

Oregon Water Resources Department

Regarding the)
Hydroelectric License) Final Order
Application HE 618)
In the Name of Train)

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

Pursuant to OAR 690-051-0090(3)(d), this final order is being issued with findings that the proposed project together with any recommended measures to protect, mitigate, or enhance the natural resources of the State is consistent with the minimum standards in ORS 543.017 and the requirements in OAR 690-051-0160 through 690-051-0290 and that the project would not impair or be detrimental to the public interest as provided in ORS 543.225.

A. APPLICATION HISTORY

On July 27, 2020, Jon and Heather Train (Applicants) applied for a minor hydroelectric project (Project) to divert up to 0.67 cubic feet per second (cfs) of water from an unnamed spring and creek, tributary to North Fork Smith River, in Douglas County, Oregon. The proposed project will use about 300 feet of head to develop 22.8 theoretical horsepower (THP) to generate electricity for use on-site. The project would operate year-round.

Pursuant to OAR 690-051-0090(3)(a), on August 11, 2020, notice of the application was included in the Department's weekly public notice and was subsequently distributed to county, state, regional and federal agencies¹ for a thirty-day review and comment period seeking input on

¹ The federal, regional, state, and local agencies consulted include: Bureau of Land Management, County of Coos, Oregon Department of Geology and Mineral Industries, Legislative Commission on Indian Services, National Park Service, National Marine Fisheries Service, Northwest Power and Conservation Council, Oregon Department of Agriculture, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Department of Forestry, Oregon Department of State Lands, Oregon Parks and Recreation Department - State Historic Preservation Office, Oregon Water Resources Department, U.S. Bureau of Reclamation, U.S. Fish and

how the proposed Project would affect various resources.

Timely comments were received from the Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Forestry (ODF), and the Northwest Power and Conservation Council (NWPCC). All comments were considered by OWRD in making its findings of fact.

B. PROJECT DESCRIPTION

The applicants propose to construct a minor hydroelectric project with about 300 feet of head to develop 22.8 theoretical horsepower (THP) to generate electricity year-round for use on-site or sale to the grid.

The applicants propose to divert up to 300 gallons per minute (0.67 cubic feet per second) from a spring and an unnamed creek tributary to the North Fork Smith River. The stream reportedly flows year-round and serves as the principle source of irrigation, domestic, and livestock water for the Train residence and farm (water right permit S 41594). The spring and unnamed stream, located across the North Fork Smith River east of the Train's property, is on land owned by Roseburg Forest Products of Springfield, Oregon.

The applicants propose to construct a 6-foot tall by 5-foot wide concrete and reinforcing steel diversion dam. The dam would impound less than an acre-foot of water. Water would enter a 4-inch diameter polyethylene pipe that descends 300 feet down the hillside and an additional 600 feet to cross the North Fork Smith River. Near the base of the hillside on the east side of the river the pipe would be suspended by aerial cables anchored by supports on either side of the river. The crossing is planned at or near the existing aerial crossing for the existing water supply line for permit by S-41594.

Once on the west side of the river, the pipeline will continue below-ground to a Pelton wheel in a proposed powerhouse located in the pasture outside of the flood plain. Discharge from the powerhouse tailrace would enter a second pipe co-located in the trench with the penstock pipe. Tailrace water will discharge to the North Fork Smith River near the aerial pipeline crossing of the river near where the spring and creek enter the river. No portion of the North Fork Smith River is expected to experience a reduction in streamflow. The pipe will be positioned into the North Fork Smith River to minimize erosion, scour and turbidity.

C. PROJECT LOCATION

The point of diversion is in Tax Lot 100, within the NE¼ NE¼, Section 8 Township 20 South, Range 10 West, Willamette Meridian (W.M.). The land is owned by Roseburg Forest Products. There are no neighbors within 300 feet of the proposed powerhouse.

Wildlife Service, and U.S. Forest Service.

D. WATER USE

Water availability: The water use is non-consumptive and does not impact water availability in North Fork Smith River.

This water right shall be subordinated to all other uses. A hydraulic head of 300 feet is stated on the application. Theoretical horsepower is calculated as $0.67 \text{ cfs} * 300 \text{ feet of head} / 8.8 = 22.8 \text{ THP}$.

