

RECLAMATION

Managing Water in the West

Record of Decision

Swan Lake North Pumped Storage Hydroelectric Project

Klamath County, Oregon

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1. Introduction

On October 28, 2015, Swan Lake North Hydro LLC (SLNH) filed an application for an original License for the Swan Lake North Pumped Storage Hydroelectric Project (Project) with the Federal Energy Regulatory Commission (FERC). The 393.3-megawatt (MW) Project would be located about 11 miles northeast of the city of Klamath Falls, Klamath County, Oregon (Figure 1-1).

On December 18, 2015, FERC issued notice that it accepted SLNH's application for filing and requested interested parties to file motions to intervene if desired. The Department of the Interior (DOI), on behalf of the Bureau of Reclamation (Reclamation) and the Bureau of Land Management (BLM), filed a motion to intervene on February 12, 2016. A Draft Environmental Impact Statement (EIS) was issued by FERC on August 22, 2018 to which Reclamation submitted comments, and the Final EIS was issued on January 25, 2019. Reclamation's comments and suggestions on the Draft EIS were incorporated into the Final EIS. The Order Issuing Original License to construct, operate, and maintain the Project for a term of 50 years was issued by FERC on April 30, 2019. The License is subject to the terms and conditions of the Federal Power Act (FPA) and other FERC regulations identified in the License.

On January 31, 2018, SLNH submitted an application (O-KLA-2016-02) to Reclamation for a Right-of-Use Authorization (ROU) to use Reclamation land, adjacent to the Lost River, for Project purposes. Reclamation's action is to issue a ROU for SLNH to construct, operate, and maintain the FERC's Staff Alternative across Reclamation-administered lands as described in the FERC Final EIS (Project Number 13318-003). Reclamation's ROU will be issued in conformance with the Reclamation Act of 1902 (32 Stat. 388), the Reclamation Project Act of 1939 (53 Stat. 1187), and 43 Code of Federal Regulations (CFR) Part 429.

Per 40 CFR 1506.3(b), a non-cooperating agency may formally adopt a lead agency's EIS by recirculating it as a Final EIS. Reclamation adopted FERC's Final EIS by notifying the Environmental Protection Agency and recirculating the document for a 30-day period beginning on July 19, 2019. The purpose of this Record of Decision (ROD) is to provide a decision on SLNH's ROU application for use of Reclamation land.

1.1 Project Overview

The proposed Project includes construction of a new upper and lower reservoir, a high-pressure steel penstock between the upper reservoir and the powerhouse, three low-pressure steel penstocks from the powerhouse to the lower reservoir, a transmission line and substation, access roads to the lower and upper reservoirs, and accompanying facilities. In its entirety, the Project would occupy roughly 19 acres of land managed by Reclamation, 711 acres of land managed by BLM, and 1,310 acres of state, county, and private lands. The power-generating components of the Project would be located north of Swan Lake, approximately 11 miles northeast of Klamath Falls, Oregon. Power generated by the Project would be transmitted from the powerhouse through an adjacent fenced substation and then through a 32.8-mile-long, 230-kilovolt (kV) aboveground transmission line to interconnect with the existing non-Project substation in Malin, Oregon.

