# 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:

City of Kamiah

City of Kamiah Water Treatment Plant

Public Comment Start Date: **January 6, 2026**

Public Comment Expiration Date: **February 5, 2026**

### The EPA Proposes to Reissue the NPDES Permit

The EPA proposes to reissue the NPDES permit for the facility referenced above. The draft permit places conditions on the discharge of pollutants from the water 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 (FS) 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

### CWA § 401 Certification

Since this facility discharges to tribal waters and the Nez Perce Tribe does not have approved Treatment as a State (TAS), the EPA is the certifying authority for the permit. See FS Section VI.C. Comments regarding the intent to certify should be directed to the EPA at EPAR10WD-NPDES@epa.gov.

### Clean Water Act §401(A)(2) Review

CWA Section 401(a)(2) requires that, upon receipt of an application and 401 certification, the EPA notify a neighboring State or Tribe with TAS when the EPA determines that the discharge may affect the quality of the neighboring State/Tribe's waters.

As stated above, the EPA is the certifying authority and is accepting comment regarding the intent to certify this permit. Once the EPA reviews any comments received regarding the intent to certify and has signed a final certification, the EPA will determine whether the discharge may affect a neighboring jurisdiction's waters (33 U.S.C. § 1341(a)(2)).

### Public Comment

Persons wishing to comment on, or request a Public Hearing for, the draft permit 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 the EPA as described below.

By the expiration date of the public comment period, all written comments and requests must be submitted to EPAR10WD-NPDES@epa.gov with the subject line "Comments on Draft NPDES Permit (ID0028421)".

After the Public Notice expires, and all comments have been considered, the EPA 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, the 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 NPDES permit, fact sheet and other information can be downloaded from the internet at https://www.epa.gov/npdes-permits/about-region-10s-npdes-permit-program.

The draft Administrative Record for this action contains any documents listed in the References section. The Administrative Record or documents from it are available electronically upon request by emailing EPAR10WD-NPDES@epa.gov.

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## ACRONYMS

| | |
|---|---|
| 1Q10 | 1 day, 10-year low flow |
| 7Q10 | 7-day, 10-year low flow |
| 30B3 | Biologically based design flow intended to ensure an excursion frequency of less than once every three years, for a 30-day average flow. |
| 30Q10 | 30-day, 10-year low flow |
| AML | Average Monthly Limit |
| BAT | Best Available Technology economically achievable |
| BCT | Best Conventional pollutant control Technology |
| BE | Biological Evaluation |
| BPT | Best Practicable |
| °C | Degrees Celsius |
| CFR | Code of Federal Regulations |
| CFS | Cubic Feet per Second |
| CV | Coefficient of Variation |
| CWA | Clean Water Act |
| DMR | Discharge Monitoring Report |
| EFH | Essential Fish Habitat |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| FR | Federal Register |
| Gpd | Gallons per day |
| HUC | Hydrologic Unit Code |
| ICIS | Integrated Compliance Information System |
| lbs/day | Pounds per day |
| LTA | Long Term Average |
| mg/L | Milligrams per liter |
| mL | Milliliters |
| ML | Minimum Level |
| µg/L | Micrograms per liter |
| mgd | Million gallons per day |
| MDL | Maximum Daily Limit or Method Detection Limit |
| NEPA | National Environmental Policy Act |
| NTU | Nephelometric Turbidity Units |
| NOAA | National Oceanic and Atmospheric Administration |
| NOI | Notice of Intent |

| | |
|---|---|
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and maintenance |
| PFAS | Perfluoroalkyl and Polyfluoroalkyl Substances |
| POTW | Publicly owned treatment works |
| QAP | Quality assurance plan |
| RP | Reasonable Potential |
| RPM | Reasonable Potential Multiplier |
| RWC | Receiving Water Concentration |
| SS | Suspended Solids |
| SSO | Sanitary Sewer Overflow |
| s.u. | Standard Units |
| TBEL | Technology Based Effluent Limit |
| TMDL | Total Maximum Daily Load |
| TRC | Total Residual Chlorine |
| THMs | Trihalomethanes |
| TSD | Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) |
| TSS | Total suspended solids |
| TTHMs | Total Trihalomethanes |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| WD | Water Division |
| WQBEL | Water quality-based effluent limit |
| WQS | Water Quality Standards |
| WTP | Water treatment plant |

# I. Background Information

## A. GENERAL INFORMATION

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

**Table 1. Table General Facility Information**

| | |
|---|---|
| NPDES Permit #: | ID0028461 |
| Applicant: | City of Kamiah,<br>City of Kamiah Water Treatment Plant |
| Type of Ownership | Public Water Treatment Plant |
| Physical Address: | 101 E. Third Street<br>Kamiah, ID 83536 |
| Mailing Address: | P.O. Box 338<br>Kamiah, ID 83536 |
| Facility Contact: | Stuart Bryant<br>sbryant@cityofkamiah.org<br>(208) 935-0319 |
| Facility Location: | 46.228949877°N 116.01812998°W |
| Receiving Water | Clearwater River |
| Facility Outfall | 46.228889°N 116.017778°W |

## B. PERMIT HISTORY

The most recent NPDES permit for the City of Kamiah Water Treatment Plant (Kamiah WTP) was issued on November 26, 2012, became effective on January 1, 2013, and expired on December 31, 2017. An NPDES application for permit reissuance was submitted by the permittee on January 3, 2018. The EPA determined that the application was timely and complete. Therefore, pursuant to Title 40 Code of Federal Regulations (CFR) 122.6, the permit has been administratively continued and remains fully effective and enforceable.

## C. TRIBAL COORDINATION AND CONSULTATION

The EPA consults on a government-to-government basis with federally recognized Tribal governments when EPA actions and decisions may affect Tribal interests. Meaningful Tribal consultation is an integral component of the federal government's general trust relationship with federally recognized tribes. The federal government recognizes the right of each tribe to self-government, with sovereign powers over their members and their territory. Executive Order 13175 (November 2000) entitled "Consultation and Coordination with Indian Tribal Governments" requires federal agencies to have an accountable process to assure meaningful and timely input by tribal officials in the development of regulatory policies on matters that have tribal implications and to strengthen the government-to-government relationship with Indian tribes. In May 2011, the EPA issued the "EPA Policy on Consultation and Coordination with Indian Tribes" which established national guidelines and institutional controls for consultation.

The Kamiah WTP is located on the Nez Perce Reservation of the Nez Perce Tribe (Nez Perce or Tribe). Consistent with the Executive Order and the EPA tribal consultation policies, the EPA coordinated with the Nez Perce during development of the draft permit and is inviting the Tribe to engage in formal tribal consultation.

# II. Facility Information

## A. TREATMENT PLANT DESCRIPTION

### 1. Service Area

The City of Kamiah owns and operates the Kamiah WTP located in Kamiah, ID. The facility serves a resident population of 1933.

### 2. Treatment Process

The city reported that the facility has a design flow of 0.8 mgd in the permit application; however, since that design flow is based on the volume of water sent to the public drinking water system, it is not representative of the outfall discharge. As a surrogate for an actual design flow, the existing permit utilized the sum amount of water that each process was estimated to use, 0.0489 mgd. This number appears to be inaccurate as the discharge frequently exceeds this value. The EPA is reevaluating the design flow and will instead utilize the $95^{th}$ percentile of the recorded daily maximum flow reported in the discharge monitoring reports (DMRs), which is 0.088 mgd. 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.

The facility is a surface water treatment plant that utilizes direct filtration, drawing freshwater from the Clearwater River, treating it, distributing most of the drawn water as drinking water, and then discharging a small amount of wastewater back into the Clearwater River.

Treatment begins with liquid-solid gravity separators that remove sand and grit solids. These solids are then dewatered and removed water is routed to the process water settling basin. After pretreatment, small amounts of coagulation and flocculation additives are used to separate fine particles and colloidal materials from the water, namely poly-aluminum chloride and a polymer filter aid, Kemira Superfloc N-300LMW. These materials then enter the clarifiers.

In clarification, the suspended materials settle out of the water stream through gravity. The Kamiah WTP accomplishes this by using up-flow clarifiers, a system where water is pumped upward through filters to remove solids from the water. Solids are rinsed out from the clarifier four times a day. Water is then further filtered after the clarification process and then disinfected with chlorine, producing the finished water piped to drinking water systems.

## B. OUTFALL DESCRIPTION

The treated effluent from the Kamiah WTP discharges from one outfall into the Clearwater River and comes from four waste streams; the clarifier rinse, filter backwash, filter drain down, and the filter-to-waste process. All four of the wastewater streams are routed to the settling basin before discharge into the Clearwater River.

- Clarifier rinse: Occurs 2-4 times per day when solids are rinsed from the clarifier. Raw water is used to rinse the clarifier, and no chemicals or agents are added, solids in the clarifier are also dewatered. At most roughly 14,400 gallons of water are discharged per day.
- Filter backwash: Filter media is cleaned by flushing with water in the reverse direction to normal flow, with sufficient force to separate particles from the media. This occurs every 1-2 days, each cycle utilizes approximately 25,000 gallons of water. The water used for this is roughly 50% raw river water and 50% chlorinated water routed from the treated water well. Relative to raw river water, chlorinated water coming from the well is likely to contain higher amounts of pollutant impurities introduced by the facility process, such as total trihalomethanes (TTHMs), residual chlorine, and aluminum. The facility occasionally dechlorinates their treated water, when chlorine levels have the potential to violate effluent limits.
- Filter drain down: This process is conducted in order to maintain the performance of the backwash filter at the beginning of the backwash cycle. It occurs every 1-2 days and utilizes roughly 3,300 gallons of water
- Filter-to-waste process: Filter-to-waste is generated by filters immediately after being placed back on-line following backwashing. The filter-to-waste is not considered to be of a quality that can be sent directly into the water distribution system but is a typically clean waste stream. Typically, each filter-to-waste process cycle will generate approximately 6,000 gallons.

The plant does not discharge into basins or ponds. However, the facility does generate a small amount of sludge which is retained on site. The amount of sludge is extremely minimal and is not discharged via outfall 001. Once it is no longer suspended it dries readily in a former wastewater lagoon.

The outfall is not equipped with a diffuser, and the point of discharge in the Clearwater River is located within the boundaries of the Nez Perce Reservation. The Clearwater River is a tributary to the Snake River.

## C. EFFLUENT CHARACTERIZATION

To characterize the effluent, the EPA evaluated the facility's application form, DMR data, and additional data provided by City of Kamiah Water Treatment Plant. The effluent quality is summarized in Table 2. Data is provided in Appendix B.

