Fact Sheet

The U.S. Environmental Protection Agency (EPA)

Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:

Yakima Training Center

Public Comment Start Date: June 15, 2021
Public Comment Expiration Date: July 15, 2021

Technical Contact: Cody Piscitelli
(206) 553-1169
800-424-4372, ext. 1169 (within Alaska, Idaho, Oregon and Washington)
Piscitelli.Cody@epa.gov

EPA Proposes To Reissue NPDES Permit

EPA proposes to reissue the NPDES permit for the facility referenced above. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the United States. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the facility.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations and other conditions for the facility
- a map and description of the discharge location
- technical material supporting the conditions in the permit

State Certification

EPA is requesting that the Washington Department of Ecology (Ecology) provide a certification of the permit for this facility under Section 401 of the Clean Water Act. Comments regarding Ecology's intent to certify the permit should be directed to Angela Zeigenfuse at azei461@ECY.WA.GOV.

Public Comment

Because of the COVID-19 virus, access to the Region 10 EPA building is limited. Therefore, we request that all comments on EPA's draft permits or requests for a public hearing be submitted via email to Cody Piscitelli (piscitelli.cody@epa.gov). If you are unable to submit comments via email, please call 206-553-1169.

Persons wishing to comment on, or request a Public Hearing for, the draft permit for this facility may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires, and all comments have been considered, EPA's regional Director for the Water Division will make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If substantive comments are received, EPA will address the comments and issue the permit. The permit will become effective no less than 30 days after the issuance date, unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

Documents are Available for Review

The draft permit, this Fact Sheet and the Public Notice can also be found by visiting the Region 10 website at https://www.epa.gov/npdes-permits/Washington-npdes-permits. Because of the COVID-19 virus and limited building access, we cannot make hard copies available.

For technical questions regarding the Fact Sheet, contact Cody Piscitelli at (206) 553-1169 or Piscitelli.Cody@epa.gov. Services can be made available to persons with disabilities by contacting Audrey Washington at (206) 553-0523.

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Acronyms

BO or BiOp	Biological Opinion
BOD_5	Biochemical oxygen demand, five-day
°C	Degrees Celsius
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved oxygen
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
HUC	Hydrologic Unit Code
ICIS	Integrated Compliance Information System
LA	Load Allocation
lbs/day	Pounds per day
mg/L	Milligrams per liter
mL	Milliliters
mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
MPN	Most Probable Number
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and maintenance
QAP	Quality assurance plan
RP	Reasonable Potential
RWC	Receiving Water Concentration
SPCC	Spill Prevention and Control and Countermeasure
SS	Suspended Solids
s.u.	Standard Units
TKN	Total Kjeldahl Nitrogen

TMDL	Total Maximum Daily Load
TRC	Total Residual Chlorine
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
TSS	Total suspended solids
USFWS	U.S. Fish and Wildlife Service
UV	Ultraviolet
WD	Water Division
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater treatment plant

I. Background Information

A. General Information

This fact sheet provides information on the draft NPDES permit for the following entity:

Table 1. General Facility Information

NPDES Permit #:	WA0021962
Applicant:	Yakima Training Center
Type of Ownership	Federal
Physical Address:	Department of the Army – Yakima Training Center Wastewater Treatment Plant (WWTP) 160 North T.P. Road Yakima, WA 98901-9399
Mailing Address:	Yakima Training Center Directorate of Public Works 970 Fire Center Road, Building 810 Yakima, WA 98901-9399
Facility Contact:	Brenda A. Bach Water/Wastewater Operator WDMLVII/WWTPOLVII/CCS Yakima Training Center/DPW 970 Firing Center Road, Building 831 Yakima, WA 98901-9399 (509) 225-8046
Facility Location:	46.678056° N, 120.472139° W
Receiving Water	Yakima River
Facility Outfall	46.679194° N, 120.491056° W

B. Permit History

EPA retains permitting authority over federal facilities in the State of Washington; therefore, EPA is the permitting authority for this facility. The most recent NPDES permit for the Yakima Training Center WWTP was issued on February 11, 1975, became effective on March 13, 1975, and expired on September 30, 1979. An NPDES application was submitted by the permittee on August 13, 1998. The facility continues to comply with the terms of the expired NPDES permit.

C. Tribal Consultation

As part of Tribal Coordination, EPA shared the preliminary draft permit and draft fact sheet with the Yakama Nation prior to public notice for their review.

At the start of the comment period, EPA sent a letter to the Yakama Nation offering the opportunity for them to request Tribal Consultation on the draft permit.

II. Facility Information

A. Treatment Plant Description

Service Area

The Department of the Army operates the Yakima Training Center WWTP located in Yakima, WA. The collection system has no combined sewers. The facility serves a resident population of 100 but increases to around 10,000 during training exercises. There are no major industries discharging to the facility.

Treatment Process

The design flow of the facility is 0.72 mgd. The reported actual flows from the facility range from 0.003 mgd to 0.082 mgd (average monthly flow) between July 2015 and November 2020. The treatment process consists of activated sludge, and disinfection using ultraviolet light. A schematic of the wastewater treatment process and a map showing the location of the treatment facility and discharge are included in Appendix A**.** Because the design flow is less than 1 mgd, the facility is considered a minor facility.

Outfall Description

The outfall consists of an approximately 5000-foot long pipeline varying from 10” to 15” diameter spanning from the final settling tanks to the Yakima River. The outfall line, constructed in 1951 and last repaired/relined in 2000, contains 15 manholes, and crosses the Roza Channel over a dedicated bridge, then passes under Interstate 82 and Highway 821, with the final discharge location just downstream of the Harrison Street Bridge over the Yakima River.

Effluent Characterization

To characterize the effluent, EPA evaluated the facility’s application form, discharge monitoring report (DMR) data, and additional data provided by the Yakima Training Center. The effluent quality is summarized in Table 2. Data are provided in Appendix B.

Table 2. Effluent Characterization

Parameter	Minimum	Maximum	Limit
TSS Concentration (7-day)	2.3 mg/L	43.0 mg/L	45 mg/L
TSS Concentration (30-day)	2.0 mg/L	19.0 mg/L	30 mg/L

Parameter	Minimum	Maximum	Limit
TSS Loading (7-day)	0.5 lb/day	63.4 lb/day	270 lb/day
TSS Loading (30-day)	0.3 lb/day	13.0 lb/day	180 lb/day
TSS - % Removal	38%	98%	85% (minimum)
BOD Concentration (7-day)	2.8 mg/L	152.0 mg/L	45 mg/L
BOD Concentration (30-day)	2.0 mg/L	31.0 mg/L	30 mg/L
BOD_5 Loading (7-day)	0.7 lb/day	58.0 lb/day	270 lb/day
BOD_5 Loading (30-day)	0.4 lb/day	17.5 lb/day	180 lb/day
BOD_5 - % Removal	70.0%	98%	85% (minimum)
pH	6.2	8.2	6.5-8.5
Fecal Coliform (7-day)	0 (#/100 mL) (geomean)	470 (#/100 mL) (geomean)	400 (#/100 mL) (geomean)
Fecal Coliform (30-day)	0 (#/100 mL) (geomean)	200 (#/100 mL) (geomean)	200 (#/100mL) (geomean)

Source: DMR data from ICIS July 2015 – July 2020

Compliance History

A summary of all effluent violations between July 2015 and May 2020 is provided in Table 3.