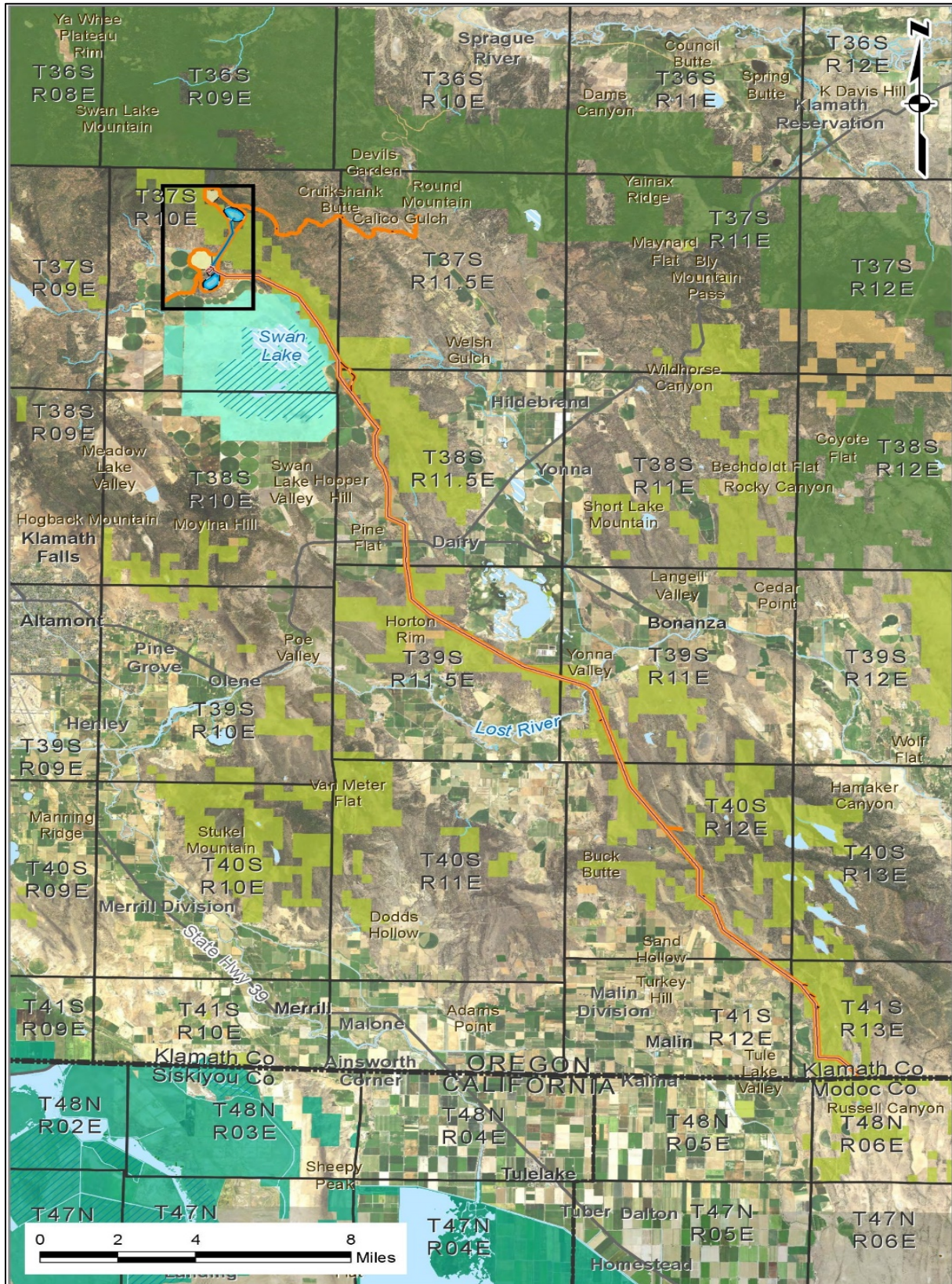


Figure 1-1 Location of Swan Lake North Pumped Storage Hydroelectric Project.

1.2 Purpose and Need

The purpose for the overall Project is to generate and provide hydroelectric power to meet part of Oregon's power requirements, resource diversity, and capacity needs. The Project would use surplus renewable power to pump water from the lower-elevation reservoir to the higher reservoir during low demand periods and generate power for up to 10 hours when grid operators require more energy to meet demand or to balance sudden drop-offs in solar or wind production. The Project would have an installed capacity of 393.3 MW and generate approximately 1,187 gigawatt hours per year, and it would operate throughout each year during its service. Power from the Project would help meet a need for power in the region over both the short and long term. The Project would provide power that would displace non-renewable, fossil-fired generation and contribute to a diversified generation mix, which may avoid some power plant emissions and create an environmental benefit.

Reclamation's action is related to the transmission line component of the Project, which crosses two 40-acre Reclamation-managed parcels, and is necessary to operate and maintain the Project. The purpose and need for Reclamation is to respond to SLNH's application to use Reclamation lands to facilitate construction, operation, and maintenance of the Project, consistent with the overall Project purpose and need. The decision to be made is whether to grant, grant with modifications, or deny the ROU.

