Response to Comments on the Draft NPDES Permit for the Kootenai-Ponderay Sewer District

June 2018

Overview

The EPA issued a draft National Pollutant Discharge Elimination System (NPDES) permit for the Kootenai-Ponderay Sewer District (KPSD) for public review and comment on June 9, 2017. The public comment period was scheduled to close on July 10, 2017, but was extended until September 7, 2017 in response to a request from KPSD. The EPA received comments from KPSD, the Idaho Conservation League (ICL), Lake Pend Oreille Waterkeeper (LPOW), and the Kalispel Tribe of Indians during this public comment period.

On January 25, 2018, the EPA reopened the public comment period for the KPSD permit pursuant to 40 CFR 124.14. The reopened public comment period closed on February 26, 2018. This comment period was limited to those permit provisions that had changed from the previous draft that was issued for public comment. See the January 2018 Fact Sheet for the specific changes that were made. The EPA received comments from KPSD, ICL, and the Kalispel Tribe of Indians during the reopened public comment period.

Section 1: Comments Received during the First Comment Period (June 9 – September 7, 2017)

Comment #1-1 (ICL)

The receiving waterbodies of KPSD's effluent discharge are impaired to such an extreme level that EPA may not authorize further pollutant discharges for KPSD into the unnamed tributary to Boyer Slough. The absence of a Waste Load Allocation (WLA) in the Pend Oreille Lake Nearshore Total Maximum Daily Load (Nearshore TMDL) further precludes EPA from authorizing discharges from KPSD into the unnamed tributary to Boyer Slough until such time as the discharger is granted a WLA.

In Idaho's 2014 Integrated Report, the Idaho Department of Environmental Quality (DEQ) identified Boyer Slough as impaired for nutrients, total nitrogen and total phosphorus.[1] Tier 1 data collected by DEQ found "[t]otal phosphorus concentrations were an order of magnitude greater than other streams and total nitrogen concentrations were 3-4 times that observed in other streams in the Panhandle of Idaho." See 2014 Integrated Report at Appendix K, page 13.

[1] The Factsheet indicates that EPA based some of its determinations and conclusions on DEQ's 2012 Integrated Report. EPA should ensure its determinations are based on DEQ's 2014 Integrated Report, DEQ's most recent federally approved Integrated Report.

Monitoring conducted by KPSD also verified the extremely high levels of total phosphorus downstream of KPSD's outfall, as well as high levels of total phosphorus in KPSD's effluent discharge. The Factsheet reported the stunning figures below:

- Maximum total phosphorus concentration upstream from the discharge: 60 µg/L
- Average total phosphorus concentration measured downstream from the discharge: 1,730 µg/L
- Maximum downstream total phosphorus concentration: 2,800 µg/L
- Average effluent concentration of total phosphorus measured between Jan. 2012 - March 2017: 5,146 µg/L
- Maximum total phosphorus concentration of effluent: 7,620 µg/L.

These total phosphorus concentrations far exceed the 9 µg/L target set in the Nearshore TMDL, and the impact of these concentration levels is readily apparent in Boyer Slough. See Appendix A. Considering the level of impairment of the unnamed tributary to Boyer Slough and Boyer Slough and the fact that KPSD is entitled to no WLA, EPA should not permit KPSD to discharge into the unnamed tributary to Boyer Slough.

Response #1-1

The EPA agrees that the receiving waters are impaired. However, this is not a basis for the EPA to deny KPSD's application for an NPDES permit.

The NPDES regulations prohibit the issuance of a permit under certain circumstances described in 40 CFR 122.4. The only prohibitions potentially applicable to KPSD's permit are 40 CFR 122.4(a), (b), (d), (e), and (g). However, the issuance of KPSD's permit complies with these regulations, as explained below.

40 CFR 122.4(a) states that "no permit may be issued…when the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA." As explained in the Fact Sheets, the EPA has established permit conditions which provide for compliance with the applicable requirements of the CWA and its implementing regulations, including technology-based limits consistent with secondary treatment and water quality-based effluent limits.

40 CFR 122.4(b) states that "no permit may be issued…when the applicant is required to obtain a State or other appropriate certification under section 401 of CWA and § 124.53 and that certification has not been obtained or waived." The State of Idaho has issued a Clean Water Act Section 401 certification of this permit.

40 CFR 122.4(d) states that "no permit may be issued…when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." As explained in the Fact Sheet, the EPA has established water quality-based effluent limits for pollutants for which such limits were necessary to ensure compliance with Idaho's water quality requirements. Due to the distance downstream to the State of Washington and the large amount of dilution that the discharge will experience in Lake Pend Oreille and the Pend Oreille River, the KPSD discharge will not affect the waters of any State other than Idaho.

40 CFR 122.4(e) states that "no permit may be issued…when, in the judgment of the Secretary, anchorage and navigation in or on any of the waters of the United States would be substantially

impaired." "Secretary" means the Secretary of the Army, acting through the Chief of Engineers (40 CFR 122.4(e)). The Secretary has not made such a judgment for the KPSD permit.

40 CFR 122.4(g) states that "no permit may be issued…for any discharge inconsistent with a plan or plan amendment approved under section 208(b) of CWA." This discharge is not inconsistent with the *Clark Fork-Pend Oreille Watershed Management Plan*.

The only prohibition related to discharges to impaired waters is 40 CFR 122.4(i). However, this prohibition is inapplicable to KPSD because it is specific to "new sources" and "new dischargers." Those terms are defined in 40 CFR 122.2. KPSD is not a "new source" because no standards of performance have been promulgated under Clean Water Act Section 306 for facilities of this type. KPSD is not a "new discharger" because it has previously received a finally effective NPDES permit for discharges at its current site and it began discharging pollutants at this site prior to August 13, 1979. The first NPDES permit was issued to this facility on December 6, 1974. Sewer connections began in 1969 (personal communication with Tanner Weisgram, KPSD, September 14, 2017).

40 CFR 122.4(c) is inapplicable to this permit because it concerns permits issued by States.

40 CFR 122.4(f) is inapplicable to this permit because it concerns discharge of radiological, chemical or biological warfare agents and high-level radioactive waste.

40 CFR 122.4(g) is inapplicable to this permit because it concerns discharges to the territorial sea, the waters of the contiguous zone, or the oceans.

Because none of the prohibitions in 40 CFR 122.4 prevent the issuance of a permit to KPSD, the EPA has no basis to deny KPSD's application for reissuance of their permit.

Regarding the statement in a footnote to this comment that the EPA should have referred to the 2014 Integrated Report instead of the 2014 Integrated Report, this was addressed by the revised draft permit issued in January 2018. The 2018 fact sheet references the 2014 Integrated Report and establishes water quality based effluent limits necessary to address the fact that total nitrogen and total phosphorus are causing impairments in Boyer Slough.

Comment #1-2 (ICL)

A 10-year compliance schedule for KPSD is not appropriate and would unjustly delay the restoration of the beneficial uses designated in the unnamed tributary to Boyer Slough and Boyer Slough. KPSD has already benefited from operating under an administratively extended NPDES permit for the past 10 years—KPSD still discharges today according to a permit that expired on January 5, 2007. In effect, KPSD has had the better part of a decade to plan for and invest in new wastewater infrastructure. During this time KPSD did in fact develop a land application program. KPSD should now be directed to utilize it, rather than be given a 10-year compliance schedule.

In addition, KPSD has benefited from knowing, well in advance, that more stringent effluent limits would likely be incorporated into its renewed NPDES permit. DEQ worked with EPA over the past four years to draft KPSD's permit renewal.[2] During that time, EPA and DEQ involved KPSD in discussions, meetings, and planning efforts, which put KPSD on notice that future effluent restrictions would likely require

[2] See Attachment 1, Letter from John Tippets to Kermit Kiebert dated April 17, 2017.

KPSD to make significant upgrades to its facility and operations. For example, over two years ago, KPSD communicated directly with EPA and DEQ regarding the development of the draft NPDES permit renewal now under consideration.[3] In these communications, EPA and DEQ informed KPSD of the likelihood of new nutrient effluent limits in KPSD's draft NPDES permit renewal.[4] In fact, during this same time, KPSD and DEQ together crafted the basis for KPSD's compliance schedule exhibited in the draft NPDES permit under consideration.[5]

The circumstances described above exemplify the ample time and notice KPSD has already been granted to anticipate and prepare for the new effluent limits proposed in this draft NPDES permit. Consequently, granting a 10-year compliance schedule as proposed in this NPDES permit renewal would be excessive and would send the wrong signal to KPSD and other point source dischargers. Granting the 10-year compliance schedule would effectively reward KPSD for failing to take responsible measures to prepare for a permit KPSD knew would be issued. Moreover, granting such a long compliance period would incentivize other wastewater treatment plants and point source dischargers to delay planning and investments in infrastructure despite clear indications that future effluent restrictions are likely. Accordingly, a 10-year compliance schedule for KPSD is inappropriate and, thus, violates federal code governing compliance schedules. See 40 CFR 122.47(a).

If EPA still proposes granting a 10-year compliance schedule, we request EPA provide a detailed explanation of its determination and a justification for the length of the compliance schedule.

Response #1-2

In its final Clean Water Act Section 401 certification dated June 20, 2018, Idaho DEQ revised the schedule of compliance proposed in the January 2018 draft permit. The compliance schedule now provides for two options, one of which includes a study to determine the assimilative capacity for discharges of nutrients to Lake Pend Oreille, which could be used to support a change in the discharge location. If KPSD decides to pursue the lake study, the schedule of compliance lasts 10 years and 6 months.

If KPSD decides not to pursue a lake study, the schedule of compliance has been shortened from 10 years to 9 years. The EPA believes that the compliance schedule authorized by Idaho DEQ in its Clean Water Act Section 401 certification requires compliance with the final water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen, and total phosphorus as soon as possible, as required by 40 CFR 122.47(a)(1).

As explained in Idaho DEQ's Clean Water Act Section 401 certification, KPSD is considering multiple options to attain compliance with the Clean Water Act. It is reasonable to allow adequate time for KPSD to evaluate these options through a facility planning effort, and, if KPSD chooses, a lake study. Following planning and studies, it is reasonable to allow time for the planned improvements to be funded, designed, constructed, and optimized. These steps are reflected as interim milestones in the compliance schedule, as required by 40 CFR 122.47(a)(3).

[3] See Attachment 2, Email from June Bergquist to Tanner Weisgram dated May 3, 2016.
[4] Id.
[5] Id.

Any future changes in the location of the outfall would require a revised permit application specifying the new discharge location, a permit modification pursuant to 40 CFR 122.62, and public review and comment and State certification of the modified permit pursuant to 40 CFR Part 124.

