

Submitted via Water Quality Permitting Portal – Permit Submittals application

January 12, 2023

Keith Primm - Water Quality Permit Coordinator
Department of Ecology - Central Regional Office
1250 West Alder Street
Union Gap, WA 98903

RE: **2022 Oil and Grease Report for Wanapum and Priest Rapids dams:
National Pollutant Discharge Elimination System Permit Nos. WA0991028 and WA0991029
(S10.C):**

Dear Mr. Primm,

Please find enclosed Grant County Public Utility District's (Grant PUD's) Annual Oil and Grease Report for 2022 for both Wanapum and Priest Rapids dams, consistent with Section S10.C of the both the Wanapum and Priest Rapids dams National Pollutant Discharge Elimination System Permits.

If you have any questions, please contact me at 509-793-1468 or rhendr1@gcpud.org.

Respectfully,



Ross Hendrick
Senior Manager – Environmental Affairs

CC: Mr. Damon Roberts – Ecology CRO
Mr. Erik Van Doren – Ecology CRO

Annual Oil and Grease Report

Wanapum Dam – Permit No. WA0991028
Priest Rapids Dam – Permit No. WA0991029

By
Public Utility District No. 2 of Grant County
P.O. Box 878
Ephrata, WA 98823

January 2023

Table of Contents

1.0	Introduction.....	1
2.0	Summary of Wanapum Dam and Priest Rapids Dam Facility Work Orders	1
2.1	Equipment with high or low levels or alarms	1
2.2	Malfunctioning Automated Grease Systems	1
2.3	Emergency Maintenance.....	2
3.0	Total Procurement of Turbine oil, Transformer oil, other oil, and grease.....	2
4.0	Lost, Unaccounted, Non-recoverable, Spill Cleanup.....	3
5.0	Estimated Kaplan Generator Oil Loss	3
6.0	EAL substitutions.....	3

List of Tables

Table 1	Grease Systems Work Orders Summary.....	1
Table 2	Wanapum Oil and Grease Summary.....	2
Table 3	Priest Rapids Oil and Grease Summary	3

1.0 Introduction

Pursuant to Section 10.C of the National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. WA0991028 for Wanapum Dam and WA0991029 for Priest Rapids Dam, the following is Public Utility District No.2 of Grant County, Washington's (Grant PUD's) 2022 Annual Oil and Grease Report. This report addresses oils and greases used at Grant PUD's Wanapum and Priest Rapids dams in 2022 to lubricate components that may contact the Columbia River and/or discharge to the permitted outfalls. Grant PUD also uses oils and greases in other areas of the dams where there is no potential for discharge to the Columbia River. Based on guidance from Ecology staff, oils and greases used in those other areas are not addressed in this report.

2.0 Summary of Wanapum Dam and Priest Rapids Dam Facility Work Orders

The following information is provided consistent with Section S10.C.1 of the NPDES Permits.

2.1 Equipment with high or low levels or alarms

There were no Work Orders associated with high or low alarms for components that may contact the Columbia River and/or discharge to the permitted outfalls.

2.2 Malfunctioning Automated Grease Systems

There was one Work Order at each facility written for a malfunctioning automated greasing system for components that may contact the Columbia River and/or discharge to the permitted outfalls.

Table 1 Grease Systems Work Orders Summary

Facility	Work Order Number	Equipment	Issue	Discussion
Wanapum Dam	327459	Wanapum Fish Pump #2 Wicket Gates Farval Automatic Greaser	Greaser was not pumping grease.	The grease hopper was still partially filled with BioBlend HDS 2 grease from EAL grease testing. The oil in the grease was found to be separating from the thickener, leading to the grease hardening and clogging the greaser. The BioBlend grease was removed and replaced with Panolin grease. There was no evidence of any grease or oil being lost or discharged to the river as a result of this Work Order.

Facility	Work Order Number	Equipment	Issue	Discussion
Priest Rapids Dam	320995	Priest Rapids Generating Unit P05 Farval Automatic Greaser	Greaser would not build pressure (not pumping grease).	While manually operating the grease pump, Operators discovered that there was no pressure. Maintenance investigated and purged the air out of the system. The greaser had failed to pump due to loss of prime. There was no evidence of any grease or oil being lost or discharged to the river as a result of this Work Order.

2.3 Emergency Maintenance

There were no Work Orders written for emergency maintenance on components that may contact the Columbia River and/or discharge to the permitted outfalls.

3.0 Total Procurement of Turbine oil, Transformer oil, other oil, and grease

Table 2 provides a summary of the oils and greases obtained from the Wanapum Warehouse for use at the Wanapum Dam for components that may contact the Columbia River and/or discharge to the permitted outfalls. Table 3 provides the same summary for the Priest Rapids Dam. This information is provided consistent with Section S10.C.2 of the NPDES Permits. All oils and greases going to the facility are logged by the Warehouse.

Table 2 Wanapum Oil and Grease Summary

Location	Amount	Type	Uses
Wanapum	280 lbs	Pyroshield 5180 Open Gear Grease	Spillway Gate Chains lubrication
Wanapum	58.9 lbs	Pyroshield 5180 Open Gear Grease	Spillway Gate Gears lubrication
Wanapum	63.4 lbs	Pyroshield 5182 Open Gear Grease	Spillway Gate Gears lubrication

Table 3 Priest Rapids Oil and Grease Summary

Location	Amount	Type	Uses
Priest Rapids	8.75 lbs	Maxtron EP Lithium Complex Grease	Traveling screen for Priest Rapids Hatchery Siphon Intake
Priest Rapids	1,200 lbs	76 Multiplex Red Lithium Grease	Generating unit wicket gates.
Priest Rapids	35 lbs	Lubrication Engineers Almaplex 1275 Grease	Fish ladder gravity intake gate wheels and emergency bulkhead gate wheels.

4.0 Lost, Unaccounted, Non-recoverable, Spill Cleanup

There was no lost, unaccounted, non-recoverable, or spill clean ups associated with components that may contact the Columbia River and/or discharge to the permitted outfalls. This information is provided consistent with Section S10.C.3 of the NPDES Permits.

5.0 Estimated Kaplan Generator Oil Loss

There was no Kaplan generator oil loss at Wanapum Dam or Priest Rapids Dam measured in 2022. This information is provided consistent with Section S10.C.4 of the NPDES Permits.

6.0 EAL substitutions

EAL grease is used in the Wanapum Turbine-Driven Fish Pumps' wicket gate automatic greasing systems. In the past, a non-EAL grease was used in these systems. This information is provided consistent with Section S10.C.5 of the NPDES Permit.