

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 1 GENERAL	 DEPARTMENT OF ECOLOGY State of Washington	U.S. ENVIRONMENTAL PROTECTION AGENCY/ECOLOGY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	1. Current permit I.D. <div style="border: 1px solid black; padding: 2px; display: inline-block;">WA</div> <div style="float: right; text-align: right;"> <table border="1" style="border-collapse: collapse;"> <tr> <td style="width: 20px;">T/A</td> <td style="width: 20px;">C</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;">D</td> </tr> <tr> <td style="text-align: center;">14</td> <td style="text-align: center;">15</td> </tr> </table> </div>	T/A	C		D	14	15
T/A	C								
	D								
14	15								

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit a NPDES permit application forms to Ecology. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

	MARK "X"				MARK "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B. Does or will this facility (<i>either existing or proposed</i>) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C) Does this facility operate a cooling water intake structure? (FORM 2C Supplemental)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	D. Is this proposal facility (<i>other than those described in A or B above</i>) which will result in a discharge to waters of the U.S.? (FORM 2D)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. Does or will this facility treat, store, or dispose of hazardous wastes ? (FORM 3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

III. NAME OF FACILITY

C 1	Priest Rapids Hydroelectric Project - Wanapum Dam
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IV. FACILITY CONTACT

A. NAME & TITLE (<i>last, first, & title</i>)		B. PHONE (<i>area code & no.</i>)	
C 2	Hendrick, Ross –Manager, License & Environmental Compliance	509	793 1468
B. EMAIL ADDRESS		C. Does the facility have or can it obtain broadband internet access?	
C 2	rhendr1@gcpud.org	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
C 3	PO Box 878		
B. CITY OR TOWN		C. STATE	D. ZIP CODE
C 4	Ephrata	WA	98823

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER					
C 5	14353 HWY 243 S				
B. COUNTY NAME					
Grant					
C. CITY OR TOWN			D. STATE	E. ZIP CODE	F. COUNTY CODE
C 6	Beverly		WA	99321	
7	D. LATITUDE/LONGITUDE (NAD 83 DATUM)				
LATITUDE AS DECIMAL DEGREES– N46.875000					
LONGITUDE AS DECIMAL DEGREES – W119.970979					

DEPARTMENT OF ECOLOGY

MAY 07 2019

WATER QUALITY PROGRAM

CONTINUED FROM THE FRONT

VII. SIC, NAICS CODES (in order of priority) **AND UBI NUMBER** Place additional on an attachment.

SIC FIRST				SIC. SECOND			
C 7	4911	(specify) Electric Services	7 7	n/a	(specify)		
EQUIVALENT NAICS FIRST				EQUIVALENT NAICS SECOND			
C 7	2211	(specify) Hydroelectric Power Generation	7 7	n/a	(specify)		

UBI NUMBER -132000175

VIII. OPERATOR INFORMATION

A. NAME				B. Is the name listed in Item VIII-A also the owner?			
C 8	Public Utility District No. 2 of Grant County, WA (Grant PUD)			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)				D. PHONE (area code & no.)			
F = FEDERAL	M = PUBLIC (other than federal or state)	M	(specify)	C A	509	766	2505
S = STATE	O = OTHER (specify)						
P = PRIVATE							

E. STREET OR PO BOX			
PO Box 878			

F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND	
C B	Ephrata	WA	98823	Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)				
C 9	T N	I N		C 9	T P	B N		
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)				(Specify)
C 9	T U	I N		C 9	T N	B N	123 FERC ¶ 61,049	Order Issuing New License
C. RCRA (Hazardous Wastes)				E. OTHER (specify)				(Specify)
C 9	T R	I N	WAD988467650	C 9	T N	B N	WDOE Order No. 5419	401 Water Quality Certification

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Wanapum Dam is a hydroelectric facility operating as part of the Priest Rapids Hydroelectric Project No. 2114, owned and operated by Grant PUD under license of the Federal Energy Regulatory Commission (FERC). Wanapum Dam is located within the mid-Columbia River, six miles downstream of Vantage, WA. The Priest Rapids Project generates clean, renewable energy for more than 40,000 customers in Grant County as well as customers throughout the region.