**Table 2. Effluent Characterization**

| Parameter | Minimum | Maximum | $95^{th}$ Percentile | Notes |
|---|---|---|---|---|
| Total Residual Chlorine (mg/L) | 0 | 0.5 | 0.2 | Daily Max |
| Total Residual Chlorine (mg/L) | 0 | 0.2 | 0.1 | Monthly Average |
| Total Residual Chlorine (lbs/Day) | 0 | 0.2 | 0.1 | Daily Max |
| Total Residual Chlorine (lbs/Day) | 0 | 0.1 | 0.0 | Monthly Average |
| Alkalinity (mg/L) | 5.2 | 191.1 | 25.1 | Daily Max |
| Alkalinity (mg/L) | 5.2 | 191.1 | 25.1 | Monthly Average |
| Aluminum (µg/L) | 0.5 | 1730 | 1667 | Annual Max |
| Aluminum (µg/L) | 0.5 | 1730 | 1667 | Annual Average |
| Turbidity (NTU) | 0 | 15.7 | 5.3 | Daily Max |
| Turbidity (NTU) | 0 | 4.7 | 2.8 | Monthly Avg |
| pH | 4.0 | 8.6 | 7.6 | Inst Max |
| pH | 6.3 | 7.5 | 6.5[3] | Inst Min |
| TSS (mg/L) | 1 | 65.1 | 22.5 | Daily Max |
| TSS (mg/L) | 1 | 65.1 | 22.5 | Monthly Avg |
| TSS (lbs/day) | 0 | 32.6 | 11.7 | Daily Max |
| TSS (lbs/day) | 0 | 18.5 | 6.4 | Monthly Avg |
| Temperature ($^0$C) | 1 | 27 | 25.3 | Daily Max |
| Temperature ($^0$C) | 0.8 | 25 | 23.1 | Monthly Avg |
| Turbidity (Turbidity Units) | 0 | 15.7 | 5.3 | Daily Max |
| Turbidity (Turbidity Units) | 0 | 4.7 | 2.8 | Monthly Average |
| Cooper[1] (µg/L) | 3.5 | 3.5 | 3.5 | Annual Max |
| Copper[1] (µg/L) | 3.5 | 3.5 | 3.5 | Annual Average |
| Zinc, Total Recoverable[1] (µg/L) | 1.6 | 1.6 | 1.6 | Annual Max |
| Zinc, Total Recoverable[1] (µg/L) | 1.6 | 1.6 | 1.6 | Annual Average |
| Antimony, arsenic, beryllium, cadmium, chromium (III and VI), copper, lead, mercury, nickel, selenium, | | | | |

| Parameter | Minimum | Maximum | 95th Percentile | Notes |
|---|---|---|---|---|
| silver, thallium, and total trihalomethanes (TTHSs)[2] | | | | |
| Source: DMR Data from the Kamiah WTP, 2015-2024<br>1) Only 1 data point for both zinc and copper (December 2015), 3 years of annual monitoring required in previous permit<br>2) No data for any of the parameters listed, 3 years of monitoring required in previous permit<br>3) 5th percentile for Inst Min pH | | | | |

## D. COMPLIANCE HISTORY

A summary of effluent violations 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=110064630706#enforcement.

There are some incidents of limit exceedances in the previous permitting period, including multiple exceedances of the total suspended solids (TSS) monthly average/daily maximum effluent limits and minimum pH limits.

Additionally, the facility failed to monitor 13 heavy metals and 4 trihalomethanes: chlorodibromomethane, dichlorobromomethane, chloroform, and bromoform (TTHMs), specified in the previous permit. Monitoring was required annually for the first 3 years of the permit for both parameters; however, the only data submitted was the annual monitoring for copper and zinc in 2015.

**Table 3. Summary of Effluent Violations (Jan 2013-Jan 2025)**

| Parameter | Limit Type | Units | Number of Instances | Dates |
|---|---|---|---|---|
| TSS | Daily Maximum | mg/L | 2 | Feb 2017, Sep 2017 |
| TSS | Monthly Average | mg/L | 2 | Feb 2017, Sep 2017 |
| TSS | Daily Maximum | kg/day | 2 | Feb 2017, Sep 2017 |
| TSS | Monthly Average | kg/day | 2 | Feb 2017, Sep 2017 |
| pH | INST Min | s.u | 2 | Nov 2015, March 2016 |

The EPA conducted an inspection of the facility in 2023. The inspection encompassed the water treatment process, records review, operation and maintenance, and the collection system. Overall, the results of the inspection found issues regarding the following permit conditions:

- Special Conditions Documentation:
    - No Best Management Practices (BMP) Plan, Quality Assurance Plan (QAP), or Operation and Maintenance Plan available on site.
- Records Retention and Development:
    - Failed to record clarifier rinses;
    - Meters for pH, temperature, and turbidity were not calibrated prior to use, sometimes for months at a time; and,
    - No formal standard operating procedures (SOPs) for processes such as the clarifier rinse and backwash, the dechlorination procedure, or the sludge pumping from the settling basin.
- Operations and Maintenance:
    - Location of Outfall 1 was unknown and unable to be located;
    - Soda ash and poly-aluminum chloride were improperly stored outside of secondary containment and posed a contamination risk; and,
    - There was an accumulation of solids within the settling basin, solids were 2-3 inches from the weir that discharges to outfall 001.
- Representative Sampling
    - The temperature of the sampling coolers received at the laboratory were consistently greater than 6$^o$ Celsius.

# III. Receiving Water

In drafting permit conditions, the 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 (WQBEL) section in Part IV.A.3. This section summarizes characteristics of the receiving water that impact that analysis.

This facility discharges to the Clearwater River in the City of Kamiah, ID located at latitude 46.228949877°N and longitude 116.01812998°W. The outfall is located approximately 7.5 miles downstream of the confluence of the middle and south forks of the Clearwater River and 12.5 miles upstream of the confluence of Lolo Creek and the Clearwater River. This places the outfall within the Clearwater Subbasin of the Clearwater Basin, referenced in Idaho's Water Quality Standards and Wastewater Treatment Requirements (IDAPA 58.01.02.120.08.).

## A. WATER QUALITY STANDARDS

CWA § 301(b)(1)(C) requires the development of limitations in permits necessary to meet Water Quality Standards (WQS). 40 CFR 122.4(d) requires that the conditions in NPDES permits ensure compliance with the WQS of all affected States. A State's WQS 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.

The Nez Perce Tribe has not applied for the status of Treatment as a State (TAS) from the EPA for purposes of the CWA. When the Nez Perce Tribe is granted TAS, and when it has WQS approved by EPA, those Tribal WQS will be used for determining effluent limitations. Meanwhile, the Idaho WQS were used as reference for setting permit limits, and to protect downstream uses in the State of Idaho.

### 1. Designated Beneficial Uses

This facility discharges to the Clearwater River in the Clearwater Subbasin (HUC 17060306) Water Body Unit C-22. At the point of discharge, the Clearwater River is protected for the following designated uses:

- Cold water aquatic life
- Primary contact recreation
- Domestic water supply
- Salmonid spawning

In addition, WQS state that all waters of the State of Idaho are protected for industrial and agricultural water supply, wildlife habitats and aesthetics (IDAPA 58.01.02.100.03.b and c, 100.04 and 100.05).

## B. RECEIVING WATER QUALITY

The water quality for the receiving water is summarized in Table 4. Water quality measurements were collected from a variety of sources, including the United States Geological Survey (USGS) station in Orofino, water quality survey data collected by the Nez Perce Tribe, and EPA National Aquatic Resources Survey (NARS) data. Exact sources are detailed in the footnotes of table 4 below.**Table 4. Receiving Water Quality Data**

| Parameter | Units | Metric | Value | Source | Count |
|---|---|---|---|---|---|
| Temperature | °C | $5^{th} – 95^{th}$ % | 0, 25.8 | Kamiah WWTP Upstream Monitoring | 40 |
| pH | Standard units | $5^{th} – 95^{th}$ % | 6.52, 8.99 | EPA & Nez Perce Tribe | 7 |
| Antimony[a] | µg/L | N/A | 0.028 | Nez Perce Tribe | 1 |
| Arsenic | µg/L | Average | 0.26 | Nez Perce Tribe | 2 |
| Beryllium | µg/L | Average | 0.008 | Nez Perce Tribe | 3 |

| | | | | | |
|---|---|---|---|---|---|
| Cadmium[a] | µg/L | N/A | 0.008 | Nez Perce Tribe | 1 |
| Chromium | µg/L | Average | 0.18 | Nez Perce Tribe | 3 |
| Copper | µg/L | Average | 0.153 | Nez Perce Tribe | 3 |
| Dissolved Oxygen | mg/L | Average | 10.4 | Nez Perce Tribe | 5 |
| Lead | µg/L | Average | 0.02 | Nez Perce Tribe | 3 |
| Mercury | ng/L | Average | 1.35 | Nez Perce Tribe | 3 |
| Nickel | µg/L | Average | 0.09 | Nez Perce Tribe | 3 |
| Thallium[a] | µg/L | N/A | 0.025 | Nez Perce Tribe | 1 |
| Zinc[a] | µg/L | N/A | 0.9 | Nez Perce Tribe | 1 |
| Sources:<br>USGS Gauge Station 13340000 in Orofino, Idaho (2024-2025)<br>Nez Perce Tribe River Survey (2022)<br>EPA National Aquatic Resources Survey (2013, 2019)<br><br>a. Only one data point available for parameter | | | | | |

### 2. Water Quality Limited Waters

The Idaho Department of Environmental Quality (NEZ PERCE TRIBE) 2022 Integrated Report states that this portion of the Clearwater River is Category 3T-waters, waters that are wholly or partially on Indian reservations are not subject to the State's § 305(b)/§ 303(d) reporting requirements. This segment of the river has not been assessed by the State or the Nez Perce to determine whether beneficial uses are being attained or impaired.

### 3. Low Flow Conditions

Critical low flows for the receiving water are summarized in Table 5 and were estimated based on USGS gage data (USGS 13340000) from 2014 through 2024. The previous permit used gage data from USGS station #13339000, in Kamiah. However, data collection at this station stopped in 1965. To best portray the current flow regime of the Clearwater River, the proposed permit is based upon modern data from a downstream monitoring location. Low flows are defined in Appendix C.

**Table 5. Critical Flows in Receiving Water**

| Flows | Annual Flow (cfs) |
|---|---|
| 1Q10 | 685.5 |
| 7Q10 | 856.9 |
| Harmonic Mean | 3092.6 |

| Flows | Annual Flow (cfs) |
|---|---|
| USGS station 13340000 located at Orofino, Idaho in the Clearwater River. (Jan 1, 1989- April 1, 2025) | |

## IV. Effluent Limitations and Monitoring

Table 6 below presents the existing effluent limits and monitoring requirements in the current Permit.

Table 7, below, presents the effluent limits and monitoring requirements proposed in the draft permit.

The draft permit includes several changes to the effluent limitations and monitoring requirements, which are as follows:

- Aluminum monitoring increased to quarterly
- Increased TSS and TRC mass-based limits

**Table 6. Existing Permit - Effluent Limits and Monitoring Requirements**

| Parameter | Units | Effluent Limitations | | | Monitoring Requirements | | |
|---|---|---|---|---|---|---|---|
| | | Average Monthly Limit | Average Weekly Limit | Max Daily Limit | Sample Location | Sample Frequency | Sample Type |
| Total Residual Chlorine (TRC) | mg/L | 0.3 | -- | 0.5 | Effluent | Weekly | Grab |
| | lbs/day[1] | 0.12 | -- | 0.2 | | | |
| TSS | mg/L | 30 | -- | 45 | Effluent | Monthly | Grab |
| | lbs/day[1] | 12.23 | -- | 18.35 | | | |
| Outfall Flow | gpd | -- | -- | -- | Effluent | Daily | Estimate[2] |
| pH | s.u | Must Be Between 6.5 and 9.0 | | | Effluent | Weekly | Grab |
| Metals[3,4] | µg/L | -- | -- | -- | Effluent | Annual | Grab |
| TTHMs[5] | µg/L | -- | -- | -- | Effluent | Annual | Grab |
| Turbidity | NTUs | -- | -- | -- | Effluent | Monthly | Grab |
| Aluminum | µg/L | -- | -- | -- | Effluent | Annually | Grab |
| Temperature | °C | -- | -- | -- | Effluent | Weekly | Grab |
| Alkalinity as $CaCO_3$ | mg/L | -- | -- | -- | Effluent | Monthly | Grab |

1. Loading is normally calculated by multiplying the concentration in mg/L by the average daily flow for the day of sampling in mgd and a conversion factor of 8.34. If the concentration is measured in µg/L, the conversion factor is 0.00834. 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).
2. Report average monthly and maximum daily gallons per day (gpd).
3. Analyses for the thirteen metals (identified as Compound Nos. 1 – 13 by the National Toxics Rule at 40 CFR § 131.36). These include: antimony, arsenic, beryllium, cadmium, chromium (III and VI), copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.
4. Sampling required during first three years of coverage only.
5. Analysis for chloroform, chlorodibromomethane, dichlorobromomethane, and bromoform

