# Contents

## Overview

On February 16, 2007, the EPA issued three draft reissued National Pollutant Discharge Elimination System (NPDES) permits for publicly owned treatment works (POTWs) operated by the City of Coeur d'Alene (Coeur d'Alene), City of Post Falls (Post Falls) and the Hayden Area Regional Sewer Board (HARSB) for public review and comment. The NPDES permit numbers for these permits are ID0022853, ID0025852, and ID0026590, respectively. These POTWs all discharge treated wastewater to the Spokane River, in Kootenai County, Idaho. The public comment period was scheduled to close on April 17, 2007, but was extended to May 17, 2007.

During the 2007 public comment period, the EPA received comments applicable to all three of the subject permits from the following parties:

- Bonnie Beavers
- Blue Water Technologies, Inc.
- Edward K. Bower
- The Center for Environmental Law and Policy (CELP)
- City of Coeur d'Alene (Coeur d'Alene)
- Center for Justice (CFJ)
- Scott Chaney
- Julie Dalgago
- Bart Haggin
- Hayden Area Regional Sewer Board (HARSB)
- Dennis Hinrichsen
- Jim Hollingsworth
- Gerry House
- JUB Engineers
- Kevin L. Lewis
- Jim Kimball
- Richard Moon
- John Osborn
- Public Employees for Environmental Responsibility (PEER)
- City of Post Falls (Post Falls)
- Zandra Saez
- Steve Shamion
- Clyde Sheppard
- W. Thomas Soeldner
- City of Spokane

On July 18, 2013, the EPA reopened the public comment period pursuant to 40 CFR 124.14. The EPA issued revised draft permits and revised fact sheets for all three dischargers for public review and

comment at that time. The public comment period was scheduled to close on September 3, 2013, but was extended until October 3, 2013.

During the 2013 public comment period, the EPA received comments applicable to all three of the subject permits from the following parties:

- Bob Bingham
- Coeur d'Alene
- HARSB
- Idaho Conservation League (ICL)
- Lisa Fitzner
- Post Falls
- City of Spokane
- Spokane Riverkeeper
- Spokane Tribe of Indians (Spokane Tribe)
- Washington State Department of Ecology (Ecology)

This document provides the EPA's response to the comments provided during both the 2007 and 2013 public comment periods which are germane to all three of the subject permits. The EPA has also prepared individual response to comments documents for comments that were specific to one of the subject permits. The comments are organized by the comment period during which they were received. Within each comment period, the comments are further organized by topic.

As a result of the comments received during the 2013 public comment period, the final permits include some changes relative to the 2013 draft permits. Changes made to the 2013 draft permits that were based upon comments received during the 2013 public comment period are identified in this document or in the individual response to comments documents, as appropriate.

# Section 1: Comments Received during the 2013 Comment Period

## Effluent Limits and Best Management Practices for Polychlorinated Biphenyls (PCBs)

### Comment #1-1

The EPA received comments from several parties regarding whether or not the discharges from the POTWs operated by Coeur d'Alene, Post Falls and HARSB have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. Effluent limits are required for pollutants or pollutant parameters which "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard…." (40 CFR 122.44(d)(1)(i)).

The Spokane Tribe stated that the EPA has sufficient data to perform a reasonable potential analysis for PCBs. Specifically, the Spokane Tribe referenced a decision by the Pollution Control Hearings Board

(PCHB) in Washington State, in the matter of the State of Washington's permit for the Spokane County Regional Water Reclamation Facility (WRF), in which the PCHB found that information such as the type of plant the applicant is operating, the available dilution, existing data, Washington State's 303d list and fish advisories were adequate to perform the reasonable potential analysis.

The Spokane Tribe stated that the PCHB also found that that there was a reasonable potential for the discharges of the Spokane County Regional WRF to cause or contribute to water quality violations. The Spokane Tribe also stated that the information available to Ecology for use in developing the Spokane County Regional WRF permit are also available to the EPA. Specifically, the Tribe referenced the Ecology's PCB Source Assessment and fish advisories issued by the Washington State Department of Health in the Spokane and Columbia rivers, and a statement by Ecology that "the Spokane River is one of the most studied rivers" in the State of Washington. The Spokane Tribe stated that "once EPA performs the reasonable potential analysis it will likely conclude that the potential for violations exists."

Coeur d'Alene, Post Falls and HARSB stated in their comments that there are insufficient data for PCBs in the publicly owned treatment works' (POTW) effluents and in the receiving water to perform a reasonable potential analysis and calculate effluent limits for PCBs.

Post Falls and HARSB stated that the PCHB's rationale for finding reasonable potential for the Spokane County WRF permit is not persuasive as applied to Post Falls and HARSB. Specifically, Post Falls and HARSB stated that the PCHB decision cited Section 3.2 of the EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD), which discusses factors other than effluent data that permitting authorities may consider as part of a reasonable potential analysis. Post Falls and HARSB stated that they have "few if any" industrial discharges that would be likely to contribute PCBs, and that they also have more dilution than the Spokane County WRF.

Post Falls and HARSB stated that the U.S. EPA NPDES Permit Writers' Manual (Permit Writers' Manual) expresses a strong preference for calculating water quality-based effluent limits (WQBELs) based on site specific monitoring data. Post Falls and HARSB note that the Permit Writers' Manual states that "EPA recommends that monitoring data be generated before effluent limitation development whenever possible," (Page 6-23), and that, when there are no site-specific data, "the permit writer must either postpone a quantitative analysis of the need for WQBELs and generate, or require the discharger to generate, effluent monitoring data, or base a determination for the need for WQBELs on other information, such as effluent characteristics of a similar discharge" (Page 6-15). Post Falls and HARSB stated that the EPA's proposal to require the POTWs to gather the missing data, which will be used to conduct a reasonable potential analysis in future permits, is fully consistent with the Permit Writers' Manual and the TSD.

Post Falls and HARSB also stated that the existing data does not support a finding of reasonable potential for PCBs. Specifically, Post Falls and HARSB stated that the EPA has no numeric PCB data for those utilities, that the PCB Source Assessment states that PCB sources to the Spokane River in Idaho are "negligible," that the Spokane River is not listed as water quality limited for PCBs in Idaho, and that there are no fish advisories in effect for PCBs in the Spokane River in Idaho. Post Falls and HARSB stated

that the concentration of PCBs in POTW effluents varies widely, and that Post Falls and HARSB are likely to be on the low end of the range. Post Falls and HARSB stated that the City of Medical Lake POTW, located southwest of Spokane, is similar to Post Falls and HARSB in that it is a primarily residential community without a large number of industrial users and that the Medical Lake POTW's effluent PCB concentration, as reported in the Fact Sheets for the Coeur d'Alene, Post Falls and HARSB permits, is 46.6 pg/L. Post Falls and HARSB also stated that none of the factors listed in on Page 6-30 of the Permit Writers' Manual, which may be used to determine reasonable potential without facility specific data, support numeric limits in their cases.

Post Falls and HARSB stated that the unique nature of PCB pollution supports the EPA's decision not to impose numeric effluent limits because PCBs have been banned since 1979 yet remain ubiquitous in the environment, and they are persistent and cannot be practically removed to low levels from municipal effluent. Post Falls and HARSB stated that "the dispersed nature of PCB pollution makes a point source treatment strategy singularly ineffective and impractical."

Post Falls and HARSB stated that, "in the Draft Fact Sheets, EPA notes that samples taken by the U.S. Geological Service ("USGS") in 1999 revealed fish-tissue concentrations of 270 µg/L, which arguably is above the fish-tissue concentrations that would be expected at the water-column criteria of 170 pg/L." Post Falls and HARSB stated that this information does not support numeric effluent limits for the following reasons: First, the relevant criterion is 170 pg/L in the water column; there is no criterion for fish-tissue concentration. Second, USGS study stated that "the brevity of sampling for this study did not allow adequate determination of the extent or permanence of contamination or impairment." Third, the study does not indicate the types of fish sampled, their probable origins or primary habitat, or other relevant information necessary to evaluate the study's accuracy. Finally, no data indicate the relationship between the subject discharges and fish-tissue concentrations.

Coeur d'Alene stated that the monitoring data for the Spokane River at the Idaho-Washington state line do not establish that Coeur d'Alene is a source of PCBs. Coeur d'Alene stated that the Fact Sheet describes a wide range of effluent data from other treatment plants in the Northwest and throughout the country. Coeur d'Alene stated that, while this information may support the imposition of best management practices under the authority of 40 CFR 122.44(k) to "carry out the purposes and intent of the Clean Water Act," EPA should acknowledge that it does not have sufficient information to conduct a qualitative reasonable potential analysis within the meaning of EPA's Permit Writer's Manual Section 6.3.3.

## Response #1-1

### *Overview*

The fact sheets (see, e.g., the Coeur d'Alene fact sheet at Page 16) state that:

> "currently, there are insufficient data to determine if the discharges from point sources to the Spokane River in Idaho have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs or dioxin in waters of the State of

Washington or the Spokane Tribe of Indians. Therefore, no numeric water quality-based effluent limits are proposed for PCBs or dioxin in the draft permit."

Specifically, the EPA has no effluent PCB data for any of the three POTWs receiving reissued permits and no receiving water data for PCBs in the water column for the Spokane River in Idaho. Although the fact sheets (see, e.g., the Coeur d'Alene fact sheet at Pages 16 and 17) state that the USGS measured high concentrations of PCBs in fish tissue in the Spokane River in Idaho,, as noted by HARSB and Post Falls in their comments, the USGS stated that "the brevity of sampling for this study did not allow adequate determination of the extent or permanence of contamination or impairment" (USGS 2003). Without effluent data for the POTWs being permitted or data for PCBs in the water column in Lake Coeur d'Alene or in the Spokane River upstream of the subject discharges, the EPA cannot reasonably determine whether and to what extent any of the subject POTWs contribute to the measured PCB concentrations in the Spokane River at the Washington-Idaho state line, or to the measured PCB concentrations in fish tissue in Idaho.

As stated in the Permit Writers' Manual at Page 6-23, the "EPA recommends that monitoring data be generated before effluent limitation development whenever possible." Therefore, the EPA has required influent, effluent, and receiving water monitoring for PCBs. These data will be used to determine if the discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs when the permits are reissued.

The EPA may also modify permits for cause during their terms. One of the allowable causes for modification is the EPA's receipt of new information that was not available at the time of permit issuance and would have justified the application of different permit conditions at the time of issuance (40 CFR 122.62(a)(2)). If the effluent and receiving water monitoring data for PCBs demonstrates that one or more of the subject discharges has the reasonable potential to cause or contribute to excursions above water quality standards, the EPA may modify the appropriate permits to include effluent limits for PCBs, after preparing a draft permit and following other procedures for decisionmaking in 40 CFR Part 124 (see also 40 CFR 122.62). This is a discretionary action; the EPA may choose not to modify a permit during its term even if cause exists.

### *Reasonable Potential Analysis Without Effluent Data*

Some commenters have correctly noted that the EPA may perform a reasonable potential analysis without facility-specific effluent data (see the TSD at Section 3.2 and the Permit Writers' Manual at Section 6.3.3). The TSD states that permit writers should consider the following factors when performing a reasonable potential analysis for a POTW without facility-specific effluent data:

- Dilution
- Type of industry or POTW
- Existing data on toxic pollutants
- History of compliance problems and toxic impact
- Type of receiving water and designated use

As explained below, the factors listed above do not support a finding of reasonable potential for the subject discharges to cause or contribute to PCB excursions in the absence of facility-specific effluent data.

### Dilution

The Spokane River provides substantial dilution of the subject discharges, which suggests that the discharges may not have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs.

The combined design flow of the three subject POTWs is 13.4 million gallons per day (mgd), which is 20.7 cubic feet per second (CFS). Actual effluent flow rates are less than the design flows. For pollutants such as PCBs, for which the water quality criteria are based on cancer risk from lifetime exposure, the TSD recommends the long term harmonic mean stream flow for use in determining reasonable potential and calculating effluent limits (Page 88). The harmonic mean flow of the Spokane River is 2,050 CFS near Post Falls, Idaho (USGS station # 12419000), and 3,610 CFS at the Long Lake Dam in Washington (USGS station #12433000), which is near the upstream boundary of the Spokane Indian Reservation. Thus, the combined design flow of the three discharges is 1.01% of the harmonic mean flow of the Spokane River at Post Falls (99:1 dilution) and 0.57% of the harmonic mean flow of the Spokane River at the Long Lake Dam (174:1 dilution).

### Type of POTW

The TSD states that POTWs with loadings from indirect dischargers (particularly primary industries) may be candidates for toxicity limits, but also states that household disposal of toxic pollutants may cause toxicity as well. The TSD states that permit writers should evaluate the types of industrial users, their product lines, and their control equipment.

HARSB has no significant industrial users. Post Falls has three significant industrial users, all of which are categorical industrial users: Two metal finishers and one pharmaceutical manufacturer. Coeur d'Alene has three significant industrial users, two of which are categorical industrial users. One of Coeur d'Alene's categorical industrial users is in the anodizing subcategory of the electroplating point source category, and the other is in the precious metals forming subcategory of the nonferrous metals forming and metal powders subcategory.

Among these, the only industrial category for which PCBs were sampled or otherwise mentioned as part of the development of categorical pretreatment standards is metal finishers. PCB Aroclors were known to be present in 1 – 6 cases (depending on the Aroclor) out of 1,048 data collection portfolios sent by the EPA to manufacturing facilities in the Metal Finishing Category (EPA 1983). Thus, PCBs were not known to be present in the wastewaters from the vast majority of metal finishers. PCBs were not specifically selected for regulation under effluent limit guidelines or categorical pretreatment standards for metal finishers. However, the categorical pretreatment standards for metal finishers include limits for total toxic organics (TTO), which includes PCBs (40 CFR 433.11(o), 433.15, 433.17). Buck Knives, which is one of the two metal finishers discharging wastewater to the Post Falls POTW, has tested its effluent for PCB aroclors using EPA method 608, with a practical quantification limit of 0.2 µg/L (200,000

pg/L) per aroclor. In semi-annual testing conducted between 2010 and 2013 (8 samples), no PCB aroclors were detected.

Thus, the EPA is not aware of any industrial users of any of the subject POTWs that would be likely to discharge measurable amounts of PCBs to the POTWs. However, the subject permits all require the permittees to address source control and elimination of PCBs from industrial and commercial sources in their toxics management plans.

### Existing Data on Toxic Pollutants

There are a large number of pollutants that are toxic to humans, wildlife, livestock, and aquatic life, many of which are unrelated to PCBs in their chemical structures, chemical and physical properties, and sources. Data on toxic pollutants that are unrelated to PCBs are irrelevant to the question of whether or not the discharges cause or contribute to excursions above water quality standards for PCBs.

PCBs are classified as persistent organic pollutants (POPs). Other persistent organic pollutants include aldrin, chlordane, dichlorodiphenyl trichloroethane (DDT), dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene, dioxins, and furans (EPA 2009). If other POPs had been measured in the effluents of any of these POTWs, this might suggest that the discharge has the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. Of these compounds, only hexachlorobenzene has been tested for in any of the three POTWs' effluents. Hexachlorobenzene was not detected in the Post Falls or HARSB effluents, using EPA Method 8270, at a detection limit of 1.0 µg/L. None of these compounds have been analyzed for the Coeur d'Alene effluent. Therefore, although the existing data on POPs are limited, they do not suggest that the discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs.

### History of Compliance Problems and Toxic Impact

The TSD states that "regulatory authorities may consider particular dischargers that have had difficulty complying with limits on toxicants or that have a history of known toxicity impacts as probable priority candidates for effluent toxicity limits."

In general, the POTWs' compliance history for non-toxic pollutants unrelated to PCBs is irrelevant to a reasonable potential analysis for PCBs, except for the total suspended solids (TSS) removal performance discussed below. As discussed above, there are no quantitative data for any persistent organic pollutants, including PCBs, for these three POTWs.

Removal of PCBs from POTW influents is strongly correlated with TSS removal, with overall removal efficiencies for PCBs being slightly lower than the overall TSS removal efficiency of the POTW (EPA 1977). The average TSS removal rates for Coeur d'Alene, Post Falls, and HARSB during 2012 were 97.5%, 98.3%, and 98.0%, respectively, and the minimum TSS removal rates during 2012 were 96%, 97.2%, and 97%. These TSS removal efficiencies are consistently higher than the minimum permit requirement (85%) and are also higher than those for the POTWs evaluated in the EPA's *PCBs Removal in Publicly Owned Treatment Works*, for which TSS removal efficiencies ranged from 84 to 95%, and PCB removal efficiencies ranged from 82 to 89 % (id at 50). Thus, it is likely that the three POTWs remove most of any

PCBs that may be present in their influents. The permits include a condition requiring that a split of all influent and effluent samples analyzed for PCBs must be analyzed for TSS. This will facilitate a better understanding of the relationship between TSS and PCBs for the subject POTWs.

Furthermore, in order to comply with the new WQBEL for total phosphorus (TP), the subject POTWs will need to install filtration systems, which will further reduce effluent TSS concentrations. Because PCB removal is correlated with TSS removal, the filtration systems are likely to further improve PCB removal rates at the subject POTWs. For the purpose of a reasonable potential analysis without effluent data, these facilities do not have a history of compliance problems or toxic impact.

### Type of Receiving Water and Designated Use

The TSD states that permitting authorities should compile water quality data for the discharges' receiving waters and "use this information as a means of identifying point sources that discharge to impaired waterbodies and that thus may be contributing to this impairment."

As stated in the fact sheets for these permits (see, e.g., the Coeur d'Alene fact sheet at Page 16) and by commenters, the Spokane River is listed in Washington's 2010 303(d)/305(b) integrated report as not attaining or not being expected to attain water quality standards for total polychlorinated biphenyls (PCBs), due to elevated concentrations in fish tissue. As also stated in the fact sheets, the Spokane Tribe has EPA-approved water quality standards for its waters, which are downstream of the Long Lake Dam, and data from lower Lake Spokane indicate that the Tribe's water quality criterion for PCBs (in the water column) is not being attained (Serdar et al. 2011). The EPA disagrees with Post Falls' and HARSB's characterization of the PCB load to the Spokane River at the Idaho-Washington border as "negligible." Although the State of Washington's *Spokane River PCB Source Assessment 2003 – 2007* (PCB Source Assessment) states that PCB sampling performed in 1994 "showed that sources upstream of the Idaho border were negligible," (id at 31), more recent sampling has shown that "PCB loading from Idaho at the state line represented 30% of the overall loading" (id at 9).

However, the fact that the Spokane River is currently impaired in Washington due to high concentrations of PCBs does not by itself justify a finding that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. The Spokane River is also impaired by temperature in Washington and cadmium in both Idaho and Washington, yet the EPA found that none of the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for cadmium or temperature. The mere fact that the waterbody is currently impaired does not necessarily require the conclusion that all dischargers to the waterbody are contributing to the impairment.

Although it has been suggested that loading at the Idaho-Washington border may account for 30 percent of the overall PCB loading to the Spokane River (Serdar et al. 2011 at 9), it is not known what fraction of the loading measured at the border, if any, is discharged by the subject POTWs. Available information suggests that PCB sources to the Spokane River watershed in Idaho other than the subject POTWs may be significant. Fish tissue sampling in Lake Coeur d'Alene near Blackwell Island (upstream from the three subject POTWs) showed PCB concentrations of 158 – 443 µg/kg in the tissue of largescale

and long-nose suckers (id at 86). Air deposition "holds the potential to deposit measurable quantities of PCBs in the mountains in the eastern portion of the Spokane River basin, eventually delivering PCBs to Lake Coeur D'Alene through the St. Joe, St. Maries, and Coeur D'Alene Rivers" (id at 91). City of Spokane stormwater contributes 44 percent of the overall PCB loading to the Spokane River (id at 9). Municipal stormwater PCB loads from Idaho are unquantified, but the large loading from City of Spokane stormwater suggests that Idaho municipal stormwater loads could be significant. Furthermore, the PCB concentration measured at the Washington-Idaho border is lower than that measured in the Little Spokane River (199 pg/L), a 35-mile-long tributary of the Spokane River that receives no permitted point source discharges.[1] Thus, the PCB loading to the Little Spokane River is entirely from non-point and legacy sources. Therefore, non-point, legacy, and stormwater sources to Lake Coeur d'Alene and its tributaries and to the main stem Spokane River in Idaho may account for the PCB loading measured in the Spokane River at the Idaho-Washington border.

### Conclusion of Reasonable Potential Analysis Without Effluent Data

Although the EPA has no effluent PCB data for any of the three POTWs receiving reissued permits and no receiving water data for PCBs in the water column for the Spokane River in Idaho, the EPA has performed a reasonable potential analysis for PCBs in the subject discharges. As explained above, based on the available information, the EPA does not conclude at this time that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. The EPA reached this conclusion because the Spokane River affords the discharges substantial dilution, and because none of the existing data for other pollutants, nor the facilities' compliance history with existing permit requirements, nor information about the industrial users discharging to the POTWs suggest that the discharges have the reasonable potential to cause or contribute to PCBs, and, although it is known that the Spokane River transports a significant PCB load from Idaho into Washington, the origin of the Idaho PCB loading is currently unknown.

### *PCHB Decision*

The fact that the PCHB held that the Spokane County WRF has the reasonable potential to cause or contribute to excursions above water quality standards for PCBs does not mean that the subject permits have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. As explained above, the EPA has performed a reasonable potential analysis for the subject POTWs using available information and considering the specific factors identified in the TSD. The EPA does not conclude at this time that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs.

### *Summary*

In summary, the EPA does not have the necessary data to perform a reasonable potential analysis using facility-specific effluent data, as described in Section 3.3 of the TSD. Therefore, EPA performed a reasonable potential analysis conducted without facility-specific effluent data, as described in Section

[1] The Little Spokane River had one source that was covered under Washington's construction stormwater general permit (permit #WAR011881) but that coverage is now inactive. Information about permitted point sources to the Little Spokane River was obtained from the State of Washington's Water Quality Permitting and Reporting Information System (PARIS) on December 20, 2013.

3.2 of the TSD. The EPA's conclusion is that there is insufficient information to justify a finding of reasonable potential for PCBs. Therefore, the EPA has not established effluent limits for PCBs in the subject permits.

As the EPA stated in the fact sheets for these permits:

> "(T)he EPA believes that, similar to POTWs in the State of Washington and elsewhere, the Idaho POTWs may be discharging PCBs and dioxin, and that best management practices (BMP) requirements to control or abate the discharge of PCBs and dioxin are reasonably necessary to carry out the purposes and intent of the Clean Water Act. Due to the lack of data, it is infeasible to calculate numeric water quality-based effluent limits for PCBs and dioxin at this time. Therefore, the draft permit includes BMP requirements for PCBs and dioxin, consistent with 40 CFR 122.44(k)(3) and (4)."

It is not necessary for the EPA to find that the discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs in order to require BMPs.

### Comment #1-2

The Spokane Tribe stated that the PCHB found that the conditions in the Spokane County WRF permit do not constitute a narrative limit. Specifically, the Tribe stated that a requirement in the Spokane County WRF permit to develop a toxics management plan with a goal of reducing PCB discharges to the "maximum extent practicable" does not meet the requirements of the Clean Water Act (CWA).

The Spokane Tribe requested that the EPA revise the permits "to include numeric or narrative standards that will ensure that the discharges from these three facilities do not cause or contribute to the violation of water quality standards, including the Tribe's."

Post Falls and HARSB stated that the NPDES permitting rules do not refer to narrative effluent limitations in the context of point source discharge permits. Rather, the regulations and guidance uniformly refer to BMPs as the proper type of condition to impose when data is sparse or when it is infeasible to impose numeric limits, e.g., 40 CFR 122.44(k).

Post Falls and HARSB stated that the Spokane County PCHB Ruling insists that the conditions "must require defined steps toward compliance with standards" (Spokane County PCHB Ruling at 24), and that the conditions must specify "the expected reductions in toxicant loadings, the schedule for initiating such reductions, and at a minimum, offer greater definition and timelines for/of this expected outcome." Id. at 25. Post Falls and HARSB stated that, while we all hope the PCB BMPs will improve water quality, nothing in the CWA requires the performance-based approach to the BMPs mandated by the PCHB. Rather, BMPs "are inherently pollution prevention practices." Guidance Manual for Developing Best Management Practices, EPA 833-B-93-004) (October 1993) at 1-4. As the name implies, BMPs are practices the permittee undertakes to minimize the pollutants discharged from a facility. If the permittee implements the practices, it complies with the conditions.

Post Falls and HARSB stated that "numeric reduction targets should be left for when there is sufficient data and a need to impose a numeric effluent limitation."

### Response #1-2

The BMP requirements for PCBs in the draft permit need not be revised.

As explained in the response to comment #1-1, currently available information does not support a finding that the subject POTWs have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs, so the permits do not include effluent limits.

Having determined that it is neither necessary nor feasible to include effluent limits for PCBs in the permits at this time, the EPA instead has chosen to require BMPs to reduce or eliminate the three subject POTWs' discharge of PCBs (if any). BMPs are defined as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of 'waters of the United States.' BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (40 CFR 122.2). The EPA Permit Writers' Manual elaborates on this definition, stating that "BMPs are, by their nature, pollution prevention practices." One way of requiring BMPs in an NPDES permit is to require the permittee to develop a BMP plan, and this approach is preferable when the specific practices that the permittee should use to prevent pollution are not known at the time of permit issuance (see the EPA Permit Writers' Manual at Section 9.1.2.2). In general, the BMP requirements in the subject permits are required by way of a toxics management plan, although the permits do require the toxics management plan to address source control and elimination of PCBs in certain specific ways.

Effluent limitations, on the other hand, are defined as "any restriction imposed by the Director on quantities, discharge rates, and concentrations of 'pollutants' which are 'discharged' from 'point sources' into 'waters of the United States,' the waters of the 'contiguous zone,' or the ocean (40 CFR 122.2). Because they restrict "quantities, discharge rates and concentrations," effluent limitations are inherently quantitative.

Thus, there is an important distinction between effluent limitations and BMPs. Effluent limitations restrict the "quantities, discharge rates and concentrations" of pollutants, and generally leave the decision of how to achieve compliance with these restrictions up to the permittee. BMP requirements, in a sense, do the reverse; i.e., they specify the practices that the permittee must use in order to reduce their discharges of pollution, with the expectation that, when properly implemented, these practices will reduce the discharge of pollutants, although they do not explicitly restrict the quantity of pollutants discharged.

Since the EPA has appropriately required BMPs in the subject permits instead of effluent limitations for PCBs, it is not necessary for the permits to specify the expected reductions in toxicant loadings.

### Comment #1-3

Post Falls and HARSB stated that the Spokane County PCHB Ruling exceeds the reopener requirements of the CWA by requiring "the use of ongoing monitoring data to set a numeric effluent limitation at the earliest possible time, including during the term of the current permit, in order to be in compliance with water quality standards." Spokane County PCHB Ruling at 26. Post Falls and HARSB stated that the EPA should not adopt this approach. Rather, the agency should retain its discretion as to the timing of permit modification and /or reissuance, and include only a standard reopener clause in the permit.

### Response #1-3

As provided for in 40 CFR 122.62, the EPA may modify a permit during its term for cause. This is a discretionary action; the EPA may choose not to modify a permit during its term even if cause exists.

One of the allowable causes for modification is the EPA's receipt of new information that was not available at the time of permit issuance and would have justified the application of different permit conditions at the time of issuance (40 CFR 122.62(a)(2)). If the effluent and receiving water monitoring data for PCBs demonstrates that one or more of the subject discharges has the reasonable potential to cause or contribute to excursions above water quality standards, the EPA may modify the appropriate permits to include effluent limits for PCBs, after preparing a draft permit and following other procedures for decisionmaking in 40 CFR Part 124 (see also 40 CFR 122.62). Since this authority is provided by the NPDES regulations, it is not necessary to include a reopener clause in the permit for this purpose.

### Comment #1-4

The City of Spokane stated that the EPA should consider how the PCHB's decision in the matter of the NPDES permit issued to the Spokane County WRF might affect permits issued to Idaho dischargers.

Spokane Riverkeeper stated that the PCHB found that the NPDES permit needs to specify that measures to achieve PCB reductions must be clarified regardless of the work of the Spokane River Regional Toxics Task Force.

### Response #1-4

As described in the responses to comments 1-1, 1-2, and 1-3, the EPA has reviewed the PCHB decision in the matter of the Spokane County WRF. The EPA has determined that no changes are necessary to the subject draft permits' requirements as a result of the PCHB decision in the matter of the Spokane County WRF.

### Comment #1-5

Coeur d'Alene requests that the EPA remove the requirement for a new local pre-treatment standard for PCBs at 3 µg/L. The City has reviewed its industrial and commercial customers and cannot identify any customer with effluent that might be a particular source of PCB loading. Coeur d'Alene should be allowed to identify any potential PCB problems in its effluent before engaging in source control through its pre-treatment program. The City ordinance and EPA regulations regulating pre-treatment do not require monitoring for PCBs, so setting any pretreatment limit now would be meaningless and unnecessary.

### Response #1-5

Coeur d'Alene is referring to Part II.I.1.b.ii of their draft permit; this requirement is identical in the other two subject permits. This requirement is included in the permits because federal regulations already prohibit discharges of water containing PCBs in concentrations greater than or equal to 3 µg/L by any person to any treatment works, including POTWs (40 CFR 761.50(a)(3), see also 40 CFR 503.9(aa)).

This requirement is not a "local pre-treatment standard" since it applies to all treatment works in the United States and it also applies to any person, not just to industrial users of the POTW. This requirement therefore requires the permittee to enforce an existing requirement of federal law, which restricts discharges of PCBs to treatment works. Consistent with 40 CFR 761.50(a)(3), the permits do not prevent the permittees from establishing local pretreatment limits more stringent than 3 µg/L.

Since this requirement applies to any person, the EPA has moved this requirement so that it is not subordinate to the requirement to address source control and elimination of PCBs from industrial and commercial sources.

## Spokane River Regional Toxics Task Force (SRRTTF or Task Force)

### Comment #1-6

The Spokane Tribe expressed concern about the EPA's reliance on the Task Force as a means to achieve applicable water quality standards on numerous occasions. The Spokane River PCB TMDL Stormwater Loading Analysis Final Technical Report identifies a total PCB load reduction of 95% from Idaho as necessary to meet the Tribe's water quality standards for PCBs. First, the EPA has clearly stated that it does not believe that it has the authority to force Idaho dischargers to participate in the Task Force and can only require participation in the permits by the voluntary agreement of the dischargers. (Attachment E). Second, the PCHB identified the Task Force as a good idea but far too vague to have much effect, and the Tribe agrees with this assessment. (Order at 26). Third and finally, the EPA has presented the Task Force as a way to eventually meet the Tribe's water quality standards. The Tribe fundamentally believes that the decision to attempt to use the Task Force as a means to meet water quality standards is not supportable in law or fact because the Task Force and all of its goals are unenforceable, there is no required funding mechanism, and there are no deadlines to meet any of the amorphous goals. Simply put, the EPA cannot reasonably expect 95- to 99-percent reductions in PCBs through voluntary means alone.

The EPA has the authority to develop a multi-jurisdiction PCB TMDL and this approach could utilize the efforts of the Task Force, but in the end have an enforceable plan to meet water quality standards. Given the complexity of the watershed, it will only delay the goals of the CWA by imposing the Task Force on the Idaho Dischargers without the EPA simultaneously leading a multi-jurisdictional PCB TMDL. EPA is the only entity that can prepare such a PCB TMDL given that the State of Idaho, the Coeur d'Alene Tribe, the State of Washington, the Spokane Tribe, and the Colville Confederated Tribe all assert some jurisdiction over the waters impacted by these discharges of PCBs.

In the end, these permits contemplate 10-year compliance schedules, a multi-jurisdictional PCB TMDL would give the Idaho dischargers regulatory certainty in understanding what the various technologies they are implementing will need to accomplish for PCB removal.

The Tribe requests that the EPA reassess its decision to utilize the Task Force and instead begin the process of preparing a multi-jurisdictional PCB TMDL.

### Response #1-6

The issue of a PCB TMDL for the Spokane River is beyond the scope of these permitting actions. Nothing in the CWA or NPDES regulations requires that a TMDL be developed to address water quality impairments in the permittee's receiving water prior to the issuance of an NPDES permit. Indeed, the Spokane River is on the 303(d) list for pollutants other than PCBs and for which there are no valid TMDLs, including cadmium, lead, zinc, and total phosphorus in Idaho and temperature in Washington. The EPA addressed PCBs in the same way as it addressed these other pollutants; i.e., it performed a reasonable potential analysis to determine if the discharges cause or contribute to excursions above water quality standards for those pollutants. If the EPA found that the discharges had the reasonable potential to cause or contribute to such excursions, the EPA included effluent limits for those pollutants in the permits. As explained in the response to comment #1-1, based on the available information, the EPA did not find that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs.

If, in the future, a TMDL for PCBs which includes wasteload allocations for the subject discharges is approved or prepared by the EPA, then the EPA will reissue or modify the subject permits to include effluent limits for PCBs that are consistent with the wasteload allocations, as required by 40 CFR 122.44(d)(1)(vii)(B).

It is correct that the EPA has stated that it does not have the authority to require the subject permittees to participate in the SRRTTF. The draft permits contain a requirement to participate in the task force because the permittees mutually agreed with Spokane Riverkeeper, the Lands Council, and Kootenai Environmental Alliance that the permits should include language requiring such participation.

