

RESPONSE TO COMMENTS

City of Blackfoot Wastewater Treatment Plant NPDES Permit # ID-002004-4 April 9, 2013

On May 25, 2012, the U.S. Environmental Protection Agency (EPA) issued a public notice for the reissuance of the City of Blackfoot (City) Wastewater Treatment Plant (WWTP) National Pollutant Discharge Elimination System (NPDES) Permit No. ID-002004-4. This Response to Comments provides a summary of significant comments and provides corresponding EPA responses. The comments resulted in changes to the draft permit:

1. Correcting the permitted latitude and longitude of the outfall
2. Clarifying the sludge monitoring requirements
3. Increasing the average weekly total suspended solids (TSS) limit from 1,490 pounds per day (lbs/day) to 1,525 lb/day
4. Adding an annual limit for TSS of 397 lbs/day.
5. Adding an annual limit for total phosphorus of 38.9 lbs/day
6. Increasing the average weekly total phosphorus limit from 108 lbs/day to 212 lbs/day. Increasing the average monthly total phosphorus limit from 72.3 lbs/day to 141 lbs/day.
7. Correcting an internal reference to the condition for whole effluent toxicity monitoring.

Comments were received from the following:

Rex Moffit, Superintendent, Blackfoot Wastewater Treatment Plant (City)
Justin Hayes, Program Director, Idaho Conservation League (ICL)

1. **Comment (City):** Page 1. After double checking, the outfall location is latitude 43° 10' 57" N and Longitude 112° 23' 03"

Response: The outfall location has been corrected in the permit.

2. **Comment (City):** An initial review of the historical discharges from the WWTP indicates that the facility could experience permit violations of TSS and TP upon the effective date of the permit with enhancements. We therefore request the following:
 - a. The new permit conditions for TSS and TP not be included in this permit reissuance but considered for the next permit reissuance.
 - b. Or if EPA proceeds with including TSS and TP limits with this reissuance, a compliance schedule of at least five years should be provided to allow facility evaluation and upgrades to achieve the limits. This requested compliance schedule is based on our need to complete the following items: a pending facility

plan analysis (2012-2013); public outreach and involvement regarding potential upgrades (2013-2014); development of an environmental development document pursuant to IDEQ requirements with subsequent review and approval(2013-2014); funding including a potential bond election (2013-2014); preliminary and final design phase (2013-2014); construction of the recommended upgrades (2014-2016);start-up and process optimization (2016-2017). This compliance schedule seems appropriate given other schedules developed upon completion of total maximum daily load (TMDL) in Idaho (e.g. compliance schedules on the order of ten years for Spokane River in northern Idaho).

Response: The EPA has no basis to postpone inclusion of new limits for TP and TSS that are consistent with the assumptions and requirements of the City’s wasteload allocations (WLAs) in the EPA-approved *American Falls Subbasin Total Maximum Daily Load (TMDL) Plan: Subbasin Assessment and Loading Analysis October 2011*. (TMDL). In accordance with 40 CFR122.44(d)(1)(vii)(B) permit limits must be consistent with WLAs in an EPA approved TMDL.

The EPA disagrees that a compliance schedule is required for TSS or TP. As the fact sheet states “to insure no degradation of water quality, the proposed permit limits the TSS discharge to the existing annual TSS load.” The allocation is established at current discharge rates and the effluent limitations are based on the average rate consistent with the *American Falls Subbasin Total Maximum Daily Load (TMDL) Plan: Subbasin Assessment and Loading Analysis October 2011*. Upgrades are not required. The highest TSS discharge over the last three years is well below the effluent limitations as shown in the following table.

	Highest TSS Discharge in Last Three years	TSS Effluent Limitation
Monthly lbs/day	233	650
Weekly lbs/day	469	1525
Monthly mg/L	16.4	30
Weekly mg/L	30.6	45

Similarly, EPA has determined that the facility can meet the TP limits upon the effective date of the permit, therefore a compliance schedule is not warranted.

