

IPDES Effluent Limit Development Guidance (ELDG)

October 27, 2017 comment deadline

Summary of Comments Received

Idaho Power Company:

1. **Section 3.7.1, page 130-131, Nutrients** – It was disclosed at the meeting held on October 10, 2017 that additional work is being done on the portion of the Effluent Limit Development Guidance which discusses nutrients, as well as other portions of the ELDG in section 3.7 “Special Considerations.” Additional and revised content in this section is expected to be presented to the working group in the spring of 2018. As such, Idaho Power would like to reserve the opportunity to provide additional comments on that section in the event that any revisions are made to its current content.

DEQ will begin holding meetings and comment periods in spring 2018 for the Permit Writers Supplement, which may include content addressing nutrients.

2. **Appendix D, page 176, Temperature Limit Calculation** – In the variable column [for Equation 49] it calls out D=Dilution Factor (Equation 24). This is actually Equation 25 on page 170.

DEQ made the correction to call out Equation 25.

US Environmental Protection Agency (EPA) Region 10:

1. **Section 2.1, page 6, TBELs for Publicly Owned Treatment Works (POTWs)** – The first paragraph should note that a POTW is a treatment works which is owned by a state or municipality. This section should also point out that permits for other treatment works may include conditions similar to POTW permits, as described in Section 2 of the IPDES User’s Guide to Permitting and Compliance Volume 2.

DEQ clarified that POTWs are owned by a state or municipality (these include sewer districts which are subdivisions of the state and are public entities). DEQ also added the final sentence to the section, “Secondary treatment and equivalent to secondary treatment standards may also be appropriate for privately owned domestic sewage treatment works and sewer districts because they receive sewage of similar quality and use comparable treatment technologies, supporting the permit writer’s application of these standards by BPJ.”

2. **Section 2.1.3.1, page 11, Determine Appropriate Standards to Apply** – The statement that, for new facilities using trickling filters or waste stabilization ponds, “the ultimate design capability of the treatment processes (waste stabilization ponds, trickling filters, or both), geographical and climatic conditions, and the performance capabilities of recently constructed facilities in similar situations should be considered when determining which standard applies,” should be supported with references to the preamble to the secondary treatment regulation (49 FR 37002, September 20, 1984) and 40 CFR 133.105(f)(2). See also the US EPA NPDES Permit Writers’ Manual at Section 5.1.3.1.

DEQ added the following two sentences to address the comment, “When a new waste stabilization pond or trickling filter is permitted, adjustments to the permit limits may apply, but no adjustment less stringent than specified in 40 CFR 133.105(a)–(e) will be made. For existing facilities, it may be determined that more stringent limits may apply for a reissued permit after reviewing past performance data as specified in 40 CFR 133.105(f).”

- 3. Section 2.2.2.4, page 26, Determine whether Existing or New Source Standards Apply –** As written, this section implies that new source performance standards (NSPS) are applicable to new dischargers in addition to new sources. As explained in this section of the ELDG and in 40 CFR 122.2, the terms “new discharger” and “new source” are distinct. NSPS are applicable to “new sources,” not to “new dischargers.” See also the US EPA NPDES Permit Writers Manual at Appendix D.

The statement that “new dischargers are required to meet the requirements of their applicable technology-based guidelines before they begin discharging” is misleading. According to 40 CFR 122.29(d)(4), new dischargers, as well as new sources and recommencing dischargers, “shall install and have in operating condition, and shall ‘start-up’ all pollution control equipment required to meet the conditions of its permits before beginning to discharge.” However, this does not mean that such dischargers “are required to meet the requirements of their applicable technology-based guidelines before they begin discharging,” because 40 CFR 122.29(d)(4) also provides that “within the shortest feasible time (not to exceed 90 days), the owner or operator must meet all permit conditions.” See also the U.S. EPA NPDES Permit Writers’ Manual at Section 9.1.3.

DEQ copied a portion of the NPDES Permit Writers' Manual Exhibit 5-8 as the ELDG's Table 7, which shows that NSPS are applicable to "New Direct Dischargers." DEQ did revise section 2.2.2.4 to clarify that discharger may be granted a grace period, not to exceed 90 days, to tune the pollution control equipment, as expeditious as possible, to meet all permit conditions (40 CFR 122.29(d)(4)).

- 4. Section 2.2.2.5.1, page 27-28, Calculating Mass-Based TBELs from Production-Normalized Effluent Guidelines –** This section states that “the production rate used in the production-normalized TBEL calculation should be representative of the actual production likely to prevail during the next term of the permit. . . .” The use of the word “should” implies that this is only a recommendation, from which permit writers may deviate. In fact, the use of “a reasonable measure of actual production of the facility” is a regulatory requirement (40 CFR 122.45(b)(2)(i)). The use of alternate limitations based on anticipated increased or decreased production levels is discretionary (40 CFR 122.45(b)(2)(ii)).

