

Response to Comments on the Draft NPDES Permit for The Meadows, LLC: Permit # ID0024422

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Background

On March 14, 2012, the United States Environmental Protection Agency (EPA) Region 10 issued a draft National Pollutant Discharge Elimination System (NPDES) permit for public review and comment for The Meadows, LLC (NPDES Permit #ID0024422). The public comment period closed on April 13, 2012. EPA received comments on the draft permit from the Idaho Conservation League (ICL).

Response to Comments Received on the Draft Permit

Comments Regarding Effluent Limits for Total Suspended Solids

Comment #1

ICL stated that the average monthly TSS effluent limits in the draft permit are not consistent with the Big Wood River TMDL's WLA for this facility. ICL stated that the Big Wood River TMDL established a Total Suspended Solids (TSS) WLA of 0.6 tons/year for The Meadows, LLC WWTP. ICL notes that, on a daily basis, the WLA is equivalent to 3.3 lbs/day; however, the draft permit proposes an average monthly TSS limit of 8.3 lb/day. ICL asserts that EPA's conclusion that the proposed effluent limits are "consistent with the assumptions and requirements" of the TMDL is unsupported for the following reasons:

- ICL stated that 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* or TSD. ICL stated that EPA has used the TSD's methodologies to develop limits for TSS, not toxic pollutants. ICL stated that this is an inappropriate and unsupported use of the methodologies described in the TSD.
- ICL stated that the average monthly effluent limit was calculated using what appears to be a totally arbitrary multiplier. ICL stated that EPA cites the average monthly limit as being calculated by multiplying the facility's TMDL WLA, converted to a daily load (3.3 lbs/day) by 2.5. EPA states that this multiplier of 2.5 is the result of a "relationship" shown in Table 5-2 in the TSD. ICL stated that Table 5-2 has 200 different ratios and that the discussion in the fact sheet therefore fails to provide the information required for reviewers to review or replicate EPA's conclusion. ICL stated that, although Table 5-2 contains 200 possible ratios, none of these ratios is "2.5" – the ratio that EPA has chosen to utilize.
- ICL states that the proposed effluent limits authorize discharges that exceed the WLA for this facility. If the facility were to discharge TSS at 8.3 lbs/day for every day of the year, it would be in compliance with the draft permit. Doing so would result in an annual TSS discharge of 1.5 tons/yr. ICL stated that an effluent limit that provides for a lawful discharge of 1.5 tons/year of TSS is not consistent with the WLA in the EPA approved TMDL of 0.6 tons/year.

Response #1

EPA believes that the proposed average monthly effluent limit of 8.3 lb/day is, in fact, consistent with the assumptions and requirements of the WLA in the TMDL, for the reasons explained below.

The TSD Was Properly Used to Calculate the Average Monthly Limits in the Draft Permit

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)

"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 <www.epa.gov/npdes/pubs/owmo264.pdf> (hereafter 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 Meadows, LLC was the equation used to calculate an average monthly limit based upon a pre-determined long-term average (LTA) WLA (see TSD at table 5-2). Typically, for effluent limits for toxic pollutants based upon two-value (i.e. acute and chronic) water quality criteria, the LTA WLA would have been calculated based on the acute and chronic WLAs, as shown in Box 5-2 and Table 5-1 of the TSD. In this case, the WLA in the Big Wood River TMDL is expressed as an annual total load of 0.6 tons per year, which can be converted to an annual average load of 3.3 lb/day.¹ Once the WLA is converted to an annual average value, it is approximately 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.

