



**2023 Annual Operation Compliance Report**

**Wallowa Falls Hydroelectric Project**

**(FERC No. P-308)**

**Grande Ronde River Basin**

**Wallowa County, Oregon**



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## 1.0 Introduction

The Federal Energy Regulatory Commission (Commission) issued a new operating license for the Wallowa Falls Hydroelectric Project (Project) January 5, 2017. The Operation Compliance Monitoring Plan (OCMP) was developed to satisfy Article 408 and Condition 1e) of Appendix A: Oregon Department of Environmental Quality (ODEQ) Water Quality Certification, of the license. The OCMP was approved by the October 11, 2017, Commission Order Modifying and Approving Operations Compliance Monitoring Plan Pursuant to License Article 408.

Condition 1(e) of the Water Quality Certification for the relicensing and continued operation of the Wallowa Falls Project required that the OCMP be revised within three months of completion of the tailrace realignment channel, upstream passage barrier (tailrace barrier), and a modified forebay flow release valve or gate. The OCMP was revised in consultation with the Oregon Department of Environmental Quality (ODEQ), Oregon Department of Fish and Wildlife (ODFW), U.S. Fish and Wildlife Service (USFWS), Oregon Water Resources Department (OWRD) and the U.S. Forest Service (USFS). The revised OCMP was submitted to the Commission on September 22, 2020, and was approved by the June 29, 2023, Commission Order Amending Operations Compliance Monitoring Plan Pursuant to License Article 408.

This Annual Report satisfies the reporting requirements of Section 3.1.2 of the OCMP (PacifiCorp 2017a) and license Article 408. In addition to the report elements identified in Section 3.1.2 of the OCMP, PacifiCorp has elected to include the 2023 Wallowa Falls Bull Trout Redd Monitoring Report required by Article 412 of the license and the 2023 Noxious Weed Control Plan Annual Report required by Section 3.5 of the Noxious Weed Control Plan (PacifiCorp 2017c) in this Report, as Appendices B and C, respectively.

## 2.0 Project Operations – Water Management

### 2.1 *Minimum Flows*

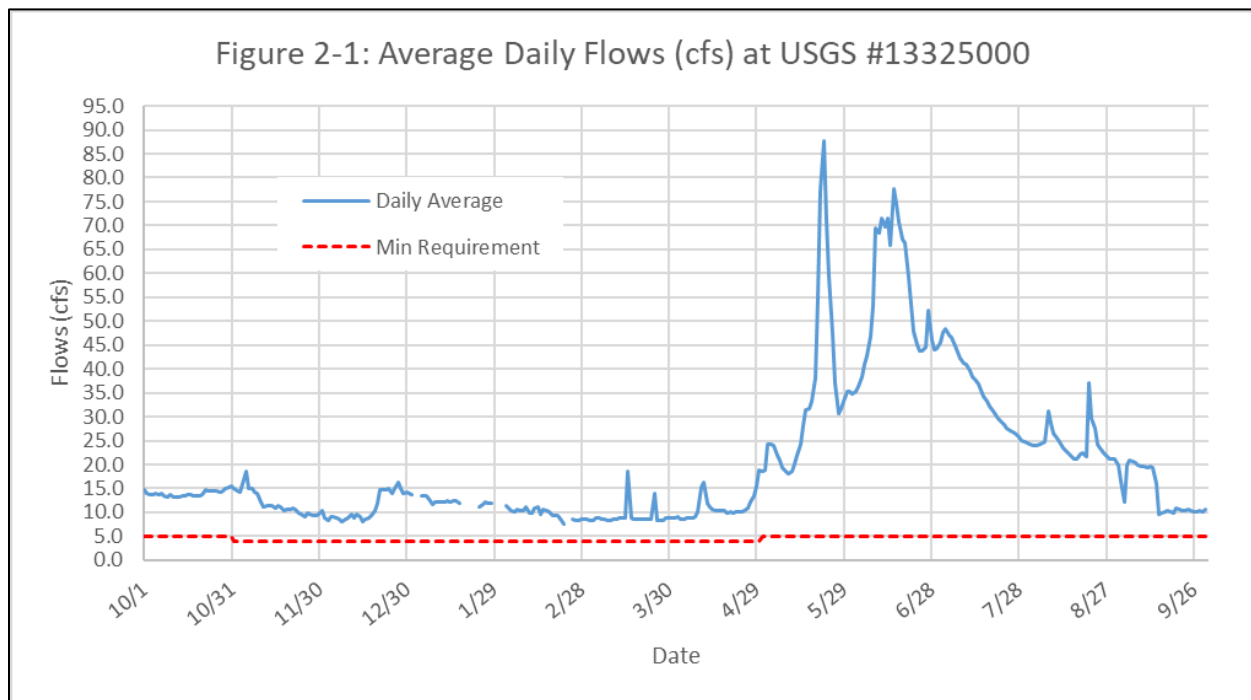
Minimum instream flows, as required by license Appendix A, Condition 1(a) and Appendix B, Condition 9(2) were implemented by PacifiCorp before July 5, 2018. PacifiCorp contracted the United States Department of the Interior, U.S. Geological Survey (USGS) to install the required stream gage. USGS continues to conduct the required hydrologic surveillance program (USGS Gage 13325000, East Fork Wallowa River) for the Project. The gage was installed in the summer of 2017<sup>1</sup>. As required by license Appendix A, Condition 1(b), the East Fork Wallowa River gage reports a real-time recording of river stage and corresponding flow in cubic feet per second (cfs) measured in 15-minute intervals. Compliance with the license required minimum flow is determined based on a top of the hour average of the previous four 15-minute readings.

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<sup>1</sup> The Gage and associated communications system are located on the East Fork of the Wallowa River on a parcel of property owned by PacifiCorp and designated by Wallowa County, Oregon, as tax lot number 03S4500009900.

From October 1-31, 2022, and May 1, through September 30, 2023, the Project operated with 5 cfs or greater in the bypassed reach of the East Fork Wallowa River as measured at the compliance gage. From November 1, 2022, through April 30, 2023, the Project operated with 4 cfs or greater in the bypassed reach of the East Fork Wallowa River as measured at the compliance gage. There were 4 periods (January 1-3, January 18-23, January 29-February 1 and February 23-24) when the gauge equipment froze, and no flow data is available. Figure 2-1 shows the average daily flow during the 2023 water year.

Figure 2-1: Average Daily Flow (cfs)



## 2.2 Ramping

In accordance with *Article 406 Ramping Rates and Condition 1(c)* of Appendix A of the Wallowa Falls License, PacifiCorp filed the *Wallowa Falls Ramping Study Report and Down-Ramping Plan* with the Commission on April 3, 2018 (PacifiCorp. 2018a.). As discussed in the Study Report and OCMP, due to the lack of storage capacity, the Project is operated in run-of-river mode and generation is subject to seasonal river flows.<sup>2</sup> All increases in generation, will comply with the Standard Operating Procedure (Down-Ramping Plan) for ramping. Improvements in automation

<sup>2</sup> Run of river mode of operation refers to a hydroelectric project that has little or no water (energy) storage, is subject to seasonal river flows for generation and is therefore an intermittent energy source. This contrasts with conventional hydropower which uses reservoirs to regulate water for flood control and dispatchable electrical power.

At a run of river project there is little or no storage, therefore when generation is held at a steady state, changes to river stage in the bypassed reach are entirely the result of natural increases or decreases in inflow to the project. In contrast, at a conventional hydropower project, when generation is held at a steady state, natural increases in inflow can be absorbed (stored) in the project reservoir or natural decreases in inflow can be withdrawn from the project reservoir, allowing the downstream river stage to be maintained in steady state.

and communication infrastructure at the Project have allowed the Programmable Logic Control (PLC) to control unit generation based on real-time forebay level indication and streamflow in the bypassed reach. This is a much more efficient way to run the generating unit than was historically possible and has the added benefit of holding a steadier river stage in the bypassed reach of the East Fork Wallowa River. For example, when a rainstorm occurs and forebay indication shows a rise in inflows the PLC can ramp the unit up at a maximum of 300 kW per hour (kW/h). to utilize the increased inflows for generation while holding the bypassed reach at a steady stage. PacifiCorp's water right of 16 cfs is the maximum used for generation. Therefore, any inflow greater than 16 cfs will always spill over the dam. The PLC also receives real-time data from the USGS compliance gage and is programmed to alarm locally at the plant as well as the HCC, in Ariel, Washington, when bypassed reach flows are within 2 cfs of the minimum requirement.

For the current reporting year, all generation changes were made in compliance with the Down-Ramping Plan, meaning the automated PLC made all generation increases in steps of 300 kW/h or less. The following unplanned outages (unit trips) occurred during the reporting period of October 1, 2022, through September 30, 2023.

### **Planned Unit Start-up of November 8, 2022**

This ramping event occurred in water year 2023. However, for continuity of reporting it was included in the 2022 annual report. As described in Section 2.2.1 of the 2022 report, the generating unit was shut down by a Hydro Control Operator on July 28, 2022, due to repeated low flow alarms in the bypassed reach. The East Fork Wallowa River bypassed reach experienced natural flow at this time. As reported in Appendix C of the 2022 Report, seven bull trout redds were recorded in the bypassed reach during the spawning period of August 28 to October 27, 2022. On November 8 natural inflows to the bypassed reach were deemed sufficient to restart the generating unit. Per protocol contained within the OCMP, and prior to the generating unit being brought online, PacifiCorp dispatched contract biologist, Kendrick Moholt of Bio-Resources to monitor previously dug redds to ensure they stayed watered up as the unit came on and flows in the bypassed reach receded.

The generator was brought online at 0905 hours (hr) and began ramping up to 200 kW. Generation was increased in 200 kW increments. Concurrently, a baseline measurement of 15.5 - 16 centimeters (cm) of water was measured over the most vulnerable redd. At 1003 hr generation stabilized at 200 kw. At 1010 hr, 15.0 cm of water was measured at the same location over the most vulnerable redd. An additional generation increase began at 1015 hr and stabilized at 400 kW at 1134 hr and 13.5 – 14 cm was measured over the redd at the same location. It was determined that additional increases in generation would not be prudent. At 1145 hr the forebay level was set at 2.09 feet (400 kW). Shortly thereafter the USGS East Fork Wallowa River flow gage became ice affected and accurate gage readings were rendered impossible. Due to the unreliable gage readings, and out of an abundance of caution, PacifiCorp shut down all generation on November 16. Due to low winter flows and the unreliable ice affected gage, it was decided that the generating

unit would remain offline until sufficient runoff occurred and/or bull trout fry had emerged from spawning gravel.

### **May 2, 2023**

The generator was brought online on May 1, 2023. Generation increased at a rate of 300 kW/hr or less. The generator tripped offline May 2, 2023 due to a governor malfunction. The generator was offline for 24 days and restarted. Upon starting the unit, PacifiCorp increased generation following the rate of 300 kW/hr or less.

### **June 14, 2023**

The generator tripped offline June 14, 2023 due to low penstock pressure caused by failure of the head gate solenoid. Upon further inspection, additional generator equipment including the turbine deflector plate had failed and needed to be replaced. This resulted in the generator remaining offline until September 1, 2023 when repairs were complete.

### **Planned Unit Start-up of August 31 - September 1, 2023**

A redd survey was conducted by PacifiCorp biologist Jeremiah Doyle on the afternoon of August 31, 2023. No redds were observed. Six adult bull trout were observed holding in the bypassed reach. No active spawning was observed.

Several attempted starts of the unit on August 31, 2023 failed due to mechanical issues. The unit was started successfully at approximately 0745 hr, September 1, 2023, and ran for an hour, then tripped offline due to mechanical issues. Repairs were made and the unit was restarted at 1100 hr and followed the ramp rate of 300kW/hr or less to approximately 400 kW.

### **September 2, 2023**

The generator tripped offline September 2, 2023 for unknown reasons. An attempt to restart the unit September 3, 2023 was unsuccessful and resulted in a mechanical lockout and closure of the penstock intake headgate. The unit is remained off-line for trouble shooting and repairs.

### **Planned Unit Start-up of September 13, 2023**

A redd survey was conducted by contract biologist Kendrick Moholt on the morning of September 13, 2023. Two redds were recorded. Mr. Moholt began observation of the more vulnerable of the two redds at 0830 hours (hr). A water depth of 140 millimeters (mm) was recorded at the shallowest point of the redd. The surface of the pool where the redd is located is quite turbulent and all water depths over the redd are approximate. Bypassed reach flow was 19.9 cfs (4.78 ft) per the USGS gage.

At 0900 hr PacifiCorp Hydro Operations opened the penstock headgate diverting water for power generation. Bypassed reach flow was 19.2 cfs (4.77) per the USGS gage. At 1030 hr the generator

was brought online, and a series of generator equipment tests occurred at low generation levels for several hours. The resulting drop in bypassed reach flow of 3-5 cfs resulted in a slight decrease in redd coverage observed by Mr. Moholt.

At approximately 1400 hr testing was completed and generation increased at a ramp rate of 300 kW/hr or less. Bypassed Reach flow was 16.8 cfs (4.73 ft) per the USGS gage. Redd observation continued.

At 1730 hr Mr. Moholt measured a water depth of approximately 100 mm at the shallowest point over the redd. Flow in the bypassed reach was 15.1 cfs (4.70 ft) per the USGS gage. Generation continued to increase at or below the ramp rate of 300 kW/hr.

At approximately 1820 hr generation stabilized at 600 kW. Flow in the bypassed reach was 12.6 cfs (4.65 ft) per the USGS gage. Increases in generation were suspended to allow bypassed reach flows to stabilize.

At 1900 hr Mr. Moholt measured a water depth of approximately 80 mm at the shallowest point over the redd. Flow in the bypassed reach was 10.8 cfs (4.61 ft) per the USGS gage. Generation remained at 600 kW. Monitoring of the redd continued.

At 1915 hr Mr. Moholt reported a water depth of approximately 80 mm at the shallowest point over the redd. Flow in the bypassed reach was 10.4 cfs (4.6 ft) per the USGS gage. It was determined that no additional increases in generation would be made and depth at the redd had stabilized. Redd monitoring was suspended.

### **September 25, 2023**

The generator tripped offline on September 25, 2023 at 1320 hr due to an electrical fault in the local electrical grid. Generation resumed at approximately 1400 hr. A ramp rate of 300 kW/hr or less was followed to generation level of approximately 500 kW at approximately 1600 hr.

### **October 28, 2023**

Although this ramping event occurred in water year 2024, for continuity of reporting it is included in this annual report. The generator tripped offline due to loss of communication between Hydro Control Center and Wallowa Falls plant at approximately 0700 hr on October 28, 2023 generation resumed at approximately 0920 hr on October 28, 2023. Ramp rate was followed to generation level of approximately 460 kW.

### **October 30, 2023**

Although this ramping event occurred in water year 2024, for continuity of reporting it is included in this annual report. The generator tripped offline on October 30, 2023 at 0810 hr due to a line

disturbance in the local electrical grid causing an electrical fault and was restarted at approximately 1540 hr. A Generation up-ramp rate of 377 kW/hr occurred in the first hour after restart. This exceeds the ramp rate of 300 kW/hr as specified in Appendix C of the Operations Compliance Monitoring Plan. While the generation up-ramp rate was faster than 300kW/hr, the associated bypassed reach flow reduction was observed to be within the 0.1 ft/hr down-ramp stream flow rate required in the bypassed reach of the East Fork Wallowa River.

Per Article 413 (c ) of the license, PacifiCorp filed a report with the Commission on November 30, 2023, identifying the following: (i) the nature and chronology of the event, (ii) the circumstances that lead-up to the event, (iii) any observed or reported adverse environmental impacts resulting from the event, (iv) any corrective actions taken, and (v) any recommended measures to reduce the likelihood of similar events occurring in the future.

Due to a required powerline outage following the unit trip described above, the generation unit was taken offline at 2355 hr on October 30, 2023. In consideration to the above ramping deviation, the generator remained offline for trouble shooting and repair.

Following the 0810 unit trip, bypassed reach flow increased from gage height of 4.62 feet (12.60 cfs) to a maximum of 4.77 feet (21.2 cfs) for approximately 2 hours. At 16:30 flow in the bypassed reach decreased at a rate of 0.1 ft/hr meeting the FERC approved ramp rate in terms of bypassed reach stage change. Bypassed reach flow stabilized at 16:30, at 4.61 cfs (12.1 cfs). No other impacts were observed.

An emergency redd survey was not required as generation resumed successfully less than 8 hours after the trip. The ongoing routine weekly redd surveys have not recorded any active spawning since October 13, 2023 when the last new redd was recorded. All spawning activity concluded at that time.

Upon further investigation, PacifiCorp determined that recently installed equipment used to control the flow of water to the turbine-runner had a different operational capacity than the prior equipment and was providing more water than prior settings. Therefore, when the plant came on-line, more water was sent to the turbine causing generation up-ramp to be faster than 300 kW per hour. The issue was corrected by adjusting the electronic programmable logic controller to compensate for the increased efficiency of the new equipment. Flow to the turbine-runner is now set to achieve a ramp rate of less than 300 kW/hr. The unit was brought online on November 1 and followed the prescribed ramp rate to approximately 500 kW. All subsequent generator trips to date have complied with the required ramp rate.



### **3.0 Forebay Flushing**

Annual flushing of the Project forebay is permitted under Appendix A, Condition 5 of the license. On August 2, 2017, the Commission issued an Order Modifying and Approving the Turbidity Monitoring Plan for Forebay Flushing under Appendix B, Condition 10 of the Project license.

Per Section 3.0 of the Turbidity Management Plan, PacifiCorp is required to provide notice of its intent to flush the forebay of the Wallowa Falls Hydroelectric Project in the month of June at least 10 days prior to the date forebay flushing is scheduled to begin. On June 2023, an email notice was sent to consulting parties informing them that PacifiCorp would not be flushing the forebay in 2023 due to ongoing coordination with the US Army Corps of Engineers, Oregon Division of State Lands, and Oregon Department of Environmental Quality to renew the Clean Water Act Section 404 permit for Project forebay flushing. PacifiCorp is on track to secure the permit prior to June 2024 and plans to flush the Project forebay at that time. PacifiCorp did not conduct turbidity monitoring associated with forebay flushing and a Forebay Flushing Report was not filed with the Commission and the Oregon Department of Environmental Quality.