The EPA recalculated TP effluent limitations using a more complete and current set of TP monitoring data that demonstrates a compliance schedule is not needed to meet these effluent limits. The more extensive and current data shows a higher variability of total phosphorus effluent concentration in the effluent. Because of the higher variability (as reflected in the coefficient of variation (CV)) the calculated effluent limits derived from the long term average (LTA) are higher. The monthly and weekly effluent limitations for TP are revised to be 141 lbs/day and 212 lbs/day respectively. As shown in the table below, a single sample exceeded the calculated effluent limit. The data used and revised permit limit calculations are provided below.

The EPA has evaluated the latest TP monitoring data over the last three years shown below:

WWTP flow	TP Concentration (mg/L)	TP Loading (lbs/day)	Date
3.4247	0.35	10.00	1/11/2010
3.1534	0.45	11.83	2/16/2010
2.679	0.34	7.60	3/11/2010
2.77	0.23	5.31	4/13/2010
2.2734	0.3	5.69	5/13/2010
1.419	0.05	0.59	6/10/2010
1.4208	0.18	2.13	7/15/2010
1.494	1.87	23.30	8/16/2010
1.5355	0.2	2.56	9/15/2010
1.5466	3.07	39.60	10/7/2010
1.4428	3.66	44.04	11/12/2010
1.47	4.99	61.18	12/13/2010
1.4843	0.3	3.71	1/10/2011
1.4552	0.05	0.61	2/7/2011
1.4788	0.31	3.82	3/14/2011
1.6563	0.29	4.01	4/11/2011
1.6258	0.41	5.56	5/13/2011
1.4705	1.43	17.54	6/13/2011
1.41	3.09	36.34	7/15/2011
1.42	15.3	181.19	8/12/2011
1.48	7.95	98.13	9/12/2011
1.47	2.97	36.41	10/11/2011
1.44	0.45	5.40	11/14/2011
2.092	2.7	47.11	12/20/2011
2.23	0.61	11.34	1/9/2012
1.7	0.47	6.66	2/10/2012
1.84	0.33	5.06	3/15/2012
1.64	0.22	3.01	4/9/2012
1.5	0.2	2.50	5/7/2012
1.46	2.27	27.64	6/11/2012
1.54	3.05	39.17	7/6/2012
1.29	0.12	1.29	07/31/2012

1.42	1.08	12.79	08/31/2012
1.4	1.39	16.23	09/30/2012
1.49	7.19	89.35	10/31/2012
1.6	1.4	18.68	11/30/2012
1.55	7.3	94.37	12/31/2012
1.57	0.05	0.65	01/31/2013
	Average	25.85	
	std	37.01	
	CV	1.43	
	Limit	141	

The WLA is 7.10 tons per year.

$$7.10 \text{ tons/year} \times 2000 \text{ lbs/ton} \div 365 \text{ days/year} = 38.9 \text{ lbs/day (annual average)}$$

Assume LTA = 38.9 lbs/day:

$$AML = LTA \times \exp[z\sigma_n - 0.5\sigma_n^2] \quad (\text{from Table 5-2 of the TSD})$$

Where:

CV= coefficient of variation = 1.43 (based on facility data from January 2010 – January 2013)

n= 4 (number of samples in a month)

$$\sigma_4^2 = \ln((CV^2/4) + 1) = \ln((1.43^2/4) + 1) = 0.41$$

$$\sigma_4 = 0.64$$

Z = percentile exceedance probability for AML (99%) = 2.3263

$$AML = 38.9 \times \exp[(2.3263 \times 0.64) - (0.5 \times 0.41)]$$

$$AML = 141 \text{ lbs/day}$$

Calculating the Average Weekly Limit

$$AWL = 141 \times 1.5 = 212 \text{ lbs/day}$$

- 3. Comment (City)** Please clarify that only 12 samples are required to satisfy the surface water monitoring requirement. That is, does one sample every two months for two years for a total of 12 samples satisfy the surface water monitoring requirements and no further surface monitoring is required.

Response: That is correct. Ammonia surface water monitoring is reduced from monthly to once every two months until 12 samples are collected.

The permit is unchanged.

4. **Comment (City):** On page 2 and page 9 of the permit Condition I. C. Whole Effluent Toxicity Testing should be I. D. Whole Effluent Toxicity Testing.