The Multiplier Used to Calculate the Average Monthly Limit was Not Arbitrary

As stated in the fact sheet (Page C-5), "the average monthly and average weekly loading limits for TSS are calculated based on the annual total wasteload allocation as well as the variability of the effluent TSS load, using the relationship shown in Table 5-2 of the TSD." ICL notes in its comments that Table 5-2 has 200 possible ratios, and none of the ratios listed is equal to 2.5, which is the multiplier used in this case. This is because EPA did not use the *values* printed in the table to calculate the multiplier; rather, EPA used the *equation* which is printed in the table and which produces the values in the table. The direct use of the equation rather than the values in the table allows for a more precise calculation of the multiplier than is possible using the table (even if interpolation is used), because the table only includes certain values for the coefficient of

¹ 0.6 tons/year × 2000 lb/ton ÷ 365 days/year = 3.3 lb/day

variation (CV) and sampling frequency, whereas, if the equation is used, then the exact CV and sampling frequency can be used. The equation is:

$$AML = LTA \times \exp(z_a \sigma_n - 0.5 \sigma_n^2)$$

Where:

$$\sigma_n^2 = \ln(CV^2/n + 1)$$

$$\sigma_n = \sqrt{\sigma_n^2}$$

$z_a = 1.645$ for 95th percentile probability basis

$n =$ number of sampling events

In this case, the multiplier was calculated based on the variability of The Meadows, LLC's average monthly discharges, as reported on the City's discharge monitoring reports (DMRs) from February 2000 through August 2011. The average of the monthly average TSS loads was 1.367 lb/day, and the standard deviation of the monthly average TSS load was 1.132 lb/day, thus, the coefficient of variation (CV) is $1.132 \div 1.367 = 0.8283$.

When setting an average monthly limit based on a LTA WLA, the goal is to assess the variability of the monthly averages (i.e., the expected ratio between the long-term average and the maximum monthly average). The TSD equations are based on the assumption that the CV has been calculated based on individual data points. In this case, EPA calculated the CV of the monthly average TSS loads, as reported on the DMRs. Because The Meadows, LLC was required to sample its effluent for TSS at least once per week (see the 1999 permit at Table 2, on Page 5), each reported monthly average TSS load represents the average of at least four samples. The monthly averages will be less variable (i.e., have a lower CV) than the individual daily loads. The equation in Table 5-2 can be adapted to assess the variability of the monthly average data by setting the "number of samples" equal to one. This is appropriate because, in this case, any single "sample" from the data set used to calculate the effluent variability is, in fact, an *average* of at least four individual samples. Thus:

$$\sigma_1^2 = \ln(CV^2/1 + 1) = \ln(0.8283^2 \div 1 + 1) = 0.5224$$

$$\sigma_1 = \sqrt{\sigma_1^2} = 0.7228$$

$$\exp(z_a \sigma_n - 0.5 \sigma_n^2) = \exp(1.645 \times 0.7228 + 0.5 \times 0.5224) = 2.53$$

Note that the CV in this case (0.8283) is close to 0.8. The LTA multiplier shown in Table 5-2 of the TSD for a CV of 0.8 and $n = 1$ is 2.48, which is close to the multiplier calculated from the actual CV.

Thus, the multiplier used to calculate the average monthly TSS limit from the annual WLA was not arbitrary and was based on EPA permitting guidance (i.e., the TSD).

An Average Monthly Limit Must Be Set Higher Than an Annual Average WLA to Account for Effluent Variability

On Page C-5, the fact sheet states that:

“The goal of a water quality-based effluent limit is to ensure a low probability that water quality standards will be exceeded in the receiving water as a result of a discharge, while considering the variability of the pollutant in the effluent (see TSD at Section 5.3.1). The average monthly and average weekly loading limits for TSS are calculated based on the annual total wasteload allocation as well as the variability of the effluent TSS load, using the relationship shown in Table 5-2 of the TSD.

The average monthly limit is 8.3 lb/day, which is calculated as 2.5 times the wasteload allocation converted to a daily load. The monthly average effluent limits will nonetheless ensure that the facility will have a low probability of exceeding its 0.6 ton-per-year wasteload allocation because facilities must generally operate below their average monthly limits most of the time in order to ensure consistent compliance (see TSD at figure 5-3). Therefore, the TSS effluent limits are consistent with the assumptions and requirements of the wasteload allocation.”