### **4.0 Fish Salvage Events**

Article 411 of the license calls for a Fish Salvage Plan to be developed within six months of license issuance, PacifiCorp developed the Fish Salvage Plan (PacifiCorp 2017b) in consultation with the agencies and filed it with the Commission April 14, 2017. The plan was originally intended to be implemented during all tailrace dewatering events, as well as immediately after installation of the temporary tailrace barrier, until the permanent tailrace barrier, required by license Article 409 and Appendix A, Condition 2(a), was installed and operational.

With the bringing online of the permanent tailrace fish barrier in June 2020, it was anticipated that construction of temporary tailrace fish barriers and tailrace fish salvages would no longer be necessary. The unexpected identification of a small side-channel of the West Fork Wallowa River (WFW) immediately downstream of the tailrace discharge plume made it necessary for this Plan to continue to be implemented moving forward. Accordingly, the 2023 Fish Salvage and Temporary Tailrace Barrier Report is included as Appendix A to this report.

No unit trips of long enough duration with subsequent headgate closure occurred at the Wallowa Falls Project between November 16, 2022, and July 30, 2023. Thus, no fish salvages were ever required. No planned fish salvages occurred at the Project during 2023. Typically, a fish salvage would occur in the side-channel within the WFW prior to installation of the temporary fish barrier in mid-August. Due to the Project being off-line for repair June 14, to September 1, including the day of barrier installation along with naturally occurring receding seasonal flow in the WFW, the side-channel was completely dry, and a fish salvage was not necessary.

## **5.0 Bull Trout Monitoring and Protection Measures**

Article 412 of the license mandates that annually, by March 31, PacifiCorp file a report with the Commission that documents the prior year's bull trout redd monitoring results as required by Appendix C, condition 4(a), of the license, as well as, any bull trout monitoring and protection measures completed during the previous year. At a minimum, the report must include:

- 1) The results of the fish handling and injury monitoring from removal for in-water construction required by Appendix C, condition 2(g) and (h);
- 2) The results of the bull trout construction monitoring required by Appendix C, condition 3(a)xi; and
- 3) The results of the bull trout redd monitoring required by Appendix C, condition 4(a).

No fish were handled for work-site isolation as there was no in-water construction on the Wallowa Falls Hydroelectric Project in 2023. Per license Article 412 and Appendix C, condition 4(a), the results of bull trout redd monitoring for calendar year 2023 are included as Appendix B to this report.

## **6.0 Noxious Weed Control**

Article 415 and Appendix B, condition 6 of the Commission license requires that PacifiCorp file a noxious weed control plan with the Commission within six (6) months of license issuance, PacifiCorp developed the Noxious Weed Control Plan (NWCP [PacifiCorp 2017c]) in consultation with the agencies and filed it with the Commission June 5, 2017. As provided for in Section 3.5 of the NWCP, the 2023 Noxious Weed Control Plan Annual Report is included as Appendix C to this report.

## **7.0 Deviations and Unanticipated Events**

No deviations occurred during the reporting period. However, as noted in Section 2.1.2 above, one ramping deviation occurred on October 30, 2023. A complete summary of this event will be provided in the 2024 Annual Report.

### **West Fork Wallowa River Potential Stranding Issue**

As described in the 2020 Annual Report, the permanent tailrace barrier was commissioned in June 2020. As-built inspection of the fish barrier and direct observation and measurement completed during tailrace commissioning verified that the barrier was constructed and is operating in compliance with the National Marine Fisheries Service design criteria and is indeed a passage barrier for adult salmonids. Given this, PacifiCorp will not be conducting fish salvage of the "new" single tailrace channel during future unit outages or trips. However, immediately downstream of

the new tailrace outlet and permanent fish passage barrier there is a side-channel on the right bank of the West Fork Wallowa River that is at risk of becoming dewatered if the project headgate closes when the West Fork is at base flow. Under agreement with the resource agencies, PacifiCorp will be following the fish salvage procedure, previously used for the old tailrace channels, for the side-channel habitat in the West Fork Wallowa River. For all planned and unplanned unit outages where the headgate closes, between November 16th–July30th (period when no temporary fish barrier is in place), the West Fork side-channel immediately downstream of the tailrace outlet will be inspected for dewatering, electrofished and salvaged if necessary. These procedures will be followed for the next five years (2021 through 2025). After the five-year period, these procedures will be reevaluated by the licensee and stakeholders to determine next steps. PacifiCorp is in the process of revising the OCMP in consultation with the agencies to reflect this change. Upon completion of the revisions, the updated OCMP will be filed with the Commission.

## **8.0 Implementation Projects**

No license implementation projects were undertaken in 2023. All implementation projects associated with the license have been completed as of the 2022 reporting year.

## **9.0 References**

Federal Energy Regulatory Commission (FERC). 2017. PacifiCorp Wallowa Falls Hydroelectric License (FERC) Project No. 308. Issued January 5, 2017.

PacifiCorp. 2017a. Operational Compliance Monitoring Plan. Wallowa Falls Hydroelectric Project FERC Project No. P-308. Portland, Oregon.

PacifiCorp. 2017b. Noxious Weed Control Plan. Wallowa Falls Hydroelectric Project FERC Project No. P-308. Portland, Oregon.

PacifiCorp. 2017c. Fish Salvage Plan. Wallowa Falls Hydroelectric Project FERC Project No. P-308. Portland, Oregon.

PacifiCorp. 2018a. Wallowa Falls Ramping Study Report and Down-Ramping Plan. Wallowa Falls Hydroelectric Project FERC Project No. P-308. Portland, Oregon.

PacifiCorp. 2018b. Recreation and Aesthetic and/Visual Resource Management Plan. Wallowa Falls Hydroelectric Project FERC Project No. P-308. Portland, Oregon.

**Appendix A**  
**2023 Fish Salvage & Temporary Tailrace Barrier Report**



**Final**

**Fish Salvage & Temporary Fish Barrier Report for the  
Wallowa Falls Hydroelectric Project Tailrace**

**(FERC No. P-308)**

**November 20, 2023**



**-West Fork Wallowa River side-channel bull trout juvenile**

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## 1.0 INTRODUCTION

The Federal Energy Regulatory Commission (FERC) issued a new operating license for the Wallowa Falls Hydroelectric Project (Project) on January 5, 2017. Elements of the new license address fishery resources within the Project area, specifically as they pertain to the Project tailrace. **Article 411** of the license calls for a *Fish Salvage Plan* to be developed within six months of license issuance, “*the licensee must file for Commission approval a fish salvage plan that describes its proposed procedures for capturing, handling, and relocating any fish trapped in the tailrace channel during planned or unplanned unit outage events that dewater the tailrace channel. The fish salvage plan must be implemented each year following license issuance until the permanent tailrace barrier required by Appendix A condition 2(a) and Article 409 is installed and operating. In addition to the handling procedures specified by Appendix C, condition 2, the plan must include the following provisions: (1) Salvaging of fish from the tailrace channel within two hours of the installation of any temporary fish passage barrier required by Appendix A, condition 2(b); and (2) Salvaging of fish from the tailrace channel prior to complete dewatering of the tailrace channel due to a planned or unplanned outage event.*”

With the bringing online of the permanent tailrace fish barrier in June 2020, it was anticipated that construction of temporary tailrace fish barriers and tailrace fish salvages would no longer be necessary. The unexpected identification of a small side-channel of the West Fork Wallowa River (WFW) immediately downstream of the tailrace discharge plume made it necessary for this Plan to continue to be implemented moving forward.

It was identified that this small side-channel would lose connectivity with the main channel of the WFW as the main channel receded to base flow, at which time the total flow into the side-channel would be provided by the Project tailrace channel discharge, if and when the Project was in operation. The concern was then raised that if the Project unit tripped during the low-flow season and the tailrace dewatered, the small side-channel would also then dewater. To address this unplanned and unforeseen event, an Emergency Action Plan was developed and implemented to mitigate risk to aquatic species in the vicinity of the side-channel should the WFW be at base flow and the unit trip and tailrace dewater (Appendix A).

A stakeholder meeting consisting of representatives from the United States Fish and Wildlife Service (USFWS), Oregon Department of Fish and Wildlife (ODFW), United States Forest Service (USDA-FS), Oregon Department of Environmental Quality (ODEQ), and PacifiCorp took place in 2020 after the first year implementation of the emergency temporary barrier as part of the Emergency Action Plan. Discussion centered around next steps moving forward concerning mitigation for the potential side-channel dewatering issue. It was agreed during this meeting to continue to install and maintain a temporary barrier at the inlet and outlet of the side-channel during the base flow period of the year, August 15 – November 15, for the next five years. The Group then agreed this Plan would be reevaluated after a five-year period.

Resident and migratory fish species encountered during prior surveys within the side-channel and nearby vicinity consist of rainbow trout (*Oncorhynchus mykiss*), bull trout (*Salvelinus confluentus*), brook trout (*Salvelinus fontinalis*), mountain whitefish (*Prosopium williamsoni*), kokanee (*Oncorhynchus nerka*), and *Cottid ssp.*

This Report and the information contained therein fulfill Plan implementation reporting requirements of Article 411 of the FERC license as well as actions necessary to protect and preserve fishery resources within the Project area.

## 2.0 STUDY AREA

The Project is located on the East Fork Wallowa River (EFW) approximately 11 miles (17 kilometers) outside of the City of Joseph in Northeastern Oregon. The Project (Figure 1) reservoir/forebay lies over 5,200 feet (1,600 meters) above mean sea level (msl) and is approximately 0.2 surface acres (0.08 ha) in size and averages 5 feet (1.5 m) deep. Because the Project operates as run of river, there is no measurable storage. Though no measurable storage is present in the forebay, habitat in this area is lacustrine, and given the shallow water depth no thermal stratification is present. Substrate in the forebay consists of deposited silt, sand, and other glacial fines.

Water diverted at the forebay travels through the flow line and penstock to the generating turbine in the Project powerhouse. Water exits the turbine and is discharged into an approximately 985-foot (300 m) long tailrace discharge channel that empties into the West Fork Wallowa River. This channel has an average wetted-width of 10 feet (3.1 m) and an average depth of one foot (0.3 m).



**Figure 1 Wallowa Falls Hydroelectric Project.**



### 3.0 METHODS

November 16 – July 30, upon notification of a unit trip with corresponding headgate closure, regardless of time of day, a local on-call qualified biologist is immediately notified by an operator at Merwin Hydro Control and upon arrival begins with physically rescuing stranded fish from the side-channel of the West Fork Wallowa immediately below the tailrace discharge. The local qualified biologist lives in close proximity to the Project so as to be on-site and walking the side-channel within 60 minutes of the unplanned unit trip. On-site observations indicate when the unit trips and the headgate closes, it takes approximately 90 minutes for the entire tailrace channel to drain completely of water. Conversely, if the unit trips and the headgate does not close, a constant flow of approximately 3 cubic feet per second (cfs) is supplied to the tailrace channel. Thus, a fish salvage event is only triggered if the unit trips along with a subsequent headgate closure. Unit trips that do not cause the headgate to close shall result in no salvage response as the amount of water available flowing down the tailrace channel to the West Fork side-channel during this scenario is sufficient for fish survival until the unit is brought back online and full flow is restored.

A Smith-Root LR-24 (or similar model) backpack electrofisher and/or long-handled dip net is utilized to capture stranded fish. If a backpack electrofisher is utilized, it is set to Direct Current (DC) and applied at the lowest voltage setting possible to still allow capture of stranded fish species. All electrofishing activities follow protocols as set forth in the National Marine Fisheries Service Backpack Electrofishing Guidelines (NMFS 2000). To remain compliant with stipulations contained within the USFWS issued Biological Opinion (BiOp) for the Wallowa Falls Hydroelectric Facility, PacifiCorp ensures that fish capture and removal operations are conducted by a qualified biologist, and that all staff participating in the operation have the necessary knowledge, skills, and abilities to ensure safe handling of fish.

Prior to liberation, all captured fish are quantified and measured to their caudal fork. Due to the presence and possible capture of Endangered Species Act listed bull trout in the Project area, recording of information following contact with said species complies with stipulations contained within the USFWS issued BiOp for this Project which states, “PacifiCorp shall document all bull trout encountered during work site isolation by submitting a fish handling and injury-occurrence report to the Service. The report shall include: 1) the name and address of the supervisory fish biologist; 2) methods used to isolate the work area and minimize disturbances to bull trout; 3) stream conditions before and following placement and removal of temporary barriers; 4) the means of fish removal; 5) approximate the number of fish removed by species and age class, the number of bull trout removed; 6) condition of all bull trout released; and 7) any incidence of observed injury or mortality to bull trout. Specifically, for all bull trout captured, we ask that the fisheries biologist in charge of handling record the date and time, capture location, capture method used, length and weight of the specimen, condition (if abnormal), search for and record identification numbers from any tags that may be present and provide the collector's name.” This Report and information contained therein shall qualify also as the “fish handling and injury-occurrence report” as stipulated within the USFWS issued BiOp for the Project.

In 2023, per the agreed upon Emergency Action Plan submitted in August of 2020, a sandbag barrier was constructed to serve as a temporary fish exclusionary device at the top of the small WFW side-channel located immediately downstream of the tailrace barrier discharge plume. The fish barrier at the upstream end utilized sandbags, stacked one on top the other for the entire width

of the side-channel (Figure 2). This sandbag berm diverted all water from the tailrace channel into the WFW, effectively dewatering the side-channel for the entirety of the survey period. A large bank of gravel from upstream erosion was deposited at the downstream end of the side-channel at its confluence with the WFW (Figure 3), this and further channel incision of the West Fork at this location made it unnecessary during the survey period to string a net at this location as there was no surficial hydraulic connectivity after the side-channel was dewatered. Further specifics to the Emergency Action Plan concerning this side-channel can be found in Appendix A.



**Figure 2. Photo of Wallowa Falls side-channel barrier on upstream end.**



**Figure 3. Bottom end of side-channel showing deposited gravel bar and no hydraulic connectivity.**

## **4.0 RESULTS**

### **Fish Salvage**

No unit trips of long enough duration with subsequent headgate closure occurred at the Wallowa Falls Project November 16 – July 30, 2023, and as such no emergency, unplanned fish salvages were ever required.

No planned fish salvages occurred at the Project during 2023. Typically, a fish salvage would occur in the side-channel within the WFW prior to installation of the temporary fish barrier in mid-August. Due to the Project being off-line for repair June 14, to September 1, including the day of barrier installation along with naturally occurring receding seasonal flow in the WFW, the side-channel was completely dry, and a fish salvage was not necessary.

### **Temporary Fish Barrier**

Per the Action Plan submitted to stakeholders on August 17, 2020, a temporary fish barrier was installed at the upstream end of the WFW side-channel immediately downstream of the Project tailrace barrier discharge plume on August 15, 2023. The tailrace fish barrier was visually inspected twice per week until taken out on November 15, 2023. At no time during weekly inspections was the barrier visually assessed to be ineffective in precluding fish from entering the side-channel.

## **5.0 CITATIONS**

National Marine Fisheries Service. 2000. National Marine Fisheries Service Backpack Electrofishing Guidelines.

United States Fish and Wildlife Service. 2016. Biological Opinion for the Wallowa Falls Hydroelectric Project.

**APPENDIX A**  
**EMERGENCY ACTION PLAN – WF WALLOWA SIDE-CHANNEL TEMPORARY**  
**FISH BARRIERS**

**August 10, 2020**

**Emergency Action Plan: Wallowa Falls Temporary Fish Barriers to identified side-channel below Project Tailrace discharge**

**Background:**

Upon completion of the newly realigned tailrace and permanent tailrace fish barrier at the Wallowa Falls Hydroelectric Project, a side-channel directly below the tailrace discharge outlet was identified as being susceptible to unplanned Project induced dewatering events. Under normal water years, the side-channel in question may lose connectivity to the main channel of the West Fork Wallowa River as it recedes to base flow, and may naturally go dry. With new construction recently completed, the Project tailrace now will provide some flow to the side-channel even at times of hydraulic loss of connectivity with the West Fork Wallowa River. Under this scenario, in the event of an unplanned unit trip with subsequent headgate closure at the Wallowa Falls Project, the side-channel could now unexpectedly dewater. Potential impacts of this possible event are exacerbated during the bull trout and kokanee spawn timeframe, as redds that may have been excavated earlier would then become desiccated.

**Study Area:**

The side-channel in question (stranding channel) is located immediately downstream of the Wallowa Falls Project tailrace discharge channel, and within the flood plain of the West Fork Wallowa River (see Figure A, Sketch of side-channel and approximate locations of tailrace discharge outlet and barrier placements: Location 1). It is approximately 79 meters (260 feet) long, with an average wetted-width of 3 meters (10 feet). Figure 1 shows Location 1 on the sketch, the top-end of the stranding side-channel looking downstream. The West Fork Wallowa River main channel is on the left, the tailrace discharge is in the middle and the side-channel is on the right. The photograph in Figure 1 was taken on August 8, 2020, during West Fork Wallowa River midsummer flows. Based on August 8 field observation, the West Fork main channel has recently further down-cut below the entrance of the stranding side-channel. As a result, the tailrace is now providing the majority of flow, approximately 3cfs, into the stranding channel. However, during the August 8 field visit, it was discovered that a small channel connecting the main thalweg of the West Fork to the stranding channel also exists (Figure A, location 2). The channel in Location 2 (Figure 2) is contributing very little flow (approximately 0.5-1 cfs) to the stranding channel.

