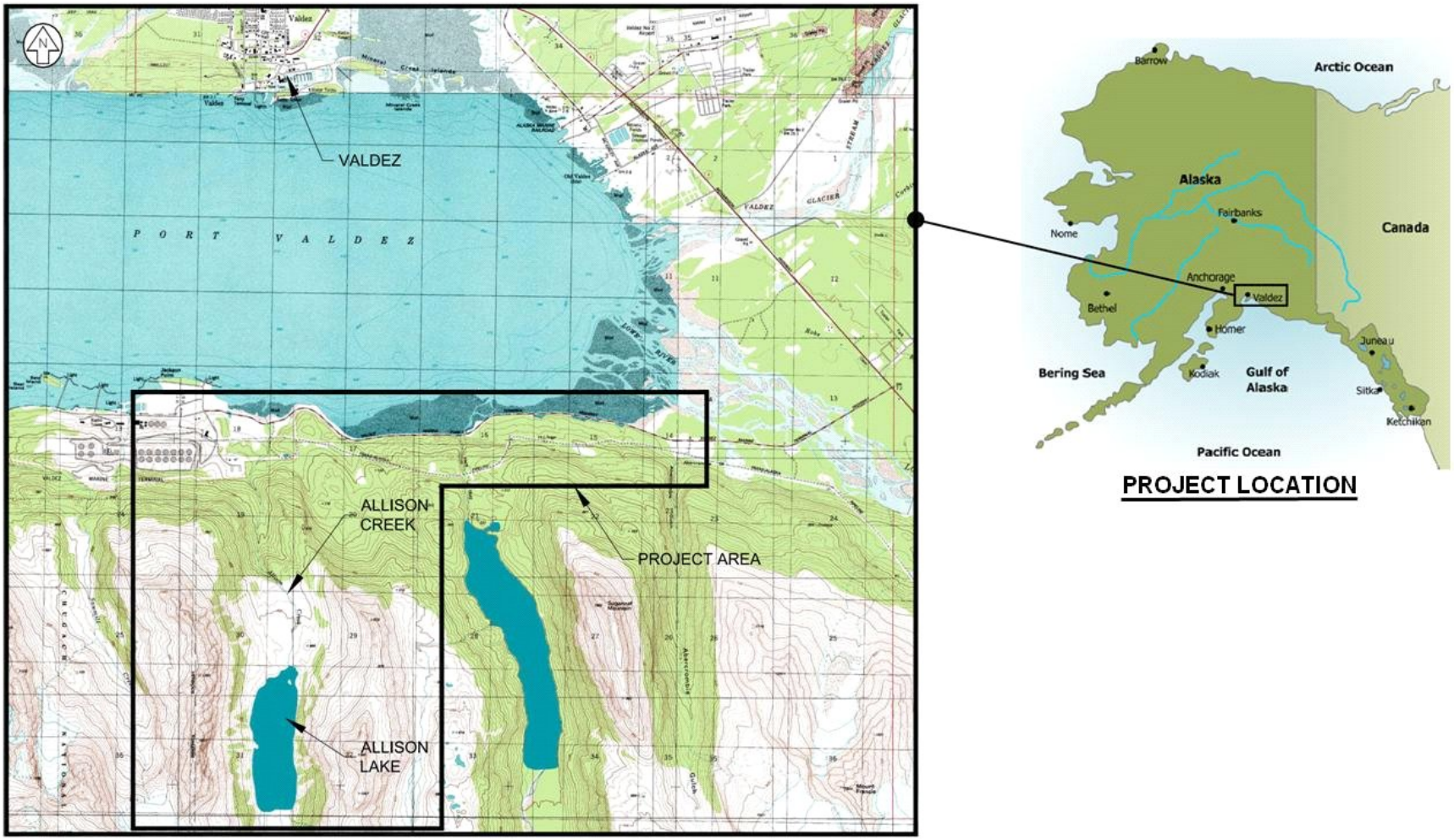

Figure 1: Location of Allison Creek Hydroelectric Project (Source: Copper Valley, 2011a).

Under the provisions of the Federal Power Act, the Commission must decide whether to amend the license as proposed and what, if any, conditions should be placed on any license amendment issued. This environmental assessment (EA) analyzes the effects associated with the proposed changes to the penstock, access roads, and proposed new tunnel.