Grant PUD's operation of the Priest Rapids Project pursuant to its FERC License is in conformance with all applicable water quality based, technology based, toxic and pretreatment effluent limitations as provided under 33 U.S.C. §§ 1311, 1312, 1313, 1316, and 1317 (CWA Sections 301, 302, 303, 306, and 307), as certified by the Washington State Department of Ecology in its Water Quality Certification issued under the Clean Water Act, 33 U.S.C. § 1341, Order No. 4219 (April 3, 2007) and amended via Order 5419 (March 6, 2008).

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XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Ross Hendrick – Manager, License and Environmental Compliance		10-17-2010

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VII. SIC, NAICS CODES (in order of priority) **AND UBI NUMBER** Place additional on an attachment.

SIC FIRST				SIC. SECOND			
C 7	n/a	(specify)	7 7	n/a	(specify)		
EQUIVALENT NAICS FIRST				EQUIVALENT NAICS SECOND			
C 7	4911	(specify)	7 7	n/a	(specify)		

UBI NUMBER -132000175

VIII. OPERATOR INFORMATION

A. NAME				B. Is the name listed in Item VIII-A also the owner?			
C 8	Public Utility District No. 2 of Grant County, WA (Grant PUD)			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)				D. PHONE (area code & no.)			
F = FEDERAL S = STATE P = PRIVATE	M = PUBLIC (other than federal or state) O = OTHER (specify)	M	(specify)	C A	509	766	2505

E. STREET OR PO BOX							
PO Box 878							
F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND			
C B	Ephrata	WA	98823	Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)				
C 9	T N	I		C 9	T P	8		
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)				(Specify)
C 9	T U	I		C 9	T	8	123 FERC ¶ 61,049	Order Issuing New License
C. RCRA (Hazardous Wastes)				E. OTHER (specify)				(Specify)
C 9	T R	I		C 9	T	8	WDOE Order No. 5419	401 Water Quality Certification

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XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Ross Hendrick – Manager, License and Environmental Compliance		5-2-2019

Please type or print in the unshaded areas only		EPA ID Number (Copy from Item 1 of Form 1)		Form Approved OMB No. 2040-0086 Approval expires 8-31-98	
Form 2C NPDES				U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS <i>Consolidated Permits Program</i>	
I. Outfall Location					
For this outfall, list the latitude and longitude, (degrees, min.xxxx) and name of the receiving water(s)					
Outfall Number (list)	Latitude		Longitude		Receiving Water (name)
	Deg	Min	Deg	Min	
See Figure 3					All outfalls discharge to the Columbia River
					DEPARTMENT OF ECOLOGY
					MAY 07 2019
					WATER QUALITY PROGRAM
II. Flows, Sources of Pollution, and Treatment Technologies					
A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed description in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.					
B. For each outfall, provide a description of (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.					
1. Outfall No. (list)	2. Operations Contributing Flow		3. Treatment		
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
W001	Dewatering	800 gpm	Left bank station sump	4-A	
W002	non-contact cooling water	619 gpm	Turbine Unit 1	4-A	
W003	non-contact cooling water	619 gpm	Turbine Unit 2	4-A	
W004	non-contact cooling water	619 gpm	Turbine Unit 3	4-A	
W005	non-contact cooling water	619 gpm	Turbine Unit 4	4-A	
W006	non-contact cooling water	619 gpm	Turbine Unit 5	4-A	
W007	non-contact cooling water	619 gpm	Turbine Unit 6	4-A	
W008	non-contact cooling water	619 gpm	Turbine Unit 7	4-A	
W009	non-contact cooling water	619 gpm	Turbine Unit 8	4-A	
W010	non-contact cooling water	619 gpm	Turbine Unit 9	4-A	
W011	non-contact cooling water	619 gpm	Turbine Unit 10	4-A	
W012	Dewatering	800 gpm	Right bank station sump	4-A	

