

Exhibit A

Narrative Project Description



Exhibit A

Prepared for:
Swan Lake North, LLC

**Swan Lake North Pumped Storage
Hydroelectric Project**

FERC Project No. P-13318

October 2015, Updated May 2019

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FERC Project No. P-13318

October 2015, Updated May 2019

Environmental Resources Management
1050 SW 6th Avenue, Suite 1650
Portland, OR 97204

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ACRONYMS AND ABBREVIATIONS

AMSL.....	above mean sea level
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
COTP	California-Oregon Transmission Project
EL	elevation
FERC.....	Federal Energy Regulatory Commission
ft	feet/foot
GIS	gas-insulated switchgear
HVAC.....	heating, ventilating, and air conditioning
in	inch
JEI.....	Jespersen-Edgewood, Inc.
kV	kilovolt
m	meter
MW	megawatt
Project.....	Swan Lake North Pumped Storage Hydroelectric Project
PVC.....	polyvinyl chloride
ROW	right-of-way

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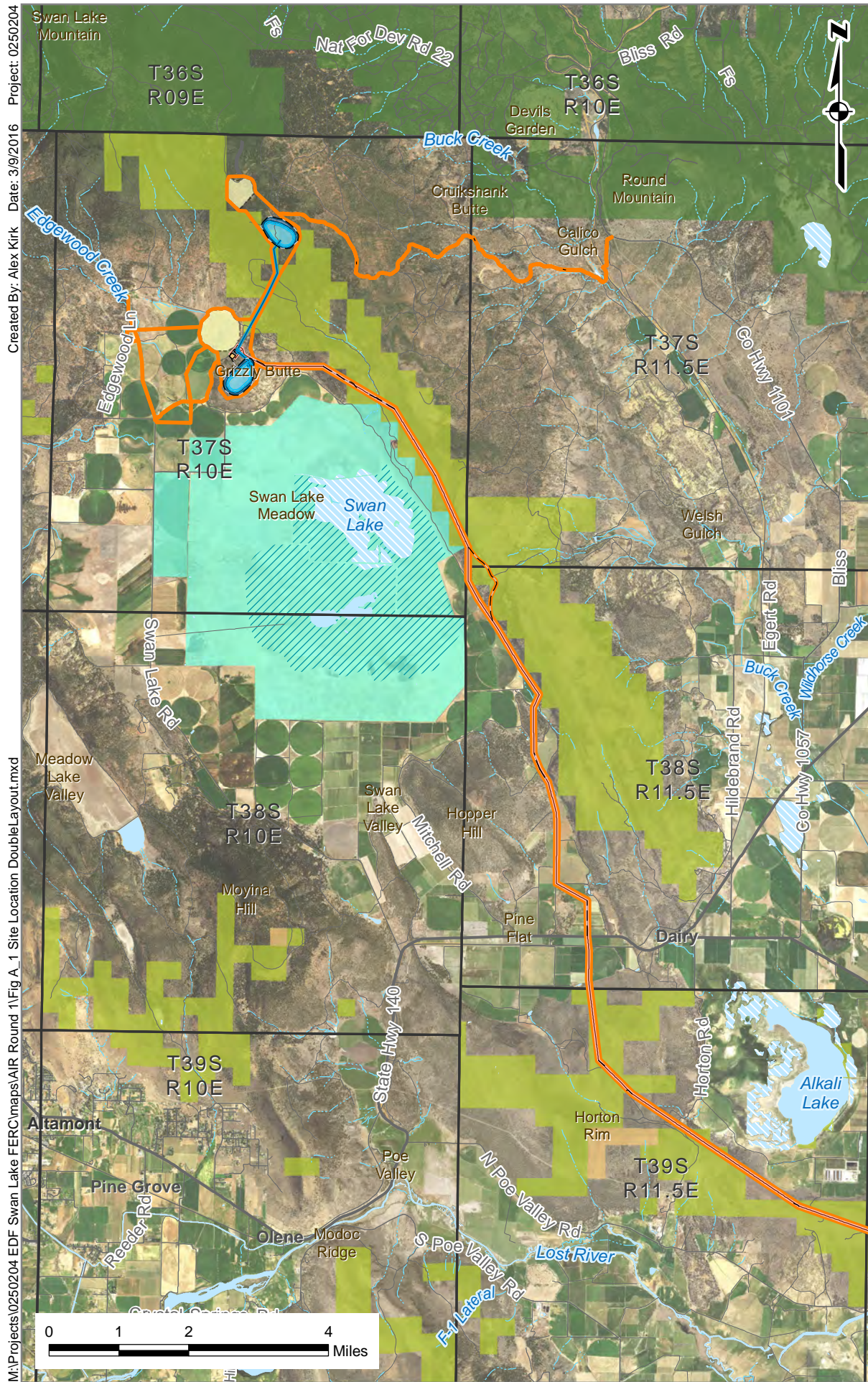
1 PROJECT LOCATION, FACILITIES AND OPERATION

1.1 Site Description

The Swan Lake North Pumped Storage Hydroelectric Project (Project) is a pumped storage hydroelectric project with a total installed capacity of 393.3 megawatts (MWs) in turbine mode, consuming around 300 MW by the end of the pumping cycle. It will be located roughly 11 miles northeast of Klamath Falls in Klamath County, Oregon (Figures A.1 and A.2). Excluding the transmission right-of-way (ROW) and associated temporary construction access roads, the proposed project boundary encompasses approximately 857 acres and stretches from the west side of Grizzly Butte to Swan Lake Rim, as shown on Exhibit F, Drawing F-100. It is located in Township 37 South, Range 10 East, Sections 1, 2, 3, 4, 9, 10, 11, 16, 17, 20, 21 and Township 37 South, Range 11.5 East, Sections 7, 8, 9, on the Swan Lake Point, Sprague River West, Whiteline Reservoir, and Swan Lake U.S. Geological Survey 7.5-minute quadrangles. The upper reservoir and its associated features are located on Swan Lake Rim, a high desert plateau rising approximately 1,500 feet (ft) above the Swan Lake Valley. The lower reservoir, powerhouse, and open air terminal are all within the Swan Lake Valley, a 10-mile-long lake basin.