1.3 Authority

Authorization from Reclamation is required for features of the Project that would be located on or cross over Reclamation lands or facilities. The Reclamation Act of June 17, 1902, as amended and supplemented, 32 Stat. 388; 43 United States Code 391, et seq., provides for Reclamation authority to review and to approve or deny use of Reclamation-administered lands. Reclamation's regulations set forth a process for application and agency consideration of Use Authorizations under 43 CFR Part 429. The DOI's regulations at 43 CFR § 46.20(d) allow the responsible official, who is the Regional Director in this case, to render a decision on a proposed action if it is within the range of alternatives discussed in the relevant environmental document. To this end, Reclamation would issue a license for use of United States fee lands under Reclamation's jurisdiction and would consent to the use where the United States holds a less-than-fee interest (such as an exercise of 1890s reserved right-of-way, exercise of similar state reservations, reserved rights-of-way from land sales, or acquired easement rights). Reclamation's ROU document outlines the criteria for the use of the lands under Reclamation's administration, including but not limited to duration and terms of use.

2. Reclamation Related Lands

The transmission line component of the Project would originate from the powerhouse, located just north of Swan Lake, and would extend southwest for 32.8 miles to the Malin substation. At the point where the proposed route of the transmission line crosses the Lost River, immediately downstream of the existing Harpold Dam (at 42° 10' 12.62" N, 121° 27' 10.96" W), it would

cross two 40-acre parcels managed by Reclamation. The legal description for each property is the northwest and southeast quarter of the southeast quarter of Section 19, Township 39 South, Range 11 East of the Willamette Meridian in Klamath County, Oregon. Accounting for the 300-foot wide right of way, approximately 19 acres of Reclamation property would be occupied by the transmission line (Figure 2-1).

Though not a Reclamation facility, Harpold Dam is owned and operated by Horsefly Irrigation District (HID), a water using entity within Reclamation's Klamath Project. Water from the Lost River, both upstream and downstream of the dam, is used to support Klamath Project water users. The northern parcel also contains a rock quarry that is utilized by both Klamath Irrigation District (KID) and Klamath County Public Works (KCPW).

Permanent impacts within the right of way would be limited to four mono-poles needed to support the transmission line over the Lost River. Each pole requires a 90-square foot base and would range from 80 to 120 feet in height. Temporary impacts would be related to the development of two temporary access roads, one on each side of the Lost River, that would be used to install the mono-poles; the roads would impact a total of roughly 0.9 acres. After construction is complete, access road sites would be remediated in accordance with the Project Revegetation and Noxious Weed Management Plan and other provisions identified in the FERC License. Per Article 414 of the License, exact locations of the poles and access roads would be determined, in coordination with Reclamation, HID, KID, and KCPW, during final Project design.