As explained in Section 5.2.2 of the TSD, “all permit limits, whether technology-based or water quality-based, 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 WLA and will achieve the desired loadings.”

In general, federal regulations require effluent limits for continuously discharging dischargers to be expressed as average monthly discharge limitations, meaning the highest allowable average of discharges measured over a calendar month (40 CFR 122.2, 122.45(d)). 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) 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 an annual average WLA, it would be more stringent than intended.²

EPA Has Assured that the Permits Will Meet the Annual WLA

There is a low probability that the permittee would exceed the annual WLA. The average monthly TSS limits in the draft permit represent the expected maximum monthly average effluent load that the City would discharge, if its long-term average TSS load were equal to the WLA (0.6 tons per year, or, equivalently, 3.3 lb/day), assuming that the effluent variability (i.e., the CV) remains the same as it has been in the past. Thus, as stated on Page C-5 of the fact sheet, “The

² 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.

monthly average effluent limits will nonetheless ensure that the facility will have a low probability of exceeding its 0.6 ton-per-year wasteload allocation because facilities must generally operate below their average monthly limits most of the time in order to ensure consistent compliance (see TSD at figure 5-3).”

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, as explained in the response to comment #2, below, EPA has included an annual average effluent limit for TSS, which directly ensures that the annual loading of TSS will not exceed 3.3 lb/day, on average (or, equivalently, 0.6 tons per year total).

Comment #2

ICL stated that EPA has not proposed a TSS effluent limit consistent with the tons/yr (or annual loading) format of the TSS WLA in the Big Wood River TMDL. ICL stated that the absence of an annual limit is a deficiency that EPA needs to correct prior to issuance of this permit.

Response #2

EPA agrees that an annual limit for TSS is appropriate in this case. As explained in the response to comment #1, above, because federal regulations require that effluent limits for facilities that discharge continuously must generally be expressed as average monthly limits (40 CFR 122.45(d)), for the draft permit, EPA attempted to reconcile the difference between the averaging period of the WLA (annual) and the averaging periods of the limits (monthly) in a way that accounts for the variability of the effluent TSS loading.

As explained in the response to comment #1, above, EPA disagrees with ICL’s statements that the average monthly TSS limits proposed in the draft permit were arbitrary and an improper use of the TSD. However, ICL is correct that it is possible (albeit unlikely) that the permittee could comply with the average monthly limits and yet discharge more TSS than allocated in the TMDL. Therefore, EPA has established an annual average effluent limit for TSS of 3.3 lb/day. This limit is equal to the 0.6 ton-per-year WLA converted to a daily load.³ EPA chose to express the TSS effluent limits as an annual average (in lb/day) instead of an annual total, because this is consistent with the way the monthly and weekly limits are expressed. This will simplify the calculation of loads for compliance purposes, because the annual average load is calculated in a manner similar to an average monthly or weekly load.

EPA has determined that the City can comply with an annual average limit of 3.3 lb/day immediately upon the effective date of the final permit. This annual average load has not been exceeded in the past seven years (January 2005 – December 2011). The highest annual average load measured in the last seven years was 2.33 lb/day, in 2009. Therefore, a compliance schedule is not necessary for this new water quality-based effluent limit.

³ 0.6 tons/year × 2000 lb/ton ÷ 365 days/year = 3.3 lb/day

EPA has also included average monthly and average weekly limits in addition to the annual average limit of 3.3 lb/day. The average monthly limit in the final permit is identical to that in the draft permit (8.3 lb/day). The average weekly limit has been changed to 26 lb/day, as explained in the response to comment #3, below. The average monthly limit ensures that the permit complies with federal regulations governing the expression of effluent limits in NPDES permits for facilities that discharge continuously (40 CFR 122.45(d)). As explained on Page C-1 of the fact sheet, it is impracticable to express the “maximum” limits for TSS as maximum daily limits, in this case, because the technology-based limits for TSS are expressed as maximum 30-day and 7-day averages. In addition, the average monthly and average weekly limits will ensure that the maximum discharge in any given month is not so much greater than the annual average limit that the City is likely to violate the annual average WLA due to one or two months of relatively high discharge loading.

