Response to Comments

City of Kooskia Wastewater Treatment Plant
NPDES Permit Number: ID0021814
November 18, 2019

On September 10, 2019, the U.S. Environmental Protection Agency Region 10 (EPA) issued a public notice for the proposed reissuance of the City of Kooskia Wastewater Treatment Plant (WWTP) Draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID0021814. The public comment period closed October 11, 2019.

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

- City of Kooskia (City)
- 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:

- Change to effluent monitoring sample type for biochemical oxygen demand (BOD_5), total suspended solids (TSS) and total ammonia to grab samples
- Clarification of total ammonia frequency of monitoring in effluent and surface water
- Removal of dissolved oxygen monitoring in effluent and surface water

Comment 1 (City): 24-Hour Composite Sampling for BOD_5, TSS and Total Ammonia

The draft Permit requires that flow-proportional, 24-hour composite samples be collected for BOD_5, TSS, and Total Ammonia with at least eight discrete 100 milliliter samples collected over a 24-hour period. Lagoon-based treatment facilities are known for consistent effluent water qualtiy and flow where concentrations and flow are unlikely to change more than a few percent over a period of several hours. Therefore, there is no apparent value in collecting eight samples over a 24-hour period and doing so will only serve to put an onerous burden on your operations staff. The City requests that these continue to be "grab" samples in accordance with the City's previous permit. If grab samples are deemed to not be sufficient, they request that these samples be "8-hour composite" samples collected as three discrete, equal-volume grab samples over an 8-hour period.

EPA Response.

Thank you for your comment. The EPA will be making a change to the permit as a result of this comment. 40 CFR 122.21(g)(7)(i) on effluent characteristics states:

"When paragraph (g)(7) of this section requires analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including E. coli), and Enterococci (previously known as fecal streptococcus at 122.26(d)(2)(iii)(A)(3)), or volatile organics, grab samples must be collected for those pollutants. For all other pollutants, a 24-hour composite sample, using a minimum of four (4) grab samples, must be used unless specified otherwise at 40

CFR Part 136. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours."

Appendix A of the fact sheet (page 34) shows the design criteria of the facility. A review of the volume, design flow and retention times of cells 1 (retention time of 10 days) and 2 (retention time of 12 days) list retention times of over 24 hours. As the retention times exceed 24 hours, the facility will be required to collect BOD_5, TSS and Total Ammonia using grab sampling.

Effluent monitoring of BOD_5, TSS and ammonia is as follows:

Parameter	Units	Sample Location	Sample Frequency	Sample Type
BOD_5	mg/L	Influent and effluent	1/week	Grab
TSS	mg/L	Influent and effluent	1/week	Grab
Total Ammonia (as N)	mg/L	Effluent	1/month	Grab

Comment 2 (ICL): Ammonia and Dissolved Oxygen Monitoring

Please explain why EPA is proposing to reduce monitoring of ammonia and to remove the requirement to monitor dissolved oxygen (DO) in Kooskia's effluent. EPA did not explain the rationale for these proposed changes on page 24 of the fact sheet. We request the monitoring frequencies for ammonia and dissolved oxygen not be reduced.

EPA Response

Thank you for your comment. The EPA will be making some changes to the permit as a result of this comment. As is stated in the permit, the City of Kooskia will be required to monitor for ammonia in the effluent at a frequency of 1/month and in surface water at a frequency of 1/quarter. Monitoring in either the effluent or surface water will not be required for DO.

Table 14 of the fact sheet creates some confusion for the sample frequency of ammonia in the effluent. The table should say that ammonia is required to be monitored at a frequency of 1/month. Table 15 of the fact sheet is correct in that surface water monitoring of ammonia is required at a frequency of 1/quarter. Monitoring of ammonia in surface water is needed for assessing reasonable potential in the next permit cycle. Over a five-year permit cycle, 1/quarter will produce enough data points to accurately assess ammonia upstream in the receiving water. Also, ammonia monitoring in the effluent is required by grab sampling. For explanation, see comment 1 and EPA response.

