Response to Comments on the 2010 and 2012 Draft NPDES Permits for the City of Idaho Falls

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Region 10
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Overview

EPA issued for public comment a draft National Pollutant Discharge Elimination System (NPDES) permit for a publicly owned treatment works (POTW) owned and operated the City of Idaho Falls, Idaho (City) on October 5, 2010. The public comment period was scheduled to close on November 4, 2010. In response to a request from the City, the comment period was extended until December 10, 2010.

On February 15, 2012, EPA reopened the public comment period and accepted comments on those aspects of the revised draft permit that differed from the 2010 draft permit. Significant changes in the revised draft permit included revisions to the proposed effluent limits for total phosphorus, ammonia, and chlorine, changes to the dilution series and the accelerated testing trigger for whole effluent toxicity (WET), and changes to the receiving water monitoring requirements.[1] The comment period for the revised draft permit closed on March 16, 2012.

EPA received comments on both versions of the draft permit from the City and from the Idaho Conservation League (ICL). This document provides EPA's response to the comments received on both versions of the draft NPDES permit for the City of Idaho Falls.

Ammonia Effluent Limits

Comment #1

The City stated in comments on the 2010 draft permit that the ammonia limits were based on out-dated ammonia criteria that have since been superseded by IDEQ and approved by EPA. The City noted that, in the 2010 fact sheet, EPA cited antibacksliding as the reason the limits have not been updated. The City stated that antibacksliding does not prevent removal of ammonia limits or less stringent ammonia limits based on the current Idaho criteria for the following reasons:

- The City stated that it has not been able to comply with the limits in the current permit, and, as documented in annual compliance reports to EPA, additionally would not be able to immediately meet less stringent limits based on the current Idaho criteria.
- The City stated that antibacksliding does not prevent removal or relaxation of limits in all cases, because there are exceptions to antibacksliding that EPA did not consider or discuss in the Fact Sheet. The City stated that the exception under CWA sections 402(o)(1) and 303(d)(4)(B) pertaining to attainment waters clearly applies to the Idaho Falls situation. The City stated that the Snake River near Idaho Falls is considered an attainment water, as demonstrated by the antidegradation analysis conducted by IDEQ in its draft certification dated June 3, 2010 and accepted by EPA for the 2010 draft permit. In the case of attainment waters, permit limits can be made less stringent as long as the limits are consistent with the State's antidegradation policy. In this particular case for ammonia limits, new or increased discharge of ammonia would not occur. In fact, even new, less restrictive limits based on the current Idaho criteria would still require some additional improvements in ammonia treatment and effluent quality compared to current effluent quality. Thus, there would be no lowering of water quality with these less restrictive limits. The City stated that this

[1] A complete list of the changed conditions in the 2012 draft permit can be found in the 2012 fact sheet at Page 2.

conclusion is consistent with the logic and findings of the antidegradation review that has already been developed for the 2010 Draft Permit.

- The City stated that this same logic for the antibacksliding exception that the City outlines for ammonia limits is in fact consistent with the logic in the EPA Fact Sheet for this Draft Permit for the transition from fecal coliform limits to E. coli limits, which also was prompted by a change in Idaho Water Quality Standards criteria for bacteria. For bacteria, EPA also cites the antibacksliding exception pertinent to attainment waters and related consistency with Idaho's antidegradation policy.
- The City stated that a 10% mixing zone is more stringent than typical and necessary, and the City would not have reasonable potential for ammonia if a larger mixing zone were used.

Response #1

This comment was addressed in part by revisions to the ammonia effluent limits proposed in the 2012 draft permit, which were less stringent than those in proposed in the 2010 draft permit as well as those in the 2001 final permit.

As explained in the 2012 fact sheet, EPA applied the antibacksliding exception in (CWA Section 303(d)(4)(B)) to allow less-stringent ammonia limits in the revised draft permit.[2] This antibacksliding exception is applicable to the revised draft permit because the revised ammonia effluent limits are based in large part on a provision of Idaho's antidegradation implementation methods (Idaho Code Section 39-3603(2)(c)). This specific provision provides that if a discharge results in degradation of a high quality waterbody but the degradation is found to be insignificant, then no further Tier II antidegradation review is required. This provision was adopted by the State of Idaho in March 2011 and approved by EPA on August 18, 2011. It was therefore not in effect when the 2010 draft permit was issued. As explained in Appendices B, D, and E of the 2012 fact sheet, although the revised ammonia limits proposed in the 2012 draft permit will result in water quality degradation with respect to ammonia, that level of degradation was found by the State of Idaho in its CWA Section 401 certification to be insignificant, so no further tier 2 antidegradation analysis is required. Therefore the 303(d)(4)(B) exception to antibacksliding is applicable to the 2012 draft permit, as well as the final permit.

The City appears to argue that relaxation of the ammonia limits would not actually allow a lowering of water quality if the antidegradation analysis was based on the City's current discharge, which frequently exceeds its 2001 permit limits. Although not clearly articulated, the City seems to argue that if the ammonia limits could be relaxed to any load and/or concentration less than the actual effluent loads and/or concentrations, that relaxation would not result an increase in their actual discharge, which would not lower water quality and therefore comply with the State's antidegradation policy.

EPA disagrees that the ammonia limits could be relaxed to reflect existing effluent loads and/or concentrations without allowing lower water quality. Idaho's antidegradation implementation methods provide that, "for a reissued permit or license, the calculated change (in water quality) will be the difference in water quality that would result from the activity or discharge as authorized in the current permit or license and the water quality that would result from the activity or discharge as proposed in the reissued permit or license" (IDAPA 58.01.02.052.04.a).

[2] This is the same anti-backsliding exception referenced by the City in its comments on the 2010 draft permit.

The implementation methods further provide that "for pollutants that are currently limited, current discharge quality shall be based on limits in the current permit or license," and that "future discharge quality shall be based on proposed permit limits" (IDAPA 58.01.02.052.04.a.i – ii). Thus, Idaho's antidegradation implementation methods clearly require that the permit's *effluent limits*, as opposed to the actual level of discharge, must be used to define both the current and future discharge quality.

The City's position would provide an incentive for permittees to violate their effluent limits, and then use these violations as a basis to relax effluent limits in reissued permits. This would be an illogical outcome, and is clearly not the intent of either the antibacksliding provisions of the Clean Water Act or the State of Idaho's antidegradation policy.

The City's reference to the fecal coliform antibacksliding and antidegradation analysis in the 2010 fact sheet does not support their assertion that the ammonia limits can be relaxed. The City notes that EPA used the antibacksliding exception in section 303(d)(4)(B) to allow fecal coliform limits to be removed from the permit. However, the fecal coliform limits could be deleted without allowing lower water quality because there are other limits in the permit for bacteria, which maintain and protect the existing level of water quality with respect to bacteria and their effect on beneficial uses. As stated in the 2010 Fact Sheet on Page 13,

> *E. coli is a better indicator of bacteria levels that may cause gastro-intestinal distress in swimmers, and the new E. coli limits provide the same level of protection for the beneficial use of primary contact recreation as was provided by the fecal coliform effluent limits in the previous permit. Therefore, the change from fecal coliform limits to E. coli limits will not allow lower water quality relative to the 2001 permit. Because the change from fecal coliform limits to E. coli limits will not allow lower water quality relative to the 2001 permit, this change is consistent with Idaho's antidegradation policy (IDAPA 58.01.02.051).*

Thus, the basis for deleting the fecal coliform limits in the draft permit was that there were other limits in the permit (for E. coli) which would prevent lowering of water quality relative to the 2001 permit, and deleting the fecal coliform limits was therefore consistent with Idaho's antidegradation policy and, in turn, allowed under CWA Section 303(d)(4)(B). This is not the case for modifying ammonia limits.

The City states that EPA has removed ammonia limits from other WWTP permits when reasonable potential evaluations have shown no need for the limits using the updated criteria and appropriate mixing zones. The City states that, if a larger mixing zone were used, the discharge would not have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia. As explained below, the City of Idaho Falls discharge would, in fact, have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia, even if a larger mixing zone were used in the reasonable potential analysis. Thus, EPA could not remove ammonia effluent limits from the permit, even if the removal of the ammonia limits would not violate antidegradation requirements.

As stated in the Fact Sheet, on Page D-3, for ammonia, "EPA has used maximum daily limits in the 2001 permit as the maximum projected effluent concentrations. The previous permit's effluent limits are used in this manner because, in general, the anti-backsliding provisions of the Clean Water Act (Section 402(o)) require that water quality-based effluent limits in reissued permits be at least as stringent as the effluent limits in the previous permit. If a discharge at the

maximum limits in the previous permit would not result in excursions above water quality standards, then the previous permit's effluent limits may be retained." Thus, the finding of "no reasonable potential" for ammonia, in Table D-2 of the 2010 fact sheet, is a finding that the 2001 permit's *effluent limits* are protective of water quality. In other words, Table D-2 of the 2010 fact sheet demonstrates that the City of Idaho Falls discharge does not have the reasonable potential to cause or contribute to excursions above water quality criteria for ammonia *if* the discharge were in compliance with the 2001 permit's effluent limits. It is *not* a finding that the historic *discharge*, which has not been in consistent compliance with effluent limits, does not have the reasonable potential to cause or contribute to excursions above water quality criteria for ammonia.