Comment #1-3 (ICL)

Barring the argument that a 10-year compliance schedule is not appropriate in this instance, the compliance schedule should also not be granted because it is not clear whether EPA's determination of KPSD's ability to immediately comply with the effluent limits for ammonia and phosphorus upon the effective date of the final permit is reasonable. We request EPA explain the basis for this determination and whether EPA considered KPSD's capacity to reuse water through land application.

In 2013, KPSD renewed its Wastewater Reuse permit,[6] which authorizes KPSD to irrigate 36.5 acres with wastewater during the growing season. See Idaho DEQ Reuse Permit No. M-182-03. KPSD's most recent approved reuse permit expanded KPSD's capacity to land apply wastewater, which includes KPSD's approval to extend its wastewater irrigation through the middle of October.

Moreover, KPSD's Wastewater Reuse permit suggests that KPSD may not yet be utilizing the full capacity of its reuse permit. For example, the risk of constituent overloading on KPSD's wastewater reuse sites appears low given that only one, very accommodating, loading limit for nitrogen was included in the reuse permit. KPSD's irrigation history at its wastewater reuse site otherwise indicates that KPSD still has irrigation capacity at its site.

KPSD's capacity to land apply and store wastewater could be further enhanced by leveraging seasonal fluctuation of the wastewater influent KPSD receives. Because many KPSD customers do not reside in Kootenai and Ponderay year-round, KPSD's wastewater intake is high during the summer months and over the holiday period, in November and December, but lower during the months in between. That predictable variation could allow KPSD adjust its operations to comply with the proposed new effluent limits through land application during the growing seasons and storing wastewater during the non-growing season. EPA must evaluate this option before it may approve a compliance schedule for KPSD. EPA should begin its evaluation by determining and reporting how much land application KPSD currently utilizes and whether KPSD has a present need, or not, to discharge effluent during the growing season into the unnamed tributary to Boyer Slough.

Response #1-3

As explained in the 2018 Fact Sheet at Pages 12 and 13, the EPA has determined that the KPSD cannot comply with the new water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen and total phosphorus immediately upon the effective date of the final permit, even though the permittee can store and land apply a portion of its wastewater.

As explained on Pages 13 and 14 of the 2018 Fact Sheet, the EPA requested and obtained influent flow data from KPSD. The EPA analyzed these data and found that influent flows are relatively low during the

[6] Upon our review of KPSD's most recent Reuse Permit Renewal, we were disappointed to see that DEQ's Staff Analysis revealed that KPSD failed to conduct several activities required by KPSD's compliance schedule in its 2008 Reuse Permit. See Staff Analysis for Draft Wastewater Reuse Permit No. M-182-03 at section 4.1. KPSD's failure to timely and adequately follow through on requirements in its wastewater reuse compliance schedule and DEQ's failure to enforce the reuse compliance schedule is further reason why ICL does not support granting KPSD a lengthy 10-year compliance schedule in the proposed NPDES permit.

summer months and relatively high during the winter and early spring. Thus, even though some KPSD customers may not be year-round residents, this has not resulted in low wastewater flows except during the summer and November and December.

A footnote to this comment states that KPSD failed to conduct several activities required by KPSD's compliance schedule in its 2008 Reuse Permit and that this is further reason why ICL does not support granting KPSD a 10-year compliance schedule in the proposed NPDES permit. In general, the reuse permit that IDEQ has issued to KPSD and KPSD's record of compliance or noncompliance with that permit is beyond the scope of this permitting action, however, the EPA considered KPSD's ability to store and land apply a portion of its wastewater in determining if a compliance schedule was necessary. Re-use and storage capacity were also considered in the development of the interim effluent limits for total nitrogen and total phosphorus, as explained in the 2018 Fact Sheet at Pages 14 and 15.

Comment #1-4 (ICL)

A mixing zone of 100% of the critical flow volume of the unnamed tributary to Boyer Slough violates the Idaho Water Quality Standards currently in effect, and this mixing zone must be removed from the final NPDES permit.

EPA cannot integrate erroneous State conclusions into the EPA's NPDES permit. While Idaho has the authority to authorize mixing zones, EPA cannot integrate a mixing zone into an NPDES permit if the mixing zone authorized by the state violates the state's own mixing zone rules.

In this instance, DEQ authorized a mixing zone for nitrate + nitrite that utilizes 100% of the receiving flow of the unnamed tributary to Boyer Slough. EPA states (on page C-2 of the Factsheet) that utilizing 100% of Boyer Slough's estimated 30B3 flow rate as a mixing zone for nitrate + nitrite is consistent with DEQ's mixing zone authorization. And DEQ states (on page 5 of the 401 Certification) that IDAPA 58.01.02.060 authorizes the 100% mixing zone proposed for nitrate + nitrite. Both of these statements are incorrect and misrepresent the effective Water Quality Standards in Idaho for mixing zones.

Idaho's effective mixing zone rules clearly prohibit authorization of mixing zones greater than 25% of the receiving waterbody's flow. See 58.01.02.060, 2014 Idaho Administrative Code. Both EPA and DEQ incorrectly justify the 100% mixing zone for nitrate + nitrite based on proposed revisions to DEQ's Mixing Zone Policy, which have not yet been approved by EPA. Until EPA approves the revisions to DEQ's Mixing Zone Policy, the previous standards published in the 2014 Idaho Administrative Code continue to apply and are effective for Clean Water Act purposes.

It is inappropriate for EPA to incorporate a mixing zone (and accompanying effluent limits) into its NPDES when that mixing zone violates DEQ's own mixing zone rules. Accordingly, the 100% mixing zone for nitrate + nitrite must be removed from the proposed NPDES permit and 401 Certification, and appropriate effluent limits must be set for nitrate + nitrite.

As an aside, without providing a legal or regulatory basis, DEQ inappropriately included the flow from the main stem of Boyer Slough into the nitrate + nitrite mixing zone proposed for the unnamed tributary to Boyer Slough. No statutory or regulatory authority permits DEQ or EPA to authorize mixing zones for one receiving waterbody by including the flow in another downstream receiving water body. For this reason, too, EPA must remove the 100% mixing zone proposed for nitrate + nitrite and revise the proposed permit accordingly.

The EPA calculated the mixing zone for nitrate + nitrite based on a flawed estimate of the 30B3 flow rate of Boyer Slough. EPA estimated the 30B3 flow rate of Boyer Slough by calculating the 30B3 flow rate of Sand Creek (a nearby tributary to Pend Oreille Lake) and scaling that rate by the ratio of the drainage areas of Sand Creek and Boyer Slough.

Calculating Boyer Slough's flow rate in this way is flawed because it ignores the geographic and topographic differences of these drainages areas. The Sand Creek drainage, for example, is a higher elevation watershed than the Boyer Slough drainage, and the Sand Creek drainage also includes more south-facing slopes in the watershed. As a result, spring runoff and associated flow rates from the Sand Creek drainage are likely higher and more sustained than the runoff and associated flow rates in the Boyer Slough drainage. Because EPA failed to account for this variable, EPA's estimate of the 30B3 flow rate for Boyer Slough is inaccurate and cannot be used to justify the 100% mixing zone proposed for nitrate + nitrite.

Response #1-4

This comment was addressed by changes made to the revised draft permit issued in January 2018. The only conditions in the June 2017 draft permit that were influenced by the estimated flow rate of the main stem of Boyer Slough were the proposed effluent limits for nitrate + nitrite, which were based on a proposed mixing zone which encompassed 100% of the flow of the main stem of Boyer Slough.

In its revised draft Clean Water Act Section 401 certification, Idaho DEQ only proposed a mixing zone for chlorine, and the chlorine mixing zone encompassed 25% of the stream flow of the unnamed tributary to Boyer Slough which receives the discharge. None of the conditions in the January 2018 draft permit or the final permit were based on the flow rate of the main stem of Boyer Slough.

Comment #1-5 (ICL)

EPA incorrectly estimated and applied critical low flows for the unnamed tributary to Boyer Slough, upstream from the point of KPSD's discharge, because the flow data collected by KPSD and used by EPA came from samples recorded in Boyer Slough. Consequently, EPA must remove the mixing zones and effluent limits for ammonia and chlorine and revise the final permit accordingly.

At page C-1 of the Factsheet, EPA explains that it estimated critical low flows upstream of the point of discharge based on flow data collected by KPSD, as part of the conditions set out at page 5 of KPSD's 2002 NPDES permit. Contrary to EPA's understanding, KPSD's 2002 NPDES permit did not require KPSD to record flow data from the unnamed tributary to Boyer Slough, but rather from Boyer Slough. The 2002 permit clearly states that KPSD establish monitoring stations "on the Boyer Slough," not on the unnamed tributary to Boyer Slough. See KPSD 2002 NPDES permit at 5. EPA's mistaken use of flow monitoring data taken from Boyer Slough in place of the actual flow data from the unnamed tributary to Boyer Slough would explain why EPA's estimates of critical low flows for the unnamed tributary to Boyer Slough appear unreasonably high. Recent observations of the unnamed tributary to Boyer Slough suggest the unnamed tributary is ephemeral.[7] Without accurate flow data for the unnamed tributary to

[7] ICL staff observed KPSD's outfall into the unnamed tributary to Boyer Slough on August 29, 2017 and saw little to no flow in the receiving water. Based on this observation, we believe there is a reasonable likelihood that the unnamed tributary to Boyer Slough is ephemeral and has zero flow during some portions of the summer months, at least. See Appendix B.

Boyer Slough, EPA cannot authorize mixing zones for ammonia and chlorine and must revise the corresponding effluent limits accordingly.

Response #1-5

This comment was addressed by changes made to the revised draft permit issued in January 2018. As stated on Page 9 of the January 2018 Fact Sheet, the receiving water monitoring stations used for the monitoring required by the 2002 permit were, in fact, in the unnamed tributary immediately upstream and downstream of the discharge pipe. In addition, the EPA included the results of two additional flow measurements performed by Idaho DEQ to revise the estimated flow rates. The revised estimates are lower than those in the 2017 Fact Sheet, however, the EPA does not agree that the unnamed tributary to Boyer Slough is ephemeral and has zero flow for some portions of the summer months.

See the response to comment #2-1 for a detailed explanation of the estimated critical low flow rates.

Comment #1-6 (ICL)

EPA must include effluent limits for temperature in KPSD's final NPDES permit.