Response: The EPA agrees. The typographical error in the Table of Contents and the numbering for Whole Effluent Toxicity Testing is changed from I.C. to I.D.

5. **Comment (City):** II.A.8.a. Confusing language concerning sludge monitoring. Some parameters are mentioned twice and others are separate, namely chromium, cyanide, silver, zinc and molybdenum.

Response: The EPA agrees. The following correction is made.

Condition II.A.8.a. is revised to:

8. Sampling Requirements

- a) Parameters: The permittee must sample influent and effluent ~~and sludge~~ from the POTW, for arsenic, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, and zinc. Metals must be analyzed and reported as total metals. The permittee must sample sludge for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, percent solids and zinc.

Some parameters are correctly listed twice in the revised Condition II.A.8.a. The first list of parameters is for influent and effluent monitoring and the second list is for sludge.

6. **Comment (City):** The reference to whole effluent toxicity testing in Condition II.A.8.c. should read "I.D."

Response: The typographical error in Condition II.A.8.b. is corrected. The condition for Whole Effluent Toxic testing is in I.D not I.C. as in the draft permit.

The revision is below.

"Sampling Locations and Sample Type: The permittee must sample as described in Table 3. To the extent that the timing of effluent sampling coincides with sampling required for whole effluent toxicity testing under paragraph I.D. these results will satisfy the requirements of that paragraph."

7. **Comment (City):** Page 16. The schedule for cyanide sampling appears to require sampling throughout a 24 hour period. The grab sampling schedule should be revised to allow sampling during normal working hours similar to the existing permit.

Response: 40 CFR Part 122.21(g)(13) allows the EPA to require information to assess discharges. To better assess discharges and to obtain a more representative sample of cyanide discharges the permit requires grab samples throughout a 24 hour period.

The permit is unchanged.

8. **Comment: (City)** Section VI of the Fact Sheet states "The proposed permit requires the permittee to submit a biosolids permit application (NPDES Form 2S) before sewage sludge is removed from the lagoon." Does this mean we have to apply for a biosolids permit? In addition, we do not have lagoons, we have anaerobic digested liquid Biosolids in a storage tanks, dewatered anaerobic digested Biosolids from a Geo-tube or

Centrifuge, soon to be a Screw Press, that we land apply to City owned property and IDEQ approved farm land.

Response: The permit does not require the City to submit a biosolids permit application. Until future issuance of a sludge-only permit, sludge management and disposal activities at the WWTP continues to be subject to the national sewage sludge standards at 40 CFR Part 503 and any requirements of the State's biosolids program. The Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a permit has been issued.

The permit is unchanged.

- 9. Comment (City):** Page 5 Part II.A. of the Fact Sheet. Blackfoot Cheese has been renamed Sartori Foods. Basic American Foods, Blackfoot Division no longer sends non-process water to us, only domestic wastewater. Nonpareil IPP Wastewater flow is only from November 1st to March 31st. The paragraph that starts with "The digested solids are..." should read as follows:

Digested solids are treated by Centrifuge and three anaerobic digesters. Solids and centrate are separated with the centrate returning to the headworks and the pressed solids are hauled off to a farm for disposal.

In the last paragraph where did the 300,000 gallons per day of inflow and infiltration come from?

Response: Fact Sheets are not revised but this response to comments provides the updates. The EPA acknowledges that Blackfoot Cheese has been renamed Sartori Foods, Blackfoot Division no longer sends non-process water to the WWTP and only discharges domestic wastewater and Nonpareil IPP Wastewater flow is only from November 1st to March 31st. The inflow and infiltration flow came from the Blackfoot WWTP NPDES permit application (dated March 5, 2007) Form 2A on page 7 of 21.

The permit is unchanged.

- 10. Comment (City):** Footnote 2 to Table 2 should be changed to 3.2 mgd from 5.1 mgd as the derivation of the effluent limitation on pages 26 through 28 are based on 3.2 mgd and not 5.1 mgd. This will avoid confusion in the future.

Response: The mass loading limits are derived from a design flow of 3.2 mgd. Fact Sheets are not revised but this response to comments provides the correction to Footnote 2 to Table 2 in the Fact Sheet.

The permit is unchanged.