**Action:**

To prohibit fish from entering the stranding side-channel immediately below the Project tailrace discharge outlet from the downstream side during the bull trout and kokanee spawn, a block net (barrier net) will be installed by August 24, 2020 to serve as a temporary fish exclusionary device (Figure A, Location 3). The barrier net will be laid across the entire bottom of the upstream side of the side channel (Figure 3). The openings of the barrier net will be 6.35 mm. The net will be held in place by large sandbags placed end to end along the stream bottom and spanning the entire stream-width. The net will span the entire wetted width of the side channel, rise above the water surface, and will be pinned to the stream bank on either side with rebar to hold it in place in the event of higher than anticipated flows. The barrier net will be visited on a bi-weekly basis to clean debris and assess it is functioning as intended.

To prohibit fish and tailrace discharge from accessing the stranding side-channel from the topend immediately below the weir (Figure 1), a diversion (using sandbags, bio-blocks, or similar) will be built. The planned construction method is a sandbag berm approximately 3 meters (10 feet) long and 0.75 meter (2.5 feet) high. The diversion will prohibit water flow and connection between the West Fork Wallowa River, and the stranding side-channel, while diverting water from the tailrace discharge to the main thalweg of the West Fork.

To prohibit fish and main West Fork channel water from entering the stranding side-channel at Location 2 (Figure 2), a diversion using sandbags will be built. The planned construction method is a sandbag berm approximately 1.5 meters (5 feet) long and 0.6 meter (2 feet) high. After the three side-channel temporary barriers are placed, all fish will be salvaged from the stranding side-channel and liberated to the main channel West Fork Wallowa River by means of electrofishing. All side-channel barriers will be dismantled and taken out of the river no earlier than November 15, 2020, after conclusion of the bull trout and kokanee spawn season.

**Appendix B**  
**2023 Bull Trout Redd Monitoring Report**





**Final  
Bull Trout Redd Monitoring Report for the Wallowa Falls  
Hydroelectric Project**



**Upper East Fork Wallowa River  
photo courtesy of Kendrick Moholt  
(FERC No. P-308)**

**November 20, 2023**

*Prepared by:*

Jeremiah Doyle

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## 1.0 INTRODUCTION

The United States Fish and Wildlife Service (USFWS) issued a new Biological Opinion (BiOp) for the Wallowa Falls Hydroelectric Project (Project) on October 14, 2016. Monitoring elements within the new BiOp specifically pertaining to Endangered Species Act (ESA) listed bull trout (*Salvelinus confluentus*) were triggered when the Federal Energy Regulatory Commission (FERC) issued a new operating license for the Project on January 7, 2017.

The USFWS listed five reasonable and prudent measures (RPM) to be undertaken in order to minimize incidental take of bull trout by Project operations. Elements within this Plan pertain specifically to RPM 4 which seeks to “*minimize the risk of adverse effects to bull trout from emergency shut-down and ramping*”. Section 8.4 4(a) of the BiOp adds specific language and actions to be taken in order to achieve RPM 4.

Bull trout currently inhabit the East Fork Wallowa River (Study Area) at varying densities, depending on time of year. Past redd surveys of the Study Area have revealed bull trout actively constructing redds, while no bull trout redds have ever been observed within the neighboring West Fork.

This Report and the information contained therein fulfills reporting requirements per Section 8.4 4(a) of the USFWS issued BiOp as well as results pertinent to implementation of actions necessary to assess abundance and spatial distribution of bull trout redds within the East Fork Wallowa River.

## 2.0 STUDY AREA

The bypassed portion of the East Fork Wallowa River within and near the Project area is approximately 2,800 meters (m) long from the Project diversion dam to its confluence with the Wallowa River (Figure 1). Gradient in this reach is high, with the upper 1,600 m averaging 19 percent and the lower 1,200 m averaging 8.5 percent. Channel morphology within most of the upper reach is dominated mainly by steep bedrock, vertical waterfalls, and cascades over boulders; though the upper reaches are steep, the lower 800 m to the confluence with the Wallowa River has a shallower gradient, consisting of numerous riffles and pools. Over the course of its length, the bypassed East Fork Wallowa River drops approximately 365 m from the dam to the confluence with the Wallowa River. The upper and lower portions are divided by a 3.7 m vertical falls, an impassible upstream migration fish barrier.



**Figure 1. Wallowa Falls Hydroelectric Project.**

### 3.0 METHODS

Section 8.4 4(a) of the BiOp states the following terms and conditions are necessary for the implementation of RPM 4, “Conduct bull trout redd monitoring in the East Fork Wallowa River (from the upstream falls to the confluence with the Wallowa River) on an annual basis for 10 years to monitor take. FERC/PacifiCorp shall meet with the Service at the end of the 10 year period to determine whether additional years of redd monitoring are necessary GPS and map redds and photo document redds during survey. Measure the size of a redd and its location. Document bull trout observed (<6 inches in length, < 12 inches in length, <14 inches in length, and > 14 inches in length, while conducting redd count and document if bull trout occupy the redd). Note if brook trout are spawning with bull trout. Document flows during annual redd counts and during a shutdown and ramping. Conduct this redd monitoring in mid-September and October. If an emergency shutdown and ramping occurs during the spawning season, the East Fork Wallowa River spawning area will be field visited for any new redds built near the water’s edge that could be dewatered due to shut down and ramping. Notify the Service of both positive and negative findings”.

Bull trout redd surveys of the lower portion of the East Fork Wallowa River began August 24, 2023, and continued weekly through October 20, 2023, for a total of nine planned redd surveys. During each survey the entire lower portion of the East Fork Wallowa River was walked by an experienced qualified biologist, from the confluence with the West Fork Wallowa River upstream 800 m to the migratory fish barrier, an approximately 7-meter vertical falls. To standardize inherent observer error, the same experienced surveyors were utilized for all surveys in 2023.

All encountered bull trout redds were demarcated with handheld Global Position Satellite (GPS) units, flagged for visual reference within the stream, measured, and photographed. During subsequent surveys, previously identified redds were revisited and assessed for visibility. Flagging was either marked Still Visible along with the survey date if redd could still be visually identified, or the flagging taken down if the redd was no longer visible. Time taken for redd to no longer remain visible within the stream was recorded to assess redd life. Though the Planning document for these activities called for only four redd surveys during the spawning period, this being the sixth year of study and redd life still being characterized, nine surveys were performed to increase precision of previously assessed redd persistence within this watershed. Average and minimum observed redd life will be utilized to adjust frequency of surveys moving forward. Flows during the survey period (Sep-Oct) remained relatively stable and measured between 9-20 cubic feet per second as measured at the United States Geological Survey gage.

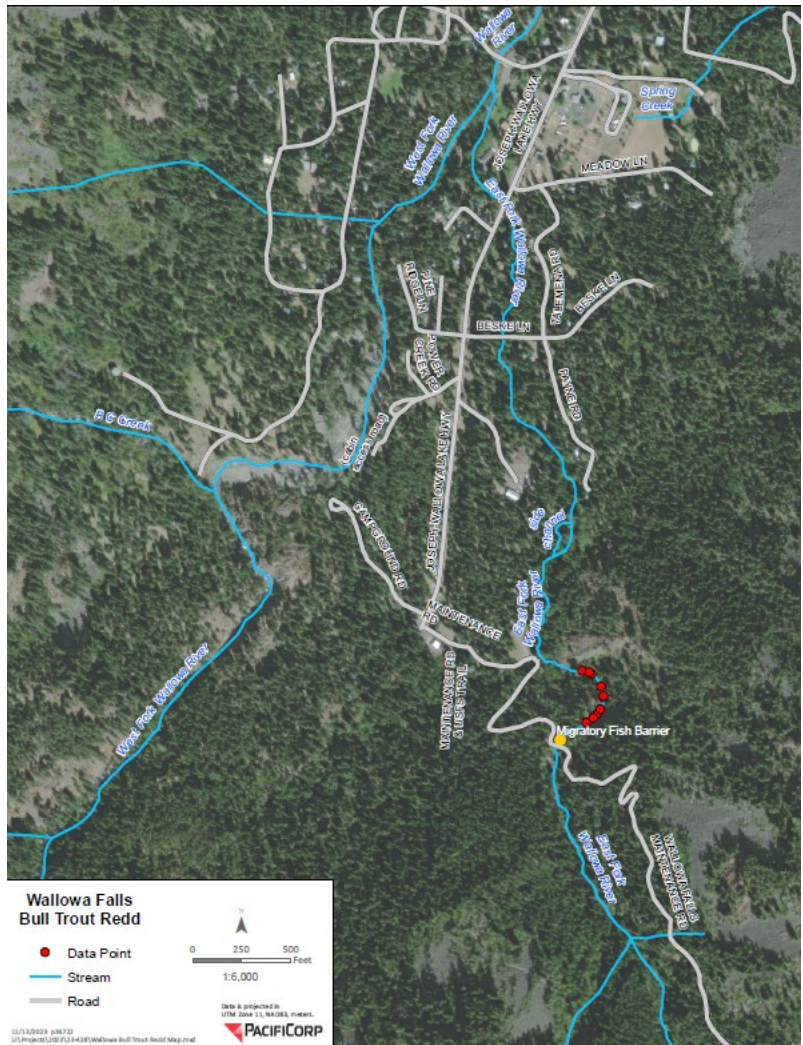
All fish observed in the vicinity of identified redds were recorded to species, if possible, as well as estimated for fork length.

#### **4.0 RESULTS**

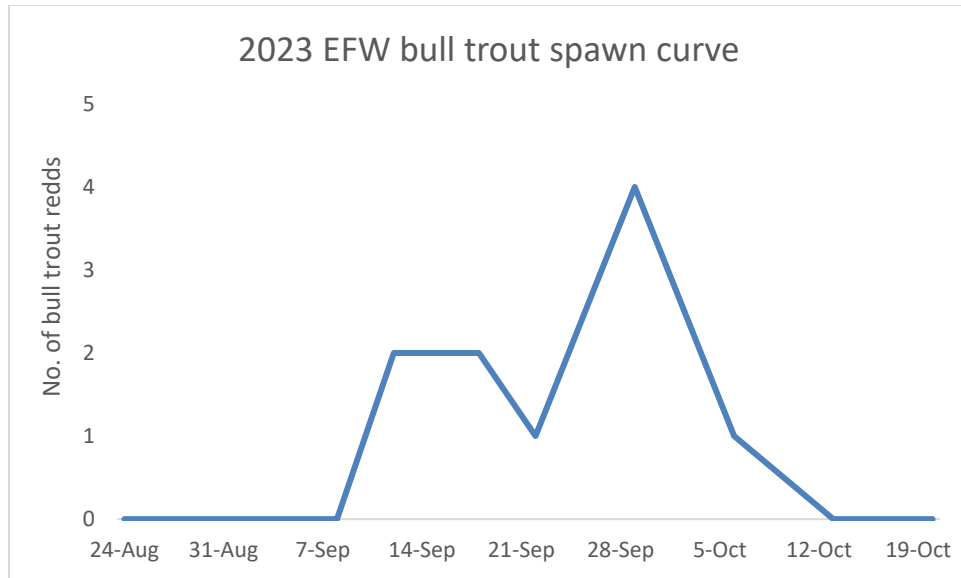
Ten bull trout redds were identified and marked by GPS during redd surveys performed in the East Fork Wallowa River in 2023 (Figure 2). All ten bull trout redds were large and indicative of being constructed by large migratory-sized fish (Table 1), and all were observed in the upper portion of available habitat in the East Fork Wallowa, just below and near to the natural migratory fish barrier. All redd observations in 2023 occurred between September 12 and October 6, with the peak of four counted on September 29 (Figure 3). Six of the ten identified redds had live bull trout either on the redd actively constructing, or in close proximity. Figure 4 graphically represents the established trend line based on historical redd counts in the East Fork Wallowa River to date (2017-2023).

**Table 1. East Fork Wallowa River bull trout redd data.**

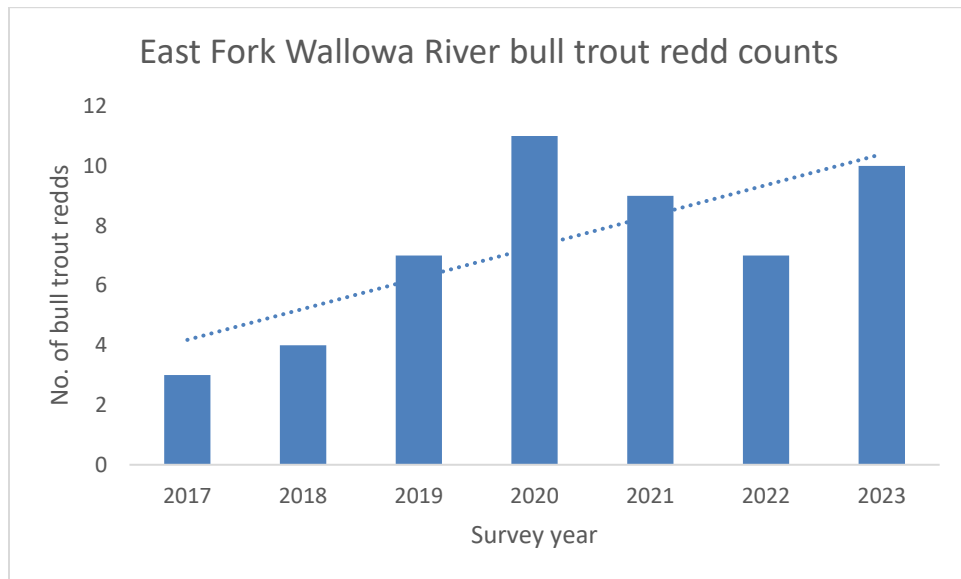
Date	Survey Location	Redd #	Redd Dimension (cm)	Live bull trout				Survey Conditions
				<6 in.	<12 in.	<14 in.	>14 in.	
8/24/2023	EFW, mouth to barrier	n/a						Sunny, clear. Water clarity excellent.
8/31/2023	EFW, mouth to barrier	n/a	Emergency survey prior to the generating unit being brought online, no redds observed during survey.					Sunny, clear. Water clarity excellent.
9/8/2023	EFW, mouth to barrier	n/a						Sunny, clear. Water clarity excellent.
9/12/2023	EFW, mouth to barrier	1	96 x 50	n/a	n/a	n/a	2	Sunny, clear. Water clarity excellent.
9/12/2023	EFW, mouth to barrier	2	130 x 65	n/a	n/a	n/a	2	Sunny, clear. Water clarity excellent.
9/18/2023	EFW, mouth to barrier	3	120 x 70	n/a	n/a	n/a	2	Clear. Water clarity excellent.
9/18/2023	EFW, mouth to barrier	4	90 x 80	n/a	n/a	n/a	2	Clear. Water clarity excellent.
9/22/2023	EFW, mouth to barrier	5	102 x 48	n/a	n/a	n/a	n/a	Clear. Water clarity excellent.
9/29/2023	EFW, mouth to barrier	6	118 x 80	n/a	n/a	n/a	2	Clear. Water clarity excellent.
9/29/2023	EFW, mouth to barrier	7	72 x 65	n/a	n/a	n/a	n/a	Clear. Water clarity excellent.
9/29/2023	EFW, mouth to barrier	8	144 x 120	n/a	n/a	n/a	n/a	Clear. Water clarity excellent.
9/29/2023	EFW, mouth to barrier	9	50 x 35	n/a	n/a	1	1	Clear. Water clarity excellent.
10/06/2023	EFW, mouth to barrier	10	60 x 45	n/a	n/a	n/a	n/a	Clear. Water clarity excellent.
10/13/2023	EFW, mouth to barrier	n/a	Emergency survey prior to the generating unit being brought online, no redds observed during survey.					Clear. Water clarity excellent.
10/20/2023	EFW, mouth to barrier	n/a						Clear. Water clarity excellent..



**Figure 2. Marked GPS locations (red dots, n=10) of bull trout redds within the East Fork Wallowa River**



**Figure 3. 2023 bull trout spawn curve in the East Fork Wallowa River.**



**Figure 4. Bull trout redd counts by survey year (2017-2023).**

All ten bull trout redds were in the upper portion of available habitat below the barrier. No brook trout were definitively observed during any 2023 East Fork Wallowa River redd survey.

Flows during the survey period remained stable and never deviated below the prescribed minimum instream flow as measured at the United States Geological Survey gage site.

Two emergency redd surveys were performed during the 2023 season. As part of elements contained within the BiOp and Project license, if the generating unit trips for a duration longer



than 8 hours from September through October, a redd survey documenting new redd locations and or redds susceptible to desiccation with receding bypass flows, must be performed prior to the unit being brought back online.

The generating unit had been off-line for repairs since June 2023 and was scheduled to be brought back on-line on August 31. An unplanned redd survey was conducted of the East Fork Wallowa River on August 31 prior to unit start-up to ensure no redds would be impacted by the receding flows, no new or old bull trout redds were observed during the survey.

The second emergency survey was triggered by a trip of the generating unit during the second week of October. Prior to the unit being started back up on October 13, an emergency redd survey was performed. During this survey no new redds were observed. Care was taken during this survey to monitor previously constructed redds as flows in the bypass receded due to water diversion through the generating unit. The biologist was on-site within the stream and in contact with the hydro control operator as the unit was slowly ramped up. Based on direct observation, a maximum set point for the generating was then established to maintain adequate flow over the existing redds.

Given length of redd persistence within the East Fork Wallowa observed for the first seven seasons of these surveys (average time of 24 days 2017-2023, minimum in 2023 of 14 days), in 2024 it is anticipated bull trout redd surveys will occur on a 10-day rotation during the months of September and October.

## **5.0 CITATIONS**

Oregon Department of Environmental Quality. 2016. 401 Water Quality Certification for the Wallowa Falls Hydroelectric Project.

United States Fish and Wildlife Service. 2016. Biological Opinion for the Wallowa Falls Hydroelectric Project.