In order to find that the facility did not have reasonable potential for ammonia, and in turn remove the ammonia limits from the permit, EPA would need to demonstrate that the actual levels of ammonia discharge would not cause or contribute to excursions above water quality criteria for ammonia. EPA has re-calculated the reasonable potential analysis for ammonia, using the procedures in Section 3.3 of the *Technical Support Document for Water Quality-based Toxics Control*, using a 25% mixing zone and the facility's actual effluent ammonia data and has found that the discharge would have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia, even with the larger mixing zone (see Table 1, below).

Table 1: City of Idaho Falls Ammonia RPTE using Effluent Data and 25% Mixing Zone

Dilution Factors	Acute	Chronic Ammonia
	12.1	18.5
Probability Basis		0.99
Z-score of Probability Basis		2.33
Maximum Reported Effluent Conc.		25.37
Number of samples (n)		1827
Coefficient of Variation		0.931
σ^2		0.624
σ		0.790
Percentile of Largest Value		0.997
Z-Score of Percentile of Largest Value		2.805
C_{99}		4.598
C_n		6.709
Reasonable Potential Multiplier (RPM)		0.69
Maximum Projected Effluent Conc.		**17.4**
Ambient Concentration		0.00
Maximum Acute Receiving Water Concentration (RWC)		1.43
Maximum Chronic RWC		0.94
Acute Aquatic Life Criterion		1.77
Chronic Aquatic Life Criterion		0.72
Reasonable Potential?		**YES**

Comment #2

The City stated in its comments on the 2010 draft permit that, if ammonia limits are retained, even the less stringent limits based on the updated criteria, a schedule of compliance will be needed to provide time to comply.

In its comments on the 2012 draft permit, the City stated that it understood "that its compliance obligations with respect to the ammonia limits in this Draft and Final Permit have been defined and determined in accordance with the EPA Compliance Order dated December 13, 2011."

Response #2

Compliance schedules are allowed for effluent limitations based on standards adopted after July 1, 1977 only if the state has clearly indicated in its water quality standards or implementing regulations that it intends to allow them (see the *US EPA NPDES Permit Writers' Manual* at Section 9.1.3). Compliance schedules are also governed by federal regulations at 40 CFR 122.47.

The compliance schedule authorizing provision in Idaho's water quality standards reads as follows: "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" (IDAPA 58.01.02.400.03).

While the ammonia limits in the City of Idaho Falls permit are "new" in the sense that the limits are different from those in the 2001 permit, the ammonia effluent limits in the reissued permit are less stringent than those in the 2001 permit. The State of Idaho did not authorize a compliance schedule for ammonia limits in its Clean Water Act Section 401 certification of this permit.

One of the factors relevant to the appropriateness of a compliance schedule under 40 CFR 122.47 is "how much time the discharger had to meet the WQBEL under prior permit(s)" (see the *US EPA NPDES Permit Writers' Manual* at Section 9.1.3). The City of Idaho Falls was given a compliance schedule of nearly five years, under its 2001 permit, to meet the same ammonia limits that have been continued forward in this permit, and those limits have now been in effect for six years following the expiration of that compliance schedule. Therefore, the City has already had eleven years to achieve compliance with the ammonia limits in the 2001 permit, and thus it would not be appropriate to authorize a second compliance schedule to meet less-stringent limits.

Therefore, neither federal regulations (40 CFR 122.47) nor the Idaho Water Quality Standards (IDAPA 58.01.02.400.03) allow for a schedule of compliance for ammonia effluent limits in this case.

Comment #3

ICL stated that, even if Idaho's insignificance threshold in its antidegradation implementation methods was lawful, the analysis that was provided to determine that the decrease in assimilative capacity resulting from the increased ammonia effluent limits was less than 10% is seriously flawed.

ICL stated that the revised factsheet for the 2012 draft NPDES permit contains an "Insignificance Analysis for Revised Ammonia Limits," which purports to follow the procedures outlined in Idaho's antidegradation rules to calculate the "baseline condition" – a step necessary to determine if the increased degradation will utilize more than 10% of the receiving water's remaining assimilative capacity. ICL stated that a key aspect in this analysis is identifying all upstream sources of the pollutant (in this case ammonia) and assuming that each of these sources is discharging the pollutant at their permitted limits.

ICL stated that, in this instance, the upstream WWTPs at St. Anthony and Rexburg were identified and their discharges were input into a model to determine baseline conditions – and then "insignificance." ICL stated that the model that was developed to justify the proposed increased ammonia effluent limits failed to include ammonia discharges from numerous other upstream WWTPs, including Ashton, Driggs, Rigby, Ririe and Roberts. ICL stated that the Roberts, Rigby, Ririe and Ashton WWTPs do not any have effluent limits for ammonia in their current NPDES permits, and St. Anthony's WWTP does not have an ammonia limit during the period from November to May. ICL stated that the Driggs WWTP's NPDES permit contains both 'interim' and 'final' limits, and that the 'interim' limits would need to be used for modeling 'baseline conditions' since these are the limits currently in affect. ICL stated that these additional WWTPs need to be factored in.

ICL also stated that downstream ammonia sources must also be considered when setting the "baseline condition" in this instance because the increase in ammonia from the Idaho Falls WWTP will travel downstream and interact with ammonia from downstream sources, causing further degradation of water quality in these downstream areas. In this instance, the ammonia discharges from the downstream WWTP at Shelley must be taken into account.

ICL stated that it believes the inclusion of the ammonia discharges from these other WWTPs will alter the findings of this "Insignificance Analysis" and demonstrate that the proposed increased ammonia effluent limit will result in an unacceptable degradation of water quality and is not consistent with Idaho's antidegradation rules or EPA's antidegradation obligations. Thus, the proposed increased ammonia limits run afoul of the Clean Water Act's anti-backsliding provision.

Response #3

Overview

This comment concerns the application of a provision of Idaho State law which is part of Idaho's EPA-approved antidegradation implementation methods. The relevant provision is Idaho Code Section 39-3603(2)(c), which states that IDEQ "shall consider the size and character of an activity or discharge or the magnitude of its effect on the receiving stream and shall determine whether it is insignificant. If an activity or discharge is determined to be insignificant, then no further Tier II analysis for other source controls, alternatives analysis or socioeconomic justification is required." The provision further states that IDEQ "shall determine insignificance when the proposed change in an activity or discharge, from conditions as of July 1, 2011, will not cumulatively decrease assimilative capacity by more than ten percent (10%)." Assimilative capacity is calculated as the difference between the criterion level and the ambient level of a pollutant (IDEQ 2011).

IDEQ has published draft guidance explaining its antidegradation policy and implementation methods (found in IDAPA 58.01.02.051 and 58.01.02.052, and Section 39-3603 of the Idaho Code). The draft guidance is entitiled *Idaho Antidegradation Implementation Procedure* ("Draft Antidegradation Guidance"), and was published on August 5, 2011. The Draft Antidegradation Guidance provides recommendations on how the State of Idaho's antidegradation provisions should be applied. IDEQ has found in is antidegradation review of this permit that the degradation resulting from the less-stringent ammonia limits is insignificant, thus, the effluent limits are consistent with Idaho's antidegradation policy, even though no Tier II analysis for

other source controls, alternatives analysis or socioeconomic justification was performed. This finding was based on an analysis performed by CH2MHILL on behalf of the permittee and provided to IDEQ and EPA. The analysis is included in the 2012 fact sheet as Appendix E.

This comment raises concerns regarding the application of this provision to the ammonia limits in the Idaho Falls permit. Specifically, ICL asserts that the insignificance analysis did not adequately consider other ammonia sources' impact upon the assimilative capacity of the Snake River, and that the insignificance analysis should have used modeling in order to consider the ammonia discharges from numerous upstream WWTPs that were not mentioned in the insignificance analysis, including Ashton, Driggs, Rigby, Ririe and Roberts. The consideration of other sources is important when applying this provision, because this is necessary to accurately calculate the remaining assimilative capacity, and, in turn, the amount of degradation that would be considered "insignificant."

As explained below, EPA agrees with IDEQ's finding that the calculation of the remaining assimilative capacity in this case was accurate and consistent with Idaho's antidegradation methods in State of Idaho statutes and regulations, as well as the Draft Antidegradation Guidance.

Determining Upstream Water Quality

Idaho's antidegradation implementation methods regulations state that "receiving water quality will be the quality measured, or modeled as appropriate, immediately above the discharge for flowing waters…" (IDAPA 58.01.02.052.04.b). The Draft Antidegradation Guidance provides recommendations regarding when modeling is necessary to determine the upstream receiving water quality in addition to or in lieu of measurements. The Draft Antidegradation Guidance also provides recommendations on specifically how to use measurements to determine the upstream water quality. In this case, the determination of upstream water quality was based upon measurements instead of modeling, although modeling was used to verify the appropriateness of using measurements. As explained below, this was appropriate based on the Draft Antidegradation Guidance.

Basis for Using Measured Upstream Water Quality in lieu of Modeling

Measurements Were Used in a Manner Consistent with the IDEQ's Draft Antidegradation Guidance

The upstream water quality, shown in the significance analysis at Exhibit 1, (Appendix E) is calculated based on the 95th percentile ammonia concentration measured immediately upstream from the City's discharge. The Draft Antidegradation Guidance states that IDEQ will use the 95th percentile of upstream measurements when evaluating water quality for pollutants subject to acute and chronic aquatic life criteria, unless there are fewer than 12 data points available, in which case DEQ will use the maximum value observed during critical conditions (Page 23). In this case, there were at least 30 measurements available, so the 95th percentile was used (see the insignificance analysis at Page 3).