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C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ **YES** (complete the following table)☒ NO (go to Section III)[illegible]

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (complete Item III-B)

☒ **NO** (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C)

☐ **NO** (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

[illegible]

IV. IMPROVEMENTS

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ **YES** (complete the following table)

☒ **NO** (go to Item IV-B)

[illegible]

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☒ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAM IS ATTACHED

A, B, & C: See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-9.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
See "Additional Information"			

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☒ **NO** (go to Item VI-B)

VII. BIOLOGICAL TOXICITY TESTING DATA

☐ **YES** (identify the test(s) and describe their purpose below)

☒ **NO** (go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

☒ **YES** (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☐ **NO** (go to Section IX)[illegible]

IX. CERTIFICATION

A. NAME & OFFICIAL TITLE (type or print)

B. PHONE NO. (area code & no.)

(509) 793-1468

D. DATE SIGNED

5-2-2019



EPA Form 2-C Supplemental Cooling Water Intake Structures

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DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

CWA §316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. EPA has promulgated rules for new facilities at 40 CFR 125 Subpart I and for existing facilities at 40 CFR 125 Subpart J. This form requests information from applicants using EPA Form 2-C to determine applicability of CWA 316(b) requirements and inform applicants of additional application requirements that may apply to the facility.

Facility Name: Wanapum Dam

NPDES Permit Number: n/a

SECTION A. APPLICABILITY

☒ Yes ☐ No

Is there a cooling water intake associated with this facility? Cooling water intake means a structure withdrawing cooling water, for contact or noncontact cooling, from a surface water source. Withdrawal from groundwater or a public water system is not applicable. If No, STOP.

1. What is the design intake flow (in gallons per day)? 17,827,200 gal./day
2. What percentage of the flow is used exclusively for cooling? 100%
3. What is the maximum intake velocity? 0.50 ft/sec
4. Describe the cooling water system (e.g., once-through, closed-cycle). Once-through
5. Name the surface water body from which cooling water is withdrawn. Columbia River
6. Provide latitude/longitude of the cooling water intake(s) (NAD83/WGS84). See Attachment A /
To ensure accurate locations provide at least 5 significant digits.
7. Describe the configuration of the intake(s) (e.g., dimensions, screen type). Perf. Plate 1/4" Thick, 1/4" Dia.
If as-built plans and specifications are available, please provide. Rnd Hole, 1/2" Ctrs., Galv. Steel
8. When was the intake(s) installed, including any major modifications? 1959
9. When was the intake(s) last inspected? If regular inspections are scheduled, provide frequency. 5 Year Interval
10. Have there been any studies to determine the impact of the intake(s) on aquatic organisms (e.g., impingement/entrainment studies). ☒ Yes ☐ No
If yes, please provide

SECTION B. APPLICATION REQUIREMENTS

CWA §316(b) requirements apply to all industrial NPDES permitted facilities with cooling water intake structures. EPA has promulgated best technology available (BTA) effluent guidelines for facilities meeting certain thresholds:

- Design intake flow greater than two million gallons per day.
- Greater than 25 percent of the water withdrawn is used for cooling purposes.

Submittal requirements for facilities subject to BTA effluent guidelines:

- New facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.86.
- Existing facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.95.

Facilities subject to BTA guidelines are encouraged to contact Ecology early in the application process. Ecology may consider this application administratively incomplete until the required information is received.

Submittal requirements for existing facilities and new facilities below BTA thresholds:

- Ecology will evaluate the information submitted with this form and may request additional information to assess the need for requirements under 40 CFR 125.90(b) or 40 CFR 125.80(c).