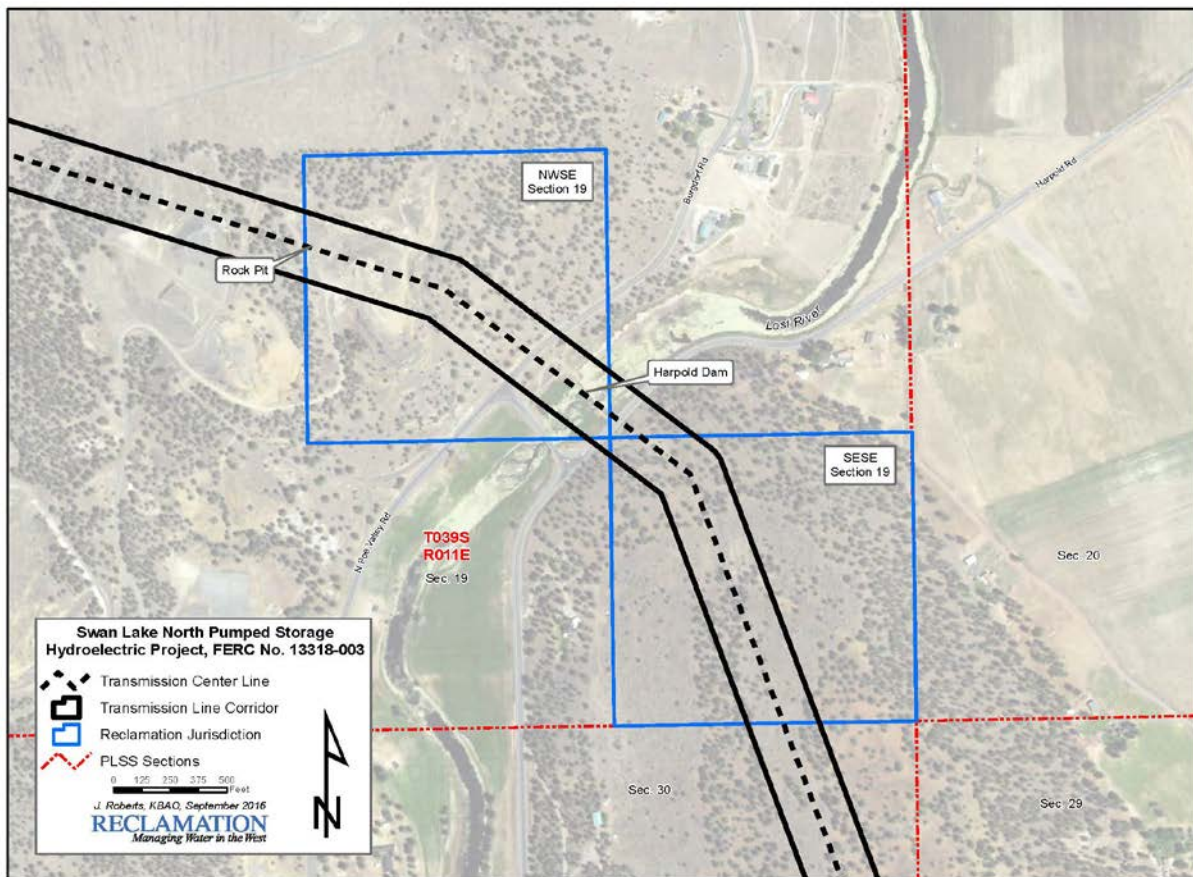


Figure 2-1 Location of Transmission Line on Reclamation Parcels.

3. Alternatives Considered

Section 2 of the Final EIS considers and analyzes two alternatives: the Applicant Proposal and the Staff Alternative. Under the Staff Alternative, the proposed Project would include SLNH's proposal, as identified in its application including measures to protect or enhance environmental resources, with additional measures and modifications. Additionally, a No Action Alternative was used as a baseline for comparing environmental effects of the Project and demonstrating the consequences of License denial.

With respect to the transmission line, the Project component involving Reclamation property, SLNH conducted a transmission line corridor alternatives analysis as part of its pre-filing studies. Six preliminary routes were presented during a public meeting in Klamath Falls on May 30, 2011. Based on received comments, SLNH refined six preliminary routes into five alternatives for further study. The five route alternatives were based on: using existing rights of way, natural divisions, and agricultural boundaries where feasible; limiting the length of the line and avoiding geographic constraints that limit line constructability; avoiding populated areas, or other conflicting land uses where possible; avoiding major environmental features, including Swan Lake, Alkali Lake, and other important wildlife habitat; avoiding known historic and culturally significant resources areas; avoiding or minimizing conflicts with agriculture, including center pivot irrigation features and other agricultural facilities; avoiding or minimizing impacts to groundwater resources; avoiding or minimizing impacts on federal lands; avoiding private lands; avoiding or minimizing impacts to residences; and avoiding airports.

The five revised transmission line route alternatives, illustrated in Figure 2-2 of the Final EIS, were presented publicly in October 2011 and considered during the pre-application phase of the licensing process. As stated in Section 2.4.2 of the Final EIS, SLNH selected Route 4 as its preferred alternative (i.e., as part of the Applicant Proposal) for the following reasons:

- Route 4 would have the fewest number of transmission line poles on agricultural lands.
- Route 4 would affect fewer residences than routes 1, 2, and 3.
- Route 4 would have fewer aesthetic impacts to residents in Swan Lake Valley compared to that of routes 1, 2, 3, and 5.
- Route 4 would have fewer aesthetic impacts to residents in Poe Valley than routes 1, 2, and 3.
- All five routes would affect public and private lands, but Route 4 would have fewer impacts to public lands compared to Route 5 and fewer impacts to private lands compared to routes 1, 2, and 3.
- Route 4 would have less potential to negatively impact wildlife and waters of the United States than routes 1, 2, 3, and 5.
- Route 4 would best address concerns raised at public meetings (to the extent possible) by minimizing impacts to agriculture, private landowners, and wildlife.
- Route 4 would be the shortest in length, reducing the number of impacts to a variety of resources as well as Project costs.

