Response to Comments

Riverside Water and Sewer District
NPDES Permit Number: ID0024503
November 9, 2021

On March 8, 2021, the U.S. Environmental Protection Agency Region 10 (EPA) issued a public notice for the proposed reissuance of the Riverside Water and Sewer District Draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID0024503. The public comment period closed April 9, 2021.

During the public comment period, the EPA received comments from the following:

- The Nez Perce Tribe (Tribe)
- Idaho Conservation League (ICL)

This document presents the comments received and provides corresponding response to those comments. As a result of comments received, the following revisions were made to the permit:

- Added the tribal contact information to the Notice of New Introduction of Toxic Pollutants section; and
- Change to require continuous temperature monitoring of the effluent instead of grab samples

It is the EPA Region 10 policy not to revise the Fact Sheet based on public comment; instead, upon permit issuance the EPA considers this Response to Comments document as an appendix to the Fact Sheet that clarifies issues as necessary.

Following the public comment period, EPA met with the Nez Perce Tribe to further discuss their concerns raised during the public comment period. Discussions with the Tribe included the use of mixing zones, continuous effluent temperature monitoring and environmental justice. After the discussions concluded, the Tribe was supportive of moving forward with issuance of the permit.

Comment 1: Required Notification of New Introduction of Toxic Pollutants (Tribe)

Under the Monitoring, Recording and Reporting Requirements section of the draft permit, the Nez Perce Tribe is requesting to be included, along with the EPA, in the notification of new introduction of toxic pollutants (page 16). The Tribe requests that EPA include the following Nez Perce Tribal address:

Nez Perce Tribe
Attn: Ken Clark
Water Resources Division
P.O. Box 365
Lapwai, ID 83540

EPA Response.

EPA made the requested change to the permit, adding the Tribe's contact information to Section J, Notice of New Introduction of Toxic Permits.

Comment 2: Requirement of Continuous Temperature Monitoring in Effluent (Tribe and ICL)

Both ICL and the Tribe request that EPA require continuous effluent temperature monitoring instead of grab sampling in the proposed permit. As the Clearwater River has beneficial uses of cold-water aquatic life and salmonid spawning, ICL and the Tribe feel that it is important to continuously monitor the effluent temperature to make sure the beneficial uses are supported. Since EPA did not require the facility to collect temperature data in the previous permit, ICL sees continuous monitoring of temperature a necessary step in making sure effluent limits are accurately determined and the beneficial uses are fully supported.

EPA Response.

EPA made changes to the permit as a result of this comment. EPA had follow-up discussions with the Tribe to further understand the Tribe's concerns with thermal pollution in the Clearwater River and the use of mixing zones to meet water quality standards. As the result of the Tribe's concerns, the permittee has agreed to collect continuous temperature effluent monitoring data. Continuous monitoring will provide measurements throughout the day, taking into account any diurnal variations of temperature. EPA revised Table 1 of the permit to require continuous temperature monitoring which will provide data to re-evaluate reasonable potential in the next permit term.

Comment 3: Water Quality Limited Waters (Tribe and ICL)

The Tribe commented that the Water Quality Limited Waters section of the fact sheet states that the Clearwater River is fully supporting aquatic life according to the State of Idaho's 2016 Integrated Report. This should not be listed as "supporting" but as "not assessed" from the most recent 2018 Integrated Report.

EPA Response.

EPA agrees, the fact sheet incorrectly stated that the receiving water is fully supporting aquatic life. The Idaho Department of Environmental Quality (IDEQ) 2018/2020 Integrated Report states that the portion of the Clearwater River to which the facility discharges has not been assessed by the State or the Tribe to determine whether beneficial uses are being attained or impaired.

There are no changes to the permit as a result of this comment. As discussed in the introduction to this document, it is EPA Region 10's policy to not revise the Fact Sheet.