The unnamed tributary to Boyer Slough, the receiving waterbody for KPSD's discharge, is designated for cold water aquatic life and salmonid spawning and must maintain the following water temperatures:

- 13 degrees C or less with a maximum daily average no greater than 9 degrees C during the time of spawning and incubation; and
- 22 degrees C or less with a maximum daily average of no greater than 19 degrees C when spawning and incubation is not occurring.

As discussed above, the unnamed tributary to Boyer Slough likely has a critical low flow rate of zero, so effluent temperature is unlikely to be diluted by the receiving water during certain times of the year. In addition, wastewater sitting in KPSD's ponds during the summer months is likely to exceed temperature limits for cold water aquatic life and salmonid spawning and likely to exceed these temperatures at the point of discharge.

Therefore, because the projected temperature of the effluent in the receiving water (during times of zero flow) will exceed the numeric criterion for temperature the discharge has a reasonable potential to cause or contribute to an excursion above the water quality standards for temperature. Accordingly, EPA must set temperature limits pursuant to the water quality-based effluent limits cited above.

Response #1-6

As explained in the responses to comment #1-5 and 2-1, the critical low flow of the receiving water is not zero. As stated on Page D-11 of the Fact Sheet, the EPA does not have sufficient data to determine if effluent limits for temperature are necessary for the KPSD discharge. The EPA has required continuous monitoring of the effluent and receiving water temperature. These data will be used to determine if the discharge has the reasonable potential to cause or contribute to excursions above water quality standards for temperature when the permit is reissued.

Comment #1-7 (ICL)

The draft permit calls for total phosphorus effluent limits during the months of June through September. This is improper because the receiving water is demonstrating excess nutrient issues year round and because EPA failed to recognize the 1-year retention time of nutrients in Pend Oreille Lake. See *Nutrient*

TMDL for the Nearshore Waters of Lake Pend Oreille, Idaho: TMDL Five-Year Review (June 2015) at x. EPA should reevaluate the total phosphorus effluent limits to reflect this background water quality condition.

At page D-6 of the Factsheet, EPA explains that it determined the effluent limits for total phosphorus based on the Nearshore TMDL for Pend Oreille Lake. This is an appropriate basis for effluent limits on total phosphorus partly because KPSD cannot discharge pollutants that will or can be expected to result in a violation of water quality standards applicable to downstream waters. See IDAPA 58.01.02.80.01.a. Similarly, EPA should extend the time period in which total phosphorus limits apply to KPSD to reflect the 1-year retention time of nutrients in Pend Oreille Lake.

Response #1-7

As stated in the 2017 Fact Sheet at Page D-6, the EPA's interpretation of the State's narrative nutrient criterion for total phosphorus is valid from June – September. This is the season during which the Nearshore TMDL applies, and it is the season during which the receiving waters are most vulnerable to effects from nutrient loading.

The EPA does not have sufficient data to determine if KPSD's discharge of nutrients has the reasonable potential to cause or contribute to excursions above water quality standards outside of the June – September season. As stated in the 2017 Fact Sheet at Page 15, the permit requires surface water monitoring for total phosphorus, total nitrogen, Secchi depth, dissolved oxygen, and chlorophyll a in the water column and in periphyton, to determine if phosphorus and/or total nitrogen limits are necessary outside of the June – September season.

Comment #1-8 (ICL)

During the development of the proposed draft NPDES permit for KPSD, several alternatives have been suggested, which would move KPSD's outfall location. If any of these alternatives were to be considered for inclusion into KPSD's final NPDES permit, EPA would be required to establish and facilitate a supplemental comment period in which the new alternative could be evaluated and considered.

Preliminarily, we note that the Nearshore TMDL for Pend Oreille Lake set a WLA of zero for the nearshore area of the lake. As such, KPSD is precluded from discharging into the nearshore area. The WLA in the Nearshore TMDL was, in part, based on a wastewater reuse permit application submitted by KPSD to DEQ in 2001, which indicated KPSD's intention to eliminate its wastewater discharge during the June through September growing season.

Response #1-8

The final permit authorizes the discharge of pollutants at the same location as proposed in the draft permit. Therefore, it is not necessary to reopen the comment period to take comment on the discharge location.

Any future changes in the location of the outfall would require a revised permit application specifying the new discharge location, a permit modification pursuant to 40 CFR 122.62, and public review and comment and State certification of the modified permit pursuant to 40 CFR Part 124.

Comment #1-9 (LPOW)

Boyer Slough is a unique waterbody near Sandpoint, Idaho. Its designated uses are cold water aquatic life, salmonid spawning, primary contact recreation, domestic water supply, wildlife habitat and aesthetics. Of these uses, cold water aquatic life and primary contact recreation are the most sensitive. Boyer Slough is relied upon and used primarily by waterfront property owners; unfortunately, some effects of its use – and neglect – are becoming increasingly apparent.

Boyer Slough is listed as impaired for total phosphorous and total nitrogen in DEQ's 2014 Integrated Report. However, this fact was not recognized in the establishment of effluent limitations for the KPSD WWTF. According to the 2014 Integrated Report, discharge from the KPSD WWTF is a point source of phosphorous and nitrogen pollution.

Since 2013, data collected by Lake Pend Oreille Waterkeeper's Water Quality Monitoring Program (WQMP) demonstrates phosphorus and nitrogen impairment of Boyer Slough (Tables 1, 2, and 3). In Table 1, highlighted values indicate samples that exceeded 0.009 mg/L (9µg/L), which is the equivalent to the Nearshore TMDL for total phosphorous for Lake Pend Oreille. We appreciate that the 9 µg/L target from the Nearshore TMDL applies to final effluent limits established from June-September when algae and rooted macrophyte growth is at its peak. However, the interim limits for phosphorous (282 lb/month) are excessive and not protective of water quality.

Table 1. total phosphorus data collected by the Lake Pend Oreille Waterkeeper Water Quality Monitoring Program.

Total Phosphorus -Boyer Slough					
	2013 (mg/L)	2014 (mg/L)	2015 (mg/L)	2016 (mg/L)	2017 (mg/L)
June	0.233	0.394	0.392	0.335	0.131
July	0.192	0.296	0.0809	0.259	0.172
Aug.	0.0995	2.86	0.0496	0.04	To Be Reported
Sept.	0.128	0.248	0.039	1.09	To Be Collected
Oct.	4.98	No Data	No Data	1.58	To Be Collected

Tables 2 and 3 show TKN and Nitrate + Nitrite data collected from 2013-2017. The recommended total nitrogen concentration range (sum of TKN and nitrate + nitrite) for lakes in Nutrient Ecoregion II[8] is 0.1-0.8 mg/L. The combined nitrogen concentration has exceeded the recommended range on 12 occurrences.

TKN - Boyer Slough					
	2013 (mg/L)	2014 (mg/L)	2015 (mg/L)	2016 (mg/L)	2017 (mg/L)
June	1.01	4.45	0.5	0.086	0.5
July	0.5	0.53	0.5	0.89	0.70
Aug.	1.0	2.77	0.76	0.76	To Be Reported

[8] Ambient Water Quality Criteria Recommendations. Information Supporting the Development of State and Tribal Nutrient Criteria. Lakes and reservoirs in Nutrient Ecoregion II." EPA 822-B-00-007. 2007.

TKN - Boyer Slough					
	2013 (mg/L)	2014 (mg/L)	2015 (mg/L)	2016 (mg/L)	2017 (mg/L)
Sept.	1.43	0.058	0.05	1.52	To Be Collected
Oct.	6.94	No Data	No Data	2.03	To Be Collected

Nitrate + nitrite - Boyer Slough					
	2013 (mg/L)	2014 (mg/L)	2015 (mg/L)	2016 (mg/L)	2017 (mg/L)
June	0.05	0.554	0.05	0.05	0.05
July	0.106	0.05	0.05	0.05	0.677
Aug.	0.05	4.22	0.05	0.05	To Be Reported
Sept.	0.05	0.05	0.05	0.908	To Be Collected
Oct.	1.54	No Data	No Data	5.88	To Be Collected

Response #1-9

This comment was addressed by changes made to the revised draft permit and explained in the 2018 Fact Sheet. As explained in the 2018 Fact sheet at Page 10, the 2014 Integrated Report was approved by EPA on June 5, 2017, which was four days before the public comment period for the KPSD draft permit began. While the EPA was developing the draft permit and Fact Sheet, the State of Idaho's 2012 integrated report was the most recent approved integrated report, which is why the 2017 Fact Sheet references the State of Idaho's 2012 Integrated Report (see the 2017 Fact Sheet at Page 10).

The revised draft permit addresses the impairments identified in the 2014 integrated report by proposing water quality-based effluent limits (WQBELs) for total nitrogen in addition to the total phosphorus WQBELs proposed in the 2017 draft permit. In addition, in the revised draft Clean Water Act Section 401 certification, Idaho DEQ did not authorize mixing zones for any nitrogen compounds. This resulted in more stringent effluent limits for ammonia and nitrate + nitrite than had been proposed in the 2017 draft permit.

The commenter is correct that the *interim* ammonia and total phosphorus effluent limits, which apply during the term of the compliance schedule, will not ensure compliance with water quality standards. However, they are not intended to do so, nor are they required to do so under federal regulations (40 CFR 122.47).

Comment #1-10 (LPOW)

40 CFR §122.44(a)(1) requires that NPDES permits include applicable technology-based limitations and standards ("TBELs").

Legal Standard

Clean Water Act Section 301 requires that NPDES permits "shall require application of" Best Available Technology ("BAT") to reduce pollutant discharges to the maximum extent "technologically and economically achievable," including "elimination of discharges of all pollutants" if it is achievable. 33 U.S.C. § 1311(b)(2)(A)(i); see also id. § 1362(6) (defining "pollutant" to include "heat"); U.S. Steel Corp. v.

Train, 556 F.2d 822, 840 n.27 (7th Cir. 1977) (noting that Section 301(b) of the Act requires effluent limitations on thermal discharges). Federal regulations promulgated by U.S. EPA also require that "[t]echnology-based treatment requirements under Section 301(b) of the [Clean Water Act] represent the minimum level of control that must be imposed" in a NPDES permit. 40 C.F.R. § 125.3(a) (emphasis added); see also Mich. Admin. C. R 323.2189(2) (incorporating federal regulations). BAT is a stringent treatment standard that has been held to represent "a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges." EPA v. Nat'l Crushed Stone Ass'n, 449 U.S. 64, 74 (1980).