Grant PUD NPDES Permit Application

Vicinity Map

Figure 1

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Grant PUD NPDES Permit Application

Figure 2

Wanapum Dam

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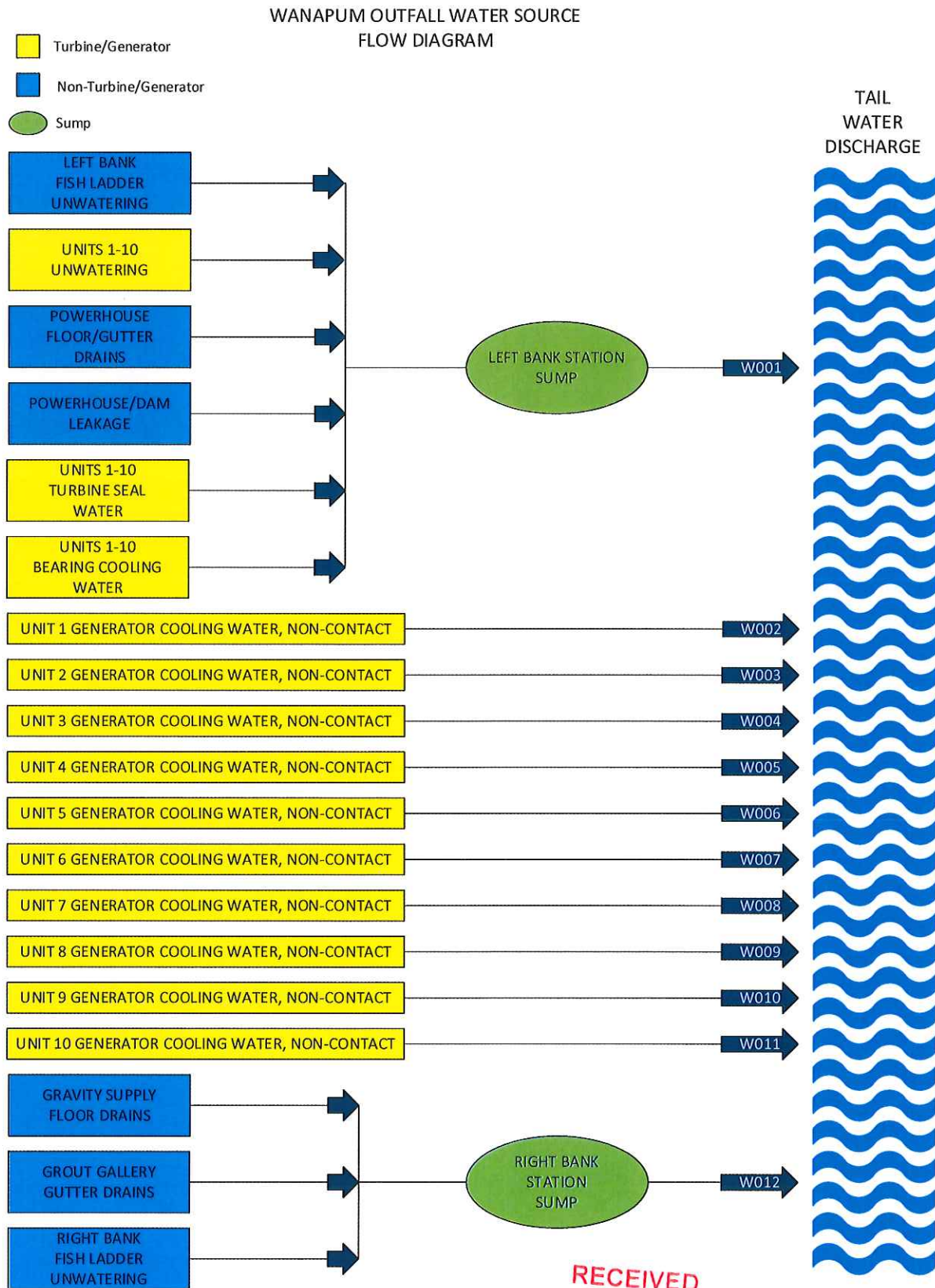


Figure 4

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 CENTRAL REGIONAL OFFICE

Grant County PUD NPDES Application
Wanapum Dam
Additional Information

The following additional information is being provided in support of Public Utility District No. 2 of Grant County, Washington's (Grant PUD's) NPDES permit application package.