Existing water rights: There are other water uses on tributaries of the North Fork Smith River, however, they are small. The only other uses for this spring and creek are for the applicants' domestic, irrigation, and livestock uses.

Basin Program: Power development is a classified use in the Umpqua Basin Program per OAR 690-516-0005(1).

E. STANDARDS (OAR 690-051-0160)

All proposed new minor (less than 100 theoretical horsepower) hydroelectric projects in Oregon, such as this Project, must comply with the minimum standards in ORS 543.017, meet the resource protection standards of OAR 690-051-0170 to OAR 690-051-0260, and must not impair or be detrimental to the public interest as provided in ORS 543.225.

F. FINDINGS OF FACT

▪ **Protection of Designated Resource Areas and Special Management Areas (OAR 690-051-0170)**

The Project is not part of any other special management area for a federal, state, city or county agency, or on any designated resource area listed in OAR 690-051-0030. The Unnamed Spring and Creek are not designated as a protected area by the Columbia River Basin Fish and Wildlife Program of the Northwest Power and Conservation Council. The Project is not located in the Columbia River Gorge as designated in OAR 390.460. The project is not located within a designated scenic waterway.

OWRD finds that the Project complies with the standards and requirements of this rule.

▪ **Mitigation, No Net Loss (OAR 690-051-0180)**

This application was submitted along with detailed questionnaires to federal, state, regional and county entities to ensure the following natural resources of OAR 690-051-0170 to OAR 690-051-0260 were considered: water resources including water quality; fish and wildlife; plant life; recreation; historic, cultural, and archeological resources, land resources including wet lands, forest lands, agriculture, and scenic and aesthetic resources; and compliance with county planning documents.

Based on the consultations noted above including the written comments from the ODFW, ODEQ, ODF, NWPCC, and of the facts contained in the file, OWRD finds that the Project, as conditioned, will result in no net loss of natural resources. This finding is supported by those below.

- **Water Resources (OAR 690-051-0190 (1-8))**

There are other water uses on the main stem or tributaries of the North Fork Smith River, however they are small. The only other use of this spring and creek are for the applicants' domestic, irrigation, and livestock uses. Power development is a classified use in the Umpqua Basin Program per OAR 690-516-0005(1).

The hydroelectric use is consistent with other Water Resources Policies and with achieving maximum economic development of the waters involved and with making the fullest practical use of the stream's hydroelectric potential. The Project will not constitute wasteful, uneconomic, impracticable, or unreasonable use of the waters involved.

Based on a review of the information contained in the file and in Section D above, OWRD finds that the Project complies with the standards and requirements of this rule.

- **Water Quality (OAR 690-051-0190(9))**

DEQ's assessment of potential water quality-related impacts is based on the location and operation of the project as proposed in the OWRD application, discussions with the applicant during the site visit, visual observations during the project site visit, and a review of available database resources maintained by DEQ.

Existing water quality:

Oregon DEQ's 2012 Integrated Report identifies the water quality of the North Fork Smith River as impaired for temperature, bio-criteria, and habitat modification. Water quality for these parameters is below levels needed to provide support for designated beneficial uses. Activities that negatively impact these parameters or reduce support for beneficial uses are not allowed.

Potential Construction-Related Impacts:

Diversion structure: Applicants propose to construct a low-head concrete diversion structure to capture water for hydropower production. If Remove/Fill permits are required, they shall be acquired from the appropriate agencies. DEQ will condition this activity to isolate the work area from the flowing stream to prevent water contact with wet or curing concrete.

Penstock: The four-inch diameter polyethylene pipe must be anchored securely to the rock face of the hillside to prevent movement and failure.

Aerial Support: Support anchors and cabling system must be designed to prevent movement or failure.

Discharge Outfall: Outfall must be designed to prevent scour and erosion of river embankment. The discharge point may require energy dissipation features such as rock placement to reduce velocity of tailrace discharge.

Potential Operational Impacts:

DEQ anticipates no significant temperature-related impacts due to project operation for several reasons. First, while the portion of the pipeline east of the river is above ground it is located beneath tree canopy like the unnamed stream. Furthermore, the pipeline segment through the pasture is below ground and insulated from ambient and direct solar thermal warming. Second, water diverted for hydropower production is non-consumptive and will return to river at or near where the source stream currently discharges to the river. For this reason, DEQ expects no reduction in base streamflow or loss of localized cold-water habitat in the project reach. Finally, the quantity of water requested for hydroelectric use (0.67 cfs) represents a small portion of the river's base flow. Any alteration in water quality caused by project operation is small relative to the river's base flow and unlikely to measurably affect conditions in the river.