The transmission ROW is approximately 32.8 miles long and runs generally southeast from the Project site, west of Dairy and Bonanza, east of Bryant Mountain, to Bonneville Power Administration (BPA)'s Malin Substation. The Project boundary also includes a total of 2.18 miles of temporary access roads outside of the transmission ROW that would be required for construction of the transmission line. The Project boundary associated with the transmission ROW includes a total of 1,637 acres, for a total Project boundary size of 2,044 acres (see Appendix A-1, Table 1).

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Source: USDA National Agricultural Imagery Program, flown 7/25/2014 at 1m per pixel

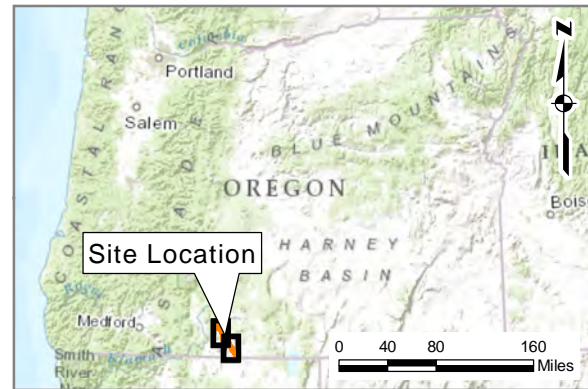
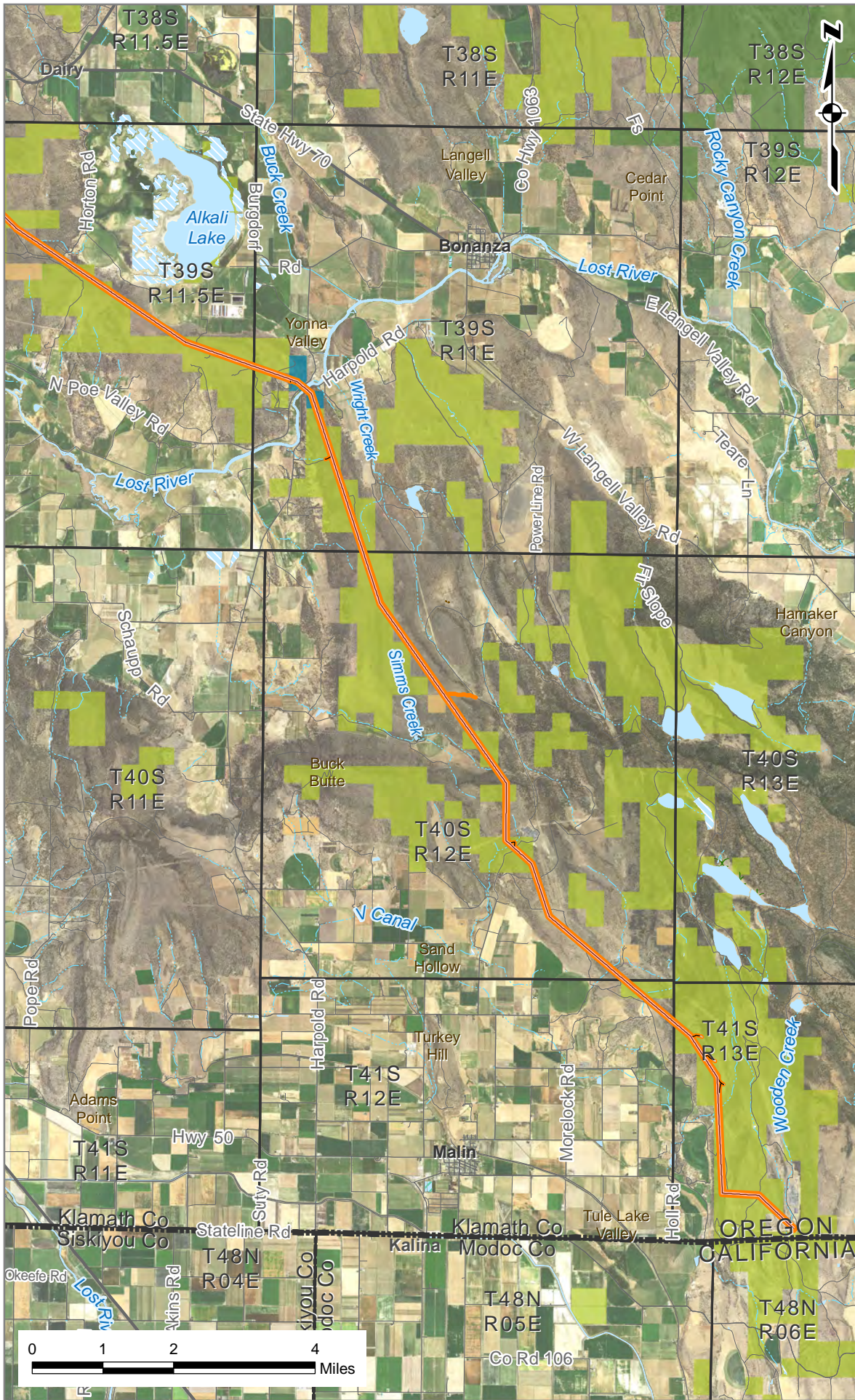


Figure A.1
Site Location
Swan Lake North Pumped
Storage Hydroelectric Project
Final License Application
EDF Renewable Energy
Klamath Falls, Oregon

Environmental Resources Management
1001 SW 5th St, Suite 1010
Portland, Oregon 97204