Additional compliance information for this facility, including compliance with other environmental statutes, is available on Enforcement and Compliance History Online (ECHO). The ECHO web address for this facility is: https://echo.epa.gov/detailed-facility-report?fid=110001855653#history110001855653

Table 3. Summary of Effluent Violations (accessed January 28, 2021)

Parameter	Limit	Units	Number of Instances
BOD % Removal	Monthly Average	mg/L	4
pH	Inst. Minimum	Standard Units	3
Fecal Coliform	Weekly Geomean	#/100 mL	1
BOD_5	Monthly Average	mg/L	1
BOD_5	Weekly Average	mg/L	1

EPA conducted an inspection of the Facility on June 6, 2017. This inspection encompassed the wastewater treatment process, records review, operation and maintenance, and the collection system. Overall, the inspection found that the facility was in generally good

condition; however, with several minor issues. The secondary clarifiers contained duckweed, dead snails, and brown clumps of floating solids which were observed to be passing through the outlet weirs of the clarifiers. One of the contact chambers just after the secondary clarifier contained duckweed and other floating debris. Brown clumps of floating solids were observed periodically flowing from the UV disinfection to the outfall pipe.

III. Receiving Water

In drafting permit conditions, EPA must analyze the effect of the facility's discharge on the receiving water. The details of that analysis are provided in the Water Quality-Based Effluent Limits section below. This section summarizes characteristics of the receiving water that impact that analysis.

A. Receiving Water

This facility discharges to the Yakima River approximately 5 miles upstream of the City of Yakima, Washington. At the point of discharge, the Yakima River is a water of the State of Washington. The outfall is approximately 14 miles upstream of the Yakama Nation, and is approximately 114 miles upstream of the confluence with the Columbia River in Richland, Washington.

B. Water Quality Standards

Overview

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. 40 CFR 122.4(d) requires that the conditions in NPDES permits ensure compliance with the water quality standards of all affected States. A State's water quality standards are composed of use classifications, numeric and/or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each water body is expected to achieve, such as drinking water supply, contact recreation, and aquatic life. The numeric and narrative water quality criteria are the criteria deemed necessary to support the beneficial use classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

Washington Water Quality Standards (WAC 173-201A) were utilized when developing the effluent limitations in the draft permit.

Designated Beneficial Uses

This facility discharges to the Yakima River in the Upper Yakima Subbasin (HUC 17030001). At the point of discharge, the Yakima River is protected for the following designated uses (WAC 173-201A-602 Table 602—Use designations for fresh waters by water resource inventory area (WRIA 39)):

- primary contact recreation

- all water supply uses - domestic, agricultural, industrial, and stock watering
- salmonid spawning and rearing
- all miscellaneous uses - wildlife habitat, harvesting, commerce and navigation, boating, and aesthetics

C. Water Quality

The water quality for the receiving water is summarized in Table 4.

Table 4. Receiving Water Quality Data

Parameter	Units	Percentile	Value	Source
Flow	mgd	5^{th} – 95^{th}	464 – 2575	USGS NWIS
Flow	mgd	5^{th} – 95^{th}	233 – 2880	Ecology EIM
Temperature	°C	95^{th}	1.91 – 20.38	Ecology EIM
pH	Standard units	5^{th} – 95^{th}	7.60 – 9.00	Ecology EIM
Hardness	mg/L	5^{th} – 95^{th}	34.5 – 66.9	Ecology EIM
Ammonia	mg/L	5^{th} – 95^{th}	0.006 – 0.028	Ecology EIM
Fecal Coliform	#/100 ml	5^{th} – 95^{th}	1 - 173	Ecology EIM

Source:

United States Geological Survey's National Water Information System collected at USGS Station 12484500, Yakima River at Umtanum, WA (46.862778° N, 120.47889° W)
https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=12484500

Ecology's Environmental Information Management System collected at the Harrison Street Bridge, Station ID 06-YKHA (46.67946° N, 120.4912° W)
https://apps.ecology.wa.gov/eim/search/Detail/Detail.aspx?DetailType=Location&SystemStationId=19630343&LocationUserIdSearchType=Equals&LocationUserId=06-YKHA

D. Water Quality Limited Waters

The State of Washington's 2012 Integrated Report Section 5 (section 303(d)) lists the Yakima River, in the vicinity of the Harrison Street Bridge as impaired for pH.

E. Low Flow Conditions

A mixing zone is not included because EPA recommends that state mixing zone policies do not allow mixing zones for bacteria in waters designated for primary contact recreation. Calculating low flow is not relevant to this permit. (40 CFR 131.13)

IV. Effluent Limitations and Monitoring

Table 5 below presents the existing effluent limits and monitoring requirements in the Yakima Training Center Permit.

Table 5. Existing Permit - Effluent Limits and Monitoring Requirements

Yakima Training Center Wastewater Treatment Plant			
Effluent Characteristic	**Unit of Measurement**	**Monthly Average**	**Weekly Average**
Effluent Concentrations			
Biochemical Oxygen Demand, 5-day (BOD_5)	mg/L	30	45
Suspended Solids	mg/L	30	45
Fecal Coliform Bacteria	Number/100 ml	200	400
pH	Standard Units	Within the range of 6.5 to 8.5	
Effluent Loadings			
Effluent Characteristic	**Unit of Measurement**	**Monthly Average**	**Weekly Average**
BOD_5	kg/day (lb/day)	82 (180)	123 (270)
Suspended Solids	kg/day (lb/day)	82 (180)	123 (270)
The effluent BOD_5 and suspended solids concentrations shall not exceed 15% of the influent BOD_5 and suspended solids concentrations.			
Monitoring Requirements			
Monitoring Requirements	**Unit of Measurement**	**Sampling Frequency**	**Type of Sample**
Total flow	cmd (mgd)	Continuous	Recording
BOD_5	mg/L	Weekly	24-hr composite
Suspended Solids	mg/L	Weekly	24-hr composite
Fecal Coliform Bacteria	Number/100 ml	Weekly	Grab
pH	pH Units	Daily	Grab
Chlorine Residual	mg/L	Daily	Grab

Yakima Training Center Vehicle Wash Racks		
Effluent Characteristics	**Discharge Limitations**	**Monitoring Requirements**

		Measurement Frequency	**Sample Type**
Oil and Grease – mg/L	N/A	Monthly	Grab
Suspended Solids – mg/L	N/A	Weekly	Grab

a. The pH shall not be less than 6.5 standard units nor greater than 8.5 standard units and shall be monitored weekly
b. There shall be no discharge of floating solids or visible foam in other than trace amounts
c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: in open ditch at point where wash rack discharges are combined, prior to discharge to unnamed water course

Effluent Limitation Changes The vehicle wash racks no longer discharge under this permit; thus, conditions related to the discharge from the vehicle wash racks have been taken out of the permit. The facility replaced chlorination treatment with ultraviolet disinfection, therefore, daily monitoring of chlorine is no longer required. Additional monitoring requirements are being proposed at this time. Table 7, below, presents the proposed effluent limits and monitoring requirements in the draft permit.