The EPA supports the goal of the SRRTTF to make measurable progress toward bringing the Spokane River into compliance with applicable water quality standards for PCBs. The EPA believes the SRRTTF should be given an adequate opportunity to achieve its goal, and participation in the SRRTTF is the preferred option at this time for achieving toxics loading reductions in the Spokane River. Numeric toxics control remains an option once more effluent and receiving water data and an appropriate approved test method approved for use in NPDES permits are available, and in the event that the SRRTTF fails to achieve measurable reductions in PCB loads.

### Comment #1-7

Coeur d'Alene stated that the EPA should affirm that it will become a signatory to the Task Force agreement and that it will seek funding to support the Task Force.

Spokane Riverkeeper stated that success of the SRRTTF depends upon consistent participation of the EPA (and Idaho Department of Environmental Quality (IDEQ)) in the process, in order to track the effectiveness of Idaho permittees in the process and assess measureable progress. Spokane Riverkeeper requests that the EPA dedicate staff to participate in a meaningful way in the SRRTTF, and that the EPA's and IDEQ's participation in the SRRTTF is built into work plans and budgets to ensure that there is consistent participation as the process proceeds.

### Response #1-7

The EPA intends to sign the SRRTTF memorandum of agreement (MOA) once the subject NPDES permits are finalized.

The SRRTTF is eligible to compete for EPA grants, and the EPA can work to ensure that the SRRTTF is aware of related grant competitions. If the SRRTTF is amenable to this option, the EPA could pursue contract funding in an existing EPA contract to support SRRTTF work efforts. In that case, the EPA would have to manage that work in partnership with the SRRTTF.

As stated in a letter to Spokane Riverkeeper on September 20, 2013, Tom Eaton, the Director of the EPA's Washington Operations Office, is the EPA's primary representative on the SRRTTF.

### Comment #1-8

Spokane Riverkeeper requests that the requirements for "measurable progress" contained in the Washington NPDES permits be included in the EPA-issued permits. The Washington permits state:

> If Ecology determines the Regional Toxics Task Force is failing to make measurable progress toward meeting applicable water quality criteria for PCBs, Ecology would be obligated to proceed with development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met.

Spokane Riverkeeper views "measurable progress" as concrete, on-the-ground efforts toward reduction of PCBs, including, but not limited to, source control, implementation of best management practices, institutional practices (e.g., eliminating the purchase of products with PCBs), local ordinances, and site cleanup. If measurable progress is not achieved, the EPA must take appropriate action to require end-of-the-pipe cleanup to ensure compliance with water quality standards.

### Response #1-8

The EPA does not agree with Spokane Riverkeeper that the permits must include a clause requiring "measurable progress" toward meeting water quality standards for PCBs. The permits do include requirements for some of the actions that Spokane Riverkeeper views as "measurable progress," including preferentially using PCB-free products, source control, and including industrial and commercial users of the POTWs' collection systems and sources within the direct control of the permittee. As explained in the responses to comments 1-1 and 1-2, the BMP requirements in the draft permit are appropriate and authorized by NPDES regulations (40 CFR 122.44(k)).

## Effluent Limits for Nutrients and Oxygen-Demanding Pollutants

### Comment #1-9

Post Falls and HARSB stated that the infrastructure improvements required in the Idaho NPDES permits completely address the water quality impacts to the Spokane River coming from the State of Idaho point sources and provide substantial assimilative capacity to their downstream neighbors. Any further efforts to meet Washington regulations should therefore be led and implemented solely by and within the State of Washington.

### Response #1-9

The issue raised by this comment is whether the subject permittees will be required to implement "further" (presumably meaning more stringent) efforts to meet Washington's water quality standards for dissolved oxygen (DO), beyond those required in the subject permits. The issue raised by this comment is therefore beyond the scope of the subject permit actions. The EPA will not speculate as to what specific requirements may be necessary in reissued or modified permits for the subject POTWs in the future.

If, at the time that the permits are reissued, new information demonstrates that more stringent effluent limits for nutrients and/or oxygen demand are necessary for any or all of the subject permits in order to meet Washington's water quality standards for DO, the EPA will include such limits in the permits.

Any reissued or substantively modified permits will be made available for public review and comment prior to issuance and subject to appeal, as required by 40 CFR 122.62 and Part 124.

### Comment #1-10

The Idaho Conservation League (ICL) stated that the draft permits call for Phosphorus Management Plans in lieu of phosphorus limits in the winter months, and that while the plans contain laudable practices, a management plan is not an effluent limit and should not take the place of one. Instead, the new seasonal limits for phosphorus should be applied throughout the year. When phosphorus enters the watershed, whether in the winter or the summer, some of it will remain in the watershed. As the draft permit acknowledges, the effects of nutrient loading are not immediate. Some of the phosphorus discharged in the winter months will settle in the sediments downstream in Long Lake and could be released due to negative retention in the sediments during the summer months.[2] This release could contribute to plant growth in the summer, and cause a decrease in DO. Therefore, these limits should be applied throughout the year, not just during the warmer months.

### Response #1-10

The subject permits include seasonal average effluent limits for total phosphorus (TP), which apply from February 1st to October 31st, or nine months of the year. During November, December, and January, there are no effluent limits for TP in any of the permits.

[2] Martin Sondergaard, Jens Peder Jensen, Erik Jeppesen, "Role of sediment and internal loading of phosphorus in shallow lakes," Hydrobiologia 506-509, (2003), 235-145.

The EPA does not dispute the commenter's statement that the effects of nutrient loading are not immediate. Indeed, modeling has shown that discharges of phosphorus as early as January can affect DO concentrations in Lake Spokane during the following summer. Therefore, the modeling that supports the limits in the draft permits assumes that, because there are no effluent limits in effect, the discharge concentrations of phosphorus in January will be unchanged from typical current discharges. The modeling shows that water quality standards for DO will be attained in Lake Spokane on a cumulative basis despite the impact of these relatively high TP discharges in January.

Currently, the CE-QUAL-W2 model used to develop the State of Washington's DO TMDL and the subject permits cannot simulate the effects of pollutants discharged late in one calendar year (e.g., November and December) upon DO concentrations in Lake Spokane during the following year. Therefore, it is infeasible for the EPA to calculate effluent limits for TP for November and December at this time. Federal regulations allow the EPA to establish BMP requirements in lieu of effluent limits when numeric effluent limits are infeasible (40 CFR 122.44(k)(4)), and, as the commenter notes, the permits require BMPs for phosphorus through the phosphorus management plans. The EPA has used the best available information and tools to establish protective WQBELs for nutrients in the subject permits. The EPA has addressed the model's inability to simulate the effects of pollutants discharged late in one calendar year upon DO concentrations in Lake Spokane during the following year by requiring year-round BMPs.

### Comment #1-11

ICL stated that, although phosphorus is greatly reduced, they are concerned that the combined reductions of phosphorus, carbonaceous biochemical oxygen demand (CBOD), and ammonia are not sufficient to achieve the Washington State DO criteria. Of the three pollutants, ammonia discharges remain relatively high in the draft permits, and it appears that the seasonal amount that would be allowed under Post Falls' permit would actually increase from the existing permit's average monthly limit. According to the Spokane DO TMDL, Ecology developed assumptions about "the anticipated permit-driven reductions of anthropogenic loading of phosphorous, CBOD and ammonia from wastewater treatment plants and stormwater in Idaho. These assumptions are based on point sources discharging equivalent pollutant concentrations at wastewater treatment plants in both states and have been incorporated into the model scenarios supporting this TMDL." (p. 35, Spokane DO TMDL). The sum total of the seasonal averages for TP, CBOD, and ammonia in the draft permits for the three Idaho dischargers is significantly more than the total assumed anthropogenic loading of the three pollutants as listed in the Washington TMDL. For example, the presumed load from ammonia was 94.4 lb/day, while the actual loading under the draft permits is 604.4 lb/day. Therefore, the overall reduction in the oxygen-consuming pollutants does not appear to be sufficient to meet the downstream State's needs. Given the state of DO downstream, it would make all the more sense to attempt to decrease ammonia from Post Falls, rather than allow an increase in discharge. It's difficult to see how the state of Washington is going to achieve its goals downstream in the Spokane River TMDL if the Idaho dischargers are allowed to exceed the suggested wasteload allocation assigned to Idaho in the TMDL. We recommend the EPA revisit the CBOD and ammonia levels in an effort to be consistent with the downstream TMDL.

### Response #1-11

As explained in Appendix B to all three fact sheets, the seasonal average ammonia limits in the draft permits, in combination with the TP and CBOD limits, the load and wasteload allocations for Washington pollution sources in the Spokane DO TMDL, and Avista Corporation's DO responsibility, will ensure compliance with Washington's water quality standards for DO on a cumulative basis.

As explained in Appendix B to all three fact sheets, the modeling assumptions that Ecology made when developing the TMDL are not binding on the EPA when it drafts the Idaho permits. The EPA is free to establish any limits in the Idaho permits for CBOD5, ammonia, and TP so long as those limits ensure compliance with both Idaho and Washington WQS, when considered cumulatively with other sources of pollution (40 CFR 122.4(d), 122.44(d)(4)).

The subject dischargers may have higher ammonia limits than assumed in the TMDL modeling because, in other respects, their limits for nutrients and oxygen-demanding pollutants are lower than assumed in the TMDL modeling. For example, the TMDL modeling assumed that stringent limits for TP, ammonia, and CBOD would begin on March 1st, but the subject permits generally have seasonal average limits for those pollutants that become effective on February 1st, with the sole exception being that Coeur d'Alene's ammonia limits do not take effect until March 1st.

### Comment #1-12

Mr. Bob Bingham of the North West Property Owners Association (NWPOA) asked the EPA to please describe the current percent permit removal or achievement for nitrogen and phosphorus and the proposed change.

### Response #1-12

None of the subject permits include effluent limits for any form of nitrogen other than ammonia. All of the subject permits include effluent limits for TP; the phosphorus limits are stated in terms of mass as opposed to percent removal.

Tables 1-3, below, provide a comparison of the ammonia and phosphorus effluent limits in the 1999 permits and the corresponding limits in the reissued permits.

**Table 1: Comparison of Ammonia and Phosphorus Effluent Limits in the 1999 and 2013 Permits for Coeur d'Alene**

| Ammonia | | | | | | |
|---|---|---|---|---|---|---|
| **Month** | **1999 Permit** | | | **2013 Permit** | | |
| | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit |
| January | None | None | None | None | None | None |
| February | | | | | | |
| March | | | | 272 lb/day | 649 lb/day | 1,547 lb/day |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | 350-370 lb/day | 1,000 – 1,100 lb/day | | 330 lb/day | 786 lb/day |
| August | | | | | | |
| September | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| October | | None | None | | None | None |
| November | | | | None | | |
| December | | | | | | |
| **Phosphorus** | | | | | | |
| **Month** | **1999 Permit** | | | **2013 Permit** | | |
| | Seasonal Average Limit | | Average Monthly Limit | Seasonal Average Limit | Average Monthly Limit | |
| January | None | | None | None | None | |
| February | | | | | | |
| March | | | 85% removal or 1,000 µg/L | 3.17 lb/day | | |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | | | | | | |
| November | | | None | None | | |
| December | | | | | | |

| **Table 2: Comparison of Ammonia and Phosphorus Effluent Limits in the 1999 and 2013 Permits for HARSB** | | | | | | |
|---|---|---|---|---|---|---|
| **Ammonia** | | | | | | |
| **Month** | **1999 Permit** | | | **2013 Permit** | | |
| | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit |
| January | None | 985 lb/day | 985 lb/day | None | 1,575 lb/day | 5,004 lb/day |
| February | | | | 77.4 lb/day | None | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | No Discharge when river flow is ≤ 2,000 CFS | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | None | 985 lb/day | 985 lb/day | None | 1,575 lb/day | 5,004 lb/day |
| November | | | | | | |
| December | | | | | | |
| **Phosphorus** | | | | | | |
| **Month** | **1999 Permit** | | | **2013 Permit** | | |
| | Seasonal Average Limit | | Average Monthly Limit | Seasonal Average Limit | Average Monthly Limit | |
| January | None | | | None | None | |
| February | | | | 1.33 lb/day | | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | No Discharge when river flow is ≤ 2,000 CFS | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | None | | | | | |

| | | | |
|---|---|---|---|
| November<br>December | | None | |

**Table 3: Comparison of Ammonia and Phosphorus Effluent Limits in the 1999 and 2013 Permits for Post Falls**

**Ammonia**

| **Month** | **1999 Permit** | | | **2013 Permit** | | |
|---|---|---|---|---|---|---|
| | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit | Seasonal Average Limit | Average Monthly Limit | Maximum Daily Limit |
| January | None | 737 lb/day | 2,661 lb/day | None | 1,059 lb/day | 3,824 lb/day |
| February | | | | 255 lb/day | | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | 238 lb/day | 856 lb/day | | 342 lb/day | 1,230 lb/day |
| August | | | | | | |
| September | | | | | | |
| October | | 737 lb/day | 2,661 lb/day | None | 1,059 lb/day | 3,824 lb/day |
| November | | | | | | |
| December | | | | | | |

**Phosphorus**

| **Month** | **1999 Permit** | | **2013 Permit** | |
|---|---|---|---|---|
| | Seasonal Average Limit | Average Monthly Limit | Seasonal Average Limit | Average Monthly Limit |
| January | None | None | None | None |
| February | | | 3.19 lb/day | |
| March | | 70% removal | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | None | None | |
| December | | | | |

### Comment #1-13

Mr. Bob Bingham of the NWPOA asked, if these permits are instituted, please provide the projected net gains (whatever they may be) to river quality and the methods used to predict/forecast such gains.

### Response #1-13

The goal of the WQBELs for TP, ammonia, and CBOD in the subject permits is to meet water quality standards for DO in Lake Spokane. Because Lake Spokane is more sensitive to loading of nutrients and oxygen-demanding pollution than the relatively free-flowing upstream reaches of the Spokane River, the limits will ensure compliance with water quality standards for DO in the Spokane River, as well.

Improving DO levels in Lake Spokane will provide better habitat for fish and other aquatic life. The reductions in TP discharges will also reduce the occurrence of algae blooms in Lake Spokane, including blooms of blue-green algae or cyanobacteria, which can be toxic to humans, livestock, and wildlife. The

reductions in TP discharges will also prevent periphyton (i.e. attached algae) densities in the Spokane River from reaching nuisance levels.

As explained in the 2013 Fact Sheets to the subject permits at Appendix B, the EPA used the CE-QUAL-W2 model to predict the impact of the subject discharges as well as other point and non-point sources of nutrients and oxygen-demanding pollution in both Idaho and Washington upon water quality in Lake Spokane. The same model was used by the State of Washington to develop the Spokane DO TMDL.

## Effluent Limits for Metals

### Comment #1-14

Coeur d'Alene previously submitted comments on the cadmium and lead effluent limits proposed in the Idaho's Revised Draft 401 Water Quality Certification for its draft permit. Those comments are attached and incorporated herein. We request that the cadmium and lead limits be adjusted in the permit to the extent IDEQ modifies the proposed limits in its final 401 Certification. We also request that the permits allow for modification of the limits following any review of the state 401 Certification.

### Response #1-14

Although this comment was submitted by Coeur d'Alene, all three of the subject draft permits contained cadmium and/or lead limits that are specified in the Idaho's draft CWA Section 401 certifications, thus, the comment could be applicable to any of the subject permits.

As stated in the fact sheets (e.g., the Coeur d'Alene Fact Sheet at Page 13), the State of Idaho specified effluent limits for cadmium (and, for Coeur d'Alene, lead) in its draft CWA Section 401 certifications. The draft certifications stated that these limits were necessary to ensure compliance with IDAPA 58.01.02.055.04. The draft permits included these effluent limits in order to incorporate the requirements specified in the draft CWA Section 401 certifications (40 CFR 124.53(e), 124.55(a)(2)).

The final CWA Section 401 certifications do not specify any cadmium or lead limits. On June 4, 2014, a rule became effective under Idaho state law (Docket No. 58-0102-1301), which repealed the language in IDAPA 58.01.02.055.04 that had stated that the loading of pollutants causing water quality impairments in high-priority water-quality-limited waters must remain constant or decrease within the watershed. As stated in Appendix D to each of the subject fact sheets, none of the subject POTWs have the reasonable potential to cause or contribute to excursions above water quality criteria for cadmium. In addition, Coeur d'Alene does not have the reasonable potential to cause or contribute to excursions above water quality criteria for lead (see the Coeur d'Alene fact sheet at Table 2 in Appendix D).

Thus, there is no basis to include effluent limits for cadmium in any of the subject final permits, and there is no basis to include effluent limits for lead in the Coeur d'Alene final permit. The final permits do not include such limits.

### Comment #1-15

Several parties submitted comments comparing the effluent limits for cadmium, lead, and/or zinc to those in the State of Washington's permits for POTWs discharging to the Spokane River in Washington.

Ecology stated in its comments on the subject draft permits that the Spokane River Dissolved Metals TMDL for cadmium, lead, and zinc requires waste load allocations for Washington dischargers as the more stringent of either end-of-pipe limits based on discharge hardness or performance-based limits for each facility. In its comments on the subject draft permits, Ecology recommended that the EPA use the same method of calculation for the Idaho dischargers.

The City of Spokane stated that they reviewed the effluent limits for metals such as zinc. In order to protect water quality, Spokane (53.8 µg/L monthly average) is required to achieve effluent limits for zinc that are twice as stringent as the EPA's proposed effluent limits for Idaho dischargers (135 µg/L monthly average). The City of Spokane stated that it is not clear from the Fact Sheets why municipal discharges in Idaho are not being held to the same standard as Spokane.

Riverkeeper stated that the proposed effluent limits for the Idaho dischargers for metals do not appear to be protective of water quality in Washington. For example, the effluent limit for zinc is twice the limit of the dischargers in Washington (53.8 v. 135 µg/L monthly average), the average monthly limit for lead is 2.5 v. 0.772 µg/L, and the average monthly limit for cadmium is 0.149 v. 0.076 µg/L. It is unclear why these limits are significantly higher than the limits set for Washington dischargers.

### Response #1-15

The bases for the cadmium, lead, and zinc effluent limits in the draft permits are explained in Appendix C to the subject fact sheets.

As explained in the response to comment #1-14, above, the effluent limits for cadmium (and, for Coeur d'Alene, lead) in the draft permits were removed from the final permits because they were removed from the final CWA Section 401 certifications, following changes to Idaho's water quality rules at IDAPA 58.01.055.04.

The effluent limits for lead and zinc in the subject final permits have two possible bases, as summarized in Table 4, below. Some of the limits are based on meeting Idaho water quality criteria at the end-of-pipe (i.e., with no mixing zone), using discharge hardness. Other limits are based on ensuring compliance with the anti-backsliding requirements of the CWA. The limits that appear in the permits are the more stringent limits resulting from these possible bases.

**Table 4: Bases for Cadmium, Lead, and Zinc Effluent Limits**

| Metal | Average Monthly Limit | Maximum Daily Limit |
|---|---|---|
| **City of Coeur d'Alene** | | |
| Zinc | Idaho water quality criteria | Idaho water quality criteria |
| **City of Post Falls** | | |
| Lead | Anti-backsliding[1] | Anti-backsliding[1] |
| Zinc | Anti-backsliding[1] | Anti-backsliding[1] |
| **Hayden Area Regional Sewer Board** | | |
| Lead | Concentration: Idaho water quality criteria[2]<br>Mass: Anti-backsliding[1] | Anti-backsliding[1] |
| Zinc | Anti-backsliding[1] | Anti-backsliding[1] |

Notes:
1. Concentration limits were identical to the limits in the 1999 permits, but mass limits were increased because of the increased design flows of the Post Falls and HARSB POTWs.
2. Because the shape of the lead criteria curves, when plotted against hardness, are "concave up," (i.e., the second derivative is always positive), calculating criteria end-of-pipe water quality-based effluent limits for lead, using the hardness of the effluent, can contribute to excursions above water quality criteria as the discharge mixes with a receiving water that is softer than the effluent. This was addressed in this case by calculating a tangent line to the water quality criteria at the State of Idaho's hardness "floor" of 25 mg/L as CaCO3 and calculating water quality-based effluent limits based on the tangent line.

As stated by Ecology in its comments, some of the wasteload allocations (WLAs) for cadmium, lead, and zinc in the State of Washington's Spokane River Dissolved Metals TMDL are based on the dischargers' performance. States have the discretion to set any WLA for a discharger in a TMDL, including WLAs based on performance, as long as the TMDL complies with the EPA's regulations in 40 CFR 130.7. However, there is no provision in the CWA or the NPDES regulations that allows the EPA to independently set effluent limits based on performance.

Effluent limits in an NPDES permit are either technology-based (TBEL) or water quality-based (WQBEL). Effluent limits based on WLAs in a TMDL are a type of WQBEL. When a state specifies additional or more stringent requirements in a CWA Section 401 certification, these requirements are also based on the state's water quality standards or other provisions of state law.

The applicable technology-based limits for POTWs are the secondary treatment standards in 40 CFR Part 133. The secondary treatment standards do not address cadmium, lead, or zinc. Therefore, unless more stringent effluent limits are necessary to ensure compliance with the anti-backsliding provisions of the CWA or to ensure consistency with a state certification, the effluent limits for cadmium, lead, and zinc in the permits are WQBELs. WQBELs apply Idaho water quality criteria at the end-of-pipe, using discharge hardness. Some of WLAs in the Spokane River Dissolved Metals TMDL are calculated similarly, using Washington's water quality criteria.

As stated in the fact sheets (e.g., the Coeur d'Alene fact sheet at Page 15), the EPA has determined that the subject discharges do not have the reasonable potential to cause or contribute to excursions above Washington's water quality standards for cadmium, lead, or zinc. Idaho and Washington have identical water quality criteria for lead. Because the effluent limits for lead ensure compliance with Idaho's water quality criteria, they will also ensure compliance with Washington's water quality criteria. Idaho's water quality criteria for cadmium are more stringent than Washington's. Because none of the subject POTWs have the reasonable potential to cause or contribute to excursions above Idaho's water quality criteria for cadmium, none of the subject POTWs have the reasonable potential to cause or contribute to excursions above Washington's water quality criteria for cadmium.

Regarding zinc, the increase in zinc concentration attributable to the Idaho dischargers at the state line is less than the increase in water quality criteria (and, in turn, loading capacity) caused by the hardness of the effluents. Therefore, although Idaho's water quality criteria for zinc are marginally less stringent than Washington's criteria, the EPA has determined that the subject discharges do not have the reasonable potential to cause or contribute to excursions above Washington's water quality criteria for zinc.

Therefore, the effluent limits for lead and zinc in the subject permits are as stringent as necessary to ensure compliance with the water quality standards of both Idaho and Washington, as well as the anti-backsliding provisions of the CWA. Washington dischargers may have more stringent effluent limits where the Spokane River Dissolved TMDL specified more stringent WLAs for Washington dischargers. For example, the Washington WLAs and limits may be more stringent if they were performance-based. Or, since the water quality criteria are based on discharge hardness, and water quality criteria for cadmium, lead, and zinc increase with increasing hardness, the effluent limits for a particular Washington discharger may be more stringent than the Idaho dischargers' effluents if the effluent of a particular Washington discharger was softer than the Idaho dischargers' effluents.

## Influent and Effluent Monitoring and Reporting Requirements

### Comment #1-16

Coeur d'Alene requests clarification as to how the EPA will use data collected using the unapproved test method 1668. The fact sheet states that the EPA will be using the data to perform a reasonable potential analysis and derive numeric limits but acknowledges that compliance with such limits cannot be enforced using an unapproved test method. Is it correct to assume that this statement in the Fact Sheet regarding the use of method 1668 is a statement of current intentions and not a permit decision? That is, is it correct to assume that the reasonableness and legality of the potential future use of 1668 data to set permit limits will be fully considered in future permits and is not being determined in this permit cycle? This is an important issue given the expense, variability, and uncertainty regarding the reliability of the data that will be collected using an unapproved test method.

### Response #1-16

The EPA believes, barring unforeseen data quality issues, that the data collected using EPA Method 1668 (or Method 8082) will be useful in performing a reasonable potential analysis for PCBs in the future.

Nothing in the CWA or regulations prevents the EPA from using data produced using an analytical method that is not approved under 40 CFR Part 136 in a reasonable potential analysis. Indeed, as discussed in the response to comment #1-1, reasonable potential analyses may be conducted without *any* facility-specific effluent data (see also the TSD at Section 3.2). Although the EPA chose to defer approval of Method 1668C while it considers the large number of comments received on the proposed approval, the EPA has stated that "this decision does not negate the merits of this method for the determination of PCB congeners in regulatory programs or for other purposes when analyses are performed by an experienced laboratory" (77 FR 29763). The EPA also requires permittees to submit data for any parameter upon request, regardless of the test methods used (see the permits at Part III.D.).

As stated in the fact sheets, (e.g. the Coeur d'Alene Fact Sheet at Page 27), the EPA may require the use of methods 1668 or 8082 in this case because the permit requires analysis of PCB congeners, and the methods approved under 40 CFR 136 are not capable of analysis for individual PCB congeners. For pollutants for which there are no approved methods under 40 CFR Part 136 (such as PCB congeners),

monitoring must be conducted according to a test procedure specified in the permit (40 CFR 122.44(i)(1)(iv); see also the EPA Permit Writers' Manual at Section 8.3).

In addition to their inability to differentiate PCB congeners, the PCB analytical methods that are approved under 40 CFR Part 136 have high detection limits that render them useless for effluent characterization for the purpose of a reasonable potential analysis. The lowest published method detection limit for the approved PCB methods is 0.065 µg/L, which is 65 ng/L or 65,000 pg/L, for PCB-1242, in Method 608. This is 383 times the Washington water quality criterion for PCBs (170 pg/L), 1,016 times the Idaho water quality criterion for PCBs (64 pg/L) and 50,000 times the Spokane Tribe's water quality criterion for PCBs (1.3 pg/L).

EPA Method 1668 is the only analytical method for PCBs with detection limits comparable to the water quality criteria for the States of Washington and Idaho (i.e. 64 – 170 pg/L). The EPA is not aware of any analytical methods that can detect PCBs in whole water samples at the Spokane Tribe's water quality criterion.

### Comment #1-17

Post Falls and HARSB stated that the draft permits require PCB monitoring of the influent at the frequency of once every two months but quarterly for the final effluent. Since HARSB's and Post Falls' collection and treatment system was constructed after 1978 when PCB production and use was banned and it has no Significant Industrial Users that predate the ban, it is not reasonable to expect significant fluctuations in influent concentrations of PCB. In addition, it would be beneficial to conduct influent PCB sampling contemporaneously with effluent PCB sampling in order to calculate removal rates. The influent and effluent PCB sampling will be further coordinated with the required Toxics Management Plan, with the Regional Toxics Task Force, and with surface water quality monitoring. Therefore, we request the Draft Permit be revised with the influent PCB monitoring to match the quarterly effluent monitoring for this permit cycle.

Coeur d'Alene stated that the monitoring frequency in Table 1 for influent and effluent samples for PCBs should be equivalent.

### Response #1-17

The EPA does not agree that the influent PCB sampling frequency should be reduced. As explained below, the EPA believes the proposed influent sampling frequency of once every two months is reasonable.

As stated in the fact sheets (e.g. the Coeur d'Alene Fact Sheet at Page 26), the proposed influent and effluent monitoring frequencies for PCBs are the same as those in the State of Washington's permit for the Liberty Lake Sewer and Water District, which operates the smallest of the three POTWs that discharge to the Spokane River in Washington and, like the subject dischargers, serves a primarily residential community.

As explained in the response to comment #1-1, POTWs that comply with removal requirements for TSS are likely to remove a large percentage of the PCBs in their influents. Thus, some PCB congeners that

are present at detectable concentrations in the influent may not be detectable in the effluent. Since the specific PCB congeners detected can aid in source identification, influent sampling will be more useful for source identification than effluent sampling. Since source identification aids in source control, it is reasonable to require PCB sampling of the influents to the POTWs somewhat more frequently than the effluents.

Furthermore, the fact that the required influent sampling frequency is different from the required effluent sampling frequency does not preclude contemporaneous influent and effluent sampling, because sampling once every two months will result in at least one influent sample every quarter. For example, influent sampling during the odd-numbered months would result in two samples during the first quarter (January – March) and the third quarter (July – September) and one sample during the second quarter (April – June) and the fourth quarter (October – December). Conversely, influent sampling during the even-numbered months would result in one sample during the first and third quarters and two samples during the second and fourth quarters. The quarterly effluent sample could be taken at the same time as one of the influent samples for a given quarter, thus allowing the calculation of a PCB removal rate.

### Comment #1-18

Ecology stated that, currently, DO monitoring is required only once per month. Ecology would like the EPA to consider increasing the DO monitoring to five times per week for a more representative monitoring event. The facilities will be required to monitor pH five times per week and we feel that including the additional parameter will not be burdensome on the facilities. Also, since the permits were written with the intention of protecting DO levels in Lake Spokane, the increased DO monitoring will help in the validation that our state water quality standards will be met.

### Response #1-18

The EPA agrees that, since pH must already be monitored at least 5 times per week with a grab sample, it would not be a significant burden for the permittees to test for DO 5 times per week as well. The EPA agrees that, since many of the subject permits' conditions are intended to ensure compliance with water quality standards for DO, it is reasonable to better characterize the discharges' effluent DO concentrations. Therefore, the EPA has changed the required effluent monitoring frequency for DO from once per month in the draft permits to five times per week in the final permits.

### Comment #1-19

Ecology stated that they would like to be allowed access to review monthly DMRs from each of the three dischargers.

### Response #1-19

Effluent data, as reported on DMRs, for all NPDES discharges in Idaho, including the subject POTWs, will be entered into the EPA's Integrated Compliance Information System (ICIS) database. The EPA will assist in granting access to the ICIS database to appropriate Ecology staff so that Ecology staff may review the DMR data. Also, to address this comment, the subject POTWs will be required to submit their DMR data electronically using NetDMR within 6 – 12 months and, thereafter, will not submit paper DMRs to the EPA. This is consistent with EPA Region 10's current reporting policy for major dischargers.

The public can access the information in ICIS on the internet by using Enforcement and Compliance History Online[3] (ECHO), Envirofacts[4], or the DMR Pollutant Loading Tool[5].

### Comment #1-20

ICL stated that the PCB monitoring should be more frequent to ensure a robust database for determining the sources of contamination and the ability of the treatment plants to capture the PCBs. A monitoring regimen that compares influent to effluent should be added.

### Response #1-20

The EPA believes the influent and effluent PCB monitoring requirements in the draft permits are adequate to characterize the utilities' discharges of PCBs (if any). The influent and effluent monitoring frequencies for PCBs are identical to those in the NPDES permit for the Liberty Lake Sewer and Water District, which discharges to the Spokane River in Washington and is of comparable size to the subject POTWs.

The following relative errors were calculated using the procedures described in Appendix N to the EPA's Local Limits Development Guidance (EPA 2004).

Assuming a coefficient of variation of 0.6, which is recommended by EPA permitting guidance in cases where the actual effluent variability is unknown (see TSD at Pages 53 and E-3), the 20 effluent samples that will be collected over the permit term (i.e., quarterly sampling for five years) will quantify the average effluent concentration with a 22.5% relative error, at a confidence level of 90%. For the influent (30 samples) the relative error will be 18.3%, at a confidence level of 90%.

Analysis of PCBs using EPA Method 1668 is expensive, costing about $1,000 per sample. The EPA has attempted to balance the cost of the monitoring with the need to adequately characterize the utilities' discharges of PCBs (if any).

### Comment #1-21

Coeur d'Alene requests that the permit clarify that any test results below the detection limit of the test method be treated as zero for calculating monthly mass discharge levels.

### Response #1-21

The draft permits state, in relevant part, "For purposes of calculating seasonal, monthly and weekly averages, except for E. coli, zero may be assigned for values less than the method detection limit (MDL)…." This language is applicable to the reporting of averages for both concentration and mass. In the final permits, this sentence has been edited to read, "For purposes of calculating seasonal, monthly and weekly average mass loadings and concentrations, except for E. coli, zero may be assigned for values less than the MDL…."

[3] echo.epa.gov
[4] www.epa.gov/enviro/index.html
[5] cfpub.epa.gov/dmr

### Comment #1-22

Coeur d'Alene requests that the text in Part I.B.3 be revised to state, "Effluent loading of zinc and silver (October-June) and concentrations of cadmium, copper, lead, silver and zinc must be reported as total recoverable metal." The language in the draft permit suggests that loading must be reported for all parameters where zinc and silver (October-June) are the only metal parameters with mass loading limits.

### Response #1-22

The EPA agrees that the language suggested by Coeur d'Alene is clearer than the language of the draft permit. The EPA has made the suggested change to the Coeur d'Alene permit and has made similar changes to the Post Falls and HARSB permits.

### Comment #1-23

Coeur d'Alene requests that the reporting deadline for seasonal average TP, $CBOD_5$ and ammonia loads be revised from the October DMR to the November DMR to allow sufficient time for analysis and reporting.

