

RESPONSE TO COMMENTS

City of Bonners Ferry Wastewater Treatment Plant NPDES Permit # ID-002022-2 July 21, 2011

On November 18, 2011, the U.S. Environmental Protection Agency (the EPA) issued a public notice for the proposed reissuance of the City of Bonners Ferry Waste Water Treatment Plant (WWTP) draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID-002022-2. This Response to Comments provides a summary of significant comments and provides the corresponding EPA responses. Where indicated, the EPA has made appropriate changes to the final NPDES Permit.

Comments were received from the following:

David Sims, Assistant Administrator, City of Bonners Ferry

Justin Hayes, Program Director, Idaho Conservation League (ICL)

1. Comment (City of Bonners Ferry)

The draft permit states that the temperature monitoring shall begin within six months of the effective date of the permit. The City of Bonners Ferry currently does not have any temperature monitoring equipment at our wastewater facility, and we are requesting that the six month period be changed to one year. This will allow us to coordinate with Idaho Department of Environmental Quality (IDEQ) to ensure the data we collect is useful to them and available in an agreeable format. This will still result in four full years of data for their analysis before the next permit reissue.

Response

As addressed by IDEQ's Response to Comments document prepared for the first public comment period regarding the 401 certification, this request has become unnecessary since delays in permit issuance has allowed time to obtain the equipment and coordinate with IDEQ. The format for reporting is the discharge monitoring report required under Section III.B of the permit. Averaging periods for reporting temperature are the same as those of the water quality standards for temperature in IDAPA 58.01.02.250. These are an instantaneous and maximum daily average. These reporting periods have been added to Section I.B.3 of the permit.

2. Comment (ICL)

The draft permit reauthorizes the current discharge limits, which are based on the design flow of the Bonners Ferry WWTP. The design flow of this facility is 0.45 million gallons per day (mgd). During the term of the previous permit, the plant has discharged an average of 0.39 mgd. The difference between the design flow and the average discharge, 0.06 mgd, is not discharged and therefore the water quality of the receiving water is defined by the actual

loading attributable to a discharge of 0.39 mgd.

It is possible to quantify the difference between actual loading (i.e. that which is currently occurring) vs. permitted loading (i.e. the total amount of loading that is authorized under the current/past permit). Doing so helps to illustrate that reissuing this facility's NPDES permit with the currently proposed effluent limits authorizes a lowering of water quality in the receiving water.

For example:

The prior permit developed the mass-based limits for BOD5 for this facility using the following equation:

Mass-based limit (lbs/day) = concentration limit (mg/L) x design flow (mgd) x 8.34

In this instance, the concentration limit for BOD5 is 45 mg/L and the design flow is 0.45

The resulting mass-based limit for BOD5 is 169 lbs/day. Thus, the prior permitted (or authorized) average monthly limit for BOD5 is 169 lbs/day. This translates to an annual limit of 61,685 lbs/yr.

However, this facility is currently discharging at 0.39 mgd, which is less than the design flow of the facility. Substituting the 'actual flow' for the design flow of the facility results in a calculation that reports the actual loading to the receiving water. See below:

Conservatively utilizing the concentration limit found in the permit. (However, we are aware that utilization of the actual reported discharge concentrations would likely result in an even lower actual loading number.)

Concentration limit (mg/L) x actual flow (mgd) x 8.34 = Actual loading (lbs/day)

Actually loading: 45 mg/L x 0.39 mgd x 8.34 = 146.4 lbs/day. This translates to an annual actual load of 53,436 lbs/yr.

The difference between the prior permit's authorized loading and the actual loading is 8,249 lbs of BOD5.

Thus, the proposed permit will unlawfully allow a lowering of water quality because the limits would be based on prior permit limits, not "actual current loading" as required per EPA policy and the demonstrated in the EPA's Water Quality Standards Handbook.

The example outlined above is just for one of the pollutants discharged by this facility. Performing this exercise for all of the pollutants discharged from the facility demonstrates similar findings. Namely, that this reissued permit will allow for the lowering of water quality in the receiving water.