1.3 STATUTORY AND REGULATORY REQUIREMENTS

A license amendment for the Allison Creek Project is subject to several requirements under applicable statutes.

1.3.1 Endangered Species Act

Section 7 of the Endangered Species Act requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. There are no federally listed threatened or endangered species that are known to occur in the project area; however, a candidate species, the Kittlitz's murrelet (*Brachyramphus brevirostris*) may occur in the project area (Copper Valley, 2011c). During licensing it was determined that the project would have no effect on federally listed threatened and endangered species or the candidate species. The proposed amendment does not include any new activity that has the potential to affect federally listed threatened and endangered species or the candidate species. Therefore, we conclude that amending the license for the Allison Creek Project, as proposed, would have no effect on federally listed threatened and endangered species.

1.3.2 National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires that every federal agency "take into account" how each of its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places.

The area of potential effects (APE) for the project was inventoried for cultural resources by professional archeologists contracted by the licensee in 2009, 2010, and 2011. The results of the inventories found that no cultural resources were located within the APE. As part of the licensing process, on October 17, 2011, the licensee sent a letter to the Alaska State Historic Preservation Office stating that no significant cultural resources were located within the APE. The Alaska State Historic Preservation Office returned the letter with a "No Historic Properties Affected" stamp, dated November 9, 2011. This letter was filed with the Commission on November 14, 2011.

The proposed amendment would not change the APE as considered during the licensing process, and therefore, the proposed amendment would not affect any historic properties. In addition, Article 418 of the license requires the licensee to take certain measures if the licensee discovers previously unidentified cultural resources during the course of constructing, maintaining, or developing project works or other facilities at the project. No further action is needed with regard to cultural resources at the project for the proposed amendment.

1.4 PRE-FILING CONSULTATION AND PUBLIC COMMENT

1.4.1 Pre-Filing Consultation

Prior to filing the application, the license consulted with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, and Alaska Department of Fish and Game. By email dated September 25, 2013, U.S. Fish and Wildlife Service stated that, although it does not have sufficient staff to review the project, it does not have any objection to the proposed amendment. By email dated September 24, 2012, NMFS stated that there is no concern for additional environmental impacts as a result of the proposed amendment and that there is most likely a reduction in any impacts. NMFS also stated that it has no objection to the proposed amendment. By email dated September 26, 2013, Alaska Department of Fish and Game stated that it supports the tunnel option and proposed license amendment. Alyeska Pipeline Service Company, which owns and operates the Valdez terminal of the Alaska pipeline immediately adjacent to the project, approved of the tunnel construction in a letter filed November 20, 2013.

1.4.2 Public Notice

On October 2, 2013, the Commission issued a public notice that the amendment application was accepted for filing and soliciting comments, motions to intervene, and protests. The Alaska Department of Fish and Game filed comments stating that it supports the licensee's proposal and requests that it be approved by the Commission.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 NO-ACTION ALTERNATIVE

The no-action alternative is denial of the amendment. Project construction would proceed as licensed with the penstock being installed mostly above-ground and no tunnel would be drilled and blasted. We use this alternative as the baseline environmental conditions for comparison with the proposed alternative.

2.2 APPLICANT'S PROPOSAL

2.2.1 Description of Licensed Facilities

The unconstructed Allison Creek Project (Figure 2) consists of: (a) a 16-foot-high, 130-foot-long diversion including a 50-foot-long overflow spillway section located 10,000 feet (about 1.9 miles) upstream of the mouth of Allison Creek and 2,350 feet downstream from the outlet of Allison Lake; (b) a screened intake in the spillway section; (c) a 42-inch-diameter, 500-foot-long buried and 7,200-foot-long above-ground steel penstock traversing the existing grade; (d) an approximately 4,000 foot-long temporary construction access road; (e) a 65-foot-wide, 43-foot-long, 48-foot-high powerhouse containing two Pelton-type horizontal access turbine/generator units with a total installed capacity of 6.5 megawatts; (f) a 120-foot-long tailrace extending from the west side of the powerhouse to Allison Creek via a concrete channel and the existing creek bed; (g) a 550-foot-long, 24-foot-wide access road to the powerhouse; (h) a parking area; (i) a transformer located in a switchyard adjacent to the parking area; (j) a 3.8-mile-long, 34.5 kilovolt transmission line connecting to an existing substation; and (k) appurtenant facilities.

