

Hydropower Project License Summary

WALLOWA RIVER, OREGON

WALLOWA FALLS HYDROELECTRIC PROJECT (P-308)



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**Hydropower Reform Coalition
Wallowa River, Oregon**

WALLOWA FALLS HYDROELECTRIC PROJECT (P-308)

DESCRIPTION:

The Wallowa Falls Project is located approximately 6 miles south of Joseph, Oregon in Wallowa County on the East Fork Wallowa River and on Royal Purple Creek, a tributary of the Wallowa River. The project is operated by PacifiCorp Energy (PacifiCorp), and occupies 12 acres of federal land within the Wallowa- Whitman National Forest administered by the U.S. Forest Service. The project has an authorized capacity of 1.1 megawatts (MW).

A popular summer camping and hiking destination, the project's affected rivers are also home federally listed Bull Trout. As such, the updated license contains many provisions to ensure that the species is protected from the dam's continuing operations. These updated requirements are addressed in the pages that follow.

A. SUMMARY

1. License Application Filed: February 28, 2014
2. License Issued: January 5, 2017
3. License Expiration: 12/31/2056
4. Capacity: 1.1 MW
5. Waterway: East Fork Wallowa River, West Fork Wallowa River, & Royal Purple Creek
6. Counties: Wallowa County
7. Licensee: PacifiCorp Energy
8. Licensee Contact: PacifiCorp Energy
825 NE Multnomah Street
Portland, OR 97232
9. Project Website: <http://www.pacificorp.com/es/hydro/hl/wf.html>
10. Project Area: The project is located in the Wallowa Mountain Range and affects three waterways: the East Fork Wallowa River (East Fork), Royal Purple Creek, and the West Fork Wallowa River (West Fork). The East Fork flows 7 miles from its headwaters in the Wallowa Mountains to its confluence with the West Fork. Royal Purple Creek, a 2-mile-long tributary to the East Fork, flows into the East Fork approximately 0.17 mile below the project's East Fork Dam. The West Fork also originates in the Wallowa Mountains and flows about 14 miles to its confluence with the East Fork. The East and West Forks combine to form the Wallowa River which flows about 0.7 mile to Wallowa Lake, a 3.7-mile-long by 0.7-mile-wide natural waterbody. From Wallowa Lake, the Wallowa River flows about 50 miles to its confluence with the Grande Ronde River, a tributary to the Snake River. The total drainage area of the Wallowa River Basin is 950 square miles. At the project, the three tributaries drain about 43 square miles of land, representing about 5 percent of the total drainage area of the Wallowa River Basin.

11. Project Facilities: In total, the project includes two dams, a pipeline, a small impoundment, a penstock, powerhouse, tailrace channel, transmission line, and a 1.4 mile unpaved access road.

a. Hydropower generation and steam-water flow facilities

- The 2-foot-high, 9-foot-long Royal Purple Creek Diversion Dam on Royal Purple Creek, diverts water through a 240-foot-long partially-buried pipeline. The water from the pipeline empties into an open channel that discharges to the East Fork, just upstream of the project's East Fork Dam.
- The 18-foot-high East Fork Dam is integrated with a 30-foot-spillway that creates a 0.2 acre impoundment on the East Fork. An intake box on the left embankment of the dam diverts flows into a 5,688-foot-long buried penstock that connects to the powerhouse. A sluiceway located adjacent to the intake connects to a 2-foot-diameter pipe passing through the dam to provide instream flow releases to the 1.7-mile-long bypassed reach of the East Fork.
- The project's powerhouse is outfitted with a sole 1.1 MW impulse turbine-generator unit.
- Once flows have passed through the turbine, they exit the powerhouse into a 40-foot-long concrete tailrace that discharges into an open, braided tailrace.
- The tailrace consists of two channels: a southern main channel which conveys a majority of the flows, and a smaller northern channel that contains several braided segments. Each channel is roughly 1,000 feet and discharge at separate locations, several hundred feet apart into the West Fork

b. Recreation facilities

- There no existing project recreational facilities, though PacifiCorp voluntarily operates the Pacific Park Campground, which is located partially within the project boundary, adjacent to the powerhouse and along the existing southern tailrace channel.

B. IMPORTANT PROVISIONS AND REQUIREMENTS IN LICENSE

The license requires numerous enhancements to the project's existing infrastructure and operations to better protect and enhance its fish, wildlife, recreational, cultural, and aesthetic resources. Most notably, the license emphasizes PacifiCorp's assurance to protect federally listed bull trout from critical habitat loss and degradation.

1. Instream Flows [Reference: Article 407]

Prior to the issuance of this license, the project operated under a .5 cfs minimum flow requirement to the bypassed reach of the East Fork. Under the new conditions of the Oregon DEQ in Appendix A, Condition 1(a), & the Forest Service in Appendix B, Condition 9(2), PacifiCorp must provide the following instream flow releases to the bypassed reach within 18 months of license issuance:

Timeframe	Required Flows
<i>November 1 – April 30</i>	4 cfs
<i>May 1 – October 31</i>	5 cfs (or inflow, whichever is less)

Additionally, within one year of license issuance, PacifiCorp shall install and maintain a monitoring flow gage at the existing BPL gage location. The gage will provide a continuous real-time recording of flows in the bypassed reach which shall be reported to the USDA Forest Service through the Licensee’s internet reporting system. The data obtained from the new gage site will provide verification that instream flow releases to the East Fork bypassed reach are being implemented as required.