- 11. Comment (City):** EPA is requiring additional effluent and surface water monitoring for metals because of "detectable amounts among Expanded Effluent Testing Data reported in the permittee's application for renewal." However, no further justification is provided, for example with a reasonable potential analysis with the available data. Since lead is shown within the Fact Sheet not to have a reasonable potential and further sampling is removed from the permit it is unclear why additional monitoring for these metals at considerable cost to the City is required. Please review the applications data for metals and provide explicit justification for the additional sampling or demonstrate a reasonable potential for toxicity.

Response: As page 34 of the Fact Sheet states, eight lead samples were reported to EPA. However, the average of only three samples were reported to EPA on Form D for arsenic, cadmium, chromium, copper, mercury, nickel, silver and zinc all of which were detected.

Box 3-2 on page 53 of the TSD states “ EPA recommends finding that a permittee has “reasonable potential” to exceed a receiving water quality standard if it cannot be demonstrated with a high confidence level that the upper bound of the lognormal distribution of effluent concentrations is below the receiving water criteria at specified low-flow conditions.” The average of three samples is not a demonstration with a high confidence level that the WWTP is below the receiving water criteria for these metals and that the issuance of the NPDES permit will not result in violation of the water quality standards of the State of Idaho.

Further, page 52 of the TSD states “It is impossible to determine from one piece of monitoring data where in this [variability] range the effluent variability really falls. More monitoring data would need to be generated to determine the actual variability of this effluent and reduce this source of uncertainty.”

Twelve samples are required to determine the variability of monitoring data. Twelve samples allow the coefficient of variation to be calculated rather than assumed. Although eight samples do not provide as much confidence in the variability of lead samples as 12 samples the EPA will not require resampling of lead.

The permit is unchanged.

- 12. Comment (City):** It appears the value of σ_2 should be 0.678 based on the proceeding calculations. This would result in an AWL for TSS of 1,525 lbs/day, rather than the 1,492 lbs/day indicated. Please confirm the value and change as appropriate.

Response: EPA concurs with the comment, there was a mathematical error in the fact sheet, σ_2 should have been 0.678. The corrected average weekly mass limit for TSS is changed to 1,525 lbs/day in the final permit.

- 13. Comment (City):** We were unable to recreate the average monthly NH_3 limits for the summer (37.6 mg/L) and winter conditions (43.7 mg/L) based on the preceding calculations. Please confirm the derivation of these values and correct as necessary.

Response: The calculated average monthly limit in the fact sheet for the summer season was incorrect, the corrected value is 15.1 mg/L. The winter monthly ammonia limit is verified to be 43.7 mg/L. A summary of the intermediate values in those calculations is provided below. Note however, that the corrected monthly effluent limitation for summer is less stringent than the 8.25 mg/L limit in the existing permit. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit unless the exceptions to the antibacksliding provisions apply (see response no. 14). Therefore the summer limit in the Permit remains unchanged.

Seasonal Information for Blackfoot Discharge		
	April 1 – September 30 (summer)	October 1 – March 31 (winter)
1Q10 cfs	1,590	1,170
30B3 cfs	1,790	1,790
acute NH3 criterion mg/L	1.47	2.14
chronic NH3 criterion ug/L	0.536	1.09
ambient pH S.U.	8.7	8.5
ambient temperature, °C	20.3	14.2
ambient NH3 concentration, mg/L	0.027	0.020
CV	2.18	1.55
WLA chronic	45.6	97.3
WLA acute	117	127
Number of Samples per month	30	4
LTA acute	129	179
LTA chronic	8.6	25.0
Dilution Ratio Acute	81.3	60.0
Dilution Ratio Chronic	91.4	91.4
NH3 limits, average monthly, m/L	15.1	43.7
NH3 limits, daily maximum, mg/L	78.2	127

14. Comment: (City): Page 30 of the Fact Sheet: “The derived ammonia (NH₃) concentration limits in the current fact sheet are greater than the calculated limits in the prior NPDES permit. However, Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit. Therefore the limits remain unchanged.”