**Table 7. Draft Permit - Effluent Limits and Monitoring Requirements**

| Parameter | Units | Effluent Limitations | | | Monitoring Requirements | | |
|---|---|---|---|---|---|---|---|
| | | Average Monthly Limit | Average Weekly Limit | Max Daily Limit | Sample Location | Sample Frequency | Sample Type |
| TRC | mg/L | 0.3 | -- | 0.5 | Effluent | Weekly | Grab |
| | lbs/day[1] | 0.22 | -- | 0.37 | | | |
| TSS | mg/L | 30 | -- | 45 | Effluent | Monthly | Grab |
| | lbs/day[1] | 22 | -- | 33 | | | |
| Outfall Flow | gpd | -- | -- | -- | Effluent | Daily | Estimate[2] |
| pH | s.u | Must Be Between 6.5 and 9.0 | | | Influent & Effluent | Weekly | Grab |
| Metals[3,4] | µg/L | -- | -- | -- | Effluent | Annual | Grab |
| TTHMs[5] | µg/L | -- | -- | -- | Effluent | Annual | Grab |
| Turbidity | NTUs | -- | -- | -- | Effluent | Monthly | Grab |
| Aluminum | µg/L | -- | -- | -- | Effluent | Quarterly | Grab |
| Temperature | ºC | -- | -- | -- | Effluent | Weekly | Grab |
| Alkalinity as $CaCO_3$ | mg/L | -- | -- | -- | Effluent | Monthly | Grab |

1. Loading is normally calculated by multiplying the concentration in mg/L by the average daily flow for the day of sampling in mgd and a conversion factor of 8.34. If the concentration is measured in µg/L, the conversion factor is 0.00834. 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).
2. Report average monthly and maximum daily gallons per day (gpd).
3. Analyses for the fourteen metals (identified as Compound Nos. 1 – 13 by the National Toxics Rule at 40 CFR § 131.36). These include: antimony, arsenic, beryllium, cadmium, chromium (III and VI), copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.
4. Sampling required during first three years of reissuance coverage only.
5. Analysis for chloroform, chlorodibromomethane, dichlorobromomethane, and bromoform

## A. BASIS FOR EFFLUENT LIMITS AND MONITORING REQUIREMENTS

In general, the CWA requires that the effluent limits for a particular pollutant be the more stringent of either technology-based effluent limits (TBELs) or WQBELs. TBELs are set according to the level of treatment that is achievable using available technology. A WQBEL is designed to ensure that the WQS applicable to a waterbody are being met and may be more stringent than TBELs.

CWA § 308 and 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.

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 Part 136) or as specified in the permit.

### 1. Pollutants of Concern

Pollutants of concern are those that either have TBELs or may need WQBELs. The EPA identifies pollutants of concern for the discharge based on those which:

- Have a TBEL
- Have an assigned wasteload allocation (WLA) from a total maximum daily load (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

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

- TSS

- TRC
- pH
- Temperature
- Metals (listed in Table 7 above)
- TTHMs (listed in Table 7 above)
- Turbidity
- Aluminum

**2. Technology-Based Effluent Limits (TBELs)**

**a. Federal Secondary Treatment Effluent Limits**

To date, the EPA has not established, pursuant to Section 301(b) of the CWA, technology-based effluent limitation guidelines (ELGs) or standards of performance applicable to discharges from water treatment plants. In such circumstances, where ELGs have not been developed, the EPA relies on best professional judgment (BPJ), pursuant to Section 402(a)(1) of the CWA, to establish technology-based effluent limits on a case-by-case basis. Such limits must be established based on best available technology economically achievable (BAT) for toxics and non-conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants and take into consideration the factors presented at 40 CFR § 125.3(d)(2) for BCT and at 40 CFR § 125.3(d)(3) for BAT. Since there are no ELGs for discharges from the water treatment industry, the EPA established technology-based effluent limitations based on BPJ for TSS and TRC.

**b. Mass-Based Limits**

*i. TSS*

The EPA is retaining the existing TSS effluent limits of 30 mg/l (average monthly limit) and 45 mg/l (maximum daily limit). The EPA established these TBELs in the permit utilizing BPJ to meet the requirements of BCT/BAT.

In establishing the TSS limitations for this permit, the EPA is relying on research performed for the EPA in 1987 (SAIC, 1987). This study considered sedimentation lagoons as the model treatment for BCT based on a finding that 76 percent of WTPs surveyed had used this technology for water treatment. Analysis of 76 individual NPDES permits for WTPs determined that limitations of 30 mg/l and 45 mg/l were representative of current permitting practice for average monthly and daily maximum TSS limits, respectively. Additionally, analysis of monitoring data for sedimentation lagoons within the industry resulted in calculation of 95th percent occurrence (monthly average) and 99th percent occurrence (daily maximum) levels of treatment of 28.1 mg/l and 44.4 mg/l, respectively. These levels of treatment performance were considered BPT, and subsequent analysis determined that BPT was equal to BCT. The study identified 30 mg/l and 45 mg/l to be the monthly average and daily maximum TSS limits for a model NPDES permit.

Both the existing permit for the Kamiah WTP and other individual permits for water treatment plants in Idaho have limits of 30 mg/l and 45 mg/l (monthly average and daily maximum). The WTP's within Idaho have largely been in compliance with these limits, which further shows that the limits identified in the study represent BPT/BCT for water treatment plants. Therefore, the EPA is retaining these BPJ TBELs in the draft permit.

40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, except under certain conditions. To calculate mass-based limits, the EPA is utilizing the guidance from 40 CFR 122.45(b), which 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 = concentration limit (mg/L) × design flow (mgd) × 8.34[1]

Since the design flow for this facility is 0. 088 mgd, the technology-based mass limits for TSS are calculated as follows:

Average Monthly Limit = 30 mg/L × 0.088 mgd × 8.34 = 22 lbs/day

Maximum Daily Limit = 45 mg/L × 0.088 mgd × 8.34 = 33 lbs/day

*ii. TRC*

Chlorine is often used to disinfect municipal water prior to distribution for drinking. There are no applicable effluent limitation guidelines for chlorine discharges from water treatment plants. However, The Idaho WQS do have acute and chronic values for chlorine for the protection of aquatic life, 19 µg/L and 11 µg/L, respectfully. The City of Kamiah WTP uses chlorine disinfection. The previous permit established a 0.3 mg/L average monthly limit (AML) for chlorine that was derived from the guidance given in the *Water Pollution Control Federation'*s manual on the *Chlorination of Wastewater* (1976). This was done because the chlorination process used by the Kamiah WTP is like that of POTWs. The Draft Permit is using BPJ to continue to apply the 0.3 mg/L AML. The maximum daily limit (MDL) is calculated to be 1.74 times the AML which results in an average weekly limit (AWL) for chlorine of 0.5 mg/L.

Using the design flow determined for the outfall, mass-based limits for chlorine are calculated as follows:

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

Monthly average Limit= 0.3 mg/L x 0.088 mgd x 8.34 = 0.22 lbs/day

Maximum Daily Limit = 0.5 mg/L x 0.088 mgd x 8.34 = 0.37 lbs/day

### 3. Water Quality-Based Effluent Limits (WQBELs)

#### a. Statutory and Regulatory Basis

CWA § 301(b)(1)(C) requires the development of limitations in permits necessary to meet WQS. 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 CWA § 401. 40 CFR 122.44(d)(1) implementing CWA § 301(b)(1)(C) 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 WQS, including narrative criteria for water quality. Effluent limits must also meet the applicable water quality requirements of affected States other than the State in which the discharge originates, which may include downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA § 401(a)(2)).

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 WQS are met and must be consistent with any available WLA for the discharge in an approved TMDL. If there are no approved TMDLs that specify WLAs for this discharge; all the WQBELs are calculated directly from the applicable WQS.

#### b. Reasonable Potential Analysis and Need for WQBELs

The 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, the 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 WQBEL must be included in the permit.

In some cases, a dilution allowance or mixing zone is permitted. A mixing zone is a limited area or volume of water where initial dilution of a discharge takes place and within which certain water quality criteria may be exceeded (EPA, 2014). While the criteria may be exceeded within the mixing zone, the use and size of the mixing zone must be limited such that the waterbody will not be impaired, all designated uses are maintained, and acutely toxic conditions are prevented.

DEQ’s mixing zone WQS at IDAPA 58.01.02.060(h) provides for a default mixing zone size of 25%. However, the size of the mixing zone should not be larger than necessary considering siting, technological and managerial options available to the discharger (IDAPA 58.01.02.060(c)). The EPA calculated the minimum necessary mixing zones for this facility consistent with Idaho Department of Environmental Quality's (IDEQ) policy to minimize the authorized mixing zone (IDEQ, 2017) and determined that a mixing zone that is 2% of the river flow is protective enough to ensure that WQS are met. Table 8 below summarizes the mixing zone factors calculated for the draft permit.

**Table 8. Mixing Zone Analysis**

| Pollutant of Concern | Minimum % of Mixing Zone | Chronic Dilution Factor at 2% Mixing | Acute Dilution Factor at 2% Mixing |
|---|---|---|---|
| Chlorine | 2% | 126.9 | 101.7 |
| Temperature | 2% | 126.9 | 101.7 |

As discussed in Part IV.A.1, the pollutants of concern in the discharge are, TSS, chlorine, pH, temperature, metals, TTHMs, turbidity, and aluminium. Each parameter is summarized in Part IV.A.3.b and the equations used to conduct the reasonable potential analysis and calculate the WQBELs are provided in Appendix C. The relevant water quality standards are shown in Table 9, below.

**Table 9. Applicable Water Quality Standards**

| Parameter | Designated Uses | Relevant Standards from IDAPA 58.01.02 | |
|---|---|---|---|
| pH | Aquatic Life | Maintain constant level of pH values from 6.5 - 9 s.u | |
| Temperature | Salmonid Spawning | 13 °C or less | Maximum daily average no greater than 9 °C |
| Turbidity | Water Supply Use | Turbidity must not be increased;<br>• by more than 5 NTU above background turbidity when background turbidity is 50 NTU or less,<br>• increased by more than 10% above background when background is between 50 and 250 NTU,<br>• or increased by more than 25 NTU above background when background is above 250 NTU. | |
| Chlorine | Aquatic Life | 19 µg/L (acute); and 11 µg/L (chronic) | |
| Toxics | General | Surface waters of the state shall be free from toxic substances in concentrations that impair designated beneficial uses. | |
| Aluminium[1] | See IV.A.3.c.v | | |
| Antimony | Domestic Water Supply | 5.2 µg/L (human health; water and organisms) | |
| Arsenic | Domestic Water Supply | 10 µg/L (human health; water and organisms) | |
| Copper | Aquatic Life | 12.3 µg/L (acute); 7.6 µg/L (chronic) | |

| | | |
|---|---|---|
| Lead | Aquatic Life | 65 µg/L (acute); 2.5 µg/L (chronic) |
| Nickel | Domestic Water Supply | 58 µg/L (human health; water and organisms) |
| Selenium | Aquatic Life | 3.1 µg/L (30 day Average) |
| Silver | Aquatic Life | 3.45 µg/L (acute) |
| Thallium | Domestic Water Supply | 0.017 µg/L (human health; water and organisms) |
| Zinc | Aquatic Life | 120 µg/L (Acute and Chronic) |
| 1. 2018 EPA Aquatic Life Criteria for Aluminum in Freshwater, Aluminum aquatic life criteria are dependent on a site's water chemistry, such as pH, total hardness, and DOC. | | |

**c. Reasonable Potential and WQBELs**

The reasonable potential and WQBEL for specific parameters are summarized below. The calculations are provided in Appendix D.

*i. pH*

The Idaho WQS at IDAPA 58.01.02.250.01.a require pH values of freshwater to be within the range of 6.5 to 9.0. 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 and no reasonable potential was found.

However, because the facility processes and discharges raw river water, any potential future pH violations would likely be attributed to the receiving water and not the facility. To circumnavigate any potential pH issues with the receiving water in the next permitting cycle, the EPA is including influent pH monitoring in the draft permit to compare to the effluent pH.