Table 7. Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite[1]
	lbs/day	180	270	--			Calculation[2]
BOD_5 Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[3]
Total Suspended Solids (TSS)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite[1]
	lbs/day	180	270	--			Calculation[2]
TSS Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[3]
E. coli[4]	CFU/ 100 ml	100 (geomean)	--	320 (instant. max)	Effluent	1/week	Grab
pH	std units	Between 6.5 – 8.5[5]			Effluent	1/day	Grab
Total Ammonia (as N)	mg /L	Report	--	Report	Effluent	1/week	Grab
	lbs/day	Report	--	Report			Calculation[1]

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Total Phosphorus (as P)	mg /L	Report	--	Report	Effluent	1/quarter[7]	Grab
	lbs/day	Report	--	Report			Calculation[1]
Floating, Suspended, or Submerged Matter	--	See Permit Part I.B.2.				1/month	Visual Observation
Dissolved Oxygen	mg/L	Report Minimum and Average			Influent and Effluent	1/month	Grab
Total Kjeldahl Nitrogen (as N)	mg/L	Report	--	Report	Effluent	1/quarter[6]	24-hour composite
Orthophosphate (as P)	mg/L	Report	--	Report	Effluent	1/quarter[6]	24-hour composite
Nitrate + Nitrite	mg/L	Report	--	Report	Effluent	1/quarter[6]	24-hour composite
Flow	mgd	Report	--	Report	Effluent	Continuous	Meter
Temperature	°C	--	Report	Report	Effluent	1/week	Grab
Effluent Testing for Permit Renewal							
Permit Application Effluent Testing Data[7]	--				Effluent	1/year	--

Notes

1. The composite sample must be time proportionate. See Permit Part VI.
2. Loading (in lbs/day) is calculated by multiplying the concentration (in mg/L) by the corresponding flow (in mgd) for the day of sampling and a conversion factor of 8.34. For more information on calculating, averaging, and reporting loads and concentrations see the *NPDES Self-Monitoring System User Guide* (EPA 833-B-85-100, March 1985).
3. Percent Removal. The monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month using the following equation:
4. The average monthly *E. coli* bacteria counts must not exceed a geometric mean equal to the effluent limit based on a minimum of five samples taken every 3 - 7 days within a calendar month. See Permit Part VI. for a definition of geometric mean.
5. Reporting is required within 24 hours of a maximum daily limit or instantaneous maximum limit violation. See Permit Parts I.B.2. and III.G.
6. For quarterly monitoring frequency, quarters are defined as: January 1 to March 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31.
7. Effluent Testing Data - See NPDES Permit Application Form 2A, Table B for the list of pollutants to be included in this testing. The Permittee must use sufficiently sensitive analytical methods in accordance with Permit Part I.B.7.

A. Basis for Effluent Limits

In general, the CWA requires that the effluent limits for a particular pollutant be the more stringent of either technology-based limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards applicable to a waterbody are being met and may be more stringent than technology-based effluent limits.

B. Pollutants of Concern

Pollutants of concern are those that either have technology-based limits or may need water quality-based limits. EPA identifies pollutants of concern for the discharge based on those which:

- Have a technology-based limit
- Have an assigned wasteload allocation (WLA) from a TMDL
- Had an effluent limit in the previous permit
- Are present in the effluent monitoring. Monitoring data are reported in the application and DMR and any special studies
- Are expected to be in the discharge based on the nature of the discharge

The wastewater treatment process for this facility includes both primary and secondary treatment. Pollutants expected in the discharge from a facility with this type of treatment, include but are not limited to: five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), *E. coli* and fecal coliform bacteria, pH, ammonia, temperature, phosphorus, and dissolved oxygen (DO).

Based on this analysis, pollutants of concern are as follows:

- BOD_5
- DO
- TSS
- *E. coli* and fecal coliform bacteria
- pH
- Temperature
- Ammonia
- Nitrogen
- Nitrate-Nitrite
- Phosphorus
- Orthophosphorus

C. Technology-Based Effluent Limits

Federal Secondary Treatment Effluent Limits

The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. Section 301 of the CWA established a required

performance level, referred to as "secondary treatment," which POTWs were required to meet by July 1, 1977. EPA has developed and promulgated "secondary treatment" effluent limitations, which are found in 40 CFR 133.102. These technology-based effluent limits apply to certain municipal WWTPs and identify the minimum level of effluent quality attainable by application of secondary treatment in terms of BOD_5, TSS, and pH. The federally promulgated secondary treatment effluent limits are listed in Table 6. For additional information and background refer to Part 5.1 *Technology Based Effluent Limits for POTWs* in the Permit Writers Manual.

Table 6. Secondary Treatment Effluent Limits

Parameter	30-day average	7-day average
BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
Removal for BOD_5 and TSS (concentration)	85% (minimum)	--
pH	within the limits of 6.0 - 9.0 s.u.	
Source: 40 CFR 133.102		

Mass-Based Limits

The federal regulation at 40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, except under certain conditions. The regulation at 40 CFR 122.45(b) requires that effluent limitations for POTWs be calculated based on the design flow of the facility. The mass-based limits are expressed in pounds per day and are calculated as follows:

Mass-based limit (lb/day) = concentration limit (mg/L) × design flow (mgd) × 8.34[1]

Since the design flow for this facility is 0.72 mgd, the technology-based mass limits for BOD_5 and TSS are calculated as follows:

Average Monthly Limit = 30 mg/L × 0.72 mgd × 8.34 = 180 lbs/day

Average Weekly Limit = 45 mg/L × 0.72 mgd × 8.34 = 270 lbs/day

Chlorine

Chlorination is cited in the existing permit as a form of disinfection to the wastewater prior to discharge. The facility confirmed that chlorine is no longer used anywhere within the facility. As chlorine is no longer, EPA proposes to remove the chlorine effluent limits.

[1] 8.34 is a conversion factor with units (lb ×L)/(mg × gallon×10^6)

D. Water Quality-Based Effluent Limits

Statutory and Regulatory Basis

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Discharges to State or Tribal waters must also comply with conditions imposed by the State or Tribe as part of its certification of NPDES permits under section 401 of the CWA. 40 CFR 122.44(d)(1) implementing Section 301(b)(1)(C) of the CWA requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State or Tribal water quality standard, including narrative criteria for water quality.

The regulations require the permitting authority to make this evaluation using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met and must be consistent with any available wasteload allocation for the discharge in an approved TMDL. If there are no approved TMDLs that specify wasteload allocations for this discharge; all of the water quality-based effluent limits are calculated directly from the applicable water quality standards.

Reasonable Potential Analysis and Need for Water Quality-Based Effluent Limits

EPA uses the process described in the *Technical Support Document for Water Quality-based Toxics Control* (*TSD*) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a water quality-based effluent limit must be included in the permit.

Reasonable Potential and Water Quality-Based Effluent Limits

The reasonable potential and water quality-based effluent limit for specific parameters are summarized below.

<u>pH</u>

The water quality standards at WAC 173-201A-200(g), require pH values for the aquatic life use of the River to be within the range 6.5 to 8.5 standard units with a human-caused variation within the above range of less than 0.5 units. Mixing zones are generally not granted for pH, therefore the most stringent water quality criterion must be met before the effluent is discharged to the receiving water. Effluent pH data were compared to the water quality criteria. The effluent data for pH have been between the range of 6.2 and 8.2 standard units. Ambient pH monitoring is being proposed in the draft permit.

Dissolved Oxygen (DO) and BOD_5

Natural decomposition of organic material in wastewater effluent impacts dissolved oxygen in the receiving water at distances far outside of the regulated mixing zone. The water quality criterion requires DO to be greater than a lowest 1-day minimum of 8.0 mg/L. The BOD_5 of an effluent sample indicates the amount of biodegradable material in the wastewater and estimates the magnitude of oxygen consumption the wastewater will generate in the receiving water. Effluent and receiving water monitoring are proposed in the draft permit.

Ammonia

Ammonia criteria are based on a formula which relies on the pH and temperature of the receiving water, because the fraction of ammonia present as the toxic, un-ionized form increases with increasing pH and temperature. Therefore, the criteria become more stringent as pH and temperature increase. There are no effluent data for ammonia, so effluent and receiving water monitoring are proposed in the draft permit. The draft permit also requires that the permittee monitor the receiving water for pH and temperature in order to determine the applicable ammonia criteria for the next permit reissuance.