Response

The EPA disagrees with this comment. EPA has reviewed IDEQ's 401 certification and antidegradation analysis to ensure that the final permit contains conditions as stringent as necessary to meet water quality standards, including the State's antidegradation policy and antidegradation implementation procedures. The State's antidegradation implementation procedures require IDEQ to consider the design flow of a facility, not the actual flow from a facility. IDAPA 58.01.02.052.04a. IDEQ followed these implementation procedures and used design flow when it conducted the antidegradation analysis for the Bonners Ferry WWTP. Therefore, after reviewing the 401 certification and the antidegradation analysis, EPA concludes that the permit contains conditions necessary to meet state water quality standards; in particular, EPA finds that IDEQ has followed its antidegradation implementation procedures that have been approved by EPA.

There is no change to the permit.

3. Comment (ICL)

Antidegradation review for high quality waters does allow for increased discharges, but the draft permit does not contain the analysis to support this. 40 CFR 131.12(a)(2) does allow for increase discharge into high quality waters upon meeting two conditions: First, after conducting a full public participation process. Second upon a showing "that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." Further, this necessity analysis must demonstrate that the state and EPA will achieve "the highest statutory and regulatory requirements for all new and existing point sources and reasonable best management practices for nonpoint source pollutant controls."

The EPA interprets the necessity analysis "to prohibit point source degradation as *unnecessary* to accommodate important economic and social development if it could be partially or completely prevented through implementation of existing State-required BMPs.

If the reissued permit authorizes discharges into high quality waters based on prior unutilized effluent limits, it will cause a lowering of water quality. If the EPA decides to continue down this path, then the permit must follow a full public participation process and perform a necessity analysis. This necessity analysis must first ensure the state and EPA implement the highest regulatory requirements and reasonable BMPs before authorizing any discharge that would lower existing water quality as measured by the current loading from this facility.

Response

On September 16, 2011, IDEQ issued a final 401 certification and antidegradation analysis after a 30 day public comment period on the revised 401 certification and antidegradation analysis. IDEQ's 401 certification and antidegradation analysis contains a Tier 1 analysis for aquatic life uses and a Tier 2 analysis for recreational uses. EPA has reviewed the revised 401 certification and antidegradation analysis and concludes that the final permit conditions are as stringent as necessary to meet state water

quality standards, including the State's antidegradation policy and antidegradation implementation procedures.

4. Comment (ICL)

It strikes us that one of the reasons why EPA is misapplying anti-degradation with regard to this issue of reissuing permits is that EPA has confused the directive to develop limits that ensure that a discharge does not cause or contribute to an excursion above a state water quality standard with the obligation to comply with anti-degradation requirements.

EPA conducts a "reasonable potential" analysis to determine if there is a reasonable potential that a discharge will cause or contribute to an excursion above a state water quality standard. If EPA concludes that this potential exists then EPA develops a WQBEL effluent limit designed to ensure that the germane standard is not violated. If EPA determines that there is not a reasonable potential that the discharge will violate the standards, EPA does not develop a WQBEL effluent limit.

There is, however, a need to recognize that a facility could have a discharge that does *not* have a reasonable potential to cause or contribute to a violation of a numeric or narrative water quality standard but will still result in a lowering of water quality. In such an instance EPA must acknowledge that water quality will be degraded by the discharge even though no numeric or narrative standards will be violated. As such, EPA would need to either develop an effluent limit which assures that water quality will not be lowered in violation of the anti-degradation requirements or undertake the determination that this lowering of water quality is necessary to accommodate important economic or social development in the area. EPA's position that the reissuance of effluent limits from prior permits, which do indeed protect against the exceedance of standards, provide assurance against the degradation of the receiving water is thus incorrect.

Response

In this case, EPA established numeric effluent limits for those pollutants in which EPA found that there was a reasonable potential. In addition, IDEQ completed an antidegradation analysis. In that analysis, IDEQ found that the waterbody was a Tier 1 waterbody for aquatic life uses and a Tier 2 waterbody for recreational uses. IDEQ concluded that, with regard to the Tier 1 analysis, the permit ensures the level of water quality necessary to protect designated and existing uses. Furthermore, with regard to the Tier 2 analysis, IDEQ concluded that there will not be a lowering of water quality.