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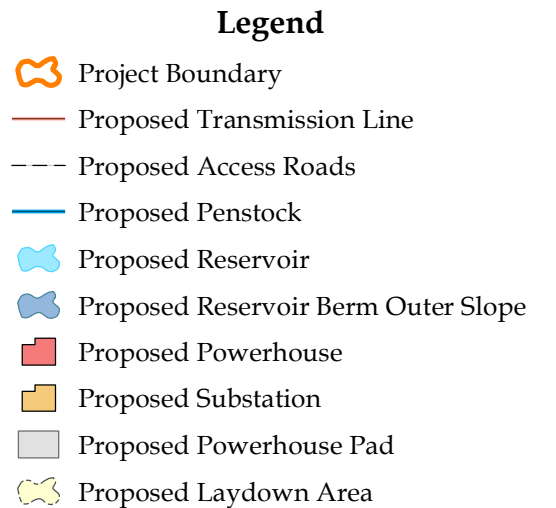
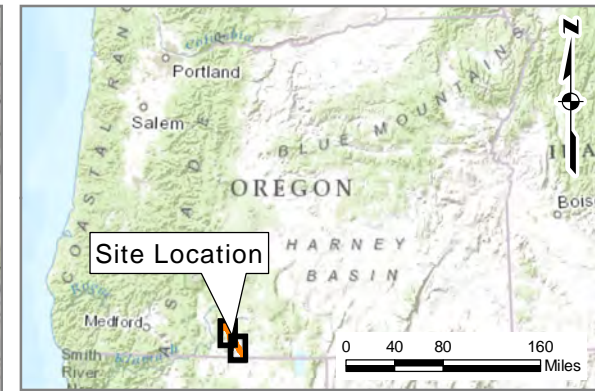
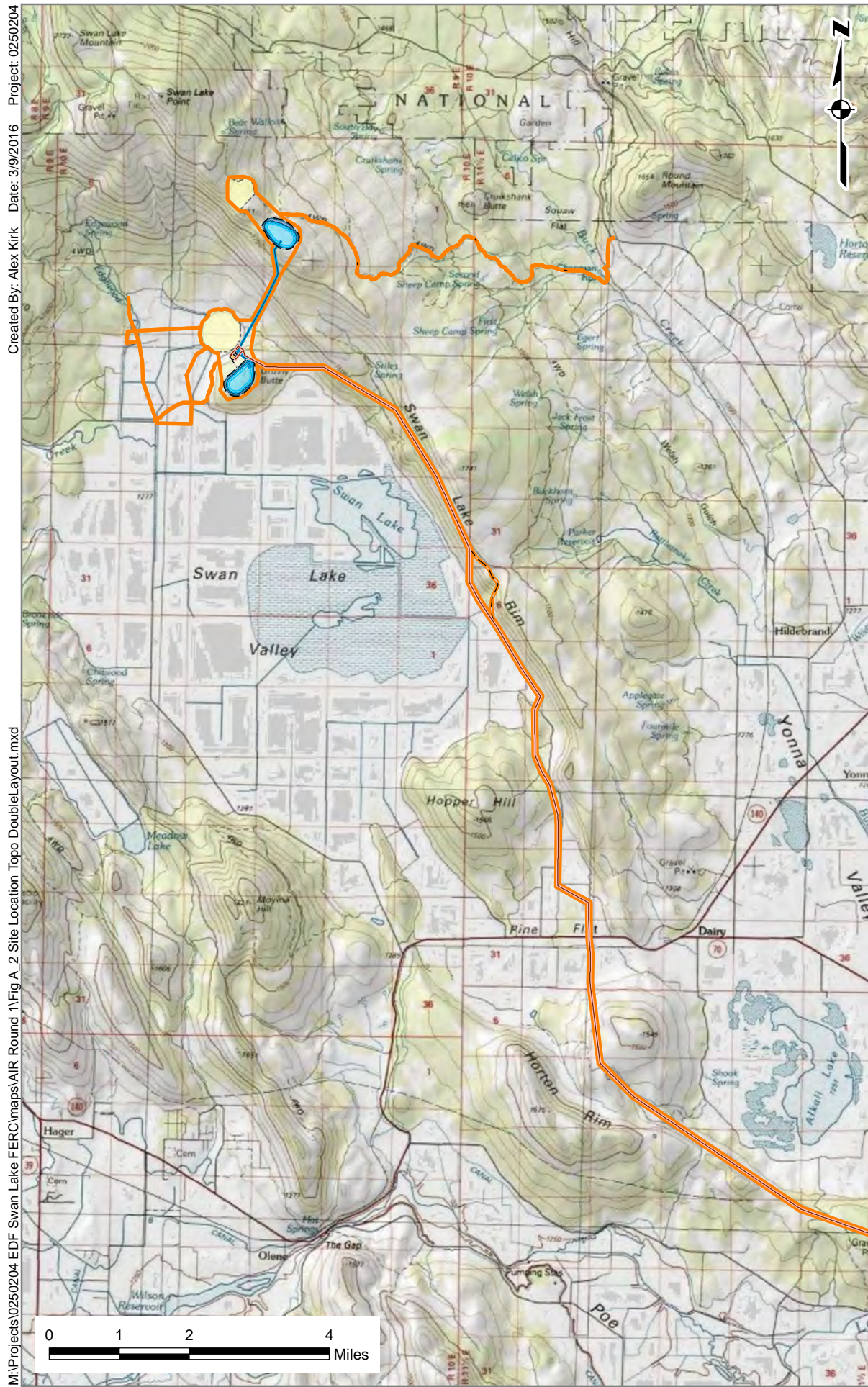


Figure A.2
Site Location and
USGS Topographic Map
Swan Lake North Pumped
Storage Hydroelectric Project
Final License Application
EDF Renewable Energy
Klamath Falls, Oregon

Environmental Resources Management
1001 SW 5th St, Suite 1010
Portland, Oregon 97204

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1.2 Proposed Project Facilities

1.2.1 Upper Reservoir

The upper reservoir will be located on the western edge of Swan Lake Rim. The area will be accessible from an improved existing access road on private land off of Bliss Road (NF-11). A 7,972-ft-long, 15-ft-wide perimeter road will be constructed around the upper reservoir. The reservoir will have a total volume of 3,228 acre feet, live storage capacity of 2,562 acre-ft and a surface area of 64.21 acres at maximum fill, and 45.87 at minimum fill at the spillway crest elevation of 6,135.5 ft above mean sea level (AMSL). The usable storage of the upper reservoir will be 2,568 acre-ft at the maximum operating pool elevation of 6,128 AMSL. The minimum water surface elevation would be 6,084 ft AMSL, with a usable storage volume of 2,414 acre-ft (see Appendix A-1, Table 1). The volume versus elevation relationship for both the upper reservoir is shown in Figure A.3. The elevation change in the upper reservoir during normal operations is anticipated to be 44 ft. The bottom and side slopes of the reservoir will be composed of an asphalt concrete facing with a geomembrane liner.