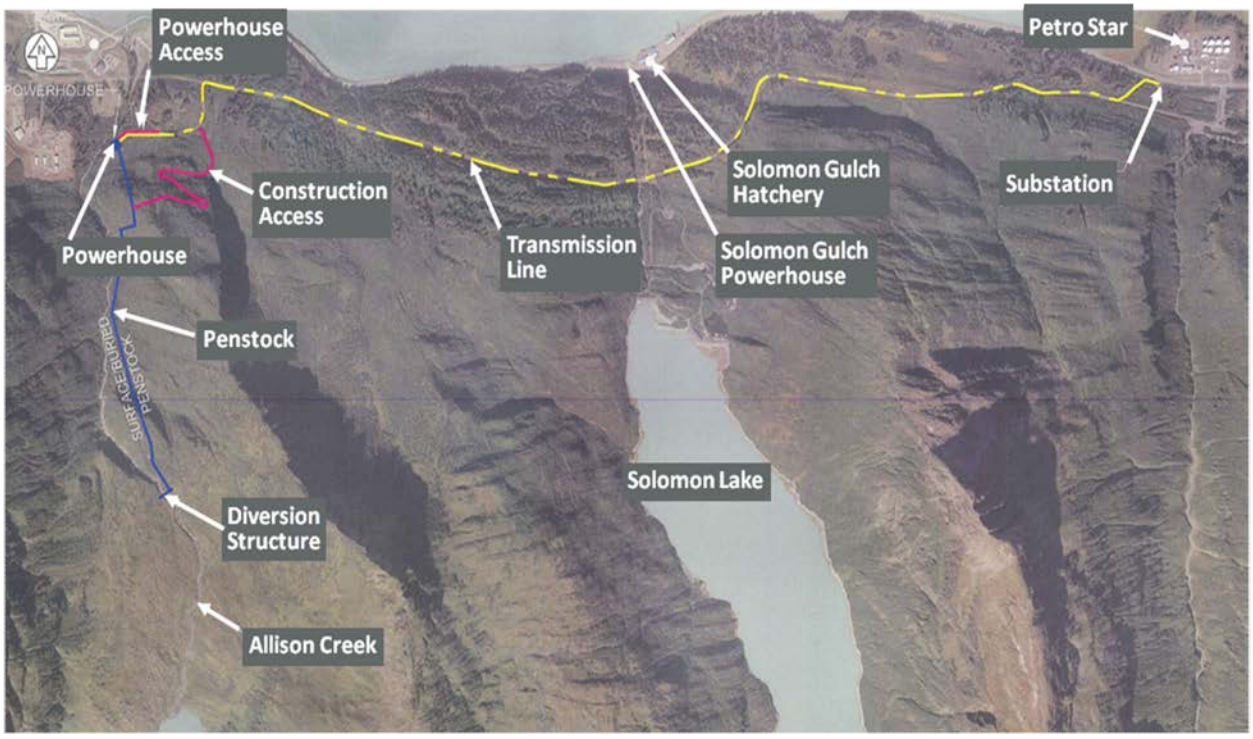

Figure 2. Location of licensed project features for the Allison Creek Project (Source: Copper Valley, 2011a).

2.2.2 Proposed Changes to Penstock

The licensee proposes to modify the design of the penstock and the methods by which construction access will be provided. The licensee proposes to bury the penstock for its entire length (instead of a partial burial as licensed), construct a 2,700-foot-long lower temporary construction access road, construct a 4,700 foot-long upper temporary construction access road, and drill and blast a 700-foot-long, 16-foot-diameter access tunnel through which a segment of the penstock would be routed (Figure 3). The proposed changes are described below, starting from the upstream part of the project (the diversion structure) and ending downstream at the powerhouse.