Form 1, Part X (Existing Environmental Permits)

Grant PUD owns and operates the Priest Rapids Hydroelectric Project (Project). The Project is licensed as Project No. 2114 by the Federal Energy Regulatory Commission (FERC), and includes the Wanapum and Priest Rapids dams. A 401 water quality certification (401 WQC) for the operation of the Project was issued by the Washington Department of Ecology (Ecology) on April 3, 2007, amended on March 6, 2008, and effective on issuance of the FERC license to operate the Project in April of 2008. Grant PUD's operation of the Project pursuant to its FERC License is in conformance with all applicable water quality based, technology based, toxic and pretreatment effluent limitations as provided under 33 U.S.C. §§ 1311, 1312, 1313, 1316, and 1317 (Clean Water Act (CWA) Sections 301, 302, 303, 306, and 307), as certified by Ecology in its 401 WQC, Order No. 4219 (April 3, 2007) and amended via Order 5419 (March 6, 2008).

Form 1, Part XI (Map)

Figure 1 provides an overview vicinity map of the Priest Rapids Project, which includes both Wanapum and Priest Rapids dams. Figure 2 provides a topographic map of Wanapum Dam. Figure 3 provides a more detailed drawing of Wanapum Dam, showing the outfall locations and latitude/longitude data, and as such contains **critical energy infrastructure information (CEII)** and has been prepared in accordance with RCW 42.56.270 (financial, commercial, and proprietary information) and RCW 42.56.420 (records prepared or maintained to prevent, mitigate, or respond to criminal terrorist acts). Grant PUD requests that Ecology provide Grant PUD with notice prior to disclosure of Figure 3 so that Grant PUD may attempt to seek protection of these records under RCW 42.56.540.

Form 2C, Part I (Outfall Locations)

Outfall numbers along with latitude and longitude information is provided in Figure 3. This information is considered **CEII** and has been prepared in accordance with RCW 42.56.270 and RCW 42.56.420. Grant PUD requests that Ecology provide Grant PUD with notice prior to disclosure of Figure 3 so that Grant PUD may attempt to seek protection of these records under RCW 42.56.540.

Form 2C, Part IV-B (Description of Additional Control Programs)

Consistent with Section 6.9 of the 401 WQC for the Project (as described above), and in accordance with 40 C.F.R. §112.7, Grant PUD has developed and is implementing Spill Prevention, Control, and Countermeasure (SPCC) plans for both Wanapum and Priest Rapids dams. Section 403 of the SPCC plans contain additional information related to specific prevention, containment, and countermeasures that are already being implemented at each dam. The current SPCC plans are included as part of this application for reference.

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Grant County PUD NPDES Application
Wanapum Dam
Additional Information

Form 2C, Part V-A, B, and C (Effluent Characteristics)

Laboratory analysis for the requested pollutants (per email from Ecology staff on April 15, 2019) are pending completion and were collected per the “*Sampling Plan for a National Pollutant Discharge Elimination System (NPDES) Permit Application*”, which is included as Attachment 4. A draft of the sampling plan was reviewed by Ecology staff on April 19, 2019. Once the laboratory analyses are completed (anticipated to be completed by May 31, 2019), Part V of Form 2C will be provided to Ecology.

Form 2C, Part V-D

Grant PUD does not know or have reason to know of discharges of pollutants other than incidental or inadvertent de minimis discharges of oil and grease from facilities, such as unwatering sumps and wicket gates.

Form 2C Supplemental Form (Cooling Water Intake Structures), Sections A(1) and A(3)

The total design intake flow and maximum intake velocity is based on the Alstom generator nameplate nominal cooling water flowrate of 1000 gpm/unit. Currently, two generators have been upgraded to the new Alstom design with the balance of the plant scheduled to be upgraded within the next nine years. Other cooling water flows considered are based off of the 1958 Harza Mechanical Design Memo No. 36R1. The original estimated cooling water required for the air coolers of one generator at rated kva is 1600 gpm/unit. Actual generator cooling water flow on a non-upgraded unit typically does not exceed 1100 gpm.