Upstream Sources with Effluent Limits Would Not Change the Upstream Ammonia Concentration by Discharging at Their Effluent Limits

As ICL stated in its comment, the insignificance analysis modeled the potential impact of the St. Anthony and Rexburg WWTPs discharging at their effluent limits, and concluded that "even at

fully permitted limits, ammonia contributed by the St. Anthony and Rexburg WWTFs is present in negligible concentrations by the time it reaches Idaho Falls." The insignificance analysis therefore concluded that the upstream water quality for ammonia, which was based on measurements, would not change if St. Anthony and Rexburg were to discharge at their permitted limits instead of their actual discharge levels. IDEQ's draft Antidegradation Guidance does not require modeling to assess upstream water quality when there are sufficient in-stream measurement data, as is the case here. Furthermore, modeling shows that the upstream discharges would not affect the validity of that measurement data. ICL notes that the City of St. Anthony's permit (#ID0020401) has seasonal ammonia limits, which only apply from June – October. For the purpose of determining if upstream WWTPs would impact the upstream ammonia concentration if they discharged at their effluent limits, the significance analysis took a conservative approach and assumed that the City of St. Anthony would discharge at its June – October average monthly effluent limit of 26 mg/L year-round.[3] The City of St. Anthony's average monthly limit of 26 mg/L is close to the maximum ammonia concentration measured, which was 29.3 mg/L, according to the 2009 fact sheet for the City of St. Anthony's draft permit (see page D-4). Thus, EPA believes the assumption that the City of St. Anthony would discharge at its June – October effluent limit year-round was reasonable.

Modeling is not Necessary for Upstream Sources without Effluent Limits

For those upstream sources without effluent limits for ammonia (i.e., Roberts, Rigby, Ririe and Ashton), using modeling in lieu of actual measurements is neither necessary nor practical. All of the sources named by ICL in its comment are publicly owned treatment works treating and discharging primarily domestic sewage. Ammonia is known to be a constituent of domestic sewage. Thus the discharge of ammonia is authorized by the NPDES permits for Roberts, Rigby, Ririe and Ashton, even though no effluent limits have been established.[4]

According to the Draft Antidegradation Guidance, the purpose of modeling upstream water quality in the context of an antidegradation analysis is to ensure that the analysis reflects "potential upstream quality, that is, the quality that would occur with other sources upstream discharging at their permitted limits" (page 24).

An effluent limit quantifies the amount of authorized discharge. However, if there are no effluent limits established for a given pollutant, and the discharge of that pollutant is nonetheless authorized, as it is for the ammonia discharged by the upstream sources named by ICL in its comment, then the authorized discharge and the actual discharge of that pollutant are indistinguishable. The discharges of ammonia from sources without ammonia effluent limits do effect the ammonia concentration upstream from Idaho Falls. However, because there is no difference between actual and authorized discharges for those sources, measurements of ammonia in the receiving water upstream from the Idaho falls discharge effectively capture the impact of any and all upstream sources that contribute to the upstream ammonia concentration and load, including all the sources named by ICL in its comments.

[3] The assumption that St. Anthony would discharge at its effluent limits year-round was not stated in the insignificance analysis. However, this assumption is clear from the spreadsheet used for the modeling calculations, which is part of the administrative record for this permit.

[4] See memorandum dated July 1, 1994 from Robert Perciasepe, Assistant Administrator (AA) for Water, Steven A. Herman, AA for Enforcement and Jean C. Nelson, General Counsel to Regional Administrators and Regional Counsels at Page 2.

Modeling is therefore not necessary to assess the impact on water quality for sources that don't have effluent limits for ammonia.

Ashton, Driggs and Ririe Are Too Distant to Model

The Draft Antidegradation Guidance states, "it is suggested that when estimating the potential water quality immediately upstream of a new or increased discharge that the upstream limit for taking into account other permitted sources that may be affecting that water quality be the upstream boundary of the 4th-field HUC, i.e. subbasin, or one subbasin above if the source under evaluation is closer to the upstream rather than downstream extent of the subbasin in which it is located" (page 24). The City discharges near the downstream end of HUC 17040201 (Idaho Falls). Therefore, it would be consistent with the Draft Antidegradation Guidance to model only those sources within the same 4th-field HUC as the City.

Of the upstream sources that ICL named in its comment, only the Roberts and Rigby WWTPs are in the same 4th-field HUC as the City. As explained above, these WWTPs do not have effluent limits for ammonia, and, thus, it is not necessary to model their discharges because the actual discharge (the effect of which is adequately quantified by the in-stream ammonia measurements) is indistinguishable from the authorized discharge.

Under the Draft Antidegradation Guidance, the other sources named by ICL in its comment (Ashton, Driggs, Ririe and Shelley) would be considered too distant to model. Furthermore, Rexburg and St. Anthony, which have effluent limits for ammonia and which were actually modeled in the significance analysis for the purpose of determining if discharges of ammonia at their effluent limits would change the measured upstream concentration, would be considered too distant to model under the Draft Antidegradation Guidance as well. In this respect, the significance analysis was more conservative than the recommendations of the Draft Antidegradation Guidance.

Modeling Additional Sources Would Not Change the Findings of the Significance Analysis

As explained above, of the sources that ICL named in its comment, only the Roberts and Rigby WWTPs are in the same 4th-field HUC as the City and thus could be subject to modeling under the Draft Antidegradation Guidance.

The St Anthony and Rexburg WWTPs are larger than the Roberts and Rigby WWTPs,[5] yet, the modeling discussed in the significance analysis shows that, even if the St. Anthony and Rexburg WWTPs discharged at their effluent limits, this would not significantly change the ammonia concentration measured immediately upstream from the City of Idaho Falls' discharge. As explained above, EPA believes that modeling is unnecessary for Roberts and Rigby because they do not have effluent limits for ammonia.

Furthermore, due to their small size relative to the St. Anthony and Rexburg WWTPs, which were shown not to effect the ammonia concentration upstream from the City of Idaho Falls, even if the discharges of ammonia from the smaller Roberts and Rigby WWTPs were modeled in the significance analysis in addition to (or in lieu of) the St. Anthony and Rexburg WWTPs, this

[5] The design flows of the St. Anthony and Rexburg WWTPs are 0.80 and 3.6 mgd, respectively. See the 2009 fact sheet for the St. Anthony NPDES permit (#ID0020401) at Page 7 and the 2001 fact sheet for the Rexburg NPDES permit (#ID0023817) at Page 5. The design flows of the Roberts and Rigby WWTPs are 0.1 and 0.53 mgd, respectively. See the 2003 fact sheet for the Roberts NPDES permit (#ID0026913) and other permits at Page A-16 and the 2005 fact sheet for the Rigby NPDES permit (ID0020010) at Page 7

would not significantly change the estimated ammonia concentration immediately upstream from the City's discharge, and thus would not change the findings of the significance analysis.

Downstream Sources Need Not Be Considered

In addition to being in a different 4th field HUC from the City, the City of Shelley is downstream from the City. Idaho's EPA-approved antidegradation implementation methods regulations do not require the consideration of downstream sources when determining the receiving water quality for an antidegradation analysis in flowing waters (IDAPA 58.01.02.052.04.b).

The Significance Analysis Used Conservative Assumptions

The significance analysis incorporates a number of conservative assumptions that would tend to exaggerate the calculated impact of the Idaho Falls' discharge and/or decrease the calculated assimilative capacity. These conservative assumptions provide additional assurance that the proposed effluent limits will not, in fact, allow "significant" degradation as defined in Idaho State law (Idaho Code Section 39-3603(2)(c)). These conservative assumptions include:

- Calculating the value of the ammonia criteria using the 95th percentile pH and 95th percentile temperature in the receiving water, which results in conservative (i.e., low) values for the ammonia water quality criteria, and, in turn, the assimilative capacity (see Exhibit 1).
- Using critical low flow conditions in the Snake River for mixing calculations (see Exhibit 3).
- Using the design flow of the City's WWTP for mixing calculations rather than the actual discharge level, which is less than the design flow (see Page 4).
- Basing both the average monthly and maximum daily limit on the more restrictive assimilative capacity calculation (see Page 8).

Finally, even though the significance analysis shows that the June – September effluent limits for Idaho Falls could be as high as 7.4 mg/L as an average monthly limit and 27.8 mg/L as a maximum daily limit (Exhibit 14), IDEQ certified more-stringent ammonia limits for that season, and those more-stringent limits have been included in the permit (3.8 mg/L average monthly and 14.1 mg/L maximum daily).

Therefore, the analysis that IDEQ used to determine that the decrease in assimilative capacity resulting from the increased ammonia effluent limits is less than 10% is technically sound.

Comment #4

The City provided comments on the ammonia limits in the 2012 draft permit, and the related mixing zones.