Comment #3

ICL stated that the calculation of the average weekly effluent limit incorrectly used technology-based effluent limit methodology rather than water quality-based limits. ICL stated that the fact sheet states that the average weekly TSS limit was set at 12.5 lbs/day, which is 1.5 times the average monthly limit and that this is “consistent with the technology-based concentration limits.” ICL stated that the Big Wood River is listed as 303(d) for TSS and there is a TMDL that has established a TSS WLA for this facility. As such, it is not appropriate for this facility’s effluent limits to be technology-based. Rather, this facility’s limits need to be water quality-based.

Response #3

As stated in the fact sheet at Page C-2 (emphasis added):

“Mass Limits

Technology-based mass effluent limits for BOD₅ and TSS are calculated by multiplying the technology-based concentration limits in Table C-1 by the design capacity of the treatment plant (0.1 mgd) and the density of water (8.34 lb/gallon). *The technology-based mass limits for BOD and TSS are an average monthly limit of 25 lb/day and an average weekly limit of 38 lb/day.*

Use of Technology-based Effluent Limits in the Draft Permit

The technology-based effluent limits for BOD₅ and pH are stringent enough to ensure compliance with water quality standards and have been proposed in the draft permit. The concentration effluent limits for TSS are also technology-based.

More stringent water quality-based mass limits are proposed for TSS, as explained below.”

The proposed water quality-based average monthly and average weekly TSS loading limits in the draft permit are 8.3 lb/day and 12.5 lb/day, respectively. These limits represent a 67% reduction relative to the technology-based effluent limits. The fact that EPA used the same ratio between the average monthly and average weekly limits (1.5:1) as used in the technology-based limits does

not mean that the average weekly TSS limits are technology-based rather than water quality-based.

The water quality-based effluent limits for TSS are expressed exclusively as loads (i.e., the concentration limits are technology-based) because the WLA for TSS in the Big Wood River TMDL is expressed exclusively as load (i.e., tons per year). If the effluent flow rate were sufficiently low, the permittee could comply with the water quality-based mass limits for TSS, without discharging a lower concentration of TSS than required by the technology-based limits.

Because the WLA is expressed as an annual total load (i.e, tons per year), the effluent loading of TSS in any given week is only of concern if it ultimately results in noncompliance with the average monthly or annual average limit. Therefore, EPA has reviewed The Meadows' effluent TSS data to determine if the assumed 1.5:1 ratio of the maximum average weekly load to the average monthly load accurately reflects the WWTP's performance. The TSS effluent limits in The Meadows' 2001 permit were expressed as average monthly and average weekly limits, thus, the city was required to report the monthly average and the maximum weekly average TSS load each month. EPA calculated the ratios of the reported maximum weekly average TSS load to the reported average monthly TP load for each month from January 2005 through April 2012. All of the monthly average TSS loads were less than the average monthly effluent limit in the reissued permit, and the ratio of the maximum average weekly load to the average monthly load was greater than 1.5:1 69% of the time. The 95th percentile ratio was 3.17:1.

Therefore, EPA believes that the proposed 1.5:1 ratio of the average weekly limit to the average monthly limit does not reflect the historic performance of The Meadows' WWTP. EPA has therefore used the 95th percentile ratio of the maximum average weekly load to the average monthly load (3.17:1) to calculate the average weekly limit. This results in an average weekly limit of 26 lb/day in the final permit, instead of the proposed average weekly limit of 12.5 lb/day. This water quality-based limit is more stringent than the technology-based average weekly TSS effluent loading limit, which is identical to the average weekly TSS loading limit in the prior permit (38 lb/day). Therefore, this limit complies with the anti-backsliding provisions of the Clean Water Act. The average monthly limit of 8.3 lb/day is unchanged from that proposed in the draft permit.