**Appendix C**  
**2023 Noxious Weed Control Plan Annual Report**

# 2023 Noxious Weed Control Plan Annual Report

Wallowa Falls Hydroelectric Project

FERC Project No. 308



*Prepared by:*



December 2023

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# 1.0 Introduction

The Wallowa Falls Hydroelectric Project (FERC Project No. 308) received a new operating license from the Federal Energy Regulatory Commission (Commission) on January 5, 2017 (FERC 2017). Article 415 of the FERC license required PacifiCorp to file a noxious weed control plan (NWCP) with FERC within 6 months from the date of the license issuance (July 5, 2017):

Article 415. Noxious Weed Control Plan. The revised Noxious Weed Control Plan required by Appendix B, condition 6, must be developed after consultation with the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife Service. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

The United States Department of Agriculture (USDA), Forest Service Final Section 4(e) Conditions were filed on February 16, 2016, and included as Appendix B in FERC license (FERC 2017). The following conditions apply to the NWCP (PacifiCorp 2017):

Condition No. 6 – Noxious Weed Management Plan (NWMP) The Licensee shall, within six months following License issuance, revise the Noxious Weed Management Plan (NWMP), Appendix K, Volume III of the FLA [Final License Application] (February 2015), in consultation with the USDA Forest Service. The NWMP shall include measures A through D below and must meet USDA Forest Service standards, guidelines, methods, and monitoring protocols for actions undertaken on National Forest Service (NFS) lands. The NWMP shall be filed with the Commission for approval. After Commission approval, the Licensee shall immediately implement the NWMP.

- A. The Licensee shall 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, as amended for the period of the License. Future changes or modifications to the management direction will require the Licensee to coordinate with the USDA Forest Service at the Annual Resource Coordination Meeting required in Condition 5 to ensure the Licensee's implementation activities comply with those changes or modifications.

- B. The Licensee shall survey and treat noxious weeds on NFS lands within the FERC Project Boundary for three (3) consecutive years between June 1 and July 31 following construction or maintenance activities described in the FLA. If for three consecutive years, no noxious weeds are detected during the annual surveys, then survey intervals shall shift to a biennial schedule until a noxious weed infestation is detected. Control methods that will effectively control all Class A and other target weeds shall be implemented the same year as detection as allowed by U.S. Forest Service Pacific Northwest Region Invasive Plant Program, Preventing and Managing Invasive Plants (April 2005a) and Record of Decision (ROD) (October 2005b).
- C. The exact timing between June 1 and July 31 are recommended to implement control methods for optimal effectiveness in association with the guidelines provided by U.S. Forest Service Pacific Northwest Region Invasive Plant Program, Preventing and Managing Invasive Plants (April 2005a) and Record of Decision (ROD) (October 2005b). Manual control methods shall include measures including but not limited to reseeding, mulching and supplemental irrigation to ensure establishment of non-noxious vegetation in treated areas.
- D. The Licensee shall ensure that: a) 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 b) 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 USDA Forest Service to develop suitable alternatives.
- E. The Licensee shall include a status report in its Annual Report, required by Condition No. 5 – Resource Coordination, describing 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.

PacifiCorp submitted the Noxious Weed Control Plan (NWCP) to the Commission on June 1, 2017, pursuant to Article 415 and the Forest Service Final Section 4E Conditions included as Appendix B of the FERC license. A FERC order approving NWCP was issued by the Commission on July 25, 2017.

This report complies with the FERC License Appendix B USDA, Forest Service Final Section 4(e) Condition No. 5- Resource Coordination requiring PacifiCorp to provide an Annual Report to Wallowa Whitman National Forest (WWNF) on the status of the NWCP activities for that year (FERC 2017). The status report should be completed by December 1 each year to allow for at least a 30-day review prior to the Annual Resource Coordination meeting. This status report will only apply to the Project Boundary as described in Section 2.0 and shown in Appendix A and includes the following information:

- The current year Invasive Plant Inventory Forms
- A description of the control methods, operation and maintenance, and success of the control methods conducted that year and the accompanying treatment forms [Herbicide Application (2510), Insect Release (2550), and/or Mechanical/Physical Treatment (2530)]
- Future anticipated soil disturbing activities, noxious weed prevention methods to be conducted, and identification of future efforts to control noxious weed spread and colonization for the following year within the Project Boundary
- Future expected efforts and a schedule for monitoring
- Compliance with the current Wallowa Whitman National Forest, State and Local regulations for weed management activities
- Results of revegetation success for all ground disturbance activities

## 2.0 Project location

The Wallowa Falls Hydroelectric Project is located on the East Fork Wallowa River near the town of Joseph, Oregon in Wallowa County. The project powerhouse discharges into the West Fork Wallowa River upstream of Wallowa Lake (Figure 1).

The Project Boundary is an estimated 26 acres and encloses project operations, such as Royal Purple Creek Diversion Dam, the pipeline and open channel conveying water from the Royal Purple Creek Diversion Dam to the East Fork Dam and impoundment, penstock, powerhouse, transmission line, and non-project substation (FERC 2017). Portions of the access road, tailrace, and Pacific Park Campground are also included within the Project Boundary (FERC 2017). Approximately half of the lands within the Project Boundary are owned by PacifiCorp and the other half are on federal lands managed by WWNF. Appendix A shows the Project Boundary and the associated features.

Areas within the Project Boundary may be more susceptible to noxious weeds due to exposed soils and/or are adjacent to frequent human activity. Therefore, the Project Boundary is differentiated into three noxious weed priority areas to prioritize monitoring, prevention, and control methods accordingly. Noxious weed priority areas are defined as follows:

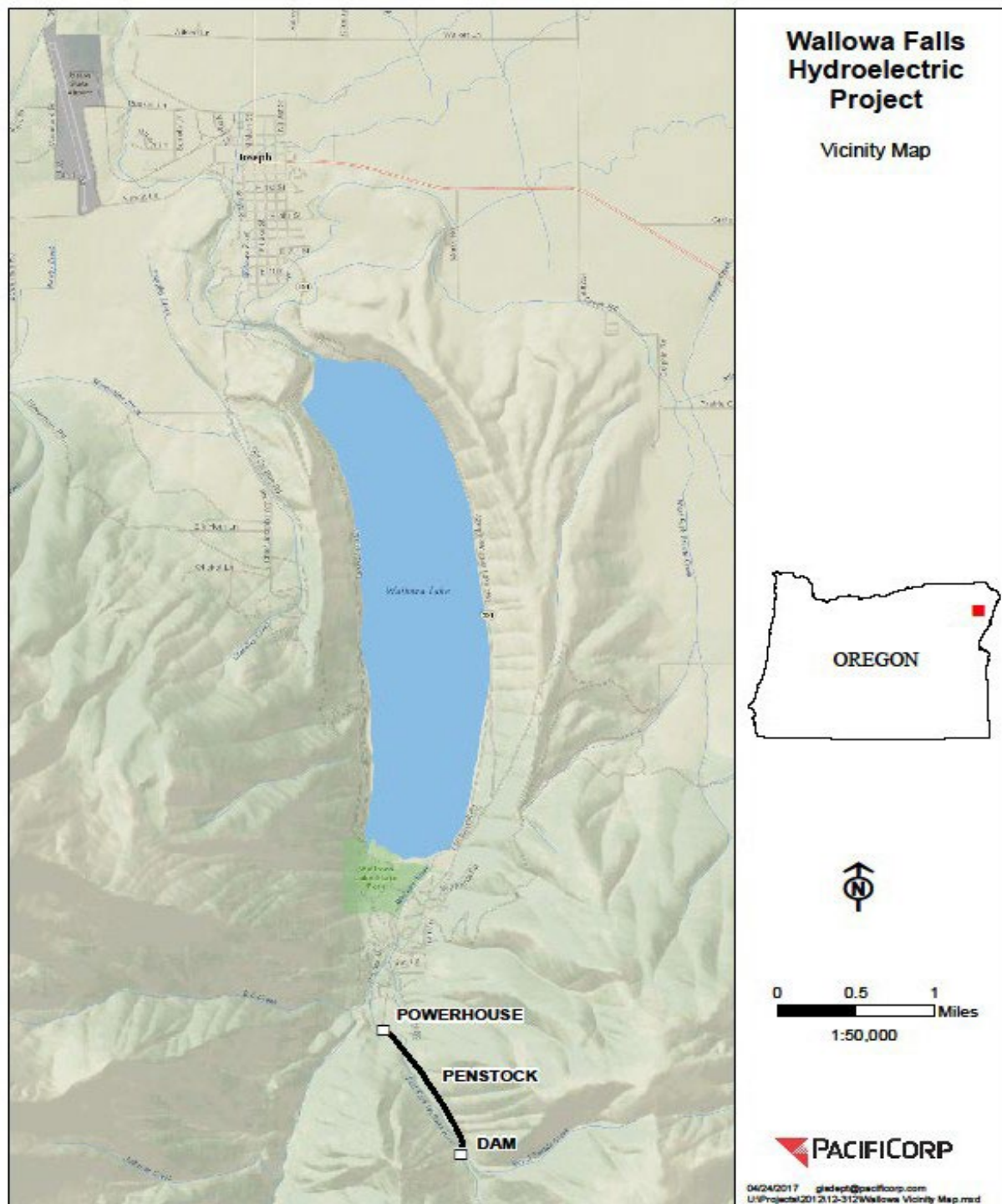
**High Priority:** areas with frequent or continued soil disturbance, frequent or constant exposure to weed seed vectors, or is known to have existing noxious weeds. These areas include the campground, forebay area, and portions of the WWNF trail within the Project Boundary.

**Medium Priority:** areas with prior or frequent soil disturbance but low exposure to weed seed vectors. Examples of this would include the access road and penstock.

**Low Priority:** areas that have intact soils and a low exposure to weed seed vectors. Examples of this would include talus slopes and forested areas away from high use areas.

These areas may be modified as needed to adjust for changes in the Project Boundary or public use (e.g., new trails etc.). In 2019 the new tailrace location was identified as a High Priority Noxious Weed area due to the construction and expected exposure to weed seed vectors.

**Figure 1: Wallowa Falls Hydroelectric Project Vicinity Map**





## 3.0 Regulation and Compliance

A comprehensive review of current and applicable WWNF, State and local regulations was completed. The laws are as follows and PacifiCorp complied with these regulations and guidelines for all noxious weed monitoring and management in 2023:

### 3.1 USFS and WWNF regulations guidelines

The following USFS documents were used as guidelines and reference for all noxious weed monitoring and control methods implemented in 2023:

- Land and Resource Management Plan Wallowa-Whitman National Forest, as amended (USFS 1990).
- Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants Final Environmental Impact Statement (USFS 2005a).
- Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision. (USFS 2005b).
- Wallowa-Whitman National Forest Invasive Plants Treatment Project Final Environmental Impact Statement. (USFS 2010a).
- Wallowa-Whitman National Forest Invasive Plant Treatment Project Record of Decision. (USFS March 2016).

### 3.2 Oregon Revised Statues

The following Oregon Revised Statues (ORS) are chapter 569 Weed Control that provide state and county authority to manage noxious weeds and are applicable to NWCP:

#### 2015 ORS 569.175 applicable definitions:

- (1) "Noxious weed" means a terrestrial, aquatic or marine plant designated by the State Weed Board under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs.
- (2) "Person" means a person as defined in ORS 174.100 (Definitions), the federal government or any of its agencies, the State of Oregon or any of its agencies, or any city, county, district or municipal corporation of this state

#### 2015 ORS 569.185 State Department of Agriculture authority:

- (13) Request any person owning or controlling land within this state to control, prevent the spread of or, when feasible, eradicate noxious weeds, and to supervise such activities.

#### 2015 ORS 569.350 Necessity of eradication of weeds:

Noxious weeds have become so thoroughly established and are spreading so rapidly on state, county and federally owned lands, as well as on property in individual ownership and in transition to county ownership through tax delinquency, that they hereby are declared a menace to the public welfare. While it is recognized that complete eradication may not be practicable, it hereby is established that steps leading to eradication and control are

necessary and that responsibility rests not only on the individual landowner and operator but also on the county, state and federal government, and that the county, state and federal government should cooperate with individual owners in the control and eradication of noxious weed pests.

### 3.3 Noxious Weed Monitoring List

State of Oregon and Wallowa County maintain a list of target Noxious Weeds that are separated into the following three categories for prioritizing management (Oregon Department of Agriculture 2022):

**A listed Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future occurrence in Oregon seem imminent.

Recommended action: Infestations are subject to eradication or intensive control when and where found.

**B listed Weed:** A weed of economic importance, which is regionally abundant, but which may have limited distribution in some counties.

Recommended action: Limited to intensive control at the state, county or regional level as determined on a site specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.

**T Designated Weed:** A designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority. T designated noxious weeds are determined by the Oregon State Weed Board and directs Oregon Department of Agriculture to develop and implement a statewide management plan. T designated noxious weeds are species selected from either the A or B list.

The following table is a list of species included in the 2023 NWCP monitoring:

**Table 1: 2023 Oregon State and Wallowa County Listed Noxious Weeds**

Common Name <sup>2,3</sup>	Scientific Name <sup>1,2</sup>	Oregon State Category <sup>2</sup>	Wallowa County Category <sup>3</sup>
Absinthe Wormwood*	<i>Artemisia absinthium</i>		B
African Rue	<i>Peganum harmala</i>	A (T)	
Annual Bugloss*	<i>Anchusa officialis</i>		B
Armenian blackberry (Himalayan blackberry) *	<i>Rubus armeniacus</i>	B	B
Atlantic Ivy	<i>Hedera hibernica</i>	B	

**Table 1: 2023 Listed Oregon and Wallowa County Listed Noxious Weeds (continued)**

<b>Common Name</b> <sup>2,3</sup>	<b>Scientific Name</b> <sup>1,2</sup>	<b>Oregon State Category</b> <sup>2</sup>	<b>Wallowa County Category</b> <sup>3</sup>
Bachelor Button *	<i>Centaurea cyanus</i>		B
Barbed goatgrass	<i>Aegilops triuncialis</i>	A (T)	
Biddy-biddy	<i>Acaena novae-zelandiae</i>	B	
Bigseed dodder	<i>Cuscuta indecora</i>	B	
Bohemian Knotweed	<i>Polygonum behemicum</i>	B	A
Buffalobur	<i>Solunum rostratum</i>	B	
Bull thistle**	<i>Cirsium vulgare</i>	B	
Bur Buttercup *	<i>Ceratocephala testiculata</i>		B
Butterfly bush	<i>Buddleja davidii</i>	B	
Camelthorn	<i>Alhagi pseudalhag</i>	A	
Canada thistle**	<i>Cirsium arvense</i>	B	B
Cape Ivy	<i>Delairea odorata</i>	A (T)	
Chicory *	<i>Cichorium intybus</i>		B
Coltsfoot	<i>Tussilago farfara</i>	A	
Common Bugloss *	<i>Anchusa officinalis</i>	B(T)	A(T)
Common Burdock**	<i>Arctium minus</i>		B
Common cordgrass	<i>Spartina anglica</i>	A	
Common crupina*	<i>Crupina vulgaris</i>	B	B
Common frogbit	<i>Hydrocharis morsus-range</i>	A	
Common reed	<i>Phragmites australis</i>	B	
Common Tansy	<i>Tanacetum vulgare</i>		A
Common Teasel	<i>Dipsacus fullonum</i>		B
Creeping yellowcress	<i>Rorippa sylvestris</i>	B	
Cut-leaf Teasel	<i>Dipsacus laciniatus</i>	B	
Dalmatian Toadflax *	<i>Linaria dalmatica</i>	B (T)	B
Delta arrowhead	<i>Sagittaria platyphyla</i>	A (T)	
Dense flowered cord grass	<i>Spartina densiflora</i>	A (T)	
Diffuse Knapweed*	<i>Centaurea diffusa</i>	B	B
Dog Rose	<i>Rosa canina</i>	B	
Dyer's Woad*	<i>Isatis tinctoria</i>	B	T
English hawthorn	<i>Crataegus monogyna</i>	B	
English Ivy	<i>Hedera helix</i>	B	
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>	B	

**Table 1: 2023 Listed Oregon and Wallowa County Listed Noxious Weeds (continued)**

<b>Common Name</b> <sup>2,3</sup>	<b>Scientific Name</b> <sup>1,2</sup>	<b>Oregon State Category</b> <sup>2</sup>	<b>Wallowa County Category</b> <sup>3</sup>
European water chestnut	<i>Trapa natans</i>	A	
False Brome	<i>Brachypodium sylvaticum</i>	B	
False Hoary Alyssum *	<i>Berteroa incana</i>	A(T)	
Field Bindweed*	<i>Convolvulus arvensis</i>	B	B
Five-angled Dodder	<i>Cuscuta pentagona</i>	B	
Floating Primrose Willow	<i>Ludwigia peploides</i>	B (T)	
Flowering Rush	<i>Butomus umbellatus</i>	A (T)	
French Broom	<i>Genista monspessulana</i>	B	
Garden yellow loosestrife	<i>Lysimachia vulgaris</i>	A (T)	
Garlic Mustard	<i>Alliaria petiolata</i>	B (T)	A(T)
Giant hogweed	<i>Heracleum mantegazzianum</i>	A (T)	
Giant Knotweed	<i>Polygonum sachalinense</i>	B	A
Giant reed	<i>Arundo donax</i>	B (T)	
Goatsrue	<i>Galega officinalis</i>	A (T)	
Gorse	<i>Ulex europaeus</i>	B (T)	
Hairy whitetop *	<i>Lepidium pubescens</i>	B	A
Halogeton	<i>Halogeton glomeratus</i>	B	
Herb Robert	<i>Geranium robertianum</i>	B	
Himalayan knotweed	<i>Polygonum polystachum</i>	B	
Hoary Alyssum	<i>Berteroa incana</i>	A (T)	A(T)
Hoary cress whitetop*	<i>Lepidium draba</i>	B	
Houndstongue**	<i>Cynoglossum officinale</i>	B	B
Hydrilla	<i>Hydrilla verticillata</i>	A	
Iberian star-thistle	<i>Centaurea iberica</i>	A (T)	A
Indigo bush	<i>Amorpha fruticosa</i>	B	
Italian Thistle	<i>Carduus pycnocephalus</i>	B	A(T)
Japanese dodder	<i>Cuscuta japonica</i>	A	
Japanese knotweed*	<i>Polygonum cuspidatum</i>	B	T
Johnsongrass	<i>Sorghum halepense</i>	B	
Jointed goatgrass*	<i>Aegilops cylindrica</i>	B	B (T)