Temperature

The Washington water quality standards at WAC 173-201A-200(1)(c) establish criterion for the protection of salmonid spawning. As the facility currently does not collect effluent temperature monitoring data, the reasonable potential analysis for temperature was unable to be calculated. In order to calculate reasonable potential for the next permit, EPA is proposing effluent and ambient temperature monitoring.

E. coli and Fecal Coliform

The Washington water quality standards at WAC 173-201A-200(2)(b) state that in waters of the State of Washington, that are designated for recreation, *E. coli* organism levels within an averaging period must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL. Proposed effluent limitations for *E. coli* are based on the criteria with the geometric mean serving as the average monthly and the not to be exceeded value serving as the maximum daily.

The Washington water quality standards at WAC 173-201A-200(2)(b) replaced fecal coliform with *E. coli* as the applicable criteria as of December 31, 2020. As such, the fecal coliform effluent limits have been removed from the permit.

E. Antibacksliding

Section 402(o) of the Clean Water Act and 40 CFR §122.44 (l) generally prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit (i.e., anti-backsliding) but provides limited exceptions. For explanation of the antibacksliding exceptions refer to Chapter 7 of the Permit Writers Manual *Final Effluent Limitations and Anti-backsliding*.

The effluent limitations proposed in the draft permit are as or more stringent than the current permit, so there is no backsliding.

V. Monitoring Requirements

A. Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality.

The permit also requires the permittee to perform effluent monitoring required by the NPDES Form 2A application, so that these data will be available when the permittee applies for a renewal of its NPDES permit.

The permit also requires the permittee to perform effluent monitoring required by Table B of the NPDES Form 2A application, so that these data will be available when the permittee applies for a renewal of its NPDES permit.

The permittee is responsible for conducting the monitoring and for reporting results on DMRs or on the application for renewal, as appropriate, to EPA.

B. Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples must be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) or as specified in the permit.

Monitoring Changes from the Previous Permit

As listed in Table 7 both the BOD_5 and TSS loadings must now be sampled weekly in the receiving water, as well as the monthly monitoring of percent removal, in addition to the weekly effluent TSS and BOD_5 concentration monitoring required in the previous permit. Fecal coliform bacteria monitoring is no longer required and has been replaced by effluent limits and weekly monitoring of *E. coli* bacteria. Visual observations for floating, suspended, or submerged matter are proposed to be performed monthly. The draft permit proposes weekly effluent ammonia monitoring. The draft permit proposes that the receiving water and effluent be monitored monthly for dissolved oxygen concentrations and quarterly for orthophosphate (as P), Total Kjeldahl Nitrogen (as N), and nitrate-nitrite. Weekly temperature monitoring for both effluent and receiving water is also proposed. There is no longer a discharge from the Vehicle wash rack so the monitoring from the current permit is removed from the draft permit.

C. Surface Water Monitoring

In general, surface water monitoring may be required for pollutants of concern to assess the assimilative capacity of the receiving water for the pollutant. In addition, surface water monitoring may be required for pollutants for which the water quality criteria are dependent and to collect data for TMDL development if the facility discharges to an impaired water body. No ambient surface water monitoring was required in the previous permit, so Table 7 presents the proposed surface water monitoring requirements for the draft permit. Surface water monitoring results must be submitted with the DMR.

Table 7. Surface Water Monitoring in Draft Permit

Monitoring Requirements	Unit of Measurement	Sampling Frequency	Type of Sample
Dissolved Oxygen	mg/L	Monthly	Grab
Total Ammonia as N	mg/L	Monthly	Grab
Temperature	°C	Weekly	Grab
pH	pH Units	Weekly	Grab

D. Electronic Submission of Discharge Monitoring Reports

The draft permit requires that the permittee submit DMR data electronically using NetDMR. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application.

VI. Other Permit Conditions

A. Quality Assurance Plan

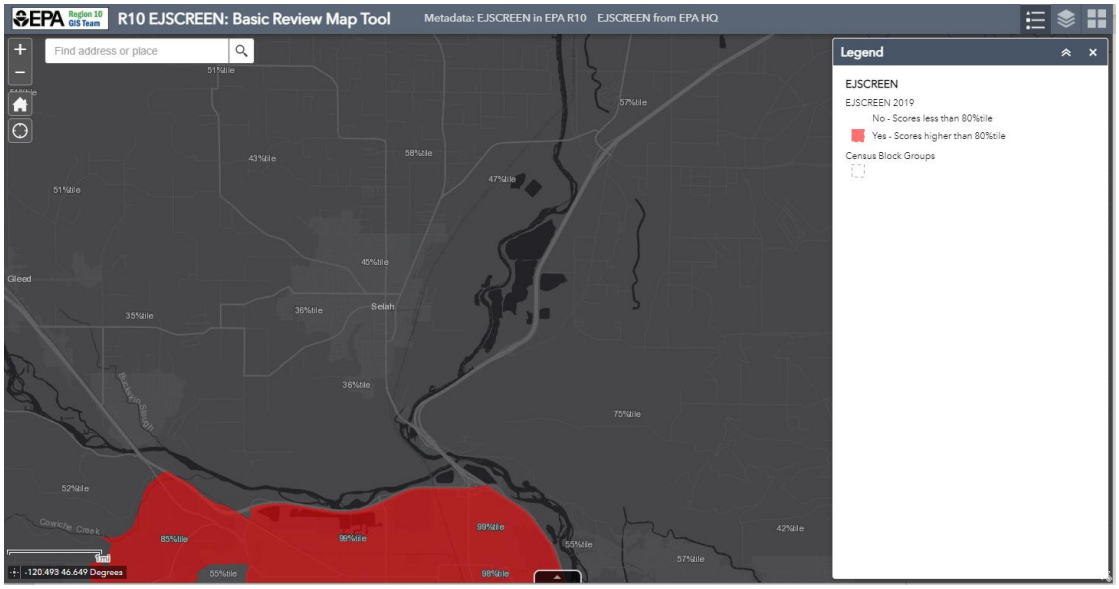
The Yakima Training Center is required to update the Quality Assurance Plan within 180 days of the effective date of the final permit. The Quality Assurance Plan must consist of standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and made available to EPA and Ecology upon request.

B. Operation and Maintenance Plan

The permit requires the Yakima Training Center to properly operate and maintain all facilities and systems of treatment and control. Proper operation and maintenance is essential to meeting discharge limits, monitoring requirements, and all other permit requirements at all times. The permittee is required to develop and implement an operation and maintenance plan for their facility within 180 days of the effective date of the final permit. The plan must be retained on site and made available to EPA and Ecology upon request.

C. Environmental Justice

As part of the permit development process, EPA Region 10 conducted a screening analysis to determine whether this permit action could affect overburdened communities. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.



The facility is not located within or near a Census block group that is potentially overburdened. The draft permit does not include any additional conditions to address environmental justice.

Regardless of whether a facility is located near a potentially overburdened community, EPA encourages permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see https://www.federalregister.gov/d/2013-10945). Examples of promising practices include: thinking ahead about community's characteristics and the effects of the permit on the community, engaging the right community leaders, providing progress or status reports, inviting members of the community for tours of the facility, providing informational materials translated into different languages, setting up a hotline for community members to voice concerns or request information, follow up, etc.

For more information, please visit https://www.epa.gov/environmentaljustice and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

D. Standard Permit Provisions

Permit Parts III., IV. And V. contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

VII. Other Legal Requirements

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. A review of the threatened and endangered species located in Idaho finds that bull trout, Chinook Salmon (Snake River fall run) and steelhead are threatened. Based on the following considerations, EPA concludes that this permit has no effect on endangered or threatened species under the jurisdiction of NOAA or USFWS.