We request EPA implement the derived limits in the current fact sheet for the following reason. The existing permit ammonia limits were based on a design flow of 5.1 mgd. This resulted in less dilution in the receiving water and correspondingly higher ammonia toxicity from the WWTP effluent than the 3.2 mgd design flow used in the draft permit. This change should be considered new information pursuant to Section 402(o)(2)(B)(i) of the clean water act which allows a modification to the permit to less stringent conditions without violating the above mentioned anti-backsliding provisions.

Response: Section 402(o)(2) states

“(2) Exceptions. ---- A permit with respect to which paragraph (1) (General Prohibition to backsliding) applies *may* (emphasis added) be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant” if information is available which was not available at the time of permit issuance.

The 3.2 mgd design flow for the treatment plant was information available to the City and provided to the City by Keller and Associates at the time the City submitted its NPDES application for the existing permit. However, in submitting the application for the existing permit the City submitted a design flow of 5.1 mgd on Form 2A. The EPA

calculated ammonia limits for the existing permit based on the 5.1mgd submission. The City submitted a design flow rate of 3.2 mgd in its application for the current draft permit. The EPA re-calculated the ammonia limits in the draft permit based on this flow rate. The fact that the City corrected its flow rate does not qualify as new information. The 3.2 mgd design flow was available information to the City therefore the 402(o)(2)(B)(i) exception to backsliding where new information is available that was not available at the time of permit issuance is not applicable.

Further, under 402(o)(2)(B)(i) backsliding is at EPA's discretion. With only one exception the City is within the mass effluent limitations as shown in the following table comparing effluent limitations with measured mass loading for the years 2007, 2008 and 2009.

Ammonia – Mass Versus Limits				
Season	Average Monthly Limit	Highest Monthly Average	Maximum Daily Limit	Highest Maximum Daily
April 1- Sept 30 Mass Loading - lb/day	350	343 ¹ 192 ³	983	343 ¹
October 1-March 31 Mass Loading- lb/day	587	1101 ^{1,3} 373 ^{1,3} 270 ^{1,3}	1650	1011 ¹

With six exceptions out of 36 measurements the City was within the concentration limits as shown in the table below.

Ammonia – Concentration Versus Limits				
Season	Average Monthly Limit	Highest Monthly Average	Maximum Daily Limit	Highest Maximum Daily
April 1- Sept 30 Mass Loading – mg/L	8.25	29.64 8.67	23.1	29.64 (8.67) ²
October 1-March 31 Mass Loading- mg/L	13.8	35.4 32.8 20.6 (12.67) ²	38.7	35.4

1. As corrected by EPA using the equation:

$$\text{Average Monthly Mass} = \text{conc.} \times \text{flow} \times 8.34 = \text{lbs/day}$$

e.g. Highest Reported Concentration (May, 2009) = 29.64 mg/L

Reported Flow (May, 2009) = 1.3936 million gallons per day (mgd)

Conversion Factor = 8.34

Average Monthly Limit = 29.64 mg/L × 1.3936 mgd × 8.34 = 343 lbs/day

2. Highest measured concentration within effluent limitations.
3. These mass values are based on the concentrations exceeding the limits

Therefore the EPA has no justification to backslide from the achievable ammonia effluent limitations in the existing permit.

The previous permit required monthly sampling for ammonia. As seen in the table of measured ammonia concentrations and by the EPA's review of the DMRs, the City took only one sample per month and used it for compliance with both the monthly and daily limits. The reissued permit requires weekly monitoring to determine compliance with the maximum daily limits. The weekly monitoring will provide a more representative measurement of compliance with the average monthly limits by requiring an average of at least four samples per month rather than the one sample per month required in the previous permit. Statistically, more samples used for calculating the average monthly discharges should lower the measured monthly concentration.

The permit is unchanged.

- 15. Comment: (City):** The calculations in the prior permit utilized 1Q10 and 7Q10 flows, while EPA's current, accepted approach is to use the 1Q10 and 30B3 flows noted on page 7 of the Fact Sheet. In particular the 30B3 flow is greater than the 7Q10 flow, and according to EPA a biologically-based flow rate designed to ensure an excursion frequency of no more than once every three years for a 30 day average flow rate. This change should be considered new information pursuant to Section 402(o)(2)(B)(i) of the Clean Water Act which allows a modification to the permit to less stringent conditions without violating the above mentioned anti-backsliding provisions.