Section 2.4 of the Final EIS further explains why various alternative designs and transmission line routes were not preferable.

3.1 Environmentally Preferable Alternative

Sections 4(e) and 10(a)(1) of the FPA require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection of, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Based on FERC's independent review of agency and public comments filed on this Project and FERC's review of the environmental and economic effects of the proposed Project and its alternatives, the Staff Alternative was selected as the Environmentally Preferable Alternative. This option is recommended because: (1) issuance of a hydropower license by FERC would allow SLNH to construct and operate the project as an economically beneficial and dependable source of electrical energy for its customers; and (2) the recommended measures would protect wildlife and wildlife habitat, land uses, and visual resources.

Reclamation has also determined that selection of the Staff Alternative, which was analyzed and documented in the Final EIS, is the Environmentally Preferable Alternative. It is the alternative that causes the least impact to the environment, and it best protects, preserves, and enhances the resources that are present. The route alignment approved by this ROD follows the Staff Alternative in the Final EIS.

4. Decision and Basis for the Decision

Reclamation's decision is to grant the ROU for a term of 25 years. Under the ROU, SLNH will be required to comply with the environmental measures and conditions described in the FERC Final EIS and License (summarized in Section 5 below). Additional stipulations for the protection of Reclamation's interests and environmental concerns will be outlined in the executed ROU.

This decision is based on the analysis in the FERC Final EIS. The Applicant Proposal and the Staff Alternative were evaluated on how well each met the Project's purpose and need and the magnitude of environmental effects. Based on an independent review of agency and public comments filed on the Project and the review of the environmental and economic effects of the proposed Project and its alternatives, inclusive of the transmission line, FERC selected the Staff Alternative, described in Section 2.3 of the Final EIS, as the preferred option. Under this alternative the Project would provide a dependable source of electrical energy for the region and, with executing the environmental measures proposed by SLNH (as modified by FERC), would adequately protect and enhance environmental resources affected by the Project. Reclamation concurs with the Staff Alternative and approves the activities, with protective measures, to avoid or minimize effects to Reclamation lands while achieving Project goals.

Endangered Species Act (ESA)

As described and analyzed in Sections 1.3.3 and 3.3.5 of the Final EIS, several federally listed species have potential to occur in the Project area. FERC concluded that most of these species,

including Lost River and shortnose suckers, would be unaffected as the Project would not alter surface water hydrology and incorporates adequate protective measures.

FERC did determine, however, that the Project may affect, but would not likely adversely affect gray wolves. Per Section 7 of the ESA, FERC consulted with the U.S. Fish and Wildlife Service (USFWS) for the action, and on October 9, 2018, USFWS provided its concurrence to FERC.

National Historic Preservation Act (NHPA)

Reclamation has designated FERC as lead agency for Section 106 of the NHPA, for this undertaking. To meet the requirements of Section 106, FERC developed a Programmatic Agreement (PA) to govern the implementation of Section 106 for the construction, operation, and maintenance of the Project. The terms of the PA ensure that SLNH addresses and treats all historic properties identified within the project's area of potential effects through the finalization of a *Historic Properties Management Plan (HPMP)*. A draft PA and HPMP was provided to the Oregon State Historic Preservation Officer (SHPO), BLM, and Reclamation for review on September 21, 2018. The SHPO, BLM, and Reclamation returned detailed comments that are discussed in Section 3.3.8.2 of the Final EIS. FERC executed the PA with the SHPO, with BLM and Reclamation as concurring parties, on April 3, 2019. SLNH, as the Licensee, will implement the PA pursuant to Article 417 of the License. The Klamath Tribes and Modoc Tribe have also been invited to participate as concurring parties to the PA.