Comment 4: Pollutants of Concern – Ammonia (Tribe)

The permit lists ammonia as one of the pollutants of concern but ammonia is not monitored with any effluent limitations. Can the permit list effluent limitations for ammonia if it is monitored in the permit?

EPA Response.

Ammonia is a pollutant of concern in municipal wastewater effluent. EPA conducted a reasonable potential analysis for each of the pollutants of concern. If there is reasonable potential to cause or contribute to a violation of a water quality criterion, then EPA must establish an effluent limit for that pollutant of concern. Here, EPA determined that the Riverside discharge will not have the reasonable potential to cause or contribute to a violation of the water quality criteria for ammonia. Therefore, the permit does not contain water quality-based effluent limits for ammonia. In order to assess reasonable potential in the next permit cycle, EPA will continue to require monthly ammonia effluent monitoring. There are no changes to the permit as a result of this comment.

Comment 5: Mixing Zones (Tribe and ICL)

The Tribe is generally against the use of mixing zones, although might consider endorsing one in this case if the Riverside Water and Sewer District is simply unable to achieve the required level of control without a mixing zone. Both ICL and the Tribe expressed concerns that there might be overlap of mixing zones between the City of Orofino WWTP, the Ahsahka Water and Sewer District WWTP and Riverside WWTP. Is there water quality monitoring being done downstream of the three-point source dischargers to assess effects of the combination with other mixing zones?

EPA Response.

EPA met with the Tribe to discuss their concerns over the allowance of a mixing zone. The Idaho Water Quality Standards (WQS) were used as reference for setting permit limits, and to protect downstream uses in the State of Idaho. For flowing waters, Idaho WQS allow for a 25% mixing zone of the low flow design discharge conditions.

Without the allowance of a mixing zone (i.e. no dilution) the discharge would have reasonable potential to cause or contribute to a violation of the water quality criteria for both ammonia and chlorine. This would require end-of-pipe water quality-based effluent limitations for ammonia and chlorine, i.e., the facility would be required to produce effluent that met water quality criteria at the point of discharge. Based on the last five years of discharge monitoring report effluent data from the facility, Riverside WWTP would not be able to meet end-of-pipe water quality-based effluent limitations and would most likely require upgrades to meet the limits.

Based on the Tribe's concerns, EPA further analyzed the dilution needed to meet water quality criteria. While the Idaho WQS allow for a 25% mixing zone EPA calculated that, based on the design flow of the facility and the critical low flows of the receiving water, a much smaller dilution would allow the facility to meet the ammonia and chlorine criteria. For ammonia, with a 1% mixing zone, there is no reasonable potential to exceed water quality criteria. For chlorine, there is no reasonable potential to exceed the water quality criteria with a 9% mixing zone. These

smaller mixing zones indicate that a low level of dilution is needed to comply with water quality standards, because the discharge concentrations are relatively low.

To evaluate the impact of adjacent mixing zones for the three wastewater treatment plants, EPA conducted a reasonable potential analysis, for a scenario in which all three facilities were discharging effluent from the same pipe. Even when the three facilities are combined, the combined discharge would not have the reasonable potential to cause or contribute to a violation of the water quality criteria for either ammonia or chlorine. The calculations are provided in Appendix A.

Regarding downstream monitoring to assess impacts of the three dischargers, the NPDES program establishes effluent monitoring in permits to determine compliance and to directly assess the impact of the discharge on the receiving water. The permit establishes monitoring sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the permittee. Given the available dilution, size of the facility, type of facility, additional monitoring is not warranted.

There are no changes to the permit as a result of this comment.

Comment 6: Environmental Justice (Tribe)

The Riverside WWTP is located in an "overburdened" community as defined as including tribal and indigenous populations, while also being located on the Nez Perce Reservation.

EPA Response.

Thank you for this comment. EPA appreciates the tribe's clarification and assertion to define the community around Riverside as overburdened. EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted. The geospatial tool did not recognize Riverside as being within or near a Census block group that is potentially overburdened. EPA acknowledges that Riverside is located in an "overburdened" community as defined as including tribal and indigenous populations.