Provided that appropriate and effective energy dissipation measures are implemented and maintained, discharge of tailrace water is not expected to create scour or increase sedimentation.

Consistent with comments from ODEQ, the Project shall be conditioned to require erosion and sediment controls to protect water quality consistent with standards in OAR 340-41.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

▪ **Fish Resources (OAR 690-051-0200)**

The proposed diversion structure would be located on a small tributary to North Fork Smith River that has a roughly 300-foot vertical drop at the mouth that prevents fish access into the tributary. The proposed diversion structure would be close to the cliff precipice and would not span the entire stream channel. Though potential fish use is not a concern at the proposed diversion location, it is recommended that the diversion be screened to exclude amphibians. The diversion construction area should be isolated from live flow to prevent water contact with wet or curing concrete and any other potentially harmful chemicals. North Fork Smith River is a key waterway for a number of fish species including ESA-listed Coho Salmon, Oregon Sensitive Species-listed Pacific Lamprey, and other game fish such as fall Chinook Salmon and winter steelhead, and is designated as Essential Salmonid Habitat (ESH) by Oregon Department of State Lands. The proposed location of return flows will be at or above the mouth of the creek that is the project's water source, which limits the possibility of reduced stream flows for any portion of North Fork Smith River. Some streambank excavation will likely be needed with the development of the tailrace outfall and tailrace energy dissipation measures, and best management practices (BMPs) should be followed to limit sediment/chemical input in North Fork Smith River from those activities. No other instream work is proposed in

North Fork Smith River for this project. In-water/construction work, including any streambank excavation, should be completed August 1-September 15 to limit impacts to fish and wildlife. It is recommended that riparian areas impacted during project construction be restored/replanted.

The proposed Project will be conditioned to provide that if ever, unanticipated circumstances or emergency situations arise where fish or wildlife are being killed, harmed, or endangered by the project facilities, then the applicants shall immediately take appropriate action to prevent further loss; and within 24 hours, the applicants shall notify the nearest ODFW office and comply with measures required by ODFW to prevent additional injury or mortality.

Comments received from the NWPCC stated that “the proposed project appears to be in what the NWPCC has designated a Protected Area for anadromous fish. However, the tributary to be used for this Project is not accessible to fish and thus is consistent with the provisions of the Council’s Fish and Wildlife Program. The NWPCC’s evaluation included their review of maps of the project location and comparing those maps to the protected area designations on the Streamnet website at <http://map.streamnet.org/protectedquery/viewer.htm>.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

- **Wildlife (OAR 690-051-210)**

There will be minimal land disturbances during construction of the dam, the placement of the penstock, and the building of powerhouse. There is not expected to be much area of inundation behind the diversion structure, but if trees are lost due to inundation or other construction activities, they should be replaced near to mitigate wildlife habitat loss. There should be no significant disruption of wildlife.

The location, design, construction, or operation of the proposed project will not jeopardize the continued existence of animal species that have been designated or officially identified as threatened or endangered, nor have adverse impacts been identified to wildlife, wildlife habitat, nesting, and wintering grounds, or wildlife migratory routes.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

- **Plant Life (OAR 690-051-0220)**

The location, design, construction, or operation of the proposed project will not jeopardize the continued existence of plant species that have been officially proposed or designated as threatened or endangered.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

▪ **Recreation (OAR 690-051-0230)**

The Project is being developed on private lands, thus there are no public recreation areas within the Project area.

Project facilities will be designed, located, constructed, and operated to substantially avoid visible or audible intrusion on the existing environment. The proposed Project will not reduce the abundance or variety of recreational facilities or opportunities available in the vicinity.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

▪ **Historic, Cultural and Archaeological Resources (OAR 690-051-0240)**

The Coquille Indian Tribe did not comment but shall be contacted immediately if any known or suspected cultural resource are encountered during the work.