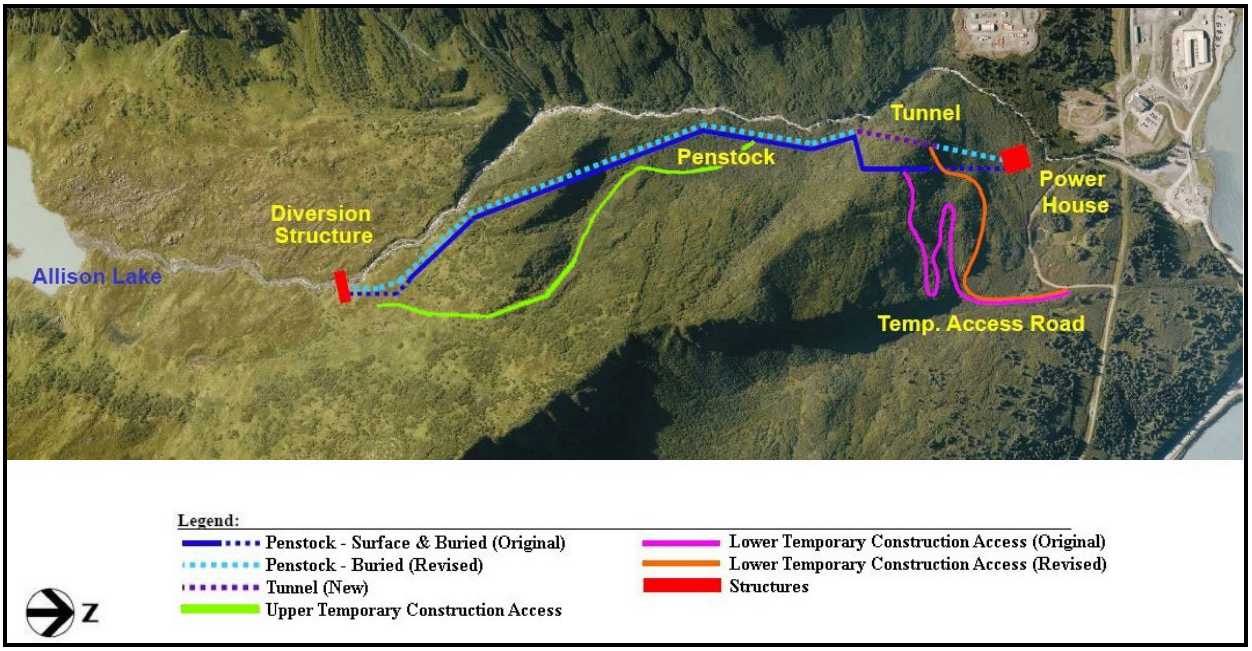

Figure 3. Location of licensed and proposed changes to project features for the Allison Creek Project (Source: Copper Valley, 2013, modified by staff).

There are no proposed changes to the diversion structure. The upper 5,500 feet of the penstock would be a 42-inch-diameter steel pipe as licensed. The first 500 feet of the penstock would be buried as originally planned. The next 5,000 feet of the penstock (to the upstream end of the tunnel), would also be buried (instead of being installed above-ground) along the same route as licensed (see Figure 3). The licensee proposes to bury the penstock by placing it at least 3 feet deep in a trench and backfilling.

Instead of taking a southerly turn over a steep ridge as originally planned, the next 700 feet of the penstock would be routed through an access tunnel. The licensee would use drill and blast methods to construct the approximately 700-foot-long, 16-foot-diameter horseshoe tunnel. Construction of the tunnel would require rock bolts at the entrances and rock and shotcrete where fractured rock is encountered within the tunnel itself. The downstream entrance would include a ventilation louver, a door to

allow pedestrian and vehicle access, and wing walls to help restrain the adjacent hillside. The licensee expects construction of the tunnel to produce approximately 10,900 cubic yards of spoils which would primarily be used construct the permanent access road to the project's powerhouse.

At the upstream end of the tunnel, the diameter of the penstock would be reduced to 36 inches. The penstock would be routed through the tunnel and mounted 1.5 to 2 feet above the tunnel floor on a concrete anchor. The penstock, as well as electrical and communications conduits, would run along one side of the tunnel, allowing vehicles to utilize the other half of the tunnel. Upon passing through the downstream tunnel entrance, the 36 inch-diameter penstock would continue approximately 700 feet downslope in a backfilled trench to the powerhouse. Based on our review of the drawings included in the amendment application, the proposed amendment would decrease the over-all length of the penstock from 7,700 to 6,900 feet.

2.2.3 Proposed Changes to Construction Access Roads

The licensee proposes to construct a 4,700-foot-long, 16-foot-wide upper temporary construction access road beginning near the upstream tunnel entrance and extending to the diversion structure (Figure 3).[2] This access road would follow the penstock route for approximately 3,100 feet before encountering a steep hill requiring the road to follow natural contours before returning to the penstock right-of-way at the diversion structure. This road would be abandoned and revegetated once construction activities are complete.