**Table 1: 2023 Listed Oregon and Wallowa County Listed Noxious Weeds (continued)**

<b>Common Name</b> <sup>2,3</sup>	<b>Scientific Name</b> <sup>1,2</sup>	<b>Oregon State Category</b> <sup>2</sup>	<b>Wallowa County Category</b> <sup>3</sup>
Jubata grass	<i>Cortaderia jubata</i>	B	
King devil hawkweed	<i>Pilosella piloselloides</i>	A	
Kochia*	<i>Kochia scoparia</i>	B	B
Kudzu	<i>Pueraria lobata</i>	A(T)	
Large-flower Primrose Willow	<i>Ludwigia grandiflora</i>	B (T)	
Leafy Spurge*	<i>Euphorbia esula</i>	B(T)	A (T)
Lens podded whitetop*	<i>Cardaria chalapensis</i>	B	
Lesser celandine	<i>Ranunculus ficaria</i>	B	
Long-Spine sandbur	<i>Cenchrus longispinus</i>		B
Matgrass	<i>Nardus stricta</i>	A (T)	
Meadow Hawkweed*	<i>Hieracium pratense</i>	B (T)	T
Meadow Knapweed*	<i>Centaurea pratensis</i>	B	A
Mediterranean Sage	<i>Salvia aethiopis</i>	B	A(T)
Medusahead Rye*	<i>Taeniatherum canput-medusae</i>	B	B(T)
Milk thistle	<i>Silybum marianum</i>	B	
Mouse-ear hawkweed	<i>Pilosella pilosella</i>	A (T)	
Musk thistle	<i>Carduus nutans</i>	B	A(T)
Myrtle Spurge	<i>Euphorbia myrsinites</i>	B	A(T)
Oblong spurge	<i>Euphorbia oblongata</i>	A (T)	
Old man's beard	<i>Clematis vitalba</i>	B	
Orange Hawkweed*	<i>Pilosella aurantiacum</i>	A (T)	A(T)
Oregano	<i>Organum vulgare</i>		A(T)
Ovate goatgrass	<i>Aegilops ovata</i>	A	
Oxeye Daisy**	<i>Leucanthemum vulgare</i>		B
Parrot's feather	<i>Myriophyllum aquaticum</i>	B	
Paterson's curse	<i>Echium plantagineum</i>	A (T)	
Perennial peavine	<i>Lathyrus latifolius</i>	B	
Perennial Pepperweed*	<i>Lepidium latifolium</i>	B	A(T)
Pheasanteye (Blooddrop)*	<i>Adonis aestivalis</i>	B	
Pine echium	<i>Echium pininana</i>	B	
Plumeless Thistle*	<i>Carduus acanthoides</i>	A (T)	A
Poison Hemlock*	<i>Conium maculatum</i>	B	B
Policeman's Helmet	<i>Impatiens glandulifera</i>	B	

**Table 1: 2023 Listed Oregon and Wallowa County Listed Noxious Weeds (continued)**

Common Name <sup>2,3</sup>	Scientific Name <sup>1,2</sup>	Oregon State Category <sup>2</sup>	Wallowa County Category <sup>3</sup>
Portuguese broom	<i>Cytisus striatus</i>	B(T)	
Puncturevine*	<i>Tribulus terrestris</i>	B	A
Purple Loosestrife*	<i>Lythrum salicaria</i>	B	A
Purple nutsedge	<i>Cyperus rotundus</i>	A	
Purple Star-thistle	<i>Centaurea calcitrapa</i>	A (T)	T
Ragweed	<i>Ambrosia artemisifolia</i>	B	
Ravennagrass	<i>Saccharum ravennae</i>	A (T)	A
Reed Canarygrass (Ribbon grass)	<i>Phalaris arundinaceae</i> var. <i>Picta</i>	B (T)	B
Rose campion	<i>Lychnis coronaria</i>		A
Rush Skeletonweed*	<i>Chondrilla juncea</i>	B(T)	B(T)
Russian Knapweed*	<i>Acroptilon repens</i>	B	A(T)
Salt meadow cordgrass	<i>Spartina patens</i>	A (T)	
Saltcedar*	<i>Tamarix ramoissima</i>	B	
Scotch Broom*	<i>Cytisus scoparius</i>	B	A(T)
Scotch Thistle*	<i>Onopordium acanthium</i>	B	B(T)
Shiny leaf geranium	<i>Geranium lucidum</i>	B	
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>	A	
Slender flowered thistle	<i>Cardus tenuiflorus</i>	B	
Small broomrape	<i>Orobranche minor</i>	B	
Smooth Cordgrass	<i>Spartina alterniflora</i>	A (T)	
Smooth distaff thistle	<i>Carthamus baeticus</i>	A	
Smoothseed alfalfa (Dodder)	<i>Cuscuta approximata</i>	B	
South American waterweed	<i>Egeria densa</i>	B	
Spanish Broom	<i>Spartium juneceum</i>	B	
Spanish Heath	<i>Erica lusitanica</i>	B	
Spiny cocklebur	<i>Xanthium spinosum</i>	B	
Spotted Cats Ear	<i>Hypochoeris maculata</i>		T
Spotted Knapweed**	<i>Centaurea maculosa</i>	B (T)	A(T)
Spurge laurel	<i>Daphne Laureola</i>	B	
Squarrose knapweed	<i>Centaurea virgata</i>	A (T)	
St. Johnswort**	<i>Hypericum perforatum</i>	B	
Sulfur Cinquefoil*	<i>Potentilla recta</i>	B	B (T)
Swainsonpea	<i>Sphaerophysa salsula</i>	B	

**Table 1: 2023 Listed Oregon and Wallowa County Listed Noxious Weeds (continued)**

Common Name <sup>2,3</sup>	Scientific Name <sup>1,2</sup>	Oregon State Category <sup>2</sup>	Wallowa County Category <sup>3</sup>
Sweetbriar Rose*	<i>Rosa rubiginosa</i>	B	B
Syrian bean-caper	<i>Zygophyllum fabago</i>	A	
Tall Buttercup*	<i>Ranunculus acris</i>		B
Tansy Ragwort*	<i>Senecio jacobaea</i>	B (T)	A(T)
Tree of Heaven*	<i>Ailanthus altissima</i>	B	
Tuarian thistle	<i>Onopordum tauricum</i>	A(T)	
Turkish Thistle	<i>Cardus cineris</i>	A(T)	
Velvetleaf	<i>Abutilon theophrasti</i>	B	
Ventenata (North Africa grass)*	<i>Ventenata dubia</i>	B	B
Water soldier	<i>Stratiotes aloides</i>	A	
Waterprimrose	<i>Ludwigia hexapetala</i>	B (T)	
Wetted Thistle*	<i>Cardus crispis</i>	A (T)	A(T)
West Indian spongeplant	<i>Limnobiium laevigatum</i>	A	
White bryonia (white bryony)	<i>Bryonia alba</i>	A	A
White Campion	<i>Silene latifolia</i>		B
Wooly distaff thistle	<i>Carthamus lanatus</i>	A (T)	
Yellow archangel	<i>Lamiastrum galeobdolon</i>	B	
Yellow flag iris*	<i>Iris psuedoacorus</i>	B	A(T)
Yellow floating heart	<i>Nymphoides peltata</i>	A (T)	
Yellow hawkweed*	<i>Pilosella floribundum</i>	A (T)	
Yellow nutsedge	<i>Cyperus esculentus</i>	B	
Yellow starthistle*	<i>Centuarea solstitialis</i>	B	A
Yellow toadflax*	<i>Linaria vulgaris</i>	B	B
Yellowtuft	<i>Alyssum coriscan</i>	A(T)	

\*Noxious weeds are known to exist within Wallowa County <sup>1, 2</sup>

\*\*Noxious weeds are known to exist within the Project Boundary (Bio-Resources 2023)

<sup>1</sup> Natural Resources Conservation Service 2018 <sup>2</sup> Oregon Department of Agriculture 20223

<sup>3</sup> Wallowa County 2022

## 4.0 2023 Monitoring and Management

The following is description of noxious weed monitoring, control and other management strategies that occurred in 2023 within the Project Boundary.

## 4.1 Prevention

Activities that disturb soils through the removal of native vegetation result in exposed ground that promotes the establishment of noxious weeds. Therefore, noxious weeds will be controlled prior to conducting any soil disturbing activity and the area will be revegetated to prevent noxious weed establishment. No ground disturbing activities occurred within the Project Boundary in 2023.

## 4.2 Noxious Weed Monitoring

PacifiCorp contracted with local contractor, Kendrick Moholt (Bio-Resources, Inc.) to implement the NWCP monitoring and oversee control methods. The noxious weed monitoring surveys were completed by Kendrick on July 14 and 25, 2023, and included all high and medium priority noxious weed areas. A record of each noxious weed infestation has been documented on Invasive Plant Inventory Forms are provided in Appendix B. The table below provides a list of the noxious weeds' location and status.

No Scotch thistle or meadow hawkweed plants were located in 2023.

**Table 2: Noxious Weeds Located in 2023 within the Project Boundary.**

Common Name	Scientific Name	Oregon State Category	Wallowa County Category	Location
Bull thistle	<i>Cirsium vulgare</i>	B		Campground
Canada thistle	<i>Cirsium arvense</i>	B		Campground
Common Burdock	<i>Arctium minus</i>		B	Campground
Houndstongue	<i>Cynoglossum officinale</i>	B	B	Trail
Oxeye daisy	<i>Leucanthemum vulgare</i>		B	Campground
Spotted knapweed	<i>Centaurea maculosa</i>	B (T)	A (T)	Campground
St. John's Wort	<i>Hypericum perforatum</i>	B		Access Road

## 4.3 Control Methods

On July 14, 15, and 25 and August 16, 2023 a Bio-Resources, Inc. botanist (Mr. Moholt) performed a manual removal control operation targeting weeds within the Project Area. These techniques consisted of hand pulling individual plants, digging plants with a shovel, and the use of a string trimmer in the campground area and lower wetland areas. Manual control techniques were exclusively used on both PacifiCorp property and property managed by the US Forest Service to remove target noxious weeds. The Mechanical/Physical Treatment (2530) Data form is provided in Appendix B.

On June 28, 2023, a PacifiCorp maintenance crew applied Glyphosate (Roundup) to US Forest Service lands in the proximity of the Wallowa Falls dam. The application was done as part of annual Project maintenance activity. Though intentional, this activity did not follow protocol and company policy. It has been documented on Herbicide Application (2510) Data Form in Appendix B. In the future, all PacifiCorp maintenance in these areas will use a string trimmer to manage vegetation.



On September 20, 2023, Mr Moholt, reseed the treated area with a weed free, native seed mix previously provided to the Project by US Forest Service botanist Jerry Hustafa.

The reclamation seed, Blue Wildrye (*Elymus glaucus*), was applied using a broadcast method. Seven pounds of seed was applied to the treated area (estimated to be about one third acre) resulting in an approximately 21 pounds per acre application rate. The Project has had excellent results using this seed with fall broadcast applications. The seed was applied in the third week of September during a light misty rain that was followed by heavy rain through the night and morning. These conditions are very desirable for wild seed broadcast applications. Good germination is expected.

#### 4.4 Revegetation Success

All areas of prior ground disturbance within Project Boundary will be evaluated during the annual noxious weed monitoring to determine if the following criteria have been met:

- a) 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 area of ground disturbance and
- b) species composition in disturbed areas equals or exceeds 75 percent non-weedy species.

These areas will be monitored until the above criteria is met for 3 consecutive years. If the criteria cannot be met and is not feasible or achievable, then PacifiCorp will consult and coordinate with the US Forest Service at the Annual Resource Coordination Meeting.

## 5.0 2024 Monitoring and Management

The construction of the tailrace reroute and royal purple pipe extension began in 2019 and was completed in 2020. The royal purple pipe extension is currently within a high priority portion of the current Noxious Weed Monitoring Area. The portion of the new tailrace reroute has been included in the high priority area in the Noxious Weed Monitoring Area.

The planned 2024 noxious weed monitoring will include all high and medium priority areas within the Project Boundary and noxious weed control will occur as needed. In 2022, the royal purple pipe was repaired following an eroding slope. Soil stabilization is being evaluated for the area and may require additional soil disturbance. As a result, this area will be a high priority for noxious weed monitoring and control in 2024. The USFS made the following recommendations that will be incorporated into the 2024 noxious weed monitoring and management:

- Photo points of noxious weed treatment sites will be established and taken at each Noxious Weed Monitoring survey to document the changes over time.
- Implement manual control, where possible, to minimize the use of chemicals.

We also recommend continuing post-construction weed monitoring and control efforts in the late summer/early fall through 2024. Particular attention should be paid to any meadow hawkweed that may germinate. Though never seen along the access road in past surveys, Scotch thistle

(*Onopordum acanthium*) has been observed recently invading the valley below the Project boundary. If either meadow hawkweed or Scotch thistle are found, they should be aggressively treated with a chemical control. Other, less aggressive species may be more appropriately treated with mechanical methods.

## 6.0 References

Bio-Resources, Inc. 2023. Wallowa Falls Hydroelectric Project Special Status Plant and Noxious Weed Management. August 2023.

Federal Energy Regulatory Commission (FERC). 2017. PacifiCorp Wallowa Falls Hydroelectric License (FERC) Project No. 308. Issued January 5, 2017.

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Oregon Department of Agriculture. 2022. Noxious Weed Policy and Classification System 2022.

PacifiCorp. 2017. Wallowa Falls Hydroelectric Project FERC Project No. P-308 Noxious Weed Control Plan. Portland, Oregon.

United States Forest Service. 1990. Land and Resource Management Plan Wallowa-Whitman National Forest, as amended. United States Forest Service. URL: [http://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5260139.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5260139.pdf). (September 24, 2013).

United States Forest Service. 2005a. Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants Final Environmental Impact Statement. United States Forest Service April 2005. URL: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprd3812803.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3812803.pdf). (April 20, 2017)

United States Forest Service. 2005b. Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision. United States Forest Service October 2005. URL: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5302164.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5302164.pdf) (April 20, 2017).

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Wallowa County. 2022. 2012 Noxious Plant List. URL: <https://co.wallowa.or.us/public-works/vegetation/2017-noxious-plant-list/> (October 18, 2022).

## **Appendix A**

### **Noxious Weed Monitoring Area and 2023 Wallowa Falls Noxious Weeds Maps**

# Wallowa Falls Hydroelectric Project

## Noxious Weed Monitoring Area

Page 1 of 3

### Legend

- Trail
- Road
- Highway
- Facility
- Penstock
- Tailrace
- - - FERC Boundary

### Priority Noxious Weed Areas

- High
- Medium
- Low

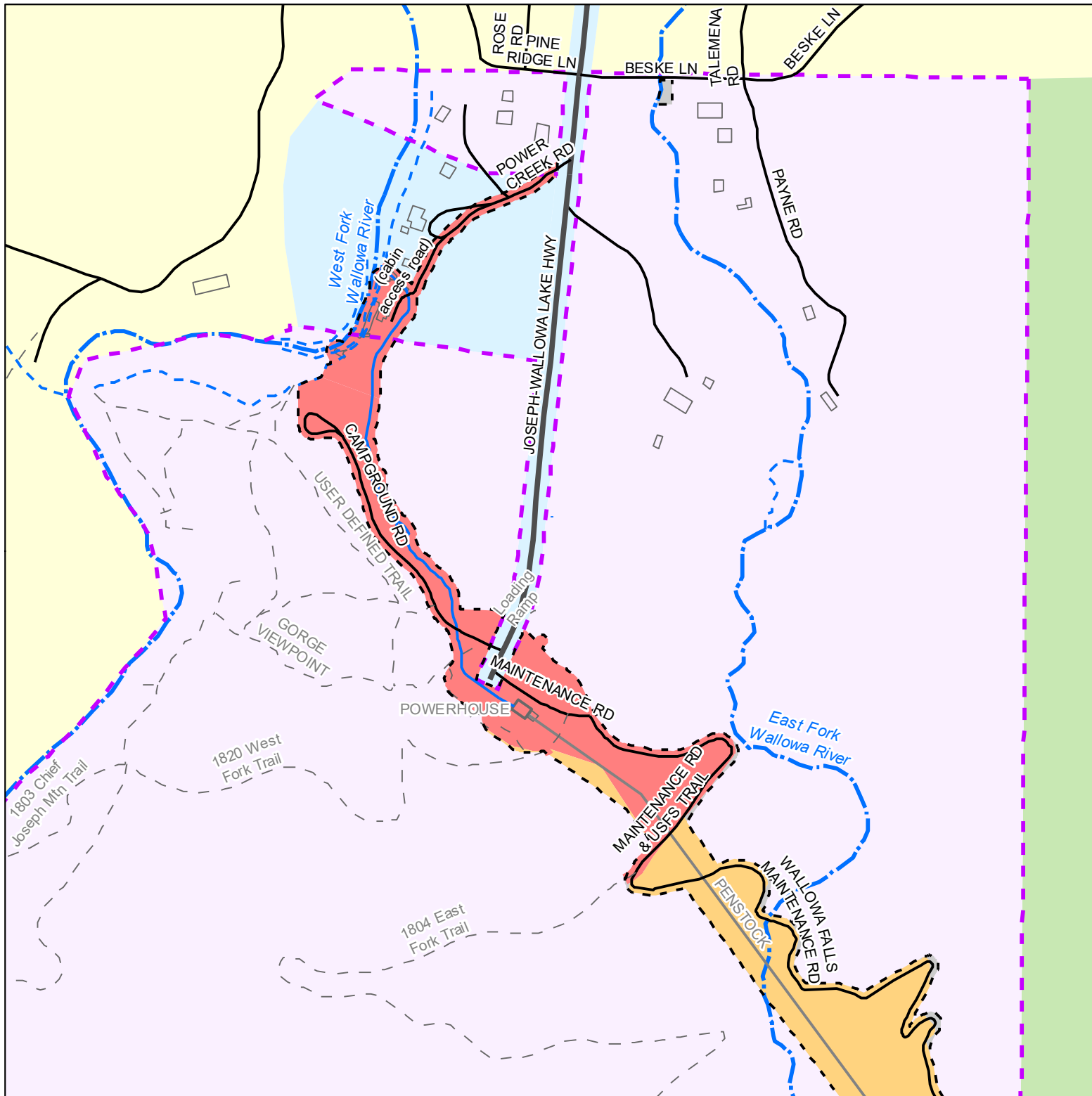
### Land Ownership

- PacifiCorp
- USFS
- State
- Private



0 250 500 Feet

1:4,000



# Wallowa Falls Hydroelectric Project

## Noxious Weed Monitoring Area

Page 2 of 3

### Legend

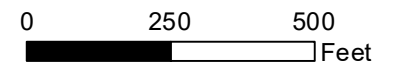
- - Trail
- Road
- Highway
- Facility
- Penstock
- Tailrace
- - - FERC Boundary