There are no changes to the permit as a result of this comment. As discussed in the introduction to this document, it is EPA Region 10's policy to not revise the Fact Sheet.

Appendix A

Reasonable Potential Analysis (RPA) and Water Quality Effluent Limit (WQBEL) Calculations

Facility Name	Riverside + Ahsahka + Orofino
Facility Flow (mgd)	1.84
Facility Flow (cfs)	2.85

Critical River Flows (CFS)

		(IDAPA 58.01.02 03. b)	Annual Crit. Flows	Annual Crit. Flows
Aquatic Life - Acute Criteria - Criterion Max. Concentration (CMC)	**1Q10**		665	665.0
Aquatic Life - Chronic Criteria - Criterion Continuous Concentration (CCC)	**7Q10 or 4B3**		834	834.0
Ammonia	**30B3 or 30Q10/30Q5** (seasc		1149	1,149.0
Human Health - Non-Carcinogen	**Harmonic Mean Flow**		3116	3,116.0
Human Health - carcinogen	**Harmonic Mean Flow**		3116	3,116.0

DF at defined percent of river flow allow	25%	**59.4**
DF at defined percent of river flow allow	25%	**74.2**

Receiving Water Data

			Notes:	Annual Crit. Flows
Hardness, as mg/L $CaCO_3$	= 100 mg/L			
Temperature, °C		Temperature, °C	95th percentile	21.5
pH, S.U.		pH, S.U.	95th percentile	7.89

Pollutants of Concern			AMMONIA . default: cold water, fish early life stages present	CHLORINE (Total Residual)
Effluent Data	**Number of Samples in Data Set (n)**		177	177
	Coefficient of Variation (CV) = Std. Dev./Mean (default CV = 0.6)		1.55	0.35
	Effluent Concentration, µg/L (Max. or 95th Percentile) - (C_e)		11,336	418.4
	Calculated 50th % Effluent Conc. (when n>10), Human Health Only			
Receiving Water Data	**90th Percentile Conc., µg/L - (C_u)**			
	Geometric Mean, µg/L, Human Health Criteria Only			
Applicable Water Quality Criteria	Aquatic Life Criteria, µg/L	Acute	6,891	19.
	Aquatic Life Criteria, µg/L	Chronic	1,808	11.
	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 Default Value = 25%	**Aquatic Life - Acute**	**1Q10**	25%	25%
	Aquatic Life - Chronic	7Q10 or 4B3		25%
		30B3 or 30Q10/30Q5		25%
	Human Health - Non-Carcinogen	Harmonic Mean	25%	25%
	Human Health - Carcinogen	Harmonic Mean		25%
Calculated Dilution Factors (DF) (or enter Modeled DFs)	Aquatic Life - Acute	1Q10	59.4	59.4
	Aquatic Life - Chronic	7Q10 or 4B3		74.2
	Aquatic Life - Chronic Ammonia	30B3 or 30Q10/30Q5	101.9	101.9
	Human Health - Non-Carcinogen	Harmonic Mean		274.7
	Human Health - Carcinogen	Harmonic Mean		274.7

Aquatic Life Reasonable Potential Analysis

σ	$\sigma^2 = \ln(CV^2+1)$		1.107	0.340
P_n	$=(1\text{-confidence level})^{1/n}$, where confidence level =	**99%**	0.974	0.974
Multiplier (TSD p. 57)	$=\exp(z\sigma\text{-}0.5\sigma^2)/\exp[\text{normsinv}(P_n)\sigma\text{-}0.5\sigma^2]$, where	**99%**	1.5	1.1
Statistically projected critical discharge concentration (C_e)			17222	475.76
Predicted max. conc.(ug/L) at Edge-of-Mixing Zone		Acute	290	8.01
(note: for metals, concentration as dissolved using conversion factor as translator)		Chronic	169	6.41
Reasonable Potential to exceed Aquatic Life Criteria			**NO**	**NO**