### Response #1-23

The EPA has addressed this comment by changing the DMR due date from the 10$^{th}$ day of the month following the monitoring month to the 20$^{th}$ day of the month following the monitoring month, for all three of the subject permits. The seasonal average TP, ammonia, and $CBOD_5$ loads are still required to be reported on the October DMR, but the October DMR is now due on November 20$^{th}$ instead of November 10$^{th}$.

The EPA does not agree that more time is necessary for analysis and reporting of a seasonal average limit than for an average monthly limit. A seasonal average discharge is calculated in much the same way as a monthly average discharge (i.e., it is the arithmetic average of daily discharges measured during a defined time frame).

### Comment #1-24

Mr. Bob Bingham of the NWPOA asked the EPA to please provide a summary of the methods used for collection, handling and analyzing of samples including standardization of equipment.

### Response #1-24

In general, the required methods used for collection, handling, and analysis of samples are specified in 40 CFR Part 136. The one exception is the influent, effluent, and receiving water sampling and analysis of PCB congeners. The EPA specified the methods to be used for analysis of PCB congeners, because there is no approved method for PCB congeners in 40 CFR part 136.

Specific information about analytical methods can be found online at the National Environmental Methods Index at www.nemi.gov and at the EPA's website at water.epa.gov/scitech/methods/cwa/methods_index.cfm.

### Comment #1-25

Coeur d'Alene stated that, Table 2, in Part I.B.6; some of the maximum Minimum Levels (MLs) for reporting are not consistent with approved EPA Methods. Coeur d'Alene stated that the permit writer seems to have picked the lowest value for any EPA approved or non-approved method regardless of its applicability.

For example, most laboratories utilize EPA Method 351.2 for total Kjeldahl nitrogen (TKN). This method has a working range according to the method of 100 ug/L to 20 mg/L. The approved EPA Method 351.1 has a working range of 50 ug/L to 2 mg/L, but it is only applicable to surface or saline waters, and not to domestic or industrial wastewaters. Thus, the ML for TKN in Table 2 should be set at 100 ug/L in this case to match EPA Method 351.2.

### Response #1-25

The EPA agrees that the ML for total Kjeldahl nitrogen (TKN) for effluent monitoring (Table 2) should be changed to 100 µg/L, consistent with the minimum of the working range of EPA Method 351.2 (O'Dell 1993).

## Surface Water Monitoring and Reporting Requirements

### Comment #1-26

The Spokane Tribe stated that the monitoring should require that the dischargers utilize high volume sampling such as the CLAM methodology when collecting surface water samples for PCBs to increase sensitivity.

### Response #1-26

The permits require the use of EPA Method 1668 for receiving water sampling of PCBs. Method 1668 is the most sensitive method available for analysis of whole-water samples for PCBs. According to the May 1, 2014, draft Quality Assurance Project Plan prepared for the Spokane River Regional Toxics Task Force, the Task Force's analyses for PCBs will use EPA Method 1668C (LimnoTech 2014). Method 1668 is not necessarily a high-volume method. Method 1668C does not specify a sample volume for aqueous samples, but rather states "collect one liter (or a larger or smaller volume) of sample sufficient to meet project needs."

### Comment #1-27

Coeur d'Alene stated that Part I.F.1 requires monitoring stations upstream and downstream from the Coeur d'Alene outfall. The locations have to be approved by IDEQ. Coeur d'Alene requests guidance as to where the monitoring stations should be located.

### Response #1-27

The permittees should work with IDEQ to establish monitoring locations that fit the descriptions in Part I.F of the final permits. The EPA has chosen to leave the required monitoring locations somewhat general, so that representative, safe, and accessible monitoring locations may be chosen based on site-specific conditions.

### Comment#1-28

Ecology stated that the permits specify that analysis for PCB congeners must use EPA Method 1668, with target MDLs no greater than 10 picograms per liter per congener. You should note that EPA Method 1668C includes MDLs for individual congeners, many of which exceed the 10 pg/L target value. Ecology wants to ensure that the permit language will not exclude EPA Method 1668C as a preferred monitoring method. In addition, Ecology would like to ensure that the discharger's involvement in the Spokane River Toxics Task Force (SRRTTF) requires each facility to follow their recommended Quality Assurance Plan for toxics monitoring in the receiving water.

### Response #1-28

In the final permits, the EPA has changed the language in Part I.B.11.e to require the permittees to target the MDLs listed in Table 2 of EPA Method 1668 Revision C for analyses of PCBs using Method 1668. The EPA referenced the MDLs from Method 1668C because the earlier revisions of Method 1668 listed *estimated* MDLs (EMDLs). This will provide clarity as to the acceptable MDLs for each congener. The reference to the MDLs published in Method 1668 Revision C does not require the use of Revision C.

### Comment #1-29

Coeur d'Alene stated that Parts I.B.11 (PCB Congeners) and I.B.12 (2,3,7,8 TCDD) of the draft permit incorporate the word "target" for MDLs and MLs. Coeur d'Alene asked how "targeting" is accomplished and explained to EPA inspectors during audits. Coeur d'Alene stated that none of the three permittees have or will have the capability to analyze for PCBs or TCDD onsite, and contract laboratories do not provide target MDLs or MLs, only sample results and the associated reporting/quantitation limits (i.e. minimum level of detection (ML). Coeur d'Alene asked if an MDL above the target MDL is a permit violation.

### Response #1-29

The word "target" is intended to recognize the fact that, even if a sensitive method is used and appropriate quality assurance and quality control (QA/QC) procedures are followed, the actual MDL or ML achieved in a particular analysis is dependent upon the sample matrix and may be higher than the MDLs or MLs published in the method. If the permittee can demonstrate that it has strived to meet the "target" MDLs and MLs in the draft permit, then, an actual MDL or ML higher than the targets would not be considered a permit violation.

### Comment #1-30

Coeur d'Alene stated that total phosphorus has an ML of 10 µg/L in Table 2, which is consistent with the working ranges of approved EPA Methods 365.1, 365.3, 365.4, but Section I.F. Table 4 for "Surface Water Monitoring Requirements" indicates an ML of 5 µg/L for Total Phosphorus and Orthophosphate which is not consistent with any approved EPA method. Total Phosphorus and Orthophosphate target MLs should be consistent with ML requirements listed in Table 2 at 10 µg/L. Coeur d'Alene stated that all current approved EPA TP methods list a working range minimum of 10 µg/L.

Coeur d'Alene stated that all other MLs should be reviewed for consistency with approved EPA Methods and applicability to domestic wastewater and or surface/receiving water.

### Response #1-30

The EPA does not agree that the required MLs for total phosphorus and orthophosphate in Table 4 should be changed to 10 µg/L. There are EPA-approved methods for surface water that can achieve a ML no greater than 5 µg/L, for example, Standard Method 4500-P F, which has an applicable concentration range of 1 µg/L to 10 mg/L.

The EPA has reviewed all of the other MLs and MDLs in the permits. The EPA has changed the ML for total Kjeldahl nitrogen, for effluent monitoring, from 50 µg/L to 100 µg/L consistent with the minimum of the working range of EPA Method 351.2 (O'Dell 1993). Otherwise, the EPA has not found any other MLs or MDLs that cannot be achieved.

## Phosphorus Management Plan

### Comment #1-31

Coeur d'Alene, HARSB and Post Falls requested that the EPA delete the phosphorus management plan requirements from the permits.

Coeur d'Alene stated that a ban on the retail or wholesale sale of phosphorus-containing laundry cleaning products in Coeur d'Alene has been in place since 1990 (Coeur d'Alene Municipal Code Chapter 13.28) and that the state of Washington's ban on dishwashing detergent containing phosphorus applies to Northern Idaho as well since distributors carry only Washington compliant products in the Coeur d'Alene market.

Coeur d'Alene requests that the EPA remove the requirement in Part II.B.2 to evaluate the WWTP TP reduction potential because the City has already engaged in an extensive evaluation of multiple treatment trains for TP removal. Based on this information, the City has updated its facility plan and secured financing and increased utility rates to construct facilities that are tailored to unique needs of Coeur d'Alene. No further evaluation of TP removal should be required until the current facility plan needs to be updated.

Coeur d'Alene requests that the EPA remove the requirement in Part II.B.3 to identify "total phosphorus reduction goals" and any reference to "goals" in Parts II.B.4, 5 and 7 to the extent such goals are anything other than the final effluent limits in the permit. Coeur d'Alene also objects to the potentially vague and burdensome obligation to meet some "typical value" outside its permit limits. The treatment system to be developed by the City was the result of a multi-year evaluation of several different treatment systems. The resulting design is unique to Coeur d'Alene and should not at any time be compared to other facilities. Simply stated, the TP reduction goal for Coeur d'Alene is to achieve compliance with its final effluent limits through optimal operation of its existing, and to be improved, treatment plant.

Coeur d'Alene requests that the EPA remove Part II.B.7 regarding revision of a phosphorus management plan. The performance of the WWTP and applicable TP limits, which should be the only "goals" that are legally required, should be addressed in the ordinary course of the permit cycle. TP removal planning should be addressed in the Facility Plan. It is improper and unlawful for the EPA to impose a de facto

permit limit through the proposed phosphorus removal planning and deadlines of 180 days as proposed in this permit condition. The City cannot manage its utility, its utility rate base, or public financing obligations when subject to an unpredictable extra-permit process. EPA should explain in response to these comments how the 180-day deadline in this section can be consistent with the ten-year compliance schedule to meet the final TP limits.

Coeur d'Alene requests that the EPA remove the annual reporting requirements for a phosphorus management plan in Part II.B.8. An annual report in the next permit cycle is redundant and unnecessary. The City will be filing monthly DMRs. Under Section I.D Coeur d'Alene must file annual progress reports on meeting the final phosphorus limits and reports on interim milestones of the compliance schedule. It is unlikely during the compliance schedule that the City will have anything else to report in terms of phosphorus management. Even if the City engaged in the "planning" required under Part II.B, it is more likely than not that the City would ultimately rely on Part II.B.6.g "total phosphorus removal at the WWTP" and Part II.B.6.h "ongoing monitoring" as its specific actions under the plan throughout the compliance period. EPA does not need a separate report under Part II.B.8 to determine the status of the implementation and optimization of the WWTP upgrades.

Post Falls and HARSB stated that the Draft Permit requires preparation of a Phosphorus Management Plan, ostensibly to reduce influent TP to the treatment plant so as to reduce resulting loading to the Spokane River. This requirement serves no purpose for HARSB and Post Falls for two reasons. First, HARSB has no significant industrial or commercial entities that would discharge inordinate quantities of TP to the treatment plant (i.e. dairies, food processors, metal finishers, etc.).

Post Falls stated that they have utilized a year-round biological TP removal process since the late 1990's which requires the influent TP in order to maintain adequate populations of phosphorus accumulating organisms. Reducing influent TP will reduce the population of those organisms but will have virtually no impact, or perhaps a slightly negative impact, on effluent TP concentrations. Therefore, we request that the requirements for a Phosphorus Management Plan be removed from this permit.

Coeur d'Alene, Post Falls and HARSB stated that the current influent concentrations and loadings of TP are typical for domestic wastewater. Thus, it would be elusive to reduce the influent loading.

### Response #1-31

The phosphorus management plan requirements in the draft permits are not unduly burdensome. The requirements are modeled after the Phosphorus Management Plan Guide developed by the Minnesota Pollution Control Agency (MPCA) and the Minnesota Technical Assistance Program at the University of Minnesota. The Phosphorus Management Plan Guide is a 14-page template, available as a Microsoft Word document from the MPCA website[6], which allows utilities to complete a phosphorus management plan by printing the document and filling it in by hand, or by entering information electronically into the document using Microsoft Word and/or Excel. The goal of the phosphorus management plan is to help

[6] www.pca.state.mn.us/index.php?option=com_k2&view=item&id=722

the utilities achieve the lowest possible effluent TP concentrations, in part through strategies to reduce influent TP concentrations.

The EPA recognizes that, in this case, the final water quality-based effluent limits for TP can only be achieved through upgrades to the treatment facilities. Because the final water quality-based effluent limits will require roughly 99% removal of TP from the influent wastewater, the EPA agrees that, once the TP removal upgrades are completed, strategies to reduce influent TP concentrations, even if successful, are unlikely to result in substantial further reductions in effluent TP loads from February to October, when the TP effluent limits apply. Such strategies would be more likely to reduce effluent TP loads at treatment plants that are not designed for TP removal, or that use chemical addition as their only means of TP removal. Therefore, the EPA has deleted those portions of the phosphorus management plan requirements that are intended to reduce influent TP concentrations.

However, the EPA believes those portions of the phosphorus management plan requirements that are concerned with improving the TP removal performance of the treatment plants themselves are useful and are authorized by federal regulations, which allow permitting authorities to include BMP requirements in permits when "(t)he practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA" (40 CFR 122.44(k)(3)).

Even after the necessary upgrades are completed, the achievement of the subject permits' stringent TP effluent limits will require a high level of skill and attention by the POTW operators. The EPA believes it will be beneficial for the utilities to develop a plan for achieving the high level of performance necessary to achieve the effluent limitations. Careful attention to maintenance, operational parameters such as chemical dosing and in-plant DO concentrations, and up-to-date knowledge of performance achieved by other POTWs using similar treatment technology has the potential to save the utilities money on energy and chemicals.

Couer d'Alene asked the EPA to explain how the 180-day deadline in Part II.B.7 of the draft permit (which appears as Part II.B.5 in the final permits) for revising the phosphorus management plan under certain circumstances is consistent with the ten year compliance schedule to meet the final water quality-based TP limits. The 180-day deadline for revision of the phosphorus management plan is independent of the compliance deadline for the final TP limits, because the phosphorus management plan requirements apply during the term of the compliance schedule. Part II.B.3.a of the final permits states that "effluent total phosphorus reduction goals must be consistent with interim or final total phosphorus effluent limits, as appropriate, or with typical values for the type of treatment process employed by the wastewater treatment plant…." Thus, it is not necessary for the final effluent TP limits to have become effective in order for the utilities to develop phosphorus reduction goals. The EPA believes that implementation of the phosphorus management plans prior to completion of phosphorus removal upgrades and imposition of the final TP limits may result in reductions in TP loadings during the terms of the compliance schedules, which is also consistent with the purposes and intent of the CWA.

The EPA understands that the phosphorus management plan will have some overlap or redundancy with other efforts, such as the utilities' facility plans and operation and maintenance plans. However, since

the TP limits present unique challenges, and because it will take several years to complete the upgrades necessary to comply with those limits, the EPA believes it is nonetheless useful and authorized by 40 CFR 122.44(k)(4) to have a plan specifically for TP removal.

Furthermore, as explained in the response to comment #1-10, modeling predicts that discharges of TP during the month of January can influence DO concentrations in Lake Spokane during the following summer. Therefore, even though there are no numeric effluent limits in effect from November to January, it is reasonably necessary to carry out the purposes and intent of the CWA (e.g., to achieve water quality standards) for the EPA to require the phosphorus management plan to include a phosphorus reduction goal for November to January. This requirement is not intended to significantly increase operating costs above those necessary to meet the February to October TP limits. That is to say, the phosphorus reduction goal for November to January should reflect the level of TP control that the permittee can achieve without incurring significant additional operating costs (e.g., for chemicals and energy) beyond those necessary to comply with permit requirements other than TP limits.

The permits require the utilities to "compare … effluent total phosphorus concentrations against typical values for wastewater treatment plants utilizing similar treatment technology," and further requires that "if the effluent total phosphorus concentrations are higher than typical levels, the permittee must investigate the cause of the high total phosphorus concentrations and take steps to reduce total phosphorus concentrations." The EPA disagrees with Coeur d'Alene that there are no "typical" values for its facility. This requirement does not require a comparison with treatment plants using identical technology, merely "similar" technology. For example, Coeur d'Alene could compare its performance against other treatment plants that use trickling filters for biological treatment and chemical addition for TP removal, Post Falls could compare its performance against other treatment plants using oxidation ditches with biological phosphorus removal, and HARSB could compare its performance against oxidation ditches without biological phosphorus removal. Once upgrades are completed, there are likely to be other treatment plants using similar tertiary processes for TP removal against which the treatment plants' performance could be compared.

Therefore, those portions of the phosphorus management plan requirements that are concerned with improving the TP removal performance of the treatment plants themselves, as well as the associated reporting requirements, have been retained in the final permits.

## Tribal Trust Responsibility

### Comment #1-32

The Spokane Tribe stated that it has specific water rights and fishing rights in the Spokane and Columbia River that are negatively impacted by upstream pollution and that the federal government is the trustee of the Spokane Tribe's rights, including its fishing rights

The Tribe further stated that if the EPA proceeds to issue these permits substantially unchanged and also fails to initiate a multi-jurisdictional PCB TMDL, it will be in violation of its fiduciary duties.

The Tribe requests that the EPA review these draft permits for compliance with its statutory duties under the Clean Water Act in light of its trust responsibility to the Spokane Tribe of Indians. Further, the EPA should articulate how it is meeting its separate federal common law trust responsibility that is owed to the Spokane Tribe.

### Response #1-32

The EPA has reviewed the draft permits for compliance with the CWA and applicable federal regulations. As explained in the response to comment #1-1, the EPA did not conclude, based on the available information, that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs, and therefore has not included effluent limits for PCBs, consistent with 40 CFR 122.44(d). As explained in the response to comment #1-2, the EPA has also reviewed the BMP requirements for PCBs in the draft permits and has determined that these requirements are consistent with 40 CFR 122.44(k) and thus do not need to be changed, even though the PCHB held that similar requirements in the Spokane County WRF permit needed to be changed. As explained in the response to comment #1-5, the issue of a PCB TMDL for the Spokane River is beyond the scope of these permitting actions. The EPA need not delay issuance of these permits until a PCB TMDL is in place.

Because the permits comply with the CWA and applicable federal regulations, the EPA has met its trust responsibility to the Spokane Tribe.

## Schedules of Compliance

### Comment #1-33

The City of Spokane stated that each Idaho discharger will receive a compliance schedule to meet final effluent limits in 2023. Spokane noted that each discharger has interim milestones for engineering (1 yr), pilot testing (3 yrs), system design (5 yrs), and construction completion (8 yrs). Spokane is encouraged by these milestones, and by the fact that each Idaho discharger will have a period of time (2 to 3 years) to work with their new system and then comply with final limits in 2023. It is concerned that Ecology is scheduled to complete its initial ten-year review of the success of the DO TMDL in 2020. The concept was for Ecology to look at water quality in the Spokane River after all municipal entities had installed the next level of treatment and operated these new systems for a period of 2 to 3 years. EPA and Ecology should consider how a useful ten-year review can be conducted in 2020 if the Idaho dischargers do not upgrade their wastewater facilities until 2023.

### Response #1-33

The regulatory requirement for the length of a compliance schedule in a permit is that the schedule "shall require compliance as soon as possible" (40 CFR 122.47(a)(1)). As explained in Appendix G to each of the fact sheets, the EPA has determined that the schedules of compliance proposed in the draft permits require compliance with the final water quality-based effluent limits as soon as possible. Therefore, the EPA has no basis to require compliance sooner than proposed in the draft permits.

The EPA believes that, even if some Spokane River dischargers have not achieved compliance with their final water quality-based effluent limits at the time of the ten-year assessment for the State of

Washington's DO TMDL, there nonetheless will be substantial reductions made in discharges of nutrients and oxygen-demanding pollution to the Spokane River, relative to pre-TMDL conditions, as well as additional water quality data, that can be used to update the CE-QUAL-W2 model used to develop the TMDL and the permits.

### Comment #1-34

Mr. Bob Bingham NWPOA stated that the EPA should amend the permits to extend the compliance date (of 10 years) to a point when at least 50% to 70% of all the Washington State municipal NPDES point discharge entities also meet these same stringent standards along the river system to the west coast and/or extend the compliance deadline to 15 to 18 years to allow each of the permittees to gradually begin to raise sewer rates and to gradually accumulate the required funds instead of having to force citizens to experience doubling and perhaps tripling of their sewer rates.

### Response #1-34

Federal regulations state that schedules of compliance in NPDES permits must require compliance with effluent limits as soon as possible (40 CFR 122.47(a)(1)). As explained in Appendix G to the fact sheets for all three permits, the ten-year schedules of compliance in the permits require compliance as soon as possible. If the schedules of compliance were extended beyond ten years, they would not comply with 40 CFR 122.47.

Furthermore, it would not be consistent with federal regulations nor would it be practical or reasonable to link the schedules of compliance for new water quality-based effluent limits in the subject permits to schedules for permits in Washington. Federal regulations state that compliance schedules must require compliance as soon as possible. Some permittees will be able to achieve compliance with new water quality-based effluent limits sooner than others, so the meaning of "as soon as possible" will be different for each permit. Furthermore, different permits are reissued on different schedules. Therefore, it would be unreasonable and would violate federal regulations if schedules of compliance were somehow linked to the achievement of similar effluent limits by municipalities in Washington.

Finally, it should be noted that the schedules of compliance for TP and CBOD effluent limits in the NPDES permits for existing POTWs in the State of Washington that discharge to the Spokane River above Lake Spokane (i.e. the City of Spokane and the Liberty Lake Sewer and Water District) do, in fact, require compliance with their new water quality-based effluent limits no later than March 1, 2021, which is sooner than the subject POTWs must achieve compliance with such limits. The Spokane County WRF permit does not include any schedules of compliance because it is a new discharger, and schedules of compliance are generally prohibited for new dischargers (40 CFR 122.47(a)(2)).

## Timing of Permit Issuance

### Comment #1-35

The City of Spokane stated that the EPA's decision approving the Spokane River DO TMDL was appealed to the U.S. District Court in Idaho by dischargers in Idaho. The City of Spokane filed a motion to intervene in the litigation in order to preserve the progress achieved through the TMDL process, and to protect Spokane's investment in new wastewater treatment systems. The appeal is pending but we

understand it will be dismissed with prejudice after the Idaho dischargers receive final NPDES Permits. We urge EPA to move quickly so that the uncertainty created by the litigation is alleviated and the Idaho dischargers can join Spokane and others in implementing new technologies and programs that will continue to improve water quality in the Spokane River.

### Response #1-35

The EPA has issued the subject permits as expeditiously as possible.

## Effluent Limit Structure

### Comment #1-36

ICL stated that the permits do not list any average weekly limits for E. coli, total residual chlorine, total ammonia, or metals (except for cadmium). Weekly average limits should be established for these pollutants. Those pollutants with only monthly average limits and daily maximum limits risk exceeding the monthly limit if the daily maximum is reached multiple times over a period of several days. Therefore, average weekly limits for E. coli, total residual chlorine, total ammonia, and metals should be included.

### Response #1-36

There is no basis to include average weekly limits for any of the pollutants mentioned, to the extent that such limits were not already included in the draft permits.

Federal regulations state that effluent limits for POTWs that discharge continuously shall be stated as average monthly and average weekly discharge limitations "unless impracticable" (40 CFR 122.45(d)(2). The HARSB permit does, in fact, include average weekly limits for total residual chlorine, from October to May. Otherwise, the effluent limits in the permits for the pollutants mentioned by ICL in its comments are stated as average monthly and maximum daily limits, because it is impracticable for the EPA to state the limits as average weekly limits.

Specifically, for E. coli, as explained in Appendix C to the 2013 fact sheets, it is impracticable to properly implement a 30-day geometric mean criterion in a permit using monthly and weekly arithmetic average limits. Therefore, the permit limits for E. coli are stated as a monthly geometric mean concentration, which is identical to the water quality standard in both its magnitude and its averaging. Because a single sample value exceeding 406 organisms per 100 ml indicates a likely exceedance of the geometric mean criterion, the EPA has imposed an instantaneous (single grab sample) maximum effluent limit for E. coli of 406 organisms per 100 ml, in addition to a monthly geometric mean limit.

For ammonia, chlorine, and metals, structuring the limits as average monthly and maximum daily limits is consistent with the recommendations of the TSD. The TSD recommends using maximum daily limits in lieu of the generally required average weekly limits for POTWs, because an average weekly limit has an averaging period that is too long to prevent acute toxicity to aquatic life (Section 5.2.3). The October to May limits for chlorine for HARSB are an exception because they are technology-based effluent limits, which are based upon standard operating practices rather than toxicity.

## Availability of Information

### Comment #1-37

Ecology respectfully requests a courtesy review of the required toxics monitoring quality assurance plans to confirm the monitoring protocols meet the same requirements as Washington dischargers.

### Response #1-37

To address this comment, the EPA has required Post Falls and Coeur d'Alene to submit their quality assurance plans (QAPs) to the EPA as an electronic attachment to their DMRs. Thus, the QAPs will thus be available in the ICIS database. As explained in the response to comment #1-19, the EPA will assist in providing ICIS access to the appropriate Ecology staff. This will allow Ecology staff to obtain and review the QAPs.

In its final permit, HARSB is not required to begin submitting monitoring data using NetDMR by the time they must submit their QAP to the EPA. Thus, HARSB's QAP may not be submitted as an electronic attachment to a DMR. The EPA will work with Ecology staff to obtain a copy of the HARSB QAP for review by Ecology.

## Other Comments

### Comment #1-38

Mr. Bob Bingham of the NWPOA asked how many municipal wastewater NPDES permits are there in the EPA database that the EPA oversees, and how many municipal wastewater NPDES permits are there in State run programs database that the EPA requires, but allows the respective state to assume oversight and jurisdiction? Mr. Bingham also asked what percentage of those permits are as strict as the proposals being put forth upon Post Falls, Coeur d'Alene, and HARSB. Mr. Bingham also asked the EPA to please quantify the number of total other municipal permits being required to attain these same reduction goals.

### Response #1-38

The database that is used to track NPDES permits is the Integrated Compliance Information System (ICIS). The public can access the information in ICIS on the internet by using Enforcement and Compliance History Online[7] (ECHO), Envirofacts[8], or the DMR Pollutant Loading Tool[9]. The EPA performed queries of the ICIS database in order to answer the questions posed in this comment.

According to the ICIS database, there are 22,369 NPDES permits for facilities with a standard industrial classification (SIC) code of 4952, which is the code for sewerage systems. This includes individual NPDES permits and coverages under general NPDES permits. Of these, 20,779 (93%) were issued by State and Territorial agencies, and 1,590 (7%) were issued by the EPA.

[7] echo.epa.gov
[8] www.epa.gov/enviro/index.html
[9] cfpub.epa.gov/dmr

It is not clear what the commenter meant by permits that are "as strict as" the subject permits. The subject permits have water quality-based effluent limits for a number of pollutants. However, the phosphorus limits in the subject permits are the limits that present the greatest technical challenge and that require the most extensive upgrades to meet. Thus, for the purpose of this comment, the EPA has searched for permits with phosphorus effluent limits that are comparable to or more stringent than the phosphorus limits in the subject permits.

The phosphorus limits in the subject permits are expressed as seasonal average limits for mass. Effluent limits for phosphorus may be expressed in terms of mass, concentration, removal rate, or a combination of these. The effective stringency of a mass limit depends on the facility's flow rate and, in turn, the effluent concentration that a POTW must achieve in order to achieve the mass limit. As explained in the fact sheets (see Table 4 in Appendix B), the phosphorus mass effluent limits in the draft permits are equivalent to a discharge of 0.05 mg/L (50 µg/L) TP at projected future flow rates. The ICIS database does not include flow projections, but it does include facilities' current design flow rates as reported on their most recent permit applications. At the POTWs' current design flow rates, the phosphorus mass limits in the subject draft permits are equivalent to 63 µg/L, 66 µg/L, and 76.5 µg/L for Coeur d'Alene, HARSB and Post Falls, respectively.

Effluent limits may also be expressed using a variety of different averaging periods. Because effluent discharges are variable, meeting an effluent limit of a given magnitude requires the POTW to achieve lower long-term average concentration or loading if the averaging period for the limit is relatively short. Thus, it is important to consider the differences in averaging periods when comparing the stringency of effluent limits. Regarding effluent variability, for the purpose of reasonable potential and effluent limit calculations, the TSD recommends making the assumption that the coefficient of variation (CV) is equal to 0.6, if there are not enough effluent data available to calculate a CV (Pages 53 and E-3). Assuming a sampling frequency of four samples per month, a CV of 0.6, and using the 99$^{th}$ percentile probability basis for both the average monthly and maximum daily limits, the ratio between an average monthly and an average weekly limit is 1.64:1 (see TSD at Table 5-3). Thus, a maximum daily limit of 126 µg/L is roughly equally as stringent as an average monthly limit of 76.5 µg/L (76.5 µg/L × 1.64 = 126 µg/L).

Thus, to address this question, the EPA searched for facilities with phosphorus limits that met at least one of the following criteria:

- For concentration limits:
    - Limits with an averaging period of monthly or longer with a magnitude of 76.5 µg/L or lower. As explained above, Post Falls' proposed seasonal average TP limit is equivalent to a concentration of 76.5 µg/L at the facility's current design flow rate. Or,
    - Limits with an averaging period shorter than monthly (e.g., average weekly limits or maximum daily limits) with a magnitude of 126 µg/L or lower.
- For mass limits:
    - Effluent limits that meet the above criteria for concentration limits, when the mass limits are converted to equivalent concentrations using the design flow of the facility. Facilities without a design flow value in ICIS were not considered.

- For percent removal:
    - A minimum percent removal requirement of at least 98%.

The database queries located 52 NPDES permits for POTWs in 11 States and in the Virgin Islands that have limits that meet the above criteria. The TP limits in the permits for the three POTWs discharging to the Spokane River in Washington were not in the ICIS database; these three POTWs also have TP limits that meet the above criteria. The final water quality-based TP effluent limits for the City of Boise, Idaho's two POTW treatment plants were not in the ICIS database, and would have also met these criteria. The phosphorus limits in the Boise, City of Spokane, Spokane County and Liberty Lake permits are shown in Table 5, below.

Thus, there are at least five permits (the two City of Boise permits and the three Washington permits for discharge to the Spokane River) that have limits at least as strict as those in the subject permits that were not found by the ICIS search, resulting in a total of 57 permits in 12 States and in the Virgin Islands. There may be other permits with similar limits which are not in the database. Of these 57 permits, 8 (14%) were issued by the EPA and the remaining 49 (86%) were issued by State or territorial permitting authorities.

### Comment #1-39

Please list all municipal permits that have equal to or stricter limits and their permit limits along the entire river path to the Pacific Ocean.

### Response #1-39

It is not clear what the commenter meant by "the entire river path to the Pacific Ocean." The subject POTWs discharge to the Spokane River, which is a tributary to the Columbia River, which flows to the Pacific Ocean. For the purposes of responding to this comment, the EPA will list permits with phosphorus limits at least as stringent as those in the subject permits, which are in the Columbia River watershed. Those permits are listed in Table 5, below. The permits listed may have other phosphorus limits in addition to those listed in the table. If the permit had phosphorus limits with multiple averaging periods (e.g. average monthly and average weekly limits), then the limits listed in the table are those with the longest averaging period. If the permit had phosphorus limits for both mass and concentration, only the concentration limits are listed.

**Table 5: Permits with Low Phosphorus Limits in the Columbia River Watershed**

| NPDES ID | Permit Effective Date | Permit Name | City | State | Issuing Agency Type | TP Limit | Limit Unit | Statistical Base | Design Flow (mgd) | Equiv. Conc. Limit (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| ID0020036 | 10/1/2005 | Grangeville, City of | Grangeville | ID | U.S. EPA | 67 | µg/L | Monthly Average | 0.88 | |
| ID0020443 | 8/1/2012 | Boise, City of (Lander St.) | Boise | ID | U.S. EPA | 70 | µg/L | Monthly Average | 15 | |
| ID0021016 | 10/1/2013 | Notus, City of | Notus | ID | U.S. EPA | 70 | µg/L | Monthly Average | 0.2 | |
| ID0022781 | 7/1/2012 | Plummer, City of | Plummer | ID | U.S. EPA | 50 | µg/L | Monthly Average | 0.32 | |

| Table 5: Permits with Low Phosphorus Limits in the Columbia River Watershed | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **NPDES ID** | **Permit Effective Date** | **Permit Name** | **City** | **State** | **Issuing Agency Type** | **TP Limit** | **Limit Unit** | **Statistical Base** | **Design Flow (mgd)** | **Equiv. Conc. Limit (mg/L)** |
| ID0023159 | 8/1/2013 | New Meadows, City of | New Meadows | ID | U.S. EPA | 6.6 | lb per month | Monthly Total | 0.36 | 0.0733 |
| ID0023981 | 8/1/2012 | Boise, City of (West Boise) | Boise | ID | U.S. EPA | 70 | µg/L | Monthly Average | 24 | |
| ID0028304 | 1/1/2013 | Greenleaf, City of | Greenleaf | ID | U.S. EPA | 70 | µg/L | Monthly Average | 0.24 | |
| ID0028355 | 6/1/2009 | Kuna, City of | Kuna | ID | U.S. EPA | 70 | µg/L | Monthly Average | 3.5 | |
| OR0034002 | 4/1/2004 | Mcminnville, City of | Mcminnville | OR | State | 70 | µg/L | Monthly Median | 5.6 | |
| WA0024473 | 7/1/2011 | Spokane AWWTP | Spokane | WA | State | 17.8 | lb/day | Seasonal Average | 55.9 | 0.038 |
| WA0045144 | 7/1/2011 | Liberty Lake Sewer and Water Dist. | Liberty Lake | WA | State | 0.45 | lb/day | Seasonal Average | 2 | 0.027 |
| WA0093317 | 12/1/2011 | Spokane County Regional WRF | Spokane | WA | State | 2.8 | lb/day | Seasonal Average | 8 | 0.042 |

### Comment #1-40

Mr. Bob Bingham of the NWPOA asked how many municipal wastewater NPDES permits are there in Region 10 along the waterway system that these three utilities discharge into. Mr. Bingham asked the EPA to provide a map showing the locations of each and their respective permit limits (nitrogen and phosphorus/phosphate) and respective permit renewal dates.