Bull Trout

1. The U.S. Fish and Wildlife Service *Recovery Plan for the Coterminous United States Population of Bull Trout* 2015 identified causes of the Bull Trout listing. They are isolation and habitat fragmentation, poaching, non-native species, residential development, mining, transportation networks and agricultural practices. Neither Yakima Training Center's WWTP nor any sewage treatment plant is identified as a contributing factor to the decline in Bull Trout.
2. High conservative dilution ratios of more than 300 to 1 (using the lower 5^{th} percentile low flow from Table 4 and the design flow of 0.72 mgd).
3. The design flow is low at 0.72 mgd and the actual flow is only between 0.003 and 0.082 mgd, with an average actual flow of 0.04 mgd between 2015 and 2020.
4. Compliance with water quality standards for pH and bacteria at the point of discharge.
5. This permit requires compliance with the State of Washington Surface Water Quality Standards that protect aquatic organisms including threatened and endangered species.

Steelhead

Similar factors have likely caused the decline of steelhead. Based on the same reasons listed for Bull Trout, EPA determines this permit has no effect on the threatened species under the jurisdiction of NOAA or the USFWS.

B. Essential Fish Habitat

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH). Essential Fish Habitat in the Upper Yakima consists of all life stages of

Chinook and Coho Salmon according to NOAA Fisheries (https://www.habitat.noaa.gov/application/efhmapper/index.html - accessed January 22, 2021). There are no Habitat Areas of Particular Concern nor are there EFH Areas Protected from Fishing.

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. EPA has prepared an EFH assessment which appears in Appendix C.

EPA has determined that reissuance of this permit will not affect EFH in the Yakima River.

C. CWA § 401 Certification

Section 401 of the CWA requires EPA to seek State certification before issuing a final permit. EPA requested a prefiling meeting with Ecology on April 13, 2021. As a result of the certification, the State may require more stringent permit conditions or additional monitoring requirements to ensure that the permit complies with water quality standards, or treatment standards established pursuant to any State law or regulation.

EPA had preliminary discussions with Ecology regarding the 401 Certification during development of the draft permit. EPA will seek State certification and include any resulting permit conditions (if applicable) in the final documents.

D. Antidegradation

EPA has completed an antidegradation review in Appendix D and finds that it is consistent with the State's WQS and the State's antidegradation implementation procedures. Comments on the 401-certification including the antidegradation review can be submitted to Ecology as set forth above (see State Certification on Page 1 of this Fact Sheet).

E. Permit Expiration

The permit will expire five years from the effective date.

VIII. References

EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control.* US Environmental Protection Agency, Office of Water, EPA/505/2-90-001.

https://www3.epa.gov/npdes/pubs/owm0264.pdf

EPA. 2010. *NPDES Permit Writers' Manual.* Environmental Protection Agency, Office of Wastewater Management, EPA-833-K-10-001. September 2010. https://www3.epa.gov/npdes/pubs/pwm_2010.pdf

EPA. 2014. Water Quality Standards Handbook Chapter 5: General Policies. Environmental Protection Agency. Office of Water. EPA 820-B-14-004. September 2014. https://www.epa.gov/sites/production/files/2014-09/documents/handbook-chapter5.pdf

U.S. Fish and Wildlife Service. 2015. Recovery plan for the coterminous United States population of bull trout (Salvelinus confluentus). Portland, Oregon. xii + 179 pages. https://www.fws.gov/pacific/bulltrout/pdf/Final_Bull_Trout_Recovery_Plan_092915.pdf

Appendix A. Facility Information

Figure A-1: Yakima Training Center Wastewater Treatment Plant and Outfall Map

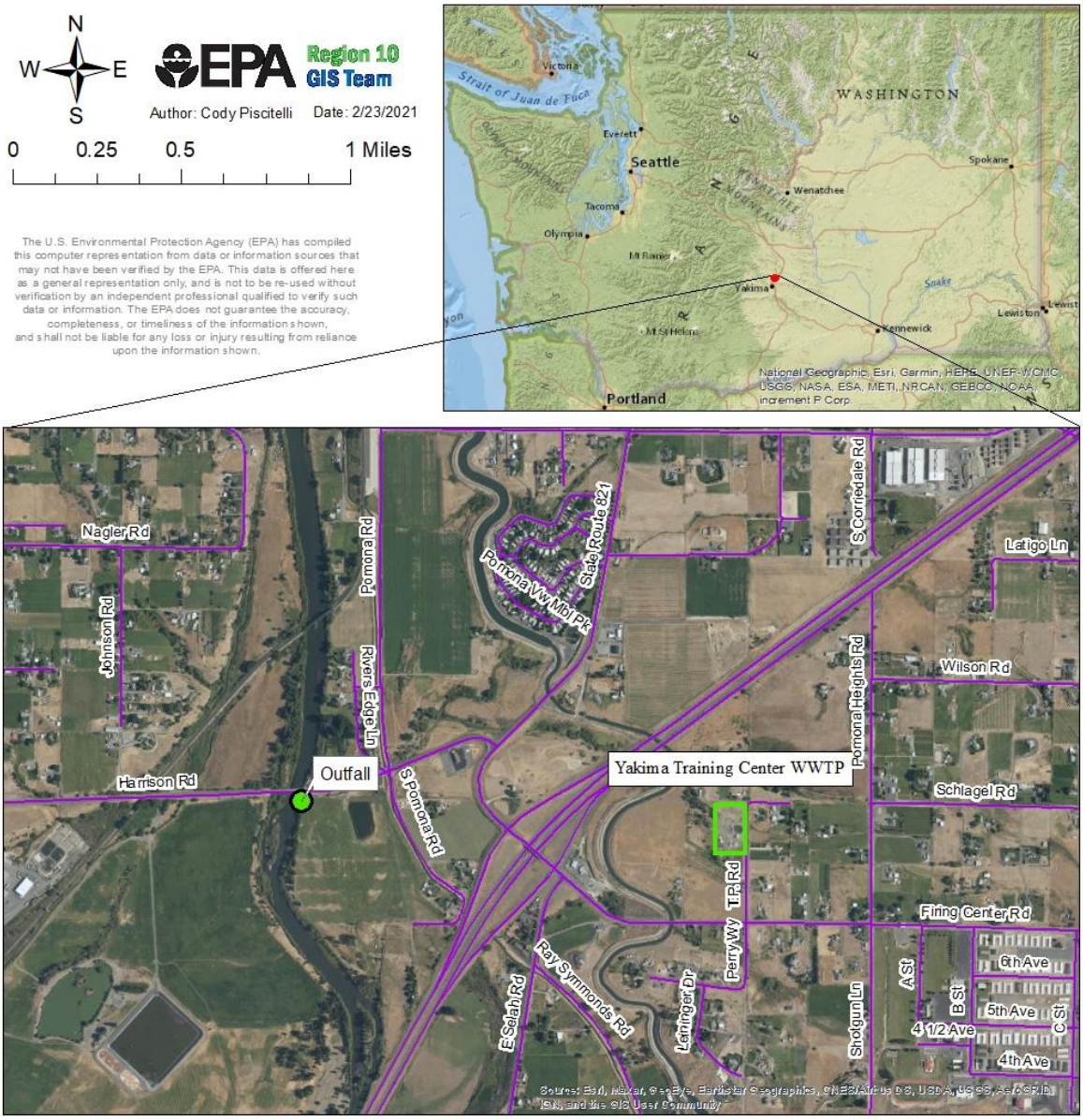
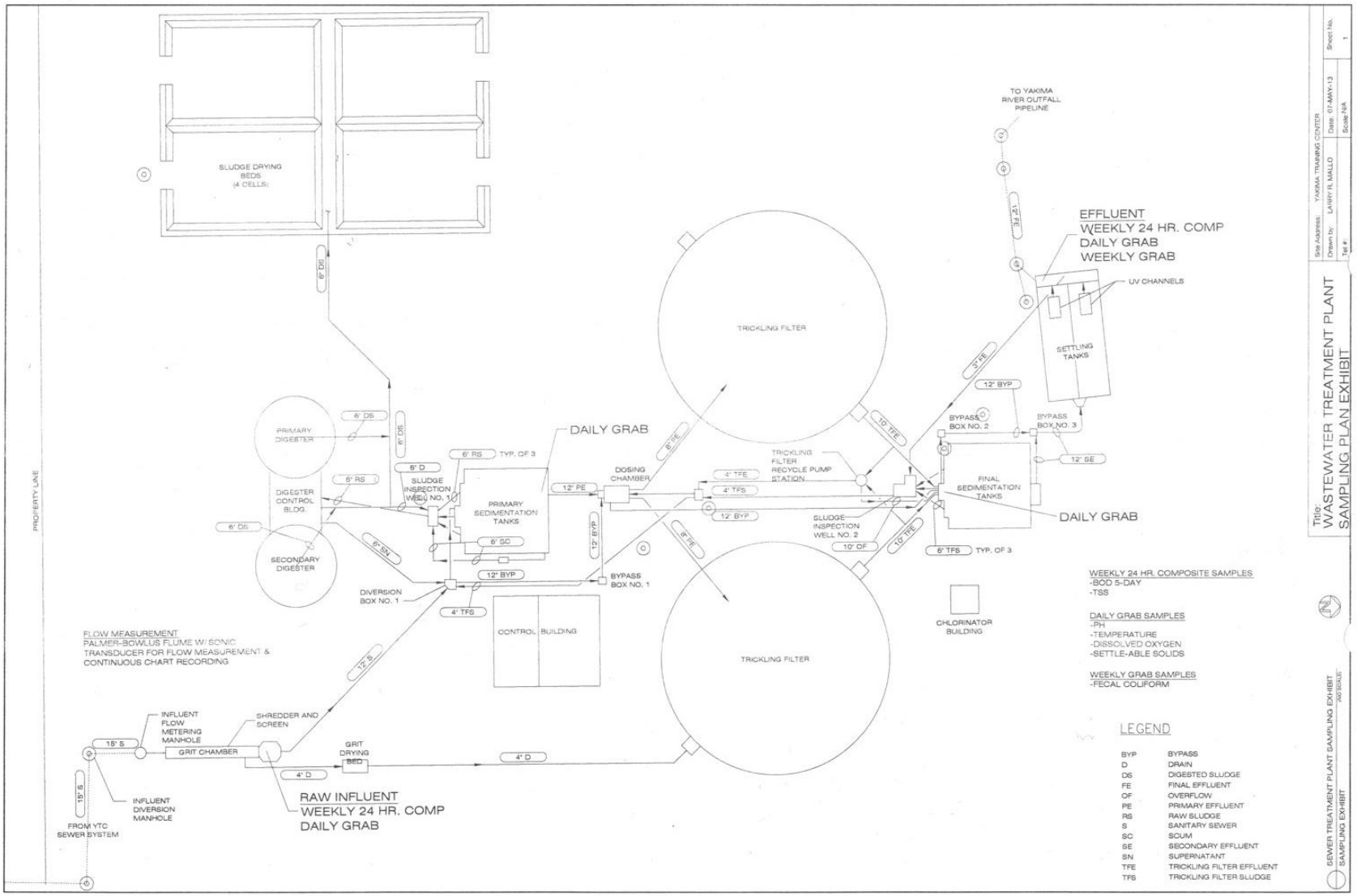