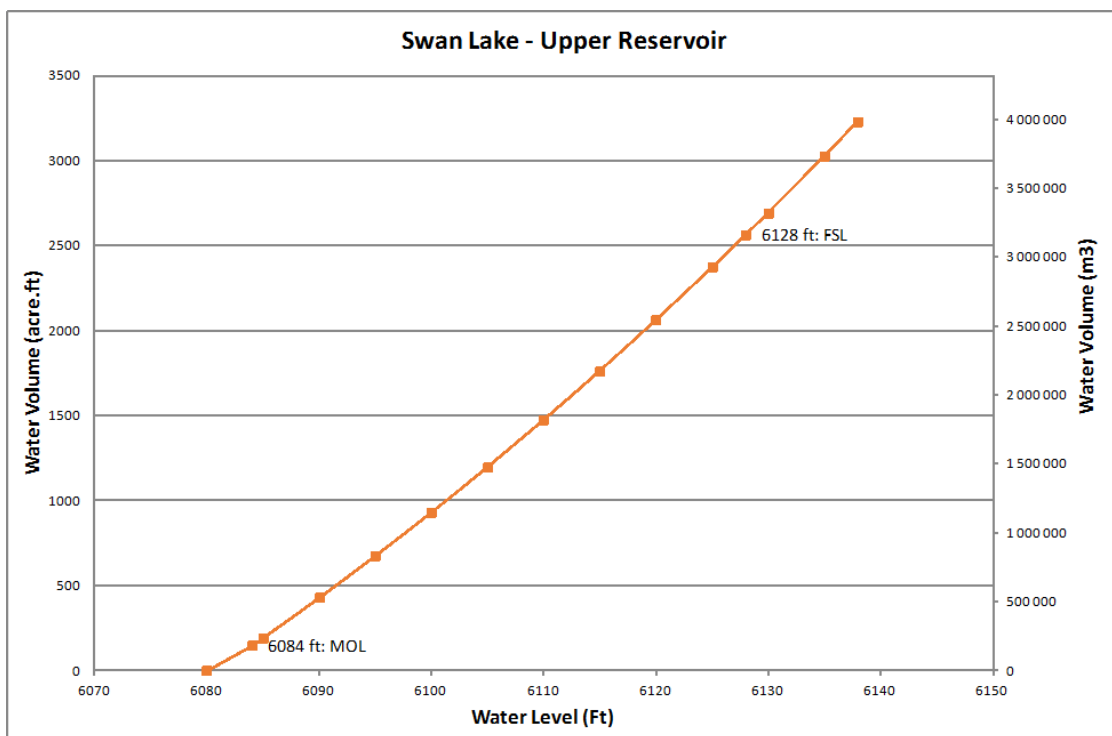


FIGURE A.3: RESERVOIR VOLUME VERSUS ELEVATION FOR THE UPPER RESERVOIR

1.2.2 Overflow Spillway

An overflow spillway has been added on both reservoirs in order to comply with Federal Energy Regulatory Commission (FERC) requirements. However, the chances of overtopping are very low as the two reservoirs both have the same capacity, there is no inflow from river (the reservoirs form a closed-loop system) and the reservoirs are sized to contain the probable maximum flood volume above the flood storage level of each reservoir while still maintaining adequate freeboard. The overflow spillways have been designed to release the maximal turbines flow 3,230 cubic feet per second (91.5m³/s). Exhibit F includes additional spillway details.

1.2.3 Drainage System

The purposes of the drainage are to detect, collect and monitor water leakage through the impervious polyvinyl chloride (PVC) membrane, and to release potential uplift pressure below the geomembrane layer in case of quick dewatering of the reservoir.

The drainage system consists in perforated pipes network (perforated PVC pipe, 0.5 percent slope), which collect the water from the drainage layer and carry the water out of the reservoir towards measurement stations located at the external toe of the reservoir.

The drainage system includes a peripheral drain (10in [0.25m] diameter pipe located along the internal toe of the reservoir banks) and bottom drains (located below the bottom of the reservoir). Collector pipes (25in [0.63m] diameter pipes installed below the embankment) carry the water in measurement station located at the external toe of the reservoir settled where the embankment is the higher (in order to limit the excavation below the foundation). The topography of the site (upper and lower reservoir settled on a hill top) allows setting easily several measurement stations all around the reservoirs in order to identify the areas of potential leakage.

In addition, an optical fiber will be placed just above the peripheral drain in order to locate any leakage area, monitoring of temperature variation along the optical fiber due to leaking water. Three such measurement stations would be installed for each reservoir (see Exhibit F)

1.2.4 Lower Reservoir

The lower reservoir is located on the plateau at the top of the Grizzly Butte. The Grizzly Butte is a hill of volcanic origin culminating 295 ft above the bottom of the Swan Lake valley. The area will be accessible from an improved existing access road on private land off of Swan Lake Road. An 8,003-ft-long, 15-ft-wide perimeter road will be constructed around the lower reservoir. The reservoir will have a total volume of 3,206 acre-ft, live storage capacity of 2,581 acre feet, and a surface area of 60.14 acres at maximum fill, and 39.89 acre at minimum fill. The volume versus elevation relationship for both the lower reservoir is shown in Figure A.4. The bottom and side slopes of the reservoir will be composed of an asphalt concrete facing with a geomembrane liner.

1.2.4.1 Bottom Outlet

The bottom outlet structure is provided to dewater gravitationally the lower reservoir in case of emergency. Such event is very rare as it corresponds to a situation where potential failure is developing on the lower reservoir and, at the same time, the transfer of the water from lower to upper reservoir is not possible (no power available, pumps out of order or upper reservoir damaged). A dedicated bottom outlet structure has not been provided on the upper reservoir, because the dewatering by gravity of the upper reservoir into the lower reservoir is possible at any time through the penstock circuit.

The bottom outlet structure has been designed such that:

- The reservoir can be fully depleted in less than 21 days,
- Hydrostatic load on the reservoir can be divided by 2 in less than 8 days.