The City stated that the mixing zone for ammonia ranges from 5 to 15%, depending on season, which are essentially back-calculated values to establish Water Quality-based Effluent Limits (WQBELs) that avoid significant degradation for ammonia. The City is concerned that the unqualified establishment of mixing zones of less than 25% for ammonia may set a precedent for future permits that will be inappropriate and potentially unnecessarily burdensome. In addition, the mixing zones for ammonia, for the summer season, lead to WQBELs that are more restrictive than appropriate for this permit. The City stated that it understands that the mixing zone allowances used for the Draft Permit are consistent with the Draft IDEQ 401 certification dated

December 28, 2011 (included as Appendix C in the Fact Sheet) and would provide similar comments to IDEQ regarding the mixing zones for ammonia.

The City recommends that the final IDEQ 401 letter and EPA Fact Sheet recognize and state that 25% (or greater if a site specific mixing zone study is done) could be an appropriate mixing zone allowance for ammonia and can be used in future permits depending on the circumstances at that time. The City also recommends that the WQBELs for ammonia not be fundamentally based on mixing zones, but instead be based on the insignificant degradation determination for ammonia, because limits based on the insignificant degradation determination are more restrictive than mixing zone based WQBELs at the standard default value of 25% for both seasons.

In the event that mixing zone allowances less than the standard 25% for ammonia limits are retained as the determinative basis for WQBELs, the City recommends that a 10% mixing zone be used for June – September, and a 15% mixing zone for October – May. The City stated that would result in limits consistent with Exhibit 14 of Appendix E.

The City stated that it concurs with the insignificant degradation based limits for the winter season (October through May), but believes that the summer season limits (for June through September) should be those derived from the river design flow for the summer season (i.e., the limits in Exhibit 14 of the memorandum in Appendix E of the Fact Sheet). DEQ and EPA appear to be in agreement with the seasonal river design flow approach (e.g., see discussion in Fact Sheet Appendix B, item B., Low Flow Conditions). Therefore, the City believes that the selected insignificant degradation limits also should be based on the seasonal approach as a simple matter of technical consistency.

Response #4

As stated in the City's comments, the mixing zones used to develop the ammonia limits in the 2012 draft permit are those authorized by the State of Idaho in its draft CWA Section 401 certification dated December 28, 2011 (Appendix C to the 2012 fact sheet). The final CWA Section 401 certification authorizes mixing zones for ammonia that are identical to those proposed in the 2011 draft certification. As stated in the Idaho WQS, "…the Department (of Environmental Quality) will determine the applicability of a mixing zone and, if applicable, its size, configuration, and location" (IDAPA 58.01.02.060.01). Thus, mixing zones must be authorized and sized by IDEQ. EPA cannot establish a mixing zone without IDEQ's authorization, nor can EPA establish a mixing zone that is larger than authorized by IDEQ.

The final CWA Section 401 certification also specifies ammonia effluent limits that are identical to those in the 2011 draft certification and the 2012 draft permit. NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, EPA cannot establish the larger mixing zones and associated less-stringent ammonia limits proposed by the City.

The fact that mixing zones of certain sizes have been established by IDEQ in the CWA Section 401 certification does not mean that a larger mixing zone could not be established in the future. The mixing zone is not a condition of the permit and is therefore not subject to the anti-backsliding provisions of the Clean Water Act and federal regulations (CWA Section 402(o), 40 CFR 122.44(l)). However, any less stringent *effluent limits* that may be established based on a larger mixing zone in the future must comply with the antibackskiding provisions of the CWA

and federal regulations and with the Idaho WQS, including the State of Idaho's antidegradation policy and implementation methods.

Monitoring and Reporting Requirements

Comment #5

The City stated in its comments on the 2010 draft permit that the mercury testing level (Minimum Level, ML) in Table 2, page 7 of the Draft Permit is very low and will be difficult and costly for the City to achieve. In addition, the City notes this same value is identified in Table 4, but in that case as a Method Detection Level (MDL), even though an ML is supposed to be 3.18 times the MDL per EPA guidance. The City is confused by this discrepancy between the two tables, but moreover requests instead that the analytical testing levels (MDLs) used by EPA for the recent Twin Falls final permit (see Table 3 of that permit) be included for these same parameters in the Idaho Falls permit.

Response #5

According to Section 4.1.3 of EPA's *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*, the most appropriate methods for measuring low levels of mercury concentrations in the water column are Method 1631, Revision E and Method 245.7. Table 2, below provides the minimum levels (MLs) and method detection limits (MDLs) as published in those methods.

Table 2: MLs and MDLs for EPA Methods 245.7 and 1631E

Method	ML (ng/L)	MDL (ng/L)
1631E	0.5	0.2
245.7	5.0	1.8

Thus, for the less-sensitive of the two acceptable methods for mercury (Method 245.7), the ML is 5.0 ng/L (0.005 µg/L) and the MDL is 1.8 ng/L (0.0018 µg/L). To account for the fact that interferences may prevent attainment of the published MLs and MDLs, EPA has set the required ML for mercury at 0.01 µg/L (10 ng/L), which is twice the published ML for Method 245.7, but less than the value of the chronic aquatic life mercury criterion which is in effect for Clean Water Act purposes in Idaho (0.012 µg/L). Table 4 has been edited to specify an ML for mercury instead of an MDL, consistent with Table 2.

Comment #6

The City stated in its comments on the 2010 draft permit that the cyanide chilling temperature in item 10 on page 8 of the Draft Permit should now be 6 degrees Celsius instead of 4 degrees, per 40 CFR 136.

Response #6

This comment was addressed by a change to the 2012 draft permit. As explained in the 2012 fact sheet at Page 12, the cyanide preservation temperature in the 2012 draft permit as well as the final permit is ≤ 6 °C.

Comment #7

The City stated in its comments on the 2010 draft permit that the Discharge Monitoring Reports (DMRs) should be postmarked by the 15th of each month consistent with item 1 on page 2 of the Draft Permit. Thus, item III.B.1 on page 21 of the Draft Permit that stipulates the 10th day should be changed to be the 15th day.

The City stated in comments on the 2012 draft permit that the Discharge Monitoring Reports (DMRs) should be postmarked by the 15th of each month consistent with item 1 on page 2 of the Draft Permit. Thus, item III.B.l on page 21 of the Draft Permit that stipulates the 10th day should be changed to be the 15th day. The City stated that the 2012 fact sheet, on page 8, notes that EPA intended to make this edit in the permit, but did not actually do so. In addition, item III.B.2. on page 21 (electronic submissions) should also be changed to state the 15th of the month rather than the 10th.

Response #7

The City is correct that EPA intended to address the City's comments on the 2010 draft permit by changing the DMR submission postmark deadline to the 15th day of the month following the monitoring month.

As explained in the 2012 fact sheet at page 14, EPA intended to change the DMR due date to the 15th day of the month following the monitoring month, which is consistent with the with both the 2001 permit and with the schedule of submissions on Page 2 of both versions of the draft permit.

This change has been made to the final permit.

Comment #8

The City stated in comments on both versions of the draft permit Section III.G.1.e.ii of the draft permit requires the City to provide 24-hour noncompliance reporting for any overflow of any volume, even for those that do not reach waters of the United States. The City requests that for overflows that do not reach waters of the U.S., the permit should set a reasonable threshold for such reportable overflows. The requirement to consider small and already managed spills that do not reach waters of the U.S. as noncompliance events worthy of 24-hour notice does not seem appropriate to the City. The City instead requests that a reportable volume of 1,000 gallons serve as the threshold for reporting for overflows that do not reach waters of the U.S. This request is supported by precedent in California, which distinguishes different "classes" of SSOs and has different reporting requirements for each class. One distinction between a Class 1 SSO (minimum 3-day reporting allowance) and Class 2 (30-day reporting period) is 1,000 gallons.

Response #8

As stated in the 2010 Fact Sheet on Page 19, 40 CFR 122.41(l)(6) requires 24-hour reporting of any noncompliance which may endanger human health or the environment. A sanitary sewer overflow (SSO) which reaches waters of the United States is a discharge which is not authorized by the permit and therefore a violation of the Clean Water Act (Section 301(a)). An SSO which does not reach waters of the United States would nonetheless constitute noncompliance with the permit because it would violate the permit conditions requiring proper operation and maintenance of the POTW (Part IV.E of the permit, 40 CFR 122.41(e)). Therefore, any SSO is a violation of the permit. EPA believes that any SSO may endanger human health or the

environment. Therefore, any SSO event is noncompliance which may endanger human health or the environment, and must be reported to EPA within 24 hours (40 CFR 122.41(l)(6)).

Comment #9

The City stated that the sample frequency for copper in Table 1 of the Daft Permit is once per month, whereas the frequency for the other metals is twice per year. The City requests that the copper frequency be twice per year, consistent with the other metals.

Response #9

EPA agrees with the City that there is no basis to require a different influent and effluent monitoring frequency for copper than for other metals such as cadmium and zinc. Therefore, the final permit requires influent and effluent monitoring for copper at the same frequency as other metals. However, the City should note that, "for each twice-per-year sampling event, the permittee must collect three 24-hour composite samples within a calendar week" (see the final permit at Part I.B.11).

Comment #10

The City stated that IDEQ and the City have agreed that the upstream and downstream sampling locations should be at two power plant spillways for safety and sample representative reasons. The IDEQ Draft 401 Certification Letter confirms the spillways are the agreed-upon locations on page 4 of the letter, however, the specific coordinates in the letter are not correct and should be identified in the 401 letter and on page 12 item I.D.1. in the Draft Permit as below:

Gem Lake Power Plant:

43° 25' 17.37637" N

112° 06' 11.46972" W

Lower Power Plant:

43° 28' 05.80495" N

112° 03' 46.31989" W

The City stated that, in addition, Item I.D.3 in the Draft Permit on page 12 should be deleted because the IDEQ and City have agreed that sampling should be from the spillways, not at three separate grab locations across the river.