The licensee also proposes to modify the lower temporary access road leading to the lower entrance of the proposed tunnel (Figure 3). The lower access road would be constructed in a similar fashion as contemplated in the license. The 16-foot-wide road would begin in the same location as licensed; however, the road would follow the base of a prominent ridge rather than traveling over it as previously designed. Therefore, the proposed road would avoid steep grades and switchbacks and would be safer to construct and travel on. This would also result in a shorter road, approximately 2,700 instead of 4,000 feet long as contemplated in the license. Consistent with the license, the licensee proposes to abandon and revegetate this road once construction is finished.

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[2] The upper temporary construction access road was contemplated during the licensing process as an access road for small all-terrain vehicles. However, the Temporary Penstock Access Route Plan filed on October 1, 2013, and included in the amendment application, describes the upper road in more detail. The proposed road is more substantive than previously considered with some changes to the route of the access road, therefore we are considering it part of the amendment proposal.

2.2.4 Proposed Environmental Measures

Because the license requires the implementation of environmental measures during construction and operation of the project, the licensee does not propose any new environmental protection measures specific to the proposed amendment. However, the licensee states that plans and measures required by the license will be updated to incorporate the proposed changes to the penstock route and construction. Specifically, the licensee will incorporate necessary changes to the following plans:

- Article 303 Contract Plans and Specifications, including the Quality Control Inspection Plan, Temporary Construction Emergency Action Plan, and Blasting Plan
- Article 304 Erosion and Sediment Control Plan (ESCP), including the Storm Water Pollution Prevention Plan, Fire Protection Plan, Hazardous Materials/Fuel Storage Plan, and Spill Prevention, Control and Countermeasure Plan
- Article 306 Temporary Penstock Access Route Plan
- Article 307 Public Safety and Access Plan
- Article 407 Biotic Monitoring Plan-Phase 1 and Environmental Compliance Monitor Plan
- Article 410 Vegetation Management Plan
- Article 413 Bear Safety, Scavenger, and Waste Management Plan
- Article 415 Penstock Location and Grade Plan

3.0 ENVIRONMENTAL ANALYSIS

In this section, we present: (1) a general description of the project vicinity; (2) an explanation of the scope of our cumulative effects analysis; and (3) our analysis of the proposed action. Sections are organized by resource area. Under each resource area, historical and current conditions are first described. The existing condition is the baseline against which the environmental effects of the proposed action and alternatives are compared, including an assessment of the effects of proposed mitigation, protection, and enhancement measures, and any potential cumulative effects of the proposed action and alternatives.

3.1 GENERAL DESCRIPTION OF THE RIVER BASIN[3]

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

Allison Creek is a second-order stream, with a dendritic drainage pattern in which the mainstem receives many closely spaced, subparallel tributaries that join it at acute angles. There are no named tributaries to Allison Creek. The drainage density is high, as is typical for a basin with short channel lengths and steep slopes. The first-order streams draining the adjacent steep slopes into Allison Creek increase the overall catchment basin size (from the Allison Lake outlet to lower Allison Creek) by approximately 30 percent (R&M Consultants Inc., 2011a).

3.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

According to the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (40 CFR §1508.7), a cumulative effect is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over time, including hydropower and other land and water development activities. We've identified no resources that would be cumulatively affected by amending the license for the Allison Creek Project. The project is located in a very small watershed with very little existing or planned future developmental activity.

3.3 PROPOSED ACTION

In this section, we discuss the effect of the proposed amendment on environmental resources. For each resource, we first describe the affected environment,

[3] Unless otherwise stated, all information in this section and under the Affected Environment sections is taken from the Commission's Environmental Assessment for licensing the project issued June 21, 2013 (FERC, 2013).

which is the existing condition and baseline against which we measure effects. We then discuss and analyze the site-specific environmental issues raised by the proposed amendment. Our analysis is limited to the effects of the actions included in the proposed amendment and does not include those elements of the project that were analyzed during licensing of the project which are not affected by the proposed amendment.

Only the resources that would be affected are addressed in detail in this EA. Based on this, we have determined that geology and soils, water quality, terrestrial resources, and aesthetic resources may be affected by the proposed amendment.

3.3.1 Geology and Soils

3.3.1.1 Affected Environment

The Allison Creek basin lies within the Chugach Mountains physiographic province, which forms an extremely rugged barrier along the north coast of the Gulf of Alaska. The slopes in the project area are composed primarily of coarse-grained soil or bedrock, and are generally considered to be stable. Cobbles and boulders (glacial erratics) should be expected within the glacial moraine deposits as well as within most of the other terrain units.