### Response #1-40

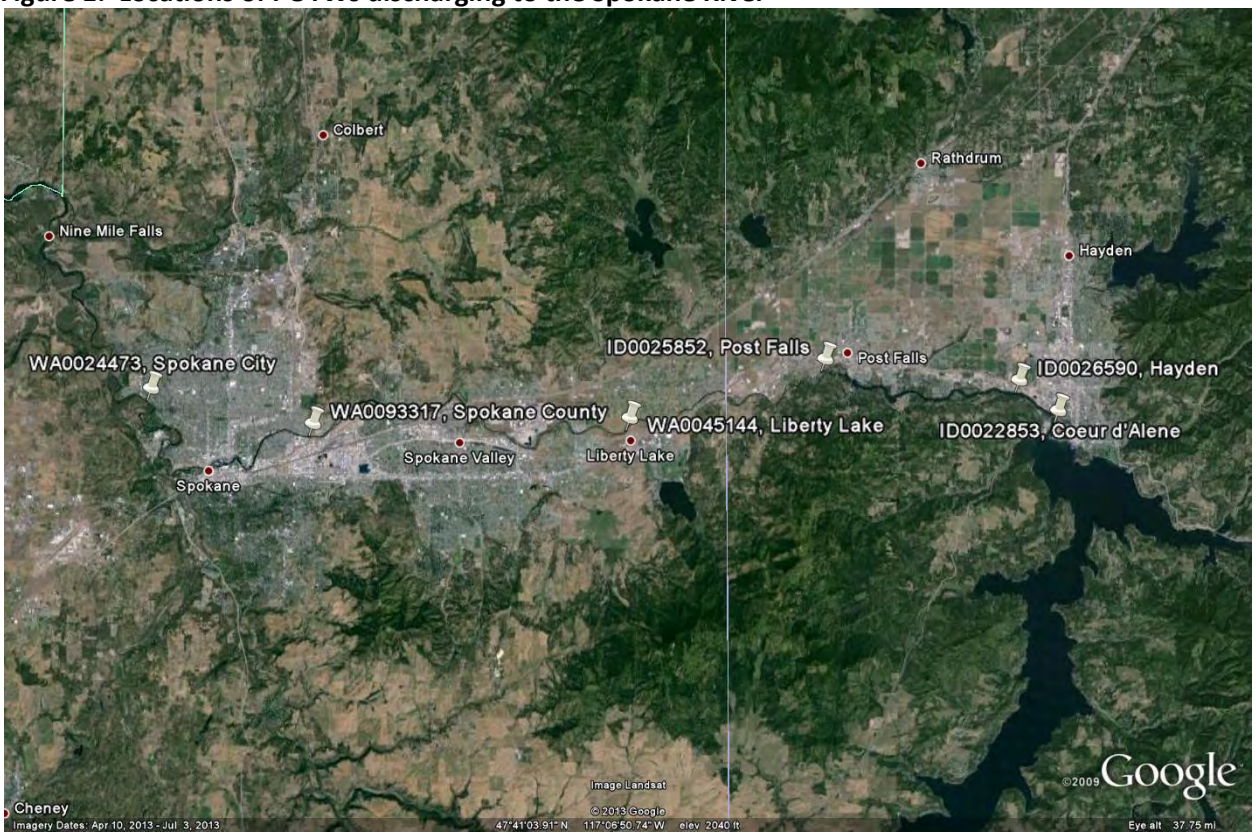
It is not clear what the commenter meant by "the waterway system that these three utilities discharge into." For the purposes of responding to this comment, the EPA will assume that the commenter was referring to the Spokane River, which flows about 111 miles from Lake Coeur d'Alene in Idaho to the Columbia River (Lake Roosevelt) in Washington.

The three subject permits (Coeur d'Alene, HARSB and Post Falls) are the only three NPDES permits for discharges of municipal wastewater to the Spokane River in Idaho. In the State of Washington, there are three additional NPDES permits for discharges of municipal wastewater to the Spokane River. These permits are issued to the Liberty Lake Sewer and Water District, the Spokane Advanced Wastewater Treatment Plant, which is operated by the City of Spokane, and the Spokane County Regional Water Reclamation Facility. Table 6, below, shows the effective dates and the TP and ammonia limits for all six of these permits (none of the permits include effluent limits for any form of nitrogen other than ammonia). As shown in the table, all six of these permits have stringent water quality-based effluent limits for phosphorus and ammonia, which are necessary to meet water quality standards for DO in Lake Spokane.

A map showing the outfall locations of these six POTWs is shown in Figure 1, below.

| Table 6: NPDES Permits for Discharge of Municipal Wastewater to the Spokane River | | | | | |
|---|---|---|---|---|---|
| **Name** | **Permit #** | **Design Flow** | **Effective Date** | **TP Limit** | **NH3 Limit** |
| Liberty Lake Sewer and Water District | WA0045144 | 2 mgd | 7/1/2011 | 0.45 lb/day | 2.27 – 8.94 lb/day |
| Spokane County Regional Water Reclamation Facility | WA0093317 | 8 mgd | 12/1/2011 | 2.8 lb/day | 14.0 – 55.4 lb/day |
| Spokane Advanced Wastewater Treatment Plant | WA0024473 | 55.9 mgd | 7/1/2011 | 17.8 lb/day | 89 – 351 lb/day |
| City of Coeur d'Alene | ID0022853 | 6 mgd | 12/1/2014 | 3.17 lb/day | 272 lb/day |
| City of Post Falls | ID0025852 | 5 mgd | 12/1/2014 | 3.19 lb/day | 255 lb/day |
| Hayden Area Regional Sewer Board | ID0026590 | 2.4 mgd | 12/1/2014 | 1.33 lb/day | 77.4 lb/day |

**Figure 1: Locations of POTWs discharging to the Spokane River**




## Comment #1-41

Mr. Bob Bingham of the NWPOA asked the EPA to please discuss the known effects of farming and ranching along the path 50 miles upstream and 250 miles downstream of these 3 cities.

### Response #1-41

The water quality-based effluent limits in the subject permits are based on the effects of the discharges upon water quality in the Spokane River and Lake Spokane. In developing the draft permits, the EPA did not evaluate the effects of the subject discharges at points downstream from the Long Lake Dam, which forms Lake Spokane and is located at river mile 33.9 on the Spokane River. The farthest upstream of the subject discharges is the City of Coeur d'Alene, which is located at river mile 110.2. Thus, the EPA evaluated the effects of the subject discharges only as far as 76.3 miles downstream from any of the subject POTWs. Because the effluent limits in the permits ensure compliance with water quality standards either at the point of discharge, at the edges of small mixing zones near the outfalls, or, for nutrients and oxygen demand, in Lake Spokane, and the discharges will experience additional dilution and attenuation of discharged phosphorus, the discharges will have a negligible effect upon water quality at points downstream from the Long Lake Dam. Therefore, the effects of farming and ranching upon the Spokane and Columbia Rivers at points downstream from Long Lake Dam (i.e., more than 76.3 miles downstream of the subject POTWs) are irrelevant to the subject permits.

The Spokane DO TMDL addresses non-point source loading to the Spokane River, including loading from farming and ranching, in Figure 4, on Page 32, and on Pages 36 – 40. The Spokane DO TMDL was based on 2001 river flow conditions (see the Spokane DO TMDL at Page 20) and the CE-QUAL-W2 model was calibrated to the conditions observed in 2001. As shown in Figure 4, in 2001, from March to October, most of the anthropogenic phosphorus loading to Lake Spokane was discharged by point sources. Non-point source loadings from Hangman Creek, the Little Spokane River, groundwater inflow, and the Lake Spokane watershed can be significant at times. Loading from Coulee Creek, stormwater discharges, and combined sewer overflows are less significant. The Spokane DO TMDL calls for reductions from current levels of non-point source loading as shown in Table 6.

### Comment #1-42

Mr. Bob Bingham of the NWPOA asked the EPA to please provide the last 10 yrs of annual historical records for nitrogen and phosphorus/phosphate sampling along the path 50 miles upstream and 250 miles downstream of these 3 discharge source points.

### Response #1-42

The subject POTWs discharge to the Spokane River, which is 111 miles long and flows from Lake Coeur d'Alene in Idaho to Lake Roosevelt in Washington, and the length of the Spokane River within Idaho is only about 15 miles. Therefore, to provide data for nitrogen and phosphorus "50 miles upstream" and "250 miles downstream" requires including data from the Columbia River downstream from the Spokane River and from the Lake Coeur d'Alene watershed, upstream from the Spokane River.

To respond to this comment, the EPA used the EPA's Nitrogen and Phosphorus Data Access Tool[10] to download nitrogen and phosphorus data for the watershed that receives the discharges (Upper Spokane, HUC 17010305), as well as the Coeur d'Alene Lake watershed, which is upstream from the discharges (HUC 17010303) and the Lower Spokane (HUC 17010307), Franklin D. Roosevelt Lake (HUC

[10] gispub2.epa.gov/npdat

17020001), and Chief Joseph (HUC 17020005) watersheds, downstream from the discharges. The EPA also downloaded data from the Washington Department of Ecology's river and stream water quality monitoring website[11], for water resource inventory areas (WRIAs) 57 (Middle Spokane), 54 (Lower Spokane), 53 (Lower Lake Roosevelt), 50 (Foster), 47 (Chelan) and 44 (Moses Coulee).

The Nitrogen and Phosphorus Data Access Tool includes data from 1995 to the present, which is sourced from the USGS National Water Information System (NWIS) and from the EPA's Storage and Retrieval (STORET) database. No data from the Nitrogen and Phosphorus Data Access Tool was excluded from the summary provided below because it was older than the ten-year time frame requested by the commenter. To ensure consistency with the NWIS and STORET retrievals, data from prior to 1995 was excluded from the summary statistics provided below, for the Washington Department of Ecology data. There were no post-1995 water quality data from Ecology for the Columbia River in WRIAs 50 or 47.

For the Upper Spokane watershed and all watersheds and WRIAs downstream of the subject POTWs, only data from the main stem Spokane and Columbia rivers are summarized below. Data were available for multiple species of phosphorus and nitrogen. Data are summarized below for TP, and, if available, total nitrogen. If total nitrogen data were not available, data are summarized below for nitrate+nitrite and for ammonia. The downstream watersheds and WRIAs encompass the Columbia River as far downstream as Wenatchee, Washington. The data are summarized in the tables below. All concentrations are reported in mg/L unless otherwise noted.

**Table 7: Lake Coeur d'Alene Watershed (HUC 17010303) Total Phosphorus Data from USGS NWIS**

| Monitoring Location | Min of Results | Average of Results | Max of Results | Std. Dev. of Results | Count of Results | Date of Earliest Sample | Date of Latest Sample |
|---|---|---|---|---|---|---|---|
| USGS 12413500 Coeur D'Alene River Near Cataldo, ID | 0.007 | 0.031 | 0.152 | 0.035 | 25 | 2/10/1996 | 10/22/2013 |
| USGS 12413810 Coeur D'Alene River At Rose Lake, ID | 0.050 | 0.050 | 0.050 | N/A | 1 | 2/10/1996 | 2/10/1996 |
| USGS 12413858 Coeur D'Alene River Below Blue Lake Near Harrison ID | 0.012 | 0.013 | 0.013 | 0.001 | 2 | 3/9/1999 | 3/9/1999 |
| USGS 12413860 Coeur D Alene River Near Harrison, ID | 0.002 | 0.027 | 0.356 | 0.049 | 109 | 2/10/1996 | 12/3/2013 |
| USGS 12417610 Spokane River Near Coeur D'Alene Lake Outlet at Coeur d'Alene ID | 0.004 | 0.007 | 0.016 | 0.003 | 35 | 5/22/2006 | 10/24/2013 |
| USGS 472500116450000 Coeur D'Alene Lake NE of Blue Pt Near Harrison, ID | 0.005 | 0.014 | 0.038 | 0.009 | 76 | 6/2/1999 | 8/22/2006 |
| USGS 472730116475900 Coeur D'Alene Lake at Mouth Of Cd'A River At Harrison, ID | 0.010 | 0.010 | 0.010 | N/A | 1 | 6/2/1999 | 6/2/1999 |
| USGS 473054116500600 Coeur D'Alene Lake 1.7 Mi NE of Univ. Pt Near Harrison, ID | 0.003 | 0.011 | 0.049 | 0.010 | 128 | 6/2/1999 | 8/23/2006 |

[11] www.ecy.wa.gov/programs/eap/fw_riv/rv_main.html

| Table 7: Lake Coeur d'Alene Watershed (HUC 17010303) Total Phosphorus Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 473500116482000 Coeur D Alene Lk 0.8 Mi SW Of Driftwood Pt Near Coeur d'Alene, ID | 0.002 | 0.007 | 0.027 | 0.004 | 88 | 6/3/1999 | 8/21/2006 |
| USGS 473555116474300 Coeur D'Alene Lake Near Driftwood Pt Near Coeur d'Alene, ID | 0.002 | 0.006 | 0.040 | 0.008 | 21 | 12/3/2003 | 5/24/2005 |
| USGS 473900116453000 Coeur D Alene Lk 1.3 Mi SE of Tubbs Hill Near Coeur d'Alene, ID | 0.002 | 0.007 | 0.076 | 0.009 | 98 | 6/3/1999 | 8/24/2006 |
| USGS 474030116480600 Coeur D Alene Lake @ Outlet of Spokane R At Coeur d'Alene, ID | 0.008 | 0.008 | 0.008 | N/A | 1 | 6/3/1999 | 6/3/1999 |

| Table 8: Lake Coeur d'Alene Watershed (HUC 17010303) Total Nitrogen Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 12413500 Coeur d'Alene River Near Cataldo, ID | 0.44 | 0.44 | 0.44 | N/A | 1 | 2/10/1996 | 4/15/2002 |
| USGS 12413858 Coeur d'Alene River Below Blue Lake Near Harrison, ID | 0.17 | 0.18 | 0.18 | 0.01 | 2 | 3/9/1999 | 3/9/1999 |
| USGS 12413860 Coeur d'Alene River Near Harrison, ID | 0.07 | 0.19 | 0.71 | 0.13 | 28 | 2/10/1996 | 8/21/2003 |
| USGS 472500116450000 Coeur D'Alene Lake Ne Of Blue Pt Near Harrison, ID | 0.12 | 0.20 | 0.42 | 0.11 | 6 | 6/2/1999 | 10/19/1999 |
| USGS 472730116475900 Coeur d'Alene Lake at Mouth Of Cd'A R at Harrison, ID | 0.16 | 0.16 | 0.16 | N/A | 1 | 6/2/1999 | 6/2/1999 |
| USGS 473054116500600 Coeur d'Alene Lake 1.7 Mi NE of Univ. Pt Near Harrison, ID | 0.07 | 0.16 | 0.30 | 0.06 | 12 | 6/2/1999 | 10/19/1999 |
| USGS 473500116482000 Coeur d'Alene Lake 0.8 MI SW of Driftwood Pt Near Coeur d'Alene, ID | 0.13 | 0.20 | 0.42 | 0.08 | 13 | 6/3/1999 | 10/19/1999 |
| USGS 473900116453000 Coeur d'Alene Lake 1.3 MI SE of Tubbs Hill Near Coeur d'Alene, ID | 0.16 | 0.21 | 0.25 | 0.06 | 2 | 6/3/1999 | 6/3/1999 |
| USGS 474030116480600 Coeur d'Alene Lake @ Outlet of Spokane R at Coeur d'Alene, ID | 0.16 | 0.16 | 0.16 | N/A | 1 | 6/3/1999 | 6/3/1999 |

| Table 9: Lake Coeur d'Alene Watershed (HUC 17010303) Total Phosphorus Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| BUNKER_USGS-LC-50 (USGS Cataldo) | 0.007 | 0.025 | 0.062 | 0.023 | 7 | 3/30/2010 | 7/13/2011 |
| BUNKER_USGS-LC-60 (USGS Harrison) | 0.007 | 0.054 | 0.356 | 0.091 | 16 | 1/10/2009 | 7/19/2011 |
| IDEQ_CDAOFFICE_WQX-C1-TUBBS (USGS - 1.3 miles southeast of Tubbs Hill) (µg/L) | 3.00 | 6.19 | 16.0 | 2.59 | 47 | 7/24/2007 | 10/9/2009 |
| IDEQ_CDAOFFICE_WQX-C4-UNIV (USGS - 1.7 miles northeast of University Point) (µg/L) | 3.00 | 9.11 | 25.0 | 5.03 | 46 | 7/24/2007 | 10/8/2009 |
| R10BUNKER-LC-4000 (Latitude 47.6499059, Longitude -116.7593534, NAD 83) | 0.002 | 0.006 | 0.028 | 0.004 | 40 | 6/3/1999 | 10/20/2004 |
| R10BUNKER-LC-4001 (Latitude 47.5832386, Longitude -116.8065743, NAD 83) | 0.002 | 0.006 | 0.040 | 0.007 | 26 | 6/3/1999 | 10/20/2004 |
| R10BUNKER-LC-4002 (Latitude 47.5986111, Longitude -116.7952778, NAD83) | 0.002 | 0.004 | 0.010 | 0.002 | 16 | 12/3/2003 | 8/25/2004 |
| R10BUNKER-LC-4003 (Latitude 47.5149051, Longitude -116.8360166, NAD83) | 0.003 | 0.023 | 0.310 | 0.060 | 51 | 6/2/1999 | 10/20/2004 |
| R10BUNKER-LC-4004 (Latitude 47.4165724, Longitude -116.7510095, NAD83) | 0.005 | 0.012 | 0.031 | 0.006 | 28 | 6/2/1999 | 10/19/2004 |
| R10BUNKER-LC-4006 (Latitude 47.4133333, Longitude -116.7402778, NAD 83) | 0.009 | 0.013 | 0.018 | 0.004 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4007 (Latitude 47.4558333, Longitude -116.7916667, NAD83) | 0.005 | 0.008 | 0.015 | 0.005 | 4 | 10/22/2003 | 8/26/2004 |
| R10BUNKER-LC-4008 (Latitude 47.4638889, Longitude -116.9330556, NAD83) | 0.005 | 0.007 | 0.012 | 0.003 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4009 (Latitude 47.505, Longitude -116.9005556, NAD83) | 0.005 | 0.007 | 0.012 | 0.003 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4010 (Latitude 47.4955556, Longitude -116.8208333, NAD83) | 0.004 | 0.008 | 0.016 | 0.006 | 4 | 10/21/2003 | 8/25/2004 |
| R10BUNKER-LC-4011 (Latitude 47.5366667, Longitude -116.7777778, NAD83) | 0.004 | 0.008 | 0.023 | 0.008 | 5 | 10/21/2003 | 8/26/2004 |
| R10BUNKER-LC-4012 (Latitude 47.5572222, Longitude -116.8255556, NAD83) | 0.004 | 0.008 | 0.013 | 0.004 | 4 | 11/4/2003 | 8/26/2004 |
| R10BUNKER-LC-4013 (Latitude 47.5983333, Longitude -116.8530556, NAD83) | 0.005 | 0.007 | 0.014 | 0.005 | 4 | 11/4/2003 | 8/26/2004 |

| Table 9: Lake Coeur d'Alene Watershed (HUC 17010303) Total Phosphorus Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| R10BUNKER-LC-4014 (Latitude 47.6075, Longitude -116.7688889, NAD83) | 0.004 | 0.008 | 0.014 | 0.005 | 4 | 11/4/2003 | 8/26/2004 |
| R10BUNKER-LC-4015 (Latitude 47.6458333, Longitude -116.8, NAD83) | 0.004 | 0.007 | 0.014 | 0.004 | 5 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-4016 (Latitude 47.6730556, Longitude -116.8122222, NAD83) | 0.004 | 0.009 | 0.015 | 0.005 | 4 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-4017 (Latitude 47.6147222, Longitude -116.6880556, NAD83) | 0.004 | 0.006 | 0.008 | 0.002 | 4 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-50 (USGS Cataldo) | 0.008 | 0.044 | 0.152 | 0.051 | 9 | 4/15/2002 | 9/15/2008 |
| R10BUNKER-LC-60 (USGS Harrison) | 0.004 | 0.021 | 0.230 | 0.035 | 92 | 10/23/1998 | 1/10/2009 |
| R10BUNKER-SR-1 (Spokane River At Lake Outlet at Coeur d'Alene, ID) | 0.002 | 0.008 | 0.015 | 0.003 | 50 | 11/7/2002 | 1/12/2009 |

| Table 10: Lake Coeur d'Alene Watershed (HUC 17010303) Total Nitrogen Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| BUNKER_USGS-LC-50 (USGS Cataldo) | 0.05 | 0.14 | 0.26 | 0.09 | 7 | 3/30/2010 | 7/13/2011 |
| BUNKER_USGS-LC-60 (USGS Harrison) | 0.05 | 0.18 | 0.53 | 0.15 | 16 | 1/10/2009 | 7/19/2011 |
| IDEQ_CDAOFFICE_WQX-C1-TUBBS (USGS - 1.3 miles southeast of Tubbs Hill) (µg/L) | 65 | 144 | 281 | 47 | 40 | 7/24/2007 | 10/9/2009 |
| IDEQ_CDAOFFICE_WQX-C4-UNIV (USGS - 1.7 miles northeast of University Point) (µg/L) | 54 | 161 | 269 | 62 | 41 | 7/24/2007 | 10/8/2009 |
| NARS_WQX-NLA06608-1985 (Latitude 47.4486876, Longitude -116.7986927, WGS84) (µg/L) | 27 | 27 | 27 | N/A | 1 | 7/21/2007 | 7/21/2007 |
| R10BUNKER-LC-4000 (Latitude 47.6499059, Longitude -116.7593534, NAD 83) | 0.03 | 0.13 | 0.28 | 0.05 | 38 | 10/22/2003 | 10/20/2004 |
| R10BUNKER-LC-4001 (Latitude 47.5832386, Longitude -116.8065743, NAD 83) | 0.05 | 0.15 | 0.32 | 0.06 | 21 | 10/22/2003 | 10/20/2004 |
| R10BUNKER-LC-4002 (Latitude 47.5986111, Longitude -116.7952778, NAD83) | 0.06 | 0.14 | 0.20 | 0.04 | 16 | 12/3/2003 | 8/25/2004 |
| R10BUNKER-LC-4003 (Latitude 47.5149051, Longitude -116.8360166, NAD83) | 0.06 | 0.20 | 1.23 | 0.22 | 45 | 10/21/2003 | 10/20/2004 |

| Table 10: Lake Coeur d'Alene Watershed (HUC 17010303) Total Nitrogen Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| R10BUNKER-LC-4004 (Latitude 47.4165724, Longitude -116.7510095, NAD83) | 0.07 | 0.16 | 0.30 | 0.07 | 23 | 10/23/2003 | 10/19/2004 |
| R10BUNKER-LC-4006 (Latitude 47.4133333, Longitude -116.7402778, NAD 83) | 0.07 | 0.15 | 0.28 | 0.09 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4007 (Latitude 47.4558333, Longitude -116.7916667, NAD83) | 0.07 | 0.11 | 0.16 | 0.04 | 4 | 10/22/2003 | 8/26/2004 |
| R10BUNKER-LC-4008 (Latitude 47.4638889, Longitude -116.9330556, NAD83) | 0.06 | 0.12 | 0.20 | 0.06 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4009 (Latitude 47.505, Longitude -116.9005556, NAD83) | 0.09 | 0.12 | 0.21 | 0.06 | 4 | 10/22/2003 | 8/25/2004 |
| R10BUNKER-LC-4010 (Latitude 47.4955556, Longitude -116.8208333, NAD83) | 0.04 | 0.11 | 0.16 | 0.05 | 4 | 10/21/2003 | 8/25/2004 |
| R10BUNKER-LC-4011 (Latitude 47.5366667, Longitude -116.7777778, NAD83) | 0.03 | 0.13 | 0.20 | 0.07 | 5 | 10/21/2003 | 8/26/2004 |
| R10BUNKER-LC-4012 (Latitude 47.5572222, Longitude -116.8255556, NAD83) | 0.10 | 0.16 | 0.27 | 0.08 | 4 | 11/4/2003 | 8/26/2004 |
| R10BUNKER-LC-4013 (Latitude 47.5983333, Longitude -116.8530556, NAD83) | 0.09 | 0.11 | 0.15 | 0.03 | 4 | 11/4/2003 | 8/26/2004 |
| R10BUNKER-LC-4014 (Latitude 47.6075, Longitude -116.7688889, NAD83) | 0.06 | 0.10 | 0.15 | 0.04 | 4 | 11/4/2003 | 8/26/2004 |
| R10BUNKER-LC-4015 (Latitude 47.6458333, Longitude -116.8, NAD83) | 0.07 | 0.11 | 0.22 | 0.06 | 5 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-4016 (Latitude 47.6730556, Longitude -116.8122222, NAD83) | 0.09 | 0.13 | 0.20 | 0.05 | 4 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-4017 (Latitude 47.6147222, Longitude -116.6880556, NAD83) | 0.05 | 0.12 | 0.21 | 0.07 | 4 | 11/5/2003 | 8/27/2004 |
| R10BUNKER-LC-50 (USGS Cataldo) | 0.08 | 0.18 | 0.32 | 0.10 | 8 | 10/17/2007 | 9/15/2008 |
| R10BUNKER-LC-60 (USGS Harrison) | 0.03 | 0.14 | 0.32 | 0.09 | 18 | 10/9/2003 | 1/10/2009 |
| R10BUNKER-SR-1 (Spokane River At Lake Outlet At Coeur d'Alene, ID) | 0.04 | 0.11 | 0.20 | 0.05 | 20 | 10/14/2003 | 1/12/2009 |

| Table 11: Upper Spokane Watershed (HUC 17010305) Total Phosphorus Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 12417598 Spokane River At Lake Outlet At Coeur d'Alene ID | 0.002 | 0.008 | 0.015 | 0.004 | 27 | 11/7/2002 | 4/8/2006 |
| USGS 12419000 Spokane River Near Post Falls, ID | 0.004 | 0.013 | 0.057 | 0.009 | 99 | 1/11/1995 | 10/25/2013 |
| USGS 12419495 Spokane River At Stateline Bridge Near Greenacres, WA | 0.006 | 0.009 | 0.017 | 0.003 | 11 | 5/14/2003 | 4/26/2010 |
| USGS 12419500 Spokane River Above Liberty Bridge Near Otis Orchard, WA | 0.005 | 0.011 | 0.020 | 0.004 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12420500 Spokane River At Greenacres, WA | 0.005 | 0.013 | 0.024 | 0.005 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12420800 Spokane River At Sullivan Road Bridge Near Trentwood, WA | 0.006 | 0.013 | 0.020 | 0.004 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12422000 Spokane River Below Green St At Spokane, WA | 0.004 | 0.010 | 0.016 | 0.004 | 10 | 4/16/1999 | 4/5/2000 |
| USGS 12422500 Spokane River At Spokane, WA | 0.005 | 0.011 | 0.024 | 0.004 | 16 | 10/19/1998 | 4/3/2000 |

| Table 12: Upper Spokane Watershed (HUC 17010305) Total Nitrogen Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 12417598 Spokane River At Lake Outlet At Coeur d'Alene, ID | 0.11 | 0.20 | 0.40 | 0.14 | 4 | 11/7/2002 | 8/19/2003 |
| USGS 12419000 Spokane River Near Post Falls, ID | 0.09 | 0.22 | 0.68 | 0.10 | 81 | 1/11/1995 | 9/11/2007 |
| USGS 12419495 Spokane River At Stateline Bridge Near Greenacres, WA | 0.12 | 0.21 | 0.40 | 0.13 | 4 | 5/14/2003 | 8/19/2003 |
| USGS 12419500 Spokane River Above Liberty Bridge Near Otis Orchard, WA | 0.11 | 0.19 | 0.31 | 0.06 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12420500 Spokane River At Greenacres, WA | 0.13 | 0.20 | 0.29 | 0.05 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12420800 Spokane River At Sullivan Road Bridge Near Trentwood, WA | 0.11 | 0.30 | 0.87 | 0.23 | 10 | 4/15/1999 | 4/5/2000 |
| USGS 12422000 Spokane River Below Green St At Spokane, WA | 0.20 | 0.42 | 1.10 | 0.28 | 9 | 4/16/1999 | 4/5/2000 |
| USGS 12422500 Spokane River At Spokane, WA | 0.19 | 0.40 | 1.10 | 0.26 | 12 | 10/19/1998 | 4/3/2000 |

| Table 13: Upper Spokane Watershed (HUC 17010305) Total Phosphorus Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| BUNKER_USGS-SR-5 (Latitude 47.6819444, Longitude -116.7975, NAD83) | 0.004 | 0.007 | 0.016 | 0.003 | 16 | 1/12/2009 | 7/20/2011 |
| BUNKER_USGS-SR-50 (USGS Near POST FALLS, Latitude 47.7030556, Longitude -116.9777778, NAD83) | 0.008 | 0.010 | 0.012 | 0.002 | 5 | 7/12/2010 | 7/20/2011 |
| BUNKER_USGS-SR-55 (USGS Spokane River at Stateline Br, Latitude 47.6986, Longitude -117.0431, NAD83) | 0.006 | 0.007 | 0.007 | 0.001 | 2 | 4/6/2010 | 4/26/2010 |
| R10BUNKER-SR-50 (USGS Near Post Falls, Latitude 47.7030556, Longitude -116.9777778, NAD83) | 0.001 | 0.012 | 0.057 | 0.008 | 103 | 4/23/1996 | 9/3/2003 |
| R10BUNKER-SR-55 (USGS Spokane River At Stateline Bridge, Latitude 47.6986, Longitude -117.0431, NAD83) | 0.005 | 0.010 | 0.027 | 0.005 | 19 | 4/15/1999 | 9/17/2008 |
| R10BUNKER-SR-65 (USGS Near Trentwood, WA, Latitude 47.6762, Longitude -117.3522, NAD83) | 0.006 | 0.011 | 0.020 | 0.005 | 7 | 4/15/1999 | 9/9/1999 |
| R10BUNKER-SR-70 (USGS At Spokane, Latitude 47.6617, Longitude -117.4255, NAD83) | 0.004 | 0.008 | 0.016 | 0.004 | 7 | 4/16/1999 | 9/9/1999 |
| R10BUNKER-SR-75 (USGS At Spokane, Latitude 47.6594, Longitude -117.4481, NAD83) | 0.005 | 0.011 | 0.024 | 0.005 | 13 | 10/19/1998 | 9/8/1999 |

| Table 14: Upper Spokane Watershed (HUC 17010305) Total Nitrogen Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| BUNKER_USGS-SR-5 (Latitude 47.6819444, Longitude -116.7975, NAD83) | 0.05 | 0.09 | 0.16 | 0.03 | 16 | 1/12/2009 | 7/20/2011 |
| BUNKER_USGS-SR-50 (USGS Near POST FALLS, Latitude 47.7030556, Longitude -116.9777778, NAD83) | 0.05 | 0.13 | 0.20 | 0.06 | 5 | 7/12/2010 | 7/20/2011 |
| BUNKER_USGS-SR-55 (USGS Spokane River At Stateline Bridge, Latitude 47.6986, Longitude -117.0431, NAD83) | 0.14 | 0.15 | 0.15 | 0.01 | 2 | 4/6/2010 | 4/26/2010 |
| NARSTEST-FW08ID019 (Latitude 47.6961111, Longitude -116.9155556, WGS84) (µg/L) | 86 | 86 | 86 | N/A | 1 | 8/12/2009 | 8/12/2009 |

| Table 14: Upper Spokane Watershed (HUC 17010305) Total Nitrogen Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| NARSTEST-FW08WA040 (Latitude 47.679816, Longitude -117.217191, WGS84) | 441 | 441 | 441 | N/A | 1 | 9/9/2008 | 9/9/2008 |
| R10BUNKER-SR-55 (USGS Spokane River At Stateline Bridge, Latitude 47.6986, Longitude -117.0431, NAD83) | 0.13 | 0.18 | 0.23 | 0.04 | 8 | 10/2/2007 | 9/17/2008 |

| Table 15: Lower Spokane Watershed (HUC 17010307) Total Phosphorus Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 12433000 Spokane River At Long Lake, WA | 0.007 | 0.031 | 0.087 | 0.021 | 29 | 10/20/1998 | 9/10/2003 |

| Table 16: Lower Spokane Watershed (HUC 17010307) Total Phosphorus Data from USGS NWIS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| USGS 12433000 Spokane River At Long Lake, WA | 0.29 | 0.86 | 1.80 | 0.34 | 27 | 10/20/1998 | 9/10/2003 |