Technology-based effluent limitations ("TBELs") are a necessary minimum requirement for a permit "regardless of a discharge's effect on water quality." Am. Petroleum Inst. v. EPA, 661 F.2d 340, 344 (5th Cir. 1981); see also PUD No. 1 Jefferson County v. Wash. Dep't of Ecology, 511 U.S. 700, 704 (1994) (state water quality standards are "supplementary" to required individual TBELs) (citing EPA v. Calif. ex. rel. Water Res. Control Bd., 426 U.S. 200, 205 n.12 (1976)); Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 620, 623 (2d Cir. 1976) (Clean Water Act "predicate[s] pollution control on the application of control technology on the plants themselves rather than on the measurement of water quality."). Federal regulations require state permitting authorities to establish BAT effluent limits in individual NPDES permits on a case-by-case basis, using Best Professional Judgment ("BPJ"), "to the extent that EPA- promulgated effluent limitations are inapplicable." 40 C.F.R. § 125.3(c)(2), (d)

Amendments to the federal Clean Water Act stand for the proposition that publicly owned wastewater treatment facilities – like the KPSD WWTF – have a baseline TBEL requirement of secondary treatment. Currently, the KPSD WWTF possesses and implements secondary treatment, and therefore there is in compliance with applicable TBEL requirements.

Response #1-10

The EPA agrees with the commenter that publicly owned treatment works must achieve effluent limits based on secondary treatment (Clean Water Act § 301(b)(1)(B), 40 CFR 133). The EPA also agrees with the commenter that KPSD implements secondary treatment. The permit includes effluent limits based on secondary treatment, as explained in Appendix D to the 2016 Fact Sheet.

Because the permit includes effluent limits based on secondary treatment, it satisfies the applicable Clean Water Act requirements for technology-based effluent limits.

The Clean Water Act's requirement for application of BAT is inapplicable to POTWs. Clean Water Act Section 301(b)(2)(A) reads, in relevant part, "(there shall be achieved) … effluent limitations for categories and classes of point sources, *other than publicly owned treatment works*, which shall require application of the best available technology economically achievable…" (emphasis added).

Comment #1-11 (LPOW)

LPOW acknowledges the addition of compliance schedules to the draft permit, which solidifies the requirement of master planning and choosing from a variety of facility options that will allow compliance with final effluent limits in 10 years. However, allowing 3 years after the effective date of the final permit for the KPSD WWTF to submit a masterplan that identifies the preferred alternative is excessive. Given that the interim effluent limits for nutrients will cause or contribute to water quality standard (WQS) violations, allowing 3 years to decide which option is more palatable is unwarranted

and should be reduced. A streamlined timetable to select a compliance schedule is needed to proactively address impairment to local waterways.

Response #1-11

This comment was addressed by changes to the compliance schedule in Idaho DEQ's final Clean Water Act Section 401 certification. Specifically, if KPSD chooses to perform a study to determine the assimilative capacity of Lake Pend Oreille to accept discharges of nutrients (compliance schedule option A), the final facility plan is not due until February 28, 2023, which is after the lake study is complete. However, if KPSD chooses not to perform the lake study (compliance schedule option B), the facility plan is due by August 31, 2020, which is two years after the effective date of the final permit, instead of three years as proposed in the draft permit.

The EPA believes that the compliance schedule authorized by Idaho DEQ in its draft Clean Water Act Section 401 certification requires compliance with the final water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen, and total phosphorus as soon as possible. Because there are multiple options that KPSD is considering to attain compliance with the Clean Water Act, it is reasonable to allow adequate time for KPSD to evaluate these options through a master planning effort.

Comment #1-12 (LPOW)

Drawing an analogy to the stormwater context, the importance of EPA requiring further implementation of technology-based pollution controls – including at minimum further optimization - at the KPSD WWTF is particularly evident given the increasing regional population.

Response #1-12

As explained in the response to comment #1-10, the applicable technology-based standard for POTWs is secondary treatment. As explained in Appendix D to the Fact Sheet, the permit includes technology-based effluent limits which are consistent with the definition of secondary treatment (40 CFR 133.102). Thus, further implementation of technology-based pollution controls is not necessary to comply with the Clean Water Act's technology-based requirements.

Comment #1-13 (LPOW)

The regional population is approaching the threshold for implementation of a municipal separate storm sewer system permit (MS4) as best available science has proven, time and again, that populations reaching 10,000 residents often cause or contribute to local waterway pollution. Whereas in the stormwater context, the population surrounding the KPSD WWTF is likely discharging stormwater pollution containing sediment and nutrients that cause or contribute to Boyer Slough's impairment.

Response #13

Discharges of pollutants from municipal separate storm sewer systems are beyond the scope of this permitting action.

Comment #1-14 (LPOW)

More Stringent WQBELs Are Required

40 CFR § 125.3(a) requires additional or more stringent effluent limitations and conditions, such as WQBELs, be imposed when TBELs are not sufficient to protect water quality. Further enunciating this concept, § 122.44(d)(1)(i) provides that "[l]imitations must control all pollutants or pollutant parameters

(either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will *cause*, have the *reasonable potential to cause*, or *contribute* to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality." [emphasis added].

Legal Standard

WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (e.g. the fishable/swimmable goals of the CWA). WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water.

40 CFR § 122.44(d)(1) requires that permits include limits for all pollutants or parameters which are or may be discharged at levels which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including narrative criteria for water quality. Discharge must be stringent enough to ensure that water quality standards are met, and must be consistent with any applicable wasteload allocation.

The Draft Permit Needs Stronger WQBELs for Nutrients to Protect Boyer Slough

The KPSD WWTF discharges wastewater effluent to Boyer Slough, which is part of the Clark Fork/Pend Oreille watershed. Boyer Slough is protected by Idaho water quality standards for cold water aquatic life, primary contact recreation, and domestic water supply.2 Additionally, Boyer Slough is protected for industrial and agricultural water supply, wildlife habitats and aesthetics.3 As discussed above, Lake Pend Oreille Waterkeeper has provided best available science, including numeric data, showing that Boyer Slough is failing to maintain its designated uses. Furthermore, DEQ has included Boyer Slough on the 303(d) list as part of the 2014 Integrated Report for total phosphorous and total nitrogen and TMDLs will need to be created for these pollutants.

The revised draft permit would authorize interim and final seasonal discharges as follows:

- Ammonia: June-September – 1,168 lbs/month.
- Phosphorous: June-September – 282 lbs/month.
- No interim limits for nitrate + nitrite.

Given the listing status of Boyer Slough, the interim limits for ammonia and phosphorous are clearly excessive and will not protect water quality standards. While the final effluent limit for phosphorous aligns with the Nearshore TMDL for total phosphorous for Lake Pend Oreille, this would not be enforced for 10 years.

Furthermore, the justification for the nitrate + nitrite 100% mixing zone is weak. According to DEQ, the proposed mixing zone is contrary to the WQS mixing zone rules (IDAPA 58.01.02.060). Yet DEQ attempts to rationalize the permissibility of larger mixing zones by referencing Boyer Slough's lack of existing drinking water use, and the assumption of no adverse effects to cold water aquatic life or recreational uses. According to DEQ's 2014 Integrated Report, Boyer Slough is not meeting water quality standards and TMDLs for total phosphorus and nitrogen are needed. A 100% mixing zone is in violation of IDAPA rules. Thus the proposed mixing zone lacks supporting science, logic, or law and is arbitrary and capricious.

The Proposed WQBELs Don't Protect WQS

As a preliminary matter and discussed supra, there is sufficient data and science showing that Boyer Slough is unable to meet, at minimum, its recreational contact and cold water aquatic life designated uses, and therefore is impaired and requires TMDLs for phosphorous and nitrogen. As EPA recognizes in its Fact Sheet, when a waterway does not possess a TMDL, permits can still contain Wasteload Allocations (WLAs) for specific point source dischargers. In turn, EPA has given the KPSD WWTF WLAs.

However, Boyer Slough is included on the 303(d) list for total phosphorous and total nitrogen, which necessitates the development of TMDLs. The draft permit fails to recognize the findings of the 2014 Integrated Report. Therefore, the WLAs for the KPSD WWTF would sanction excessive loading based on, as discussed above, a 100% mixing zone for nitrate + nitrite and a 25% mixing zone for ammonia, and therefore are inappropriate and must be revised. Indeed, the proposed WQBELs for Boyer Slough are insufficient to ensure that water quality standards downstream of the discharge will be protected because the permit does not account for a safety factor, contributions from other point and nonpoint sources.

Response #1-14

The ammonia and phosphorus limits listed by the commenter are the interim limits that were proposed in the 2017 draft permit. As explained in the response to comment #1-9, the interim limits apply during the term of the compliance schedule and need not ensure compliance with water quality standards.

The final effluent limits for ammonia, nitrate + nitrite, total nitrogen, and total phosphorus are shown in Table 4, below:

Parameter	Units	Effluent Limits		
		Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit
Nitrate + Nitrite (as N)	mg/L	10.0	20.1	—
(October – May)	lb/day	33.4	67.1	—
Total Ammonia (as N)	mg/L	1.77	—	4.63
(October – May)	lb/day	5.90	—	15.4
Total Ammonia (as N)	mg/L	1.56	—	4.07
(June – September)	lb/day	5.20	—	13.6
Total Nitrogen (as N)	µg/L	200	401	—
(June – September)	lb/day	0.667	1.34	—
Total Phosphorus (as P)	µg/L	9.0	18.0	—
(June – September)	lb/day	0.030	0.060	—

The portions of this comment regarding mixing zones for ammonia and nitrate + nitrite were addressed by changes made to the revised draft permit issued for public comment in January 2018, which does not incorporate mixing zones for any nitrogen compounds. The final effluent limits for ammonia ensure compliance with Idaho's numeric water quality criterion for ammonia at the end-of-pipe. The final effluent limits for total nitrogen and total phosphorus ensure compliance with Idaho's narrative water quality criterion for nutrients (IDAPA 58.01.02.200.06) at the end-of-pipe. The final effluent limits for

nitrate + nitrite ensure compliance with Idaho's narrative water quality criterion for toxic substances (IDAPA 58.01.02.200.02) at the end-of-pipe.

Although the EPA's regulations for total maximum daily loads (TMDLs) require a margin of safety (40 CFR 130.7(c)(1)), there is no such requirement for WQBELs calculated for a specific NPDES permit.

The commenter notes that there are no interim limits for nitrate + nitrite. In the 2017 Fact Sheet, the EPA had determined that KPSD could comply with the final nitrate + nitrite effluent limits immediately upon the effective date of the final permit, thus, neither a compliance schedule nor interim limits for nitrate + nitrite were necessary.

The permittee cannot comply with the more stringent nitrate + nitrite effluent limits proposed in the 2018 draft permit, thus, the 2018 draft permit does propose a compliance schedule for the nitrate + nitrite limits. However, interim limits for nitrate + nitrite are nonetheless unnecessary because the interim limits for total nitrogen will also control the discharge of nitrate + nitrite.