### Priority Noxious Weed Areas

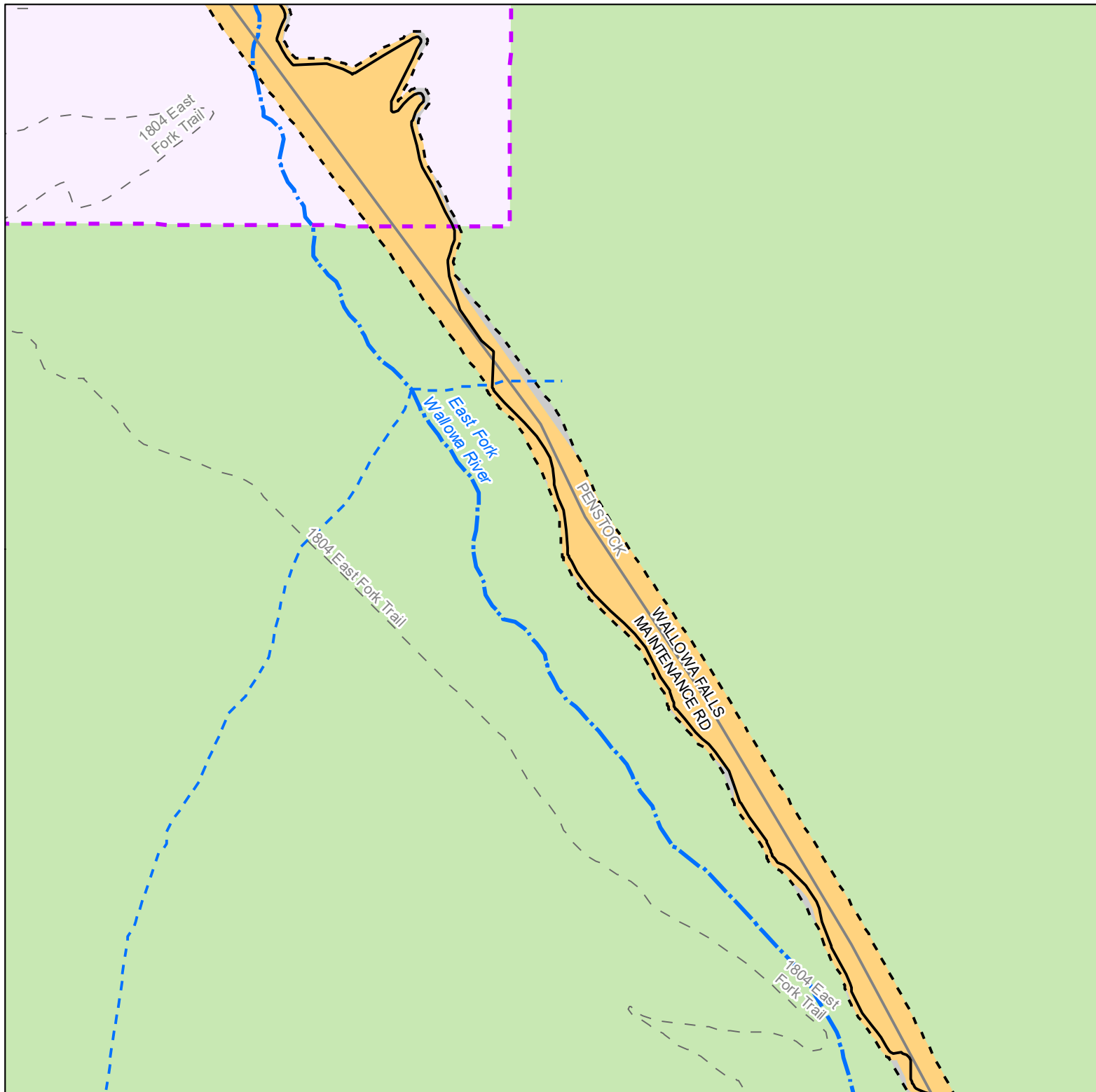
- High
- Medium
- Low

### Land Ownership

- PacifiCorp
- USFS
- State
- Private



1:4,000



# Wallowa Falls Hydroelectric Project

## Noxious Weed Monitoring Area

Page 3 of 3

### Legend

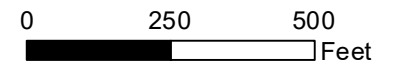
- Trail
- Road
- Highway
- Facility
- Penstock
- Tailrace
- - - FERC Boundary

### Priority Noxious Weed Areas

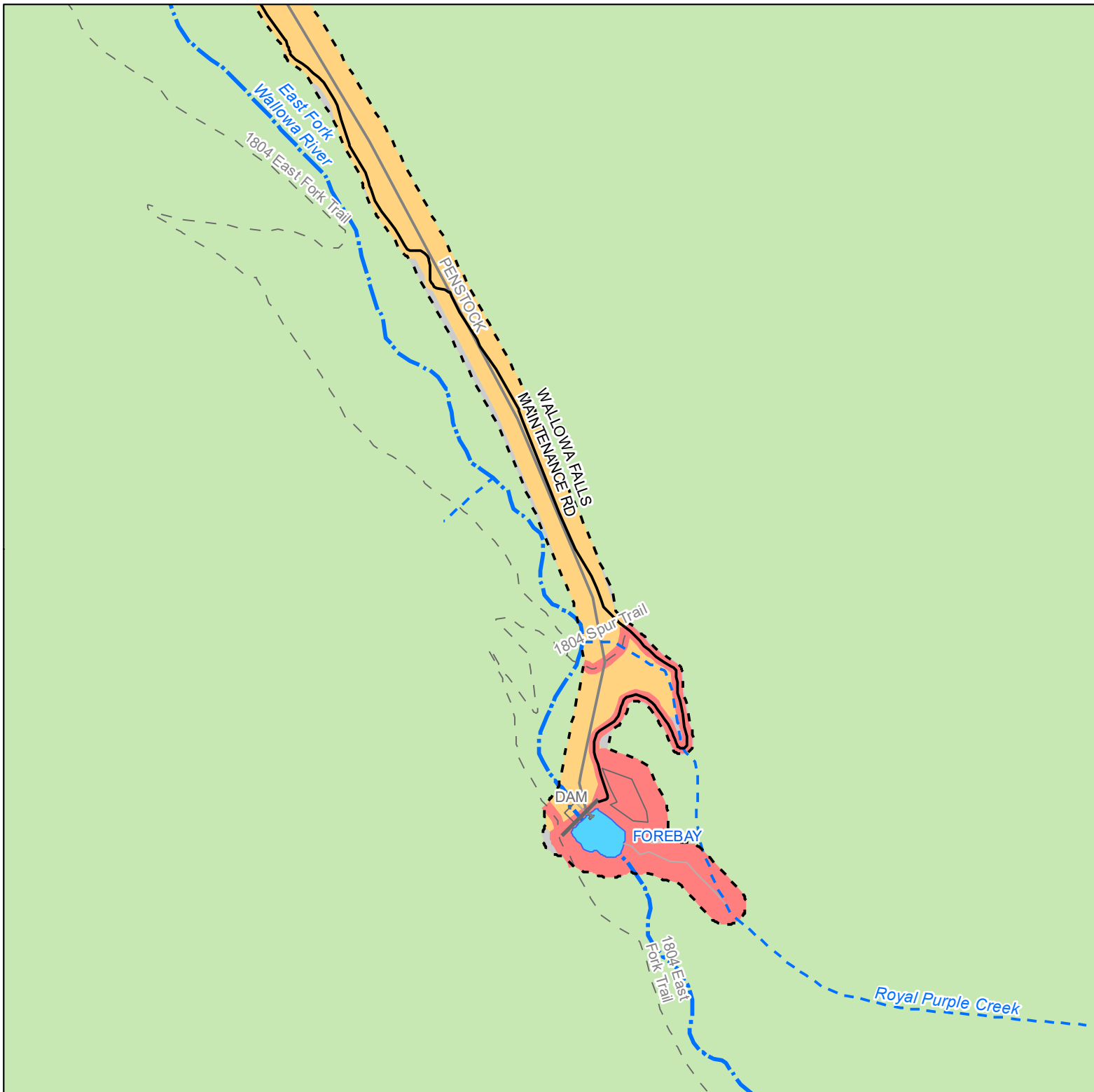
- High
- Medium
- Low

### Land Ownership

- PacifiCorp
- USFS
- State
- Private

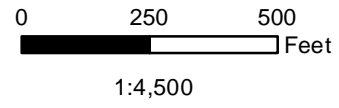


1:4,000



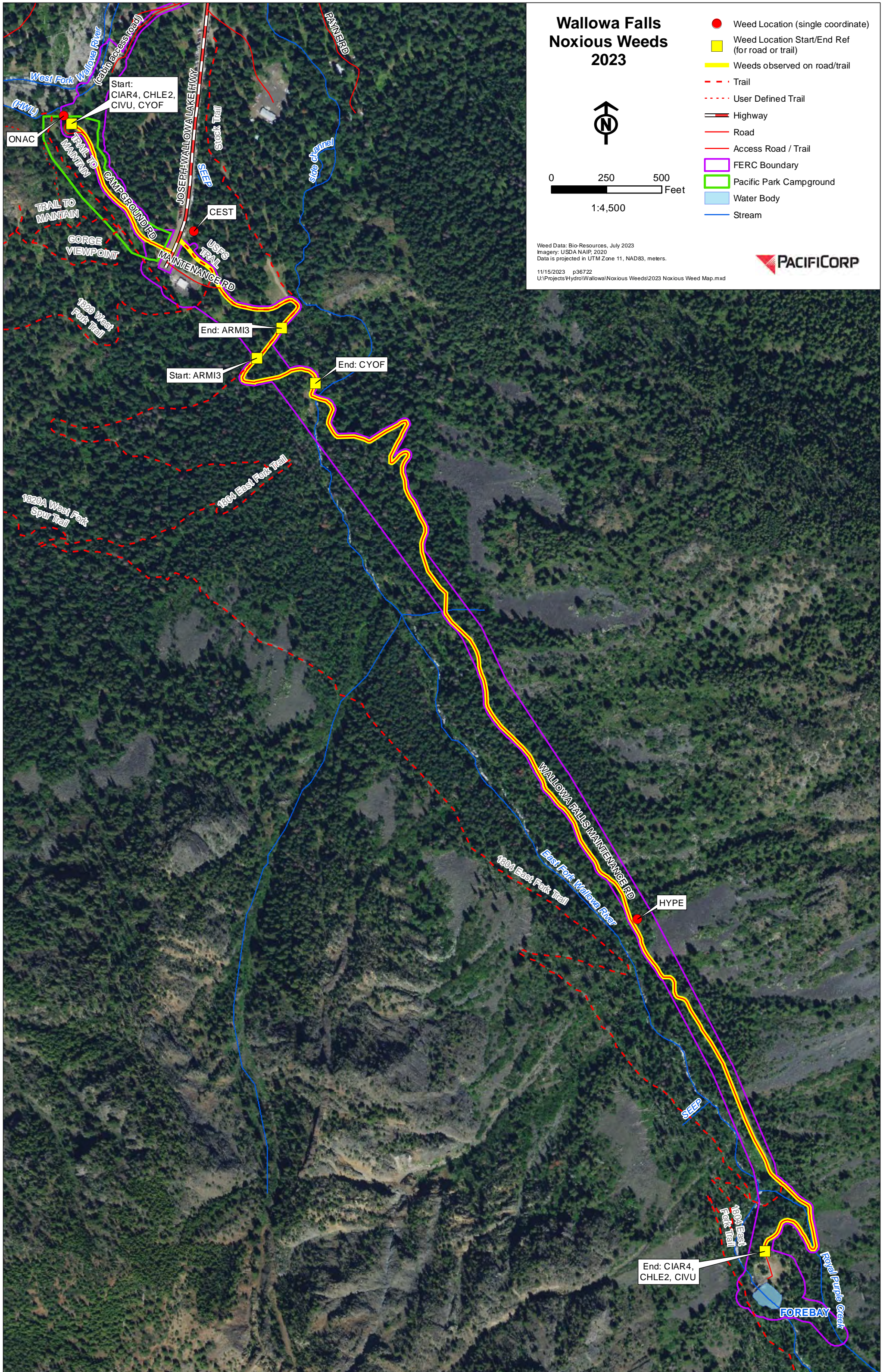
# Wallowa Falls Noxious Weeds 2023

- Weed Location (single coordinate)
- Weed Location Start/End Ref (for road or trail)
- Weeds observed on road/trail
- Trail
- User Defined Trail
- Highway
- Road
- Access Road / Trail
- FERC Boundary
- Pacific Park Campground
- Water Body
- Stream



Weed Data: Bio-Resources, July 2023  
 Imagery: USDA NAIP, 2020  
 Data is projected in UTM Zone 11, NAD83, meters.

11/15/2023 p36722  
 U:\Projects\Hydro\Wallowa\Noxious Weeds\2023 Noxious Weed Map.mxd



## **Appendix B**

### **Invasive Plant Inventory Form and Herbicide Application (2510) and Mechanical/Physical Treatment (2530) Form**



# **Appendix 2**

## **Noxious Weed Forms**

# Invasive Plant Inventory Form

## General Site Information

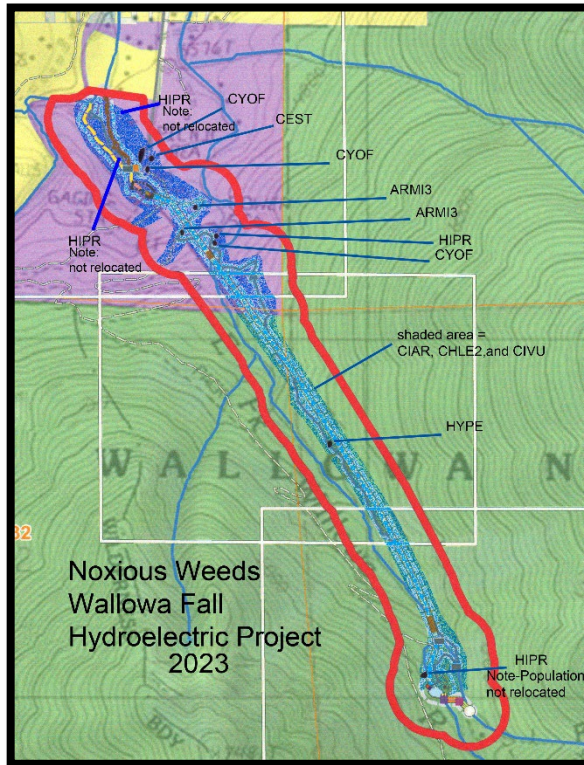
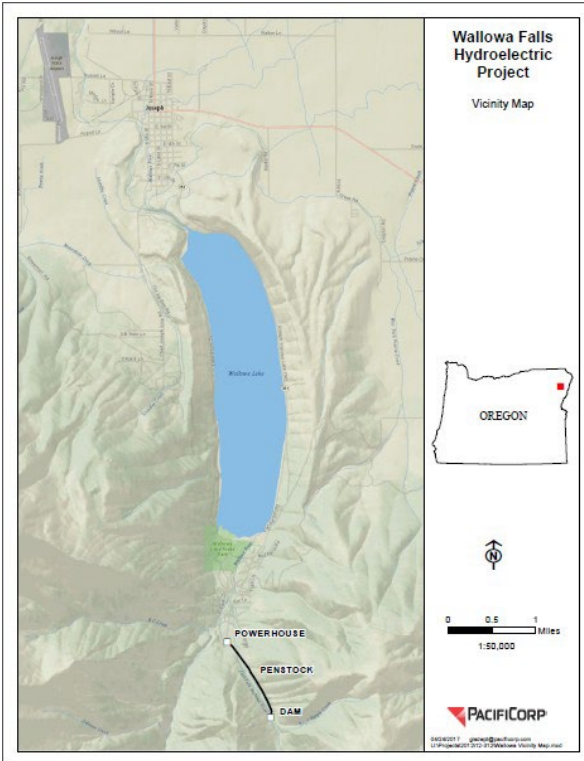
<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership/District: USFS, WWNF, Eagle Cap and PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
Botanist Initial:	<b>Elevation:</b> 4700'- 5800'	<b>GPS Coordinates:</b> 0483259 E 5012652N to 0484159E 5011062N	<b>Datum:</b> UTM (NAD 27) Zone 11
Wildlife Biologist:			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other campground			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 33 NW <sup>1</sup> / <sub>4</sub> of NW <sup>1</sup> / <sub>4</sub> , SW <sup>1</sup> / <sub>4</sub> of NW <sup>1</sup> / <sub>4</sub> , NW <sup>1</sup> / <sub>4</sub> of SW <sup>1</sup> / <sub>4</sub> , SE <sup>1</sup> / <sub>4</sub> of SW <sup>1</sup> / <sub>4</sub>			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 29 SW <sup>1</sup> / <sub>4</sub>			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 32 NE <sup>1</sup> / <sub>4</sub> of NE <sup>1</sup> / <sub>4</sub>			