| Table 17: Lower Spokane Watershed (HUC 17010307) Total Phosphorus Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| MIDNITE_2-LR-01 (Spokane Arm - upstream of confluence with Blue Creek, Latitude 47.8774, Longitude -118.1392, NAD83) | 0.01 | 0.02 | 0.07 | 0.02 | 45 | 3/29/2011 | 2/14/2012 |
| MIDNITE_2-LR-02 (Spokane Arm - adjacent to confluence with Blue Creek, Latitude 47.887, Longitude -118.1491, NAD83) | 0.01 | 0.03 | 0.07 | 0.02 | 38 | 3/29/2011 | 2/14/2012 |
| MIDNITE_2-LR-03 (Spokane Arm - downstream of confluence with Blue Creek, Latitude 47.886, Longitude -118.1556, NAD83) | 0.01 | 0.03 | 0.07 | 0.02 | 36 | 3/30/2011 | 2/15/2012 |
| R10BUNKER-SR-85 (USGS AT LONG LAKE, Latitude 47.8364, Longitude -117.8395, NAD83) | 0.007 | 0.030 | 0.087 | 0.021 | 42 | 10/20/1998 | 9/10/2003 |

| Table 18: Franklin. D. Roosevelt Lake Watershed (HUC 17020001) Total Phosphorus Data from EPA STORET | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 1119USBR_WQX-FDR006 (FDR at Lincoln City Boat Ramp, Latitude 47.8315833, Longitude -118.40345) | 0.016 | 0.021 | 0.026 | 0.007 | 2 | 6/19/2008 | 6/19/2012 |
| 1119USBR_WQX-FDR008 (FDR at Keller Ferry Area, Latitude 47.91215, Longitude -118.713) | 0.010 | 0.014 | 0.023 | 0.006 | 4 | 6/18/2008 | 6/19/2012 |
| 1119USBR_WQX-FDR010 (FDR at log boom upstream of FDRW water quality site, Latitude 47.9519333, Longitude -118.97535) | 0.010 | 0.014 | 0.022 | 0.004 | 19 | 6/18/2008 | 5/22/2013 |
| 1119USBR-FDR008 (FDR at Keller Ferry Area, Latitude 47.91215, Longitude -118.713) | 0.000 | 0.006 | 0.018 | 0.008 | 12 | 6/18/2008 | 6/18/2008 |

| Table 19: WRIA 57 (Middle Spokane) Total Phosphorus Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 57A123 Spokane R @ Sandifer Bridge | 0.0050 | 0.0089 | 0.0145 | 0.0025 | 30 | 4/14/2008 | 9/20/2010 |
| 57A125 Spokane R blw Monroe Street | 0.0034 | 0.0054 | 0.0070 | 0.0012 | 12 | 5/9/2007 | 3/10/2008 |
| 57A140 Spokane R @ Plante's Ferry Park | 0.0036 | 0.0085 | 0.0146 | 0.0025 | 37 | 10/2/2007 | 9/20/2010 |
| 57A146 Spokane R @ Sullivan Rd | 0.0074 | 0.0106 | 0.0174 | 0.0026 | 24 | 10/14/2008 | 9/20/2010 |
| 57A148 Spokane R @ Barker Rd | 0.0044 | 0.0075 | 0.0142 | 0.0026 | 16 | 5/9/2007 | 7/15/2008 |
| 57A150 Spokane R @ Stateline Br | 0.0031 | 0.0137 | 0.1260 | 0.0117 | 210 | 1/9/1995 | 9/24/2012 |
| 57A190 Spokane R nr Post Falls | 0.0046 | 0.0051 | 0.0057 | 0.0005 | 5 | 5/9/2007 | 9/12/2007 |
| 57A240 Spokane R @ Lake Coeur d'Alene | 0.0013 | 0.0061 | 0.0135 | 0.0023 | 42 | 5/9/2007 | 9/20/2010 |

| Table 20: WRIA 57 (Middle Spokane) NO2+NO3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 57A123 Spokane R @ Sandifer Bridge | 0.064 | 0.371 | 0.952 | 0.236 | 30 | 4/14/2008 | 9/20/2010 |
| 57A125 Spokane R blw Monroe Street | 0.099 | 0.466 | 0.928 | 0.278 | 11 | 5/9/2007 | 3/10/2008 |
| 57A140 Spokane R @ Plante's Ferry Park | 0.042 | 0.281 | 0.752 | 0.190 | 36 | 10/2/2007 | 9/20/2010 |
| 57A146 Spokane R @ Sullivan Rd | 0.017 | 0.125 | 0.324 | 0.088 | 24 | 10/14/2008 | 9/20/2010 |
| 57A148 Spokane R @ Barker Rd | 0.010 | 0.075 | 0.173 | 0.045 | 15 | 5/9/2007 | 7/15/2008 |
| 57A150 Spokane R @ Stateline Br | 0.010 | 0.066 | 0.264 | 0.047 | 209 | 1/9/1995 | 9/24/2012 |
| 57A190 Spokane R nr Post Falls | 0.015 | 0.079 | 0.199 | 0.076 | 5 | 5/9/2007 | 9/12/2007 |
| 57A240 Spokane R @ Lake Coeur d'Alene | 0.010 | 0.021 | 0.074 | 0.016 | 41 | 5/9/2007 | 9/20/2010 |

| Table 21: WRIA 57 (Middle Spokane) NH3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 57A123 Spokane R @ Sandifer Bridge | 0.010 | 0.010 | 0.020 | 0.002 | 30 | 4/14/2008 | 9/20/2010 |
| 57A125 Spokane R blw Monroe Street | 0.010 | 0.010 | 0.010 | 0.000 | 11 | 5/9/2007 | 3/10/2008 |
| 57A140 Spokane R @ Plante's Ferry Park | 0.010 | 0.011 | 0.028 | 0.004 | 36 | 10/2/2007 | 9/20/2010 |
| 57A146 Spokane R @ Sullivan Rd | 0.010 | 0.012 | 0.029 | 0.004 | 24 | 10/14/2008 | 9/20/2010 |
| 57A148 Spokane R @ Barker Rd | 0.010 | 0.011 | 0.017 | 0.002 | 15 | 5/9/2007 | 7/15/2008 |
| 57A150 Spokane R @ Stateline Br | 0.010 | 0.015 | 0.137 | 0.012 | 209 | 1/9/1995 | 9/24/2012 |
| 57A190 Spokane R nr Post Falls | 0.010 | 0.011 | 0.013 | 0.001 | 5 | 5/9/2007 | 9/12/2007 |
| 57A240 Spokane R @ Lake Coeur d'Alene | 0.010 | 0.010 | 0.015 | 0.001 | 41 | 5/9/2007 | 9/20/2010 |

| Table 22: WRIA 54 (Lower Spokane) Total Phosphorus Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 54A070 Spokane R @ Long Lake | 0.0051 | 0.0256 | 0.0816 | 0.0185 | 38 | 5/9/2007 | 8/16/2010 |
| 54A090 Spokane R @ Ninemile Br | 0.0081 | 0.0330 | 0.1720 | 0.0294 | 46 | 6/11/2000 | 9/20/2010 |
| 54A120 Spokane R @ Riverside State Pk | 0.0052 | 0.0413 | 0.6930 | 0.0578 | 212 | 1/9/1995 | 9/24/2012 |
| 54A130 Spokane R @ Fort Wright Br | 0.0052 | 0.0116 | 0.0385 | 0.0075 | 18 | 4/14/2009 | 9/20/2010 |

| Table 23: WRIA 54 (Lower Spokane) NO2+NO3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 54A070 Spokane R @ Long Lake | 0.139 | 0.814 | 1.600 | 0.393 | 37 | 5/9/2007 | 8/16/2010 |
| 54A090 Spokane R @ Ninemile Br | 0.147 | 1.039 | 2.830 | 0.663 | 45 | 6/11/2000 | 9/20/2010 |
| 54A120 Spokane R @ Riverside State Pk | 0.080 | 0.825 | 3.300 | 0.600 | 212 | 1/9/1995 | 9/24/2012 |
| 54A130 Spokane R @ Fort Wright Br | 0.106 | 0.492 | 1.220 | 0.313 | 18 | 4/14/2009 | 9/20/2010 |

| Table 24: WRIA 54 (Lower Spokane) NH3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 54A070 Spokane R @ Long Lake | 0.010 | 0.016 | 0.033 | 0.007 | 37 | 5/9/2007 | 8/16/2010 |
| 54A090 Spokane R @ Ninemile Br | 0.010 | 0.012 | 0.051 | 0.007 | 45 | 6/11/2000 | 9/20/2010 |
| 54A120 Spokane R @ Riverside State Pk | 0.010 | 0.016 | 0.203 | 0.018 | 212 | 1/9/1995 | 9/24/2012 |
| 54A130 Spokane R @ Fort Wright Br | 0.010 | 0.010 | 0.010 | 0.000 | 18 | 4/14/2009 | 9/20/2010 |

| Table 25: WRIA 53 (Lower Lake Roosevelt) Total Phosphorus Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 53A070 Columbia R @ Grand Coulee | 0.0023 | 0.0158 | 0.8610 | 0.0606 | 209 | 1/11/1995 | 9/24/2012 |

| Table 26: WRIA 53 (Lower Lake Roosevelt) NH3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 53A070 Columbia R @ Grand Coulee | 0.010 | 0.013 | 0.074 | 0.008 | 209 | 1/11/1995 | 9/24/2012 |

| Table 27: WRIA 44 (Moses Coulee) Total Phosphorus Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 44A190 Columbia R @ Hwy 2 Bridge | 0.0045 | 0.0058 | 0.0077 | 0.0010 | 11 | 10/3/2005 | 9/11/2006 |

| Table 28: WRIA 44 (Moses Coulee) NO2+NO3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 44A190 Columbia R @ Hwy 2 Bridge | 0.045 | 0.104 | 0.234 | 0.061 | 11 | 10/3/2005 | 9/11/2006 |

| Table 29: WRIA 44 (Moses Coulee) NH3 Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitoring Location** | **Min of Results** | **Average of Results** | **Max of Results** | **Std. Dev. of Results** | **Count of Results** | **Date of Earliest Sample** | **Date of Latest Sample** |
| 44A190 Columbia R @ Hwy 2 Bridge | 0.010 | 0.010 | 0.010 | 0.000 | 11 | 10/3/2005 | 9/11/2006 |

### Comment #1-43

Mr. Bob Bingham of the NWPOA asked why not all permits are being forced to the same standards for phosphorus removal.

### Response #1-43

As explained in Appendix C to the subject fact sheets, there are two kinds of effluent limits that may appear in an NPDES permit: technology-based effluent limits and water quality-based effluent limits.

For POTWs, the EPA has promulgated technology-based effluent limits (40 CFR Part 133, see also CWA §301(b)(1)(B)). The technology-based effluent limits for POTWs define the minimum level of effluent quality that can be achieved through application of secondary treatment in terms of $BOD_5$ or $CBOD_5$, TSS, and pH. The secondary treatment rule, which requires all POTWs to meet certain minimum standards, does not include technology-based effluent limits for any other parameters, including phosphorus.

The phosphorus effluent limits in the subject permits are water quality-based effluent limits. Water quality-based effluent limits are based on the water quality standards for a specific facility's receiving water and the receiving water's capacity to assimilate pollutant loading while still meeting the water quality standards. NPDES permits include conditions that meet the water quality requirements of all States that are affected by the discharge, not just the State in which the discharge originates.

Permits would only need to include stringent effluent limits for phosphorus if facility's discharge of phosphorus had the reasonable potential to cause or contribute to excursions above water quality standards (e.g., for DO, pH, or nuisance algae growth), and the loading capacity of the receiving water for phosphorus was small.

In this case, the State of Washington's DO water quality criterion for lakes and reservoirs is stringent, allowing only a small (0.2 mg/L) decrease in DO concentrations from natural conditions (WAC 173-201A-200(1)(d)(ii)). In the summer, Lake Spokane has a long residence time (greater than 50 days overall and as much as 150 days for the hypolimnion) due to reduced flows in the Spokane River, and it thermally stratifies, both of which make it sensitive to nutrient loading (Moore and Ross 2010). Furthermore, the Spokane River flows through a densely populated area, which includes Spokane, which is the second most-populous city in the State of Washington (pop. 208,916), Spokane Valley (89,755), Coeur d'Alene (44,125), Post Falls (27,574), and Liberty Lake (7,591). Thus, there are numerous other point and non-point sources of nutrients and oxygen-demanding pollution to the Spokane River in addition to the subject permits. The combined effects of all of these factors result in a need to establish stringent phosphorus limits in the subject permits.

Other POTWs that discharge to waters with less stringent water quality standards, fewer sources of nutrients, and/or with characteristics that allow them to assimilate greater loadings of nutrients (e.g. higher flow rates, lower temperatures, shorter residence times) than the Spokane River and Lake Spokane may not need effluent limits for phosphorus as stringent as those that are necessary here.

### Comment #1-44

Mr. Bob Bingham of the NWPOA asked the EPA to please comment on the BPA government program that is adding both phosphate and nitrogen to improve fisheries in a NW river.

### Response #1-44

It is not clear which nutrient supplementation project the commenter was referring to, so the EPA cannot comment on any specific nutrient supplementation project.

In general, in some waterbodies, human actions such as dam construction and operation can cause a phenomenon called cultural oligotrophication, resulting in waters with nutrient (i.e., phosphorus and/or nitrogen) concentrations that are too low to support a healthy fishery (Anders and Ashley 2007). Nutrient supplementation can increase fish populations in such waters. This is not the case in the Spokane River and in Lake Spokane, which suffer from cultural eutrophication, in which anthropogenic nutrients from numerous municipal and industrial wastewater, stormwater, and non-point sources have over-enriched the waters to such an extent that they do not meet applicable water quality standards for DO and aesthetics.

### Comment #1-45

Ms. Lisa Fitzner commented "Great job getting Coeur d'Alene, etc. to clean up the Spokane River. Just wish it could happen sooner."

### Response #1-45

Comment noted. The EPA has issued the subject permits as expeditiously as possible. As explained in Appendix G to the three subject fact sheets, the compliance schedules in the permits require compliance with new water quality-based effluent limits as soon as possible.

## Section 2: Comments Received during the 2007 Public Comment Period

### Effluent Limits for Nutrients and Oxygen-Demanding Pollutants

### Comment #2-1

A number of commenters, including the Center for Justice (submitting comments on behalf of the Sierra Club, Upper Columbia River Group) (CFJ), the Lands Council, the Center for Environmental Law and Policy (CELP), Public Employees for Environmental Responsibility (PEER), and several individuals, stated that the proposed effluent limits for TP, ammonia, and CBOD in the 2007 draft permits were not stringent enough and will contribute to violations of Washington's water quality standards for DO in Lake Spokane. The central issue raised by these commenters is that the effluent limits must be based on a cumulative analysis of all sources of human-caused pollution to the watershed, including those in the State of Washington. The commenters assert that it is not enough for the EPA to ensure that the Idaho permits will ensure the Idaho sources do not *cause* an exceedance of Washington's DO criterion for Lake Spokane. Rather, the commenters' position is that the EPA must ensure that the effluent limits for the three Idaho municipalities will ensure that the resulting discharges will not *contribute* to an exceedance of the DO standard by taking into account the contributions from all other sources in the watershed when deriving the effluent limits for the three Idaho municipalities.

### Response #2-1

These comments have been addressed by changes made in the revised draft permits issued for public comment in 2013. As explained in the fact sheets to all three permits, the EPA has recalculated the water quality-based effluent limitations for TP, ammonia, and $CBOD_5$ in the 2013 draft permits. These effluent limits ensure that the level of water quality to be achieved by limits on point sources is derived from and complies with all applicable water quality standards (40 CFR 122.44(d)(1)(vii)(A)) and are based on the cumulative impact of all human actions that affect DO concentrations in Lake Spokane, including the load and wasteload allocations and Avista Corporation's DO responsibility in the State of Washington's Spokane DO TMDL. See the 2013 fact sheets at Appendix B.

### Comment #2-2

CFJ stated that the EPA assumed there was more dilution than is truly available when setting water quality-based effluent limits for oxygen-demanding pollutants, when developing the 2007 draft permits.

### Response #2-2

In the context of water quality, "dilution" means a reduction in pollutant concentration caused by mixing with water with a lower concentration of the pollutant. Wastewater effluents discharged to flowing waters are diluted by mixing with the flow of the receiving water. When the receiving water flow is lower, there is less dilution available.

The modeling performed in support of the effluent limits in the 2007 and 2013 draft Idaho permits (and the draft TMDLs prepared by the State of Washington) used river flow rates that were very conservative. The flows used were the actual flows observed in calendar year 2001. The calendar year mean flow rate of the Spokane River at Long Lake (USGS station #12433000) during calendar year 2001 was 4,000 CFS, which was the third lowest annual mean flow rate measured between 1940 and 2011, which is the period of record for which full calendar years of data are available. The calendar year mean flow rate of the Spokane River at Long Lake was lower than it was in 2001 only in 1944 (3,576 CFS) and 1994 (3,939 CFS). By using the 2001 actual flows in the modeling, the EPA was assuming less dilution than will normally be the case.

### Comment #2-3

CFJ stated that the proposed permits "leave Washington sources no allowable loading" for nutrients and oxygen-demanding pollution. CFJ stated that, if the State of Washington were to "(consider) the Idaho discharges as boundary or background conditions at the State line" for the purposes of completing a DO TMDL, it would violate its own standards and the Clean Water Act. CFJ stated that "the combined effect of the EPA proposed permit limitations…as incorporated into the Washington TMDL is to…(support) an additional 0.2 mg/L degradation." The commenters conclude that the total DO decrease will be 0.4 mg/L below natural conditions. As such, the commenters request that the EPA recalculate the effluent limits considering the presence of Washington loading and request that the EPA require Washington's TMDL to do the same.

CFJ further stated that the State of Washington has a duty to object to the issuance of these permits under Section 401(a) of the Act. Moreover, CFJ stated that the absence of an objection from the State of Washington does not relieve the EPA of its independent duty to "condition these permits such that they do not cause or contribute to nonattainment" of Washington water quality standards pursuant to Clean Water Act Section 301(b)(1)(C).

CFJ cited to a 2005 e-mail from Mark Hicks of Ecology. In this email, Mr. Hicks appears to question EPA's approach for permitting the Idaho dischargers. Specifically, Mr. Hicks stated that "EPA appears poised to grant a 0.2 mg/L depression from naturally low DO levels to the point sources in Idaho, and then grant another 0.2 mg/l depression for the Washington dischargers."

### Response #2-3

This comment was addressed by the revised draft permits issued for public review and comment in 2013. Both the Spokane DO TMDL and the subject NPDES permits for discharge to the Spokane River in Idaho have been revised such that compliance with the State of Washington's water quality standards for DO are achieved on a cumulative basis in Lake Spokane. See also the response to comment #2-1 and the 2013 fact sheets at Appendix B.

### Comment #2-4

CFJ recommends that the EPA allocate 0.1 mg/L DO decrease for the Idaho permits (one half of the 0.2 mg/L decrease allowed under the Washington standards), or apportion loading according to flow. CFJ

states that by accepting their recommendation, Ecology's TMDL would be more defensible and the EPA could then state that the Idaho permits conformed with the Washington TMDL.

### Response #2-4

This comment was addressed by the revised draft permits issued for public review and comment in 2013. The Spokane DO TMDL and the NPDES permits for discharge to the Spokane River in Idaho have been revised such that compliance with the State of Washington's water quality standards for dissolved are achieved on a cumulative basis in Lake Spokane. See also the response to comment #2-1 and the 2013 fact sheets at Appendix B.

### Comment #2-5

CFJ stated that effluent limits for TP, ammonia, and CBOD should be expressed in concentration and mass.

### Response #2-5

The federal regulation at 40 CFR 122.45(f) requires NPDES permits to contain mass limitations except (1) for pH, temperature, radiation, or other pollutants that cannot be expressed as mass, (2) when applicable standards are expressed in terms of other measurements, or (3) if in establishing permit limits pursuant to 40 CFR 125.3, (i.e. technology-based effluent limits), mass limitations are infeasible. In all cases, effluent limits for TP, ammonia, and CBOD have been, at a minimum, expressed in terms of mass. See the 2013 fact sheets at Page B-13.

Effluent limits expressed in terms of mass may also be expressed in terms of other units of measurement (40 CFR 122.45(f)(2)). Whenever there was a basis to include concentration limits for TP, ammonia, and CBOD in addition to mass limits, the concentration limits were included in the permits. See the 2013 fact sheets at Page B-14.

In general, effluent limits for CBOD are expressed in terms of mass, concentration, and removal rate. The concentration and removal rate limits are the applicable technology-based limits (40 CFR 133.102(a)(4)), and the mass limits are water quality-based effluent limits.

In general, the water quality-based effluent limits for ammonia are expressed in terms of mass. However, concentration limits have also been established where necessary to ensure compliance with the anti-backsliding provisions of the Clean Water Act or to prevent direct toxicity to aquatic life.

With respect to TP, as stated on Page B-13 of the 2013 fact sheets:

> "Effluent limits for TP are expressed exclusively in terms of mass because there are no applicable technology-based standards or numeric in-stream water quality standards for TP, the effluent limitations for TP are intended to meet Washington water quality standards, which apply several miles downstream from the discharges after complete mixing has occurred, and phosphate phosphorus is neither directly toxic to aquatic life nor directly hazardous to human health. Therefore, there is no basis to express the water quality-based TP limits in units other than mass."

### Comment #2-6

CFJ stated that effluent limits for CBOD, TSS, and phosphorus should include maximum daily limits. They cite the fact that DO criteria are expressed as daily minima, and the *Friends of the Earth* v. *EPA* decision regarding "daily loads" in TMDLs.

### Response #2-6

The averaging periods for effluent limits in NPDES permits for POTWs are governed by 40 CFR 122.45(d)(2), which states that, "(f)or continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as…(a)verage weekly and average monthly discharge limitations for POTWs."

The effluent limits for TSS and the November to January effluent limits for $CBOD_5$ in the subject permits are technology-based effluent limits, which are stated as maximum allowable 30-day and 7-day averages (40 CFR 133.102). The EPA has determined that the technology-based effluent limits for TSS and for $CBOD_5$ from November to January are adequately stringent to ensure compliance with water quality standards. There is no basis to express the effluent limits for TSS or November to January $CBOD_5$ as maximum daily limits.

As explained on Pages B-9 – B-12 of the 2013 fact sheets, the EPA has determined that it is impracticable to state the water quality-based effluent limits for phosphorus and $CBOD_5$, which apply from February 1st through October 31st, as average monthly and average weekly limits, and that those limits should be expressed as seasonal average limits. As explained on Page B-10, modeling shows that controlling the average loading of oxygen-demanding pollution to the Spokane River will ensure compliance with water quality standards for DO in Lake Spokane. It is not necessary to control short-term (e.g. daily or weekly) maximum concentrations or loadings of phosphorus or CBOD in order to ensure such compliance.

*Friends of the Earth v. EPA*, 446 F.3d 140 (DC Cir. 2006), is inapplicable to these discharges because *Friends of the Earth* is a decision that is relevant only to TMDLs, not effluent limits in NPDES permits. None of the effluent limits in the subject permits are based on a wasteload allocation in an approved TMDL.

### Comment #2-7

CFJ is concerned about the ammonia limits in the 2007 draft permits, which CFJ stated are much higher than the waste load allocations (WLAs) in Washington's draft Spokane DO TMDL. CFJ believes that 0.1 mg/L ammonia is achievable.

### Response #2-7

Although CFJ was comparing the ammonia limits in the subject permits to the ammonia WLAs in a draft of the State of Washington's TMDL for DO in the Spokane River and Lake Spokane, for the purposes of this response, the EPA will compare the ammonia limits in the subject permits to the final, EPA-approved TMDL.

This comment was addressed to some extent by changes made in the revised draft permits issued for public comment in 2013. As shown in Figures 2 and 5, the seasonal average ammonia effluent limits in

the permits for Coeur d'Alene and HARSB require lower effluent ammonia loads than the monthly average ammonia limits in the 2007 draft permits at all times from February to October. The seasonal average ammonia limits for Post Falls are 7% higher than the monthly average ammonia limits in the 2007 draft permit from March to October (255 lb/day instead of 238 lb/day), but are 65% lower during February (255 lb/day instead of 726 lb/day). The seasonal average ammonia effluent limits for the subject discharges are expressed in terms of mass, but are equivalent to concentrations of 3.9 – 6.1 mg/L at the facilities' design flow rates.

The WLAs for ammonia for point sources discharging to the Spokane River in the State of Washington's TMDL for DO in Lake Spokane and the Spokane River, are, in fact, more stringent than the ammonia limits in the subject permits. The ammonia WLAs for Washington POTWs range from 0.18 – 0.83 mg/L (see Moore and Ross 2010 at Table 5).

However, there is no basis to include more stringent ammonia limits than proposed in the drafts in any of the subject permits. The EPA has determined that the proposed seasonal average ammonia limits ensure compliance in Lake Spokane with the State of Washington's water quality criteria for DO as well as Washington's water quality criteria for ammonia (see the 2013 fact sheets at Appendix B). Post Falls and HARSB do not have the reasonable potential to cause or contribute to excursions above Idaho's water quality standards for ammonia near their respective outfalls; therefore, it is not necessary to include ammonia limits in addition to the seasonal average limits, which are based on Washington's water quality standards for DO, in the Post Falls or HARSB permits in order to ensure compliance with Idaho's water quality criteria for ammonia[12].

Coeur d'Alene does have the reasonable potential to cause or contribute to excursions above Idaho's water quality criteria for ammonia near its outfall from March to September. Therefore, in addition to the seasonal average effluent limit for ammonia, the Coeur d'Alene permit includes average monthly and maximum daily effluent limits which are derived from and ensure compliance with Idaho's water quality criteria for ammonia.

The EPA's permits are designed to ensure compliance with Washington's and Idaho's water quality standards. The practicability of achieving 0.1 mg/L ammonia is consequently not relevant.

### Comment #2-8

Blue Water Technologies, Inc. states that sediments in the river and particularly behind dams will use up DO in the water. These sediment beds are loading year round. According to the commenter, phosphorus laden sediments deposited in the winter when there is no phosphorus control required on the Spokane River will become stirred up and/or released during turbulent activity in the spring.

### Response #2-8

As stated in the response to comment #1-10, modeling predicts that Idaho discharges of TP during the month of January can influence DO concentrations in Lake Spokane during the following summer. Due

[12] The July – September average monthly and maximum daily ammonia limits in the City of Post Falls permit are included to ensure compliance with the anti-backsliding provisions of the Clean Water Act.

to limitations of the model, the EPA cannot determine at this time if Idaho discharges of TP during November or December influence DO concentrations in Lake Spokane during the following year.

The modeling scenario that supports the TP, CBOD, and ammonia limits in the permits assumes that discharges of high concentrations of TP will continue from January 1st until the TP effluent limits become effective on February 1st. Therefore, the modeling demonstrates that the proposed effluent limits will ensure compliance with water quality standards, even though no TP effluent limits are proposed for the winter. Furthermore, the phosphorus management plan requirements apply throughout the year.

### Comment #2-9

Post Falls and HARSB commented that the State of Washington adopted water quality standards for Lake Spokane (formerly Long Lake) classifying it as a "lake" with no allowable measurable decrease in DO from "natural conditions". Post Falls and HARSB feel that this is a factual contradiction because the reservoir is a man-made impoundment, not a lake that ever existed in an actual natural condition. Moreover, Post Falls and HARSB state that the free-flowing reaches of the Spokane River continue to demonstrate very few water quality impairments, as demonstrated by the EPA and Washington in the recent modeling efforts for this permit. Therefore, although the EPA has attempted to balance this inherent unfairness through the permit process, Idaho dischargers are still being required to help pay for solving a problem that was only created by a for-profit corporation's construction of an impoundment.

### Response #2-9

As recognized by the commenters, the Washington water quality standards do not distinguish between natural and man-made lakes (WAC 173-201A-200(1)(d)(ii)). Washington's water quality standards have been approved by the EPA. Federal regulations state that the EPA must establish conditions in the subject permits that ensure compliance with the applicable water quality requirements of the State of Washington, including its water quality standards, even though Washington's water quality standards do not apply to waters of the State of Idaho.

Water quality standards are set at a level which protects the designated and existing uses of surface waters, without regard to the cost of attaining those standards. Likewise, water quality-based effluent limits are set without regard to the cost of attaining such limits. Regardless of the origins of Lake Spokane, it has designated and existing uses which must be protected through the application of the Washington water quality standards. Although the EPA recognizes that the commenters find this unfair, the permits must still be written to ensure compliance with downstream water quality standards.

### Comment #2-10

Post Falls and HARSB commented that, based on the EPA and Washington computer model of the river, even if all the point dischargers were removed along with a substantial loading from the non-point dischargers, the Long Lake reservoir would still not meet the Washington 8.0 mg/L DO water quality standard. The commenters point out that a Use Attainability Analysis (UAA) was completed by the Spokane River dischargers to address this issue, but this UAA was apparently rejected by Ecology. Post Falls believes it is necessary to maintain its right to enter into a UAA process should that be necessary in the future.

### Response #2-10

The Washington DO water quality criterion for Lake Spokane (Long Lake) is not 8.0 mg/L. The commenters may have confused Washington's water quality criterion for DO in lakes with that for flowing fresh waters supporting the uses of salmonid spawning, rearing, and migration (WAC 173-201A, Table 200(1)(d)). The DO criterion for lakes (WAC 173-201A-200(1)(d)(ii)) is "human actions considered cumulatively may not decrease the dissolved oxygen concentration more than 0.2 mg/L below natural conditions" The natural condition of Lake Spokane varies with space and time, so the numeric value of the DO criterion may be greater than, less than, or equal to 8.0 mg/L depending on the place and time of interest.

The fact that an applicable water quality standard may be difficult to attain does not relieve the EPA of its duty to establish water quality-based effluent limits necessary to meet that standard (CWA Section 301(b)(1)(C), 40 CFR 122.4(d), 40 CFR 122.44(d)).

Ecology did not act on the Use Attainability Analysis (UAA) petition referenced by the commenters. The petition was withdrawn by the dischargers in favor of a collaborative approach to TMDL implementation.[13] The commenters (Post Falls and HARSB) were both members of the Spokane River TMDL Collaboration which took place following withdrawal of the UAA petition.[14] The EPA's issuance of NPDES permits to the Idaho dischargers to the Spokane River in no way prevents a future UAA for Lake Spokane.

### Comment #2-11

CFJ stated that the EPA's permitting approach for the 2007 draft permits is being used to support a pollution trading strategy in Washington that is not scientifically defensible. CFJ noted the large percent reductions in non-point source pollution that the 2004 draft DO TMDL stated were necessary to meet the DO criterion in Lake Spokane, and noted that under the revised draft TMDL, the tributaries are now able to contain much more loading of phosphorus, ammonia, and CBOD, according to a technical memorandum from Portland State University regarding pending revisions to the TMDL. The commenters stated that the non-point source load allocations in the pending revised DO TMDL were manipulated. The commenters state that, because it is difficult to reduce non-point source pollutant loading, it is unlikely that there could be a viable trading program.

### Response #2-11

Washington's TMDL and the issuance of the Idaho permits are independent actions. Comments on the Washington TMDL for DO and its implementation are beyond the scope of the NPDES permitting actions proposed.

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[13] http://www.ecy.wa.gov/programs/wq/tmdl/spokaneriver/dissolved_oxygen/docs/spokaneriver_tmdl_exchange_of_ltrs_0205.pdf. Accessed September 29, 2014.

[14] http://www.ecy.wa.gov/programs/wq/tmdl/spokaneriver/dissolved_oxygen/historicalinfo-ross/historical_info-fullgroup.html. Accessed September 29, 2014.

In general, the EPA supports water quality trading as a means to achieve water quality standards, where appropriate.

### Comment #2-12

CFJ stated that the EPA's permitting approach is inconsistent with the EPA's policy for watershed-based approaches, which includes permitting actions. The EPA's policy acknowledges that watersheds transcend political boundaries; therefore, CFJ stated that the EPA must examine the long-term consequences of the current permitting actions and, pursuant to the EPA's policy, reintegrate the Washington and Idaho permitting actions.

### Response #2-12

The Policy Statement and the Watershed Permitting Guidance clearly state that the statements in the documents are not binding and that the permitting authority can consider other approaches consistent with the Clean Water Act and its implementing regulations. See Policy Statement at p. 3; Watershed Permitting Guidance introduction. Thus, even if the permits were inconsistent with the EPA's watershed-based permitting guidance, that would not necessarily mean that they are not in compliance with the Clean Water Act and its implementing regulations.

However, the EPA has made changes in the revised draft permits issued for public comment in 2013. The revised permits are consistent with the *Watershed-Based National Pollutant Discharge Elimination System (NPDES) Permitting Implementation Guidance* (Watershed Permitting Guidance) and *Watershed-Based NPDES Permitting Policy Statement*, from G. Tracy Mehan III, dated January 7, 2003 (Policy Statement).

The watershed-based permitting documents encourage the permitting authority to focus on watershed goals and to consider multiple pollutant sources and stressors, including where watersheds transcend political boundaries. As explained Appendix B in the 2013 fact sheets to all three permits, the EPA has recalculated the water quality-based effluent limitations for TP, ammonia, and $CBOD_5$. The effluent limits in the final permits ensure that the level of water quality to be achieved by limits on point sources is derived from and complies with all applicable water quality standards (40 CFR 122.44(d)(1)(vii)(A)). The current limits are based on the cumulative impact of all human actions that affect DO concentrations in Lake Spokane, including the load and wasteload allocations and Avista Corporation's DO responsibility in the State of Washington's Spokane River DO TMDL. The Watershed Permitting Guidance also discusses the benefits of synchronizing the issuance of permits in a given basin. Here, the EPA has chosen to issue the three permits for discharge to the Spokane River in Idaho on the same schedule.