Response #10

The final CWA Section 401 certification specifies the same receiving water monitoring locations as stated in the City's comments. In the final permit, the latitudes and longitudes have been rounded to the nearest tenth of a second. NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, the final permit requires the sampling to be conducted at the upstream and downstream locations specified in the final certification.

EPA agrees that the power plant spillways should be well-mixed and thus it is not necessary to collect three grab samples across the width of the river to ensure representative sampling. Thus,

the requirement to collect three grab samples across the width of the river has been deleted from the permit.

Antidegradation

Comment #11

The Idaho Conservation League (ICL) stated in comments on both the 2010 and 2012 draft permits that, because the actual effluent flow rate from the Idaho Falls Wastewater Treatment Plant is less than the design flow of the plant, which was used to calculate effluent limits, the issuance of the permit with effluent limits as proposed in the draft permit will allow lower water quality, in violation of Idaho's antidegradation policy (IDAPA 58.01.02.051).

ICL stated that, for purposes of complying with Tier II antidegradation requirements, the baseline is existing water quality, not the previous effluent limits. ICL referenced a statement in EPA's *Water Quality Standards Handbook: Second Edition* (1994) that "no permit may be issued, without an antidegradation review, to a discharger to high-quality waters with effluent limits greater than actual current loadings if such loadings will cause a lowering of water quality."

ICL stated that the Idaho Falls WWTP permit must limit future discharges to pollutant load levels at or below those currently discharged at the current actual average discharge volume of 11.6 mgd. ICL states that this could be accomplished by either placing a limit directly on the effluent flow rate or by reducing the concentration limits such that the facility cannot increase current loadings.

Response #11

The use of effluent limits to define the current and future discharge quality and its effect upon the receiving water quality is consistent with the State of Idaho's implementation methods regulations for its antidegradation policy. Idaho's antidegradation implementation methods have been approved by EPA under Section 303(c) of the CWA and are therefore in effect for Clean Water Act purposes (40 CFR 131.21). EPA's basis for approving these provisions is provided on pages 11 – 15 of the *Support Document, Review of Idaho's Antidegradation Implementation Methods (Idaho docket 58-0102-1001).* Specifically, the antidegradation implementation methods provide that:

> *Effect on water quality will be based on the calculated change in concentration in the receiving water as a result of a new or reissued permit or license... For a reissued permit or license, the calculated change will be the difference in water quality that would result from the activity or discharge as authorized in the current permit or license and the water quality that would result from the activity or discharge as proposed in the reissued permit or license*….(IDAPA 58.01.02.052.04.a)
>
> *For pollutants that are currently limited, current discharge quality shall be based on limits in the current permit or license. For pollutants not currently limited, current discharge quality shall be based on available discharge quality data collected within five years of the application for a permit or license or other relevant information.* (IDAPA 58.01.02.052.04.a.i)

Future discharge quality shall be based on proposed permit limits…. (IDAPA 58.01.02.052.04.a.ii.)

Under Idaho's antidegradation implementation methods, the effect of a reissued permit upon water quality is based on the authorized discharge in both the current and reissued permits, and both current and future discharge quality is required to be based on the current and proposed permit limits, respectively. Thus, under Idaho state law, as long as the effluent limits in the reissued permit are at least as stringent as the effluent limits in the prior permit, there is no lowering of water quality for those pollutants that are limited in the permit and no Tier II antidegradation review is necessary for those pollutants. See also the State of Idaho's antidegradation review dated December 28, 2011, which is included in the 2012 fact sheet as Appendix D.

Furthermore, NPDES regulations require that, "in the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow," (40 CFR 122.45(b)(1)) and Idaho's antidegradation implementation methods require that the calculation of the change in water quality "will take into account dilution using appropriate mixing of the receiving water under critical conditions coupled with the design flow of the discharge" (IDAPA 58.01.02.052.04.a). Thus, the effluent limits in the permit are calculated based on the design flow of the POTW, instead of the actual flow. These limits are consistent with the requirements of Idaho's approved antidegradation implementation methods as well as federal regulations governing the calculation of effluent limits for POTWs.

Comment #12

ICL states that 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."

ICL states that 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 the Idaho Falls WWTP.

Response #12

As explained in the response to comments #3 and #11, the reissued permit will not allow lower water quality, as defined in the Idaho WQS (IDAPA 58.01.02.052.04.a, Idaho Code Section 39-3603(2)(c)). Therefore it is not necessary for the State to make a finding that allowing lower water quality is necessary to accommodate important economic and social development in the area in which the waters are located in order to reissue the permit.

Comment #13

ICL states that, to protect the receiving water from further degradation, EPA should develop effluent limits in the proposed permit that 'lock in' the impacts caused by the facility's discharge at the actual level of discharge (i.e. the pollutant load received by the river). This is different than reissuing the facility's permit at the current level of permitted discharge.

There are least two way of addressing this:

1) Maintain the current effluent concentration limits and limit discharge flow volume to the current actual flow discharged, or, 2) Reduce the allowable concentration limits of pollutants such that the total impact of the discharge remains the same as it is today (i.e. no additional degradation) even if the facility discharges at the total design flow if the facility. This would 'lock-in' current loading – but not restrict discharge volume to levels below the design flow of the facility.

Option two (above) might be superior because it would allow the City of Idaho Falls to maintain the operational flexibility needed to discharge a greater volume to accommodate community growth.

Response #13

As explained in the response to comments #3 and #11, the reissued permit does not allow lower water quality, as defined in the Idaho WQS (IDAPA 58.01.02.052.04.a, Idaho Code Section 39-3603(2)(c)). Therefore, it is not necessary to establish flow limits or more-stringent concentration effluent limits as suggested by the commenter in order to prevent lower water quality.

Comment #14

ICL states 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.

ICL states that 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.

ICL states that 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 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 other 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.

Response #14

This comment concerns potential lowering of water quality for pollutants for which effluent limits were not proposed in the draft permits.

This issue is addressed in the State of Idaho's draft antidegradation review dated December 28, 2011 (Appendix D to the 2012 fact sheet) which states that:

> *With respect to those pollutants in the discharge for which there are no limits in the proposed permit, and no limits in the current permit, there is no reason to believe that these pollutants will be discharged in quantities greater than that which is allowed to be discharged under the current permit. Similarly, there is no reason to believe the effluent contains new pollutants that haven't been discharged previously. These conclusions are based upon the fact that there has been no change in the design flow, influent quality or treatment processes that would likely result in new or increased discharge of pollutants. Because the proposed permit does not allow for a new or increased water quality impact, DEQ has concluded that the proposed permit will not cause a lowering of water quality for the pollutants with no limits. As such, the proposed permit will maintain the existing high water quality in the Snake River for these pollutants.*

The State of Idaho's final antidegradation review dated August 6, 2012 reached the same conclusion as the draft, with respect to pollutants in the discharge which were not limited in the prior permit or the reissued permit.

Although the City of Idaho Falls wastewater treatment plant discharges pollutants that are not subject to effluent limits, EPA determined that those parameters are not discharged in sufficient quantities that there is reasonable potential for water quality standards to be exceeded (see the 2010 fact sheet at Appendix D). Therefore, no effluent limits have been established for these parameters. As explained in the State of Idaho's antidegradation review, "the proposed permit will maintain the existing high water quality in the Snake River for these pollutants," because "there is no reason to believe that these pollutants will be discharged in quantities greater than that which is allowed to be discharged under the current permit," and "there is no reason to believe the effluent contains new pollutants that haven't been discharged previously."

In addition, as explained in the response to comment #11, the reissued permit will not allow lower water quality for any parameter for which effluent limits have been established.

Comment #15

ICL stated that Idaho's adoption of an insignificance threshold of 10% of the assimilative capacity of the receiving water, which was used in the 2012 draft permit to allow less-stringent ammonia limits without a Tier 2 antidegradation review, is an unlawful interpretation of the Clean Water Act's antidegradation requirements.

ICL stated that EPA cannot rely on Idaho's antidegradation implementation methods to correctly determine baseline conditions to identify "insignificance," for two reasons.

First, ICL stated that the implementation methods did not envision a circumstance where a discharger's actual discharge is greater than its maximum permitted discharge, which is the case for the City of Idaho Falls' ammonia discharges.

Also, ICL stated that it is not clear what "limit" on ammonia would be an acceptable number to plug into the 'baseline condition' model, for upstream sources that discharge ammonia but which do not have ammonia limits in their permits (e.g., the Roberts, Rigby, Ririe and Ashton WWTPs).