Response: See Response to Comment 14. The use of 30B3 flow is not new information as it was available at the time of reissuance. The use of the 30B3 flow rate is an alternate method of calculating water quality based effluent limitations.

The permit is unchanged.

- 16. Comment: (City):** Page 31 of the fact sheet has a statement "the draft compliance monitoring schedule ...3 grabs per week" for *E-coli*. The permit has 5X/month.

Response: The statement in the Fact Sheet referring to a permit requirement of three grab samples per week for *E-coli* is a typographical error. The monitoring frequency required by the permit is five times per month and is correct.

The permit is unchanged.

- 17. Comment: (City):** The EPA states the following, "The Snake River at the point of discharge is designated for primary contact recreation. Waters of the State of Idaho that are designated for recreation are not to contain *E. coli* bacteria in concentrations exceeding 126 organisms per 100 ml as a geometric mean based on a minimum of five samples taken every three to seven days over a thirty day period (IDAPA 58.01.02.251.01.a). The draft compliance monitoring schedule contains a monthly

geometric mean effluent limit for *E. coli* of 126 organisms per 100 ml and a minimum sampling frequency of 3 grab samples a week providing 12 samples in 30 days consistent with this averaging period.

The Idaho Water Quality Standards also state that for primary contact recreation a single water sample that exceeds 406 organisms/100 ml indicates a likely exceedance of the geometric mean criterion, although it is not, in and of itself, a violation of water quality standards. (IDAPA § 58.01.02.251.01.b.ii).”

As noted by the EPA an instantaneous limit for *E. coli* is not a violation of the State water quality criteria, but may indicate non-compliance with the geometric mean. IDAPA § 58.01.02.251.01.c states the following if a sample is detected about 406 organisms per 100 ml: “additional samples should be taken to assess compliance with the geometric mean *E. coli* criteria in subsection 251.01.a” Including an instantaneous limit effectively imposes additional conditions to the state water quality criteria and could result in a permit violation even if the geometric mean is satisfied. We therefore request the following:

- i Remove the instantaneous maximum limit in the NPDES permit.
- ii Append the entry for *E.coli* in Table 1 of the Permit (page 5) with a new footnote such as: The instantaneous maximum value is included to indicate the possibility of exceeding the geometric mean criterion but does not constitute a violation of State Water Quality criteria. Additional sampling should be conducted in accordance with IDAPA § 58.01.02.251.01.c to assess compliance with the geometric mean.”

Response: The EPA’s objective in establishing maximum daily limits for *E. coli* is to restrict discharges on a daily basis to ensure compliance. Since a daily average discharge of 406 counts per 100 ml is likely to result in a violation of the 126 counts per 100 ml water quality monthly standard, establishing an effluent limitation at the daily maximum level will provide the EPA greater assurance for compliance with the monthly limit rather than establishing it as a trigger for additional monitoring as the City suggests.

In addition, the limit of 406 counts per 100 ml as a single sample maximum allowable density is a criteria to protect human health in waters lightly used for full body contact recreation in the EPA’s Quality Criteria for Water 1986 (EPA 822-Z-99-001) April 1999.

The permit is unchanged.

18. Comment: (ICL): TSS Effluent Limits Not Consistent with TMDL Waste Load Allocations

The American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis, developed by the Idaho Department of Environmental Quality (DEQ), the Shoshone-Bannock Tribes and the EPA, most recently modified in May of 2012, is the relevant TMDL for the receiving water. This TMDL established Waste Load Allocations (WLAs) for the point sources that discharge into this segment of the Snake River, including this facility.

This TMDL established a Total Suspended Solids (TSS) WLA of 72.5 tons/year for the Blackfoot WWTP. The Fact Sheet for this NPDES permit notes that, on a daily basis, the WLA is equivalent to 397 lbs/day.

When developing NPDES effluent limits, the Clean Water Act provides that the permitting agency (in this case EPA) needs to ensure that these effluent limits are consistent with the assumptions and requirements of the WLA developed in a TMDL, as required by 40 CFR 122.44(d)(1)(vii)(B).