Form 2C Supplement (Cooling Water Intake Structures), Section A(2)

The percentage of flow (as provided in Section A(1)) through the cooling water intakes used exclusively for cooling purposes is 100%; however, when considered with the total flow through the Priest Rapids Dam and Wanapum Dam powerhouse generating units (i.e. the total volume of water diverted for hydropower purposes), the percentage of the cooling water intake flow is only 0.1% and 0.1% of the total Priest Rapids Dam and Wanapum Dam flows (at maximum design flow), respectively.

Form 2C Supplement (Cooling Water Intake Structures), Section A(6)

The latitude and longitude information for the cooling water intakes are provided as Attachment A to the supplemental form, and contains CEII and has been prepared in accordance with RCW 42.56.270 and RCW 42.56.420. Grant PUD requests that Ecology provide Grant PUD with notice prior to disclosure of this information so that Grant PUD may attempt to seek protection of these records under RCW 42.56.540.

Form 2C Supplement (Cooling Water Intake Structures), Section A(10)

Grant PUD owns and operates two hydroelectric dams on the Columbia River—Wanapum and Priest Rapids—known collectively as the Priest Rapids Project (Project). The Project is operated under the terms and conditions of the Federal Energy Regulatory Commission (FERC) Hydroelectric Project License No. P-2114 issued by FERC on April 17, 2008 (FERC 2008). The Project is subject to the requirements (incorporated by reference into the license) of the Biological Opinion (BiOp) for the Project issued by the National Marine Fisheries Service (NMFS, NMFS 2008), the BiOp for the Project issued by the United States Fish and Wildlife (USFWS) regarding

Grant County PUD NPDES Application
Wanapum Dam
Additional Information

the effect of the Project on bull trout (USFWS 2007), and the Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) issued by the Washington State Department of Ecology (WDOE; WDOE 2007).

Additionally, Grant PUD operates the Project through operational agreements (also incorporated into the license) with the fishery agencies, tribal representatives, and other operators to provide protection and improvement for a range of fisheries and other resources within and downstream of the Project. These agreements include the Hanford Reach Fall Chinook Protection Program Agreement (Grant PUD 2004) and the Priest Rapids Project Salmon and Steelhead Settlement Agreement (SSSA; Grant PUD 2006).

Grant PUD is not subject to the requirements of Section 316(b) of the CWA, which requires that “the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.” 33 U.S.C. § 1326(b). Notably, the U.S. Environmental Protection Agency (EPA) adopted regulations to implement this requirement for cooling water intake structures (CWIS) at existing “point sources,” but expressly excluded hydroelectric facilities from regulation. See 40 C.F.R. § 125, subpart J (Existing Facilities Rule). In particular, the EPA stated without qualification that “hydroelectric plant withdrawals for electricity generation are not cooling water uses and are not addressed by today’s proposal.” 76 Fed Reg. 22,174, 22,190 (Apr. 20, 2011). In addition, in promulgating the Section 316(b) regulations, no information was requested by or provided to EPA in order to make any determination about the engineering feasibility of the requirements of the Existing Facilities Rule as it would be applied to hydroelectric facilities. Indeed, applying the requirements of EPA’s Section 316(b) regulations is not appropriate in the context of hydroelectric facilities, which are fundamentally different from the steam electric power and manufacturing plants EPA considered in that rulemaking, both in terms of the feasibility and cost of technology and the assessment of environmental impacts. Interpreting such regulations to apply to hydroelectric generation facilities would, therefore, be a significant expansion of EPA’s regulatory jurisdiction and would duplicate other federal and state requirements specifically designed to address these environmental impacts.

To the extent an argument might be made that the statutory requirements of CWA Section 316(b) might directly apply to hydroelectric facilities (which Grant PUD believes is not the case), the Project meets those statutory requirements. In particular, the Project was designed and constructed, and is now being operated, in a manner that meets or exceeds the statutory requirement of using “the best technology available for minimizing adverse environmental impact.” 33 U.S.C. § 1326(b). This conclusion is clearly supported by the following facts regarding the Project.