Indian Trust Assets (ITA)

There are no Indian reservations, Rancherias, or allotments in the Project area. The nearest ITA is the Klamath Tribal Designated Statistical Area, which is 7.7 miles west of the proposed Project components located just north of Swan Lake and 11.9 miles west of the proposed transmission line crossing over Harpold Dam. Based on this data and the nature of the planned work, no part of the Project appears to be in areas that will impact Indian hunting or fishing resources or water rights, and it is reasonable to assume that the Project will have no impact on ITAs.

5. Environmental Commitments

In making this Decision, Reclamation requires that SLNH comply with and implement the measures identified in the Final EIS and License to avoid or minimize impacts to Reclamation-managed properties.

SLNH will be required to provide Reclamation the Project plans and specifications for those Project features that involve Reclamation properties as prescribed in Article 302 of the License (excerpt below).

Article 302. Contract Plans and Specifications. At least 60 days prior to the start of any construction, SLNH must submit one copy of its plans and specifications and supporting design document to FERC's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer, and two copies to FERC (one of these must 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. Where project features, such as access roads, are located on Reclamation or BLM lands, SLNH must consult with Reclamation or BLM prior to filing the plans and specifications with the Commission and explain how it has addressed any Reclamation or BLM recommendations in the plans and specifications. SLNH 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.

As stated in Section 5.1.2 of the Final EIS and Article 414 of the License, before the start of any land-disturbing or land-clearing activities, SLNH must file for FERC approval a *Harpold Dam and Rock Quarry Coordination Plan*. The Plan must be developed in consultation with KID, HID, and KCPW to coordinate the construction timing and placement of the transmission line so that interference with operations at these facilities would be minimized or avoided (excerpt below).

Article 414. Harpold Dam and Quarry Coordination Plan. At least 90 days before the start of any land-disturbing or land-clearing activities, SLNH must file for FERC approval, a plan for coordinating the timing of installation and placement of the transmission line to avoid or minimize disrupting the operations of the Harpold Dam and Quarry where feasible.

The plan must include, at a minimum, a map showing the location of transmission line poles in relation to the dam and quarry, a description of transmission line and construction impacts on these operations, and measures proposed to avoid or mitigate such impacts.

The plan must be developed in consultation with KID, HID, and KCPW. SLNH must include with the plan documentation of consultation, copies of recommendations on the plan after it has been prepared and provided to the entities above, and specific descriptions of how these entities' comments are accommodated in the plan. SLNH must allow a minimum of 30 days for these entities to comment and to make recommendations prior to filing the plan with FERC. If SLNH does not adopt a recommendation, the filing must include SLNH's reasons based on project-specific reasons.

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

To comply with Section 106 of the NHPA, SLNH must execute requirements described in Article 417 of the License (excerpt below).

Article 417. Programmatic Agreement and Historic Properties Management Plan. SLNH must implement the "Programmatic Agreement Between the Federal Energy Regulatory Commission, and the Oregon State Historic Preservation Office, and The Advisory Council of Historic Preservation for Managing Historic Properties that May be Affected by Issuing a License to Swan Lake North Hydro LLC for the Operation and Maintenance of the Swan Lake North Pumped Storage Hydroelectric Project in Klamath County, Oregon (FERC No. 13318-003)," executed on April 3, 2019, and including but not limited to the HPMP for the Project. Pursuant to the requirements of this PA, SLNH must file, for FERC approval, a HPMP within one year of issuance of this order. FERC reserves the authority to require changes to the HPMP at any time during the term of this License. If the PA is terminated prior to FERC approval of the HPMP, SLNH must obtain approval from FERC,

the Oregon SHPO, and Advisory Council of Historic Preservation before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effects.

6. Implementation

Before surface-disturbing activities occur, Reclamation requires a ROU and coordination on and submission of Project plans and specifications where Project features involve Reclamation properties as described in Article 302 of the License. Reclamation will review and approve the project specifications prior to issuance of a ROU consistent with Regulations in 43 CFR § 429.14.

Upon approval of the project specifications, Reclamation will issue the appropriate ROU with right of way widths as identified by SLNH for the construction, operation, and maintenance of a 230-kV transmission line following the Staff Alternative identified in the Final EIS. The ROU decision applies only to Reclamation lands in the Project area.