

**U.S. Environmental Protection Agency  
Region 10**

**Response to Comments  
City of Plummer  
Permit No. ID-002278-1**

**Background**

**Permit Reissuance**

On December 29, 2004, EPA proposed to reissue the National Pollutant Discharge Elimination System (NPDES) Permit for the City of Plummer wastewater treatment plant. The Public Notice of the draft permit initiated a public comment period which expired on January 28, 2005. The EPA received comments on the draft permit from Unwin Scheben Korynta Huettl, Inc. (USKH) on behalf of the City of Plummer (City), as well as comments from the Coeur D'Alene Tribe (Tribe).

This document summarizes significant comments received on the draft permit, and EPA's response to the comments. The document provides a record of the basis for changes made from the draft permit to the final permit. The Fact Sheet that accompanied the draft permit was not revised because it is already a final document that provides a basis for the draft permit.

The reissuance of this permit is for the existing facility. The City is currently in the planning/design phase of a new wastewater treatment plant. Once the City has identified the design criteria for the new/upgraded facility, the City will submit a new application to the EPA. From this application, a new/modified permit will be developed.

Because of several permitting issues raised by the City and the Tribe during the public comment period, EPA met with representatives from the City, Tribe, and Idaho Department of Environmental Quality (IDEQ) on April 29, 2005 to discuss these issues. The focus of the meeting was on planning issues and future permitting requirements of the City's new/upgraded wastewater treatment plant.

**Wastewater Treatment Plant Facility Planning**

There are several factors driving the need for, and influencing the design parameters of, the new/upgraded facility. Some of the major factors include:

- Flows to the existing facility exceed its design capacity. Projected average daily flows for the City in 2010 are 0.3 million gallons per day (mgd), which exceed the existing design capacity of the treatment plant of 0.13 mgd.
- The City is under a compliance order from EPA to construct a new/upgraded treatment facility.
- The current site of the existing facility has no room for expansion.

- The potential for future water quality-based phosphorus and ammonia effluent limits. There is currently insufficient data to evaluate the need for phosphorus and ammonia limits in this permit.

### **Plummer Creek Water Quality**

The Plummer Wastewater Treatment Plant discharges to Plummer Creek, which flows to Lake Chatcolet, at the southern portion of Coeur d’Alene Lake.

Plummer Creek is not currently on EPA’s 303(d) list. However, the Tribe believes there is substantial evidence to suggest that Plummer Creek is impaired and may need a TMDL in the near future. Tribal biologists have noted a distinct lack of diversity in the macro-invertebrate populations persisting downstream of the City all the way to Little Plummer Creek (the only major tributary.)

Phosphorus data for Plummer Creek is summarized below.

<b>Phosphorus and Ortho-Phosphate Data in Plummer Creek</b>			
<b>Location</b>	<b>Above Treatment Plant</b>	<b>Just Below Treatment Plant</b>	<b>At Mouth</b>
<b>Sample Period</b>	May – Oct. 1999	April – Sept. 2000	March – May 2001
<b>Total Phosphorus (ug/L)</b>	13 – 39	18 – 68	55 – 73
<b>Ortho-Phosphate as P (ug/L)</b>	<20 – 24	<6 – 67	32 – 64
<b>No. of Samples</b>	8	6	4

The 2002 Draft Addendum to the Coeur d’Alene Lake Management Plan summarizes water quality data for the southern portion of Coeur d’Alene Lake. The plan reports dissolved oxygen concentrations below Tribal and State water quality standards. Phosphorus levels (<5 to 88 ug/L) are high in the impounded area of the St. Joe River and its lateral lakes (including Lake Chatcolet). One of the possible sources of the low dissolved oxygen and higher nutrient levels in Lake Chatcolet has been identified as adjacent tributaries. One of the recommendations from the Lake Management Plan is to eliminate and/or reduce the nutrient load from wastewater treatment plants to the Coeur d’Alene Lake.

Over the next two years, the Tribe will be conducting a study within the Plummer Creek Watershed, “the Plummer Creek Watershed Nutrient Load Assessment, Modeling, and Management Plan Development.” The project is intended to characterize nutrient concentrations and transport through the Plummer Creek watershed and into Chatcolet Lake. The project is designed to update the current understanding of nutrient loading sources within the Plummer Creek watershed and to delineate appropriate nutrient loading controls in the form of a Watershed Nutrient Management Plan.