The purposes of the average weekly limit are to ensure compliance with federal regulations governing the expression of effluent limits in permits (40 CFR 122.45(d)(2)) and to ensure that the average discharge of TSS in any given calendar week is not so much greater than the average monthly effluent limit that the permittee is likely to violate the average monthly limit due to a single week of high discharge loading. The revised average weekly limit will serve these purposes.

Comment #4

ICL stated that the Big Wood River TMDL established TSS WLAs for The Meadows, the City of Hailey WWTP and the City of Ketchum WWTP. The WLA and the proposed permit effluent limits for TSS at these facilities are displayed in the table below.

Facility	From TMDL		From Draft NPDES		Permit limit greater than WLA by: (tons/yr)
	TSS WLA (tons/yr)	Converted Daily WLA (lb/day)	Proposed TSS AML (lb/day)	Converted Annual (tons/yr)	
Meadows	0.6	3.3	8.3	1.5	0.9
Hailey	3.3	18	45	8.2	4.9
Ketchum	26.5	145	275	50.2	23.7
Total	30.4	166.3	328.3	59.9	—
Total amount of TSS discharge authorized in excess of WLA					29.5 tons/yr

ICL stated that each draft NPDES permit fails to limit TSS discharge at the respective facility to the WLA identified in the TMDL. As a result, each of these facilities is being authorized to discharge at levels that are not consistent with the WLAs in the TMDL.

ICL stated that, if each facility operated at the maximum levels allowed in their draft permits, the resulting discharge would exceed the WLAs developed in the Big Wood TMDL by 29.5 tons/year, or, equivalently, 162 lb/day. This represents a nearly 100% increase in TSS discharge beyond what the Big Wood River TMDL authorizes.

ICL stated that the TMDL was developed to reduce TSS discharge to the Big Wood River and restore water quality to the point that the river could be removed from the 303(d) list. ICL stated that permit limits that allow for a 100% increase in TSS discharge are not consistent with the TMDL. ICL stated that the limits issued in the final versions of these NPDES permits need to be the same as the WLAs that have been developed for these facilities.

Response #4

EPA agrees that the Big Wood River TMDL was developed to reduce TSS discharge to the Big Wood River and thereby restore water quality. However, EPA disagrees that the draft permits for the City of Hailey, City of Ketchum, and The Meadows allow an increase in TSS discharge. In fact, neither the draft nor the final permits allow an increase in TSS discharges relative to previously-authorized levels. Table 2, below, provides a comparison of the average monthly effluent limits in the draft and final permits relative to the prior permits.

Facility	Prior Permit AML (lb/day)	2012 Permit TSS AML (lb/day)
Meadows	25	8.3
Hailey	94	45
Ketchum	505	275
Total	624	328.3

As shown in Table 2, based solely on average monthly TSS limits, the reissued permits for The Meadows, the City of Hailey, and the City of Ketchum require a 47% reduction in TSS load relative to the prior permits.

Furthermore, as explained in the response to comment #2, to address the concern that it is possible (albeit unlikely) that The Meadows, LLC could comply with the average monthly limits and yet discharge more TSS than allocated in the TMDL, for The Meadows, LLC, EPA has established an annual average effluent limit for TSS of 3.3 lb/day, which is equal to the 0.6 ton-per-year WLA converted to a daily load.

These same concerns were also raised for the City of Hailey and The City of Ketchum. Therefore, EPA has also established annual average effluent limits for TSS for the City of Hailey and The City of Ketchum, which are equal to those facilities' annual total WLAs converted to daily loads. Thus, the reissued permits for Hailey, Ketchum, and The Meadows assure that the TSS loading from these sources, both individually and cumulatively, is no greater than that allocated in the Big Wood River TMDL.