### Comment #2-13

The Spokane River Property Owners Association stated that, based on the current Coeur d' Alene Lake Management Plan (1996) (LMP) it is clearly evident by subtracting the acceptable phosphate content in Lake Coeur d'Alene (i.e., 9 parts per billion) from the median phosphate level of the lake (i.e., 6 parts per billion), Coeur d'Alene's wastewater treatment facility is adding a maximum of approximately 3 parts per billion phosphate to the Spokane River. Therefore, the commenter states that Coeur d'Alene should

not have to expend a large amount of money to upgrade its facility and believes that the money is more well spent on addressing non-point source pollution.

### Response #2-13

The Clean Water Act (section 301(b)(1)(C)) requires the establishment of effluent limitations in NPDES permits necessary to meet water quality standards. The EPA has determined that the discharges of phosphorus from the subject point sources have the reasonable potential to cause or contribute to nonattainment of water quality standards in the State of Washington. Therefore, the permits contain water quality-based effluent limits for phosphorus, consistent with federal regulations (40 CFR 122.4(d), 40 CFR 122.44(d)(1)). See the 2013 fact sheets at Appendix B.

### Comment #2-14

Ms. Julie Dalgago noted that, in the 2007 draft permits, the strictest phosphorus effluent limits are applied for Idaho during a four-month period, meaning June, July, August, and September, and requested that the EPA evaluate the need to expand the period of time during in which these phosphorus limits apply.

### Response #2-14

This comment was addressed by changes made in the revised draft permits issued for public comment in 2013. The phosphorus limits in the revised permits are seasonal average limits that apply for nine months out of the year, from February 1$^{st}$ through October 31$^{st}$.

### Comment #2-15

Mr. Jim Hollingsworth stated that EPA should not rely only on computer models. Instead, EPA should rely on actual observations. If EPA is unable to document any actual health impacts, then EPA should wait until it is certain that the discharges impact human health.

### Response #2-15

The only effluent limits in the subject permits that are based on computer modeling are the seasonal average effluent limits for phosphorus, ammonia, and CBOD that are based on Washington's water quality standards for DO.

As explained in the 2013 fact sheets at Appendix B, the effluent limits for phosphorus, ammonia, and CBOD are intended to meet Washington's water quality standards for DO. DO criteria are necessary to provide suitable habitat for fish and other aquatic life, as opposed to protecting human health. The Clean Water Act protects aquatic life, as well as human health. The absence of a human health hazard is not a basis to fail to implement water quality criteria. Furthermore, as discussed in the response to comment #1-13, human health could be at risk from blue-green algae blooms in Lake Spokane, which are caused by excess nutrients.

The water quality problems caused by excess nutrients have been extensively documented by the Department of Ecology in its *Spokane River and Lake Spokane (Long Lake) Pollutant Loading Assessment for Protecting Dissolved Oxygen* (Cusimano 2004). This document references earlier studies of nutrient-related water quality problems in Lake Spokane by Cunningham and Pine (1969), Patmont, et. al. (1985,

1987), Soltero, et. al., (1973-1976, 1978-1985, and 1992), and URS Corporation (1981). The fact that excess nutrient loading to the Spokane River from human sources causes eutrophication, toxic algae blooms, and low DO in Lake Spokane is well-documented and has been studied for decades.

Washington's water quality standard for DO in lakes and reservoirs is expressed in terms of natural conditions. "Natural conditions" are defined in Washington's water quality standards as "surface water quality that was present before any human-caused pollution" (WAC 173-201A-020).

In this case, actual measurements cannot provide EPA with the required information to establish water quality-based effluent limits for nutrients and oxygen-demanding pollutants, because measurements can only quantify the current condition of the watershed, at the current levels of discharge. As shown by numerous studies dating back as far as 1969, the current condition of the watershed in terms of nutrient enrichment and DO is poor, does not meet applicable water quality, and is far removed from the natural condition. Computer modeling is necessary to ascertain the natural condition of the watershed and to derive effluent limitations that comply with water quality standards, which are linked to natural conditions.

### Comment #2-16

Mr. Jim Hollingsworth stated that EPA has accepted the standards set by the State of Washington without question and that this does not seem fair.

### Response #2-16

The only effluent limits in the subject permits that are based on Washington's water quality standards are the seasonal average effluent limits for phosphorus, ammonia, and CBOD.

The Washington water quality standards have been reviewed and approved by EPA pursuant to Section 303(c) of the Clean Water Act. See the letter dated February 11, 2008, from Michael F. Gearheard, EPA Region 10, to Dave Peeler, Washington State Department of Ecology. The process by which standards are approved is the same for Washington and Idaho. Once state water quality standards are approved, the permitting authority (in Idaho's case, EPA is the permitting authority) is required to include effluent limits in NPDES permits that are necessary to meet those standards pursuant to Section 301(b)(1)(C) of the Act. Pursuant to 40 CFR 122.4(d), the permitting authority must impose conditions in NPDES permits that ensure compliance with the water quality standards of all affected States, including, in this case, the State of Washington.

### Comment #2-17

Mr. Jim Hollingsworth comments that, although the public has been told that the problem is phosphorus, phosphorus is not really a pollutant unless it reaches toxic levels. The commenter further states that phosphorus in the water is actually a benefit to the plants that live in the water. Moreover, the commenter believes that there are cheaper ways to deal with the phosphorus problem, such as introducing fish into Lake Spokane which eat the excess algae, or introducing zinc or copper into the lake to inhibit algae growth.

### Response #2-17

Pollutants, as defined by the Clean Water Act and its regulations, include sewage and municipal waste that is discharged into waters of the United States. See Section 502 of the CWA and 40 CFR 122.2. As explained in the fact sheets, EPA has established conditions and limits, including the limits on phosphorus, in accordance with the Clean Water Act and its implementing regulations.

It is true that dissolved zinc and copper are toxic to, and therefore inhibit the growth of, algae. Metal salts (e.g., copper sulfate) can be added to constructed impoundments, which are not waters of the United States (e.g., wastewater stabilization ponds or lagoons) in order to control the growth of algae. It is also true that nutrients such as phosphorus and nitrogen are beneficial to water quality in small amounts. However, excess nutrients can cause violations of water quality standards for DO, pH, and can cause nuisance algae growth including toxic blue-green algae blooms.

One reason it is necessary to reduce excess algae growth is to increase DO concentrations in order to ensure that the Spokane River and Lake Spokane provide suitable habitat for fish and other aquatic life. Zinc and copper are both toxic to fish and other aquatic life at very low concentrations, and in fact the Spokane River already contains concentrations of zinc that are above the levels necessary to protect aquatic life from its toxic effects. The State of Washington has developed a TMDL to reduce discharges of zinc (as well as cadmium and lead) to the Spokane River, with the goal of meeting water quality standards. Because zinc and copper are both toxic to fish at very low concentrations, it would be counterproductive and may cause or exacerbate violations of water quality standards and/or the CWA to add zinc or copper to Lake Spokane for the purpose of inhibiting algae growth or improving DO concentrations.

The EPA is not aware of any fish species that could be introduced into Lake Spokane that would consume the excess algae. In any event, the introduction of nonnative species could potentially displace native fish species, which would be counter to the Clean Water Act goal of protecting native fish through improved water quality.

### Comment #2-18

Mr. Jim Hollingsworth asked in his comments why DO is only a problem in the lower end of Lake Spokane.

### Response #2-18

Low DO is not a problem exclusively in the lower end of Lake Spokane. However, the CE-QUAL-W2 model predicts that the nutrients and biochemical oxygen demand discharged by the sources upstream from Lake Spokane exert their greatest impact upon DO in the lower end of Lake Spokane. This is because the lower end of Lake Spokane is the deepest part of the lake, and since the lake thermally stratifies in the summer, the deeper water is isolated from, and therefore cannot be oxygenated by, the atmosphere.

### Comment #2-19

Mr. Jim Hollingsworth asked in his comments about the quality of the water that leaves the State of Washington.

### Response #2-19

The quality of waters outside the watersheds affected by the subject permits is irrelevant to the subject permit actions. The EPA has provided a summary of water quality data for phosphorus and nitrogen in the Spokane and Columbia rivers as far downstream as Wenatchee, Washington in the response to comment #1-39.

Additional water quality data for waters of the State of Washington can be found at the State of Washington Department of Ecology's environmental assessment program website at www.ecy.wa.gov/programs/eap/index.html, on the EPA's STOrage and RETreival (STORET) website at www.epa.gov/storet, or at the USGS National Water Information System (NWIS) website at waterdata.usgs.gov/wa/nwis/qw.

### Comment#2-20

Mr. Jim Hollingsworth states that the State of Washington can make demands, but it would be far better if (Idaho and Washington) could work together as neighbors to implement a plan that would be mutually acceptable.

### Response #2-20

Because waters of the State of Washington are affected by the subject discharges, the EPA is required to establish water quality-based effluent limits that meet Washington's water quality standards. This is not a "demand" made by the State of Washington; it is a requirement of federal law (40 CFR 122.4(d)).

The State of Idaho has had extensive involvement in the development of the subject permits as well as the Spokane DO TMDL developed by the State of Washington.

### Comment #2-21

Coeur d'Alene made several comments about how EPA evaluated the impact of the Idaho dischargers upon waters of the State of Washington, including the following:

- EPA should explain in more detail how the assumptions made for determining the appropriate loads for DO parameters and associated permit limits for ammonia, $CBOD_5$ and phosphorous will not cause or contribute to downstream water quality standards non-attainment in Washington State portions of the Spokane River and Lake Spokane.
- EPA should explain if its model assumptions are the same as the assumptions in the Washington DO TMDL model for upstream waste load allocations.
- EPA should more fully explain how the limits in the draft permit ensure compliance with the applicable water quality requirements of all affected states as required in 40 CFR 122.4(d).
- EPA should provide a better explanation of its rationale for ensuring that the draft permit limits will not cause nonattainment of Washington DO standards and any other State of Washington standards applicable to the permit limits.
- EPA should also explain whether a revision to TMDL model assumptions used by Ecology would impact EPA's derivation of the limits in the draft permit.
- EPA should disclose whether Ecology concurs with EPA's determination and whether there is any documentation of such concurrence.

### Response #2-21

In general, this comment has been addressed by changes made in the revised draft permits issued for public comment in 2013.

Appendix B to the 2013 fact sheets explains in detail how the effluent limits for TP, ammonia, and $CBOD_5$ ensure compliance with water quality standards in the Spokane River and Lake Spokane in the State of Washington, and, in turn, with 40 CFR 122.4(d). As stated in Appendix B, the effluent limits for the subject dischargers are somewhat different than those assumed in the modeling supporting the State of Washington's Spokane DO TMDL, but they have an impact to DO in Lake Spokane that is no greater than the discharges assumed in the modeling supporting the TMDL.

Regarding whether revisions to the TMDL model assumptions used by Ecology would impact the EPA's derivation of limits, as stated in the permits at Part I.G:

> "In the future, the State of Washington may modify the Spokane River TMDL and/or the effluent limits in NPDES permits for point sources discharging to the Spokane River within the State of Washington. Such modifications may allow for less-stringent effluent limits for total phosphorus, ammonia and/or $CBOD_5$ in this permit, while nonetheless ensuring that the cumulative effect of all such revised effluent limitations will ensure the attainment of water quality standards for DO in the State of Washington. In that case, EPA could revise the water quality-based effluent limits for total phosphorus, ammonia and/or $CBOD_5$…."

Regarding Ecology's concurrence with the EPA's determination, the EPA shared preliminary drafts of the subject permits with Ecology prior to the public comment period, and the EPA made changes to the draft permits in order to address concerns raised by Ecology. Although Ecology submitted comments on the draft permits during the public comment period, none of those comments concerned the effluent limits for TP, ammonia, or CBOD. Ecology stated in its comment letter that, "We feel that the draft permits are protective of downstream water quality and meet the intent of Washington State water quality rules for the Spokane River and Lake Spokane. Comments for the draft permits are relatively minor…."

After receiving final CWA section 401 certifications from the State of Idaho and before issuing the final permits, the EPA notified the State of Washington that it had received the certifications and that the discharges may affect the quality of waters of the State of Washington, consistent with Section 401(a)(2) of the CWA. Also, pursuant to Section 401(a)(2) of the CWA, the State of Washington was allowed 60 days to notify the EPA of any objection to the issuance of the permits, and the State of Washington did not object within the 60-day period.

### Comment #2-22

BlueWater Technologies, Inc. (BlueWater) stated that it believes that the "waste load computation" that EPA conducted is faulty. According to BlueWater, if a discharger with a 10 µg/L phosphorus limit increases their flow, then their phosphorus limit will become more stringent. This would mean that a growing city such as Post Falls would have a very stringent limit that would rob the ecosystem of an

important and essential nutrient. BlueWater concludes that "[t]o require a standard less than 10 µg/L when that is considered natural background is mathematically incongruent."

### Response #2-22

This comment was addressed by changes made in the 2013 draft permits. None of the 2013 draft permits nor the final permits have an effluent limit for TP equal to 10 µg/L, nor do they have a mass limit equivalent to 10 µg/L at the POTWs' design flow rates or at the POTWs' projected future flow rates. Rather, the effluent limits for TP are equivalent to a discharge of TP at a concentration of 50 µg/L at projected future flow rates. The background concentrations of nutrients in the Spokane River are less than 50 µg/L, therefore, the permits will not result in a shortage of phosphorus in the river ecosystem.

The mass effluent limits in the final permits require the permittees to achieve lower concentrations of phosphorus (and other pollutants) if and when their effluent flows increase above the projected future flow rates used in modeling and effluent calculations, in order to maintain compliance with effluent limits expressed in terms of mass. These limits will ensure that the permits remain protective of water quality even if flow rates increase above the current design flows of the treatment plants.

The commenter expressed its comments as if the effluent limitations were expressed as concentrations. Federal regulations require that effluent limitations in NPDES permits be expressed in terms of mass, with certain exceptions, none of which are applicable to effluent limits for phosphorus (40 CFR 122.45(f)).

### Comment #2-23

Mr. Jim Kimball, representing Post Falls and the Hayden Area Regional Sewer Board, stated that the 2004 draft TMDL prepared by Ecology would have allocated 0.1 lb/day of phosphorus to the City of Post Falls. Mr. Kimball states that, at the design flow of the Post Falls treatment plant, this would be equivalent to a concentration of 4 µg/L in the effluent, which "would cause a severe economic impact on Idaho." Mr. Kimball notes that this contrasted with a loading of 2.9 lb/day for the City of Spokane and Spokane County.

### Response #2-23

Mr. Kimball was referring to Figure 10 of Ecology's October 2004 draft TMDL for DO in Lake Spokane (Merrill and Cusimano 2004). Although Mr. Kimball's statement was specific to the City of Post Falls, EPA notes that this figure also included loading figures for the City of Coeur d'Alene and HARSB. EPA will therefore consider this comment to be applicable to all three dischargers.

This comment was addressed by the revised draft permits issued for public review and comment in 2013. The water quality-based effluent limit for TP in the City of Post Falls' final permit is 3.19 lb/day, which is equivalent to 76.5 µg/L at the City's current design flow of 5.0 mgd. The final water quality-based TP effluent limits for Coeur d'Alene and HARSB are equivalent to 63 µg/L and 66 µg/L, respectively, at the facilities' current design flows.

The State of Washington can neither regulate discharges of pollution nor set water quality standards for waters of the State of Idaho or any other jurisdiction outside of Washington. The figures referenced by

Mr. Kimball came from a draft TMDL that was neither finalized by the State of Washington nor approved by EPA.

### Comment #2-24

Ms. Julie Dalgago states that if the EPA were to "apply the (strictest) standards to the people that are upriver…that will affect the outcome at the end of the river and Lake Roosevelt."

### Response #2-24

It is not clear what Ms. Dalgago meant by the phrase "the people that are upriver." The EPA believes it is reasonable to assume she was referring to the subject POTWs, since Ms. Dalgago was commenting on the subject permits, and the Spokane River originates in Idaho, at Lake Coeur d'Alene. Thus, it appears that Ms. Dalgago is stating that the effluent limits in permits for discharge to the Spokane River in Idaho should be "the strictest," meaning they should be more stringent than those in permits issued by Ecology, to dischargers in the State of Washington.

As explained in detail in Appendix B to the 2013 fact sheets, the permits contain effluent limits for phosphorus, ammonia, and CBOD that ensure compliance with Washington's water quality standards for DO in Lake Spokane and the Spokane River on a cumulative basis. In developing these permits, the EPA did not evaluate the effects of the discharges at points downstream of the Long Lake Dam, including Lake Roosevelt. Due to additional dilution, continued decay of the effluent CBOD, and continued attenuation of the effluent phosphorus (e.g., accumulation in sediment behind dams), the discharges' effect on water quality in Lake Roosevelt is likely to be too small to measure.

### Comment #2-25

Ms. Julie Dalgago states that "discharge limits must be (the) more stringent of both the technology and water quality-based limits." Ms. Dalgago stated that she was concerned that the "stringent standards" in the permits were based on "economic feasibility."

### Response #2-25

The Clean Water Act requires that all NPDES permits contain technology-based effluent limits (CWA Sections 301(b)(1)(B), 304(d)(1), 40 CFR Parts 125.3, 133), and more stringent effluent limitations if necessary to ensure that water quality standards are met(CWA Section 301(b)(1)(C), 40 CFR 122.4(d), 40 CFR 122.44(d)). As stated in the fact sheets and in this response to comments, EPA has established water quality-based effluent limits that are more stringent than technology-based effluent limits, whenever those limits were necessary for pollutants discharged by the subject permittees. Whenever a technology-based effluent limit was imposed in lieu of a water quality-based effluent limit, EPA made a finding in the fact sheet that the technology-based effluent limit was adequately stringent to protect water quality. Water quality-based effluent limits are based solely on the water quality standards; they are not based on economic feasibility.

### Comment #2-26

The City of Spokane stated that the interim and final effluent limits for phosphorus and other nutrients in the proposed permits are too generous. By imposing these effluent limits, the City of Spokane is

concerned that other downstream discharges, such as the City of Spokane, will be unable to meet the phosphorus goals and targets set forth in the Foundational Concepts.

### Response #2-26

In this comment, the City of Spokane was referring to the *Foundational Concepts for the Spokane River TMDL Managed Implementation Plan*, dated June 30 2006.[15] This comment was addressed by the revised draft permits issued for public review and comment in 2013. The final water quality-based effluent limits for TP, ammonia, and CBOD in the subject permits ensure compliance with water quality standards for DO in Lake Spokane on a cumulative basis.

Like all point sources discharging to the Spokane River in Washington, the City of Spokane's obligations with respect to phosphorus are stated in its NPDES permit, which is based on the City's phosphorus wasteload allocation in the Spokane DO TMDL. Even if the allocations in the Spokane DO TMDL and the limits in the NPDES permits for discharges to the Spokane River should fail to ensure compliance with water quality standards, the limits in the City of Spokane's permit could not be changed without following the requirements in 40 CFR Part 124, including preparation of a draft permit, a public comment period of no less than 30 days, and the opportunity for a public hearing. Nothing in the subject permits will affect the City of Spokane's ability to meet its phosphorus effluent limit or wasteload allocation.

### Comment #2-27

The City of Spokane stated that "it is critical that both the EPA and the State interpret and apply the State of Washington standards for dissolved oxygen consistently." The City of Spokane cited numerous examples where it believed that EPA has not consistently interpreted Washington's DO water quality standards. For example, the City of Spokane believed that EPA had concluded that the Washington standards allow each Idaho discharger to reduce DO by up to 0.2 mg/L in Long Lake, while the State of Washington appeared to look at all human-caused sources combined when determining compliance with this standard. The City of Spokane compared the 2007 Coeur d' Alene Fact Sheet, p. C-10, with the 2004 Draft TMDL (Merrill and Cusimano 2004), pp. 5 and 21. In addition, the City of Spokane stated that Washington used 0.005 to 0.006 mg/L for the "natural background" phosphorous concentration whereas the EPA appeared to have used 0.14 mg/L.

### Response #2-27

This comment was addressed by the revised draft permits issued for public review and comment in 2013. The final water quality-based effluent limits for TP, ammonia, and CBOD in the subject permits ensure compliance with water quality standards for DO in Lake Spokane on a cumulative basis, considering all human actions that affect DO in Lake Spokane, which is consistent with the plain language of the standard (WAC 173-201A-200(1)(d)(ii)).

The EPA did not state in the 2007 HARSB fact sheet that the natural background phosphorus concentration in the Spokane River was 0.14 mg/L. It appears that the commenter is referring to the proposed average monthly phosphorus loading limit of 0.14 *lb/day*. This loading of phosphorus is

[15] http://www.ecy.wa.gov/programs/wq/tmdl/spokaneriver/dissolved_oxygen/foundational_concepts-v21.pdf

equivalent to a concentration of 10 µg/L (0.010 mg/L) at the HARSB facility's design flow rate (at the time the 2007 draft permit was issued for public review and comment) of 1.65 mgd. When EPA stated on Page C-7 of the 2007 HARSB fact sheet that this level of phosphorus was "comparable to natural background," EPA was referring to an effluent concentration of 10 µg/L (0.010 mg/L), which is equivalent to the proposed phosphorus loading limit of 0.14 lb/day in the 2007 draft HARSB permit.

### Comment #2-28

The City of Spokane stated in comments on the 2007 draft permits that, in establishing the effluent limits in the permits, it appeared that EPA had assumed that the Washington dischargers would control nonpoint sources. The City of Spokane believed that EPA should require the Idaho dischargers to work on nonpoint source control so that the burden is not just placed on the downstream Washington dischargers.

### Response #2-28

The effluent limits for TP, ammonia, and CBOD in the 2013 draft permits and the final permits are based on the assumption that the load allocations for non-point sources, the wasteload allocations for point sources, and Avista Corporation's DO responsibility in the Spokane DO TMDL will be attained. The EPA did not assume that the Washington dischargers would be involved in controlling non-point sources so that the non-point source load allocations in the TMDL would be attained.

The modeling supporting the Spokane DO TMDL and the subject permits also considered the estimated loading from municipal stormwater in Idaho. Non-point source loading to the Spokane River in Idaho from tributaries is unquantified, but is believed to be negligible (Annear, Wells and Berger 2005).

### Comment #2-29

HARSB and Post Falls stated that EPA appeared to have resolved an issue by providing a "dynamic" permit. These commenters provided an Exhibit 4 that was obtained from Ecology's files. The exhibit shows that a substantially higher loading in April, May, June, and October (the shoulder season) can be discharged to the river. HARSB and Post Falls both included diversion from the river to reuse (e.g., for irrigation) during the July, August, and September critical period. HARSB and Post Falls commended EPA for providing a defendable dynamic permit that would possibly reduce some of the required technology for phosphorus removal in the shoulder season so that entities like the City can invest in land application reuse during the critical months.

### Response #2-29

The phosphorus limits in the 2013 draft permits and the final permits are not "dynamic" in the same way as those in the 2007 draft permit. The 2007 draft permits had phosphorus limits from March to October, but there were different limits within that time frame. For example, the average monthly loading limits in the 2007 draft permit for the City of Post Falls were 29 lb/day in March, 7.26 lb/day in April and May, 1.45 lb/day from June to September, and 29 lb/day in October. The final Post Falls permit has a seasonal average limit of 3.19 lb/day, which applies from February to October. See Figures 1 – 9 in Appendix B to the 2013 fact sheets for comparisons of the TP, ammonia, and CBOD limits in the 2007 draft permits to those in the 2013 draft permits (which are identical to those in the final permits).

However, because the phosphorus limits in the final permits are stated in terms of mass and as seasonal averages, the limits afford the dischargers flexibility similar to the "dynamic" limits in the 2007 draft permits. For example, if a utility employs partial re-use to reduce its effluent flow rate, it could discharge a somewhat higher concentration of TP in its effluent and still comply with its seasonal average loading limit. Also, if a utility ceases its discharge to the river through 100% re-use, the permittee may report a loading of zero pounds per day for the period of time when there is no discharge. This will reduce the seasonal average loading that the utility must report, thus allowing the utility to discharge somewhat more loading during the time when it is discharging to the river and still comply with the seasonal average loading limit.

The effluent limits nonetheless restrict the total amount of TP, ammonia, and CBOD that the utilities may discharge to the Spokane River from February through October to amounts which have been shown through modeling to ensure compliance with Washington's water quality standards for DO. The flexibility described above will therefore not result in violations of water quality standards.

### Comment #2-30

Post Falls and HARSB stated that, at the 2007 public hearing on the three Idaho NPDES permits, there were numerous pleas for a basin approach and that EPA should not have interceded in providing separate analyses for the Idaho dischargers. Post Falls and HARSB provided a loading reduction table obtained from Ecology's files, which shows that the ultimate loading from the point source dischargers in both Idaho and Washington should be reduced to 4.6 pounds of phosphorus per day. In the table referenced by the commenters, only 0.2 pounds (4 percent) was allocated to the Idaho dischargers. According to Post Falls and HARSB, this restriction would cause severe limitations on the Idaho dischargers because the loading set forth in the permits are less than one half the 0.44 pounds that should have been allocated. The Idaho dischargers were not given a realistic and equitable portion of the loading in the Spokane River. Post Falls and HARSB stated that they believe the 2007 draft permits equitably allocate loading to the Spokane River.

### Response #2-30

As explained in Appendix B to the 2013 fact sheets, the EPA determined to use a "basin approach," in which the effluent limits for nutrients and oxygen-demanding pollution are calculated such that they ensure compliance with Washington's water quality criteria for DO in Lake Spokane on a cumulative basis.

The sum of the final water quality-based TP effluent limits for the subject Idaho POTWs is 7.69 lb/day. The sum of the TP wasteload allocations for Washington's point sources (except for stormwater and combined sewer overflows) in the Spokane DO TMDL is 25.5 lb/day. Thus, the Idaho dischargers have been allocated 23% of the total non-stormwater point source load.

## Effluent Limits for Metals

### Comment #2-31

CFJ stated that the EPA incorrectly calculated the reasonable potential for lead, cadmium, and zinc. CFJ notes that the EPA used effluent hardness for cadmium, lead, and zinc, and stated that this approach "is

appropriate if no dilution factor (mixing zone) is included in the reasonable potential calculations." The commenters believed that, since the EPA calculated and presented dilution factors in Appendix E of the fact sheets, the EPA used these dilution factors in reasonable potential calculations for cadmium, lead, and zinc. The commenters concluded that the EPA should have used the hardness at the edge of the mixing zone.

### Response #2-31

The toxicity of metals to aquatic life, and, in turn, the water quality criteria, varies depending on the hardness of the water. As stated in the fact sheets, the EPA did not use dilution factors in reasonable potential and effluent limit calculations for cadmium, lead, or zinc. See the 2007 fact sheets at Appendices E and F, the 2013 fact sheets at appendices D and E, and the discussion under the heading of "Water Quality Limited Segment" in the bodies of the 2013 and 2007 fact sheets. Reasonable potential and effluent limit calculations for cadmium, lead, and zinc applied water quality criteria at the end-of-pipe, using effluent hardness.

For metals other than cadmium, lead, and zinc, dilution was considered (because the ambient water meets criteria). For those metals, the EPA used the hardness at the edge of the mixing zone to calculate the values of the metals criteria.

EPA has used the 5th percentile hardness for both the effluent and the receiving water in calculating effluent limits for metals. This is a reasonable "worst case" effluent hardness, thus, it is not necessary to place an additional limit on effluent hardness.

### Comment #2-32

CFJ stated that the EPA cannot assume that the effluent limits for cadmium, lead, and zinc will not contribute to WQS violations in Washington simply because Idaho's criteria are as stringent as or more stringent than Washington's. CFJ concluded that the EPA must "condition these permits such that they do not cause or contribute to water quality violations downstream." CFJ stated that the EPA did not calculate the cumulative impact of all existing and identified sources downstream and did not include a "margin of safety."

### Response #2-32

NPDES regulations require the EPA to identify pollutants that are or may be discharged at a level which has the reasonable potential to cause or contribute to excursions above WQS and then establish limits on those pollutants that are derived from and comply with the applicable water quality criteria (40 CFR 122.44(d)(1). There is no requirement for a margin of safety when establishing NPDES permit conditions. It is, however, appropriate to use conservative assumptions when deriving water quality-based effluent limits, and the EPA has done so here.

The EPA established criteria end-of-pipe effluent limits for cadmium, lead, and zinc, expressed in terms of concentration, where reasonable potential existed, and where it was necessary to continue forward effluent limits from the 1999 permit in order to ensure compliance with the anti-backsliding provisions of the Clean Water Act. These limits are derived from and comply with Idaho WQS. Idaho's cadmium and lead criteria are at least as stringent as those in Washington. The Idaho dischargers either do not

have the reasonable potential to cause or contribute to excursions above the Idaho criteria (at the end-of-pipe) or are required to meet water quality-based effluent limits that apply the Idaho criteria concentrations at the end-of-pipe. Discharges of pollutants at concentrations at or below the applicable water quality criteria do not contribute to excursions above those criteria. Therefore, the water quality-based effluent limits for lead comply with the water quality standards of both States, and the reasonable potential analyses for lead and cadmium, including the finding that the dischargers do not have the reasonable potential to cause or contribute to excursions above water quality standards for cadmium, are valid for both States, in compliance with 40 CFR 122.4(d).

The Idaho zinc criteria are marginally less stringent than those in Washington, but the EPA has demonstrated that the Idaho dischargers do not have the reasonable potential to cause or contribute to excursions above Washington's zinc criterion. See, e.g. the 2007 Coeur d'Alene fact sheet at Page 14. Therefore, the effluent limits for zinc in the subject permits comply with 40 CFR 122.4(d).

### Comment #2-33

CELP stated that the EPA has abandoned adopting a TMDL for metals in Idaho and is therefore obligated to condition wastewater discharge permits with water quality-based toxics control for metal discharges causing or contributing to water quality violations in Idaho and Washington. Washington's ambient monitoring show repeated violations for metals lead, zinc, and cadmium when river hardness is low. The EPA protocols for these limits should be followed using the appropriate in-stream criterion and actual river critical conditions.

### Response #2-33

A TMDL for metals encompassing the Spokane River in Idaho was completed jointly by the Idaho Department of Environmental Quality and the EPA and was approved by the EPA in August of 2000. The TMDL was vacated by the Idaho Supreme Court in 2003. In the absence of a TMDL, the EPA is required by Section 301(b)(1)(C) of the Act and 40 CFR 122.44(d)(1) to include water quality-based effluent limits for metals where the discharge has the reasonable potential to cause or contribute to excursions above water quality standards. In any case where the subject dischargers had the reasonable potential to cause or contribute to excursions above water quality standards for any metal or any other pollutant, a water quality-based effluent limit has been imposed, with water quality criteria applied at the end-of-pipe. Because these limits apply at the end-of-pipe, the discharge will comply with water quality criteria under all likely hardness scenarios. The imposition of such effluent limits wherever reasonable potential exists satisfies the EPA's obligations under Section 301(b)(1)(C) of the CWA and its implementing regulations, for the pollutants in question.

### Comment #2-34

CELP stated that there is inadequate information presented in the Fact Sheets to determine if appropriate water quality criteria were applied during critical conditions. A general reference to the old NPDES permits as justification for lead and zinc limits in the new permits is not adequate, particularly given that the old permit limits were likely inappropriately derived. Since the Spokane River already exceeds metals criteria for lead, zinc, and cadmium, the discharges must meet end-of-pipe limits.

CELP stated that end-of-pipe toxicity-based limits must be derived from criteria for critical conditions in the river where aquatic organisms live.

### Response #2-34

In neither the 2007 nor the 2013 draft permits did the EPA did "reference" or continue any previously-established effluent limits under the anti-backsliding provisions of the CWA in the reissued permits without verifying that these effluent limits remain protective of water quality.

Water quality criteria for metals were applied under critical conditions. However, the appropriate critical condition for hardness depends on whether the metals criteria are applied at the end-of-pipe or at the edge of a mixing zone. For cadmium, lead, and zinc, water quality criteria qre applied at the end-of-pipe (no mixing zone). Thus, the receiving water flow rate and receiving water hardness are irrelevant because mixing with the receiving water is not a factor in determining whether the discharge has the reasonable potential to cause or contribute to excursions above water quality standards. The appropriate hardness to use in determining reasonable potential or calculating effluent limits is the hardness expected at the point where criteria are applied (either at the end-of-pipe or the edge of the mixing zone). Therefore, in these permits, the appropriate hardness to use in determining reasonable potential and in calculating effluent limits for cadmium, lead, and zinc is the effluent hardness.

The Spokane River does not consistently meet criteria for these metals. However, any point source discharge of these metals when the criteria are met at the end-of-pipe, with effluent hardness, will not contribute to excursions above criteria in-stream, even though the effluent concentration of the metals may be relatively high. This is because the hardness of the effluents reduces the toxicity of the discharged metals and raises the numeric value of the water quality criteria accordingly, wherever the hardness and the metal concentration is influenced by the discharge. This phenomenon is explained in detail in the Washington State Department of Ecology's total maximum daily load for metals in the Spokane River (Butkus and Merrill 1999).