Response #15

The finding that the revised ammonia limits in the 2012 draft permit are subject to and consistent with the State of Idaho's antidegradation policy, and therefore comply with the anti-backsliding provisions of the Clean Water Act (CWA Section 303(d)(B)) is based on an antidegradation implementation provision in Idaho State law which states that, "if an activity or discharge is determined to be insignificant, then no further Tier II analysis for other source controls, alternatives analysis or socioeconomic justification is required," and the Idaho Department of Environmental Quality "shall determine insignificance when the proposed change in an activity or discharge, from conditions as of July 1, 2011, will not cumulatively decrease assimilative capacity by more than ten percent (10%)" (Idaho Code Section 39-3603(2)(c)). EPA approved these provisions under CWA section 303(c) on August 18, 2011, thus, they are effective for Clean Water Act purposes (40 CFR 131.21). EPA's basis for approving the "insignificant degradation" provision is provided on pages 9 – 11 of the *Support Document, Review of Idaho's Antidegradation Implementation Methods (Idaho docket 58-0102-1001).*

Under Idaho's antidegradation implementation methods, the fact that the permitted facility's current actual discharge is greater than its maximum permitted discharge, as defined by its effluent limits, is irrelevant to the application of the "insignificance" provision. As explained in the response to comment #11, under Idaho's antidegradation implementation methods, the effect of a reissued permit upon water quality is based on the authorized (as opposed to actual) discharge in both the current and reissued permits, and both current and future discharge quality is required to be based on the current and proposed permit limits, respectively (IDAPA 58.01.02.052.04.a). The implementation methods do not distinguish between situations in which effluent limits are met or violated; both current and future discharge quality is based on the effluent limits, regardless of whether or not the limits have been met. The insignificance analysis was therefore conducted based on the water quality effect of the effluent limits in the City of Idaho Falls' 2001 permit, relative to the effect of the proposed effluent limits. That is to say, the analysis calculated the difference in remaining assimilative capacity that would occur downstream from the discharge at the revised, less-stringent effluent limits, relative to the 2001 permit's effluent limits. This is consistent with Idaho's antidegradation implementation methods.

As ICL notes, the City frequently does not comply with the ammonia limits in the 2001 permit. Furthermore, the actual effluent ammonia loads discharged by the City are often greater than the revised, less-stringent effluent limits in the reissued permit. Specifically, the monthly average effluent ammonia load has been greater than the revised effluent limit for June – September (539 lb/day) 25% of the time between April 2006 and February 2012, and greater than the revised effluent limit for October – May (482 lb/day) 26% of the time. The maximum monthly average effluent ammonia load measured between April 2006 and February 2012 was 1,460 lb/day. Because, in this case, all of the revised effluent limits are less than the maximum load that was actually discharged, if the insignificance analysis had used the City' actual discharges to define the current discharge quality (instead of its effluent limits) and the proposed effluent limits to

define the future discharge quality, then, the analysis would have concluded that there was *no* degradation in water quality resulting from the revised effluent limits. Thus, the use of the City's 2001 effluent limits to define the current discharge quality in lieu of the City's actual discharges was more protective of water quality in this case. As explained in the response to comment #1, for this reason, EPA does not agree that actual discharges should be used in lieu of effluent limits to define the current discharge quality in cases where the actual effluent load or concentration exceeded effluent limits.

The fact that Idaho's antidegradation implementation methods do not define how to model the contribution from upstream sources without effluent limits does not prevent the use of Idaho's antidegradation implementation methods to determine whether a proposed change in a discharge causes "significant" degradation. As explained in the response to comment #3, above, EPA believes that the method used in this case to estimate the upstream ammonia concentration, in turn, the assimilative capacity the significance of the effect of the revised limits was technically sound and protective of water quality.

Nutrients (Phosphorus and Nitrogen)

Comment #16

ICL stated in its comments on the 2010 draft permit that the draft American Falls TMDL also has load allocations for nitrogen in addition to phosphorus. Discharge limits should be reviewed to determine their appropriateness with regard to TMDL constraints on nitrogen loading.

Response #16

The final TMDL for American Falls Reservoir (IDEQ, Shoshone-Bannock Tribes, and EPA 2012) states that "phosphorus is considered the most likely limiting nutrient in American Falls Reservoir" (page xviii), and "at this time, no target will be considered for nitrogen" (Page 85).

Liebig's Law of the Minimum states that plant growth is controlled not by the total of nutrients available, but by the scarcest or limiting nutrient (EPA 1972). Phosphorus is generally the limiting nutrient (i.e., the nutrient that controls primary productivity) in freshwaters, and particularly in lakes and reservoirs. This is because blue-green algae can "fix" elemental nitrogen from the air as a nutrient source or utilize nitrogen from the water column at very low concentrations, and thereby grow in a low-nitrogen environment (EPA 1999), and because freshwater lakes, reservoirs, rivers, and streams are generally supported by large watershed areas, which capture, accumulate, and mobilize large amounts of nitrogen relative to phosphorus (Paerl 2009). Eutrophication in lakes and reservoirs is generally controlled by the phosphorus concentration, even in cases of low nitrogen-to-phosphorus ratios, which would seem to suggest limitation by nitrogen, and studies have shown that reducing nitrogen inputs to lakes cannot control the growth of blue-green algae (Reynolds 2001, Schindler 1974, 1977, 2008, Smith 1982). In the American Falls Reservoir, downstream from the discharge, blue-green algae (primarily Aphanizomenon) represented the highest concentration of phytoplankton in the reservoir in the summer (see the final American Falls TMDL at page 226).

The ratio of nitrogen to phosphorus (N:P) in biomass is approximately 7.2:1. Therefore, an N:P concentration ratio less than 7.2 suggests that nitrogen is limiting. Alternatively, higher ratios suggest that phosphorus is limiting (Chapra 1996, EPA 1999). To determine the N:P ratio for the

Snake River near the Idaho Falls discharge, EPA used water quality data from several USGS stations in Idaho and monitoring performed by the permittee, as required by its 2001 permit. Upstream from the discharge, the N:P ratio in the Snake River is 16.3:1 based on median nitrogen and phosphorus concentrations and 12.7:1 based on average concentrations. Downstream from the discharge, the N:P ratio is 13.5:1 based on median nitrogen and phosphorus concentrations and 13.4:1 based on average concentrations.

The fact that eutrophication in freshwater, and especially lakes and reservoirs, is generally controlled by the phosphorus concentration instead of nitrogen, combined with the dominance of blue-green algae in American Falls Reservoir phytoplankton and high nitrogen-to-phosphorus ratios, suggest that phosphorus is the most likely limiting nutrient in this case. The final American Falls TMDL does not establish targets or load allocations for total nitrogen. Thus, it is not necessary to establish effluent limits for total nitrogen in addition to total phosphorus in order to protect the receiving waters from the effects of excess nutrients.

However, effluent limits for ammonia are necessary in order to ensure compliance with Idaho's numeric water quality criteria for ammonia at the edges of the State-authorized mixing zones (IDAPA 58.01.02.250.02.d.) and Idaho's antidegradation policy and implementation methods (IDAPA 58.01.02.051 – 052, Idaho Code Section 39-3603).

Comment #17

The City of Idaho Falls (City) and the Idaho Conservation League (ICL) commented on the proposed effluent limits for total phosphorus (TP) in both the 2010 draft permit and the revised (2012) draft permit.

In its comments on both versions of the draft permit, ICL stated that the TP limits would allow the City to increase its TP loading above current levels. In its comments on the 2010 draft permit, ICL stated that "because of its location immediately upstream of Ferry Butte, and its current discharge of 44 tons of phosphorus per year, the Idaho Falls WWTP is a significant factor in determining whether or not the Ferry Butte load allocation is met," and that "the draft NPDES permit for the Idaho Falls WWTP proposes to continue to authorize the facility to discharge up to 17 mgd with an average monthly limit of 388 lbs/day. If this permitted limit were fully exercised by the facility, the facility would discharge 70.8 tons of phosphorus per year to the Snake River. Thus, the utilization of the effluent limits in the proposed draft permit would result in violating both the phosphorus load assigned to Ferry Butte and the instream target concentration of 0.05 mg/l."

In its comments on the revised draft permit, ICL stated that the WWTP discharges an average of 208 lb/day TP, which is equivalent to 38 tons/year. ICL states that "this revised draft permit proposes a total phosphorus effluent limit of 277 lbs/day. This translates to an annual total phosphorus load to the Snake River (newly authorized by this permit) of 50.6 tons/year. The difference between the proposed permitted loading and the actual (current) loading is 12.6 tons per year of total phosphorus. Should the permit for this facility be issued with the proposed effluent limits the full use of this permit will unlawfully allow a lowering of water quality in this tier 2 waterbody; a violation of the Clean Water Act's antidegradation provisions." ICL stated in its comments on the revised draft permit that "EPA should develop (TP) effluent limits in the proposed permit that 'lock in' the impacts caused by the facility's discharge at the actual level of discharge (i.e. the pollutant load received by the river)."

The City stated in its comments on both versions of the draft permit that it could not comply with the TP effluent limits proposed in the draft permits, and that a schedule of compliance would be necessary if the effluent limits proposed in the draft permits were imposed. In its comments on the 2010 draft permit, the City stated that the TP limits should provide a growth allowance in addition to the current load at a 2% annual growth rate.

The City proposed interim effluent limits for TP (which would apply during the term of a compliance schedule should one be established) in its comments on both versions of the draft permit. The City's proposed interim effluent limits for TP were 413 lb/day average monthly and 765 lb/day average weekly in its comments on the 2010 draft permit and 391 lb/day average monthly and 586 lb/day average weekly in its comments on the 2012 draft permit.

Response #17

The TP limits in both the 2010 and 2012 versions of the draft permit were designed to require the City to maintain its existing TP load based on its current discharge load (i.e., current effluent TP concentrations and flow rates). The average monthly and average weekly effluent limits proposed in both versions of the draft permit would not allow the City to increase its average loading of TP.