**Calculation of pH of a Mixture of Two Flows**

Based on the procedure in EPA's DESCON program (EPA, 1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington D.C.)

| | Yr. Around Basis | | |
|---|---|---|---|
| **INPUT** | **Min Limit** | **Max Limit** | **Comments** |
| 1. Dilution Factor at Mixing Zone Boundary | 1.0 | 1.0 | Chronic Dilution Factor at Design Flow and Low River Flow Conditions |
| 2. Ambient/Upstream/Background Conditions | | | |
| Temperature (deg C): | 22.70 | 0.00 | Max. and min. temperature for lower and upper pH, respectively, based on USGS data |
| pH: | 6.52 | 8.99 | Min. and max. pH for lower and upper pH, respectively, based on USGS data. |
| Alkalinity (mg $CaCO_3$/L): | 25.00 | 25.00 | USGS Data or estimate. 25 mg/L conservative estimate. |
| 3. Effluent Characteristics | | | |
| Temperature (deg C): | 22.00 | 5.00 | Max and min for lower and upper temperature, DMR data |
| pH: | 6.50 | 9.00 | Lower and Upper Effluent Limits, Sec. Treatment Standards 6.0 to 9.0 or established based on WQS. |
| Alkalinity (mg CaCO3/L): | 25.00 | 25.00 | Refer to effluent data or WET data sheets. |
| 4. Applicable Water Quality Standards | 6.50 | 9.00 | |
| **OUTPUT** | | | |
| 1. Ionization Constants | | | |
| Upstream/Background pKa: | 6.36 | 6.57 | |
| Effluent pKa: | 6.37 | 6.51 | |
| 2. Ionization Fractions | | | |
| Upstream/Background Ionization Fraction: | 0.59 | 1.00 | |
| Effluent Ionization Fraction: | 0.58 | 1.00 | |
| 3. Total Inorganic Carbon | | | |
| Upstream/Background Total Inorganic Carbon (mg CaCO3/L): | 42 | 25 | |
| Effluent Total Inorganic Carbon (mg CaCO3/L): | 43 | 25 | |
| 4. Conditions at Mixing Zone Boundary | | | |
| Temperature (deg C): | 22.00 | 5.00 | |
| Alkalinity (mg CaCO3/L): | 25.00 | 25.00 | |
| Total Inorganic Carbon (mg CaCO3/L): | 43.47 | 25.08 | |
| pKa: | 6.37 | 6.51 | |
| **RESULTS** | | | |
| **pH at Mixing Zone Boundary:** | **6.50** | **9.00** | |
| **Reasonable Potential to contribute to excursion above WQS** | **NO** | **NO** | |

*ii. Chlorine*

The WQS at IDAPA 58.01.02.210 establish an acute criterion of 19 µg/L, and a chronic criterion of 11 µg/L for the protection of aquatic life. A reasonable potential calculation showed that the discharge from the facility would not have the reasonable potential to cause or contribute to an excursion of the water quality criteria for chlorine. At the edge of the acute and chronic mixing zones the mass-balance equation for the mixing zone shows that expected chlorine concentrations will be 7.5(acute) and 6.02 (chronic) µg/L, well below the aquatic life standards of 19 and 11 µg/L. Therefore, the draft permit retains the existing BPJ TBEL effluent limits.

| Pollutants of Concern | | | CHLORINE (Total Residual) |
|---|---|---|---|
| Effluent Data | **Number of Samples in Data Set (n)** | | 112 |
| | **Coefficient of Variation (CV) = Std. Dev./Mean (default CV = 0.6)** | | 0.84 |
| | **Effluent Concentration, µg/L (Maximum) - ($C_e$)** | | 500 |
| | **Calculated 50th % Effluent Conc. (when n>10), Human Health Only** | | |
| Receiving Water Data | **90th Percentile Conc., µg/L - ($C_u$)** | | 0 |
| | **Geometric Mean, µg/L, Human Health Criteria Only** | | |
| Applicable Water Quality Criteria | Aquatic Life Criteria, µg/L | Acute | 19. |
| | Aquatic Life Criteria, µg/L | Chronic | 11. |
| | Acute:chronic ratio | | 1.73 |
| | Human Health Water and Organism, µg/L | | -- |
| | Human Health, Organism Only, µg/L | | -- |
| | Metals Criteria Translator, decimal (or default use Conversion Factor) | Acute | -- |
| | | Chronic | -- |
| | Carcinogen (Y/N), Human Health Criteria Only | | -- |
| Percent River Flow Value = 2% | **Aquatic Life - Acute** | **1Q10** | 2% |
| | Aquatic Life - Chronic | 7Q10 or 4B3 | 2% |
| | | 30B3 or 30Q10/30Q5 | 2% |
| | Human Health - Non-Carcinogen | Harmonic Mean | 2% |
| | Human Health - Carcinogen | Harmonic Mean | 2% |
| Calculated Dilution Factors (DF) (or enter Modeled DFs) | Aquatic Life - Acute | 1Q10 | 101.7 |
| | Aquatic Life - Chronic | 7Q10 or 4B3 | 126.9 |
| | Aquatic Life - Chronic Ammonia | 30B3 or 30Q10/30Q5 | 1.0 |
| | Human Health - Non-Carcinogen | Harmonic Mean | 1.0 |
| | Human Health - Carcinogen | Harmonic Mean | 1.0 |

Aquatic Life Reasonable Potential Analysis

| | | | |
|---|---|---|---|
| σ | $\sigma^2=\ln(CV^2+1)$ | | 0.731 |
| $P_n$ | =(1-confidence level) , where confidence level = | 99% | 0.960 |
| Multiplier (TSD p. 57) | $=\exp(z\sigma-0.5\sigma^2)/\exp[\text{normsinv}(P_n)\sigma-0.5\sigma^2]$, where | 99% | 1.5 |
| Statistically projected critical discharge concentration ($C_e$) | | | 763.29 |
| Predicted max. conc.(ug/L) at Edge-of-Mixing Zone | | Acute | 7.50 |
| (note: for metals, concentration as dissolved using conversion factor as translator) | | Chronic | 6.02 |
| Reasonable Potential to exceed Aquatic Life Criteria | | | **NO** |

*iii. Temperature*

The WQS at IDAPA 58.01.02.250.02.f.ii establish a water temperature limit of 13° C or less with a maximum daily average of 9° C or less for the protection of salmonid life in cold water. A reasonable potential calculation showed that the discharge from the facility would not have the reasonable potential to cause or contribute to an excursion of the water quality criteria for temperature.

However, because the facility processes and discharges raw river water, any potential future temperature violations would likely be attributed to the receiving water and not the facility. The nearby Kamiah Wastewater Treatment Plant (ID0028002) records surface water temperature in the Clearwater River, near where the Kamiah WTP influent is located. The data from this monitoring location shows that the temperature of the WTP effluent is comparable to that of the ambient temperature of the Clearwater River, showing that the facility is not contributing to an excursion of the temperature criterion. Future permit reissuances should continue to reference this surface water monitoring location for as long as it exists.

| INPUT | Cold Water Critera | Data Source |
|---|---|---|
| Chronic Dilution Factor at Mixing Zone Boundary | 126.9 | High River Flow |
| Ambient Temperature (T) (Upstream Background) | 25.8 °C | 95th Percentile based on permittee or USGS data |
| Effluent Temperature | 25.3 °C | 95th Percentile of **monthly daily max effluent** based on daily max per DMR data |
| Aquatic Life Temperature WQ Criterion in Fresh Water | 13.0 °C | Lowest daily max criteria |
| **OUTPUT** | | |
| Temperature at Chronic Mixing Zone Boundary: | 25.8 °C | Mass balance |
| Incremental Temperature Increase or decrease: | 0.0 °C | WQS 401.c - allow for maximum of 0.3ºC rise in receiving water temperature. |

iv. *Turbidity*

There are no applicable technology-based effluent limitation guidelines for turbidity in discharges from water treatment plants. The EPA has determined that limitations applied to TSS in discharges from the WTP will largely control the level of turbidity in this discharge. As a result, no reasonable potential assessment was done, and the draft permit does not include effluent limitations for turbidity. However, the draft permit will continue to require effluent monitoring.

v. *Aluminum*

There are no applicable technology-based guidelines or state water quality criteria for aluminum. To evaluate the need for effluent limitations for aluminum, the EPA would use the EPA 2018 National Aquatic Life Criteria for Aluminum in Freshwater, pursuant to Section 304(a) of the CWA. Aluminum aquatic life criteria are dependent on a site's water chemistry, such as pH, total hardness, and dissolved organic carbon (DOC). In addition, there are narrative water quality criterion for toxic substances, which states that surface waters of the state must be free of toxic substances in concentrations that impair designated beneficial uses.

A review of the literature regarding water treatment plant residuals suggests that aluminum concentrations in water treatment plants residuals can be elevated, particularly when aluminum salts are used to enhance coagulation. The Kamiah WTP uses poly-aluminum chloride as a coagulant in the treatment process and residuals could be detected in the discharge out of the outfall. The EPA is not proposing effluent limitations for aluminum in the draft permit but will continue to require monitoring and is increasing the monitoring frequency of aluminum to quarterly. The EPA is also requiring quarterly surface water monitoring for hardness and DOC in the draft permit to evaluate the effect aluminum may have in the next permitting cycle.

*vi. Metals*

The applicable Idaho WQS for metals are summarized in Table 9. A review of the literature regarding water treatment plant residuals suggests that metals may be present in discharges from drinking water treatment plants, in this case likely from the receiving water. Since the facility did not conduct monitoring during the last permit cycle, there is no available data to determine reasonable potential (outside of 1 measurement for copper and zinc). Therefore, the draft permit continues to require effluent monitoring for metals as well as hardness which is required to determine the toxicity of metals.

*vii. Residues*

The Idaho WQS require that surface waters of the State be free from floating, suspended or submerged matter of any kind in concentrations impairing designated beneficial uses. The draft permit contains a narrative limitation stating that the discharge shall not contain floating solids, visible foam or other floating materials.

*viii. Total Trihalomethanes (TTHMs)*

A review of the literature regarding water treatment plant residuals suggests that TTHMs may be present in discharges from drinking water treatment plants. As is displayed in Table 2, chloroform concentrations were detected in effluent monitoring samples. There are no applicable technology-based effluent limitation guidelines for chloroform in discharges from water treatment plants. The Idaho WQS at IDAPA 58.01.02.250.01(b) establish criterion for the protection of domestic water supply. The applicable Idaho WQS for chloroform is summarized in *Table 9*.

No monitoring data for TTHM's is available from the last permitting period. Therefore, the draft permit will retain the existing effluent monitoring requirements for TTHMs.

**4. Antibacksliding**

CWA § 402(o) 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 proposed mass-based limits for TSS and total residual chlorine are less stringent than in the existing permit. CWA § 402(o)(1)(b) allows for relaxed limitations to occur where technical mistakes were made in issuing the permit. The TSS and TRC mass-based limits were calculated using a design flow that the EPA has now determined to be inaccurate. The proposed permit corrects this error. Since a technical mistake was made in determining the design flow of the facility, the TSS and TRC effluent limits can be made less stringent pursuant to Clean Water Act §402(o).

### 5. Monitoring Requirements

Section 308 of the CWA and 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 permittee is responsible for conducting the monitoring and for reporting results on DMRs or on the application for renewal, as appropriate, to the EPA.

## B. 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. To better assess the potential impact that the aluminium in this discharge may have on the Clearwater River surface water monitoring for hardness and DOC is included in the proposed permit. Monitoring must occur once each quarter (4 times a year), and on the same day that the effluent aluminium measurement occurs. Monitoring must also be conducted upstream of the discharge, outside the influence of the discharge for the duration of the permit. No other surface water monitoring is required.