5. Comment (ICL)

Temperature

The receiving water is listed as impaired for temperature. 40 CFR 122.44(d)(1) and the Clean Water Act at Section 301(b)(1)(c) require that EPA establish limits for all pollutants which may "contribute" to an excursion of a water quality standard. Since the receiving water is 303(d) for temperature, any discharge

of temperature is “contributing” to the ongoing exceedance of the standards. As such EPA needs to develop an effluent limit for temperature in this permit.

Response

EPA did not have data to conduct a reasonable potential analysis for temperature. However, the permit requires continuous temperature monitoring so that data can be gathered during this next permit cycle. EPA will use the ambient and effluent temperature data to determine if the facility has the potential to cause or contribute to a violation of water quality standards.

6 Comment

Ammonia

The permit needs to contain effluent limits for ammonia. The prior (2004) permit contained monitoring requirements for ammonia. This data demonstrates the effective baseline for calculating actual loading to the receiving water. Limits are needed to ensure that water quality is not lowered, per antidegradation requirements.

Response

The EPA evaluated the effect on water quality for monitored pollutants of concern in the discharge without permit limits. Under the prior permit cycle and in the final permit, the permittee is required to monitor for ammonia. Based on the reasonable potential evaluation (see Appendix B of the fact sheet), the EPA determined that there is no reasonable potential, consistent with 40 C.F.R. 122.44, for the facility’s discharge to exceed numeric water quality criteria for ammonia. Furthermore, in IDEQ’s antidegradation analysis, IDEQ found that the waterbody required Tier 1 protection for the aquatic life use. Ammonia is a pollutant which impacts the aquatic life use. IDEQ concluded that the permit ensures that existing and designated beneficial uses are protected. Therefore, there is no basis to include an effluent limit for ammonia.

7. Comment (ICL)

Phosphorus

This facility discharges phosphorus to the receiving water yet there is no requirement that phosphorus be monitored or limited. Pursuant the previously articulated concerns regarding antidegradation, this permits needs to limit phosphorus to current loading levels.

Response

The EPA did not include monitoring for phosphorus in the prior permit or final permit. The EPA has no reason to believe that the facility is discharging phosphorus at levels that would cause or contribute to an exceedance of nutrient criteria. Furthermore, in IDEQ’s antidegradation analysis, IDEQ found that the waterbody required Tier 1 protection for the aquatic life use. Phosphorus is a pollutant which impacts

the aquatic life use. IDEQ concluded that the permit ensures that existing and designated beneficial uses are protected. Therefore, there is no basis to include an effluent limit for phosphorus.

8. Comment (ICL)

The draft permit proposes to allow State authorized mixing zones for several pollutants. In the case of total ammonia nitrogen, the calculated maximum concentration at the edge of the mixing zone is greater than the ambient concentration observed upstream from the point of discharge. This increase in concentration demonstrates that the discharge is causing a “lowering of water quality. As such the mixing zone for this pollutant is not allowed.

Further, we question the practice of providing a mixing zone for a pollutant that does not have a limit. Absent an enforceable limit, there is no reason to believe that the calculations used to develop (and rationalize) the mixing zone will be relevant during the forthcoming operation of the facility.

The mere fact that DEQ and EPA feel compelled to issue a mixing zone for total ammonia nitrogen argues compellingly that a limit is needed. Indeed, absence the mixing zone, the discharge would (as demonstrated in the “Reasonable Potential For Aquatic Life” document at page 27 of the Fact Sheet) would result in a violation of both the acute and chronic water quality standards in the vicinity of the discharge.

Response

The EPA is required to include effluent limits in a permit where there is a reasonable potential for a pollutant in the discharge to violate water quality standards. 40 CFR 122.44(d); *see also* Technical Support Document for Water Quality-based Toxics Control (TSD) at p. 56. When determining whether a discharge has reasonable potential to cause, or contribute to an in-stream excursion above criteria, EPA may consider dilution (40 CFR 122.44(d)(1)(ii)). As shown on pages 27 of the Fact Sheet, the EPA used TSD procedures, critical conditions and considered dilution in determining reasonable potential to violate the water quality criterion for ammonia. The calculations show that there is not a reasonable potential to violate the ammonia water quality criterion; therefore, effluent limits are not required.