The bottom outlet structure consists in a pipe (25 in diameter) installed below the embankment foundation. To avoid any risk of water leakage in the rockfill body (behind the geomembrane layer), the pipe is fully embedded in the concrete. The flow discharge is controlled with a manual valve located at the downstream extremity of the pipe in a dedicated operation building. The jet energy is dissipated with a hollow jet valve directed 45 degrees toward the top.

The bottom outlet facility will be installed on the south side of the lower reservoir in order to release the water along Grizzly Butte, away from the power house and access road, and release water into Swan Lake Valley.

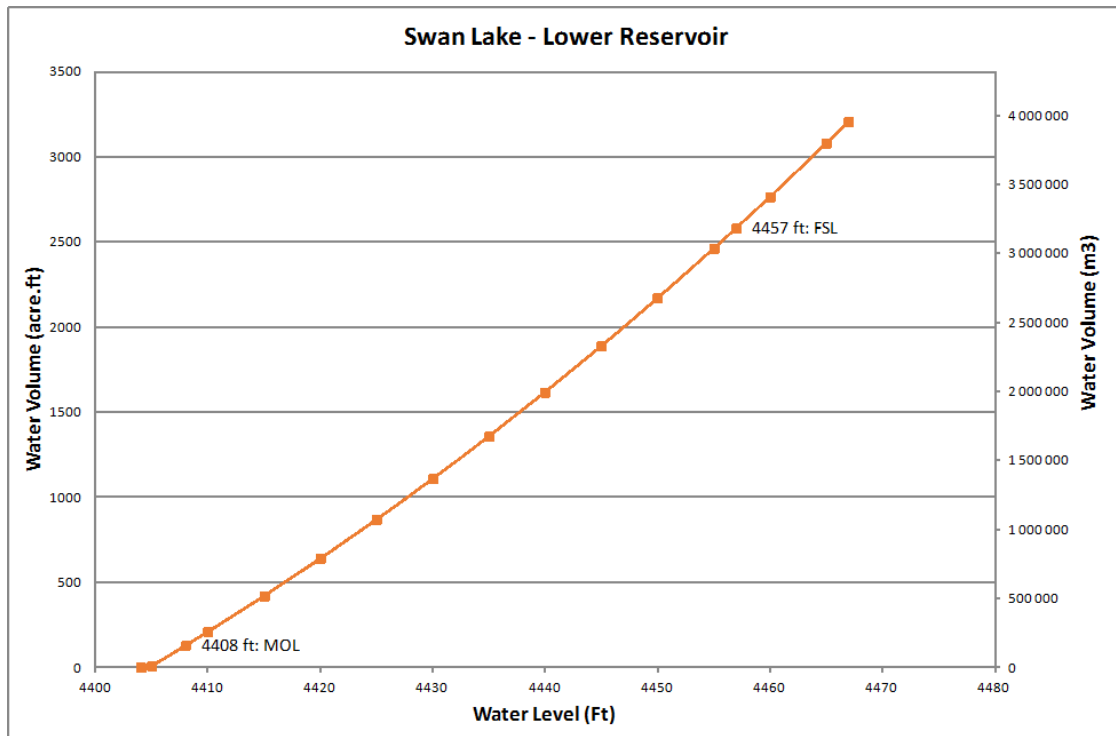


FIGURE A.4: VOLUME VERSUS ELEVATION FOR THE LOWER RESERVOIR

1.2.5 Waterway Layout

The waterway layout is composed of, from upstream to downstream:

- an upper intake,
- a headrace penstock (1 pipe 13.8ft [4.2m] diameter),
- a powerhouse (3 units),
- a tailrace penstock (3 pipes 9.8ft [3.0m] diameter),
- a lower intake located in the lower reservoir.

1.2.5.1 Upper Intake

The upper intake structure consists, from upstream to downstream, in:

- a bell-mouth (lip of the spillway at EL. 6080 in trapezoidal shape and inclined invert towards downstream),
- a inclined screen 38.6ft wide x 29.8ft high, which leads to a maximal water velocity of 2.8ft/s (< 4ft/s),
- an invert slab which is set at EL.6026, and ensures a sufficient depth below Minimum Operating Level MOL to avoid vortex formation (45.0ft depth submergence which respects the Gordon asymmetric criterion 1),

- a vertical head gate (13.8ft wide x 13.8ft high) capable of closing under flowing water conditions. The head gate is equipped with 2 automatic safety closure systems (VAG device capable of detecting P-Wave and overflow sensor see §9.1)
- an air vent located immediately downstream of the head gate,
- a square/round shape transition,
- a 13.8ft diameter steel pipe crossing the dam foundation. To avoid any risk of water seepage from the penstock into the dam foundation, the steel pipe is fully embedded into concrete.

The global shape of the intake structure is similar to the upper intake of Gilboa PSP (project under construction in Israel) which have been designed by EDF-CIH and tested in a physical model (see Exhibit F).

The upper intake has been located:

- on the west side of the reservoir to shorten the length of the penstock,
- close to the edge of the cliff in order to shorten the sub-horizontal portion of the penstock (not favorable to transient conditions).

The design of the lower intake is similar to that of the upper intake.

1.2.5.2 Penstock Design

An above ground penstock has been designed to allow for better inspection during operation and repair in the event of an earthquake. The penstocks are supported aboveground except for the connections at the extremities (upper intake, powerhouse, lower intake) where the penstocks are buried. The penstock route is outside of the major landslide areas identified during the geological investigations. The penstock route crosses faults at two locations (assumed active fault at the foot and parallel inferred fault at the mid-slope of the Swan Lake escarpment). In order to accommodate small displacement in these locations, two compensating joints are provided on each sides of the penstock portions crossing the faults (average slip rate estimated to 0.04mm/year, see Exhibit F). Compensating joints will not prevent a breach of the penstock in case of major fault offset event (fault displacement estimated to 5.5 ft [1.7m], see Exhibit F). However, the joints will reduce damages on the penstock and subsequent released flow.

In case of breach on the penstock, head valves will close automatically in order to avoid emptying the upper reservoir and damaged portions of the penstock will have to be repaired (see Exhibit F).