## C. 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.

The EPA currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: https://netdmr.epa.gov. The permittee may use NetDMR after requesting and receiving permission from the EPA Region 10.

Permit Part II.a requires that the Permittee submit a copy of the DMR to The Nez Perce Tribe. Currently, the permittee may submit a copy to The Nez Perce Tribe in one of three ways: 1) a paper copy may be mailed; 2) The email address for The Nez Perce Tribe may be added to the electronic submittal through NetDMR; or 3) The permittee may provide The Nez Perce Tribe viewing rights through NetDMR.

# V. Other Permit Conditions

## A. QUALITY ASSURANCE PLAN (QAP)

The City of Kamiah WTP is required to update the QAP within 60 days of the effective date of the permit. The QAP 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 the EPA and the Nez Perce Tribe upon request.

## B. BEST MANAGEMNT PRACTIVES (BMP) PLAN

The current permit has a condition requiring the use and development of a BMP plan to properly control the effluent from the Kamiah WTP. Section 402(a)(1) of the CWA authorizes the EPA to implement BMP plans as part of NPDES permits and they are normally utilized when a facility has persistent compliance issues, it is infeasible to control pollutants through numeric limits, and for use with an industrial permit. None of these conditions apply to the Kamiah WTP and thus the EPA has removed the BMP plan requirement in the draft permit. Removing the BMP plan does not make the draft NPDES permit for the Kamiah WTP less stringent or less protective than the current permit, so antibacksliding conditions are not applicable to this change.

## C. OPERATION AND MAINTENANCE PLAN

The permit requires the City of Kamiah WTP 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 60 of the effective date of the permit. The plan must be retained on site and made available to the EPA and the Nez Perce Tribe upon request.

## 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.

# VI. Other Legal Requirements

## A. ENDANGERED SPECIES ACT

The Endangered Species Act (ESA) requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any species that are federally listed as threatened or endangered and designated critical habitat that may be present.

A review of the threatened and endangered species located in Idaho finds that bull trout (Salvelinus confluentus), Snake River fall-run Chinook salmon (Oncorhynchus tshawytscha), Snake River Basin steelhead (Oncorhynchus mykiss), the North American wolverine (*Gulo gulo luscus)*, and the Spalding's catchfly (*Silene spaldingii)* are threatened and have the potential to be near the discharge from the Kamiah WTP. This is further discussed in Appendix D.

**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 the 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). A review of the EFH documents shows that the area of discharge is EFH for coho salmon (Oncorhynchus kisutch) and Chinook salmon.

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.

Based on the available life history information, freshwater EFH for Pacific salmon consists of four major components: spawning and incubation, juvenile rearing, juvenile migration corridors, and adult migration corridors and adult holding habitat.

Important features of essential habitat for spawning, rearing, and migration include:

- adequate substrate composition;
- water quality (e.g., dissolved oxygen, nutrients, temperature, etc.);
- water quantity, depth, and velocity;
- channel gradient and stability;
- food availability;
- cover and habitat complexity (e.g., large woody debris, pools, channel complexity, aquatic vegetation, etc.)
- space (habitat area) access and passage;
- and floodplain and habitat connectivity.

Pacific salmon EFH for the Pacific Coast Salmon Plan includes all streams, lakes, ponds, wetlands, and other water bodies currently and historically utilized by Pacific salmon within Washington, Oregon, Idaho, and California.

The Kamiah WTP does not degrade any habitat feature mentioned above. The EPA has determined that issuance of this permit has no effect on the EFH in the vicinity of the discharge.

### C. CWA § 401 CERTIFICATION

Section 401 of the Clean Water Act (CWA) requires the State in which the discharge originates to certify that the discharge complies with the appropriate sections of the CWA, as well as any appropriate requirements of State law. See 33 USC § 1341(d). This includes water quality standards that have been approved for Tribes with TAS. Since this facility discharges to tribal waters and the Tribe has not been approved for TAS for purposes of the CWA, EPA is the certifying authority. The EPA is taking comment on the EPA's intent to certify this permit. See the draft certification in Appendix E.

### D. ANTIDEGRADATION

The EPA has completed an antidegradation review which is shown in Appendix F.

### E. PERMIT EXPIRATION

The permit will expire five years from the effective date.

## VII. REFERENCES


Banci, V. Ministry of Environment, Lands and Parks, Wildlife Branch, Victoria, British Columbia. 1994. Chapter 5: Wolverine. In: Ruggiero, Leonard F.; Aubry, Keith B.; Buskirk, Steven W.; Lyon, L. Jack; Zielinski, William J., tech. eds. The scientific basis for conserving forest carnivores: American marten, fisher, lynx, and wolverine in the western United States. Gen. Tech. Rep. RM-254. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. p. 99-127. https://www.fs.fed.us/rm/pubs_rm/rm_gtr254/rm_gtr254_099_127.pdf

EPA. 1986. *Quality Criteria for Water*. EPA 440/5-86-001. May 1, 1986. https://www.epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf

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. 2007. *EPA Model Pretreatment Ordinance*. Environmental Protection Agency, Office of Wastewater Management/Permits Division. January 2007.

EPA. 2009. *Biological Evaluation of the Reissuance of a National Pollutant Discharge Elimination System Permit for the Twin Falls, Idaho, Wastewater Treatment Plant*. Limno Tech.

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.

EPA. 2018. *Final Aquatic Life Criteria for Aluminum in Freshwater*. Environmental Protection Agency. https://www.epa.gov/wqc/2018-final-aquatic-life-criteria-aluminum-freshwater

EPA. 2011. Drinking Water Treatment Plant Residuals Management Technical Report. Summary of Residuals Generation, Treatment, and Disposal at Large Community Water Systems. EPA 820-R-11-003. September 2011. https://www.epa.gov/sites/default/files/2015-11/documents/dw-treatment-residuals-mgmt-tech-report-sept-2011.pdf

Hornocker, G, Maurice & Hash, Hamed. (1981). Ecology of the wolverine in Northwestern Montana. Canadian Journal of Zoology. 59. 1286-1301. 10.1139/z81-181.

Idaho Governor's Office of Species Conservation. 2025. *Bull Trout.* https://species.idaho.gov/aquatic-species/bull-trout-updated/

National Oceanic and Atmospheric Administration. 2017. *ESA Recovery Plan for Snake River Fall Chinook Salmon (Oncorhynchus tshawytscha). https://www.fisheries.noaa.gov/s3/dam-migration/final-snake-river-fall-chinook-salmon-recovery-plan-2017.pdf*

NOAA. 2017. *ESA Recovery Plan for Snake River Spring/Summer Chinook Salmon (Oncorhynchus tshawytscha) & Snake River Basin Steelhead (Onchorhynchus mykiss).* https://www.fisheries.noaa.gov/s3/dam-migration/final-snake-river-spring-summer-chinook-salmon-and-snake-river-steelhead-recovery-plan-2017.pdf

NOAA. 2022. *5-Year Review: Summary & Evaluation of Snake River Basin Steelhead.* https://repository.library.noaa.gov/view/noaa/45368

NOAA. 2025. *Snake River Basin Steelhead*. https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/snake-river-basin-steelhead

NOAA. 2025. *West Coast Region Species and Habitat App. https://maps.fisheries.noaa.gov/portal/apps/webappviewer/index.html?id=e8311ceaa4354de290fb1c456cd86a7f*

Science Applications International Corporation. 1987. *Draft Model Permit Package Water Supply Industry.* EPA Contract Number 68-01-7043. Work Assignment No. PL-18. SAIC Project No. 2-835-03-516-03.

U.S. Fish and Wildlife Service. 2006. Draft Recovery Plan for Silene spaldingii (Spalding's Catchfly). Portland, Oregon: United States Fish and Wildlife Service.

USFWS. 2015. *Mid-Columbia Recovery Unit Implementation Plan for Bull Trout (Salvelinus confluentus)*. https://ecos.fws.gov/docs/recovery_plan/Final_Mid_Columbia_RUIP_092915.pdf

USFWS. 2021. Spalding's catchfly (Silene spaldingii) *5 Year Review* https://ecos.fws.gov/docs/tess/species_nonpublish/945.pdf

USFWS. 2024. *Bull Trout (Salvelinus confluentus) 5 Year Status Review: Summary and Evaluation.* https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/19548.pdf

USFWS. 2025. *Bull Trout (Salvelinus confluentus)*. https://ecos.fws.gov/ecp/species/8212