First, the Project as a whole is designed and operated in a way that is protective of endangered and threatened species. Per the Incidental Take Statement included in the NMFS BiOp for the Project, the lethal take of juvenile Upper Columbia River (UCR) spring-run Chinook salmon and UCR juvenile steelhead shall not exceed 13.51 percent for both the Wanapum and Priest Rapids developments combined (NMFS 2008). This corresponds to a survival standard of 86.49 percent for the Project, or 93.0 percent per development (1 reservoir and 1 dam).

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Second, pursuant to the SSSA (as well as other regulatory requirements), the Project is subject to a **No-Net Impact (NNI)** requirement. NNI is the “condition whereby the Project does not produce unmitigated project related mortality of Covered Species¹”. In collaboration with the Priest Rapids Coordinating Committee² (PRCC), Grant PUD is achieving its NNI environmental stewardship requirements through a three-pronged approach; (1) hydroelectric operations and improvements, (2) hatchery production, and (3) habitat restoration and enhancement.

With respect to the first component of the NNI approach, Grant PUD has invested hundreds of millions of dollars in hydroelectric operations and improvements to ensure the protection and safe passage of juvenile fish through the Project. Capital and operational improvements include the Wanapum Fish Bypass, Priest Rapids Fish Bypass, Advanced Hydro Turbine System (at Wanapum Dam), enhanced avian wire arrays (at Wanapum and Priest Rapids dams), an enhanced predator removal program, and implementation of “fish mode” at both dams.

Hydroelectric operations and improvements have resulted in the achievement of performance standards for Upper Columbia River yearling Chinook (juvenile spring-run) and juvenile steelhead, which are listed under the Endangered Species Act, as well as sockeye salmon (Tables 1-3). Performance standards for summer sub-yearling Chinook are achieved via contributions into the NNI Account, through hatchery compensation and habitat projects throughout the upper Columbia River Basin, while NNI for coho salmon is achieved through hatchery compensation.

Table 1 **Survival estimates and standard errors (SE) in parenthesis (development and total Project) for yearling Chinook for the Priest Rapids Project for years 2003-2005 and 2014 (Anglea et al. 2003, Anglea et al. 2004a and 2004b, Anglea et al. 2005).**

Year	Wanapum Development	Priest Rapids Development	Total Survival for Priest Rapids Project (Required Standard=86.49%)
2003	N/A	N/A	86.6% (SE=0.0442)
2004	N/A	N/A	86.4% (SE=0.0309)
2005	N/A	N/A	86.9% (SE=0.0214)
3 Year Consecutive Average			86.6% (SE=0.0322)
2014 ¹	94.5% (SE=0.013)	96.1% (SE=0.009)	90.8% (SE=0.0150)

*¹ Required Check-in per Statement of Agreement 2011-06; Wanapum Drawdown

¹ Covered Species is defined as both ESA listed and non-listed salmonids and includes spring, summer and fall Chinook salmon (*Oncorhynchus tshawytscha*), sockeye salmon (*O. nerka*), steelhead (*O. mykiss*), and coho (*O. kisutch*).

² Priest Rapids Coordinating Committee is comprised of the Confederated Tribes of the Umatilla Reservation, USFWS, Confederated Tribes of the Colville Reservation, Washington Department of Fish and Wildlife, Yakama Nation, NMFS and Grant PUD.

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Table 2 Survival estimates and standard errors (SE) in parenthesis (development and total Project) for juvenile sockeye for the Priest Rapids Project for years 2009-2010 and 2015 (Skalski et al. 2009b, Skalski et al. 2010, and Hatch et al. 2016).

Year	Wanapum Development	Priest Rapids Development	Total Survival for Priest Rapids Project (Required Standard=86.49%)
2009	97.3% (SE=0.009)	94.6% (SE=0.011)	92.1% (SE=0.014)
2010	94.1% (SE=0.014)	96.8% (SE=0.014)	91.1% (SE=0.019)
2015	94.1% (SE=0.011)	97.5% (SE=0.00)	91.8% (SE=0.012)
3 Year Consecutive Average			91.7% (SE=0.015)

Table 3 Survival estimates and standard errors (SE) in parenthesis (development and total Project) for juvenile steelhead for the Priest Rapids Project for years 2015-2017 (Skalski et al. 2018).