Figure A-2: Yakima Training Center Wastewater Treatment Plant Flow Schematic



Appendix B. Water Quality Data

A. Treatment Plant Effluent Data

Parameter	Flow, in conduit or thru treatment plant	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	pH	pH	Fecal Coliform	Fecal Coliform	Solids, total suspended	BOD, 5-day, 20 deg. C
Monitoring Location	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Raw Sewage Influent	Raw Sewage Influent
Statistical Base	MO MAX	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	INST MAX	INST MIN	WKLY GEOMN	MO GEOMN	MO AVG	MO AVG
Limit Units	MGD	mg/L	lb/day	mg/L	lb/day	%	mg/L	lb/day	mg/L	lb/day	%	SU	SU	#/100mL	#/100mL	mg/L	mg/L
Current Limit	Report	30	180	45	270	85	30	180	45	270	85	8.5	6.5	400	200		
07/31/2015	.032	6.	2.	8.4	2.2	90.6	2.	.3	8.5	2.2	94.	7.9	6.9	0.00	0.00	65.	75.
08/31/2015	.046	15.	6.	22.0	9.8	94.	3.	.35	9.8	4.4	97.	7.6	7.1	11.00	11.00	202.	280.
09/30/2015	.069	12.	7.	15.3	9.	94.	3.	.9	9.	5.	95.	7.4	7.1	24.00	24.00	169.	228.
10/31/2015	.05	13.	6.	152.0	58.	87.	3.	1.	11.	4.	94.	7.4	6.8	148.00	49.00	93.	109.
11/30/2015	.037	28.	11.	36.0	14.	85.5	4.	1.	23.	9.	85.	7.4	6.9	19.00	19.00	157.	194.
12/31/2015	.036	21.	6.	22.0	10.	70.	4.	1.	4.5	2.	95.	7.5	7.	208.00	7.50	85.	70.
01/31/2016	.05	25.	10.	30.0	14.	74.	4.	1.	8.	4.	97.	7.4	7.	297.00	143.00	115.	102.
02/29/2016	.049	22.	12.	14.0	7.	91.	5.	1.	4.	4.	97.	8.	6.9	17.20	13.00	136.	187.
03/31/2016	.043	3.	1.	3.0	7.	98.	5.	1.	3.	12.	97.	8.1	7.3	0.00	0.00	138.	144.
04/30/2016	.034	3.	1.	4.0	1.1	96.6	5.	1.5	7.	2.	93.	8.	7.1	2.00	2.00	101.	111.
05/31/2016	.049	6.	3.	6.0	3.	95.	5.	1.6	6.	6.	94.	7.9	7.	36.00	143.00	148.	1474.
06/30/2016	.056	6.	3.	8.5	6.	92.1	5.	2.	9.	7.5	95.6	7.5	6.9	157.00	72.40	123.	90.
07/31/2016	.054	7.	4.	7.0	4.	97.	5.	2.	5.	5.	97.	7.6	6.8	9.75	9.75	181.	177.
08/31/2016	.061	11.	6.	11.0	6.	95.16	5.	2.1	6.	6.	96.1	7.1	6.6	22.00	22.00	200.	317.
09/30/2016	.065	11.	11.	11.0	11.	93.	5.	2.4	7.	7.	96.	7.1	6.5	20.00	81.00	187.	172.
10/31/2016	.071	6.	4.	6.0	4.	96.	5.	2.44	5.	5.	97.	7.	6.5	3.00	1.75	206.	196.
11/30/2016	.041	9.	3.	9.0	3.	93.4	5.	2.6	5.	5.	96.	7.1	6.6	4.00	22.00	127.	183.
12/31/2016	.025	6.	1.	6.0	1.	88.	6.	2.75	7.	7.	92.	7.	6.6	3.00	3.00	144.	109.
01/31/2017	.018	18.	3.	18.0	3.	93.5	6.	2.75	14.	3.	94.5	7.	6.5	46.00	46.00	253.	286.

