RESPONSE TO COMMENTS

City of Firth
Wastewater Treatment Plant
NPDES Permit # ID-0024988
January 22, 2013

On October 2, 2012, the U.S. Environmental Protection Agency (EPA) issued a public notice for the issuance of the City of Firth Wastewater Treatment Plant (WWTP) draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID-0024988. This Response to Comments provides a summary of significant comments and provides corresponding EPA responses. The permit is not changed as a result of the comments

Comments were received from the following commenter:

Robert Dial, Public Works Director, City of Firth (City)

1. **Comment (City):** The City requests a compliance schedule for meeting phosphorus limits. We have reviewed our phosphorus monitoring results since 2005 and found that if the proposed phosphorus limits had been included in our last permit, we would have been in compliance most of the time. However, there were two months when the average monthly limit would have exceeded and up to 12 weeks when the average weekly limit could have been exceeded. These events seem to be related to infiltration events, which resulted in high wastewater flows. Infiltration has decreased in more recent years because of drier weather. However, we are concerned if we have another wet year, we may have trouble meeting our phosphorus limits.

   The City has a wastewater facilities planning study currently under way. After the study is completed, we anticipate implementing collection system improvements to reduce infiltration and inflow and treatment improvements to address increased phosphorus loads from future growth. It is expected that collection and treatment improvements will help ensure the city can meet the proposed phosphorus limits. We expect these improvements to be completed before our new permit expires.

   Response: The American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis, May 2012, (American Falls TMDL) approved by EPA in August, 2012 stated "Because nutrients do not appear to be affecting beneficial uses in the Snake River, no nutrient wasteload reductions are recommended for …Firth …wastewater treatment plant" The TMDL also states "Wasteload allocations reflect a no overall increase from current loading." Since the allocation is based on the existing discharge and reflects current loadings with no required reductions of phosphorus, a compliance schedule is not required.

   The permit is unchanged.

2. **Comment (City):** The draft permit calls for weekly sampling of influent and effluent BOD_5 and TSS and effluent total phosphorus. These constituents were monitored monthly in the last permit.

The increased sample frequency will result in a significant cost increase to the city. The City's present costs are $186.00 per month for sampling. Sampling costs under the draft permit are estimated to be $699.00 per month for sampling after accounting for lab costs, labor and delivery of samples. This is a large increase for a small town with only 159 connections. The increased sampling costs would require a 20 percent increase in our monthly sewer for water quality monitoring alone.

Instead of mandatory weekly sampling, the city proposes monthly sampling for BOD_5, TSS and phosphorus with optional weekly sampling if necessary to demonstrate permit compliance. The monthly sampling would be conducted the first week of that month. If the results show that we are meeting the average monthly limits for these constituents, no additional sampling would be required for the rest of the month for these constituents. If a constituent exceeds the average monthly limit, then we would go to weekly samples for that constituent until it falls back under the average monthly limit. If an average monthly limit is exceeded in the first sample, additional sampling could help improve the average and demonstrate compliance with the limit. Monthly sampling would be the norm with weekly sampling triggered only when the average monthly limit is exceeded.

Response: The EPA disagrees that measuring the average monthly discharges with optional weekly sampling demonstrates compliance with average weekly effluent limits. The City of Firth is required to be in compliance with the weekly limits at all times, not just when the first week shows compliance with the monthly limit.

40 CFR 122.48(b) requires the permit to specify, "Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity". Monthly monitoring is not representative of weekly discharges nor is monthly monitoring representative of a weekly interval."

The *NPDES Permit Writers' Manual*, September, 2010 states:

"To establish a monitoring frequency, the permit writer should consider the variability of the concentration of various parameters by reviewing effluent data for the facility (e.g., from discharge monitoring reports [DMRs]). A highly variable discharge should require more frequent monitoring than a discharge that is relatively consistent over time (particularly in terms of flow and pollutant concentration."

The pollutant concentration of BOD_5 discharged from Firth varied from 2 mg/L to 53 mg/l over a five year period and had a coefficient of variation (CV) of 2.0. Page 107 of the Technical Support Document (TSD) states that a CV of 0.6 is typical of the range of variability of effluents measured by EPA and represents a reasonable degree of relative variability. However the 2.0 CV for Firth is over three times this typical range and is therefore highly variable and more frequent weekly monitoring is therefore necessary.

Similarly the range for TSS varied from 2 mg/L to 87 mg/L and had a coefficient of variation of 1.6 almost three times the typical CV of 0.6. This is highly variable and more frequent weekly monitoring is necessary.

The *NPDES Permit Writers' Manual* also states:

"Location of the discharge. The monitoring frequency could be increased if the discharge is to sensitive waters"

The Snake River in the area of Firth's discharge is listed on Idaho's 303(d) list because it did not attain the state water quality standards for nutrients such as phosphorus. The American Falls Reservoir was also identified on the 303(d) list because it did not attain the state water quality standards for phosphorus. The Snake River is a tributary and contributor of phosphorus loading to the American Falls Reservoir and is therefore included in the American Falls TMDL. Because both the American Falls Reservoir and the Snake River are listed they are "sensitive waters" to nutrient loading and weekly monitoring of phosphorus is necessary to measure the impacts to them.

The permit is unchanged.