The Project shall be conditioned so that, if any cultural material is discovered during construction, all activities shall stop, and the State Historic Preservation Office shall be contacted to assess the discovery. It is a Class B misdemeanor to impact archaeological site(s) (ORS 358.905-955) and a Class C felony to impact Indian Burials (ORS 97-740-990).

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

▪ **Land Resources (OAR 690-051-0250)**

The proposed Project is located entirely on privately owned parcels of land. Adverse impacts on prime forest lands, high value or important farmlands, agricultural lands, or wetlands due to this project are not anticipated.

The location, design, construction or operation of the project will not disturb fragile or unstable soils, or cause soil erosion.

Project facilities shall be designed with appropriate safety standards with regards to geological hazards and naturally occurring conditions or hazards, such as flooding, landslides or ice formation.

Based on a review of the facts contained in the file, OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

▪ **Land Use (OAR 690-051-0260)**

The proposed water use has been approved as being allowed or not regulated by the Acknowledged Comprehensive Plans from the Douglas County Planning Department.

Based on a review of the facts contained in the file, the OWRD finds that the Project, as conditioned, complies with the standards and requirements of this rule.

G. CONCLUSIONS OF LAW

Upon review of the application and input received from numerous state and federal agencies, OWRD concludes that the proposed Project, with the conditions set forth below, complies with the minimum standards of ORS 543.017, will not violate the standards expressed in OAR 690-051-0160 through -0260, and will not impair or be detrimental to the public interest per ORS 543.225. The proposed Project is well adapted to the development and utilization of the waterpower involved.

H. LICENSE CONDITIONS

The proposed use of water is subject to the following express conditions:

1. The priority date for the proposed water right is JULY 27, 2020. Project operation is year-round.
2. The proposed use of water is limited to the amount that the generation facilities can utilize efficiently and shall not exceed the specifications noted in the water right. This water right is inferior in right and subsequent in time to any future appropriation of water upstream for beneficial consumptive uses.
3. The applicants shall comply with all statutes and rules applicable to the Project.
4. The license is effective from the date of issuance through December 31, 2051. It is to be exercised consistent with the conditions contained in the license. This may be reauthorized under laws existing at that time.
5. The applicants shall construct and build the Project according to the maps, plans and specifications filed with and approved by the OWRD within two years of issuance of the license or within any lawful extension thereof. The Project map will be incorporated into the license.
6. The applicants will maintain the Project, and each part thereof, in good order and repair and in efficient operation, for the development and transmission of electricity to its reasonable capacity; shall make all necessary renewals and replacements as required; and shall maintain and operate the Project, and all parts thereof, conformably to the rules of the Water Resources Commission (Commission) not inconsistent with Oregon Revised Statutes (ORS) 543.010 to 543.610.

7. No voluntary transfer of the license or of any property acquired, constructed or operated pursuant to the license issued under ORS 543.010 to 543.610 shall be made without written approval of the Commission. Any successor or assignee of any license under any project acquired, constructed or operated by the applicants, whether by voluntary transfer approved by the Commission or sale upon foreclosure, execution or otherwise, shall be subject to all the terms and conditions of the license and of the provisions of ORS 543.010 to 543.610 to the same extent as though the successor or assignee was the original applicant. Any mortgage, deed of trust, or other lien suffered or created upon any such project shall be subject and subordinate to all the terms and conditions of ORS 543.010 to 543.610. However, the provisions of this section shall not apply to any transfer, voluntary or involuntary, to the state or any municipal corporation thereof, and upon such transfer the license shall terminate.
8. The Project must comply with the water quality standards stated in OAR Chapter 340, Division 41, ORS 468B.048, and Section 303 of the Clean Water Act. The Project must meet water quality requirements including numeric and narrative standards, protect beneficial uses, and not degrade existing water quality. Erosion and sediment control measures shall be implemented during construction of the dam and at the tailwater return location. The work area for the low-head concrete diversion structure should be isolated from the flowing stream to prevent water contact with wet or curing concrete and any other potentially harmful chemicals. The 4-inch diameter polyethylene penstock must be anchored securely to the rock face of the hillside to prevent movement and failure. The support anchors and cabling system must be designed to prevent movement or failure. The discharge outfall must be designed to prevent scour and erosion of river embankment. Energy dissipation features, such as rocks, should be placed to reduce velocity of tailwater returning to North Fork Smith River. In-water construction work, including any streambank excavation, should be completed in the season of August 1 to September 15 to limit impacts to fish and wildlife. Riparian areas impacted during project construction must be restored/replanted. If trees are lost due to inundation behind the dam or other construction activities, they should be replaced near to mitigate wildlife habitat loss.
9. The Project shall be designed to minimize visual, aesthetic and noise impacts.
10. If any cultural material is discovered during Project construction, all activities should stop, and an archaeologist contacted to assess the discovery. In addition, the State Historic Preservation Office shall be contacted. It is a Class B misdemeanor to impact an archaeological site (ORS 358.905-955) and a Class C felony to impact Indian Burials (ORS 97-740-990).
11. If at any time an unanticipated situation arises in which the owner or operator observes or suspects that fish, wildlife, or their habitat may be harmed by any of the project facilities or as the result of project operation, the operator shall immediately take appropriate action to prevent further loss. The operator shall, within 24 hours, notify the nearest