Comments Regarding Mixing Zones

Comment #5

ICL stated that it is inappropriate to allow a mixing zone for a pollutant that is not subject to an effluent limit. ICL stated that absent a mixing zone, it appears that there is a reasonable potential to violate for Nitrate + Nitrite, given that the maximum observed concentration of this pollutant in the effluent is over twice the chronic water quality standard.

Response #5

The issue raised by this comment is whether dilution (i.e., a mixing zone) may be considered as part of a reasonable potential analysis to determine whether an effluent limit is necessary for a given pollutant. Federal regulations state that, “when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, *the dilution of the effluent in the receiving water*” (40 CFR 122.44(d)(1)(ii), emphasis added).

The TSD states that the procedures described within Chapter 4 of the TSD can be used to calculate the dilution for a reasonable potential analysis (Section 3.1.2). EPA calculated the dilution available for nitrate + nitrite using the recommendations of Chapter 4 of the TSD as well as the State of Idaho's mixing zone policy (IDAPA 58.01.02.060).

Specifically, for nitrate + nitrite, as stated on Page C-3 of the fact sheet, the 30-day, 5-year low flow rate of the receiving water was used to calculate dilution. This is consistent with the TSD's recommendation for human health criteria for non-carcinogens (see Section 4.6.2). Although the Idaho WQS do not include water quality criteria for nitrate + nitrite, EPA used the Clean Water Act Section 304(a) recommended criterion for nitrates, for the protection of human health for consumption of water and organisms, to interpret Idaho's narrative criterion for toxic substances (IDAPA 58.01.02.200.02, see also the fact sheet at Page C-3). The TSD states that “where State

standards specify that the criterion must be met at the end of the mixing zone, the criterion would be applied at that point” (Section 4.6.2). The mixing zone policy in the Idaho WQS states that “the water quality within a mixing zone may exceed chronic water quality criteria so long as chronic water quality criteria are met at the boundary of any approved mixing zone” (IDAPA 58.01.02.060.01.g). The definition of “chronic criteria” in the Idaho WQS includes human health criteria (such as the criteria for nitrate + nitrite) in addition to chronic aquatic life criteria (IDAPA 58.01.02.010.14).

Comment #6

ICL stated that the authorized mixing zones are too big. DEQ regulations typically limit the size of a mixing zone to 25% of the receiving flow. ICL stated that DEQ is in the habit of granting nearly every facility a mixing zone for the full 25%, even though smaller mixing zones would frequently suffice. ICL stated that it is inappropriate for the EPA to concur with DEQ’s granting of a full 25% and that EPA should instead calculate the minimum size of the mixing zone that is actually needed to ensure compliance with water quality standards.

Response #6

The mixing zone policy in the Idaho WQS states that “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, the authority to determine the size of a mixing zone in the State of Idaho rests with IDEQ. In its final Clean Water Act Section 401 certification, IDEQ authorized mixing zones utilizing 25% of the flow volume of the Big Wood River for ammonia and nitrate + nitrite. As stated by the commenter, this is allowed by Idaho’s mixing zone policy (IDAPA 58.01.02.060.01.e.iv).

Furthermore, the design flow of the treatment plant (0.1 mgd) was used to calculate the dilution factors, even though actual flows have generally been less than the design flow (see the fact sheet at Page 7). The mixing zone calculations also used critical low flow conditions in the receiving water, as described on Pages 7, 8, and D-2 of the fact sheet. Both of these assumptions are conservative, i.e., they will decrease the calculated dilution factors.

References

EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control*. U.S. Environmental Protection Agency. Office of Water. EPA/505/2-90-001. March 1991.

EPA. 2010. U.S. Environmental Protection Agency NPDES Permit Writers’ Manual. Office of Wastewater Management. Water Permits Division. State and Regional Branch. EPA-833-K-10-001. September 2010.

IDEQ. 2002. *The Big Wood River Watershed Management Plan*. Twin Falls Regional Office. March 11, 2002.