The route of the penstock and upper temporary construction access road from the diversion to the proposed powerhouse would cross through and over the lower 1,000 feet of the glacial moraine made of glacial till, glaciofluvial outwash, and colluvium, and then into the incised portions of Allison Creek valley and through areas of bedrock. Generally, the materials have high bearing strengths.

The licensee proposes to construct the lower temporary construction access road in a similar fashion as contemplated during licensing. The road would begin in the same location as planned, less than a quarter mile east of the proposed powerhouse site, at approximately elevation 240 feet and would rise to elevation 420 feet at the downstream entrance to the tunnel. The alignment would cross what is mapped as a glacial drift, then traverse across landslide deposits. The glacial drift and landslide deposits are generally interpreted to contain dense silty gravels and/or sands with high bearing strengths.

3.3.1.2 Environmental Effects

The proposed amendment would have minor impacts on geology and soils in the project area. These effects would be similar to those identified during the licensing proceeding. The primary effect would be an increase in the erosion potential in disturbed areas, particularly along the penstock and temporary construction access routes. Because the slopes are generally underlain by coarse-grained soil and bedrock,

the construction activities are not expected to have a negative impact on overall slope stability.

Additionally, constructing the tunnel would require drilling and blasting through metagraywacke bedrock and would permanently remove approximately 10,900 cubic yards of excavated material. Excavated material would primarily be used to construct the permanent access road to the powerhouse.[4] Any remaining spoils would be used to repair the temporary access road while it is being used and to improve the permanent access road.

Proper construction techniques, using best management practices, and site restoration would ensure slope stability is maintained and severe erosion prevented. Under Article 304 of the project license, the licensee is required to develop and submit, for Commission approval, an ESCP which is to include the following: a Storm Water Pollution Prevention Plan; a Fire Protection Plan; a Hazardous Materials Containment/Fuel Storage Plan; and a Spill Prevention, Control, and Containment Plan. In addition, Article 306 requires the licensee to develop and implement a Temporary Penstock Access Route Plan which describes how the access route will be constructed and how the route will be abandoned and revegetated following construction. The licensee states that the changes proposed in the amendment would be incorporated into the plans. Implementation of these plans would address potential erosion and sedimentation issues for geology and soils in the project area, therefore no further environmental measures are needed.

3.3.2 Water Quality

3.3.2.1 Affected Environment

Two water quality monitoring locations have been established in Allison Creek; one in the upper reach 1,200 feet upstream of the proposed diversion, and one in the lower reach near the powerhouse site. In addition, a nearly continuous temperature record has been recorded at 15-minute intervals since August 2008.

Available data indicate that temperature, pH, and specific conductivity are relatively consistent between upper and lower Allison Creek on any given day, and that these parameters vary in a predictable way within the creek from season to season. Turbidity levels are variable over time in both lower and upper Allison Creek, responding to short-term and seasonal shifts in flow, snow melt, precipitation, and sedimentation.

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[4] This permanent road was approved in the licensing of the project and is therefore not analyzed in this Environmental Assessment.

3.3.2.2 Environmental Effects

The proposed amendment has the potential to impact water quality during construction by disturbing soils and increasing the chance of eroded soils to enter surface waters. As discussed in the EA for licensing the project, project construction would likely affect turbidity, specific conductivity, and pH of the water downstream of any construction areas. The changes proposed by the licensee would not exacerbate or increase the potential for impacts to water quality beyond those identified in the licensing proceeding.

The measures and plans required to be included in the ESCP under Article 304 would minimize the transport of eroded soils and would ensure that construction work in all areas of soil-disturbing activities be conducted in accordance with the Alaska Pollutant Discharge Elimination System Construction General Permit. Specific components of the ESCP during project construction include: re-seeding, fertilizing, and watering all disturbed ground with silt and overburden to establish ground cover and minimize stormwater runoff; and developing a Storm Water Plan, a Construction Plan, and a Blasting Plan. The ESCP must be developed in consultation with resource agencies and implemented during ground-disturbing activities and would provide measures that are protective of the water quality of Allison Creek. Any unavoidable increases in stream sedimentation would likely be short-term and have no lasting negative effects on aquatic resources.