# Appendix A. Facility Diagrams and Photos

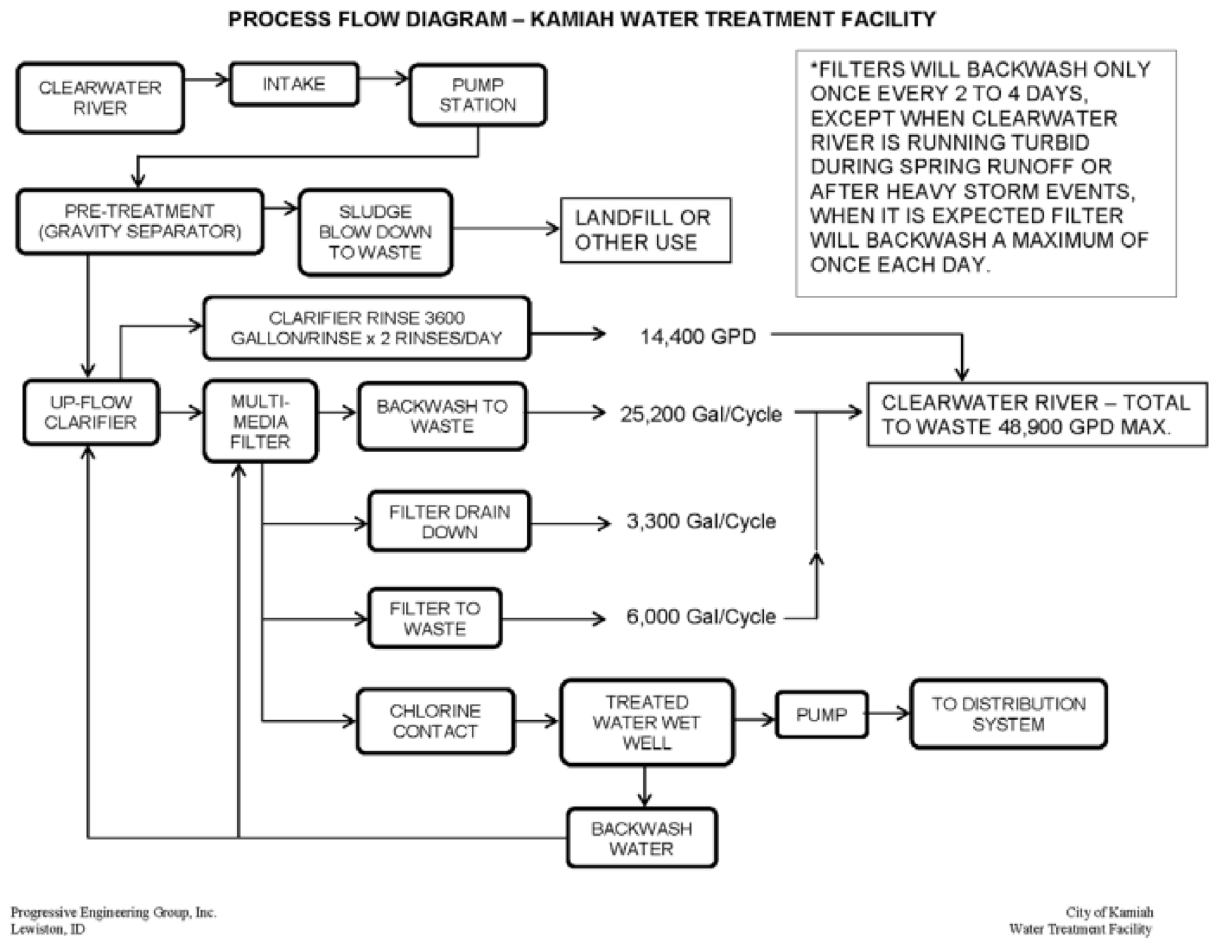


**Figure 1. Facility Flow Process Diagram**


**Figure 2. Kamiah location on the Nez Perce Reservation**


**Figure 3 . Kamiah WTP location within the City of Kamiah**


**Figure 4. Kamiah WTP outfall location**

# Appendix B. Effluent Data Summary

| 1 | Max of DMR Value | Column Labels | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | Alkalinity, total [as CaCO3] | | Aluminum, total recoverable | | Antimony, total recoverable | | Arsenic, total recoverable | | Beryllium, total recoverable [as Be] | | Cadmium, total recoverable | | Chlorine, total residual | |
| 3 | | Milligrams per Liter | | Micrograms per Liter | | Micrograms per Liter | | Micrograms per Liter | | Micrograms per Liter | | Micrograms per Liter | | Milligrams per Liter | |
| 4 | | DAILY MX | MO AVG | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | DAILY MX | MO AVG |
| 149 | Limits | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.5 | 0.3 |
| 150 | Sample Frequency | Monthly | Monthly | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Weekly | Weekly |
| 151 | Averge | 19.5 | 18.6 | 645.7 | 645.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.076 | 0.044 |
| 152 | Minimum | 5.2 | 5.2 | 0.5 | 0.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.0 | 0.0 |
| 153 | Maximum | 191.1 | 191.1 | 1730.0 | 1730.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.5 | 0.2 |
| 154 | Count | 110.0 | 110.0 | 10.0 | 10.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 112.0 | 112.0 |
| 155 | Std. Dev | 19.9 | 17.6 | 633.6 | 633.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.1 | 0.0 |
| 156 | Coef. Var | 1.02 | 0.95 | 0.98 | 0.98 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.84 | 0.62 |
| 157 | 95% | 27.1 | 25.1 | 1667.0 | 1667.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.2 | 0.1 |
| 158 | 5% | 7.5 | 7.5 | 0.6 | 0.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.0 | 0.0 |
| 159 | 90% | 23.4 | 23.2 | 1604.0 | 1604.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.1 | 0.1 |

| | Chlorine, total residual | | | | Chromium, hexavalent tot recoverable | | Chromium, trivalent total recoverable | | Copper, total recoverable | | Flow, in conduit or thru treatment plant | | Lead, total recoverable |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Milligrams per Liter | | Pounds per Day | | Micrograms per Liter | | Micrograms per Liter | | Micrograms per Liter | | Gallons per Day | | Micrograms per Liter |
| | DAILY MX | MO AVG | DAILY MX | MO AVG | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | DAILY MX | MO AVG | ANNL AVG |
| Limits | 0.5 | 0.3 | 0.2 | 0.12 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Sample Frequency | Weekly | Weekly | Weekly | Weekly | Annually | Annually | Annually | Annually | Annually | Annually | Daily | Daily | Annually |
| Averge | 0.076 | 0.044 | 0.040 | 0.014 | N/A | N/A | N/A | N/A | 3.48 | 3.48 | 62735.6 | 42675.1 | N/A |
| Minimum | 0.0 | 0.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A | 3.5 | 3.5 | 22000.0 | 6100.0 | N/A |
| Maximum | 0.5 | 0.2 | 0.2 | 0.1 | N/A | N/A | N/A | N/A | 3.5 | 3.5 | 276000.0 | 289000.0 | N/A |
| Count | 112.0 | 112.0 | 112.0 | 112.0 | N/A | N/A | N/A | N/A | 1.0 | 1.0 | 112.0 | 112.0 | N/A |
| Std. Dev | 0.1 | 0.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A | 0.0 | 0.0 | 26768.9 | 30923.0 | N/A |
| Coef. Var | 0.84 | 0.62 | 0.90 | 0.85 | N/A | N/A | N/A | N/A | 0.00 | 0.00 | 0.43 | 0.72 | N/A |
| 95% | 0.2 | 0.1 | 0.1 | 0.0 | N/A | N/A | N/A | N/A | 3.5 | 3.5 | 88000.0 | 72832.2 | N/A |
| 5% | 0.0 | 0.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A | 3.5 | 3.5 | 32693.0 | 12101.4 | N/A |
| 90% | 0.1 | 0.1 | 0.1 | 0.0 | N/A | N/A | N/A | N/A | 3.5 | 3.5 | 84000.0 | 64609.8 | N/A |

| | Lead, total recoverable | | Mercury, total recoverable | | Nickel, total recoverable | | pH | | Selenium, total recoverable | | Silver total recoverable | | Solids, total suspended | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Micrograms per Liter | | Micrograms per Liter | | Micrograms per Liter | | Standard Units | | Micrograms per Liter | | Micrograms per Liter | | Milligrams per Liter | | Pounds per Day | |
| | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | INST MAX | INST MIN | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | DAILY MX | MO AVG | DAILY MX | MO AVG |
| Limits | N/A | N/A | N/A | N/A | N/A | N/A | >5 | <6.5 | N/A | N/A | N/A | N/A | 45 | 30 | 16.35 | 12.23 |
| Sample Frequency | Annually | Annually | Annually | Annually | Annually | Annually | Weekly | Weekly | Annually | Annually | Annually | Annually | Monthly | Monthly | Monthly | Monthly |
| Averge | N/A | N/A | N/A | N/A | N/A | N/A | 7.16 | 6.89 | N/A | N/A | N/A | N/A | 6.18 | 6.18 | 3.42 | 2.16 |
| Minimum | N/A | N/A | N/A | N/A | N/A | N/A | 4.0 | 6.3 | N/A | N/A | N/A | N/A | 1.0 | 1.0 | 0.0 | 0.0 |
| Maximum | N/A | N/A | N/A | N/A | N/A | N/A | 8.6 | 7.5 | N/A | N/A | N/A | N/A | 65.1 | 65.1 | 32.6 | 18.5 |
| Count | N/A | N/A | N/A | N/A | N/A | N/A | 112.0 | 112.0 | N/A | N/A | N/A | N/A | 101.0 | 101.0 | 101.0 | 101.0 |
| Std. Dev | N/A | N/A | N/A | N/A | N/A | N/A | 0.4 | 0.2 | N/A | N/A | N/A | N/A | 9.4 | 9.4 | 4.9 | 2.9 |
| Coef. Var | N/A | N/A | N/A | N/A | N/A | N/A | 0.06 | 0.03 | N/A | N/A | N/A | N/A | 1.51 | 1.51 | 1.43 | 1.34 |
| 95% | N/A | N/A | N/A | N/A | N/A | N/A | 7.6 | 7.2 | N/A | N/A | N/A | N/A | 22.5 | 22.5 | 11.7 | 6.4 |
| 5% | N/A | N/A | N/A | N/A | N/A | N/A | 6.8 | 6.5 | N/A | N/A | N/A | N/A | 1.3 | 1.3 | 0.5 | 0.1 |
| 90% | N/A | N/A | N/A | N/A | N/A | N/A | 7.5 | 7.2 | N/A | N/A | N/A | N/A | 11.1 | 11.1 | 8.5 | 4.7 |

| | Temperature, water deg. centigrade | | Thallium, total recoverable | | Trihalomethane, tot. | | Turbidity | | Zinc, total recoverable | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Degrees Centigrade | | Micrograms per Liter | | Micrograms per Liter | | Nephelometric Turbidity Units | | Micrograms per Liter | |
| | DAILY MX | MO AVG | ANNL AVG | ANNL MAX | ANNL AVG | ANNL MAX | DAILY MX | MO AVG | ANNL AVG | ANNL MAX |
| Limits | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Sample Frequency | Weekly | Weekly | Annually | Annually | Annually | Annually | Monthly | Monthly | Annually | Annually |
| Averge | 13.88 | 11.53 | N/A | N/A | N/A | #DIV/0! | 2.00 | 1.09 | 1.61 | 1.61 |
| Minimum | 1.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 1.6 |
| Maximum | 27.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.7 | 4.7 | 1.6 | 1.6 |
| Count | 112.0 | 112.0 | 0.0 | 0.0 | 0.0 | 0.0 | 112.0 | 112.0 | 1.0 | 1.0 |
| Std. Dev | 7.5 | 7.0 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 2.1 | 0.8 | 0.0 | 0.0 |
| Coef. Var | 0.54 | 0.61 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 1.04 | 0.77 | 0.00 | 0.00 |
| 95% | 25.3 | 23.1 | #NUM! | #NUM! | #NUM! | #NUM! | 5.3 | 2.8 | 1.6 | 1.6 |
| 5% | 3.0 | 2.0 | #NUM! | #NUM! | #NUM! | #NUM! | 0.3 | 0.2 | 1.6 | 1.6 |
| 90% | 24.4 | 22.2 | #NUM! | #NUM! | #NUM! | #NUM! | 4.2 | 2.2 | 1.6 | 1.6 |

# Appendix C. Reasonable Potential and WQBEL Formulae

## A. Reasonable Potential Analysis

The EPA uses the process described in the *Technical Support Document for Water Quality-based Toxics Control* (EPA, 1991) 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, the 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 WQBEL must be included in the permit.

### 1. Mass Balance

For discharges to flowing water bodies, the maximum projected receiving water concentration is determined using the following mass balance equation:

$$C_d Q_d = C_e Q_e + C_u Q_u \qquad \textit{Equation 1}$$

where,

| | | |
|---|---|---|
| $C_d$ | = | Receiving water concentration downstream of the effluent discharge (that is, the concentration at the edge of the mixing zone) |
| $C_e$ | = | Maximum projected effluent concentration |
| $C_u$ | = | 95th percentile measured receiving water upstream concentration |
| $Q_d$ | = | Receiving water flow rate downstream of the effluent discharge = $Q_e+Q_u$ |
| $Q_e$ | = | Effluent flow rate (set equal to the design flow of the WTP) |
| $Q_u$ | = | Receiving water low flow rate upstream of the discharge (1Q10, 7Q10 or 30B3) |

When the mass balance equation is solved for $C_d$, it becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times Q_u}{Q_e + Q_u} \qquad \textit{Equation 2}$$

The above form of the equation is based on the assumption that the discharge is rapidly and completely mixed with 100% of the receiving stream.

If the mixing zone is based on less than complete mixing with the receiving water, the equation becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times (Q_u \times \%MZ)}{Q_e + (Q_u \times \%MZ)} \qquad \textit{Equation 3}$$

Where:

% MZ = the percentage of the receiving water flow available for mixing.

If a mixing zone is not allowed, dilution is not considered when projecting the receiving water concentration and,

$$C_d = C_e \qquad \textit{Equation 4}$$

A dilution factor (D) can be introduced to describe the allowable mixing. Where the dilution factor is expressed as:

$$D = \frac{Q_e + Q_u \times \%MZ}{Q_e} \qquad \textit{Equation 5}$$

After the dilution factor simplification, the mass balance equation becomes:

$$C_d = \frac{C_e - C_u}{D} + C_u \qquad \textit{Equation 6}$$

If the criterion is expressed as dissolved metal, the effluent concentrations are measured in total recoverable metal and must be converted to dissolved metal as follows:

$$C_d = \frac{CF \times C_e - C_u}{D} + C_u \qquad \textit{Equation 7}$$

Where $C_e$ is expressed as total recoverable metal, $C_u$ and $C_d$ are expressed as dissolved metal, and CF is a conversion factor used to convert between dissolved and total recoverable metal.

The above equations for $C_d$ are the forms of the mass balance equation which were used to determine reasonable potential and calculate wasteload allocations.