1.2.5.3 Powerhouse

The size of the powerhouse has been defined to fit with the electro-mechanical equipment (valves and power units). The substructure is 220 ft (67m) long, 62.5 ft (19m) wide and 65ft (19.8m) depth below ground level (EL.4248.3ft). The substructure is composed of the following floors:

- Foundation level (EL.4183.3ft)
- Valve and Auxiliaries level (EL.4201.0ft),
- Pump Turbine level (EL.4217.6ft),
- Generator level (EL.4231.5ft),
- Main hall level = ground level (EL.4248.3ft)

The superstructure is 305ft (93.0m) long, 147.8ft (45.1m) wide and 59.7ft (18.2m) high (from ground level to the roof top). The superstructure is composed of the following building:

- Main hall + extension on the left bank for handling area (EL.4248.3ft ground floor). Rails of the overhead travelling crane (EL.4284.7ft),
- Variable Speed Drive (EL.4248.3 ground floor) + Electrical equipment (EL.4263.2ft 1st floor). This building is located upstream of the main hall.

1.2.5.3.1 Substructure

The substructure is entirely constructed with reinforced concrete. Open air excavation is performed in order to build the substructure (max depth 65ft [19.8m] below natural ground). After construction of the concrete structure, the volume upstream of the power plant will be backfilled with cohesive material (backfill concrete with low cement content) in order to block the structure and to support the penstock manifold and the Variable Speed Drive building. In order to improve the stiffness by transferring the thrusts to the surrounding rock:

- the Substructure part of the powerhouse corresponding to the top of the generator has been put below ground level and excavated volume is filled with backfill concrete,
- the penstock manifold has been settled above the floor of the generator level in order to be able to block the structure and transfer the loads into the ground via rock pillars kept between the 3 penstock branches.

1.2.5.3.2 Superstructures

The main hall of the powerhouse and Variable Speed Device building are built above ground level. The powerhouse will be equipped with a 190t crane for the erection and maintenance of the materials.

The site for the substation will be located next to the powerhouse. The substation will be accessed from the main project road. The open air terminal pad will be graded to a 1 percent to 1.5 percent slope to provide adequate drainage and may be tiered to minimize excavation volumes. Runoff will be contained and fill materials will be sourced on site. A layer of soil with high silt or lean clay content is desirable for installation of conduit and grounding systems. The final surface layer will be crushed stone having minimum

resistivity of 3000 ohm meters. A standard chain link fence will enclose the substation to provide security. The fence will be minimum 7 ft high with the top foot comprised of three strands of barbed wire.

1.2.6 Access Roads

The powerhouse and lower reservoir will be accessed from Swan Lake Road via private road maintained by JEI (Figure A.1). The upper reservoir will be accessible from an improved existing access road on private land off of Bliss Road (NF-11). The Licensee will obtain the necessary rights to use and maintain both access roads. Perimeter access roads will be constructed around both the upper and lower reservoirs. Temporary access roads will be required along portions of the transmission line corridor for use during construction of the transmission line. The length of perimeter access roads, permanent, and temporary access roads are included in Appendix A-1, Table 2.

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2 TURBINES AND GENERATORS

Three variable speed, reversible pump-turbine generator units will be installed in the powerhouse. Each unit will have a rated generating capacity of 131.1 MW for a total plant rating for pumping and generating of 393.3 MW. The gross turbine head range will be between 1,627, and 1,720 ft. The Project is designed to be capable of operating 24 hours per day in combination of generating and pumping. It is anticipated that at least one pumping and one generating cycle will occur every 24 hours.

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3 TRANSMISSION LINES

Approximately 32.8 miles of 230-kV transmission line will be constructed to connect the Project to the BPA Malin substation near Malin, Oregon (see Figure A.5). The line will include a maximum of a 300-ft ROW. Schematics for the transmission line are shown in Exhibit F. The transmission ROW crosses both public and private lands. Approximately 280 transmission structures between 80 and 120 ft tall will be located approximately 600 to 700 ft apart along the length of the transmission line.

The proposed transmission line leaves the Swan Lake substation and runs east for 1.1 miles, then southeast for another 1.1 miles, along the middle of the swan lake rim escarpment. The line then traverses mid-escarpment for 2.2 miles before returning heading south for about 0.5 miles to the bottom edge of the escarpment at the floor of the Swan Lake Valley. The line continues south-southeast for 1.9 miles following a private dirt access road along the base of the Swan Lake Rim escarpment on the east side of Swan Lake Valley. The route then turns to the south-southwest for 0.2 mile toward the northeast corner of Hopper Hill. From there the route heads south for 0.65 mile toward the eastern side of Hopper Hill. It then continues south-southeast for 0.9 mile on the east side of the existing private dirt access road between the eastern side of Hopper Hill and the western edge of Swan Lake Rim. The line then heads south for 1.0 miles into Pine Flats, running along the east side of the existing private dirt access road, turning southeast for 0.51 mile, and then traveling south for 0.5 mile.

The line crosses Highway 140 East and OC&E Wood Line State Trail as it continues south for another 1.8 mile to the saddle between the southwest side of Dairy Hill and Horton Rim, where it turns south-southwest and travels between Dairy Hill and Horton Rim, then along the base of Horton Rim, for 3.5 miles facing Alkali Lake and crosses over the TransCanada Pipeline. It continues east-southeast for 1.7 miles and crosses over Horton Rim. It then drops down from Horton Rim into Poe Valley and spans the Lost River near Harpold Dam and crosses Harpold Road as it heads southeast for 0.26 mile.

After crossing Harpold Road, the line proceeds south-southeast for 3.1 miles into the uplands along the center of the Harpold Ridge on the east side of Poe Valley. The line proceeds southeast toward the Captain Jack Substation for 3.1 miles through uplands towards before heading south for 0.8 mile and crossing existing 500-kV high voltage lines at a perpendicular angle. Continuing southeast for 0.5 mile, the line crosses the access road to Captain Jack and nears another existing high voltage line ROW (ROW). The line then turns south-southeast and proceeds for 0.8 mile parallel to the California-Oregon Transmission Project (COTP) line. Heading southeast, it runs parallel to the COTP line for 2.61 miles before turning slightly south-southeast and continuing for 0.7 mile. The route continues to parallel the COTP line, running south for 1.6 miles. It then turns at a right angle, and continues east for 0.51 mile toward the Malin Substation. It then turns southeast and travels the last 0.68 mile to its terminus at the Malin Substation.