Federal regulations require effluent limits for continuously discharging POTWs to be expressed as average monthly and average weekly discharge limitations, meaning the highest allowable arithmetic averages of discharges measured over a calendar month or a calendar week (40 CFR 122.2, 122.45(d)(2)). Because effluent discharges are not constant, an effluent limit that specifies the maximum allowable average discharge over a short period of time (e.g., a month, week, or day) must be set higher than the long-term average discharge that the limit is intended to achieve. If such a short-term effluent limit were set equal to a long-term average wasteload allocation (WLA), it would be more stringent than intended.[6]

These limits were calculated based on EPA's guidance on statistical methods for developing effluent limits in permits, specifically the *Technical Support Document for Water Quality-based Toxics Control* or TSD. As stated on Page 6-11 of the *US EPA NPDES Permit Writers' Manual* (EPA 2010), the water quality-based effluent limit calculation procedures in the TSD "were developed specifically to address toxic pollutants but have been appropriately used to address a number of conventional and nonconventional pollutants as well."

As explained in Section 5.2.2 of the TSD, "all permit limits…are set at the upper bounds of acceptable performance. The purpose of a permit limit is to specify an upper bound of acceptable effluent quality." In Section 5.3.1, the TSD states that "the limits must 'force' treatment plant performance, which, after considering acceptable effluent variability, will only have a low statistical probability of exceeding the (wasteload allocation) and will achieve the desired loadings."

In both versions of the draft permit, in order to require the City to maintain the current loading of TP while being consistent with federal regulations requiring average monthly and average weekly limits, EPA set the average monthly effluent limits for total phosphorus at the upper bounds of the current phosphorus loading, consistent with the recommendations of the TSD.

[6] In Section 5.3.1, the TSD specifically recommends against setting a relatively short-term maximum permit limit equal to a relatively long term WLA because the limit would be overly stringent. The TSD's specific example of this is setting the maximum daily limit equal to the chronic WLA.

During the development of the draft permits, EPA worked with IDEQ to size the mixing zones such that the effluent limits, which reflect current performance, would result in compliance with Idaho's narrative criterion for excess nutrients at the edges of the mixing zones (IDAPA 58.01.02.200.06). EPA and DEQ interpreted this narrative standard as 50 µg/L TP, which is the in-stream target in the final American Falls TMDL. This TP concentration is also recommended for streams flowing into lakes or reservoirs in EPA's 304(a) criteria recommendations, (*Quality Criteria for Water 1986*). The limits in this permit are based on a consistent interpretation of DEQ's narrative standard.

Specifically, in the 2010 draft permit, as stated on Page F-3 of the 2010 fact sheet, the proposed average monthly limit (388 lb/day) was set equal to the City's 92nd percentile current phosphorus load, which is an estimate of the facility's maximum monthly average load[7] (see the *Municipal Nutrient Removal Technologies Reference Document* at Section 2.5.1). The 92nd percentile phosphorus load was calculated using effluent TP and flow data measured between January 1999 and September 2009; outliers were not excluded.

In the revised 2012 draft permit, the limits were based on an expanded data set, using effluent TP and flow data measured between January 1999 and October 2011, and outliers were excluded in the revised calculation. In the 2012 draft permit, instead of using the 92nd percentile to estimate the maximum monthly average loading, EPA set the effluent TP limit at the upper bound of the City's current performance using the equation shown in Table 5-2 of the TSD to calculate a ratio between the facility's long-term average discharge and the average monthly limit. This was done in part because the wasteload allocations for the Cities of Blackfoot, Shelley, and Firth in the draft American Falls TMDL are expressed as annual values (tons per year). Unlike the 92nd percentile method, the equation shown in Table 5-2 of the TSD calculates an average monthly limit from a long-term average (e.g., annual average) WLA. Thus, the TSD's method could be used to translate the annual WLAs in the American Falls TMDL into average monthly and average weekly limits, consistent with the Idaho Falls permit. As stated on Page B-11 of the 2012 fact sheet, "the ratio between the long term average discharge and the average monthly limit is 1.331:1. Dividing the average monthly TP limit of 277 lb/day by this ratio yields a long term average discharge of 208 lb/day. This is identical to the average TP loading measured between January 1999 and October 2011 (excluding outliers). Thus, the proposed effluent limits will not allow an increase in the City's long term average TP discharge, nor will they require a decrease."

Although EPA's intent in both versions of the draft permit was to establish effluent limits that required the City to maintain its existing loading of TP, the methods used to estimate the facility's maximum monthly average discharge rely on assumptions that are based on the POTW's past performance and effluent variability, which may or may not remain accurate in the future. For example, if, in the future, the effluent TP load becomes less variable than it has been in the past, the City could discharge a greater average loading of TP than it had in the past, and still comply with the effluent limits in the draft permit, as ICL notes in its comments. Conversely, if the effluent TP load becomes more variable, the City would have to maintain a lower long-term average discharge of TP in order to consistently comply with the effluent limits. Thus, it is possible that the City is correct that it could not consistently comply with the effluent

[7] The 92nd percentile is approximately equal to the maximum monthly average because it is the loading that is achieved 11/12ths (92%) of the time.

limits proposed in the revised draft permit without a schedule of compliance. EPA has made changes to the TP effluent limits in the final permit to address both of these issues.

First, EPA has established an annual average limit for total phosphorus of 236 lb/day. This loading is equal to the average discharge measured between January 2005 and December 2011.[8] In its final Clean Water Act (CWA) Section 401 certification, IDEQ has authorized a mixing zone encompassing 52.5% of the critical low flow of the receiving water, which provides a dilution factor of 81.7:1.

Thus, the annual average limit is derived from the 50 µg/L interpretation of the narrative criterion as follows:

$$C_e = \text{wasteload allocation (WLA)} = D \times (C_d - C_u) + C_u$$

Where:

C_e = Effluent concentration
C_d = Downstream concentration (the numeric interpretation of the narrative criterion)
C_u = Upstream concentration
D = Dilution Factor

In this case:

$$\text{WLA} = 81.7 \times (0.05\ \mu g/L - 0.03\ \mu g/L) + 0.03\ \mu g/L$$
$$= 1.664\ mg/L$$

This concentration-based WLA is converted to an effluent limit expressed in terms of mass (as required by 40 CFR 122.45(f)) as follows:

Annual Avg. Limit = 1.664 parts per million × 17 million gallons/day × 8.34 lb/gallon

= 236 lb/day

The annual average limit is identical to the facility's current average load measured between January 2005 and December 2011. The annual average limit is somewhat less than the City's average effluent TP loading as stated in Appendix F of the 2010 fact sheet and referenced by ICL in its comments on the 2010 draft permit (239 lb/day or 44 tons/year). Therefore, the annual average limit will prevent any increase in the average load, which could have potentially occurred under the average monthly effluent limits proposed in the draft permits (e.g., if effluent variability were reduced). It is not necessary to adjust the annual average effluent limit in order to account for effluent variability, because the in-stream target concentration is an annual average (see the 2012 fact sheet at Page B-7). Therefore the WLA is also an annual average value, and thus the averaging period for the effluent limit is identical to the averaging period for the WLA. The regulation requiring average monthly and average weekly limits (40 CFR 122.45(d)(2)) does not prevent EPA from establishing additional effluent limits expressed with different averaging periods, beyond the required average monthly and average weekly limits.

To ensure consistency with federal regulations requiring effluent limits in NPDES permits for continuously discharging POTWs to be expressed as average weekly and average monthly limits (40 CFR 122.45(d)(2)), EPA has included average monthly and average weekly limits in the

[8] No outliers were discarded in this calculation of the average load.

final permit, in addition to the annual average limit described above. As stated above, the City proposed interim effluent limits (which would apply during the term of a compliance schedule, should one be established) of 391 lb/day average monthly and 586 lb/day average weekly in its comments.

The City's proposed average monthly limit of 391 lb/day is equal to the 92nd percentile phosphorus load measured from January 2005 – December 2011, which is the same period of time used to calculate the 236 lb/day average load.[9] As explained above as well as in the 2010 fact sheet, the 92nd percentile is an estimate of the maximum monthly average discharge. The City's proposed average weekly limit is equal to the average monthly limit multiplied by 1.5, which is the same ratio between the average weekly and average monthly TP limits in both versions of the draft permit.

Therefore, EPA agrees that the average monthly and average weekly effluent limits proposed by the City in its comments on the 2012 draft permit do, in fact, represent the upper bound of the City's current TP load. Therefore, EPA has established a 391 lb/day average monthly limit and a 586 lb/day average weekly limit in the final permit, in addition to the annual average limit of 236 lb/day. These average monthly and average weekly limits will ensure that the permit complies with federal regulations requiring average monthly and average weekly discharge limitations (40 CFR 122.45(d)(2)). In addition, since the average monthly and average weekly limits are based on past performance (like the annual average limit), the average monthly and average weekly limits will ensure that the maximum discharge in any given month or week is not so much greater than the annual average limit that the City is likely to violate the annual average WLA due to a brief period of high discharge loading.