**2. Maximum Projected Effluent Concentration**

When determining the projected receiving water concentration downstream of the effluent discharge, the EPA's Technical Support Document for Water Quality-based Toxics Control (TSD, 1991) recommends using the maximum projected effluent concentration (Ce) in the mass balance calculation (see equation 3, page C-5). To determine the maximum projected effluent concentration (Ce) EPA has developed a statistical approach to better characterize the effects of effluent variability. The approach combines knowledge of effluent variability as estimated by a coefficient of variation (CV) with the uncertainty due to a limited number of data to project an estimated maximum concentration for the effluent. Once the CV for each pollutant parameter has been calculated, the reasonable potential multiplier (RPM) used to derive the maximum projected effluent concentration (Ce) can be calculated using the following equations:

First, the percentile represented by the highest reported concentration is calculated.

$p_n$ = (1 - confidence level)$^{1/n}$ *Equation 8*

where,

$p_n$ = the percentile represented by the highest reported concentration

n = the number of samples

confidence level = 99% = 0.99

and

$$RPM = \frac{C_{99}}{C_{P_n}} = \frac{e^{Z_{99} \times \sigma - 0.5 \times \sigma^2}}{e^{Z_{P_n} \times \sigma - 0.5 \times \sigma^2}}$$ *Equation 9*

Where,

$\sigma^2$ = $\ln(CV^2 + 1)$

$Z_{99}$ = 2.326 (z-score for the 99th percentile)

$Z_{Pn}$ = z-score for the $P_n$ percentile (inverse of the normal cumul distribution function at a given percentile)

CV = coefficient of variation (standard deviation ÷ mean)

The maximum projected effluent concentration is determined by simply multiplying the maximum reported effluent concentration by the RPM:

$C_e$ = (RPM)(MRC) *Equation 10*

where MRC = Maximum Reported Concentration

### 3. Maximum Projected Effluent Concentration at the Edge of the Mixing Zone

Once the maximum projected effluent concentration is calculated, the maximum projected effluent concentration at the edge of the acute and chronic mixing zones is calculated using the mass balance equations presented previously.

### 4. Reasonable Potential

The discharge has reasonable potential to cause or contribute to an exceedance of water quality criteria if the maximum projected concentration of the pollutant at the edge of the mixing zone exceeds the most stringent criterion for that pollutant.

## B. WQBEL Calculations

### 1. Calculate the Wasteload Allocations (WLAs)

Wasteload allocations (WLAs) are calculated using the same mass balance equations used to calculate the concentration of the pollutant at the edge of the mixing zone in the reasonable potential analysis. To calculate the wasteload allocations, $C_d$ is set equal to the acute or chronic criterion and the equation is solved for $C_e$. The calculated $C_e$ is the acute or chronic WLA. Equation 6 is rearranged to solve for the WLA, becoming:

$$C_e = WLA = D \times (C_d - C_u) + C_u$$ *Equation 11*

Idaho's water quality criteria for some metals are expressed as the dissolved fraction, but the Federal regulation at 40 CFR 122.45(c) requires that effluent limits be expressed as total recoverable metal. Therefore, the EPA must calculate a wasteload allocation in total recoverable metal that will be protective of the dissolved criterion. This is accomplished by dividing the WLA expressed as dissolved by the criteria translator, as shown in equation __. As discussed in Appendix ___, the criteria translator (CT) is equal to the conversion factor, because site-specific translators are not available for this discharge.

$$C_e = WLA = \frac{D \times (C_d - C_u) + C_u}{CT}$$ *Equation 12*

The next step is to compute the "long term average" concentrations which will be protective of the WLAs. This is done using the following equations from the EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD):

$$LTA_a = WLA_a \times e^{(0.5\sigma^2 - z\,\sigma)}$$ *Equation 13*

$$LTA_c = WLA_c \times e^{(0.5\sigma_4^2 - z\sigma_4)}$$ *Equation 14*

where,

| | | |
|---|---|---|
| $\sigma^2$ | = | $\ln(CV^2 + 1)$ |
| $Z_{99}$ | = | 2.326 (z-score for the $99^{th}$ percentile probability basis) |
| CV | = | coefficient of variation (standard deviation ÷ mean) |
| $\sigma_4^2$ | = | $\ln(CV^2/4 + 1)$ |

For ammonia, because the chronic criterion is based on a 30-day averaging period, the Chronic Long Term Average (LTAc) is calculated as follows:

$$LTA_c = WLA_c \times e^{(0.5\sigma_{30}^2 - z\sigma_{30})}$$ *Equation 15*

where,

$\sigma_{30}^2$ = $\ln(CV^2/30 + 1)$

The LTAs are compared and the more stringent is used to develop the daily maximum and monthly average permit limits as shown below.

**2. Derive the maximum daily and average monthly effluent limits**

Using the TSD equations, the MDL and AML effluent limits are calculated as follows:

$$MDL = LTA \times e^{(z_m\sigma - 0.5\sigma^2)}$$ *Equation 16*

$$\mathrm{AML} = \mathrm{LTA} \times e^{(z_a \sigma_n - 0.5\sigma_n^2)}$$ *Equation 17*

where σ, and $\sigma^2$ are defined as they are for the LTA equations above, and,

| | | |
|---|---|---|
| $\sigma_n^2$ | = | $\ln(CV^2/n + 1$ |
| $z_a$ | = | 1.645 (z-score for the 95th percentile probability basis) |
| $z_m$ | = | 2.326 (z-score for the 99th percentile probability basis) |
| n | = | number of sampling events required per month. With the exception of ammonia, if the AML is based on the $LTA_c$, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 4. For ammonia, In the case of ammonia, if the AML is based on the $LTA_c$, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 30. |

**1 day, 10 year low flow (1Q10):** This flow is used to protect aquatic life from acute effects. It represents the lowest daily flow that is expected to occur once in 10 years. For example, the 1Q10 flow in the Clearwater River at Kamiah is 685.5 cfs; this is the flow rate to be used for evaluating aquatic life for the acute criteria pursuant to Idaho's WQS.

**7 day, 10 year low flow (7Q10**): This flow is used to protect aquatic life from chronic effects. It the lowest 7 day average flow expected to occur once in 10 years. For example, the 7Q10 flow in the Clearwater River at Kamiah is 856.9 cfs; this is the flow rate to be used for evaluating the aquatic life for the chronic criteria pursuant to Idaho's WQS.

# Appendix D. Endangered Species Act & Essential Fish Habitat

The Endangered Species Act (ESA) requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) 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 (Salvelinus confluentus), Snake River fall-run Chinook salmon (Oncorhynchus tshawytscha), Snake River Basin steelhead (Oncorhynchus mykiss), the North American wolverine (Gulo gulo luscus), and the Spalding’s catchfly (Silene spaldingii) are threatened and have the potential to be impacted by the discharge of the Kamiah WTP.

**Bull Trout**

Bull trout are a char species of fish, a subgroup within the salmonid family. They are found native throughout the Pacific Northwest, Alaska, and Canada in waters with the following habitat conditions: cold, clean, complex, and connected. Due to these habitat requirements, bull trout are commonly found in high mountainous areas where the water is fed via snowmelt or glacial runoff. Within water systems, they will mainly be found inhabiting deep pools of large and cold rivers or lakes, where riparian habitats are intact, migration corridors are accessible, and conditions allow for both adult spawning and juvenile rearing. (USFWS 2024)

Bull trout were listed as threatened under the ESA in 1999 (64 FR 58909). Critical habitat for bull trout was designated in 2005 (70 FR 56212) and revised in 2010 (75 FR 63898). The major threats to bull trout are the destruction/modification of habitats that support the previously mentioned habitat conditions, human take, and predation from nonnative species. The USFWS Mid-Columbia Recovery Unit Implementation Plan for Bull Trout (USFWS 2015) identified multiple causes of the bull trout threatened listing: operation and maintenance of dams and other diversion structures, forest management practices, livestock grazing, agriculture, agricultural diversions, road construction and maintenance, mining, and introduction of nonnative species.

Discharges from water treatment plants were not identified as a contributing factor to the decline in bull trout. (ID Governor’s Office of Species Conservation 2025)

**Effects Determination on Species and Critical Habitat**

Bull trout require habitats that contain cold, clean, complex and connected environments and the Kamiah WTP does not modify or destroy any existing habitat that contains these aspects. The following considerations show how the discharge will affect those requirements.

Water treatment plants are not significant sources of pollutants. The Kamiah WTP influent pulls raw river water directly from the Clearwater River. The principal wastewaters produced in filtration water treatment plants include filter backwash, filter-to-waste, thickener supernatant, and liquids from dewatering processes. Filter backwash and filter-to-waste account for most of the volume of wastewater discharged.

Table 3 in the Fact Sheet shows the list of pollutants detected in the effluent. From the effluent DMR data between 2013 – 2025, there were 8 instances of effluent violations, 6 in 2017

(February and September, 6 violations of TSS limits) and 2 violations of pH (minimum pH limit, November 2015, March 2016). The facility utilizes soda ash to raise the pH when needed. The facility states that any TSS and pH violations are potentially due to high flow and solids levels within the Clearwater River.

The permit contains effluent monitoring requirements for TTHMs because a review of the literature regarding water treatment plants suggest that these pollutants may be present in the discharge. TTHM monitoring was not completed in the previous permitting term and as such reasonable potential calculations were not able to be completed. Monitoring conditions for TTHMs are maintained in the draft permit.

As with TTHMs, metals monitoring is required because a review of the literature regarding water treatment plants suggest that these pollutants may be present in the discharge. For the Kamiah water treatment process aluminium may be added to the discharge, as the facility uses poly-aluminum chloride as a coagulant. For all other metals, as the influent to the WTP is from the Clearwater River, any metals in the discharge are expected to be at ambient concentrations within the river.

Bull trout require colder temperatures. Kamiah's water treatment process pulls water from the Clearwater River and discharges back to the same source water. The Kamiah WTP does not contribute to higher temperatures in the discharge and is not anticipated to increase temperature in the receiving water body. Effluent DMR data in Table 2 shows the $95^{th}$ % of the maximum effluent temperature to be 25.3 degrees C, while Table 4 shows a the $95^{th}$ % of the receiving water temperature to be 25.8 degrees C.

The facility has a low design flow of 0.088 mgd. That combined with the high dilution of the Clearwater River, as listed in Table 5, results in any pollutants that are discharged from the outfall dissipating within the mixing zone. The only pollutant that requires a mixing zone to meet WQS is chlorine, all other pollutants meet WQS at the end of pipe. As detailed in IV.A.3.c.ii, the discharge of chlorine only requires a 4% mixing zone to not cause an exceedance of the WQS.

Furthermore, the EPA does not expect the proposed action to impact habitat or exacerbate population isolation or contribute to increased water temperatures in areas supporting bull trout. Based on these considerations, the EPA concludes that this permit has no effect on the bull trout nor the physical and biological features associated with its critical habitat.

**Chinook Salmon (Snake River Basin Fall Run DPS)**

The Snake River Basin Fall Run Chinook salmon (SRBFR Chinook salmon) distinct population segment (DPS) is an anadromous fish species of the *Salmonidae* family, native to the Snake River Basin. The SRBFR Chinook salmon DPS are an evolutionary significant unit (ESU) of steelhead that are taxonomically recognized as an independent species of steelhead by the ESA. The SRB Chinook salmon DPS is defined as including all naturally spawned fall-run Chinook salmon originating from the mainstem Snake River below Hells Canyon Dam and from the Tucannon River, Grande Ronde River, Imnaha River, Salmon River, and Clearwater River subbasins. It also includes fall-run Chinook salmon from the following artificial propagation programs: Lyons Ferry Hatchery, Fall Chinook Acclimation Ponds, Nez Perce Tribal Hatchery, and Idaho Power. The SRBFR Chinook salmon DPS was listed as threatened in 1992 and critical habitat was designated in 1993. (NOAA 2017)

SRBFR Chinook salmon are born from redds in late winter to early spring and then migrate out to the ocean through the Snake and Columbia rivers before mid-summer. Salmon will spend 2-5 years maturing and growing in the ocean before returning to freshwater to spawn, entering the Columbia River in late summer, entering the Snake River in the fall, and spawning in December. Water temperature variances significantly influence the timing of this cycle. (NOAA 2017)

Habitat degradation/loss, inaccessible spawning grounds due to physical or biological barriers, water quality degradations (temperature, nutrients, algae), and altered flow regimes present the largest threats to the SRBFR Chinook salmon DPS. Much of this is due to dam operations on the Snake, Clearwater, and Columbia Rivers as well as agricultural operations along the rivers of the Snake River Basin. (NOAA 2017)

**Effects Determination on Species**

Similar to bull trout, chinook salmon are a temperature and flow sensitive species. The Fact Sheet does not list nutrients or pollutants that result in algae growth as being pollutants of concern in the discharge. Given that similar factors impact bull trout have also contributed to the decline of Chinook salmon and based on the analysis of impacts to bull trout as result of this action, the EPA determines this permit has no effect on the SRBFR Chinook salmon DPS.