## Site Data Information

<b>Target Species Code:</b> CIVU	<b>Common Name:</b> Bull Thistle		
<b>Scientific Name:</b> <i>Cirsium vulgare</i>		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous__			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.10	
% Cover or Count (weeds): ~25		Understory Cover % (all): 40-90%	
Potential to Spread: High__ Med <input checked="" type="checkbox"/> Low__		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2-20%, Aspect variable	
Other Species on Site:			

## Comments

# Map of Site





Bull Thistle  
*Cirsium vulgare*

# Invasive Plant Inventory Form

## General Site Information

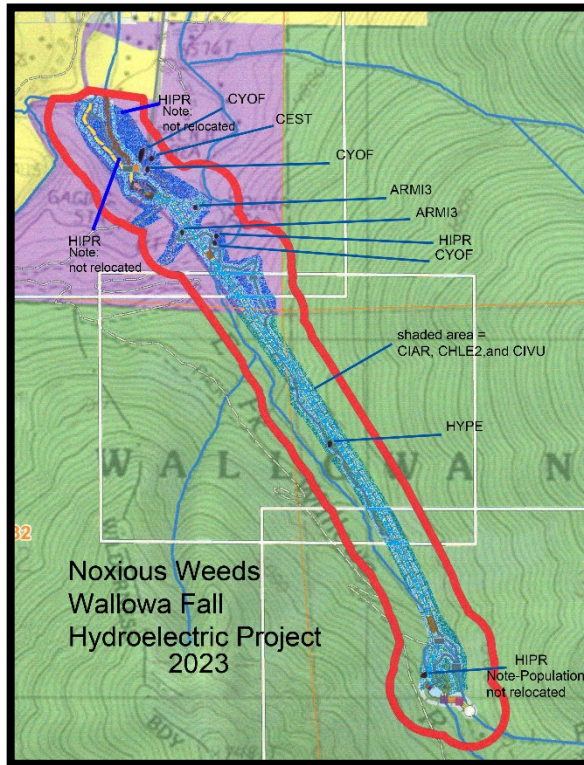
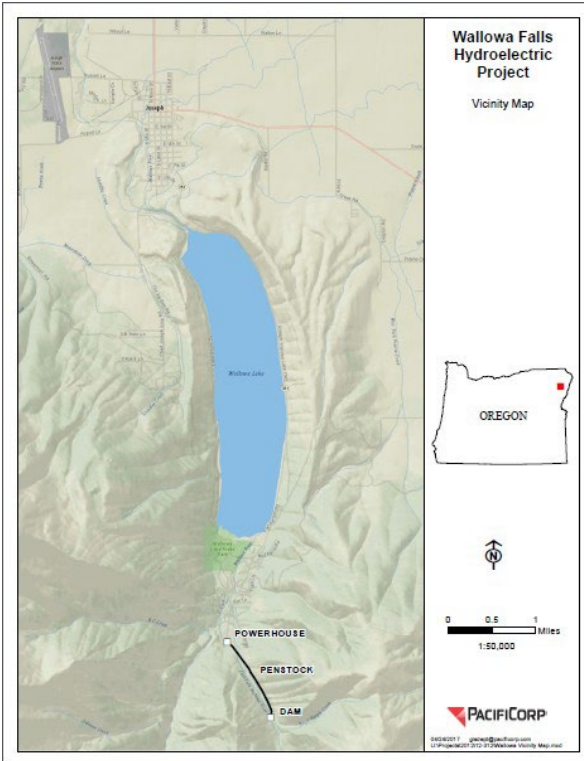
<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership/District: USFS, WWNF, Eagle Cap and PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
<b>Botanist Initial:</b>	<b>Elevation:</b> 4700'- 5800'	<b>GPS Coordinates:</b> 0483259 E 5012652N to 0484159E 5011062N	<b>Datum:</b> UTM (NAD 27) Zone 11
Wildlife Biologist:			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other campground			
<b>Township:</b> 3 <b>SRange:</b> 45E <b>Section:</b> 33 NW¼ of NW¼, SW¼ of NW¼, NW¼ of SW¼, SE¼ of SW¼			
<b>Township:</b> 3 <b>SRange:</b> 45E <b>Section:</b> 29 SW ¼			
<b>Township:</b> 3 <b>SRange:</b> 45E <b>Section:</b> 32 NE¼ of NE¼			

## Site Data Information

<b>Target Species Code:</b> CIAV	<b>Common Name:</b> Canada Thistle		
<b>Scientific Name:</b> <i>Cirsium arvense</i>		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous__			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.3	
% Cover or Count (weeds): ~1000		Understory Cover % (all): 40-90%	
Potential to Spread: High__ Med <input checked="" type="checkbox"/> Low__		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2-20%, Aspect variable	
Other Species on Site:			

## Comments

# Map of Site





Canada Thistle  
*Cirsium arvense*

# Invasive Plant Inventory Form

## General Site Information

<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership: PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
Botanist Initial:	<b>Elevation:</b> 4700'- 5000'	<b>GPS Coordinates:</b> 0483488E 5012298N and 0483529E 5012336N	<b>Datum:</b> UTM (NAD 27) Zone 11
Wildlife Biologist:			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other Campground			
<b>Township:</b> <u>3S</u> <b>Range:</b> <u>45E</u> <b>Section:</b> <u>29</u> ¼ sec: <u>SE</u> of ¼ sec: <u>SE</u>			

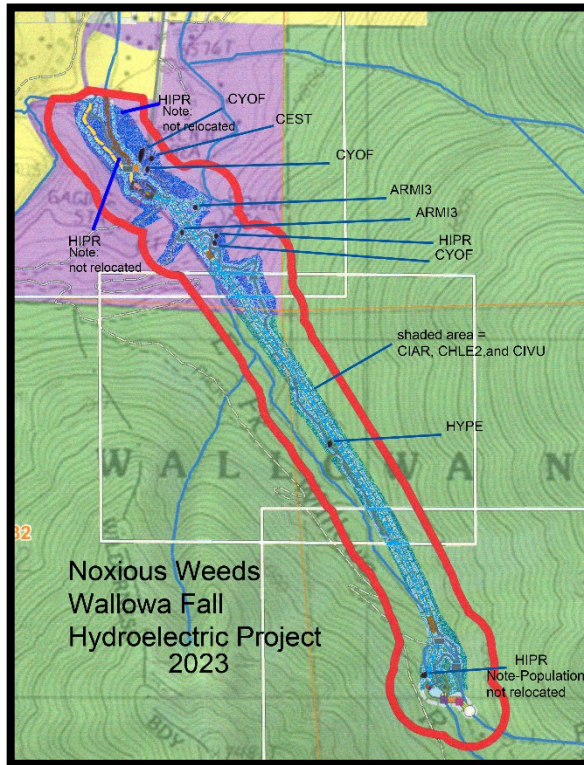
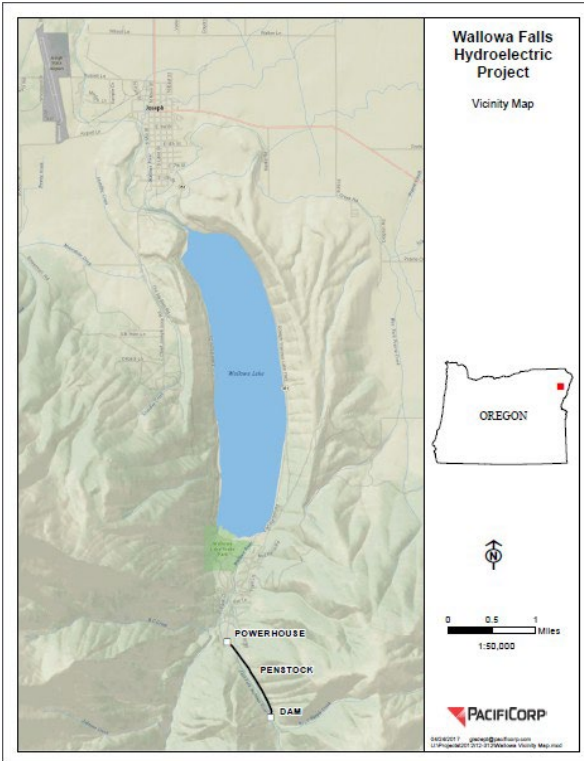
## Site Data Information

<b>Target Species Code:</b> ARMI3		<b>Common Name:</b> Common Burdock	
<b>Scientific Name:</b> <i>Arctium minus</i>		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous__			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.1	
% Cover or Count (weeds): ~5		Understory Cover % (all): 60-90%	
Potential to Spread: High__ Med <input checked="" type="checkbox"/> Low__		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2-10%, Aspect variable	
Other Species on Site:			

## Comments



# Map of Site





Common Burdock

*Arctium minus*

# Invasive Plant Inventory Form

## General Site Information

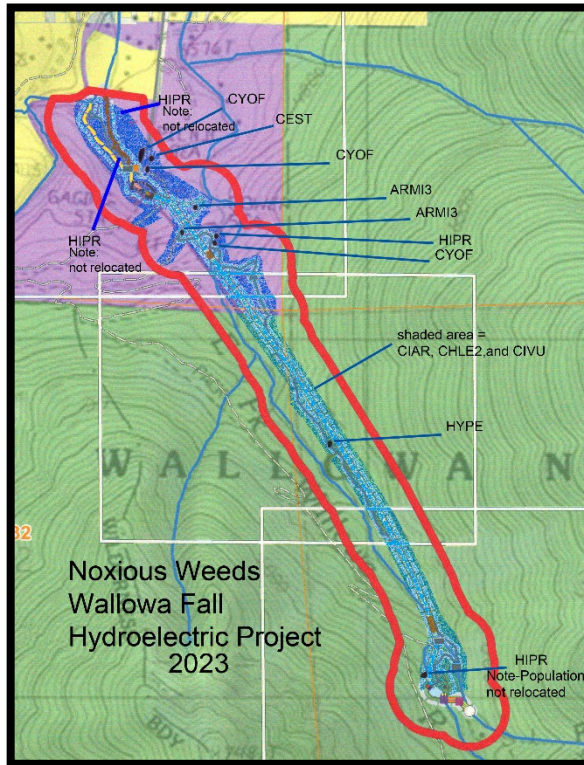
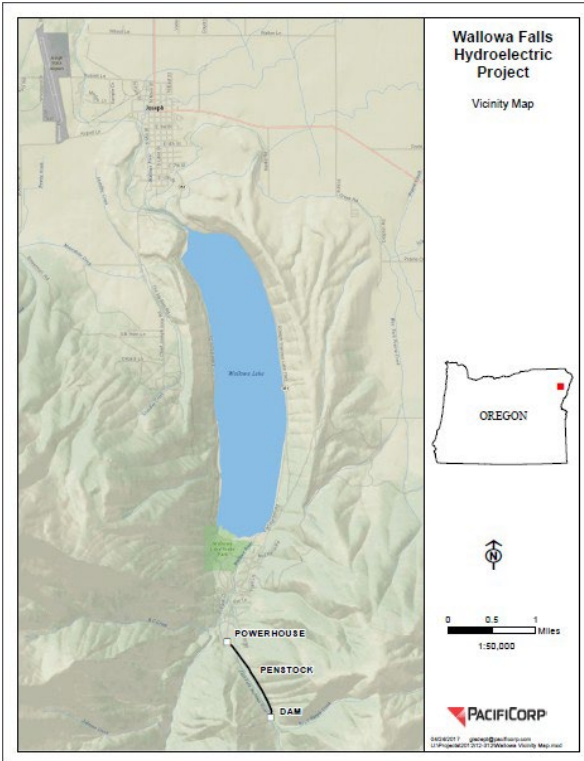
<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2025	
Photo Point (GPS):		Ownership: PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
<b>Botanist Initial:</b>	<b>Elevation:</b> 4700'- 5000'	<b>GPS Coordinates:</b> 0483297 5012651N and 0483577E 5012260N	<b>Datum:</b> UTM (NAD 27) Zone 11
<b>Wildlife Biologist:</b>			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other_____#			
<b>Township:</b> <u>3S</u> <b>Range:</b> <u>45E</u> <b>Section:</b> <u>29</u> ¼ sec: <u>NW</u> of ¼ sec: <u>SE</u>			
<b>Township:</b> <u>3S</u> <b>Range:</b> <u>45E</u> <b>Section:</b> <u>29</u> ¼ sec: <u>SE</u> of ¼ sec: <u>SE</u>			

## Site Data Information

<b>Target Species Code:</b> CYOF	<b>Common Name:</b> Houndstongue		
<b>Scientific Name:</b> <i>Cynoglossum officinale</i>		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear____ SE Scattered even____ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous_____			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.15	
% Cover or Count (weeds): ~60		Understory Cover % (all): 40-90%	
Potential to Spread: High <input checked="" type="checkbox"/> Med__ Low____		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral____		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2-10%, Aspect variable	
Other Species on Site:			

## Comments

# Map of Site





Houndstongue  
*Cynoglossum officinale*

# Invasive Plant Inventory Form

## General Site Information

No meadow hawkweed *Hieracium caespitosum* (Synonym: *Hieracium pratense*) were located during the initial survey nor during control efforts in 2023.

# Invasive Plant Inventory Form

## General Site Information

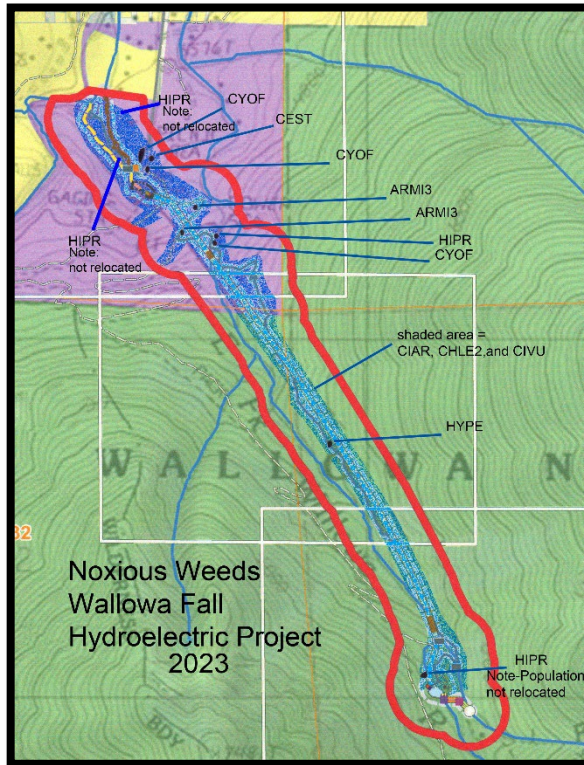
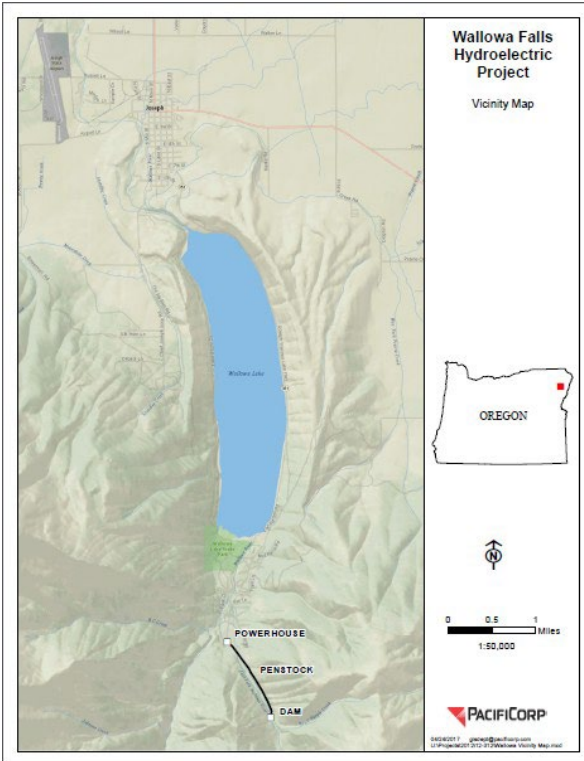
<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership/District: USFS, WWNF, Eagle Cap and PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
Botanist Initial:	<b>Elevation:</b> 4700'- 5800'	<b>GPS Coordinates:</b> 0483259 E 5012652N to 0484159E 5011062N	<b>Datum:</b> UTM (NAD 27) Zone 11
Wildlife Biologist:			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other campground			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 33 NW <sup>1</sup> / <sub>4</sub> of NW <sup>1</sup> / <sub>4</sub> , SW <sup>1</sup> / <sub>4</sub> of NW <sup>1</sup> / <sub>4</sub> , NW <sup>1</sup> / <sub>4</sub> of SW <sup>1</sup> / <sub>4</sub> , SE <sup>1</sup> / <sub>4</sub> of SW <sup>1</sup> / <sub>4</sub>			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 29 SW <sup>1</sup> / <sub>4</sub>			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 32 NE <sup>1</sup> / <sub>4</sub> of NE <sup>1</sup> / <sub>4</sub>			

## Site Data Information

<b>Target Species Code:</b> CHLE2		<b>Common Name:</b> Oxeye Daisy	
<b>Scientific Name:</b> <i>Leucanthemum vulgare</i> (Synonym- <i>Chrysanthemum leucanthemum</i> )		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous__			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~1.0	
% Cover or Count (weeds): ~1000		Understory Cover % (all): 40-90%	
Potential to Spread: High__ Med <input checked="" type="checkbox"/> Low__		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2-20%, Aspect variable	
Other Species on Site:			