Due to the "concave up" curvature (positive second derivative) of the water quality criterion for lead, this is not always the case for lead. However, in establishing water quality-based effluent limits for lead, the EPA has corrected for this, by establishing effluent limits for lead based on the tangent line to the lead water quality criteria curve at a hardness of 25 mg/L.

For other metals (e.g. copper), the hardness used in reasonable potential and effluent limits calculations is the hardness at the edge of the mixing zone (a mixture of ambient and effluent hardness in the proper proportions). Where a mixing zone is allowed, the critical river flow rates used in calculating dilution factors are the 7-day, 10-year low flow (7Q10) for chronic water quality criteria and the 1-day, 10-year low flow for acute water quality criteria (1Q10) for acute criteria. These are the flows recommended for use in steady-state modeling in the TSD (see Appendix D). The critical river flow rates used in calculating dilution factors are the design flow rates of the treatment works. The dilution factors are provided in Appendix D to each of the 2013 fact sheets.

The specific hardness values used to calculate the values of the water quality criteria for metals are shown in Table 30, below.

| Table 30: Hardness Values Used to Calculate Metal Criteria (mg/L as $CaCO_3$) | | | |
|---|---|---|---|
| Parameter | Coeur d'Alene | HARSB | Post Falls |
| Cadmium, lead and zinc | 132 | 95.3 | 97.6 |
| Others | 25 | 25 | 25 |

### Comment #2-35

Mr. Jim Hollingsworth recommends that the EPA reevaluate the level at which dissolved metals are beneficial and/or harmful to human health.

### Response #2-35

Water quality standards and the effluent limits based upon those standards must protect all existing and designated uses of the subject waters, including, in this case, cold water aquatic life (CWA §301(b)(1)(C), 40 CFR 131.11, 131.12, IDAPA 58.01.02.051.01, 58.01.02.110.12). Human health is only one of several concerns that must be considered when establishing water quality criteria and effluent limits based upon those criteria. The effluent limits in the subject permits are set to ensure that both human health and aquatic life are protected.

In general, human beings can tolerate much higher concentrations of metals in drinking water than fish can tolerate in their habitat. For example, the State of Idaho's water quality criteria for zinc, for human health protection, are 7,400 µg/L for consumption of water and organisms and 26,000 µg/L for the consumption of organisms only. In contrast, the acute and chronic water quality criteria for protection of aquatic life are both 120 µg/L, at a hardness of 100 mg/L as $CaCO_3$.

## Temperature

### Comment #2-36

CFJ stated that the EPA failed to consider the cumulative temperature impact of these discharges on waters of the State of Washington. Specifically, CFJ recommended that the EPA consider whether the total cumulative impact is greater than 0.3 °C downstream of the border (assuming non-point sources are not an issue during the critical period) as specified in 40 CFR 122.44(d).

### Response #2-36

As explained on pages B-22 to B-23 of the 2013 fact sheets, the EPA has considered the cumulative temperature impact of the subject discharges on waters of the State of Washington and has determined that the dischargers do not have the reasonable potential to cause or contribute to excursions above Washington's water quality standards for temperature. Specifically, the maximum temperature increase attributable to the Idaho dischargers, at any time, is 0.27 °C, which is much less than the allowable increase (0.96 °C).[16] At times when the predicted temperature, with no discharge from Idaho point

[16] Washington's site-specific temperature criterion for the Spokane River from Nine Mile Bridge to the Idaho border reads as follows: "Temperature shall not exceed a 1-DMax of 20.0 ºC due to human activities. When natural conditions exceed a 1-DMax of 20.0 ºC, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3 ºC; nor shall such temperature increases, at any time, exceed t = 34/(T + 9)." (WAC 173-201A-602). The capital "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity

sources, is greater than or equal to 20 °C, the maximum temperature increase attributable to the Idaho point sources is 0.13 °C, which is less than half the increase allowed by the criterion (0.3 °C) (WAC 173-201A-602).

## Monitoring Requirements

### Comment #2-37

Mr. Jim Hollingsworth objected to requiring the dischargers to incur significant costs in conducting their own monitoring, and expressed concern that there is no incentive for the permittees to actually perform the monitoring, and to accurately and truthfully report the results of the monitoring. The commenter recommends that the EPA conduct the monitoring.

### Response #2-37

The NPDES permitting program is a self-monitoring program. 40 CFR 122.44(i) requires all NPDES permits to impose monitoring requirements on permittees that will "assure compliance with permit limitations." In addition, 40 CFR 122.41(j) requires that records of monitoring information include the results of the sampling analysis.

Monitoring, recording, and reporting requirements are enforceable provisions of NPDES permits. If the permittees choose not to perform the required monitoring, or not to report the results of such monitoring, or to make false statements in such reporting, they will be subject to civil or criminal enforcement action at the EPA's discretion. Possible penalties for violations of permit conditions are listed in Part IV.B of the permits.

### Comment #2-38

Post Falls stated that paragraph F.1 on Page 12 of the 2007 Post Falls draft permit unreasonably requires surface water sampling at multiple locations that are outside the influence or control of the City and its wastewater discharge. Post Falls stated that only the water quality immediately above and below the City's outfall is pertinent to this permit and the sampling points should be changed to reflect such an approach. Post Falls stated that it will cooperate with the IDEQ to select appropriate sampling locations at or near the Post Falls Dam and at or near the old Pleasant View Bridge in the River.

Post Falls also stated that Paragraph F.1 on Page 12 and Fact Sheet Page C-2 list Skalan Creek as a sampling point but maintained that Skalan Creek is unaffected by the City's discharge and rarely flows with water. Sampling requirements for Skalan Creek also require access to private property that cannot reasonably be assured by the City. Skalan Creek should be removed from this permit as a sampling point.

### Response #2-38

The surface water monitoring requirements in all three of the 2007 draft permits were very similar. Therefore, EPA will consider this comment to be applicable to all three of the 2007 draft permits.

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of the discharge (WAC 173-201A-200(1)(c)(ii)(A)). The maximum "no source" temperature is 26.4 ºC; the value of 34/(T + 9) therefore equals 0.96 ºC.

This comment has been addressed by changes proposed in the 2013 draft permits and retained in the final permits. Specifically, the permits no longer require receiving water monitoring in Skalan Creek, and the sampling locations within the Spokane River have been changed such that sampling is required in the Spokane River upstream and downstream from each facility's outfall.

### Comment #2-39

CFJ stated that there is no evidence that the required monitoring is adequate to populate the Spokane CE-QUAL-W2 model to verify and/or determine water quality trends as restoration activities are implemented, or to provide statistically significant information on PCBs. CFJ recommended that EPA consult with EPA staff working on the PCB TMDL to ensure that the sampling is adequate and further suggested a minimum sampling frequency of once per month for total PCBs with a quarterly congener specific analysis, as well as quarterly measuring of dissolved and particulate PCBs attached to sediment.

### Response #2-39

The monitoring for PCBs required by the final permits will result in statistically robust data sets. The TSD states that the uncertainty is too large to calculate a standard deviation or mean with sufficient confidence for data sets with less than 10 results (Page 53). Over the five-year term of the permits, the required monitoring for PCBs will result in 30 influent samples, 20 effluent samples, 10 upstream receiving waters samples, and 10 downstream receiving water samples. Therefore, the PCB monitoring requirements will produce a data set that meets the TSD's recommendation of at least 10 samples at each of the required monitoring locations.

The following relative errors were calculated using the procedures described in Appendix N to the EPA's Local Limits Development Guidance (EPA 2004).

Assuming a coefficient of variation of 0.6, which is recommended by EPA permitting guidance in cases where the actual effluent variability is unknown (see TSD at Pages 53 and E-3), the 20 effluent samples that will be collected over the permit term (i.e., quarterly sampling for five years) will quantify the average effluent concentration with a 22.5% relative error, at a confidence level of 90%. For the influent (30 samples) the relative error will be 18.3%, at a confidence level of 90%.

The receiving water monitoring requirements for parameters that would be useful for CE-QUAL-W2 modeling to refine permit requirements for nutrients and oxygen demand (i.e., CBOD5, ammonia, pH, nitrate + nitrite, TP, orthophosphate, DO, and chlorophyll a), require 8 samples per year both upstream and downstream of the outfalls, resulting in 40 upstream samples and 40 downstream samples for each permit. Assuming a coefficient of variation of 0.6, 40 samples will quantify the average concentrations of these constituents with a relative error of 15.7%, at a confidence level of 90%.

## Phosphorus Management Plan

### Comment #2-40

CFJ stated that the phosphorus management plans required in the permits provide no regulatory mechanism to track performance. CFJ recommended that the EPA include requirements for regular

reporting requirements on phosphorus reductions achieved through the phosphorus management plans. Moreover, CFJ stated that there should be an opportunity for public "review and comment."

### Response #2-40

This comment has been addressed by changes made to the revised draft permits issued for public review and comment in 2013. The revised draft permits were changed to require annual reporting of reductions achieved through the phosphorus management plans, and to require that the plans themselves be submitted to the EPA. These requirements have been retained in the final permits.

The annual reports and the phosphorus management plans themselves are a matter of public record. As such, the general public will be able to request them from the EPA pursuant to the Freedom of Information Act.

## Polychlorinated Biphenyls

### Comment #2-41

CELP stated that PCBs are present in municipal effluent. The commenter cited to Ecology's latest PCB studies to explain that extremely low levels of PCBs will need to be achieved to protect water quality. Therefore, the commenter recommended that EPA include permit limits for PCBs that are derived from existing data obtained in these Spokane River studies performed by Ecology. Monthly samples of effluent PCB in the first year are needed to fully and adequately characterize each discharge.

### Response #2-41

As explained in the response to comment #1-1, based on the available information, the EPA has not concluded at this time that the subject discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs. Therefore, the permits do not contain effluent limits for PCBs. The permits include monitoring requirements for PCBs in the influent, effluent, and receiving water. The data obtained from this monitoring will be used to determine if the discharges have the reasonable potential to cause or contribute to excursions above water quality standards for PCBs in the future. The permits also include BMP requirements to control or abate the discharge of PCBs (if any) from the subject POTWs.

## Pretreatment

### Comment #2-42

CELP stated that the pretreatment program requirements need to specifically require industrial dischargers of phosphorus to be classified as SIUs and to require phosphorus removal down to 5 mg/L before discharge to the treatment plants. This requirement should include sludge discharges, for example from water treatment system maintenance.

### Response #2-42

The term "significant industrial user" (SIU) is defined in 40 CFR 404.3(v) as an industrial user that is subject to categorical pretreatment standards, and any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact

cooling and boiler blowdown wastewater); contributes a process wastestream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant, or is designated as such by the "control authority" on the basis that the industrial user has a reasonable potential to adversely affect the POTW's operation or to violate any pretreatment standard or requirement. The control authority is the POTW in cases where the POTW has an approved pretreatment program. Otherwise, it is the approval authority (which, for the State of Idaho, is the EPA). The City of Coeur d'Alene has an approved pretreatment program. The City of Post Falls and the Hayden Area Regional Sewer Board do not. However, the City of Post Falls is required to develop a pretreatment program for EPA approval as a condition of its reissued permit.

In general, the determination of whether an industrial user is an SIU is independent of whether that discharger discharges phosphorus. The only time in which a discharge of phosphorus would be relevant to this determination would be when the discharge of phosphorus "has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement."

The decision to label an industrial user (which does not otherwise fit the definition of an SIU) as an SIU on the basis that the user has the reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement would be made by the control authority. Therefore, the EPA, as the control authority for HARSB and (for the time being) Post Falls, would be required to demonstrate that a particular industrial user's discharge of phosphorus to the POTW has the reasonable potential to adversely affect the POTW's operation or to violate any pretreatment standard or requirement, in order to label this user as an SIU (if the user did not otherwise fit the definition of an SIU). At this time, the EPA has no information demonstrating this reasonable potential and the commenter submitted none with this comment. Typical untreated domestic sewage contains 4 to 15 mg/L of total phosphorus. Therefore, most of the phosphorus loading to a POTW treatment plant is from domestic sources, and pretreatment program requirements are inapplicable to such sources (40 CFR 403.1). Additional phosphorus from non-domestic sources would be unlikely to adversely affect the POTW's operation, because POTWs are designed to operate properly in spite of the relatively high concentrations of total phosphorus in untreated domestic wastewater. Therefore, the EPA cannot label an industrial user as an SIU simply because it discharges phosphorus.

## Capacity Expansions

### Comment #2-43

CFJ stated that the EPA did not discuss the planned POTW capacity expansions in the 2007 Fact Sheets.

### Response #2-43

In compliance with 40 CFR 122.45(b)(1), all of the effluent limits in the 2007 fact sheets were calculated based on the existing design flows of the treatment plants as reported on the most recent applications available at the time the draft permits were issued for public review and comment.

The City of Post Falls and the Hayden Area Regional Sewer Board submitted updated applications in 2010, reflecting the facility expansions that had taken place at that time. In compliance with 40 CFR

122.45(b)(1), the effluent limits in revised permits are calculated based on the expanded design flows of the treatment plants.

## Whole Effluent Toxicity

### Comment #2-44

CELP stated that reasonable potential determinations and permit limits to prevent effluent toxicity need to consider additive or synergistic toxicity affects when multiple heavy metal pollutants consistently occur together in relatively high concentrations.

### Response #2-44

Effluent limits for individual chemical constituents intended to prevent direct toxicity to aquatic life are derived from and comply with numeric water quality criteria that have been shown to be protective of aquatic life. However, the EPA recognizes that mixtures of chemicals in a point source discharge can be more toxic than the individual chemical constituents within that discharge. Since the toxicity of mixtures of chemicals cannot be generalized or predicted with any certainty, the permits require quarterly chronic whole effluent toxicity (WET) testing. This is consistent with the *Regions 9 and 10 Guidance for Implementing Whole Effluent Toxicity Programs* (EPA 1996).

The EPA has determined, based on existing WET data, that none of the three discharges have the reasonable potential to cause or contribute to excursions above water quality standards for toxicity (see the 2013 fact sheets at Appendix D).

The 2007 draft permits did omit some WET permit conditions that are recommended in EPA guidance. The EPA has incorporated these permit conditions in the 2013 draft permits, and these requirements have been retained in the final permits. These conditions include accelerated testing when toxicity is detected above the toxicity triggers for each facility, and a requirement that the facility re-test its effluent if a test does not meet test acceptability criteria. In the final permits, the EPA added language to Part I.E.2.b to clarify how the most sensitive species is to be determined. The WET results will be used to determine if the discharges have the reasonable potential to cause or contribute to excursions above Idaho's narrative criterion for toxicity in the next permit reissuance.

## Compliance Schedules and Interim Limits

### Comment #2-45

CFJ states that Section 301(b)(1)(C) of the Clean Water Act establishes a firm deadline of July 1st, 1977, for complying with water quality-based effluent limits, beyond which no extensions can be granted by a state. CFJ points out that, under Section 301(i) of the Act, compliance schedules could be granted for POTWs in certain circumstances if construction could not be completed by the July 1st, 1977, deadline, but that such schedules are not allowed to extend past July 1st, 1988. CFJ references 40 CFR 122.47, which states that compliance schedules cannot extend past "the applicable statutory deadline under the CWA." Therefore, CFJ concludes that the statutory deadline for compliance has expired and any attempt to extend compliance with such limitations after those dates violates the statutory compliance deadline in the Clean Water Act.

## Response #2-45

The issue raised by this comment is whether Sections 301(b)(1)(C) and 301(i) of the Act and 40 CFR 122.47 prohibit schedules of compliance in permits after July 1, 1977, or July 1, 1988, respectively.

Section 301(i) of the Act is irrelevant to the subject permits. In order to invoke Section 301(i), the owner or operator of a POTW would have needed to request the EPA to issue an NPDES permit within 180 days after February 4, 1987 (August 4, 1987). This could not have happened for the permit reissuances in question.

In *In The Matter of Star-Kist Caribe, Inc.*, 3 E.A.D. 172 (1990), EPA's Administrator interpreted Section 301(b)(1)(C) of the Act to mean that NPDES permits must require immediate compliance with effluent limitations based on water quality standards adopted before July 1, 1977. Thus, the subject permits may not contain compliance schedules for effluent limits that are based on pre-1977 water quality standards. However, for new or revised water quality standards adopted after July 1, 1977, NPDES permits may contain compliance schedules as long as the state has clearly indicated in its water quality standards or implementing regulations that it intends to allow them. See StarKist at 176-177; see also the Permit Writers' Manual at Section 9.1.3. Therefore, if a state adopts a new or revised water quality standard after July 1, 1977, the state may authorize the permitting authority to include a compliance schedule in the NPDES permit to allow time for the permittee to meet the new water quality-based effluent limit in the permit.

Compliance schedules are authorized under the water quality regulations in both Idaho and Washington. See IDAPA 58.01.02.400.03 and WAC 173-201A-510. Since the discharges authorized in the subject permits occur in Idaho, it is Idaho's regulation that is applicable to these permits.

Since the water quality standards of both affected states allow schedules of compliance, the next issue is whether the relevant water quality standard was in effect prior to July 1, 1977. The Washington water quality standard upon which the effluent limits for phosphorus, CBOD, and ammonia are based is the DO criterion for lakes and reservoirs, applied in Lake Spokane (WAC 173-201A-200(1)(d)(ii)). The currently effective version of that standard appears in the 2003 revision of Chapter 173-201A WAC and became effective for Clean Water Act purposes when it was approved by EPA on February 11, 2008. This standard reads, "For lakes, human actions considered cumulatively may not decrease the dissolved oxygen concentration more than 0.2 mg/L below natural conditions." Prior to 2003, the State of Washington's DO standard for lakes and reservoirs read "no measurable decrease from natural conditions." The Washington water quality criterion for DO in lakes and reservoirs has therefore been revised after 1977. Since the relevant water quality standard has been revised after 1977, and because the applicable state law allows for compliance schedules, a compliance schedule may be authorized.

## Comment #2-46

CFJ stated that, by extending beyond the term of the permit, the compliance schedules violate the CWA's mandate that NPDES permits be established for a fixed term not to exceed five years. CFJ stated that the compliance schedules "are not for a fixed term." CFJ referenced a 9th Circuit Court of Appeals decision in *Citizens for a Better Environment* v. *Union Oil Company of California* (*CBE* v. *UNOCAL*) and

quotes the following language from the opinion: "there is a five year duration on the life of an NPDES permit that the 'effective modification' here would violate." CFJ argued that the proposed compliance schedules extend the substantive requirements of a permit beyond the five-year limit established by the Act. CFJ referenced the City of Moscow NPDES permit appeal before the Environmental Appeals Board (EAB) and stated that the EPA argued in that case that to extend the compliance schedule beyond the term of that permit would be illogical as there was no guarantee that the permit would be administratively extended or renewed.

### Response #2-46

The EPA does not agree with the commenters that a compliance schedule longer than five years violates the Clean Water Act's mandate that NPDES permits be established for a fixed term not to exceed five years. The five-year maximum permit term required by Section 402(b)(1)(B) of the Act does not establish a deadline for meeting a water quality-based effluent limitation; it simply requires the permitting authority to re-evaluate NPDES permits every five years (see letter dated 11/29/06 from Alexis Strauss, EPA Region 9 to Tom Howard, California State Water Resources Control Board at Page 6, and the enclosure to that letter at Page 6).

The *CBE* v. *UNOCAL* case referenced by the Center for Justice (CFJ) is irrelevant to the issue of how long a compliance schedule in a permit may be. In *CBE* v. *UNOCAL,* the Ninth Circuit addressed two issues: 1) whether the cease and desist order (CDO) barred a citizen suit under Clean Water Act Section 309(g)(6)(A), and 2) whether the CDO effectively deferred the compliance date for a selenium effluent limit such that UNOCAL was not in violation of that effluent limit. The Court concluded that the CDO neither barred a citizen suit nor effectively deferred the compliance date for the selenium effluent limit.

The Court determined that the CDO did not defer the compliance date for the selenium effluent limit for the following reasons: 1) the CDO was an exercise of prosecutorial discretion and did not purport to modify the permit, 2) the federal and state regulations (e.g. 40 CFR 122.62) that govern the modification of permits were not followed, and, 3) even if the CDO were considered a modification of the permit, that modification may have violated the Clean Water Act's anti-backsliding provisions.

The language from the opinion that CFJ quoted in its comments on these permits was an observation made by the *CBE* Court that one of the requirements of the NPDES permitting program that was not followed by the CDO was the requirement that permits be limited to a fixed term not to exceed five years. However, the question of whether a compliance schedule could extend beyond the term of an NPDES permit was not before the Ninth Circuit in *CBE* v. *UNOCAL* and was not addressed by the Court.

CFJ also references the City of Moscow, Idaho NPDES permit appeal, 10 EAD 135 (EAB 2001). That case does not stand for the proposition that compliance schedules as a general matter are limited to five years under the CWA. Furthermore, that case is not applicable to the current situation. In City of Moscow, the EAB upheld EPA's authority to impose compliance schedules shorter than those set forth in the state's 401 certification where the State of Idaho's compliance schedule authorizing provision at the time the City of Moscow permit was issued allowed compliance schedules only for "five years or the life of the permit."

Following that decision, the State of Idaho revised its compliance schedule regulations to allow schedules with no specific time limitation. The State of Idaho's current compliance schedule regulation states, in full: "Discharge permits for point sources may incorporate compliance schedules which allow a discharger to phase in, over time, compliance with water quality-based effluent limitations when new limitations are in the permit for the first time." See IDAPA 58.01.02.400.03. The State of Idaho can now determine, on a case-by case basis, what an appropriate schedule of compliance is for a particular effluent limitation and discharger. The schedules of compliance in these permits were determined by the State of Idaho in its 401 certification for these permits.

The commenters also point out that there is no guarantee that the subject permits will be administratively extended or reissued, so that each point source will hold an effective NPDES permit at the time that compliance with the final water quality-based effluent limits is ultimately required by the compliance schedule certified by the State of Idaho. This is largely irrelevant to the subject permits. It is unlikely that any of the subject permittees will implement an alternative method of disposing of their wastewater and cease their discharges within the five-year terms of these permits. Therefore, the permits are likely to be administratively continued or reissued. In the unlikely scenario that a permit for any of the subject POTWs is neither administratively continued nor reissued, the discharger would have no authorization to discharge at all upon expiration of the permit, so the compliance schedule would be irrelevant.

If the permits were administratively extended, the final compliance deadline, as well as any interim deadlines, would be in effect and enforceable.

If the permits were reissued before the compliance deadline, then, as with all of the permit conditions, the permitting authority would be required to re-evaluate the compliance schedule at the time of reissuance. Depending on the particular facts, the permitting authority may conclude that the compliance schedule in the initial permit need not be altered, or the permitting authority may find that the schedule should be shortened, extended, or deleted.

The status of the permit is not a concern as long as the initial permit contains the entire compliance schedule and final effluent limits that must be met. See further discussion below in 2-48 as to the enforceability of these terms in an NPDES permit.

### Comment #2-47

CFJ stated that a compliance schedule beyond the term of a permit is unenforceable and is inconsistent with EPA's definition of a compliance schedule (CWA Section 502(17) and 40 CFR 122.2). CFJ stated that the permits' attempts to issue schedules that extend the deadline for compliance for nine years are unenforceable schedules.

### Response #2-47

The term "schedule of compliance" is defined in federal statute (Clean Water Act Section 502(17)), federal regulations (40 CFR 122.2), and in State of Idaho regulations (IDAPA 58.01.02.010.15). None of the definitions of "schedule of compliance," nor the provision allowing schedules of compliance in the Idaho Water Quality Standards, limit the term of a schedule of compliance to the term of an NPDES

permit or any other specific length of time. This gives the State of Idaho and the EPA the discretion to make case-by-case determinations as to the appropriate length of the compliance schedules.

The schedules of compliance for the Idaho permits are established under Idaho state law. The permits therefore comply with the Clean Water Act's requirement that permits be conditioned to comply with "schedules of compliance established pursuant to any State law or regulations" (Section 301(b)(1)(C), see also the enclosure to letter dated 11/29/06 from Alexis Strauss, EPA Region 9, to Tom Howard, California State Water Resources Control Board at pages 8-9). The fact that compliance schedules established under state law are to be included in a permit issued for a term not to exceed five years does not mean that the length of the compliance schedule must be limited to five years.

In Idaho, the length of a compliance schedule is limited only by the federal regulatory requirement of 40 CFR 122.47(a)(1) that compliance be achieved "as soon as possible." The State of Idaho determined that the appropriate length of the schedules of compliance for new water quality-based effluent limits for TP, $CBOD_5$, and for Coeur d'Alene, ammonia, is ten years. To ensure compliance with Section 301(b)(1)(C) of the Act, the schedules, including the final effluent limits and any interim requirements with compliance deadlines beyond the term of the permit, have been included in the permit.

EPA agrees with the commenter that schedules of compliance in NPDES permits must be enforceable. Every condition in an NPDES permit, including those that are part of a compliance schedule, are enforceable conditions (see Locust Lane v. Swarta Township Authority, 636 F. Supp. 534, 539 (M.D. Pa. 1986)). Therefore, a compliance schedule that includes interim milestones leading to compliance with a final effluent limitation at a date later than the expiration date of the initial permit is enforceable, as long as all the requirements of the compliance schedule, including those that extend beyond five years or begin after the fifth year, are included as permit terms (See enclosure to letter dated 11/29/06 from Alexis Strauss, EPA Region 9, to Tom Howard, California State Water Resources Control Board at Page 9). The requirements of the compliance schedules have been included as permit terms in the subject permits and are therefore enforceable.

The schedules in the final permits were included as conditions in Idaho's Clean Water Act Section 401 certifications, which defer the deadline for compliance with water quality-based effluent limits for a fixed amount of time, unless the schedules are modified at some future date. The compliance schedules in the final permits represent IDEQ's judgment as to the amount of time that the subject dischargers require to achieve compliance with new WQBELs in the final permits, based on the record before IDEQ at the time. The EPA concurs with IDEQ's findings regarding the compliance schedules, based on the record before the EPA at this time, as discussed in the 2013 fact sheets at Appendix G, and has included the schedules in the permits.

The reissuance of the permits will provide EPA and IDEQ an opportunity to re-evaluate the compliance schedules (along with the other permit conditions) to determine if the schedules remain appropriate (40 CFR 122.47(a)(1)) in light of any new information obtained during the term of the permit. In addition, the State of Idaho reserves the right to modify its Clean Water Act Section 401 certifications, and EPA may modify the compliance schedules (or other permit conditions) in compliance with 40 CFR 122.62

and 122.63. The fact that the compliance schedules (like any other permit conditions) may be modified in the future does not mean that they are not enforceable.

### Comment #2-48

CFJ stated that a compliance schedule longer than five years undermines the public's right to comment on future NPDES permits.

### Response #2-48

The public has had an opportunity to comment on the compliance schedule. Indeed, the EPA has received comments on the compliance schedules and has responded to them in this response to comments. When the subject permits are reissued, the EPA and IDEQ will re-evaluate the compliance schedules. The public will be able to submit comments on any condition in the reissued permits, including any compliance schedules. If the compliance schedules are modified during the terms of the permits, the public will have an opportunity to comment on the modifications at that time, since permit modifications must follow the public review and comment procedures of 40 CFR Part 124 (see also 40 CFR 122.62).

The only change that may be made to a compliance schedule without public review and comment is to change an *interim* compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement (40 CFR 122.63(c)).

The fact that the compliance schedules extend beyond the terms of the permits in no way denies the public the right to comment on the compliance schedules nor does it deny the public the right to comment on any other aspect of a future permit.

### Comment #2-49

CFJ stated that the interim phosphorus limits for Post Falls and HARSB are inconsistent with the 1989 Phosphorus Management Plan, which required 85% phosphorus removal, seasonally. CFJ believed that the interim limits should be at least this stringent.

### Response #2-49

The interim phosphorus limits in the subject permits are discussed in the 2013 fact sheets (see the 2013 Post Falls fact sheet at Pages 20-21, the 2013 HARSB fact sheet at Pages 20-22, and both fact sheets at Appendix G). The interim limits ensure compliance with 40 CFR 122.44(l)(1), which generally requires that interim effluent limits be at least as stringent as the final limits in the previous permit. The interim phosphorus limits also comply with 40 CFR 122.45(f), which generally requires effluent limits to be expressed in terms of mass. The interim mass limits for phosphorus were calculated based on the design flows of the POTWs at the time the prior permits were issued (in 1999), which ensures that they are "as stringent" as any phosphorus limits in the 1999 permits.

The Spokane River Phosphorus Management Plan would not independently require 85% phosphorus removal for Post Falls or HARSB. This plan is not a legally binding or enforceable document.

Furthermore, the plan has been superseded by the Spokane River DO TMDL. Nonetheless, we discuss below the substantive content of the plan as well.

The management plan was signed in 1989 and was intended to implement the 25 µg/L euphotic zone site-specific phosphorus criterion for Lake Spokane. The management plan stated that the City of Spokane had been removing phosphorus at its wastewater treatment plant "for many years, and will continue to operate with a discharge permit that requires at least 85% (phosphorus) removal." See Spokane River Phosphorus Management Plan at Page 2. The City of Spokane had begun phosphorus removal in late 1977 (Cusimano 2004).

As for the other municipal dischargers, including Post Falls and HARSB, the management plan stated that "as the need for further phosphorus reduction is identified, the other municipalities will sequentially implement phosphorus removal, at rates of at least 85%, and that "the discharger with the greatest daily total phosphorus load is required to treat first." The management plan anticipated that the sequence for additional phosphorus removal to be Coeur d'Alene, followed by Post Falls, followed by Liberty Lake, followed by HARSB. The City of Coeur d'Alene is already required to remove 85% of influent phosphorus and has done so since the early 1990s.

The management plan stated that the next phosphorus removal action would be triggered when existing phosphorus controls no longer achieved a loading of 259 kg/day or less to Lake Spokane (Long Lake). This trigger loading has not yet been reached. Although more recent studies show that phosphorus loading to Lake Spokane must be reduced below 259 kg/day in order to meet Washington's water quality criterion for DO, the 1989 phosphorus management plan has not been updated. Because the trigger loading of 259 kg/day has not yet been reached, the phosphorus management plan does not independently require interim phosphorus limits of 85% phosphorus removal.

### Comment #2-50

CELP and CFJ stated that interim limits that apply during the terms of compliance schedules in the permits should be based on performance.

The Center for Environmental Law and Policy stated that, because in-stream water quality violations for DO currently exist, the permits must be conditioned so that the ultimate BOD loading does not increase during the interim compliance schedule. This will require controls on both CBOD and NBOD (nitrogenous biochemical oxygen demand). CELP stated that it is not appropriate to use technology-based CBOD limits without also controlling ammonia to appropriate levels.

The Center for Environmental Law and Policy recommended that the EPA include an evaluation of performance as part of determining interim ammonia limits so that ammonia loadings are not allowed to increase where they contribute to water quality standards violations.

CFJ also stated that "no increases in pollutant loading through growth should be allowed during the interim period while treatment facilities are being upgraded." CFJ stated that EPA must "ensure no increases in pollutant loading while these facilities are being upgraded" in order to "avoid backsliding."

## Response #2-50

In the final permits, schedules of compliance have been established for new water quality-based effluent limits for TP, CBOD, and, for Coeur d'Alene, ammonia. The limits that apply during the compliance schedules in the permit are the interim limits.

Interim limits are discussed in the fact sheets at Appendix G and also in the bodies of the fact sheets (see the Coeur d'Alene fact sheet at pages 20-21, the Post Falls fact sheet at pages 20-21, and the HARSB fact sheet at pages 20-22). Nothing in the CWA or NPDES regulations requires the EPA to establish interim effluent limits based on performance so that the actual pollutant loading does not increase during the compliance schedules. Federal regulations require only that, in general, the interim limits are at least as stringent as the limits in the previous permit (40 CFR 122.44(l)(1)). That is to say, the regulations generally prohibit increases to *authorized* loading (i.e., the loading authorized by the effluent limits) during the term of a compliance schedule, but do not necessarily prohibit increases to actual loading as long as the actual loading is in compliance with effluent limits.

In all cases, the interim effluent limits are at least as stringent as the final limits in the previous permit. The interim phosphorus limits in the subject permits are discussed in the 2013 fact sheets (see the 2013 Post Falls fact sheet at Pages 20-21, the 2013 HARSB fact sheet at Pages 20-22, and both fact sheets at Appendix G). The interim limits ensure compliance with 40 CFR 122.44(l)(1), which generally requires that interim effluent limits be at least as stringent as the final limits in the previous permit. The interim phosphorus limits also comply with 40 CFR 122.45(f), which generally requires effluent limits to be expressed in terms of mass. Interim mass limits for phosphorus were calculated based on the design flows of the POTWs at the time the prior permits were issued (in 1999).

The interim $CBOD_5$ limits in the Coeur d'Alene permit are identical to the limits in the previous permit. As explained in the HARSB and Post Falls fact sheets at Appendix G, the interim limits for $CBOD_5$ for those facilities are as stringent as the previous permits' limits for $BOD_5$. The technology-based average monthly concentration limit for $CBOD_5$ is numerically 17% less than that for $BOD_5$ (i.e., 25 mg/L instead of 30 mg/L), in recognition that some fraction of the total BOD discharged by a facility is nitrogenous. The interim loading limits for $CBOD_5$ are calculated from the technology-based concentration limits using the design flows of the POTWs as of 1999, when the prior permits were issued. The $BOD_5$ limits in the previous (1999) permits were calculated from the technology-based $BOD_5$ limits using those same flows.