Additionally, Article 407 requires the licensee to designate a qualified environmental compliance monitor to be on-site during project construction. In particular, the monitor must measure turbidity upstream and downstream of the construction daily during ground-disturbing activities. If turbidity levels, as measured 100 feet downstream of construction areas, are 25 nephelometric turbidity units higher than values measured upstream of the construction area, the environmental monitor would stop work, identify the source of the turbidity, and implement corrective measures before construction could resume. No additional measures are required to protect water quality during construction.

3.3.3 Terrestrial Resources

3.3.3.1 Affected Environment

Vegetation and land cover in the Valdez area is similar to that of other terminal bays that have been influenced by glacial events in the recent past. Alpine rock and scrub tundra surround Allison Lake, as well as a subalpine area of tall alder scrub at intermediate elevations, and Sitka spruce forest stands at lower elevations. The vegetation provides habitat for a variety of birds and mammals in the project area.

The lake and stream habitats are used by several species of waterbirds (waterfowl, loons, and gulls) and shorebirds, and the forest, scrub, and tundra habitats are occupied by many landbird species (primarily passerines) and a few species of raptors and shorebirds. Approximately 32 species of land mammals are known or expected to occur in the project area, including mountain goat (which is considered a management indicator species by the U.S. Forest Service), brown and black bears, coyotes, small mammals, and furbearers.

3.3.3.2 Environmental Effects

The proposed amendment would affect vegetation and wildlife in a similar manner as contemplated during the licensing proceeding. The new upper temporary construction access road would impact an additional 1.76 acres not considered during licensing of the project. This would result in temporary habitat loss and habitat alteration during construction because the area would be cleared periodically for regular maintenance. Based on our review of the drawings included in the amendment application, the proposed amended route of the penstock would decrease the overall-length by 800 feet. This would result in a decrease of 0.28 acres of impacted area. In addition, the length of the lower construction temporary access road would be decreased from 4,000 feet as licensed to 2,700 feet as proposed in the amendment application. These changes would result in a net increase in impacts of approximately 1.00 acre (1.76 acres in new upper access road minus 0.28 acres less of penstock and 0.48 acres less of lower construction access road). Compared to the 39.04 acres of direct effects of the project identified in the EA for licensing the project, this additional 1.00 acre represents a minor and temporary increase in adverse impacts to vegetation and wildlife habitat. The proposed amendment would not result in any other new impacts to terrestrial resources.

As discussed above, the construction activities contemplated in the proposed amendment will have a minor net increase in adverse impacts to birds and mammals similar to those identified in the licensing proceeding including: direct and indirect habitat loss or alteration, behavioral disturbances, exposure to hazardous material during construction, attraction of scavengers, and hunting and trapping pressure due to improved access from project construction. The project license requires the licensee to develop and implement several plans in order to address these concerns. These requirements, to the extent that they apply to the proposed amendments, are discussed below.

Article 410 of the license requires the licensee to file, for Commission approval, a Vegetation Management Plan. The plan must include measures to restore the temporary penstock access route and other disturbed areas, and measures to prevent the introduction and spread of noxious weeds and invasive species.

Article 413 of the project license requires the licensee to develop and file, for Commission approval, a Bear Safety, Scavenger, and Waste Management Plan which must include measures to: minimize the risk of human-wildlife interactions and attraction of scavengers by prohibiting construction workers from feeding wildlife; use modern garbage-handling procedures; and train contractor personnel to adhere to the provisions in the plan.

The ESCP required under Article 304 must include a Hazardous Materials Containment/Fuel Storage Plan; and a Spill Prevention, Control, and Containment Plan which will safeguard against the release of hazardous materials which could be a threat to wildlife.

To reduce any potential effects the project would have on birds, Article 411 requires the licensee to develop and file, for Commission approval, an Avian Protection Plan which must include measures to: restrict vegetation clearing from May 1 through July 15 to protect migratory birds; avoid project activities within 660 feet of active bald eagle nests; and limit activities, blasting, and helicopter traffic from April 10 through August 10 in the vicinity of known bald eagle nests to avoid disturbance.

Article 415 requires the licensee to develop and file, for Commission approval, a Penstock Location and Grade Plan. The purpose of the plan is to provide for wildlife movement under the project penstock. Under the proposed amendment, the penstock would be buried and therefore, it would not hinder the movement of animals across the penstock.