## **Comments on Draft Permit**

### **Comment 1- Expand Discharge Period to Include November**

The draft permit allows discharge from December 1 through April 30. The City requested that the discharge period be expanded to November provided there is 0.2 mgd in the river, as determined by an in-stream flow meter upstream of the treatment facility discharge.

#### **Response 1**

The EPA agrees with the City's request to allow discharge during the month of November; however the required flow in Plummer Creek to allow discharge is 0.44 cfs (0.28 mgd). This requires slightly more water in the creek than the City requested; this flow corresponds to the critical flow conditions, upon which the permit limits are based. The draft permit limits were based on the statistically low flow conditions during the period from December 1<sup>st</sup> through April 30<sup>th</sup>. These were:

1-day low flow (1Q10) = 0.37 cfs (0.24 mgd)

7-day low flow (7Q10) = 0.44 cfs (0.28 mgd)

Permit Modification: Section I.A.1 has been revised to allow discharge from November 1 through April 30 provided there is a minimum flow of 0.44 cfs in Plummer Creek upstream of the outfall. The time frame for the surface water sampling has been revised to include the month of November. Table 2 of the permit requires flow monitoring in Plummer Creek.

### **Comment 2 – Recalculate Low Flows Using Lake Creek Correlation**

Because of the lack of flow data for Plummer Creek, the draft permit limits were based on a correlation between the limited Plummer Creek Data and more extensive data from Wolf Lodge Creek. The City believes this correlation is flawed because the two creeks have different aspects and Plummer Creek has a longer flow period than Wolf Lodge Creek. The Tribe also noted that the basin and stream characteristics of Wolf Lodge Creek are quite different than those of Plummer Creek. Both the City and the Tribe suggested that a better correlation would be made with Lake Creek.

#### **Response 2**

The EPA reviewed flow data for two monitoring stations on Lake Creek. Based on the review, the critical flows used to calculate permit limits were not revised using Lake Creek data for the following reasons:

1. The time frames for the two data sets (Plummer Creek and Lake Creek) don't overlap, which makes correlating the two data sets difficult. Data for Lake Creek are from 1999 to 2004. The time period of the Plummer Creek flow data does overlap with the Wolf Lodge Creek flow data. The Lake Creek data set is also limited (only five years).
2. In a further discussion with the City, the City clarified their comment regarding differing flow periods for Plummer Creek and Wolf Lodge Creek. The City's main concern was the

potential for predicted low flows during the summer months when the difference in the two watersheds is more pronounced. Because the correlation between Plummer Creek and Wolf Lodge Creek was made for the time period during which the facility discharges (i.e. the winter and spring seasons), correlation during the summer months is irrelevant.

3. Even if the water quality-based effluents limits were based solely on the existing flow data for Plummer Creek, i.e. the flow data were not correlated with either Wolf Lodge Creek or Lake Creek, the permit compliance limits (which are for chlorine) would not change. Because actual measured flows in Plummer Creek are low, the water quality-based effluent limits are below the method detection limit for chlorine regardless if the limits are based on statistically predicted low flows (1Q10 and 7Q10) or the actual measured low flows for Plummer Creek.

Permit Modification: None

### **Comment No. 3 – Recalculate Loadings Based on Projected Flows to the Facility**

The City requested an increase in the “implied flow limit” and the mass-based loads for BOD<sub>5</sub> and TSS. Based on the draft permit concentration and loading limits, the City calculated the “implied flow limit” to be 0.12 million gallons per day (mgd). Existing flows at the treatment plant exceed this amount; plant flows from November 3, 2003 through December 8, 2004 were 0.195 mgd. The City anticipates increased flow due to population growth. In addition, the City has an agreement to accept flow from the equivalent of 500 additional persons from the Coeur d’Alene Tribe’s celebration grounds once the City’s treatment plant is upgraded to treat the increase in flow.

### **Response**

The reissuance of this permit is for the existing treatment plant. The mass-based limits in the permit are based on the design flow of the existing facility, i.e. the wastewater flow rate that the plant was built to handle. The design flow of the existing facility (as provided in the permit application) is 0.13 mgd. EPA cannot authorize mass-based loads above the capacity of the wastewater treatment plant for which the permit is written.