Comment #1-15 (LPOW)

The Draft Permit's Limits Will Cause or Contribute to Violations of Idaho Water Quality Standards and Therefore DEQ Cannot Certify the Draft permit

As discussed previously, the proposed WQBELs are inadequate and must be revised because it would sanction arbitrary mixing zones and because proposed effluent limitations will not ensure that discharges do not cause or contribute to violations of water quality standards.

In its Water Quality Certification, DEQ explains that it is proposing to authorize a 100% mixing zone for nitrate + nitrite. DEQ recognizes that nitrate and nitrite are pollutants that are significant to Boyer's Slough's designated beneficial use for domestic water supply and cold water aquatic life, but rationalizes the proposed 100% mixing zone by stating that it would not change existing conditions due to no proposed increase in design flow. Clearly, the existing conditions do not protect beneficial uses and nutrient TMDLs are needed as recognized by the 2014 Integrated Report. This logic is self-defeating and arbitrary: the only way decision-makers can rationalize the proposed WQBEL for nitrate + nitrite is by creating exorbitant, unreasonably large mixing zone constituting 100% of the flow of the receiving water.

We acknowledge that DEQ may authorize a mixing zone that varies above the rules, however it must not cause an unreasonable interference with, or danger to, beneficial uses and must meet certain other rules. To obtain a larger mixing zone, the discharger must provide DEQ with an analysis that demonstrates a larger mixing zone is needed given, siting, technological, and managerial options.

The prevailing argument for approving a larger mixing zone was the purported expensive nature of the upgrades that would be required to meet reasonable effluent limits. While we do agree that a practical compliance schedule is necessary in order to complete upgrades, which includes securing the necessary funds, we question DEQ's decision to authorize a 100% mixing zone for nitrate + nitrite that will still violate water quality standards after upgrades are complete.

In summary, the draft permit should acknowledge the 303(d) listing status of Boyer Slough for total phosphorous and nitrogen as demonstrated in DEQ's 2014 Integrated Report. DEQ can only lawfully certify a permit that recognizes the listing status, makes appropriate changes to effluent limitations,

mixing zones and the compliance schedule, and in so doing, ensures discharges will not cause or contribute to a violation of water quality standards.

Response #1-15

This comment was addressed by changes made to the revised draft permit issued in January 2018. The only permit conditions that were influenced by the estimated flow rate of the main stem of Boyer Slough were the proposed effluent limits for nitrate + nitrite in the June 2017 draft permit, which were based on a proposed mixing zone which encompassed 100% of the flow of the main stem of Boyer Slough.

In its revised draft Clean Water Act Section 401 certification, Idaho DEQ only proposed a mixing zone for chlorine, and this mixing zone encompassed 25% of the stream flow of the unnamed tributary to Boyer Slough which receives the discharge. The final effluent limits for nitrate + nitrite ensure compliance with Idaho's narrative water quality criterion for toxic substances (IDAPA 58.01.02.200.02) at the end-of-pipe.

Comment #1-16 (KPSD)

The draft permit establishes new effluent limits for nitrate, nitrite, ammonia and phosphorus in an effort to achieve water quality standards in Boyer Slough. The District's current facilities are not designed to remove any of these constituents. Therefore, significant improvements will be necessary.

Response #1-16

As stated in the 2018 Fact Sheet at Page 13, "The EPA has determined that the KPSD cannot comply with the new water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen and total phosphorus immediately upon the effective date of the final permit." The 2018 draft permit proposed a 10-year compliance schedule for the new water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen and total phosphorus. The final permit includes a compliance schedule with two options, which provide a total of either 9 or 10-1/2 years to achieve compliance with these new limits. These schedules allow KPSD adequate time to make the improvements necessary to achieve compliance with these limits.

The EPA determined that KPSD would have been able to comply with the new WQBELs for nitrate + nitrite proposed in the 2017 draft permit immediately upon the effective date of the final permit (see the 2017 Fact Sheet at Page 12). However, the EPA determined that KPSD cannot comply with the more stringent WQBELs for nitrate + nitrite proposed in the revised draft permit. Therefore, the revised draft permit also proposed a compliance schedule for the new WQBELs for nitrate +nitrite, and the final permit includes such a schedule.

Comment #1-17 (KPSD)

No treatment technology except reverse osmosis is currently able to reliably achieve the proposed phosphorus limit of 9 µg/L. This requirement effectively prevents the District from discharging to Boyer Slough when the phosphorus limit is in effect (June – September).

Response #1-17

The basis for the proposed average monthly phosphorus limit of 9 µg/L is explained in the 2017 Fact Sheet at Pages D-5 through D-8. Water quality-based effluent limits must be derived from and comply with water quality standards, including narrative water quality criteria (40 CFR 122.44(d)(1)). Technical achievability is not a factor in the derivation of water quality-based effluent limits.

Comment #1-18 (KPSD)

The cost to comply with the proposed permit to discharge into Boyer Slough could more than double the current $43.89 monthly utility fee paid by our customers. Such a dramatic increase in rates would cause substantial and widespread economic and social impact in the community. The 2015 U.S. Census showed the City of Kootenai with a median household income (MHI) of $36,867 while Ponderay had an MHI of$25,910. Monthly rates of $90 would represent 2.9% to 4.2% of the local MHI, as much as double the 2% threshold regarded as reasonable by the EPA.

Response #1-18

The EPA assumes the increased cost of compliance primarily results from the new water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen, and total phosphorus, since the effluent limits for other parameters are similar or identical to those in the 2002 permit.

The bases for the proposed new effluent limits for phosphorus, ammonia and nitrate + nitrite are explained in Appendices D and E to the Fact Sheet. Water quality-based effluent limits must be derived from and comply with water quality standards, including numeric and narrative water quality criteria (40 CFR 122.44(d)(1)). Cost of compliance is not a factor in the derivation of water quality-based effluent limits.

Comment #1-19 (KPSD)

Request for Alternate Point of Discharge

The District began discussing a viable alternative to move the point of discharge downstream with EPA and DEQ as early as 2015. Details have not yet been worked out; however, the intent is to follow the flow downstream to a point where the discharge does not cause a loss of beneficial use. The proposed discharge point would be beyond the mouth of Boyer Slough and likely beyond the mouth of Kootenai Bay since we would like the discharge at a point where good mixing is available.

Response #1-19

Federal regulations state that NPDES permit applications for POTWs must provide, for each outfall, the latitude and longitude to the nearest second, the distance from shore, the depth below surface, whether the outfall is equipped with a diffuser, the type of diffuser used, and the name of the receiving water (40 CFR 122.21(j)(3)).

This permit is being reissued in response to an NPDES permit application received by the EPA on June 30, 2006. The 2006 application states that the discharge is to an unnamed tributary to Boyer Slough at the latitude and longitude indicated on the cover page of the permit.

If KPSD wishes to discharge pollutants from a different outfall, KPSD must submit a revised NPDES permit application providing the required information for any new outfall(s). A discharge at a different location would then need to be authorized with a permit modification pursuant to 40 CFR 122.62 and public review and comment and State certification pursuant to 40 CFR Part 124.

Comment #1-20 (KPSD)

As stated in the attached April 17, 2017 letter from DEQ Director Tippets, the 2002 *Lake Pend Oreille Nearshore Nutrient TMDL* (Nearshore TMDL) did not specifically allocate a point source load to KPSD, even though it was obviously contributing to the overall phosphorus load in the Lake via Boyer Slough.

Therefore, the Nearshore TMDL would need to be revised to allocate an appropriate phosphorus load to KPSD. As the DEQ develops the Boyer Slough TMDL over the next few years and as they revise the Nearshore TMDL to reflect the fact that KPSD has been discharging as part of those historical loads for 45 years, potential outfall locations will be vetted to determine optimal locations to meet water quality goals and achieve the Clean Water Act Section 401 Certification (401 Certification).

It is certain that KPSD's discharge entered the nearshore environment preceding and during the development of the Nearshore TMDL. The Nearshore TMDL did not call for a phosphorus load reduction, only to maintain the current load levels.[9] Therefore, some portion of the District's phosphorus load was accounted for and accepted in the Nearshore TMDL as background. The District requests that the DEQ revise the Nearshore TMDL and EPA approve it to assign the District's historic phosphorus load as a point source waste load allocation (WLA) rather than the currently assumed general background load allocation (LA) so the District has the options to move our outfall beyond waterbodies not meeting beneficial uses. We know this tool is available since the EPA's acceptance letter specifically mentions that the Nearshore TMDL may need to be revised to address point sources. We strongly reiterate, this is not a new point source. At most, it is a reallocation of a background load to a point source. No "new" phosphorus is being allowed since the KPSD has been discharging to the nearshore since its formation 45 years ago. All reductions applied to KPSD should also be applied to other background loads in Boyer Slough and the rest of the nearshore.

Response #1-20

As explained in the 2018 Fact Sheet at Page 10, the *Nutrient TMDL for the Nearshore Waters of Lake Pend Oreille, Idaho: TMDL Five-Year Review* (IDEQ 2015) explains that the Nearshore TMDL only accounts for loading from runoff from nearshore land and septic seepage through ground water immediately adjacent to the lake. It does not account for loading from point sources such as KPSD or from tributaries such as Boyer Slough. See also the 2017 Fact Sheet on Page 10.

Because the Nearshore TMDL does not address KPSD's loading of phosphorus either directly via a wasteload allocation or indirectly via a load allocation to Boyer Slough, the EPA derived effluent limits for total phosphorus directly from Idaho's narrative criterion for excess nutrients (IDAPA 58.01.02.200.06) in accordance with federal regulations (40 CFR 122.44(d)(1)(vi)).

In the future, Idaho DEQ may establish a wasteload allocation for KPSD either in a TMDL to address the nutrient impairment in Boyer Slough or in a revised Nearshore TMDL. However, unless and until Idaho DEQ prepares such a TMDL and it is approved by the EPA, effluent limits for total phosphorus must be derived directly from Idaho's narrative criterion for excess nutrients in accordance with 40 CFR 122.44(d)(1)(vi).

If a TMDL providing a total phosphorus wasteload allocation to KPSD is prepared by Idaho DEQ and approved by the EPA in the future, the effluent limits in the permit could be revised to reflect the wasteload allocation, even if this results in less stringent effluent limits (Clean Water Act Section 303(d)(4)(A)).

[9] If water quality was better than the action level.