Article 307 requires the licensee to develop and file, for Commission approval, a Public Safety and Access Plan which must include the installation of a gate at the temporary penstock access route and signage to discourage public access to project construction areas and posting “No Trespassing” signs in an effort to reduce hunting and trapping pressures within the project area.

The development and implementation of these plans in consultation with the resource agencies would avoid or minimize adverse impacts to vegetation and wildlife; therefore, no additional environmental measures are recommended.

3.3.4 Aesthetic Resources

3.3.4.1 Affected Environment

The project would be located in a scenic, largely undeveloped area above the south shore of Port Valdez and at the base of the Chugach Mountains. The dramatic natural landscape provides an important scenic backdrop to the Valdez community, and is integral to the multiple recreation and tourism activities occurring in the region, such as boating, fishing, camping, and sightseeing. The project area is most visible from Port

Valdez, the city of Valdez, a portion of the Richardson Highway (a designated scenic byway), and from the Solomon Gulch Trail.

3.3.4.2 Environmental Effects

The primary visual effects related to the proposed amendment would be the impact of the penstock itself, and the cleared corridors for the penstock and temporary construction access roads as viewed from Valdez and Port Valdez.

The proposed amendment would alter the view of the penstock as previously considered because, instead of being installed above-ground and therefore visible, the licensee proposes to bury the entire length of the penstock approximately 3 feet underground. The penstock itself would no longer be a strong visible feature, as previously described. Additionally, the licensee proposes to revegetate the penstock route following construction, obscuring the presence of the project feature.

The new upper temporary construction access road would be a visible feature not contemplated during licensing. This road, as well as the altered lower construction access road would be approximately 16 feet wide and may be prominent for several years due to disturbed soils and vegetation across steep slopes facing the Valdez community. The licensee proposes to minimize clearing and construction widths and revegetate and restore the temporary access roads once the project is constructed.

As discussed above, Article 304 requires an ESCP and Article 410 requires a Vegetation Management Plan. In addition, Article 417 requires the license to take steps to minimize the visual effects of the projects and file photographic evidence of the project after construction. The measures included in these plans will ensure that disturbance is minimized, disturbed areas are revegetated to the extent feasible, and the project blends into the natural surrounding as much as possible. These measures will reduce aesthetic impacts at the project. Overall, the proposed amendment would result in fewer visual impacts compared to the project as licensed.

3.4 NO-ACTION ALTERNATIVE

Under the no-action alternative, the proposed amendments to the Allison Creek Project would not be constructed. The additional 1.00 acre of impacts to terrestrial resources and the permanent excavation for the construction of the tunnel would be avoided. The penstock would not be buried and would be installed above-ground where it would diminish the aesthetic quality of the natural surroundings.

4.0 CONCLUSIONS

Minor amounts of sediment would enter Allison Creek as a result of construction of the project, even with implementation of our recommended control measures,

resulting in short-term effects on water quality. The licensee's proposed ESCP would minimize the potential for eroded soils to enter surface waters. The proposed amendment would result in an additional acre of disturbance to vegetation and habitat associated with the temporary access roads; however, this would be temporary and the disturbed areas would be revegetated after construction. These effects would be minimized with implementation of the ECSP and Vegetation Plan. Construction of the 700 foot long tunnel would result in the permanent removal of 10,900 cubic yards of bedrock material. This is a minor, yet permanent adverse impact.

The proposed amendment would reduce the visibility of the penstock as it would be buried instead of installed above-ground. The upper temporary construction access route would remain visible during the construction period and for some years afterward until the area is fully restored and mature native vegetation is reestablished. Implementation of the environmental measures required by the project license would minimize or avoid identified impacts; therefore, we do not recommend any additional environmental measures.

5.0 FINDING OF NO SIGNIFICANT IMPACT

Construction of the Allison Creek Hydroelectric Project, as amended, would have the following additional short-term, minor effects: increase in soil erosion and sedimentation and temporary removal of 1.00 acre of vegetation. The environmental measures required by the license would minimize these effects. Construction of the 700 foot long tunnel would result in the permanent removal of 10,900 cubic yards of bedrock material. This is a minor, yet permanent adverse impact.

On the basis of our independent analysis, the approval of the proposed amendment to the Allison Creek Hydroelectric Project would not constitute a major federal action significantly affecting the quality of the human environment.

6.0 LITERATURE CITED

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7.0 LIST OF PREPARERS

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