As discussed in the background section, once the City has the design parameters for the new/upgraded wastewater treatment, the City will need to submit a permit application to EPA, from which a new/revised permit will be developed.

Permit Modification: None

### **Comment 4 – Remove Instantaneous Maximum Limit for E. coli**

The City requested that the instantaneous maximum limit for E. coli be removed from the permit. The City attached a copy of a comment letter from the Association of Idaho Cities (AIC), which was prepared for other draft municipal NPDES permits in Idaho. The City agreed with the comments made in the AIC letter, specifically, that the Idaho Water Quality Standards (IDAPA 58.01.02.080.03) exclude the single sample water quality exceedance from constituting a water

quality violation. Therefore, the City requested that the instantaneous maximum limit be removed from the permit. In addition, the City requested that the reporting requirements for violation of the instantaneous maximum be removed.

**Response 4**

The EPA disagrees. EPA interprets IDAPA 58.01.02.251 of the Idaho Water Quality Standards (WQS) as providing the sole basis for determining bacteria effluent limitations in NPDES permits. However, the State of Idaho may use IDAPA 58.01.02.080.03 as a basis for their enforcement discretion or implementation policy of their wastewater treatment requirements. In addition, NPDES permitting regulations at 40 CFR 122.44(d) require EPA to include effluent limits in permits necessary to achieve water quality standards established under section 303(c) of the Clean Water Act. Establishing *E. coli* permit limits based upon single sample maximum and geometric mean concentrations is not only consistent with Idaho WQS, but allows EPA to monitor and control effluent variability by controlling spiked concentrations in the discharge in a way that is protective of public health.

In response to the City's request to remove the reporting requirements for violation of the instantaneous maximum, Section II.G of the permit requires 24-hour reporting for any violation of a maximum daily or instantaneous maximum discharge limitation. This is standard regulatory language that is included in all NPDES permits.

Permit Modification: None

**Comment 5 - Total Phosphorus Limit**

The City requested that EPA and the Coeur d'Alene Tribe impose a reasonable phosphorus limit in the permit based on existing data. The City is constructing a new treatment plant and would like this permit to provide the phosphorus design standards for the plant. The City would like some assurance that once the new plant is on-line, new stringent phosphorus limits would not surface.

**Response**

At this time, there is insufficient data for EPA to include a phosphorus limit in the permit. During the April 29, 2005 meeting, the City withdrew the request for a phosphorus limit in this permit.

Permit Modification: None

**Comment 6 - Ammonia and Phosphorus Effluent Monitoring**

The City noted that surface water monitoring is required for 4 years, whereas treatment plant monitoring for ammonia and phosphorus monitoring is limited, with only one year of required monitoring.

**Response**

The purpose of this surface and effluent monitoring is to evaluate the need for water quality-

based effluent limits in the next permit. The intent of the sampling program is to collect a minimum of 12 effluent samples and surface water samples. The permit was revised to require monthly effluent sampling until a minimum of 12 samples are collected.

This is the minimum number of samples that EPA considers necessary to evaluate the need for ammonia limits for the facility. Of course, a more robust data set is always better and the EPA encourages the City to collect additional data.

The surface water sampling is required during three, two-month periods for four years. These periods were revised for the final permit, since the discharge period was extended to include November.

Permit Modification: Note 4 in Table 1 was revised to require sampling until a minimum of 12 samples is collected.

Table 2, Note 2 is revised to include the month of November.

#### **Comment 7 – Designated Uses of Plummer Creek**

The Tribe commented that the Fact Sheet erroneously states that the Tribe has not yet adopted water quality standards. The Tribe has adopted water quality standards and has submitted an application to EPA for “Treatment as a State”. The Tribe requested that EPA consider the Tribal water quality standards when contemplating water quality issues within the reservation. The Tribal WQS define the beneficial uses for Plummer Creek differently. The most notable difference between the State and Tribal use designations is that of secondary contact recreational use (in the State WQS) versus recreational and cultural uses (in the Tribal WQS), which are analogous with the State’s primary use designation. Further, the Tribe believes that it is premature to conclude that the discharge from the treatment facility will not result in degradation of the receiving water, a statement made in the Fact Sheet.