Several different structure types will be used for the proposed Swan Lake transmission line. All structure types will consist of weathering tubular steel pole structures, a material that maintains a brown color due to oxidation and blends well with the natural surroundings. The proposed configuration is steel mono-pole towers with horizontal davit arms to support the conductor, fiber optic communication, and overhead ground wire. This configuration will allow longer spans while providing adequate phase to phase, and phase to ground separation. Each structure will be constructed on a reinforced concrete foundation.

3.1 Transmission Line Construction Access

Access to the ROW and transmission structure locations for construction would be accomplished via a combination of use of existing roads, construction of temporary access roads within the ROW corridor, construction of temporary access roads outside the ROW corridor, and helicopter access. All access roads built during construction would be temporary and would be restored to previous grades and revegetated after construction is completed. Existing or temporary new roads would be used to access most locations, except areas of the transmission line where it does not appear to be economically or environmentally feasible to access and construct the transmission line using conventional methods. Helicopter access would be used in these locations, including structures 12 through 50.

The Applicant considered the following design criteria during the conceptual layout of the temporary transmission line access roads:

- 15 percent maximum grade (10 percent preferred)
- 40-ft centerline radius minimum on any proposed road curves
- Utilize existing access roads where possible
- Minimize access road length
- Minimize the elevation difference between existing access and tower location to take advantage of existing topography where appropriate
- No retaining wall designs
- No significant cuts on steep slopes
- No switchback arrangements; if a switchback is required up a steep slope the site will be designated a helicopter site
- Avoid creeks and sensitive areas (including wetlands near Swan Lake)
- Minimize impact to existing agricultural fields and structures

The proposed access routes were delineated and screened for conformance to the design criteria with an effort to minimize road construction where there was potential for visual impacts from the valley floors. For example, any sites which required significant cuts across steep rock slopes or switchback construction up these slopes were designated as

“helicopter sites” in anticipation that helicopter access would be preferable to new road construction. Table 2 in Appendix A-1 presents the details of each access road and transmission access roads are fully delineated in Exhibit G.

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4 APPURTENANT FACILITIES

Appurtenant equipment necessary for Project facilities includes mechanical and electrical systems. Mechanical equipment includes maintenance equipment in the powerhouse, valves, hydraulic power unit, powerhouse crane, cooling water system, seepage collection water pumping system, hydraulic power units, fire suppression systems, compressed air system, and a HVAC system. Electrical equipment includes generator/motor power transformers, protection, control systems, and a backup generator. Further descriptions of additional mechanical, electrical, and transmission equipment can be found in Exhibit F.

4.1 Lighting

Operating exterior lighting will be minimal following construction. The majority of the Project's electromechanical equipment will be contained underground within the powerhouse cavern. The Project control room will also be located underground in the powerhouse cavern. Area lighting on the surface would consist of safety lighting around primary support structures (office, garage, workshop or equipment storage areas) and would be similar to local agricultural facilities such as barns, silos and equipment maintenance or storage buildings. This would likely include adequate sodium vapor-type lights mounted on buildings near doorways and parking areas. Surface exterior lighting would be dictated by safety requirements associated with an office building and any support buildings and parking lots, most likely located near the entrance to the powerhouse access tunnel or other designated area. This level of detail will be addressed in future design.

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5 LAND OWNERSHIP WITHING THE PROJECT VICINITY

The Project boundary encompasses the upper and lower reservoirs, access roads, penstock and associated facilities, the open air terminals, piping from wells necessary for initial reservoir fill and periodic makeup water, and approximately 32.8 miles of new 230-kV transmission line. As summarized in Table A.1, the total approximate acreage within the Project boundary is 2,044 acres; 1,300 acres are privately owned and 711 acres are on lands of the United States owned by the Bureau of Land Management (BLM), and 19 acres are on lands owned by the Bureau of Reclamation (BOR). A complete list of land owners can be found in Appendix A-2.

TABLE A.1: SUMMARY OF LAND OWNERSHIP IN THE PROJECT BOUNDARY

Owner	Number of Parcels	Acreage
Federal – Bureau of Land Management	23	711
Federal – Bureau of Reclamation	2	19
State of Oregon	2	3
Klamath County	1	9
Waters of the United States	N/A	2
Private	60	1,300
Total	88	2,044

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6 GROUNDWATER CONVEYANCE SYSTEM

The initial fill water and long-term refill for evaporative losses will be supplied by the local groundwater agricultural pumping system. Water will be supplied to the Project from three existing groundwater wells in the Project vicinity. The water will be delivered to the lower reservoir via an existing underground agricultural irrigation network. Water deliveries will be constrained by the conditions of the existing groundwater well network and established pumping rates. The wells and approximate locations of the existing buried agricultural piping system are shown on Figure A.5. A local tap will be constructed at the interconnection point to supply water to the lower reservoir.

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APPENDIX A.1

Project Feature Dimensions and Summary of Transmission Line Access Roads

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Table 1. Project Feature Dimensions

Feature	Components	Size
Total installed capacity		393.3 MW
Upper Reservoir	total volume (below crest)	3,229 acre feet
	Live storage capacity	2,562 acre feet
	surface area (maximum fill)	64.21 acres
	surface area (minimum fill)	45.87 acres
	Elevation change during normal operations	44 feet
Lower Reservoir	total volume (below crest)	3,206 acre feet
	Live storage capacity	2,581 acre feet
	surface area (maximum fill)	60.41 acres
	surface area (minimum fill)	39.89 acres
Penstock	high pressure penstock diameter	13.8 feet
	high pressure penstock length	9,655 feet
	anchor blocks (number)	10
	low pressure penstock diameter	9.8 feet
	low pressure penstock length	1,430 feet
	anchor blocks (number)	5
Overflow Spillways	Capacity	3,230 cfs
Powerhouse	footprint	305x176 feet
Bottom Outlets	diameter	25 inch
Transmission Line	length	32.84 mi
	Number of structures	280
	Structure height	80 to 120 feet
	Structure type	steel monopole
	Right-of-way length	32.8 miles
	Right-of-way width	300 feet
Access Roads	Temporary Roads inside the ROW	6.11 miles
	Temporary Roads outside the ROW	2.18 miles
	Total Temporary Roads	8.29 miles
Project Boundary	Reservoirs and associated features	857 acres
	Transmission right-of-way	1,637 acres
	Total project boundary	2,494 acres