A compliance schedule is not appropriate for the any of the TP effluent limits in the final permit. As explained above, the average monthly and average weekly TP effluent limits in the final permit are identical to those proposed by the City as interim limits (which would apply immediately upon the effective date of the final permit, until the end of any compliance schedule, if a compliance schedule were to be established) in its comments on the draft permit, and these limits represent the upper bound of the City's current TP loading. Because the annual average TP limit is equal to the average TP load measured from 2005 through 2011, the City can also comply with the 236 lb/day annual average limit for TP immediately upon the effective date of the final permit.

Mixing Zones

Comment #18

The City stated that the 2010 draft permit was developed using only 10% of the river flow for the mixing zone for all parameters evaluated except for Total Phosphorus (TP). The City stated that the use of 10% is unnecessarily restrictive compared to the 25 % which was used for the 2001 permit and has been the standard default in Idaho for years, consistent with Idaho Water Quality Standards language for mixing zones.

[9] The City had stated in its comments that 391 lb/day was the 95th percentile load measured between January 2006 and February 2012. EPA has verified that this calculation is accurate. No outliers were discarded in these calculations.

The City stated that the 10% mixing zone size is justified only by reference to EPA guidance. The city stated that EPA referenced the 1991 *Technical Support Document for Water Quality-based Toxics Control,* (TSD) which says mixing zones are to be "as small as practicable." The City stated that the TSD does not specify 10% or any other numeric percentage of river flow as being necessary or most appropriate.

The City stated that the draft IDEQ 401 certification dated June 3, 2010 (included as Appendix H in the 2010 fact sheet) authorizes the use of the mixing zones set out in the draft permit, but does not reference the 10% value specifically.

The City stated that the 10% mixing zone allowance has led to total residual chlorine (TRC) limits and Whole Effluent Toxicity (WET) testing triggers that are about two times more stringent than the current permit.

The City stated that it is the City's understanding, based on discussions with IDEQ, that the final certification will authorize a 25% mixing zone.

Response #18

This comment was addressed by changes to the Idaho Department of Environmental Quality's draft CWA Section 401 certification dated December 28, 2011 and reflected in the 2012 draft permit. Both the 2011 draft CWA Section 401 certification and the final CWA Section 401 certification authorized 25% mixing zones for chlorine, nitrate, chromium, copper, lead, silver, chloroform, dichlorobromomethane, and WET.

The larger, 25% mixing zone (relative to the 10% mixing zone used to develop the 2010 draft permit) allowed the 2001 permit's effluent chlorine limits, for concentration, to be carried forward in the reissued permit. However, EPA has established mass limits for chlorine, in addition to the concentration limits, in order to be consistent with federal regulations requiring effluent limits to be expressed in terms of mass (40 CFR 122.45(f)). See the 2012 fact sheet at page B-5 – B-7.

The 25% mixing zone also resulted in a less stringent (i.e., numerically greater) WET trigger for accelerated testing and a lower receiving water concentration relative to the 2010 draft permit. See the 2012 fact sheet at page 12.

Comment #19

ICL stated in comments on the 2012 draft permit that a mixing zone was inappropriate for TP. ICL stated that the negative environmental impacts of the discharged phosphorus are not felt in the mixing zone, but rather further downstream, especially in the American Falls Reservoir. ICL stated that the reservoir acts as a sink for nutrients, and, as such, the use of a mixing zone merely masks the negative impacts caused by the discharge by giving the impression that the harm is alleviated by showing "compliance" with the 50 ug/L interpretation of the narrative standard. ICL stated that to actually alleviate the harm caused by this discharge and to comply with the American Falls TMDL, the WWTP should be required to meet an end of pipe standard of 50 µg/L for phosphorus.

Response #19

As explained in Appendix F to the 2010 fact sheet, the State of Idaho authorized a mixing zone encompassing 54% of the flow of the snake River in its draft CWA Section 401 Certification

dated June 3, 2010 (see Appendix H to the 2010 fact sheet). As explained on Page B-2 the 2012 fact sheet, the State of Idaho authorized a mixing zone for TP which encompasses 46% of the flow of the Snake River in its revised draft CWA Section 401 certification of the permit (see the draft CWA Section 401 Certification dated December 28, 2011, which is Appendix C to the 2012 fact sheet, at Pages 2 – 3). The State of Idaho's final CWA Section 401 certification, dated August 6, 2012, authorized a 52.5% mixing zone for TP.

Concerns about water quality in the American Falls Reservoir is one of the reasons why EPA determined that effluent limits for TP were necessary for the City (see the 2012 fact sheet at Pages B-10 – B-11 and the 2010 fact sheet at Appendix F). However, EPA disagrees that it is necessary to disallow a mixing zone for TP for the City in order to protect water quality in American Falls Reservoir.

The State of Idaho has developed a TMDL for American Falls Reservoir, which does not directly apply to the City of Idaho Falls. As explained in Appendix F to the 2010 fact sheet and Appendix B to the 2012 fact sheet, the City is located upstream of the segment of the Snake River for which load and wasteload allocations are established in the final American Falls TMDL. Thus, the final American Falls TMDL does not establish wasteload allocations for the City of Idaho Falls. The final American Falls TMDL does, however, establish a load allocation of 171 tons per year TP at the USGS Shelley gauge, which is just downstream from the City's discharge. The final TMDL states that all of the load allocations for the Snake River, including that for the Shelley gauge, "represent no increase above current loads, thus no load reductions are required" (Section 5.2.4.2). The final TMDL concludes that, in combination with the other load and wasteload allocations in the TMDL, these "no increase" load allocations for the Snake River would achieve water quality standards in the American Falls reservoir.

The City's average effluent TP concentration measured between January 2006 and February 2012 is 2.1 mg/L, which is 42 times the 50 µg/L interpretation of the State of Idaho's narrative nutrient criterion (IDAPA 58.01.02.200.06). Thus, disallowing a mixing zone and establishing an effluent limit of 50 µg/L TP, as suggested by the commenter, would require a 42-fold reduction in effluent TP concentrations and loads from current levels. The Shelley gauge is just downstream from the City's discharge, thus, the current TP loading from the City's discharge is part of the loading represented by the Shelley load allocation, which represents current loads. Thus, it is not necessary to disallow a TP mixing zone and thus require the City to substantially reduce its discharge of TP, in order to achieve the load allocation for the Shelley gauge or to achieve water quality standards in the American Falls Reservoir.

Comment #20

The City recommends that the WQBELs for TP not be fundamentally based on mixing zones, but instead be based on the current loading determination. The Final 401 Letter and Fact Sheet should also state that the current loading determination leads to more restrictive TP WQBELs than a 100% mixing zone, which are thus the controlling WQBELs for this permit.

Response #20

This comment appears to request a 100% mixing zone for TP, but recognizes that limits based solely on such a mixing zone would not maintain the City's existing loading of TP and thus would not be established in the final permit.

The final CWA Section 401 certification specifies a TP mixing zone encompassing 52.5% of the stream flow. As stated in the Idaho WQS, "…the Department (of Environmental Quality) will determine the applicability of a mixing zone and, if applicable, its size, configuration, and location" (IDAPA 58.01.02.060.01). Thus, mixing zones must be authorized and sized by IDEQ. EPA cannot establish a mixing zone without IDEQ's authorization, nor can EPA establish a mixing zone that is larger than authorized by IDEQ. Also, NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, EPA cannot establish a 100% mixing zone for TP.

Comment #21

The City made several comments which concern the 2010 and 2012 fact sheets, as opposed to the draft permits, as follows:

- The City stated that the 2012 fact sheet on page 10, item V.B.I., refers to "$CBOD_5$" (meaning carbonaceous BOD_5) whereas "BOD_5" (meaning total BOD_5) is used elsewhere in the Fact Sheet and Draft Permit. The City recommends that the Fact Sheet on page 10 be corrected to read "BOD_5."
- For Ammonia, the City recommends that the EPA Fact Sheet recognize and state that 25% (or greater if a site specific mixing zone study is done) could be an appropriate mixing zone allowance for ammonia and can be used in future permits depending on the circumstances at that time.
- The City recommends that the WQBELs for Ammonia and TP not be fundamentally based on mixing zones, but instead be based on the insignificant degradation determination for Ammonia and the current loading determination for TP. The Final 401 Letter and Fact Sheet should also state that these determinations lead to more restrictive WQBELs than the use of a 25% mixing zone (for Ammonia) or the use of a 100% mixing zone (for TP) and thus are the controlling WQBELs for this permit.
- The City requests that the final fact sheet include a reference to the schedule in the Compliance Order dated December 13, 2011.

Response #21

The fact sheets are final documents that explain the conditions in the draft permits and they will not be edited.

With respect to the City's request that EPA include a reference in the "final fact sheet" to the compliance order dated December 13, 2011, EPA acknowledges that the City's compliance obligations with respect to the ammonia limits have been defined by the compliance order. One of the requirements of the compliance order is that, by October 31st, 2015 the City "shall achieve full compliance with the effluent limitations set forth in the 2001 Permit or the Reissuance Permit, whichever is in effect on this date."

EPA has responded to the issues raised by the City's comments on the statements in the 2012 fact sheet regarding mixing zones and WQBELs for ammonia in the response to comment #4.

EPA has responded to the issues raised by the City's comments on the statements on the 2012 fact sheet regarding mixing zones and WQBELs for TP in the responses to comments #17 and #20.

The City is correct that Page 10 of the 2012 fact sheet should have referred to BOD_5 instead of $CBOD_5$.

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