Comment #1-21 (KPSD)

Final End-of-Pipe Limits are Premature

We are concerned that implementing end-of-pipe effluent concentration limits at water quality standards for phosphorus prior to DEQ's completion and EPA's approval of a Boyer Slough TMDL and Implementation Plan may be premature for the following reasons:

1. The Boyer Slough TMDL and Implementation Plan are tools used to restore beneficial uses by allocating loads to various sources after careful examination of those sources and determining the extent to which each source is allowed, if any. Without a TMDL being done, EPA and DEQ have pre-determined that no amount of effort will result in assimilative capacity in Boyer Slough. While your assumption may be correct, the Clean Water Act and DEQ rules require that the TMDL must be completed and approved before eliminating KPSD's phosphorus load to Boyer Slough.
2. Implementing end-of-pipe concentration limits at water quality standards prior to the Boyer Slough TMDL development may also remove pollution trading (offsets) options from consideration since effluent limits have to be met prior to the Boyer Slough TMDL identifying potential sources that could be more cost effectively reduced. Pollution offsets are a valuable tool allowed by the Clean Water Act to more quickly and more effectively achieve beneficial uses. KPSD demands that access to this tool be retained where it can be utilized to more effectively benefit the environment while retaining cost-effective mitigation measures to avoid substantial and widespread economic and social impact in the community.

Response #1-21

In deriving the water quality-based effluent limits for total phosphorus, the EPA has not "pre-determined" what an appropriate wasteload allocation may be in a future TMDL for Boyer Slough.

The Clean Water Act does not require that a TMDL be completed before establishing WQBELs. Federal regulations require that effluent limits be established for pollutants that will cause, have the reasonable potential to cause, or contribute to excursions above water quality standards, including narrative water quality criteria (40 CFR 122.44(d)(1)). This is the case even for an impaired waterbody for which a TMDL has not been completed.

As explained in the 2017 Fact Sheet at Pages D-5 through D-8, the EPA has determined that KPSD's discharge of total phosphorus has the reasonable potential to cause or contribute to excursions above Idaho's narrative criterion for excess nutrients (IDAPA 58.01.02.200.06) and has therefore established water quality-based effluent limits for total phosphorus. As explained in the 2018 Fact Sheet at Pages C-3 through C-7, the EPA has determined that KPSD's discharge of total nitrogen has the reasonable potential to cause or contribute to excursions above Idaho's narrative criterion for excess nutrients (IDAPA 58.01.02.200.06) and has therefore established water quality-based effluent limits for total nitrogen.

If a TMDL providing a total phosphorus or total nitrogen wasteload allocation to KPSD is prepared by Idaho DEQ and approved by the EPA in the future, the effluent limits in the permit could be revised to reflect the wasteload allocation, even if this results in less stringent effluent limits (Clean Water Act Section 303(d)(4)(A)).

Establishing water quality-based effluent limits for total phosphorus in this permit does not remove pollution trading from consideration under a future TMDL.

Comment #1-22 (KPSD)

The Clean Water Act Section 401 Certification states that Boyer Slough is not supporting one or more of its assessed uses and DEQ will provide Tier 1 protection. Our understanding of Tier 1 protection is that existing uses will be protected, and the level of water quality necessary to protect existing uses shall be maintained and protected and that no further degradation shall be allowed. However, the proposed permit limits suggest an attempt to recover beneficial uses rather than maintain existing beneficial uses since KPSD loads are proposed to be severely reduced.

After more than 45 years of discharging through Boyer Slough the existing uses are well established and do not justify a sudden, highly impactful change in effluent limits. It is unclear how or why numeric criteria can be set now after years of discharging when there is no basis for a change in beneficial use status of the Boyer Slough or a regulatory change. KPSD is dedicated to protecting and enhancing the water environment for our communities, but it must be done within the framework of existing rules and without substantial and widespread economic and social impact.

Response #1-22

The new water quality-based effluent limits for ammonia, nitrate + nitrite, total nitrogen and total phosphorus are not based on Idaho's antidegradation policy. Rather, they are based on Idaho's numeric and narrative water quality criteria.

Specifically, the ammonia limits are based on numeric water quality criteria in Section 250.02.d of the Idaho Water Quality Standards, the nitrate + nitrite limits are based on Idaho's narrative criteria for toxic substances in Section 200.06, and the total nitrogen and total phosphorus limits are based on Idaho's narrative criteria for excess nutrients in Section 200.02. Federal regulations require that water quality-based effluent limits be established to meet narrative water quality criteria as well as numeric water quality criteria (40 CFR 122.44(d)(1)).

Comment #1-23 (Kalispel Tribe)

The Kalispel Tribe stated that they are concerned with aquatic toxicity, including accumulation of toxic sediments especially from things like chrome from chromating. It seems like there probably should be something about federal pretreatment program compliance over the life of the last permit and control implementation for Industrial Users.

Response #1-23

The KPSD treatment plant receives wastewater from Cygnus, Inc., a metal finisher which is subject to categorical pretreatment standards, specifically the pretreatment standards for new sources (PSNS) at 40 CFR 433.17. The applicable categorical pretreatment standards control cadmium, chromium, copper, lead, nickel, silver, zinc, cyanide, and total toxic organics (TTO). However, in lieu of monitoring for TTO, Cygnus has certified that no discharge of toxic organics has occurred, as allowed under 40 CFR 433.12.

The EPA has analyzed the monitoring data for process wastewater submitted by Cygnus Inc. from August 2015 through February 2018. For the purpose of this analysis, the EPA assumed that the KPSD WWTP's removal rates of cyanide, cadmium, chromium, copper, nickel, silver and zinc are equal to the 2nd decile (20th percentile) of the removal rates for trickling filters in Appendix R to the EPA's *Local Limits*

Development Guidance (EPA 2004), and that the hardness of the receiving water is 56.1 mg/L as CaCO3 (which was the hardness used for the reasonable potential analysis for metals in the nearby City of Sandpoint NPDES permit). The removal rates for trickling filters were used because the *Local Limits Development Guidance* does not provide removal rates for lagoons, the trickling filter removal rates are lower than the removal rates for activated sludge treatment, and both lagoons (or waste stabilization ponds) and trickling filters are potentially eligible for technology-based effluent limits based on treatment equivalent to secondary treatment (40 CFR 133.101(g)).

Based on these assumptions, the current levels of discharge from Cygnus, Inc. could potentially cause the effluent from the KPSD WWTP to exceed water quality criteria for cyanide, cadmium, chromium III, chromium VI, and copper. Discharges at the average monthly categorical limits could also cause the effluent from the WWTP to exceed water quality criteria for silver and nickel, although Cygnus, Inc. has discharged well below its categorical limits.

Because the actual hardness of the effluent and receiving water and the actual removal rates of these pollutants are unknown, the EPA believes there is too much uncertainty in this analysis to determine whether or not KPSD's discharge has the reasonable potential to cause or contribute to excursions above water quality standards for any of the pollutants controlled by the categorical pretreatment standards.

However, the EPA believes monitoring for the pollutants controlled by the categorical pretreatment standards (except TTO) is necessary to determine if KPSD's discharge has the reasonable potential to cause or contribute to excursions above water quality standards for these pollutants, and to determine if local limits that are more stringent than the categorical limits are necessary to prevent pass through of these pollutants.

The final permit requires monitoring of the influent and effluent for cyanide (weak acid dissociable), cadmium, total chromium, chromium VI, copper, nickel, silver and zinc. The final permit also requires effluent monitoring for conductivity, dissolved organic carbon, and hardness to allow for evaluation of the biotic ligand model for copper and hardness-based criteria for other metals. The required monitoring frequency for these parameters is the same as the effluent monitoring frequency proposed for mercury in the revised draft permit (i.e., quarterly, during the final three full calendar years of the permit term).

Comments Received during the Second Comment Period (January 25 – February 26, 2018)

Comment #2-1 (ICL)

Although we appreciate the reductions EPA made to its estimates of critical low flow conditions in the unnamed tributary to Boyer Slough based on a newly discovered Idaho DEQ measured flow rate recorded in 2001 and an Idaho DEQ flow rate communicated by June Bergquist, Idaho DEQ, we are still concerned that EPA estimates do not accurately reflect the critical low flow of this water body. Based on observations ICL staff made in August 2017 and on the 2001 Idaho DEQ flow rate measurement, we believe there is a high likelihood that the unnamed tributary to Boyer Slough dries up during some months of the year. As a result, the critical low flow of the unnamed tributary should be zero, and the mixing zone for chlorine should be removed.

To better understand the basis of EPA's estimate of the critical low flow conditions of the unnamed tributary to Boyer Slough, we request EPA explain in detail how it calculated the critical low flow. Additionally, since the flow rate calculations in this NPDES permit are, in several instances, based on measurements and assurances verified by personal communication only, EPA should share with the public the following:

1. The flow rate data EPA included in its revised estimation of critical low flows, identifying the source of the data (DEQ, KPSD, etc.) and the date the data were collected; and

2. The location where the flow data were collected.[10]

Providing the public a more transparent look at the flow data EPA used in this instance is especially critical, given EPA's own observation in the Revised Factsheet that the flow rate measured by Idaho DEQ in 2001 is substantially lower than the flow rates measured by KPSD.

There's also wide discrepancy between the flow rate reported by June Bergquist in 2017 and the flow rate measured by Idaho DEQ in 2001. Clearly some of the discrepancy is due to the time of year the flows were measured – Bergquist's rate was measured in mid-February and the Idaho DEQ 2001 rate was measured in mid-September. This discrepancy matters because if EPA's estimation of critical low flow over-represented flow rates during the wetter months, the estimate may not account for summer periods where the tributary runs dry.

Response #2-1

The flow data that the EPA used to estimate the critical low flow rates of the unnamed tributary to Boyer Slough are:

Date	**Flow (CFS)**	**Source**
September 19, 2001	0.02	IDEQ BURP[1]
March 2002	No Data	KPSD (upstream)
April 2002	1.61	KPSD (upstream)
May 2002	1.09	KPSD (upstream)
June 2002	0.401	KPSD (upstream)
July 2002	0.226	KPSD (upstream)
August 2002	0.226	KPSD (upstream)
September 2002	0.209	KPSD (upstream)
October 2002	0.186	KPSD (upstream)
November 2002	0.260	KPSD (upstream)
December 2002	No Data	KPSD (upstream)
January 2003	1.55	KPSD (upstream)
February 2003	0.602	KPSD (upstream)
February 14, 2017	1.6	See Note 2
Minimum	0.02	
Harmonic Mean	0.150	
Arithmetic Mean	0.665	

[10] We are unclear if the flow rate data collected by Idaho DEQ in 2017 was collected upstream or downstream of the outfall and how far upstream or downstream.