Parameter	Flow, in conduit or thru treatment plant	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	pH	pH	Fecal Coliform	Fecal Coliform	Solids, total suspended	BOD, 5-day, 20 deg. C
Monitoring Location	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Raw Sewage Influent	Raw Sewage Influent
Statistical Base	MO MAX	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	INST MAX	INST MIN	WKLY GEOMN	MO GEOMN	MO AVG	MO AVG
Limit Units	MGD	mg/L	lb/day	mg/L	lb/day	%	mg/L	lb/day	mg/L	lb/day	%	SU	SU	#/100mL	#/100mL	mg/L	mg/L
Current Limit	Report	30	180	45	270	85	30	180	45	270	85	8.5	6.5	400	200		
02/28/2017	.038	15.	10.	15.0	10.	90.	6.	3.	5.	7.	95.	6.9	6.4	40.00	40.00	126.	151.
03/31/2017	.064	17.	12.	17.0	12.	92.	6.	3.05	6.	6.	97.	7.5	6.9	144.00	144.00	233.	246.
04/30/2017	.044	6.	2.	6.0	2.	98.	6.	3.08	5.	5.	98.	7.5	6.9	39.00	39.00	387.	436.
05/31/2017	.039	10.	4.	5.1	12.03	95.25	6.	3.25	8.7	4.1	96.	7.6	6.8	57.00	30.40	191.	211.
06/30/2017	.081	31.	16.	41.0	28.	95.	6.	4.	17.	10.7	94.2	7.6	6.9	400.00	200.00	351.	370.
07/31/2017	.037	14.	5.	16.9	6.6	91.	6.	4.	11.15	4.3	95.	7.6	6.8	9.00	4.00	130.	155.
08/31/2017	.05	6.	3.	7.1	3.9	93.	6.	4.	7.15	3.2	95.2	8.	7.	20.00	6.40	208.	113.
09/30/2017	.066	13.	7.	14.9	8.8	93.	6.	4.	9.3	5.6	97.	7.5	7.	135.00	35.00	181.	203.
10/31/2017	.058	2.	2.	2.8	2.	97.	6.	4.	7.8	4.3	95.	7.7	7.2	1.00	1.00	84.	75.
11/30/2017	.035	15.	4.7	22.7	7.	95.	7.	4.06	13.15	4.8	95.	7.8	6.9	6.00	6.00	557.	359.
12/31/2017	.016	7.	1.	14.3	1.6	94.	7.	4.2	9.7	1.4	94.	7.8	6.9	2.00	2.00	142.	153.
01/31/2018	.019	7.	1.	14.9	2.7	94.	7.	5.	8.4	1.1	96.	7.6	6.8	25.00	8.00	179.	152.
02/28/2018	.012	5.	1.	10.4	1.8	96.	7.	5.	2.3	.7	98.	7.4	6.8	7.00	1.60	381.	189.
03/31/2018	.008	7.	.4	11.4	.7	96.8	7.	5.	6.	.5	97.75	7.4	6.7	0.00	0.00	287.	278.
04/30/2018	.009	3.	1.	5.6	1.	98.	7.	5.	3.3	1.	98.	7.6	6.3	1.00	0.00	304.	240.
05/31/2018	.01	6.	1.	6.8	1.	96.	7.45	5.	11.3	1.7	94.	7.9	6.6	8.00	8.00	171.	167.
06/30/2018	.031	11.	3.	15.0	4.7	92.75	8.	5.	11.3	3.5	93.25	7.4	6.7	11.00	6.00	142.	179.
07/31/2018	.029	7.	2.	13.9	4.4	90.5	8.	5.	14.6	4.6	89.25	7.6	6.9	2.00	2.00	84.	84.
08/31/2018	.05	7.	3.	9.6	4.2	94.2	8.68	5.6	14.3	6.7	94.6	7.4	6.7	33.00	10.00	143.	148.
09/30/2018	.059	13.	7.	17.8	8.7	94.	9.	6.	12.6	7.8	92.	7.5	6.8	110.00	34.80	163.	240.
10/31/2018	.045	12.	5.	18.3	8.1	93.25	9.	6.	21.95	11.2	91.25	7.1	6.8	30.00	16.50	179.	212.
11/30/2018	.021	11.	2.	29.8	5.5	96.	10.	6.	13.8	2.9	95.	7.8	7.1	1.00	1.00	155.	224.
12/31/2018	.015	4.	1.	7.5	1.	97.	10.	6.	8.6	1.	96.	7.9	7.3	3.00	1.00	139.	172.
01/31/2019	.006	3.	1.	4.0	1.	97.	11.	6.	3.35	1.	97.6	7.9	6.9	3.00	3.00	130.	117.
02/28/2019	.003	10.	1.	12.6	1.	91.	12.	6.	3.85	1.	95.	7.9	7.	33.00	15.00	164.	192.
03/31/2019	.015	20.	1.	34.1	2.8	92.23	14.	6.76	14.	1.	96.96	7.9	6.9	80.00	30.25	290.	262.
04/30/2019	.015	16.	2.	24.5	3.8	96.67	14.	7.	15.5	2.37	97.52	7.54	6.83	400.00	7.00	392.	488.
05/31/2019	.026	24.	7.	73.3	25.7	92.1	14.	7.	43.	9.	92.2	7.5	6.83	134.00	134.00	391.	480.

Parameter	Flow, in conduit or thru treatment plant	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	pH	pH	Fecal Coliform	Fecal Coliform	Solids, total suspended	BOD, 5-day, 20 deg. C
Monitoring Location	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Raw Sewage Influent	Raw Sewage Influent
Statistical Base	MO MAX	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MIN % RMV	INST MAX	INST MIN	WKLY GEOMN	MO GEOMN	MO AVG	MO AVG
Limit Units	MGD	mg/L	lb/day	mg/L	lb/day	%	mg/L	lb/day	mg/L	lb/day	%	SU	SU	#/100mL	#/100mL	mg/L	mg/L
Current Limit	Report	30	180	45	270	85	30	180	45	270	85	8.5	6.5	400	200		
06/30/2019	.047	19.	10.07	34.1	20.3	92.46	15.	7.	22.	14.	93.56	7.58	6.93	470.00	196.00	219.	248.
07/31/2019	.031	11.	3.	22.3	5.57	91.7	18.	7.1	14.6	3.65	91.06	7.81	6.93	0.00	0.00	94.	121.
07/31/2019	.031	11.	3.	22.3	5.6	91.7	3.	3.	15.	4.	87.4	7.81	6.93	0.00	0.00	94.	121.
08/31/2019	.058	16.	8.	19.1	10.5	92.4	5.01	3.7	20.	11.	90.7	7.58	7.03	96.00	28.00	183.	243.
09/30/2019	.052	11.	5.	11.0	5.	85.4	6.	5.01	9.	4.	91.8	7.51	7.15	11.00	4.00	144.	122.
10/31/2019	.041	13.	4.	28.5	8.1	84.2	6.	6.	12.	4.	88.1	7.5	7.02	28.00	7.00	104.	121.
11/30/2019	.03	11.	4.	14.9	14.88	94.9	7.	6.	8.	3.	95.26	7.51	7.16	18.00	10.00	185.	281.
12/31/2019	.061	20.	2.	5.2	3.88	91.5	7.26	7.	4.	2.	92.2	7.53	6.78	0.00	0.00	73.	69.
01/31/2020	.043	5.27	1.47	8.1	2.51	93.16	8.3	7.26	6.	2.	95.78	7.27	6.76	0.00	0.00	130.	70.
02/29/2020	.06	8.48	4.58	10.0	7.76	96.8	13.	8.3	9.	5.4	97.	6.99	6.63	0.00	0.00	269.	307.
03/31/2020	.082	11.	11.13	14.0	16.76	97.09	14.6	13.	9.1	12.9	96.92	6.99	6.22	4.00	2.00	292.	398.
04/30/2020		7.5	1.48	18.86	4.15	96.	9.9	9.9	16.3	8.1	94.31						
05/31/2020		11.04	17.47	19.6	32.2	85.	18.98	4.85	38.6	63.42	91.35						
06/30/2020	.038	10.5	5.	15.39	9.9	93.46	12.8	12.8	19.3	12.4	90.22	8.23	7.13	145.	59.00	145.	177.
07/31/2020	.037	6.97	2.16	9.86	3.37	70.88	14.24	4.09	23.	12.9	37.79	7.51	7.27	5.	3.00	64.	61.96