Year	Wanapum Development	Priest Rapids Development	Total Survival for Priest Rapids Project (Required Standard=86.49%)
2015	85.5% (SE=0.017)	94.1% (SE=0.028)	83.7% (SE=0.027)
2016	93.04%*	93.04%*	86.6% (SE=0.032)
2017	N/A	N/A	90.8% (SE=0.017)
3 Year Consecutive Average (2015-2017)			87.0% (SE=0.020)

* Priest Rapids Project total estimated survival divided by half.

With respect to the second component of the NNI approach—hatchery production—, Grant PUD’s hatchery programs released approximately 9,550,527 fish into the upper Columbia River and its tributaries in 2018. Further details on the hatchery programs that Grant PUD is implementing can be reviewed in the annual progress and implementation report (Grant PUD 2018).

With respect to the third component of the NNI approach—habitat enhancement and restoration, since 2006, 103 total projects have been unanimously approved by the PRCC and PRCC habitat sub-committee. Of those, 61 are completed and 42 are currently active and underway. Further details on the habitat program that Grant PUD is implementing can be reviewed in the annual progress and implementation report (Grant PUD 2018).

Third, the CWIS, in particular, were designed and constructed, and are now operating in a manner, to meet the statutory requirement to minimize adverse environmental impacts because Grant PUD installed fish screens at the CWIS to prevent entrainment of fish species in the intakes. Moreover, the predominate direction of water flow is parallel to the fish screens, further reducing the potential for both entrainment and impingement.

In addition, the Project’s CWIS were designed and constructed, and are now operating in a manner, to minimize adverse environmental impacts, as specifically set forth by EPA in the Existing Facilities Rule. For example, the CWIS’ design and operation are generally aligned with and achieve the objectives of the impingement mortality standard under 40 C.F.R. § 125.94(c). The

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maximum design velocities of the Wanapum Dam CWIS are 0.5 feet per second and the actual velocities are below 0.5 feet per second. The intake velocity as water passes through the screens at the Priest Rapids Dam CWIS is less than 0.5 feet per second.³

Similarly, Grant PUD is undertaking a variety of measures to minimize entrainment of aquatic species that are generally aligned with and achieve the objectives of the entrainment standard set forth in Section 125.94(d) of the Existing Facilities Rule. Notable examples of these measures include:

- Conduct spill releases over dam spillways according to schedules and guidelines in the most recent Fish Operations Plan and Fish Passage Plan.
- Operate top spill fish bypass structures to encourage fish passage over spillways.
- Keep juvenile fish passage structures, submersible traveling screens, vertical bar screens including ice and trash sluiceway, free of debris or other material, through regular and preventive maintenance and inspections.
- Operate turbines within +/- 1% peak efficiency, or as specified in the most recent Fish Passage Plan.
- Operate turbines in priority order to maximize fish passage as described in the Fish Passage Plan.
- Maintain a physical screening or exclusion technology.

Therefore, the design and operation of the Project's CWIS meet the statutory requirement of CWA Section 316(b) to minimize adverse environmental impacts. Additional controls related to the Project's CWIS are unwarranted.

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³ Malfunctioning of the Priest Rapids Dam turbines may, at times, lead to exceedances of the 0.5 feet per second velocity limitation. Grant PUD, however, is already addressing this issue. Grant PUD is in the process of replacing the turbines at Priest Rapids Dam. Some of the turbines have already been replaced. The turbines that have yet to be replaced will be replaced over the next eight (8) years. The new turbines have a maximum design velocity of 0.5 feet per second.

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For

Form 2C Supplement

Attachment A

Cooling Water Intake Locations

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Outfall Locations – GPS Coordinates

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Spill Prevention, Control and
Countermeasures (SPCC) Plan