The Draft NPDES permit for the Blackfoot WWTP proposes TSS limits as follows:

Average weekly limit is 1,492 lbs/day

Average monthly limit is 652 lbs/day

These proposed limits are expressed as lbs/day. It is worth noting that the TSS WLA for this facility is expressed in tons/yr. EPA has not proposed a limit consistent with the tons/yr (or annual loading) format. The absence of an annual limit is a deficiency that EPA needs to correct prior to issuance of this permit.

EPA asserts that there is a “low probability” that the facility would actually exceed the WLA of 72.5 tons/year and concludes that the average monthly and weekly limits are consistent with the assumptions and requirements of the wasteload allocation in the *TMDL*, as required by 40 CFR 122.44(d)(1)(vii)(B).

We believe that EPA’s conclusion that the proposed effluent guidelines are “consistent with the assumptions and requirements” of the TMDL is unsupported for several reasons:

- 1) The proposed effluent limits were not calculated using established methodologies appropriate for the pollutants in question.

The Fact Sheet relies on certain methodologies for accounting for variability in effluent discharge and relies on an EPA document entitled *Technical Support Document for Water Quality-based Toxics Control.1* (TSD)

The EPA describes the TSD as follows: "The revised Technical Support Document for Water Quality-based Toxics Control (TSD) provides States and Regions with guidance on procedures for use in the water quality-based control of toxic pollutants. It presents recommendations to regulatory authorities faced with the task of controlling the point source discharge of toxic pollutants to the Nation's waters. The document provides guidance for each step in the water quality-based toxics control process from standards development to compliance monitoring."

The NPDES in question is using these methodologies to develop limits for TSS, not toxic pollutants. Thus we hold that this is an inappropriate and unsupported use of the methodologies described in the TSD.

- 2) Compliance with the proposed effluent limits authorizes discharges that exceed the WLA for this facility.

If the facility were to operate in such a manner that it discharged TSS at 652 lbs/day for every day of the year it would be in compliance with the draft permit. Doing so would result in an annual TSS discharge of 119 tons/yr.

An effluent limit that provides for a lawful discharge of 119 tons/year of TSS is not consistent with the WLA in the TMDL of 72.5 tons/year.

Thus, the proposed effluent limits for TSS are not consistent with the assumptions and requirements of the TMDL for the receiving water and are in violation of 40 CFR 122.44(d)(1)(vii)(B). As such, the proposed effluent limit is not lawful.

Response: EPA believes that the proposed average monthly effluent limit of 650 lbs/day and weekly limit of 1,490 lbs/day is, in fact, consistent with the assumptions and requirements of the WLA in the TMDL, for the reasons explained below. EPA's guidance for writing NPDES permits (U.S. EPA NPDES Permit Writers' Manual, 2010) specifically addresses the development of water quality based effluent limits using the procedures from the TSD. (See chapter 6). Specifically, the TSD states:

"The terminology used and procedures described in this manual when discussing both assessing the need for and calculating WQBELs are based on the procedures in EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD). *Those procedures were developed specifically to address toxic pollutants but have been appropriately used to address a number of conventional and nonconventional pollutants as well.*" (emphasis added, see Page 6-11)

Therefore, consistent with this guidance, EPA appropriately relied on the statistical methods in the TSD.

As stated in the fact sheet, the specific part of the TSD that was used in the calculation of TSS effluent limits for the City was the equation used to calculate average monthly and average weekly limits based upon a long-term average (LTA) WLA (see TSD at table 5-2). The WLA in *The American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis* is expressed as an annual total load of 72.5 tons per year, which can be converted to an annual average load of 397 lb/day. Once the WLA is converted to an annual average value, it is equivalent to the LTA WLA, for the purposes of effluent limit calculations. Thus, it is appropriate to calculate average monthly limits from the annual average WLA, using the equation in Table 5-2 of the TSD.

However, ICL is correct that it is possible that the permittee could comply with the average monthly limits and yet discharge more TSS than allocated in the TMDL. Therefore, EPA has included an annual average effluent limit for TSS of 397 lbs/day, which directly insures that the annual loading of TSS will not exceed 72.5 tons.