Table 2. Project Roads

Road	Width (feet)	Length (miles)	Length (feet)
Improved Existing/Permanent			
Lower Reservoir Access Road	20	1.66	8,775
Upper Reservoir Access Road	20	7.05	37,225
Upper Laydown Area Access Road	20	0.91	4,795
Lower Laydown Area Access Road	20	0.63	3,310
Transmission Line Access Road 16	20	0.46	2,434
Total Improved Existing/Permanent Roads		10.71	56,539
New Permanent			
Lower Reservoir and Substation Access Road	20	0.23	1,206
Powerhouse Access Road	20	0.04	236
Upper Reservoir Access Road Passing Zone	30	0.03	150
Upper Reservoir Access Road Passing Zone	30	0.03	150
Upper Reservoir Access Road Passing Zone	30	0.03	150
Lower Reservoir Ring Access Road	15	1.52	8,003
Upper Reservoir Ring Access Road	15	1.51	7,972
Total New Permanent Roads		3.38	17,866
Temporary Transmission Line Access			
Transmission Line Access Road 01	20	0.21	1,133
Transmission Line Access Road 02	20	0.22	1,156
Transmission Line Access Road 05	20	0.26	1,398
Transmission Line Access Road 06	20	1.22	6,443
Transmission Line Access Road 07	20	0.25	1,301
Transmission Line Access Road 08	20	0.17	897
Transmission Line Access Road 09	20	0.50	2,633
Transmission Line Access Road 10	20	0.11	597
Transmission Line Access Road 11	20	0.10	506
Transmission Line Access Road 12	20	0.09	492
Transmission Line Access Road 13	20	0.13	691
Transmission Line Access Road 14	20	1.02	5,383
Transmission Line Access Road 15	20	0.14	751
Transmission Line Access Road 16	20	1.04	5,481
Transmission Line Access Road 17	20	1.09	5,769
Transmission Line Access Road 18	20	0.18	944
Transmission Line Access Road 19	20	0.19	1,020
Transmission Line Access Road 20	20	0.14	731
Transmission Line Access Road 21	20	0.25	1,296
Transmission Line Access Road 22	20	0.34	1,811
Transmission Line Access Road 23	20	0.08	399
Transmission Line Access Road 03	20	0.35	1,849
Transmission Line Access Road 04	20	0.16	865
Transmission Line Access Road 16	20	0.04	217
Total Temporary Roads		8.29	43,765

APPENDIX A.2

Landowners in the Project Boundary

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TABLE 1: LANDOWNERS IN THE BOUNDARY OF THE SWAN LAKE NORTH PUMPED STORAGE HYDROELECTRIC PROJECT

Property Owner	Mailing Address
7 Grand Inc.	3872 Redondo Way, Klamath Falls, OR 97603
California Giant Inc.	P.O. Box 1359, Watsonville, CA 95077
Danny R. Cohan & Mary A. Hunnicut Revocable Trust	P.O. Box 391, Arivaca, AZ 85601-0391
David R. & Debbie A. Mc'lin	21330 Hwy. 140 E, Dairy, OR 97625
Douglas D. & Cheryl L. Madsen	6111 Harpold Rd., Bonanza, OR 97623
Edgewood Ranch Inc.	12501 Swan Lake Rd., Klamath Falls, OR 97603
Five H Ranch Inc.	18596 Hwy. 140 E, Dairy, OR 97625
Green Diamond Resource Company	6400 Highway 66, Klamath Falls, OR, 97601
James & Ann Kordahl	1000 North Point Apt.506, San Francisco, CA 94109
Jespersen-Edgewood Inc.	12941 Swan Lake Rd., Klamath Falls, OR 97603
Jespersen Swan Lake Inc.	19055 Hwy 140 E, Dairy, OR 97625
Jonathan R. & Lauren E.S. Hobbs	27392 North Poe Valley Rd., Klamath Falls, OR 97603
Klamath County Public Works - Harpold Quarry	305 Main St., Klamath Falls, OR 97601
Marshall R. & Carole D. Canevari	18429 Hwy. 140 E, Dairy, OR 97625
Oregon Department of Parks & Recreation	525 Trade St SE, Suite 301, Salem, OR 97310
Oregon Department of State Lands	775 Summer St. NE, Suite 100, Salem, OR 97301-1279
Pacific Power & Light Company	825 NE Multnomah, Suite 1900, Portland, OR 97232
Patrick T. Colahan & Alta Marie Cochran	Star Rt. Box 17, Dairy, OR 97625
Paul Claiborne III	120 Palmyra St, Auburn, CA, 95603
Phillip E. & Tara R. Morgan	6441 Harpold Rd., Klamath Falls, OR 97603
Rodney R. & Marie M. Lyon	20302 Paygr Rd., Malin, OR 97632
Ryan E. & Jennifer L. Hartman /Kody L. & Kristine J. Hartman	P.O. Box 148, Malin, OR 97632
Richard Sacchi	P.O. Box 313, Malin, OR 97632
U.S. Bureau of Land Management, Alturas Field Office	708 W 12th St., Alturas, CA 96101
U.S. Bureau of Land Management, Klamath Falls Resource Area	2795 Anderson Rd., Bldg 25, Klamath Falls, OR 97603
Vinton Alan Loveness & Kathy Adair Rogers & Vicki Sue Rogal	P.O. Box 7771, Montgomery Creek, CA 96065
Virginia Falkowski	P.O. Box 7771, Klamath Falls, OR 97602

Property Owner	Mailing Address
William Paul & Susan Anne Worthington	26589 South Poe Valley Rd., Klamath Falls, OR 97603
Windy Ridge LLC	4721 Harpold Rd., Bonanza, OR 97623