Notes:
1. Flow rate: https://www2.deq.idaho.gov/water/BurpViewer/BurpSite/Flow?BurpID=2001SCDAA047
Location: https://www2.deq.idaho.gov/water/BurpViewer/BurpSite/Location?BurpID=2001SCDAA047
2. Personal communication with June Bergquist, January 3, 2018. The monitoring location for this result was downstream of the KPSD discharge, but in the unnamed tributary.

It is not clear why flow data were not reported by KPSD in March 2002 and December 2002. The receiving water temperatures observed in those months were 0 °C and 2 °C, respectively, thus, it may have been impossible to measure a flow rate due to ice on the surface of the water. Given that the flow rates measured immediately before and after these months (i.e., in April 2002, November 2002, and January 2003) were higher than those measured from July – October, low flows are not likely to have occurred in March or December.

As explained in the 2017 Fact Sheet at Page C-1, the EPA estimated the critical low flows of the unnamed tributary to Boyer Slough based on these data. Specifically, the EPA used the relationship between the arithmetic mean, harmonic mean, and the 7Q10 on Page 89 of the *Technical Support Document for Water Quality-based Toxics Control* (TSD) (EPA 1991). When solved for the 7Q10, this relationship is:

$$7Q10 = \left(\frac{Q_{hm}}{1.194{Q_{am}}^{0.473}}\right)^{1/0.552}$$

This results in an estimated 7Q10 flow rate for the unnamed tributary of Boyer Slough of 0.034 CFS. As stated on Page 89 of the TSD, "in the comparisons of flows for smaller rivers (i.e., low flow of 50 cfs), the 30Q5 flow was, on the average, only 1.1 times that of the 7Q10." For this small stream, the EPA estimated the 30Q5 as being 1.1 times the 7Q10, or 0.037 CFS. According to the EPA's *Technical Guidance Manual for Performing Wasteload Allocations, Book VI: Design Conditions: Chapter 1: Stream Design Flow for Steady-State Modeling* (EPA 1986), the mean ratio between the 7Q10 and the 1Q10 is 1.3. In this case, the 7Q10 divided by 1.3 is equal to 0.026 CFS, however, due to the small number of measurements available, the EPA used the minimum flow rate measured (0.02 CFS) to estimate the 1Q10.

Because the estimated critical low flow rates of the unnamed tributary of Boyer Slough are very small, the dilution factors provided by mixing zones encompassing 25% of these critical flows are also small. The largest dilution factor for aquatic life criteria is 1.014:1, for the chronic criterion for, and it is based on the estimated 7Q10 flow rate. Thus, even if effluent limits for chlorine were re-calculated based on meeting water quality standards at the end of pipe, the limits would be reduced by at most 1.4%.

Comment #2-2 (ICL)

We would like EPA to respond to and adjust accordingly the inconsistencies we identified in the approach EPA used to develop interim effluent limits for total nitrogen and total phosphorus.

As stated in the Revised Factsheet, "The Interim limits are expressed as monthly total loads (in pounds per month) and are equal to the loadings of total phosphorus and total nitrogen that the facility would discharge each month from June – September," according to a list of circumstances set by EPA. One of the circumstances set by EPA states that the influent flow rate is equal to the maximum monthly average influent flow rate observed for a given month between January 2007 and August 2017. Setting

the influent flow rate from this date range is not representative of the influent flow rate for the particular time during which the interim limits for total phosphorus and total nitrogen will apply.

We request EPA amend the influent flow rate to equal the maximum monthly average influent flow rate observed between the months of June – September in the past ten years. We further request EPA to adjust the interim limits accordingly.

In addition, given that EPA is considering KPSD's influent flow rates over the past ten years, we request EPA explain why it chose to consider effluent concentrations of phosphorus and nitrogen over the past five years.

Response #2-2

The EPA does not agree that it is necessary or appropriate to change the influent flow rates used to calculate the interim effluent limits for total phosphorus and total nitrogen. As stated in the 2018 Fact Sheet at Page 14, for the purpose of calculating the interim effluent limits, the influent flow rate was set "equal to the maximum monthly average influent flow rate observed *for a given month* between January 2007 and August 2017" (emphasis added). That is to say, the flow rate used to calculate the interim limit for June was the maximum monthly average influent flow rate for June, the flow rate used to calculate the interim limit for July was the maximum monthly average influent flow rate for July, and so on.

Because the EPA evaluated flow rates separately for each month, the EPA believes it was appropriate to use ten years of flow data. Using five years of flow data, for instance, would result in only five monthly average flow rate values for each month, and therefore may not capture the variability in the flow rates.

As stated in the 2018 Fact Sheet at Page 13, the KPSD WWTP is not designed to remove nitrogen or phosphorus. Thus, unlike the flow rates, the effluent concentrations of total phosphorus and total nitrogen are expected to be relatively constant throughout the year. Therefore, it is reasonable to use only five years of data to determine the 95th percentile effluent concentrations of total phosphorus and total nitrogen.

Comment #2-3 (ICL)

We request EPA re-calculate the dilution factors in Appendix B of the Revised Factsheet, using KPSD's maximum monthly average effluent flow recorded in the past ten years.

Dilution factors are calculated according to year round critical low flow conditions to ensure that effluent is not discharged in a quantity that would exceed the dilution capacity of the receiving water during critical low flows. But, a dilution factor that accounts for critical low flow but not the maximum possible effluent flow will not be protective of the receiving water body when receiving flows are at their lowest and effluent flows are at their highest.

EPA calculated dilution factors based on the KPSD's design flow of 0.4 mgd. However, DMR data available on ECHO indicates that in the past five years KPSD has regularly discharged effluent well above its design flow.[11] Indeed, the monthly average effluent flow recorded on March 31, 2017 was 0.6976 mgd – a rate over 50% greater than its design flow.[12] In other words, because KPSD regularly allows

[11] https://echo.epa.gov/effluent-charts#ID0021229
[12] See id.

effluent flow rates above the design flow a mixing zone based on the design flow will not prevent exceedances of chronic and acute water quality criteria beyond the boundary of the mixing zone or zone of initial dilution. Therefore, we request EPA calculate the dilution factor based on the maximum monthly average effluent flow recorded in the past ten years. Furthermore, we request Idaho DEQ adjust and EPA approve the mixing zone accordingly.

Response #2-3

The EPA agrees that the actual flows from the KPSD WWTP sometimes exceed the design flow of 0.4 mgd. However, the use of the design flow is nonetheless appropriate, as explained below.

Steady State Modeling is Inherently Conservative

As explained on Page 97 of the TSD, the steady state modeling techniques used in the reasonable potential analysis and effluent limit calculations for the KPSD permit are inherently conservative, since they apply a combination of worst-case assumptions which each have a low probability of occurrence and therefore an even lower probability of occurring simultaneously.

Federal Regulations Require the Use of the Design Flow

Federal regulations state that, "In the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow" (40 CFR 122.45(b)(1)). As stated in the 2018 Fact Sheet at Page B-3, the design flow of the KPSD WWTP is 0.4 mgd.

The Permit Includes Conditions Limiting the Impact of Design Flow Exceedances

In addition, the permit includes conditions which limit the impact of discharges exceeding the design flow. Specifically, the permit includes effluent limits for BOD_5, TSS, total residual chlorine, ammonia, nitrate + nitrite, total nitrogen, and total phosphorus, which are expressed in terms of both mass and concentration. For TSS, total residual chlorine, ammonia, nitrate + nitrite, total nitrogen, and total phosphorus, the mass effluent limits are equivalent to the mass that would be discharged if the effluent concentrations were equal to the effluent concentration limits and the effluent flow were equal to the design flow of 0.4 mgd. The mass effluent limits for BOD_5 are lower than the mass that would be discharged if the effluent concentrations were equal to the effluent concentration limits and the effluent flow were equal to the design flow of 0.4 mgd. Thus, when the actual effluent flows exceed the design flow, the permittee would need to reduce their effluent concentrations below the effluent concentration limits, in order to maintain compliance with the mass effluent limits.

Comment #2-4 (ICL)

It appears that some of the basis for Idaho DEQ's development of and EPA's approval of the proposed mixing zone in the revised draft permit was built on assumptions that KPSD's discharges will be lower between June and September because the permittee has the option to land apply wastewater during the growing season.

To the extent that the mixing zone or any other permit provisions were based on this or related assumptions, Idaho DEQ and/or EPA should include provisions in the final permit explaining the parameters of how KPSD's discharge during the growing season must coordinate with it use of land application.

Response #2-4

The only permit provisions which were based on KPSD's ability to dispose of wastewater through storage and re-use are the interim effluent limits for total phosphorus and total nitrogen.

The mixing zone for chlorine is not based on KPSD's ability to dispose of wastewater through storage and re-use. Idaho DEQ authorized a mixing zone encompassing 25% of the stream flow for chlorine. As explained in Appendix B to the 2018 Fact Sheet, the dilution factors were calculated based on a discharge at the design flow of 0.4 mgd mixing with 25% of the estimated 1Q10 and 7Q10 flows of the unnamed tributary that receives the discharge.

Comment #2-5 (ICL)

EPA did not respond to our comments on the June 2017 proposed draft permit, which requested EPA include effluent limits for temperature. Given the temperature recording cited in the 2001 BURP data just discovered by EPA and the temperature data collected by KPSD, EPA must establish effluent limits for temperature because KPSD's discharge of temperature has the reasonable potential to cause or contribute to excursions above water quality standards. On September 19, 2001, Idaho DEQ recorded a temperature of 10.8 degrees Celsius in the unnamed tributary to Boyer Slough.[13] In addition, the temperature data collected by KPSD upstream and downstream of the facility from March 2002 – February 2003 indicate a maximum temperature of 18 degrees Celsius for June – September and a maximum temperature of 9 degrees Celsius for October – May.

The unnamed tributary to Boyer Slough is designated for salmonid spawning, requiring the maintenance of the following water temperatures:

- 13 degrees Celsius or less with a maximum daily average no greater than 9 degrees Celsius during the time of spawning and incubation

  IDAPA 58.01.02.250.02.f.ii.

Additionally, the temperature of wastewater must not affect the receiving water outside the mixing zone so that:

- The temperature of the receiving water or of downstream waters will interfere with designated beneficial uses;
- Daily and seasonal temperature cycles characteristic of the water body are not maintained; and
- If the water is designated for cold water aquatic life, seasonal cold water aquatic life, or salmonid spawning, the induced variation is more than plus one degree Celsius.

  IDAPA 58.01.02.401.01.a.-b.; d (2011).