On page 22 of the fact sheet, under the section for DO, it states that the City will continue to sample for DO in the effluent and surface water of the South Fork Clearwater River to assess DO impacts on water quality. That sentence is incorrect and should have been removed. The EPA is not requiring continuous monitoring for DO in either the effluent or surface water. As explained on page 22 of the fact sheet, the technology-based limits for BOD_5 will ensure that the discharge does not cause or contribute to a violation of DO criteria in the receiving water.

Effluent and surface water monitoring for ammonia is as follows:

Sample Location	Parameter	Units	Sample Frequency	Sample Type
Effluent	Total Ammonia (as N)	mg/L	1/month	grab
Surface Water	Total Ammonia (as N)	mg/L	1/quarter	grab

Comment 3 (City): Effluent limits for BOD_5 and TSS

The City objects to lowering the effluent limits for BOD_5 and TSS requiring the increase of percent removals. The City's existing lagoon treatment system is likely to periodically violate these limits even though the system is properly operated. These lowered limits also cause a lowering of the allowable mass loading that the treatment plant can discharge. Combined, this means that the City's potential for growth is limited. The City of Kooskia is requesting that both parameters remain the same as the existing permit.

EPA Response.

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. In the previous permit, the TSS effluent limits of 70 mg/L for average monthly and 105 mg/L for average weekly were established pursuant to Idaho's 2002 alternative state requirements (IDAPA 58.01.420.02.b.ii). However, this was done in error as these requirements were not approved by the EPA. Regardless, in 2006, these alternative TSS requirements were removed from the Idaho Administrative Code. Since these alternative TSS requirements are no longer in effect, they could not be used to establish the final TSS effluent limits in the permit.

As is discussed in the fact sheet, the EPA established secondary treatment effluent limits (listed in Table 9) for BOD_5 and TSS effluent limits that are considered "equivalent to secondary treatment" which apply to facilities meeting certain conditions established under 40 CFR 133.101(g). The EPA used DMR data from 2002 to 2019 to evaluate the facility's eligibility for effluent limits based on equivalent to secondary treatment standards. The results of this evaluation were that the facility met the criteria for treatment equivalent to secondary treatment for TSS, but not for BOD_5. For additional information on how the EPA evaluated Kooskia's treatment equivalent to secondary treatment, see pages 17-19 of the fact sheet.

Comment 4 (City): Requirement of Instantaneous Effluent Temperature Monitoring and Numeric Effluent Limit

Instantaneous effluent temperature is now required to be electronically monitored continuously and the maximum allowable value was set equal to a value the City has already recorded. The City anticipates that this temperature limitation will likely be exceeded in portions of July and August in any given year depending on the weather. This is something that the City has no control over nor do they have any technology to lower the effluent temperature. The City is requesting this parameter be removed from the permit, and if that is not possible, to at least provide a couple degrees of grace over a value the City knows it will discharge.

EPA Response.

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. As is explained in the fact sheet, the temperature effluent limit and the associated instantaneous effluent temperature monitoring are required to remain in compliance with the March 2004 South Fork Clearwater River Total Maximum Daily Load (TMDL),[1] which was issued by the EPA for tribal waters. Effluent limitations for point sources must be consistent with applicable TMDL allocations (40 CFR 122.44(d)(vii)). The allocation provided by the TMDL is 26 degrees centigrade maximum daily average. This requires averaging over a 24-hour period.

The TMDL identifies wastewater treatment plants as contributors of heat to the South Fork Clearwater River. It has been established that temperatures in all South Fork Clearwater River streams monitored in recent years exceed established water quality criteria, primarily during the summer months. Rather than establishing natural stream temperature at each of the treatment facilities, as it varies daily, seasonally, and from year to year, the TMDL took a conservative approach in calculating the allowable heat load – the natural background temperature of the stream is equal to the applicable numeric criterion.

Kooskia began monitoring effluent temperature in May of 2003. Peak temperatures were reached during July 2003, with a maximum daily temperature of 26 ° C (78.8° F) recorded on July 31. Based on these data, a maximum daily limit of 26° C (78.8° F) was established as the wasteload allocation for Kooskia. This allocation applies from July 15 – August 31, and from October 1 – 15, when temperature criteria in the South Fork Clearwater are expected to be exceeded.