office of the Oregon Department of Fish and Wildlife (ODFW) and comply with the measures required by ODFW to prevent additional injury or mortality. The owner shall subsequently restore any damaged fish and wildlife protection features of the project consistent with direction provided by ODFW.

12. The applicants shall allow the OWRD Director and authorized agents and employees of the ODEQ, ODFW, and OWRD free and unrestricted access upon reasonable notice, in, through and across the Project in the performance of their official duties, and shall allow free access to all reports, accounts, records, and other data relating to said Project.
13. Issuance of the license does not absolve the applicants from compliance with the requirements and enforcement of the requirements under other applicable local, state, and federal laws. The applicants are made aware that permits may be required from the United State Army Corps of Engineers under Section 404 of the Clean Water Act, or from the Division of State Lands for removal and fill of material.
14. The applicants shall be liable for all damages occasioned to the persons or property of others by the construction, operation, or maintenance of the Project facilities, and in no event will the State of Oregon be liable.
15. Use of water is governed by this license. However, the operations of the Project by the applicants so far as those operations affect the use, storage and discharge from storage of waters affected by the applicants, shall at all times be controlled by such reasonable rules as the Commission may prescribe for the protection of life, health and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses.
16. The applicants shall pay, upon receiving an invoice from OWRD, an annual fee to OWRD in the amount of \$22.80, (OAR 690-051-0400(6) and ORS 543A.415 or subsequent statute). This amount shall be due by the date specified on the invoice.
17. Consistent with ORS 540.610, if after completing construction of the Project, the applicants fail to use or operate the Project facilities for any period of five consecutive years, the water right shall be subject to termination by OWRD. The Owner shall comply with the decommissioning standards under OAR 690-52.
18. Upon a decision to terminate the hydroelectric use, the applicants shall comply with any decommissioning statutes and rules in effect at that time. (OAR 690-052).
19. The following requirements of ORS 543 are hereby waived, under authority of OAR 690-051-0350:
 - ORS 543.530 which relates to the issuance of bonds or other evidence of indebtedness and the control thereof by the Commission.
 - ORS 543.550 relating to liens against the Project and providing that any sale shall be of the whole property embraced in the Project unless a partial sale is approved by the

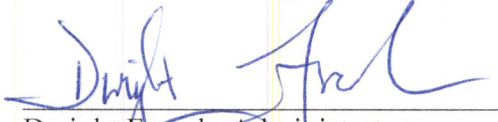
OWRD Director.

- ORS 543.560 which requires the applicants to execute to the State of Oregon a bond to the effect that the applicants shall promptly make payment to all persons supplying labor, material, machinery, etc.
20. Prior to receiving a final license, the applicants shall pay the remainder of the application fee (\$500.00) to OWRD.

I. FINAL ORDER

Based on the findings and conclusions above, the standards of ORS 543 and OAR 690-051 have been met with regards to hydroelectric application HE 618. A minor hydroelectric license shall be issued containing a time-limited water right for the Project that allows the Applicant's to use water to generate hydroelectricity as specified and conditioned above.

Dated in Salem, Oregon on April 29, 2021



Dwight French, Administrator
Water Right Services Division, *for*
Thomas M. Byler, Director
Oregon Water Resources Department

Attachment: Hydroelectric License for HE 618