#### **Response**

EPA is required to use federally-approved water quality standards for Clean Water Act purposes. The Tribe has a submitted application to administer the WQS program. As of June 2005, EPA has not approved the application. In the absence of federally-approved WQS, EPA’s practice is to apply adjacent or downstream standards to the water body for the purpose of developing permit limitations and conditions. Therefore, the Idaho WQS were applied to the permit. Once the Tribe receives authorization to administer the WQS program and has federally-approved water quality standards, the Tribe’s WQS will be in place for Clean Water Act purposes.

In terms of developing effluent limits based on primary contact recreation, this change impacts instantaneous maximum permit limit for E. coli. The primary contact single sample criterion in the Idaho WQS is 406 coliform forming units per 100 milliliters (CFU/100 ml) versus 576 CFU/100 for secondary contact recreation. The Tribe’s request was raised at the April 29 meeting, the City agreed to base the E. coli limits on primary contact recreation. This decision was confirmed on May 5, 2005. As a result, the permit was modified to include an E. coli

instantaneous maximum limit of 406 CFU/100 ml instead of 576 CFU/100 ml. Fecal coliform concentrations in the effluent are generally 2 CFU/100 ml or below. Therefore, it doesn't appear that the City will have a problem meeting the revised limit. However, the City is concerned with meeting the new E. coli limits in concert with the new stringent chlorine effluent limit. In addition, during the E. coli discussion during the April 29 meeting, the City reiterated their belief that the Idaho Water Quality Standards excludes a single sample water quality exceedance from constituting a water quality standard violation. (Refer to Comment/Response 4)

Permit Modification: The E. coli limits in Table 1 are revised to include an instantaneous maximum limit based on primary contact recreation.

### **Comment 8 – Listing Authority for Plummer Creek**

The Tribe commented on discussion in the Fact Sheet regarding the 303(d) list classification of Plummer Creek. The Fact Sheet notes that Plummer Creek is not listed as a water quality limited water segment, and that IDEQ has classified Plummer Creek as “waters with insufficient data and information to determine if standards are attained.” In their comment, the Tribe stated that Idaho lacks jurisdiction to list or de-list waterbodies within the Reservation. The Tribe believes that Plummer Creek is most likely impaired and that if a TMDL is to be developed at some point in the future it will be done so by the Tribe and EPA.

### **Response**

Currently, Plummer Creek is not on the 303(d) list. EPA has 303(d) listing jurisdiction within the Coeur d'Alene Reservation; Idaho does not have such jurisdiction within the Reservation.

Permit Modification: None

### **Comment 9 – Clarification of Essential Fish Habitat**

The Tribe requested information on what constitutes essential fish habitat, and noted that Plummer Creek was an important fishery for the tribe in the not so distant past.

### **Response**

Essential Fish Habitat (EFH) is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The Magnuson Stevens Fishery Conservation and Management Act (MSFCMA) promotes the protection of EFH in the review of projects conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. The MSFCMA requires that EFH be identified for all species which are federally managed. The EFH designations are expected to go into effect by means of fishery management plans (FMPs) or FMP amendments. There is no EFH identified in Plummer Creek. For additional information on EFH in the northwest see the NOAA website at: <http://www.nwr.noaa.gov/1habcon/habweb/msa.htm>.

Permit Modification: None

**Comment – 10 Surface Water Monitoring**

The Tribe believes that the wastewater treatment plant may be leaking wastewater into Plummer Creek. Therefore the Tribe requested that the surface water monitoring program be expanded to include sampling at locations upstream and downstream of the wastewater treatment plant and during periods when the facility is not discharging to Plummer Creek. During non-discharge periods, the wastewater is stored in the lagoons and pumped to the land application site.

**Response**

The upstream surface water sampling along with effluent sampling is used to evaluate the need for water-quality based effluent limits in the next permit and to develop the effluent limits if the evaluation indicates that limits are needed.

In order to assess the leakage from lagoons, a more reliable method is a lagoon seepage rate test. The final permit requires a lagoon seepage test in the event that the City decides to retain the existing lagoons as a treatment plant option. Based on the April 29 meeting, the City's preferred wastewater treatment plan is to decommission the lagoons and build a mechanical plant. If the City goes with this alternative, the EPA believes that a lagoon seepage rate test is unnecessary.

Permit Modification: Section I.E has been added to the permit to require a seepage rate test if the City's final design includes the continued use of the existing lagoons.

**Additional Revisions to the Permit**

References to the EPA, Coeur d'Alene Tribe and IDEQ were clarified.