2. Permanent Tailrace Barrier Plan [Reference: License Article 409]

The existing tailrace channel is one of the project’s largest threats to federally listed bull trout. To mitigate the risk of bull trout becoming stranded in the tailrace during dewatering events, the license requires PacifiCorp to install a permanent barrier at the confluence of the tailrace and the West Fork to prevent fish from entering. PacifiCorp must file a tailrace barrier plan developed in consultation with NMFS, FWS, and Oregon DFW at least 60 days prior to the start of its construction. The Oregon DEQ requires that the tailrace barrier is fully functional by February 2020.

3. Temporary Fish Passage Barrier [Reference: License Article 410]

Until the permanent barrier is installed and operational, PacifiCorp must take intermediary action to prevent fish mortality by installing and inspecting, twice per week (Aug 1 – Nov 15), a temporary fish passage barrier to ensure no fish have access to the tailrace channel during bull trout spawning season.

4. Fish Salvage Plan [Reference: License Article 411]

By August 2017, PacifiCorp is required to file a fish salvage plan developed with the Forest Service, U.F.W.S, ODFW, & the Oregon DEQ that addresses procedures for capturing, handling, and relocating any fish trapped in the tailrace during dewatering

events. The fish salvage plan must be implemented every year until the permanent tailrace barrier is constructed. In addition to the procedures specified in Appendix C, Condition 2, the plan must include the following provisions:

1. Fish must be salvaged from the tailrace channel within two hours of the installation of any temporary fish passage barrier.
2. Fish must be salvage from the tailrace channel prior to complete dewatering of the tailrace channel, regardless if it is a planned or unplanned event.

5. Bull Trout Reporting [Reference: License Article 412]

For 10 years, PacifiCorp must file, by March 31, a report that documents the prior year's bull trout monitoring and protections measures as required by the U.S. Fish & Wildlife Service in Appendix C, condition 4(a). The specific reporting metrics can be found in Appendix C, condition 4(a), but at a minimum the annual report should document:

1. The results of the fish handling and injury monitoring due to fish removal for – in-water construction.
2. The results of the bull trout construction monitoring.
3. The results of the bull trout redd monitoring.

6. Noxious Weed Control Plan [Reference: License Article 415]

As required by Appendix B, condition 6, PacifiCorp must develop a revised Noxious Weed Management Plan by July 2017. The plan must be developed in consultation with the Forest Service, and shall include the following provisions:

1. Implement applicable noxious weed control measures found in invasive plant management direction for the Pacific Northwest Region and/or the Wallowa-Whitman National Forest Land and Resource Management Plan.
2. PacifiCorp shall survey and treat noxious weeds within the Project Boundary for three consecutive years between June 1 and July 31 following construction or maintenance activities described in the FLA. If no noxious weeds are detected for those three consecutive years, the survey intervals shall shift to a biennial schedule until a noxious weed infestation is detected.
3. PacifiCorp shall ensure that:
 - Ground cover in treated areas equals or exceeds 80 percent of that in an undisturbed control area with similar vegetation and is adjacent to the Project area and

- Species composition in disturbed areas equals or exceeds 75 percent non-weedy species. If the standards above are not feasible or achievable, the Licensee shall consult and coordinate with the Forest Service to develop suitable alternatives.
4. PacifiCorp shall include a status report in its Annual Report (required by Condition No. 5) that describes activities related to weed control, assessment of weed areas, and identification of future efforts to control noxious weed spread and colonization within the Project boundary.

7. *Recreation and Aesthetics/Visual Resources Management Plan (RAVMP)*
[Reference: License Article 416]

In order to preserve the aesthetic and recreational value located within the Project Boundary, PacifiCorp must submit a revised RAVMP (see Appendix M, Volume III of the Final License Application) by July 2017. The revised plan must include the following measures:

1. Replacement of the cable gate near the powerhouse with a metal pipe gate;
2. Installation of a 3-panel interpretive sign with information about the project near the powerhouse;
3. Replacement of project fencing near the powerhouse with a darker vinyl material to reduce contrast with the surrounding environment;
4. Installation of landscaping improvements including native vegetation, boulders, rock, cobble, and gravel along the northern portion of the powerhouse yard to screen views of the project powerhouse and fencing from the Joseph-Wallowa Lake Highway terminus;
5. Re-painting the powerhouse exterior and roof with a color compatible with the surrounding environment;
6. Installation of six new directional trail signs along the project access road;
7. Cleanup of the laydown and storage area on the east side of the impoundment by removing and reorganizing existing materials;
8. Improvement of the drainage along the connector trail between the project access road and the East Fork Wallowa River Trail;
9. Installation of wood shake siding and roofing on the impoundment intake structure;

10. Paint the upper penstock trestle and penstock pipe with a uniform dark color;
11. Installation of an interpretive sign with information about the project at the west side of the impoundment; and
12. Modification of the catwalk gate on East Fork Dam to allow pedestrian access.

In addition to filing a revised implementation schedule, the plan must also include a provision to install fencing around the new tailrace barrier, as required by Article 409. Note that the Forest Service places several additional requirements to PacifiCorp's revised RAVMP in Appendix B, Condition 7(a)-(f).

C. MAP

There are two convenient ways to become familiar with this project on the Hydropower Reform Coalition website, www.hydroreform.org.

- Go directly to the project page <http://www.hydroreform.org/projects/wallowa-falls-p-308>
- To understand the geographical context of the project, visit the *On Your River* section of the site. This link (<http://www.hydroreform.org/on-your-river/Northwest>) will take you to the section for rivers in the Northwest. Zoom in until you can see NE Oregon. Locate the Wallowa Falls Project location, just south of Joseph and east of La Grande.