Continuous monitoring will provide measurements throughout the day, taking into account the diurnal variations of temperature. Continuous temperature monitoring will insure all temperatures during the day are measured to determine compliance with the maximum daily limit.

Comment 5 (City): Updating the Facility Plan

The new permit requires that the City update its Facility Planning document based on a different standard. The City interprets this as meaning that if the discharge exceeds 0.198 MGD (as a monthly average) in any two months during a year's time, as measured in a continuous 30-day period expressed as a daily average, the city will need to update its plan. This takes what used to be an annual evaluation and requires it be performed on a monthly basis. Given the infiltration and inflow (I/I) issues associated with the community collection system it seems the City would be expected to be updating its Facility Plan and addressing the I/I issue in the very near future. We are not financially prepared to do this. We do not see the value in this change and request it be eliminated and the previous requirement used.

[1] South Fork Clearwater River Subbasin Assessment and Total Maximum Daily Loads (March 2004). https://www.deq.idaho.gov/water-quality/surface-water/tmdls/table-of-sbas-tmdls/clearwater-river-south-fork-subbasin/

EPA Response.

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. Each month, the permittee must record the average daily flow in order to maintain adequate capacity. When the actual flow for any two months during a 12-month period exceed the facility planning values (maximum monthly flow of 0.198 MGD), the permittee must develop a new or updated plan and schedule for continuing to maintain capacity and maintain compliance with effluent limits. This requirement is not an annual report. It is a condition triggered when there is a two-month exceedance of the criteria. Similarly, inflow and infiltration (I/I) maintenance is standard for upkeep of a wastewater treatment plant. The purpose of the facility plan condition and maintenance of I/I is to prevent violations and ensure that the effluent limits are met.

Comment 6 (City): Surface Water Monitoring of Temperature

As the City interprets the draft permit, the river temperature upstream of the City's discharge must be monitored continuously. It is not clear if the gauging station at Stites will be allowed to be used. Previously, the City monitored this parameter as grab samples five days per week, and requests that this be continued.

EPA Response

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. Table 2 (page 9) of the permit lists the surface water monitoring requirements. The table states that temperature in surface water will be monitored via grab sampling. Thus, for surface water monitoring of temperature, upstream of the outfall, no changes have been made between the previous permit and the final permit.

Comment 7 (ICL): Outfall

At page 9 of the fact sheet, EPA states that the City of Kooskia WWTP discharges continuously to the South Fork Clearwater River through an open pipe adjacent to the facility. ICL requests that EPA explain whether the Agency considered requiring Kooskia to install a diffuser at the end of its outfall and why a diffuser is not required for this facility. Diffusers are used to ensure effluent is diluted effectively, preventing barriers to fish and other aquatic life passage. At critical low flows on the South Fork, a diffuser may be necessary to ensure proper dilution, given the 25% mixing zones authorized in this permit.

EPA Response

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. A NPDES permit regulates the discharge from a facility; not the treatment that is required at a facility. *See* NPDES Permit Writers Manual, p. 5-47 "EPA incorporates technology-based controls in NPDES permits…but does not require dischargers to install the identified technology." IDAPA 58.01.02.060, Idaho's mixing zone policy, discusses when a diffuser is required and what percent of the stream width may be used. That regulation states:

"For flowing waters: (1) the width of a mixing zone is not to exceed twenty-five percent (25%) of the stream width; and (2) the mixing zone shall not include more than twenty-five percent (25%) of the low flow design discharge conditions as set forth in Subsection 210.03.b of these rules."

The mixing zone policy further states that diffusers shall be used for all new discharges to non-flowing waters authorized after July 1, 2015. As the Kooskia WWTP discharges to the South Fork Clearwater is neither a "new discharge…authorized after July 1, 2015" nor a discharge to "non-flowing waters," the use of a diffuser is not required under Idaho state law. This does not preclude Kooskia from considering installing a diffuser in the future.

Comment 8 (ICL): Frequency of Temperature Surface Water Monitoring

ICL is concerned that the surface water monitoring requirements are too infrequent to provide EPA and the public sufficient data to assess the assimilative capacity of the receiving water and to develop and/or refine the TMDL for the South Fork Clearwater. The proposed NPDES permit for Kooskia only requires quarterly monitoring of temperature. This is problematic because, for example, if Kooskia records surface water temperature at the beginning of each quarter, there would be no records of surface water temperatures during the critical period when stream temperatures are most likely to exceed state water quality criteria (i.e. July and August).