With respect to ammonia, for HARSB and Post Falls, this comment was addressed by changes made in the revised draft permits issued for public comment in 2013. Neither the revised draft permits nor the final permits for HARSB or Post Falls include schedules of compliance for ammonia limits; the final water quality-based ammonia limits in those permits must be met immediately upon the effective dates of the final permits. The final ammonia limits, in combination with the effluent limits on phosphorus and CBOD, ensure compliance with Washington's water quality standards for DO, on a cumulative basis.

Coeur d'Alene has a compliance schedule for ammonia, which includes interim effluent limits. Coeur d'Alene's interim ammonia limits are identical to the ammonia limits in the previous permit, in compliance with 40 CFR 122.44(l)(1).

### Comment #2-51

The City of Spokane stated that the compliance schedules in the proposed permits are too generous. The City of Spokane was concerned that the although the Idaho dischargers do not need to improve their effluent until at least mid-2016, the downstream Washington dischargers will be required to upgrade their facilities sooner (i.e., by 2011 and 2012). The City of Spokane concluded that any data collected after 2011 and 2012 would be of little use unless the Idaho dischargers are required to upgrade by 2011 and 2012.

### Response #2-51

The Idaho regulation allowing the State of Idaho to authorize compliance schedules (IDAPA 58.01.02.400.03) does not contain a specific limitation on the duration of a compliance schedule. Federal regulations, however, require that compliance is achieved as soon as possible (40 CFR 122.47(a)(1)). As explained in Appendix G to each of the three fact sheets, the compliance schedules in the subject permits do, in fact, require compliance with water quality-based effluent limits as soon as possible.

### Comment #2-52

CFJ stated that the proposed compliance schedules do not comply with 40 CFR 122.47, which requires that compliance with final effluent limits be achieved "as soon as possible."

Moreover, CFJ did not believe that the 401 certifications or the fact sheets explained the need for a nine-year schedule of compliance and did not make an adequate showing that the nine-year compliance schedule satisfied the "as soon as possible" test. CFJ attached and referenceds a report from a third-party engineering firm that concludeds that 56 to 58 months is a reasonable time frame to achieve the proposed limits. CFJ further referenced cost estimates by BlueWater Technologies showing the cost of upgrading a plant to meet 50 ppb TP in the effluent would be roughly $1 million per MGD of capacity. CFJ referred to an e-mail from Dave Ragsdale of EPA Region 10 in which he noted that compliance schedules to complete new secondary treatment plants are generally 5 years or less. The commenters stated that EPA and DEQ should require permittees to better justify the need for a compliance schedule of a certain duration.

### Response #2-52

As explained in Appendix G to each of the 2013 fact sheets, the schedules of compliance in each of the permits require compliance with new water quality-based effluent limits as soon as possible, in compliance with 40 CFR 122.47(a)(1).

### Comment #2-53

CFJ stated that EPA has an independent duty to incorporate more stringent permit conditions than those in Idaho's certifications if necessary to achieve WQS pursuant to CWA Section 301(b)(1)(C). CFJ did not believe that the compliance schedules set forth in Idaho's 401 certifications were protective of

downstream water quality standards and illegally deferred compliance with the final effluent limits in violation of 40 CFR 122.47(a)(1).

### Response #2-53

As explained in the 2013 fact sheets at Appendix G, the schedules of compliance in each of the permits require compliance with new water quality-based effluent limits as soon as possible, in compliance with 40 CFR 122.47(a)(1).

## State Certification

### Comment #2-54

Mr. Jim Hollingsworth asked the EPA to explain the purpose of the Section 401 certification that is issued by IDEQ.

### Response #2-54

Section 401(a)(1) of the Clean Water Act requires IDEQ to either grant or waive Section 401 certification before EPA issues a NPDES permit. In issuing the 401 certification, IDEQ is essentially stating that they have reviewed the subject NPDES permit and certifying that the permit meets state water quality requirements.

States may respond to requests for certification of EPA-issued NPDES permits in one of three ways. First, the state may certify the permit, with or without specifying additional or more stringent conditions in the certification that the State deems necessary to comply with the CWA and state law. Second, the state may waive certification, which allows the permit to be issued. Third, the state may deny certification, which prevents a final permit from being issued.

The State may not condition or deny a certification on the grounds that state law allows a less stringent permit condition (40 CFR 124.55(c)). Therefore, EPA's effluent limits, which are based on Washington's water quality standards in compliance with 40 CFR 122.4(d), may be more stringent than necessary to meet Idaho's water quality standards, but that is not a basis for the State of Idaho to deny or condition their certifications.

### Comment #2-55

CFJ stated that Section 401(a)(1) of the Act requires that the State of Idaho certify that the conditions in all three permits comply with Sections 301, 302, 303, 306, and 307 of the Act and that Section 301 requires compliance with Sections 302, 306, 307, 308, 402, and 404.

CFJ stated that neither the interim nor the final limits are protective of Washington's water quality standards, in violation of Section 301 of the Clean Water Act, and that the permits were not in compliance with Section 301's effluent limitations and timelines. The Center for Justice also stated that the permits were not in compliance with Section 302's requirement that effluent limitations be established that will ensure attainment or maintenance of water quality, Section 308's requirement to monitor at such intervals and in such manner as to track river restoration and PCB pollution, and Section

402's requirement that permits be conditioned to protect the water quality of all affected States, that permits be limited to five years, and that the permits not allow backsliding.

CFJ stated that, for these reasons, the State of Idaho should not issue 401 certifications, and final permits should therefore not be issued, unless EPA includes more stringent conditions in the permits.

### Response #2-55

The issuance or denial of a 401 certification for any of the three subject permits is an action to be taken by the State of Idaho. Moreover, the legality of a state's CWA 401 certification, or its conditions, is not to be determined by EPA, the permit issuing agency. The 401 certification and its conditions must be challenged in State court. *American Rivers v. FERC*, 129 F. 3d. 99, 102 (2d Cir. 1999). However, having reviewed the commenter's concerns with the certification in light of the 2013 draft permits, EPA believes the final permits comply with sections 301, 302, 308, and 402 of the Clean Water Act, as explained below. EPA believes that the State of Idaho can appropriately issue 401 certifications for the subject permits.

#### *Section 301*

There are two main requirements in Section 301 of the. First, the permits must comply with Section 301(b)(1)(B), which requires that NPDES permits for POTWs require compliance with effluent limitations based on secondary treatment. As explained in the fact sheets, the effluent limits in the permits are at all times at least as stringent as the secondary treatment requirements of 40 CFR Part 133, which implements Section 301(b)(1)(B) of the Act. Second, Section 301(b)(1)(C) requires that NPDES permits contain effluent limits that are more stringent than technology-based effluent limits (such as secondary treatment) when those limits are necessary to meet water quality standards or other requirements of state or federal laws and regulations. The final permits contain water quality-based effluent limits whenever necessary, i.e., whenever the discharges had the reasonable potential to cause or contribute to excursions above water quality standards (40 CFR 122.44(d)(1)(i)), as explained in the fact sheets. The permits are also in compliance with Section 301(b)(1)(C)'s "timelines" (i.e., compliance schedules) as explained in Appendix G to each of the three 2013 fact sheets.

#### *Section 302*

Section 302 authorizes the EPA to promulgate water quality-based effluent limits when discharges from a point source will interfere with the attainment of WQS after the application of technology-based limits based on the "best available technology economically achievable" (BAT). Section 302 is not applicable to the subject permits for a number of reasons.

BAT limits are applicable to point sources other than POTWs. The subject permits are for POTWs, so Section 302 is not applicable to these permits. Furthermore, any effluent limits that would apply under Section 302 would be arguably less stringent than the effluent limits included in the final permits (which are based on Section 301(b)(1)(C) of the Act) because Section 302 requires a cost-benefit analysis and Section 301(b)(1)(C) does not. Finally, even though Section 302 is not applicable, the Section 301(b)(1)(C) water quality-based limits can nonetheless "reasonably be expected to contribute to the attainment or maintenance of…water quality," which is what would be required under Section 302.

### *Section 308*

Section 308 of the Act concerns monitoring and reporting requirements, inspections, and entry. The subject permits contain monitoring, reporting, and recordkeeping requirements, including receiving water monitoring requirements, which ensure that the permits comply with Section 308 of the Act. The permits also contain conditions requiring that EPA, Idaho DEQ, and authorized representatives may enter and inspect the facilities, perform sampling, and access and copy records, in compliance with Section 308 of the Act.

### *Section 402*

Section 402 of the Clean Water Act creates the National Pollutant Discharge Elimination System (NPDES). NPDES permits represent one of the exceptions to the general prohibition on discharges of pollutants in Section 301(a) of the act. The subject permits comply with all applicable requirements of Section 402 of the Act.

As stated in the 2013 fact sheets, the subject permits are conditioned to ensure compliance with the water quality standards of all affected states, as required by Section 402 of the Act and 40 CFR 122.4(d). Section 402(b)(1)(B) states that permits shall be issued for a fixed term not to exceed five years. The subject permits comply with this requirement, which is not violated by the fact that the permits implement compliance schedules that extend beyond the durations of the permits. See the response to comment 2-51 and the letter dated 11/29/06 from Alexis Strauss, EPA Region 9, to Tom Howard, California State Water Resources Control Board, and its enclosure.

Section 402(o) of the Act concerns backsliding, or the establishment of less-stringent effluent limitations in a reissued permit than the corresponding limits in the previous permit. There are exceptions provided in Sections 402(o)(2) and 303(d)(4) of the Act. Whenever an effluent limit in the subject draft permits was less stringent than that in the expired permits, this was explained in the fact sheets, and was done in compliance with Section 402(o) of the Act. This was the case for Post Falls' and HARSB's mass limits for TSS and November to January $CBOD_5$ and ammonia, Post Falls' limits for copper mass and chlorine, and HARSB's discharge authorization for June to September when river flows are less than or equal to 2,000 CFS.

## Ammonia Toxicity

### Comment #2-56

The Center for Environmental Law and Policy stated that since the upper pH limit is 9.0, EPA should use this value to model pH at the edge of the mixing zone and subsequent ammonia criteria instead of actual performance. Moreover, the commenter recommended that if performance limits for pH are used to calculate effluent limits for ammonia, they should also be placed in the permit to regulate pH.

### Response #2-56

The EPA has used appropriately conservative pH assumptions to evaluate water quality criteria for ammonia, and to determine reasonable potential, and to calculate effluent limits based on Idaho's water quality standards for ammonia toxicity. Therefore, it is not necessary for the EPA to establish

more stringent "performance-based" effluent limits for pH in the permits in order to ensure compliance with water quality criteria.

Specifically, the EPA has used the 95th percentile pH observed at all the available USGS stations in the Spokane River in Idaho. There were a total of 349 pH results, and the 95th percentile pH was 7.9 standard units. Chronic water quality criteria for ammonia are influenced by both pH and temperature, and the EPA has also used the 95th percentile temperature of the Spokane River for each season to calculate the values of the ammonia criteria. By using an upper percentile for both pH and temperature, the EPA has ensured that there is a low probability that the ammonia criteria will be more stringent than the values used to determine reasonable potential and calculate effluent limits.

In addition to using conservative assumptions for pH and temperature when calculating the values of the ammonia criteria, the EPA has also used critical conditions for the receiving water flow rate when calculating the available dilution, specifically the 30Q10 for use with chronic ammonia criterion and the 1Q10 for use with the acute criterion, or, if it was greater than the critical low flows calculated from historic data, the minimum flow rate of 500 CFS mandated by the Federal Energy Regulatory Commission (FERC) License for the Spokane River Hydroelectric Project (FERC 2009 at page 17).

The cumulative effects of the conservative assumptions used to calculate the value of the ammonia criteria, to determine reasonable potential to cause or contribute to excursions above those criteria, and, if necessary, to calculate effluent limits ensures that the discharges are very unlikely to cause or contribute to excursions above water quality criteria for ammonia because of pH.

## Elimination of Surface Water Discharges

### Comment #2-57

Mr. Gerry House, chairman of the Hayden Lake Recreational Water and Sewer District, stated that utilities and regulatory agencies should be "looking at ways to not discharge into the [Spokane] river at all."

Mr. Bart Haggin of the Lands Council stated that "the small amounts of discharges from these three discharge(s)…can easily be taken care of without putting any water in the [Spokane] river."

### Response #2-57

Coeur d'Alene, Post Falls, and the Hayden Area Regional Sewer Board currently have administratively extended NPDES permits and have applied for new NPDES permits, which authorize the cities to discharge treated wastewater to the Spokane River subject to the conditions set forth in those permits, for five years. The permits contain conditions that, among other things, ensure compliance with all affected states' water quality standards.

Pursuant to 40 CFR 122.64, EPA has the authority to deny NPDES permit applications, which would effectively force the applicants to cease discharging pollutants, but only when at least one of the listed causes are met. In this situation, EPA has concluded that it does not have an allowable cause to deny the subject applications under 40 CFR 122.64.

Wastewater re-use is a method by which the dischargers can reduce the amounts of pollutants they discharge to the Spokane River, in an effort to achieve the stringent water quality-based effluent limits set forth in the final permits. For example, HARSB currently re-uses (or land applies) 100% of its wastewater during the summer months. All three permits require the dischargers to consider wastewater re-use as a means to reduce phosphorus discharges as part of their phosphorus management plans. The phosphorus management plan requirements in the permits are authorized by federal regulations (40 CFR 122.44(k)).

## Anti-backsliding and Antidegradation

### Comment #2-58

CFJ stated that the permits violate federal and state antidegradation and anti-backsliding requirements because EPA did not limit phosphorus, CBOD5, and ammonia to prior performance.

The commenter noted that, in general, effluent limitations for POTWs are based on design flow, and that Washington's permit writers' manual requires no additional loading of the pollutants of concern. The commenter pointed out that EPA did not calculate current mass loadings of pollutants from the Idaho dischargers. The commenter back-calculated the flow rates used to calculate effluent limits in the permits, and noted that the City of Coeur d'Alene's average flow rate over the previous five years was 3.2 mgd and the maximum daily flow rate was 4.62 mgd, both of which are well below the design flow rate of 6.0 mgd. The commenter therefore argued that "the proposed mass limits will exceed the loadings discharge during the last five years…(causing) further degradation for another nine years."

The commenter argued that Section 303(d)(4)(a) "governs backsliding into impaired waterways for which there is a TMDL or other wasteload allocation." Although the commenter disagreed with how EPA calculated wasteload allocations and effluent limits for the Idaho permits, the commenter argued that these are nonetheless wasteload allocations and that therefore EPA "may not allow increased loading into Lake Spokane."

The commenter argued that EPA "must conduct an antidegradation analysis to calculate permissible loading limits in compliance with federal and state antidegradation policies to restrict loading to prior performance and to ensure that any expansion does not further degrade the waters."

### Response #2-58

#### *Anti-backsliding*

The anti-backsliding restrictions in Sections 402(o) and 303(d)(4) of the Clean Water Act and 40 CFR 122.44(l) limit the circumstances under which effluent limits and other permit conditions may be made less stringent than those in previous permits. The anti-backsliding restrictions would only be violated if the conditions in the reissued permits were made less stringent than the effluent limits in the previous NPDES permit without meeting one of the exceptions in the CWA or the regulations.

The EPA Permit Writers Manual discusses anti-backsliding requirements in Section 7.2. In general, the Permit Writers' Manual recommends that the permit writer follow the statutory provisions for effluent

limits based on state standards (including water quality-based effluent limits), and that the permit writer apply the statutory anti-backsliding provisions. For other limitations, standards, or conditions, the permit writer should apply the regulatory provisions in 40 CFR 122.44(l)(1). The anti-backliding requirements do not apply to actual historic discharge levels, but rather they apply to current permit effluent limits as compared to previous NPDES permit limits. Current permitted limits may only be less stringent than previous limits if there is an applicable exception to the general prohibitions on backsliding in the CWA or federal regulations.

From February to October, all of the interim and final effluent limits for TP, ammonia, and CBOD in all of the subject permits are at least as stringent as the final effluent limits in the previous permits. This is true for the $CBOD_5$ limits in the reissued permits for Post Falls and HARSB even though the prior permits had $BOD_5$ limits in lieu of $CBOD_5$ (see the 2013 Post Falls and HARSB fact sheets at Appendix G). Therefore, none of those limits violate the anti-backsliding provisions of the CWA or federal regulations.

From November to January, for Post Falls and HARSB, the loading limits for CBOD have been increased due to the increased design flows of the treatment plants. As explained in the 2013 fact sheets for these facilities, the increased loading limits comply with the anti-backsliding provisions of 40 CFR 122.44(l) because the physical expansions of the subject POTWs are material and substantial alterations to the permitted facilities that justify different permit conditions. See the 2013 Post Falls fact sheet at Page 22 and the 2013 HARSB fact sheet at Pages 22 – 23).

### *Antidegradation*

Neither Idaho's nor Washington's antidegradation policies require the EPA to limit phosphorus, ammonia, or $CBOD_5$ to prior performance.

#### Idaho

As stated in the 2013 fact sheets, the antidegradation reviews were conducted as part of the State of Idaho's CWA section 401 certifications. The draft certifications, including the antidegradation reviews, were appended to the 2013 fact sheets as Appendix H. The State of Idaho determined that the permits are consistent with Idaho's antidegradation policy and implementation methods.

IDEQ properly provided Tier 1 antidegradation protection to the Spokane River for aquatic life uses and both Tier 1 and Tier 2 protection for recreation uses. Ammonia and CBOD discharges would not affect the recreation use, so only a Tier 1 analysis was performed for ammonia and CBOD. IDEQ determined that, because the ammonia and CBOD limits in the permits are set at levels that ensure compliance with the narrative and numeric criteria in the Idaho WQS the permits will protect and maintain existing and designated beneficial uses in the Spokane River, thus ensuring compliance with Tier I antidegradation requirements. IDEQ found that the phosphorus limits in the permits meet the Tier 2 requirements under the antidegradation policy because there will be no degradation in water quality, but rather an improvement in TP levels.

The EPA has reviewed Idaho's antidegradation reviews for the subject permit and finds that they are consistent with the state's 401 certification requirements and the state's antidegradation implementation procedures.

### Washington

The subject permits can affect water quality in the State of Washington, therefore Washington's antidegradation policy is potentially applicable to the subject permits pursuant to 40 CFR 122.4(d). As explained in Appendix B to each of the 2013 fact sheets, the subject permits are consistent with the Washington's antidegradation policy. With respect to the phosphorus, CBOD, and ammonia limits, the Spokane River and Lake Spokane are 303(d)-listed for DO in the State of Washington. Washington's antidegradation policy states that "for waters that do not meet assigned criteria, or protect existing or designated uses, the department will take appropriate and definitive steps to bring the water quality back into compliance with the water quality standards." As explained in Appendix B to the fact sheets, the subject permits' final effluent limits for TP, $CBOD_5$, and ammonia ensure compliance with Washington's water quality criteria for DO on a cumulative basis.

## Other Comments

### Comment #2-59

Mr. Dennis Hinrichsen stated that he is troubled that "only cities are being required to meet these standards," and asked why there is "no mandate for near lake developments like Arrow Point who allegedly spilled 20,000 gallons of untreated sewage."

### Response #2-59

Alleged previous noncompliance with the Clean Water Act or similar state laws by entities other than those receiving permits cannot affect the permits in question.

Arrow Point Resort (on the east side of Lake Coeur d'Alene) is now connected to the Gozzer Ranch Development/Golf Course's wastewater treatment and disposal system. Arrow Point was formerly on a community drain field. The new system utilizes a membrane bioreactor (MBR) to produce high-quality (Class A) effluent that is seasonally stored in golf course ponds and then used to irrigate the golf course during the growing season.

### Comment #2-60

Mr. Gerry House stated that "the water quality in Hayden Lake continues to deteriorate because elected officials and agencies are unable to enforce storm water, site disturbance ordinances….Yet, we seem to focus most of our interest on sewer and sewage treatment plants."

### Response #2-60

The subject permits authorize POTWs to discharge treated wastewater to the Spokane River. The Spokane River does not drain to Hayden Lake, and the subject discharges do not affect water quality in Hayden Lake. Water quality problems in Hayden Lake are not relevant to the subject permits.

### Comment #2-61

Mr. Clyde Sheppard of the Spokane River Property Owners' Association stated that "we believe the current monitoring by DEQ of all the waste water treatment facilities of one visit per year is not satisfactory."

### Response #2-61

The commenter was referring to inspections conducted by Idaho DEQ. The NPDES program is a self-monitoring program. The permits require the dischargers to conduct routine self-monitoring of the discharges and to report the results of this monitoring on a monthly basis to allow EPA and citizens to determine whether the effluent limits and other conditions in the permits are being met. The permits also require the permittees to report all instances of noncompliance with the permits. Inspections may reveal some violations that would not be detected in monitoring reports, but discharges causing water quality violations will show up in the monitoring. The frequency with which a facility is inspected by DEQ or EPA is a separate issue from the reissuance of the permits.

### Comment #2-62

Mr. Jim Hollingsworth stated that, although the fact sheets state that the permits protect human health, there is nothing in the draft permits that indicate that human health is at risk and that the only thing that may be affected by the discharge are fish at the lower end of Lake Spokane.

### Response #2-62

NPDES permits must contain effluent limits necessary to meet water quality standards. Water quality standards are established in part to protect human health, but also to protect other beneficial uses of the waters such as the growth and propagation of fish, aquatic life and wildlife, aesthetics, and water supply for industry or agriculture. Waters are generally protected for multiple beneficial uses, each of which has water quality criteria that are necessary to support those uses.

For some pollutants, the criteria necessary to support aquatic life uses are more stringent than those necessary to protect human health, e.g., DO, temperature, and certain metals. For other pollutants, the human health criteria are more stringent. For example, the effluent limits for *E. coli* bacteria are based on water quality criteria that protect swimmers from illness, and the monitoring and best management practices for PCBs are intended to reduce the concentration of PCBs in fish tissue, which will minimize the risk of cancer for people who eat fish caught from the Spokane River.

The CWA and NPDES regulations require the TP limits in the subject permits in order to achieve water quality criteria to protect fish and other aquatic life. But human health may also be at risk because of the excess nutrient loading to Lake Spokane. The excess nutrient loading to Lake Spokane has resulted in blue-green algae blooms in the lake (Cusimano 2004). Blue-green algae can be highly toxic to humans, wildlife, and livestock. The toxins in certain kinds of blue-green algae can attack the liver or the nervous system and can cause death in as little as 30 minutes. Blue-green algae are unsightly, so adults are unlikely to drink water contaminated with blue-green algae, but wildlife, livestock, and children may drink not reject contaminated water and could therefore suffer illness or death as a result of the contamination. The toxins in blue-green algae are not removed by boiling the water. Swimming in water contaminated with blue-green algae (even without ingesting any of the water) can cause skin and eye irritation (British Columbia Ministry of Health 2012). Reducing levels of nutrients to the level necessary to meet DO criteria (for aquatic life) will also address the risks to humans, livestock, and wildlife from the algae problem.

### Comment #2-63

CFJ stated that the Spokane Tribe of Indians is an "affected State," thus, EPA is required to evaluate the impacts of the Idaho dischargers upon waters of the Spokane Tribe of Indians.

### Response #2-63

In developing the draft permits, the EPA did not specifically evaluate the effects of the subject permits upon waters of the Spokane Tribe of Indians. The EPA evaluated the effects of the subject permits as far downstream as the Long Lake Dam, which is at river mile 33.9 on the Spokane River. The permits include conditions that ensure compliance with the water quality standards of the states of Idaho and Washington in Lake Spokane and in the Spokane River upstream from Lake Spokane. Due to additional dilution and continued decay of non-conservative pollutants at points downstream of the Long Lake Dam, the subject discharges will have a lesser impact upon water quality in waters of the Spokane Tribe of Indians than in Lake Spokane and in the Spokane River upstream from Lake Spokane.

The following toxic pollutants have been detected in the effluents of at least one of the subject POTWs:

- Ammonia
- Butylbenzyl Phthalate
- Cadmium
- Chlorine
- Chloroform
- Copper
- Diethyl Phthalate
- Di-N-Butyl Phthalate
- Lead
- Nitrate + Nitrite
- Phenol
- Silver
- Zinc

Idaho's water quality criteria for ammonia, cadmium, chlorine, lead, nitrate + nitrite[17], and silver are at least as stringent as the Spokane Tribe's water quality criteria for these pollutants. Since the permits are conditioned to ensure compliance with Idaho's water quality criteria for these pollutants, they will also ensure compliance with the Spokane Tribe's water quality criteria for these pollutants.

The Spokane Tribe's aquatic life criteria for zinc are more stringent than Idaho's water quality criteria, but are identical to Washington's aquatic life criteria for zinc. As explained in the 2007 fact sheets, the subject POTWs do not have the reasonable potential to cause or contribute to excursions above Washington's water quality criteria for zinc. Thus, the subject POTWs do not have the reasonable

[17] Idaho does not have numeric criteria for nitrate + nitrite, but for the purpose of developing the subject draft permits, the EPA interpreted Idaho's narrative criterion for toxic pollutants using the EPA's recommended criterion of 10 mg/L, which is identical to the Tribe's criterion for primary contact ceremonial and spiritual uses.

potential to cause or contribute to excursions above the Spokane Tribe's aquatic life water quality criteria for zinc. The Spokane Tribe also has human health water quality criteria for zinc that are more stringent than those of Idaho or Washington. However, in all cases, the effluent limits for zinc in the subject permits require lower effluent concentrations of zinc than the Tribe's human health zinc criterion for consumption of water and organisms (470 µg/L).

Butylbenzyl phthalate, diethyl phthalate, di-n-butyl phthalate (or dibutyl phthalate), and phenol were detected in the effluent from Post Falls but not Coeur d'Alene or HARSB. Table 31, below, shows the maximum projected receiving water concentrations of these pollutants from Table 2 on Page D-6 of the 2013 Post Falls fact sheet, as well as the most stringent criterion for these pollutants in the Spokane Tribe's water quality standards. The maximum projected receiving water concentrations are calculated based on the mixing zones authorized by Idaho under critical conditions for river flow, effluent flow, and effluent concentration. These pollutants will be further diluted by the time the Spokane River reaches waters of the Spokane Tribe. In all cases, the maximum projected receiving water concentrations are less than the Spokane Tribe's water quality criteria. Therefore, the Post Falls discharge does not have the reasonable potential to cause or contribute to excursions above the Spokane Tribe's water quality criterion for butylbenzyl phthalate, diethyl phthalate, di-n-butyl phthalate (or dibutyl phthalate), or phenol, even though the Spokane Tribe's criteria for these pollutants are more stringent than Idaho's criteria.

**Table 31: Comparison of Maximum Projected Receiving Water Concentrations in Post Falls Reasonable Potential Analysis to Spokane Tribe WQS for Phthalates and Phenol**

| Pollutant | Maximum Projected Receiving Water Concentration in RPA (µg/L) | Most Stringent Spokane Tribe Criterion (µg/L) |
|---|---|---|
| Butylbenzyl phthalate | 1.08 | 38.7 |
| Diethyl phalate | 1.08 | 834 |
| Di-n-butyl phthalate | 1.23 | 86.4 |
| Phenol | 6.92 | 8,060 |

Chloroform was detected in the effluent from HARSB, but not Coeur d'Alene or Post Falls. In the reasonable potential analysis for HARSB, the maximum projected receiving water concentration of chloroform was 0.22 µg/L (see the 2013 HARSB fact sheet at Page D-5). This is less than the Spokane Tribe's criterion of 1.58 µg/L. Therefore, the HARSB discharge does not have the reasonable potential to cause or contribute to excursions above the Spokane Tribe's water quality criterion for chloroform, even though the Spokane Tribe's criterion is more stringent than Idaho's criterion.

The Spokane Tribe's water quality criteria for copper are more stringent than Idaho's criteria. However, in all cases, the maximum projected receiving water concentrations of copper in the reasonable potential analyses are less than the Tribe's chronic water quality criterion for copper for protection of aquatic life, which is the most stringent copper criterion in the Spokane Tribe's water quality standards. The maximum projected receiving water concentrations are calculated based on the mixing zones authorized by Idaho, under critical conditions for river flow, effluent flow, and effluent concentration. The copper in the subject effluents will be further diluted by the time the Spokane River reaches waters of the Spokane Tribe.

| Table 32: Comparison of Maximum Projected Receiving Water Concentrations in Reasonable Potential Analyses to Spokane Tribe WQS for Copper | | |
|---|---|---|
| POTW | Maximum Projected Receiving Water Concentration in RPA (µg/L) | Spokane Tribe Chronic aquatic life criterion (µg/L)[1] |
| Coeur d'Alene | 0.96 | 3.05 |
| Post Falls | 1.55 | |
| HARSB | 0.86 | |

Notes:
1. The Spokane Tribe's aquatic life water quality criteria for copper are based on the hardness of the receiving water. The chronic criterion listed was calculated at a hardness of 28.4 µg/L, which is the 5th percentile hardness measured at USGS station number 12433000 (Spokane River at Long Lake, WA) from 1998 to 2003. These were the most recent hardness data available at this station.

With respect to nutrients and oxygen-demanding pollution, the effects of upstream nutrients and oxygen-demanding pollution upon the Spokane Arm of Lake Roosevelt are discussed in the *Lake Roosevelt/Spokane River Arm Modeling Project* (Cadmus Group and Scott Wells and Associates 2009). Two of the modeling scenarios described in this report are relevant to the question of whether the subject dischargers significantly impact DO in waters of the Spokane Tribe: scenario 1, which used the draft Spokane River TMDL's modeling predictions as upstream boundary conditions, and set DO concentrations in the Long Lake Dam outflow to 8 mg/L, which is the Spokane Tribe's water quality criterion for the Spokane River, if they were below 8 mg/L, and scenario 3, which used "no source" (i.e. natural conditions) modeling predictions as upstream boundary conditions, and set DO concentrations in the Long Lake Dam outflow to 8 mg/L if they were below 8 mg/L. Thus, the difference between scenarios 1 and 3 represents the effect of anthropogenic sources of nutrients and oxygen-demanding pollution as allocated in the draft TMDL. As explained in Appendix B, the TP, ammonia, and CBOD limits in the subject permits are somewhat different from those assumed in the TMDL modeling, but they have an equivalent impact upon DO in Lake Spokane. As shown in Tables 30 and 31, of the *Lake Roosevelt/Spokane River Arm Modeling Project*, the difference between the average DO concentrations from Scenarios 1 and 3 is 0.13 mg/L for January 1st through October 29th and 0.2 mg/L for July 1st through September 30th. The difference between the average TP concentration between Scenarios 1 and 3 is 3 µg/L for both January 1st through October 29th and July 1st through September 30th. A change of 0.2 mg/L is within the monitoring measurement error for recording instruments typically used to monitor DO (see the enclosure to the letter dated February 11, 2008 approving Washington's water quality standards, from Michael F. Gearheard, EPA Region 10, to Dave Peeler, Washington State Department of Ecology). The subject dischargers represent a small fraction of the total anthropogenic loading of nutrients and oxygen-demanding pollution to Lake Spokane. The DO and TP impacts of the subject POTWs upon waters of the Spokane Tribe, which are just downstream from Lake Spokane and thus subject to additional dilution and continued decay of non-conservative pollutants, will be negligible.

With respect to PCBs, as explained in the response to comment #1-1, the EPA does not have the necessary data to perform a reasonable potential analysis using facility-specific effluent data, as described in Section 3.3 of the TSD. Therefore, a reasonable potential analysis was conducted without facility specific effluent data, as described in Section 3.2 of the TSD. That analysis did not result in a

finding of reasonable potential for PCBs. Therefore, the EPA has not established effluent limits for PCBs in the subject permits.

### Comment #2-64

CFJ states that EPA needs to better explain which water quality based effluent limits are based on mixing zones, and the EPA should describe the size of the mixing zones.

### Response #2-64

A mixing zone is "an area where an effluent discharge undergoes initial dilution and is extended to cover the secondary mixing in the ambient waterbody. A mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented" (EPA 2010 at page A-10).

This comment was addressed by the revised fact sheets that were issued with the revised draft permits in 2013. Idaho's draft CWA Section 401 certifications, dated June 25, 2013, which were included in the 2013 fact sheets as Appendix H, identified the pollutants for which mixing zones are authorized and the sizes of the mixing zones in terms of the percentages of the critical low flow volumes allowed for mixing. In Table D-1, in Appendix D to the 2013 fact sheets, the EPA listed the dilution factors afforded by the authorized mixing zones. The mixing zone sizes and dilution factors are also listed in the reasonable potential and effluent limit calculation tables in Appendices D and E of the fact sheets.

In some cases, effluent limits based on the anti-backsliding provisions of the Clean Water Act or upon Washington water quality standards were more stringent than the limits that would have resulted from the application of Idaho water quality criteria at the edge of the authorized mixing zones. In those cases, in Appendix C to the 2013 fact sheet, the EPA identified anti-backsliding or the requirement to meet the water quality requirements of all affected States (40 CFR 122.4(d)) as the bases for the limits. In those cases, as a practical matter, less dilution than authorized by Idaho in its draft CWA Section 401 certification is necessary to meet Idaho's water quality criteria.

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