Average	0.04	11.33	4.65	17.98	7.99	92.28	7.66	4.40	11.06	6.07	93.57	7.54	6.86	58.97	29.41	185.17	219.00
Minimum	.003	2.00	0.40	2.76	0.70	70.00	2.00	0.30	2.30	0.50	37.79	6.90	6.22	0.00	0.00	64.00	61.96
Maximum	.082	31.00	17.47	152.00	58.00	98.00	18.98	13.00	43.00	63.42	98.00	8.23	7.30	470.00	200.00	557.00	1474.00
Count	60	62	62	62	62	62	62	62	62	62	62	60	60	60	60	60	60
Std Dev	0.02	6.40	3.91	20.75	9.19	5.72	3.80	2.68	7.61	8.17	7.71	0.31	0.23	103.65	48.29	96.65	193.02
CV	0.48	0.56	0.84	1.15	1.15	0.06	0.50	0.61	0.69	1.35	0.08	0.04	0.03	1.76	1.64	0.52	0.88
95th Percentile	0.07	23.90	11.96	35.91	25.43	97.09	14.58	8.25	22.95	12.88	97.74	8.00	7.20	302.15	143.05	387.20	438.20
5th Percentile	0.01	3.00	1.00	4.06	1.00	84.24	3.00	1.00	3.38	1.00	88.16	7.00	6.50	0.00	0.00	83.45	70.00
90th percentile	0.06	20.00	10.91	29.98	14.79	97.00	14.00	7.00	19.93	11.18	97.00	7.90	7.13	148.90	86.30	308.70	360.10

Appendix C. Essential Fish Habitat Assessment

Pursuant to the requirements for Essential Fish Habitat (EFH) assessments, this appendix contains the following information:

- Listing of EFH Species in the Facility Area
- Description of the Facility and Discharge Location
- EPA's Evaluation of Potential Effects to EFH

A. Listing of EFH Species in the Facility Area

Essential Fish Habitat in the Upper Yakima consists of all life stages of Chinook and Coho Salmon according to NOAA Fisheries (https://www.habitat.noaa.gov/application/efhmapper/index.html - accessed January 22, 2021).

B. Description of the Facility and Discharge Location

The activities and sources of wastewater at the Yakima Training Center wastewater treatment facility are described in detail in Part II and Appendix A of this fact sheet. The location of the outfall is described in Part III ("Receiving Water").

C. EPA's Evaluation of Potential Effects to EFH

Water quality is an important component of aquatic life habitat. NPDES permits are developed to protect water quality in accordance with state water quality standards. The standards protect the beneficial uses of the waterbody, including all life stages of aquatic life. The development of permit limits for an NPDES discharger includes the basic elements of ecological risk analysis. The underlying technical process leading to NPDES permit requirements incorporates the following elements of risk analysis:

Effluent Characterization

Characterization of the effluent was accomplished using a variety of sources, including:

- Permit application monitoring
- Permit compliance monitoring
- Statistical evaluation of effluent variability
- Quality assurance plans and evaluations

Identification of Pollutants of Concern and Threshold Concentrations

The pollutants of concern include pollutants with aquatic life criteria in the Washington Water Quality Standards. Threshold concentrations are equal to the numeric water quality criteria for the protection of aquatic life.

Exposure and Wasteload Allocation

Analysis of the transport of pollutants near the discharge point with respect to the following:

- Mixing zone policies in the Washington Water Quality Standards

- Dilution modeling and analysis
- Exposure considerations (e.g., prevention of lethality to passing organisms)

Statistical Evaluation for Permit Limit Development

Calculation of permit limits allow for no mixing zones in the receiving water.

Monitoring Programs

Development of monitoring requirements, including:

- Compliance monitoring of the effluent
- Ambient monitoring

Protection of Aquatic Life in NPDES Permitting

EPA's approach to aquatic life protection is outlined in detail in the *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). EPA and states evaluate toxicological information from a wide range of species and life stages in establishing water quality criteria for the protection of aquatic life.

The NPDES program evaluates a wide range of chemical constituents to identify pollutants of concern with respect to the criteria values. When a facility discharges a pollutant at a level that has a "reasonable potential" to exceed, or to contribute to an exceedance of, the water quality criteria, permit limits are established to prevent exceedances of the criteria in the receiving water (outside any authorized mixing zone).

Effects Determination

Since the draft permit has been developed to protect aquatic life species in the receiving water in accordance with the Washington water quality standards, EPA has determined that issuance of this permit is not likely to adversely affect any EFH in the vicinity of the discharge. EPA will provide NMFS with copies of the draft permit and fact sheet during the public notice period. Any recommendations received from NMFS regarding EFH will be considered prior to reissuance of this permit.

Appendix D. Antidegradation Analysis

The purpose of Washington's antidegradation policy (WAC 173-201A-300 to 330) is to:

(a) Restore and maintain the highest possible quality of the surface waters of Washington;

(b) Describe situations under which water quality may be lowered from its current condition;

(c) Apply to human activities that are likely to have an impact on the water quality of a surface water;

(d) Ensure that all human activities that are likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART); and

(e) Apply three levels of protection for surface waters of the state, as generally described below:

(i) Tier I is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.

(ii) Tier II is used to ensure that waters of a higher quality than the criteria assigned are not degraded unless such lowering of water quality is necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities.

(iii) Tier III is used to prevent the degradation of waters formally listed as "outstanding resource waters," and applies to all sources of pollution.

A Tier II analysis is necessary when all three of the following conditions are met:

1. The facility is planning a new or expanded action.
2. Ecology regulates or authorizes the action.
3. The action has the potential to cause measurable degradation to existing water quality at the edge of a chronic mixing zone

Facility Specific Requirements

This facility must meet Tier I requirements:

1. Dischargers must maintain and protect existing and designated uses. Ecology must not allow any degradation that will interfere with, or become injurious to, existing or designated uses, except as provided for in chapter 173-201A WAC.
2. For waters that do not meet assigned criteria, or protect existing or designated uses, Ecology will take appropriate and definitive steps to bring the water quality back into compliance with the WQS.
3. Whenever the natural conditions of a water body are of a lower quality than the assigned criteria, the natural conditions constitute the water quality criteria. Where water quality

criteria are not met because of natural conditions, human actions are not allowed to further lower the water quality, except where explicitly allowed in State WQS.

All the effluent limits in the Draft Permit are as stringent as the 1975 Permit, and beneficial uses will not be impaired by the facility. The facility meets Tier I requirements and does not trigger the conditions that require a further Tier II analysis. The analysis described demonstrates that the draft permit conditions will protect existing and designated uses of the receiving water. Therefore, the Draft Permit meets Ecology's Antidegradation policy.