**Comments**

# Map of Site







Oxeye Daisy

*Leucanthemum vulgare*

# Invasive Plant Inventory Form

## General Site Information

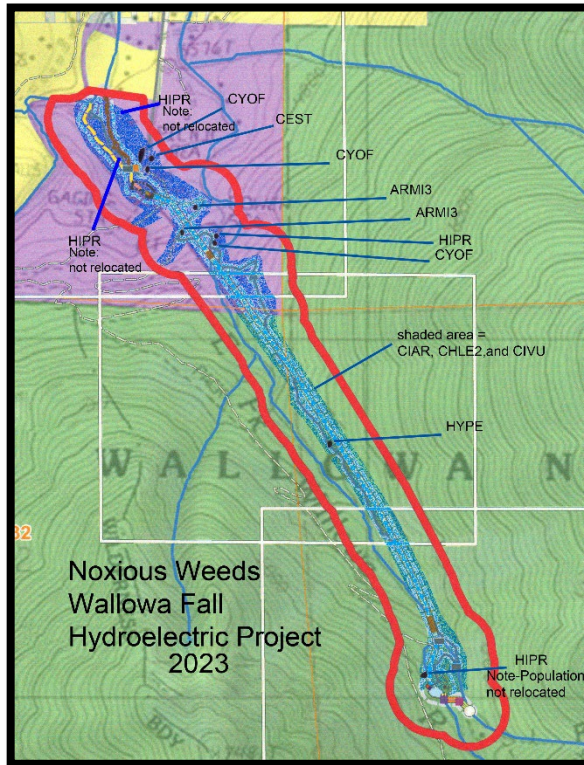
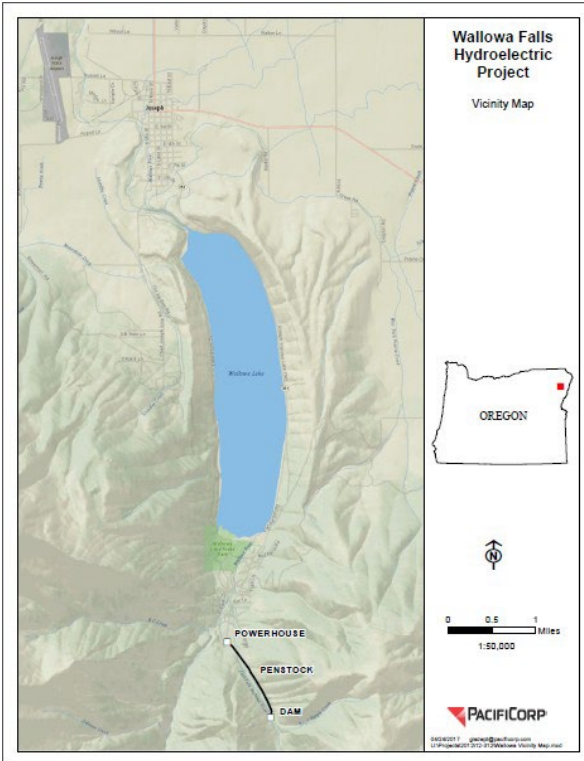
<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership: PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
<b>Botanist Initial:</b>	<b>Elevation:</b> 4700'- 5000'	<b>GPS Coordinates:</b> 0483409E 5012480N	<b>Datum:</b> UTM (NAD 27) Zone 11
<b>Wildlife Biologist:</b>			
EDRR: <u>  </u> Y <u>  </u> N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road <u>X</u> Trail <u>  </u> River <u>  </u> Other Campground			
<b>Township:</b> <u>3</u> S <b>Range:</b> <u>45</u> E <b>Section:</b> <u>29</u> $\frac{1}{4}$ sec: <u>NW</u> of $\frac{1}{4}$ sec: <u>SE</u>			

## Site Data Information

<b>Target Species Code:</b> CEST	<b>Common Name:</b> Spotted Knapweed		
<b>Scientific Name:</b> <i>Centaurea stoebe</i> Synonym ( <i>Centaurea maculosa</i> )		<b>Phenology:</b> R <u>  </u> B <u>  </u> FL <u>X</u> S	
<b>Distribution:</b> C Lumped <u>  </u> Linear <u>  </u> SE Scattered even <u>  </u> S P Scattered Patchy <u>X</u> Continuous <u>  </u>			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.25	
% Cover or Count (weeds): dozens		Understory Cover % (all): 40-90%	
Potential to Spread: High <u>x</u> Med <u>  </u> Low <u>  </u>		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial <u>  </u> Ephemeral <u>  </u>		<b>System:</b> Lake <u>  </u> River <u>  </u> Spring <u>  </u> Stream	
Soil Types: sandy loam		Slope % aspect: 2-10%, Aspect variable	
Other Species on Site:			

## Comments

# Map of Site





Spotted Knapweed (rosette)

*Centaurea stoebe*

# Invasive Plant Inventory Form

## General Site Information

<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership: PacifiCorp	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
<b>Botanist Initial:</b>	<b>Elevation:</b> 4700'- 5000'	<b>GPS Coordinates:</b> 0483122E 5012854N	<b>Datum:</b> UTM (NAD 83) Zone 11
<b>Wildlife Biologist:</b>			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail__ River__ Other: <u>Campground</u>			
<b>Township:</b> <u>3S</u> <b>Range:</b> <u>45E</u> <b>Section:</b> <u>29</u> ¼ sec: <u>NW</u> of ¼ sec: <u>SE</u>			

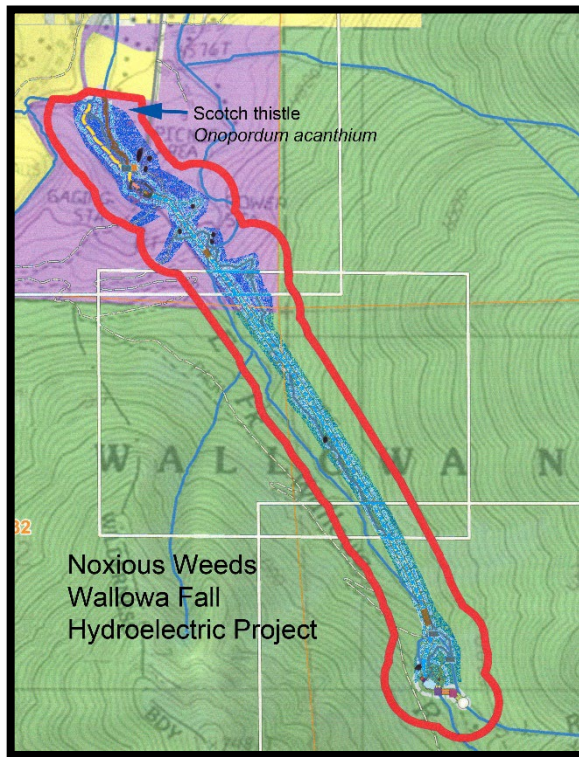
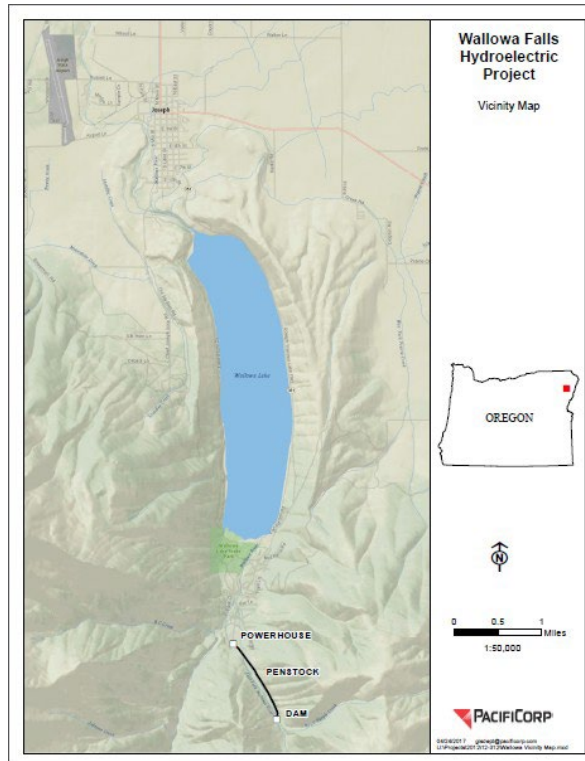
## Site Data Information

<b>Target Species Code:</b> CEST	<b>Common Name:</b> Scotch Thistle		
<b>Scientific Name:</b> <i>Onopordum acanthium</i>		<b>Phenology:</b> R__ B__ FL <u>X</u> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <u>X</u> Continuous__			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> 0%	<b>Infested Acres:</b> ~0.00	
% Cover or Count (weeds): Not relocated		Understory Cover % (all): %	
Potential to Spread: High__ Med__ Low__		<b>Distance to Water:</b> m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: %,	
Other Species on Site:			

## Comments

**No plants were relocated in 2023.**

# Map of Site



No plants were relocated in 2023.



Scotch Thistle (rosette)

*Onopordum acanthium*

# Invasive Plant Inventory Form

## General Site Information

<b>Site Name:</b> Wallowa Falls Hydroelectric Project		<b>Date:</b> 25 July 2023	
Photo Point (GPS):		Ownership/District: USFS, WWNF, Eagle Cap	
Photo Name:		<b>Examiner:</b> Kendrick Moholt, Bio-Resources, Inc.	
<b>Botanist Initial:</b>	<b>Elevation:</b> 5500'	<b>GPS Coordinates:</b> 0484018E 5011521N	<b>Datum:</b> UTM (NAD 27) Zone 11
<b>Wildlife Biologist:</b>			
EDRR: __Y__N	<b>GPS File Name:</b>	Other Observations:	
<b>Access:</b> Road__ Trail <input checked="" type="checkbox"/> River__ Other _____#			
<b>Township:</b> 3S <b>Range:</b> 45E <b>Section:</b> 33 ¼ <b>sec:</b> NW _____			

## Site Data Information

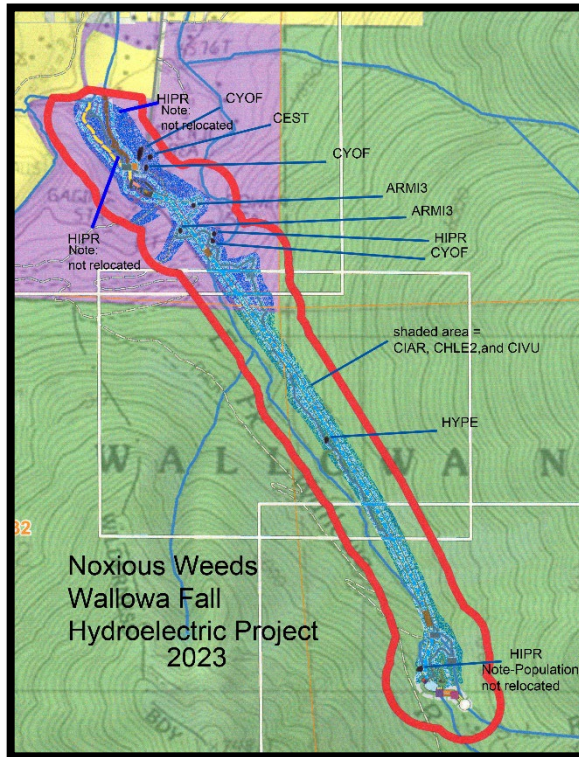
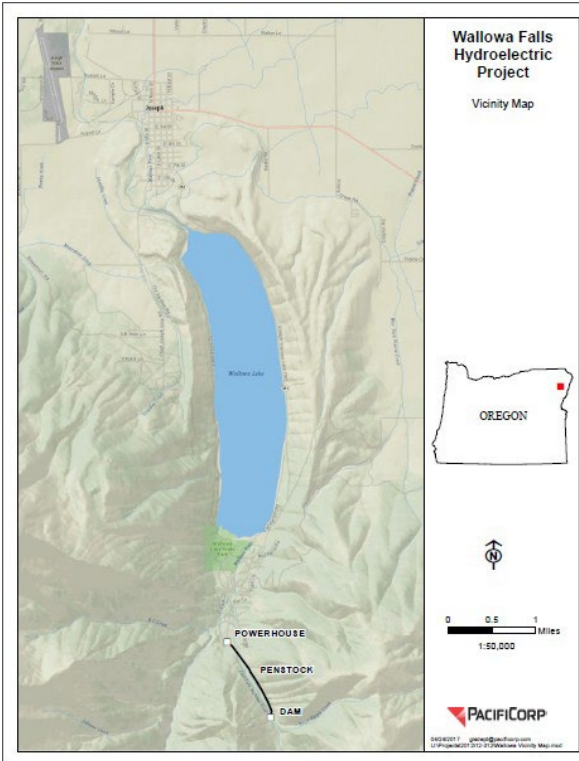
<b>Target Species Code:</b> HIPE	<b>Common Name:</b> St. John's Wort		
<b>Scientific Name:</b> <i>Hypericum perforatum</i>		<b>Phenology:</b> R__ B__ FL <input checked="" type="checkbox"/> S	
<b>Distribution:</b> C Lumped__ Linear__ SE Scattered even__ SP Scattered Patchy <input checked="" type="checkbox"/> Continuous _____			
<b>Total Acres:</b> 26	<b>Percent Infested:</b> <1%	<b>Infested Acres:</b> ~0.1	
% Cover or Count (weeds): ~25		Understory Cover % (all): 90%	
Potential to Spread: High__ Med__ Low <input checked="" type="checkbox"/>		<b>Distance to Water:</b> >30m	
<b>Water Type:</b> Perennial__ Ephemeral__		<b>System:</b> Lake__ River__ Spring__ Stream	
Soil Types: sandy loam		Slope % aspect: 2%, 230°	
Other Species on Site:			

## Comments

Approximately 1 mile from trailhead on Wallowa Falls Maintenance Road (NE of the FS1804 trail switchback on the Sec. 32/33 border).



# Map of Site



## Mechanical/Physical Treatment (2530) Data Form

### General Treatment Area

ORG (RRFFDD)	FACTS_ID	Subunit #	Treatment Area Name	Owner	Project
			Wallowa Falls Hydroelectric Project access road	USFS	Wallowa Falls Hydroelectric Project
Equipment	Fund Code	Acres Treated	Date Treated	Comments	
By hand and shovel		~1.3 acres	July 14, 15, and 25 and August 16, 2023		

### Infestation/Target Species

INFESTATION ID	Weed Code	Species Name	Infested Area Treated	Phenology
		St. John's Wort ( <i>Hypericum perforatum</i> )	30 square feet	Vegetative
		Bull thistle ( <i>Cirsium vulgare</i> )	Scattered in 20 x 3000 foot area (~30 individuals)	Vegetative, flowering
		Canada thistle ( <i>Cirsium arvense</i> )	Scattered in 20 x 3000 foot area (~100 individuals)	Vegetative, flowering

## Herbicide Application (2510) Data Form

### General Treatment Data

Treatment Area Name	Owner	FACTS ID #	Subunit	Project
Wallowa Falls Hydroelectric Project	USFS	—	—	Wallowa Falls Hydroelectric Project
Equipment (Backpack – 712, UTV – 721)	Fund Code	Comments		
Backpack Sprayer	NA	Application was to remove all vegetation within in dam operations area.		

### Infestation/Target Species

INFESTATION_ID	Species Name	% Infested	Infested Area Treat	Phenology
NA- all vegetation control	NA- all vegetation control	NA	0.25 acre	Flowering

### Daily Log

Application Site	Licensed Applicator Name and License # (Circle Applicators)	Applicators (other)							
Wallowa Falls Forebay Area	BJ – AG-L1008954PPA, AC – AG-L1070133PPA, JR – AG-L1070134APL	PacifiCorp Operator							
Application Date	Application Area (Acres) (Volume Applied ÷ Calibrated Volume)	Time Start	Time Stop	Temp (F)	Wind Speed (MPH)	Wind Direction	Cloud Cover	RH%	Water Distance
June 28, 2023	0.25 acre	9:00	10:00	65	1-5	South	Fair	50%	0 feet
Calibrated Volume	UOM	Volume Applied	UOM	Mix (oz/gal)	Diluent				
	Gal/Acre		Gal		Water				
Herb Product Name	EPA Reg #	Product Rate	UOM	Additives	Rate	UOM			
Round-Up (Glyphosate)	524-529	80 oz	Oz/Ac			Oz/Ac			
			Oz/Ac			Oz/Ac			
			Oz/Ac			Oz/Ac			

Remarks	This herbicide application was discovered after the application. Exact details were not recorded at the time of the application. Future treatments will be with weed trimmer only.
Wildlife/Botany Input for EDRR Sites	

**Appendix D**  
**Agency Comments**

AGENCY	COMMENT	UTILITY RESPONSE
<p>Wallowa-Whitman National Forest: email of December 5, 2023</p>	<p><i>Page 5 (regulation and compliance [Noxious Weed Control Plan Annual Report]) Our 2010 Inv Plant Treatment Project ROD was replaced by a Final Supplemental EIS ROD in 2016. This is the most-up-to date document that authorizes us (sic) treatments on the Wallowa-Whitman NF.</i></p>	<p>The Noxious Weed Control Plan Annual Report (Appendix C) has been revised to incorporate the 2016 EIS-ROD.</p>
<p>Wallowa-Whitman National Forest: email of December 5, 2023</p>	<p><i>As per earlier emails, there was the glyphosate application (June 2023). Do you happen to have that application record? Since there was herbicide applied to FS lands, we have a commitment to document all applications even if mis-applied.</i></p>	<p>PacifiCorp has completed a USDA-FS Herbicide Application Form and appended it to the Noxious Weed Control Plan Annual Report (Appendix C).</p>
<p>Wallowa-Whitman National Forest: email of December 5, 2023</p>	<p><i>Also, manual treatment is a form of invasive plant “control” and still requires a record (Form 2530) as mentioned on page 3 (condition 6). I attached the manual application form (in case you don’t have one on file). We need to record all your manual treatments as “treatments” made on the Forest, which we also have a requirement to document and report back to our region as accomplishments.</i></p>	<p>PacifiCorp has completed a USDA-FS Manual Invasive Treatment Form and appended it to the Noxious Weed Control Plan Annual Report (Appendix C).</p>