ICL also cites the Kootenai Ponderay Sewer District Wastewater Treatment Plant as an example where the EPA was unable to determine reasonable potential for temperature. ICL requests that EPA clearly explain what would constitute sufficient water temperature data from which EPA could confidently conduct a reasonable potential analysis of temperature for Kooskia. In addition, ICL requests that EPA set continuous temperature monitoring frequencies for upstream and downstream surface water according to the frequency necessary to ensure sufficient data will be collected if a reasonable potential analysis is needed during the next permit renewal.

EPA Response

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. The temperature TMDL for the South Fork Clearwater River provides the City with a wasteload allocation for temperature of 26° C (78.8° F) from July 15 – August 31, and from October 1 – 15, when temperature criteria in the South Fork Clearwater are expected to be exceeded. This is used to establish the effluent limitation for temperature consistent with the TMDL.

The surface water monitoring for temperature is required to determine the ammonia water quality standard for the next permit cycle and will be used to determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for ammonia not temperature. If the reasonable potential analysis for ammonia demonstrates the discharge will cause or contribute to the water quality standard for ammonia then an effluent limit is set for that parameter.

For the City of Kooskia, the EPA did not conduct a reasonable potential analysis for temperature as there is already a TMDL for temperature that provides the City with a WLA. For additional

information on the temperature TMDL, see comment 4. Also, as discussed in comment 4, the temperature TMDL on the south fork clearwater is set and maintained by the state of Idaho. If the TMDL needs to be modified, it is Idaho's responsibility to provide data. Lastly, as defined in Table 2 of the permit, quarterly monitoring frequency is defined as: January 1 to March 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31. For the purposes of measuring parameters including temperature to determine the ammonia surface water standard quarterly monitoring is adequate.

Comment 9 (ICL): Endangered Species

ICL is concerned that the EPA inappropriately determined that reissuance of Kooskia's NPDES permit will have no effect on the ESA-listed species, bull trout, as state on page 29 of the fact sheet. ICL cited the 2015 Final Recovery Plan for the Coterminous United States Population of Bull Trout, where thermal pollution is shown to impact the population status of bull trout. The plan states that water temperatures above 15°C is believed to limit bull trout distribution. ICL is concerned that thermal loading during the summer months along with Kooskia's effluent discharges of up to 26°C could lead to a thermal barrier dissuades migrating or spawning bull trout from moving beyond the lower portion of the South Fork Clearwater to its cooler headwaters. ICL requests EPA initiate consultation with the U.S. Fish and Wildlife Service to determine whether Kooskia's effluent limits for temperature will adversely affect bull trout.

EPA Response

Thank you for your comment. The EPA will not be making any changes to the permit as a result of this comment. The temperature TMDL for the South Fork Clearwater river is expected to improve conditions throughout the subbasin for all aquatic species, including threatened and endangered fish species such as bull trout. Water temperatures are elevated above water quality standards at all monitoring locations throughout the subbasin. The TMDL states that stream temperatures are primarily controlled by channel morphology, stream flow, shading and air temperature. Wide, shallow streams with little shade will heat most quickly. Stream shading has been reduced through logging, roading, mining, grazing and agricultural activities. In addition, water channels that have been made wider and shallower, with less vegetative shading, are being heated by solar insolation. Point source contributions to water temperature increases are minor throughout the subbasin except for effects from the Grangeville WWTP on Threemile Creek.[2] For additional information on the temperature TMDL, see comment 4. As point source contributions of temperature to the South Fork Clearwater are considered minor and not the primary source of thermal pollution, the EPA did not consider temperature to be a limiting factor when making a no effect determination. Since the EPA made a no effect determination, consultation with the Services is not required.

[2] South Fork Clearwater River Subbasin Assessment and Total Maximum Daily Loads (March 2004). https://www.deq.idaho.gov/water-quality/surface-water/tmdls/table-of-sbas-tmdls/clearwater-river-south-fork-subbasin/