19. Comment: (ICL): Total Phosphorus Effluent Limits Not Consistent with TMDL Waste Load Allocations

The American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis, developed by the Idaho Department of Environmental Quality (DEQ), the Shoshone-Bannock Tribes and the EPA, most recently modified in May of 2012, is the relevant TMDL for the receiving water.

This TMDL established Waste Load Allocations (WLAs) for the point sources that discharge into this segment of the Snake River, including this facility. This TMDL established a Total Phosphorus (TP) WLA of 7.1 tons/year for the Blackfoot WWTP. The Fact Sheet for this NPDES permit notes that, on a daily basis, the WLA is equivalent to

38.9 lbs/day. $(652 \text{ lbs/day} * 365 \text{ days/year}) / 2000 \text{ lbs/ton} = 119 \text{ tons/year}$. When developing NPDES effluent limits, the Clean Water Act provides that the permitting agency (in this case EPA) needs to ensure that these effluent limits are consistent with the assumptions and requirements of the WLA developed in a TMDL, as required by 40 CFR 122.44(d)(1)(vii)(B). The Draft NPDES permit for the Blackfoot WWTP proposes TP limits as follows: Average weekly limit is 108 lbs/day Average monthly limit is 72.3 lbs/day. These proposed limits are expressed as lbs/day. It is worth noting that the TP WLA for this facility is expressed in tons/yr. EPA has not proposed a limit consistent with the tons/yr (or annual loading) format. The absence of an annual limit is a deficiency that EPA needs to correct prior to issuance of this permit. EPA asserts that there is a "low probability" that the facility would actually exceed the WLA of 7.1 tons/year and concludes that the average monthly and weekly limits are consistent with the assumptions and requirements of the wasteload allocation in the *TMDL*, as required by 40 CFR 122.44(d)(1)(vii)(B).

We believe that EPA's conclusion that the proposed effluent guidelines are "consistent with the assumptions and requirements" of the TMDL is unsupported for several reasons:

1) The proposed effluent limits were not calculated using established methodologies appropriate for the pollutants in question.

The Fact Sheet relies on certain methodologies for accounting for variability in effluent discharge and relies on the TSD.

The EPA describes the TSD as follows:

"The revised Technical Support Document for Water Quality-based Toxics Control (TSD) provides States and Regions with guidance on procedures for use in the water quality-based control of toxic pollutants. It presents recommendations to regulatory authorities faced with the task of controlling the point source discharge of toxic pollutants to the Nation's waters. The document provides guidance for each step in the water quality-based toxics control process from standards development to compliance monitoring."

The NPDES in question is using these methodologies to develop limits for TSS, not toxic pollutants. Thus we hold that this is an inappropriate and unsupported use of the methodologies described in the TSD.

2) Compliance with the proposed effluent limits authorizes discharges that exceed the WLA for this facility.

If the facility were to operate in such a manner that it discharged TP at 72.3 lbs/day for every day of the year it would be in compliance with the draft permit. Doing so would result in an annual TP discharge of 13.2 tons/yr.

An effluent limit that provides for a lawful discharge of 13.2 tons/year $(72.3 \text{ lbs/day} * 365 \text{ days/year}) / 2000 \text{ lbs/ton} = 13.19 \text{ tons/year}$.

An effluent limit that provides for a lawful discharge of 13.2 tons/year of TSS is not consistent with the WLA in the TMDL of 7.1 tons/year.

Thus, the proposed effluent limits for TP are not consistent with the assumptions and requirements of the TMDL for the receiving water and are in violation of 40 CFR 122.44(d)(1)(vii)(B). As such, the proposed effluent limit is not lawful.

Response: The comment is confusing because the title addresses TP but references “methodologies to develop limits for TSS” and “discharge of 13.2 tons/year of TSS”.

For the same reasons explained in the response to Comment 17 using the TSD to provide weekly and monthly limits from an annual allocation for total phosphorous is appropriate.

However, ICL is correct that it is possible that the permittee could comply with the average monthly limits and yet discharge more TP than allocated in the TMDL. Therefore, EPA has included an annual average effluent limit for TP of 38.9 lbs/day, which directly insures that the annual loading of TP will not exceed 7.1 tons.