The concentration of temperature upstream from the discharge is higher than the numeric criteria for salmonid spawning. Therefore, the receiving water cannot provide dilution of the temperature in the effluent and dilution may not be considered in the reasonable potential analysis.

Over the past five years, KPSD's DMR records show its effluent discharges at temperatures regularly above 15 degrees Celsius.[14] The maximum monthly average temperature for KPSD's effluent in the past

[13] https://www2.deq.idaho.gov/water/BurpViewer/BurpSite/Fish?BurpID=2001SCDAA047
[14] https://echo.epa.gov/effluent-charts#ID0021229

five years was 24 degrees Celsius in June 2016.[15] Because dilution may not be considered in this reasonable potential analysis and the discharge concentration is greater than the numeric criteria, the discharge of temperature by KPSD has the reasonable potential to cause or contribute to excursions above water quality standards for temperature. Therefore, EPA must establish effluent limits for temperature in the final permit.

Response #2-5

As stated on Page D-11 of the 2017 Fact Sheet, the EPA does not have sufficient data to determine if effluent limits for temperature are necessary for the KPSD discharge. The EPA has required continuous monitoring of the effluent and receiving water temperature. These data will be used to determine if the discharge has the reasonable potential to cause or contribute to excursions above water quality standards for temperature when the permit is reissued.

Comment #2-6 (Kalispel Tribe)

The Kalispel Tribe is concerned about the potential for continued accumulation of toxic chemicals discharged to Lake Pend Oreille. There currently is not an adequate evaluation of the potential impact of the existing significant industrial users discharging to the KPSD system. There should be a summary in the Fact Sheet of the existing significant industrial users, documentation of past compliance with the federal industrial pretreatment control requirements, and discussion of any appropriate pretreatment local limits needed to prevent toxic pass-through in the KPSD discharge. This is especially the case where there is little available dilution of the KPSD effluent and also where there is a strong possibility of contaminated sediments accumulating near the outfall. There should also be a discussion of assurances that the federal pretreatment program requirements will be implemented and enforced throughout the life of the proposed permit.

Response #2-6

This comment is very similar to comment #1-23; see the response to that comment.

The purpose of the Fact Sheet is to briefly set forth the principal facts and significant questions considered in preparing the draft permit (40 CFR 124.8). Therefore, the Fact Sheet will not be revised.

Industrial users must comply with all applicable federal, state and local pretreatment standards and requirements, which includes the categorical PSNS which are applicable to Cygnus, Inc. Cygnus Inc. monitors its discharges and reports them to the EPA.

The EPA has established monitoring requirements in the final permit for pollutants controlled by the applicable PSNS. These data will be used to determine if water quality-based effluent limits or more stringent local pretreatment limits are necessary for any of these pollutants.

Comment #2-7 (KPSD)

The District continues to have significant concerns with the effluent limits imposed by the Permit. As noted in KPSD's September 7, 2017 comment on the June 2017 Draft NPDES Permit, the District does not currently have any treatment capacity to remove nitrite, nitrate, ammonia, and phosphorus and the costs to install such treatment will be substantial, especially in a community with a median household

[15] See id.

income of $25,910 (Ponderay) to $36,867 (City of Kootenai). The Revised Permit makes these effluent limits even more stringent.

Response #2-7

The revised draft permit proposed effluent limits for chlorine, ammonia, and nitrate + nitrite which were more stringent than those in the June 2017 draft permit. It also proposed new limits for total nitrogen. The bases for these effluent limits are explained in Appendix C to the 2018 Fact Sheet.

Water quality-based effluent limits must be derived from and comply with water quality standards, including narrative water quality criteria (40 CFR 122.44(d)(1)). The effluent limits for nitrogen compounds are more stringent than those in the June 2017 draft permit in order to address the total nitrogen impairment in Boyer Slough, which was identified in the State of Idaho's 2014 Integrated Report, which was approved by the EPA in June 2017.

Cost of compliance is not a factor in the derivation of water quality-based effluent limits.

Comment #2-8 (KPSD)

The District remains committed to doing its fair share to improve water quality and is currently examining several potential options for compliance with effluent limits while still meeting the District's current and future needs. These options include, but are not limited to (1) extension of the District's current outfall to a new location where either phosphorus and nitrogen are not sources of impairment and a mixing zone is available; (2) submission of a pollution trading plan that minimizes upstream nonpoint source contributions of phosphorus and nitrogen to Boyer Slough and/or the nearshore of Lake Pend Oreille; and (3) development of a regional system or shared outfall in conjunction with the City of Sandpoint wastewater treatment plant.

Response #2-8

Outfall Extension

Regarding a potential outfall extension, see the response to Comment #1-19.

Phosphorus Trading

As explained in the 2018 Fact Sheet at Page 18, in order to allow effluent trading, the permittee must develop and submit a trading plan to IDEQ for approval, and the trading plan's monitoring and reporting requirements must be incorporated in to the permit through a modification or reissuance of the permit.

Regional System or Shared Outfall

This permit is being reissued in response to an NPDES permit application received by the EPA on June 30, 2006. The 2006 application states that the discharge is to an unnamed tributary to Boyer Slough at the latitude and longitude indicated on the cover page of the permit.

If KPSD wishes to discharge pollutants from an outfall shared with the City of Sandpoint, KPSD should make the necessary arrangements with the City of Sandpoint, and then KPSD must submit a revised NPDES permit application providing the required information for any new outfall(s).

If KPSD wishes to decommission its WWTP in favor of a regional WWTP in conjunction with the City of Sandpoint, KPSD should make the necessary arrangements with the City of Sandpoint. If, following

completion of a regional WWTP, a discharge from the current WWTP is no longer necessary, KPSD may request termination of their permit from the permitting authority (40 CFR 122.64(c)).

Comment #2-9 (KPSD)

KPSD recognizes and appreciates that EPA and the Idaho Department of Environmental Quality (IDEQ) have included a compliance schedule to give the District some time to adjust to these new requirements. The District also noted the new language in the Revised Permit regarding the requirements to establish pollution trading. As currently drafted, however, the compliance schedule only contemplates the installation of treatment technology. The District is currently contemplating a broader range of options, including pollutant trading, and is concerned that the current compliance schedule may not allow the District to pursue other cost-effective solutions that it identifies during the master planning authorized in the first three years subsequent to issuance of the Revised Permit. We request that EPA modify the Revised Permit to provide more flexibility for solutions in addition to more treatment technology.

Response #2-9

This comment was addressed by changes to the compliance schedule in Idaho DEQ's final Clean Water Act Section 401 certification, which has been incorporated into the final permit in accordance with 40 CFR 124.55(a)(2). Specifically, if KPSD chooses to perform a study to determine the assimilative capacity of Lake Pend Oreille to accept discharges of nutrients (compliance schedule option A), the revised compliance schedule allows for time to complete this study and specifies appropriate interim milestones for this study.

If KPSD chooses not to perform a study to determine the assimilative capacity of Lake Pend Oreille, then the compliance schedule is shorter overall (9 years instead of 10-1/2 years) and includes appropriate interim milestones for achieving compliance with the new water quality-based effluent limits for nitrogen and phosphorus for the existing point of discharge.

Comment #2-10 (KPSD)

It is also unclear to KPSD how the Boyer Slough TMDL will affect these effluent limits and when the Boyer Slough TMDL will be issued. The District's concern is that, once the Boyer Slough TMDL is developed, the goalpost will move even further out of reach, and that this will occur after the District has invested years of time, money, and effort into meeting the Revised Permit's extremely stringent effluent limits.[16] KPSD also notes that the compliance schedule does not include any flexibility to address the Boyer Slough TMDL, especially given the ten-year timeline for meeting the Revised Permit's effluent limits and the Revised Permit's five-year term.

Response #2-10

The development of a TMDL to address the nitrogen and phosphorus impairments in Boyer Slough is beyond the scope of this permitting action. As stated in the *U.S. EPA NPDES Permit Writers' Manual* (EPA 2010) at Section 9.1.3, a compliance schedule cannot provide time to develop a TMDL.

[16] In an April 17, 2017 letter from IDEQ, the agency notes that "once the Boyer Slough TMDL is completed and the Wasteload Allocations (WLA) set for KPSD, … the NPDES permit can be reopened and the new WLA used to set the permit limits for TP."

The EPA agrees with Idaho DEQ's statement that the permit could be modified to establish limits that are consistent with the wasteload allocations in that TMDL. Such revised limits may be more stringent or less stringent than the limits in the current permit; less stringent limits would be acceptable under Section 303(d)(4)(A) of the Clean Water Act. However, any modification to the permit would be conducted pursuant to 40 CFR 122.62, and public review and State certification of the modified permit would be conducted pursuant to 40 CFR Part 124.

References

EPA. 1986. *Technical Guidance Manual for Performing Wasteload Allocations, Book VI: Design Conditions: Chapter 1: Stream Design Flow for Steady-State Modeling*. September 1986. EPA/440/4-86-014.
https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100BK6P.txt

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. 2004. *Local Limits Development Guidance*. US Environmental Protection Agency. Office of Wastewater Management. EPA-833-R-04-002A.
https://www3.epa.gov/npdes/pubs/final_local_limits_guidance.pdf

EPA. 2004. *Local Limits Development Guidance Appendices*. US Environmental Protection Agency. Office of Wastewater Management. EPA-833-R-04-002B.
https://www3.epa.gov/npdes/pubs/final_local_limits_appendices.pdf

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

IDEQ. 2015. *Nutrient TMDL for the Nearshore Waters of Lake Pend Oreille, Idaho: TMDL Five-Year Review*. June 2015. Coeur d'Alene, Idaho.
http://www.deq.idaho.gov/media/60176823/nutrient-tmdl-nearshore-waters-lake-pend-oreille-tmdl-five-year-review.pdf

MDEQ, IDEQ, WDOE, and Kalispel Tribe. 2007. *Clark Fork-Pend Oreille Watershed Management Plan: Management Strategies for the Next Decade 2007 – 2017*. Montana Department of Environmental Quality, Idaho Department of Environmental Quality, Washington Department of Ecology, and Kalispel Tribe of Indians.
https://www.deq.idaho.gov/media/892692-clark-fork-pend-oreile-watershed-mgmt-plan-0407.pdf

Tetra Tech, Inc. 2002. *Total Maximum Daily Load (TMDL) for Nutrients for the Nearshore Waters of Pend Oreille Lake, Idaho*. April 2002.
http://www.deq.idaho.gov/media/464368-_water_data_reports_surface_water_tmdls_pend_oreille_lake_ns_pend_oreille_ns_nutrient_entire.pdf