**Steelhead (Snake River Basin DPS)**

The Snake River Basin steelhead (SRB steelhead) DPS is an anadromous fish species of the *Salmonidae* family, native to the Snake River Basin. SRB steelhead DPS are an ESU of steelhead that are taxonomically recognized as an independent species of steelhead by the ESA. SRB steelhead DPS is defined as including all naturally spawned anadromous steelhead populations below natural and manmade impassable barriers in streams in the Snake River basin of southeast Washington, northeast Oregon, and Idaho, as well as six artificial production programs: the Tucannon River, Dworshak National Fish Hatchery, South Fork Clearwater River B-Run, East Fork Salmon River Natural, Salmon River B-run, and the Little Sheep Creek/Imnaha River steelhead hatchery programs. The SRB steelhead DPS was listed as threatened in 1997. Critical Habitat for the SRB steelhead DPS was designated in 2005. (NOAA 2025)

Steelhead are born in freshwater streams, where they spend their first 2-3 years of life. They then migrate to the Pacific Ocean where they gain most of their mass. After spending between 1-4 seasons in the ocean, steelhead begin migrating back to freshwater and upstream all the way to their natal waters where they spawn. Unlike Pacific salmon species, steelhead are iteroparous and can migrate back to the ocean after spawning, and then spawn again the next season. (NOAA 2022)

The largest threats to SRB steelhead DPS are the loss of migration corridors from partial or total human-caused blockages, the destruction/modification of stream and riparian habitats, water-quality impairments such as excessive temperatures and sediments, predation/competition, and human related mortalities. The National Marine Fisheries Service ESA Recovery Plan for

Snake River Spring/Summer Chinook Salmon & Snake River Basin Steelhead identifies the major causes of steelhead declines as historical overharvest, dam operations/change in flow regime, natural resource extraction (logging, mining, irrigation), and agricultural practices. (NMFS 2017)

**Effects Determination on Species**

Like bull trout and chinook salmon, SRB steelhead DPS are a temperature sensitive species. As discussed in the bull trout determination above, Kamiah's water treatment process does not contribute to higher temperatures in the discharge.

Additionally, SRB steelhead DPS are sensitive to sediments on the water column, Table 2 shows that the $95^{th}$% of the maximum monthly average TSS from 2013 – 2025 is 22.5 mg/L. This is significantly lower than the proposed technology-based effluent limit for TSS. Additionally, as the influent for the Kamiah WTP is raw river water, pulled directly from the Clearwater River, the facility is not contributing to an addition of TSS in the discharge.

Given that similar factors impact bull trout and chinook salmon have also contributed to the decline of SRB steelhead DPS, based on the analysis of impacts to bull trout as well as those listed above as result of this action, the EPA determines this permit has no effect on the SRB steelhead DPS.

**North American wolverine**

The North American wolverine (*Gulo gulo luscus)* is a medium sized mammal and largest terrestrial member of the weasel family (*Mustelidae)*, it was listed as threatened under the ESA as of January $2^{nd}$ 2024. Their historical range includes Central Idaho, where Kamiah is located. Except for the most northern portions of the western contiguous United States, wolverine habitat within Idaho, Washington, Montana, Wyoming, and California is the southern portion of the species range . Within this southern area their distribution is limited to high-alpine regions where snow is deep and persistent throughout the winter and lasts late into the summer. Wolverines tend to live in remote and inhospitable places away from human populations, they are extremely rare to encounter even in regions where populations are known to exist.

Wolverines have large spatial requirements; the availability and distribution of food is likely the primary factor in determining wolverine movements and home range (Hornocker and Hash 1981; Banci 1994). Wolverines can travel long distances over rough terrain and deep snow, with adult males covering greater distances than females (Hornocker and Hash 1981; Banci 1994).

They are opportunistic feeders, consuming a variety of food sources depending on availability. They primarily scavenge carrion but also prey on small mammals and birds when possible. They also will consume a variety of berries, fruits, and insects. (Hornocker and Hash 1981; Banci 1994).

**Effects Determination on Species**

Based on the distribution and movement patterns of North American wolverines, it is highly unlikely that the species will be present in  or near the discharge of the Kamiah WTP due to the higher human presence and lack of snow. It is determined that reissuance of the Kamiah WTP NPDES permit will have no effect on the North American wolverine.

**Spalding's catchfly (*Silene spaldingii)***

Spalding's catchfly is an herbaceous perennial plant. In general, the species is found in open, moist grassland communities, although it is occasionally also found within sagebrush steppe communities, as well as in pine forests. The bunchgrass grasslands where Spalding's catchfly primarily occurs are characterized by one or both of two dominant bunchgrass species, such as blue bunch wheatgrass and Idaho fescue. The plant is typically found at elevations ranging from 420 to 1,555 m (1,380 to 5,100 ft), usually in deep, productive loess soils. Plants are generally found in swales or on north or east facing slopes where soil moisture is relatively higher (USFWS, 2006).

It was listed as a threatened species under the ESA on October 10, 2001 (66 FR 51598). No critical habitat has been designated. Within Idaho is known to be found within 3 counties in Idaho, Idaho County, Lewis County, and Nez Perce County, Kamiah is located within Lewis County.

The most recent five-year status review that was released in 2021 found that Spalding's catchfly is still not secure from threats and has not made enough recovery progress to meet delisting requirements. Spalding's catchfly continues to face threats from habitat loss and fragmentation through development and over usage, invasive nonnative plants, changes to wildfire regime and effects, overgrazing, trampling and predation. The 2021 Five-Year Status Review also found that pollinator conservation, particularly of the golden northern bumble bee (*Bombus fervidus*) and the white-shouldered bumblebee (*Bombus appositus*), can help reduce low seed viability causing declines in Spalding's catchfly populations (USFWS 2021).

**Effects Determination on Species**

Spalding's catchfly is an upland, terrestrial species. USFWS 2021 five-year review provide maps of known populations of the species that suggest that the species are over 10-20 miles from the Kamiah WTP. Monitoring activities from numerous agencies and entities continue to search for new populations, but it appears that the species is not currently found within the vicinity of the Kamiah WTP discharge. Further, the life history of the species limits its potential occupation of a site to upland, terrestrial sites, thus eliminating its potential presence near the Kamiah WTP or exposure to the discharge from the facility. It is determined that reissuance of the Kamiah WTP NPDES permit will have no effect on the Spalding's catchfly.

# Appendix E. CWA § 401 Certification

Below is the EPA's draft CWA § 401 Certification. The EPA is taking comment on the EPA's intent to certify this permit as described in Section VI.VI.C.

2025

**Clean Water Act (CWA) Section 401 Certification for**
**Discharger Located within Tribal Boundaries**

| | |
|---|---|
| Facility: | City of Kamiah Water Treatment Plant |
| NPDES Permit Number: | ID002846 |
| Location: | Kamiah, ID 83536 |
| Receiving Water: | Clearwater River |
| Facility Location: | 101 E Third Street Kamiah, Idaho 83536 |

This grant of certification without conditions applies to the water quality-related impacts from the activity subject to the National Pollutant Discharge Elimination System (NPDES) permit referenced above. The Kamiah WTP discharges to the Clearwater River, in Kamiah, Idaho within the Nez Perce Reservation.

Section 401 of the Clean Water Act requires applicants for Federal licenses or permits to conduct any activity which may result in any discharge into waters of the United States to obtain a certification or waiver from the certifying authority where the discharge originates or will originate. When a NPDES permit is issued on Tribal Land, the Tribe is the certifying authority where the Tribe has been approved by the EPA for Treatment as a State (TAS) pursuant to CWA Section 518(e) and 40 CFR § 131.8. Where a Tribe does not have TAS, the EPA is the certifying authority. 33 U.S.C. 1341(a)(1). In this case, the Nez Perce Tribe does not have TAS for the reservation. Therefore, the EPA is making the certification decision for the permit.[1]

The EPA has determined that the activity will comply with the applicable water quality requirements, including any limitation, standard, or other requirement under sections 301, 302, 303, 306, and 307 of the CWA; any federal and state or Tribal laws or regulations implementing those sections; and any other water quality-related requirement of state or Tribal law.

**The EPA's Public Notice Process**

On January 5th, 2026, the EPA issued a public notice for the draft permit, including the intent to certify under Section 401, and provided the opportunity for the public to submit comments until February 5th, 2026.

Susan Poulsom
Branch Manager
Permitting, Drinking Water and
Infrastructure
EPA Region 10

## Appendix F. Antidegradation Analysis

The WQS contain an antidegradation policy providing Tier 1, Tier 2, and Tier 3 levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier 1 Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier 2 Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier 3 Protection. The third level of protection applies to those water bodies where an outstanding resource water has been designated by the legislature, that water quality shall be maintained and protected from the impacts of point and nonpoint source activities (IDAPA 58.01.02.051.03).

The EPA is employing a water body by water body approach in conducting the antidegradation analysis. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier 1 protection for that use, unless specific circumstances warranting Tier 2 protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data was used to determine support status and the Tier protection. (IDAPA 58.01.02.052.05).

According to the 2022 Integrated Report the Clearwater River in the vicinity of the discharge is designated as 3T waters and the water quality of the river is unassessed. Because of this the EPA has no evidence to suggest the river in not fully supporting beneficial uses. Therefore, the EPA will provide a Tier 2 antidegradation analysis.

**Pollutants with Limits in the Current and Proposed Permit**

For pollutants that are currently limited and will have limits under the reissued permit, the current discharge quality is based on the limits in the current permit or license (IDAPA 58.01.02.052.06.a.i), and the future discharge quality is based on the proposed permit limits (IDAPA 58.01.02.052.06.a.ii). For this permit, this means determining the permit's effect on water quality based upon the limits for pH, TSS, and TRC in the current and proposed permits. Table E-1 provides a summary of the changes between the current permit limits and the proposed reissued permit limits.

| Table E-1: Comparison of Proposed and Current Permit Limits | | | | |
|---|---|---|---|---|
| **Parameters** | **Average Monthly Limit** | | **Maximum Daily Limit** | |
| | **Draft Permit (2025)** | **Current Permit (2013)** | **Draft Permit (2025)** | **Current Permit (2013)** |
| *TSS[a] (lbs/day)* | 22 | 12.23 | 33 | 18.35 |
| *Chlorine[a] (lbs/day)* | 0.22` | 0.12 | 0.37 | 0.2 |
| a. Mass based limits only | | | | |

Apart from the mass-based limits for chlorine and TSS, the proposed permit limits are the same as the existing permit limits. The proposed new limits are based on a recalculation due to a reassessment of the design flow of the facility, described in section II.A.2. These calculations are part of the TBEL process detailed in Section IV.A.2.b of this fact sheet. Since these mass-based limits are in line with regulations provided in 40 CFR 122.45(f) and based on the flow and concentration-based limits within the permit, there will be no adverse change in water quality of the receiving water is maintained and protected. Therefore, the EPA concludes that the permit complies with the Tier 2 provisions of Idaho's WQS (IDAPA 58.01.02.051.02 and IDAPA 58.01.02.052.06).