DEQ corrected the discrepancy by replacing "should be representative" with “...must be...Based upon a reasonable measure...” DEQ also included the appropriate IDAPA references (58.01.25.303.02.b.i and ii) to clarify which aspect is required versus discretionary.

- 5. Section 3.1, page 47, Characterize the Effluent –** The opening sentence of this section states that “the permit writer uses information from the permit application to identify pollutants that may be discharged by the facility and impact the receiving water.” In fact, the permit application is just one of several sources of information that a permit writer should

consider when identifying pollutants of concern. Although this is clear from the subsequent discussion, this sentence should be revised to be more general.

DEQ revised the introductory sentence, identifying that “The permit writer typically uses information from various sources...” to determine pollutants of concern.

6. **Section 3.1.2, page 49, Identify Effluent Critical Conditions** – The final sentence in this section states that “Receiving water critical conditions are presented in Section 0.” The section reference is incorrect; the correct reference is Section 3.2

DEQ corrected the reference to section 3.2.

7. **Section 3.2.1, page 50, Receiving Water Upstream Flow** – The statement that “DEQ will assess non-flowing water bodies on a case-by-case basis” is unnecessarily vague. Since this statement appears in a section that concerns critical flows for flowing receiving waters, which are an important consideration for water quality-based effluent limits (WQBELs) and mixing zones, this section should reference the section of the guidance addressing mixing zones for non-flowing waters (3.4.3.4.2).

DEQ added a reference to section 3.4.3.4.2 for nonflowing waters.

8. **Section 3.2.1.1, page 51, Use DFLOW** – In this section, DEQ proposes to delete the word “continuous” when discussing the data requirements for calculations of critical stream flows using DFLOW. “Continuous” should not be simply deleted, but rather replaced with “daily.” This section should point out that biologically-based critical flows (e.g., 1B3, 4B3, and 30B3) may be calculated from only three years of daily flow data.

DEQ replaced “continuous” with “daily” and clarified that “...4B3 requires 3 years of daily flow data.”

9. **Section 3.2.1.2, page 51, Move Upstream or Downstream** – The portion of the first sentence including and after the word “provided” should be deleted. It is clear from the subsequent discussion that diversions and additional sources of flow must be accounted for when using a stream gauge located significantly upstream or downstream from the permitted source to calculate critical stream flows.

DEQ removed the portion of the sentence after the word “provided.”

10. **Section 3.2.3, page 53-54, Other Receiving Water Characteristics** – The phrase “For water bodies other than free-flowing rivers and streams” in the first sentence of this section should be deleted. The need to consider critical conditions other than flow is not limited to “water bodies other than free-flowing rivers and streams.”

DEQ has removed the qualifying statement “for water bodies other than free-flowing rivers and streams.”

11. **Section 3.3, page 54, Determine Applicable Water Quality Standards (WQS)** – In the second paragraph of this section, the first sentence should be revised to read “WQS define water quality goals and pollutant limits that support beneficial uses.” Propagation of fish, shellfish, and wildlife and recreation in and on the water are not the only beneficial uses that are protected by the water quality standards.

DEQ has incorporated the suggested change.

12. **Section 3.3.2.1, page 55-56, Numeric Criteria—Aquatic Life** – The description of the durations for ammonia criteria is incomplete. Idaho’s ammonia criteria also include a 4-day average criterion in addition to the 1-hour CMC and 30-day CCC (IDAPA 58.01.02.250.02.d.ii.(2)).

The statement that “DEQ’s dissolved oxygen WQS include both minimum concentrations and percent oxygen saturation that must be maintained” is misleading, because dissolved oxygen criteria expressed as percent oxygen saturation are specific to the salmonid spawning use, which applies “in areas used for spawning and during the time spawning and incubation occurs” (IDAPA 58.01.02.250.02.f.i.(2)(a)).

DEQ has clarified that, “Ammonia criteria use 1-hour CMC and 30-day CCC durations, and the highest 4-day average within the 30-day period should not exceed 2.5 times the 30-day CCC.”

DEQ revised the third paragraph of section 3.3.2.1, “IDAPA 58.01.02.250.02.f specifies dissolved oxygen minimum concentrations, and in waters designated for salmonid spawning, percent oxygen saturation that must be maintained.”

13. **Section 3.3.2.2, page 60, Numeric Criteria—Human Health** – This section states that “all Idaho human health numeric chemical criteria are based on an annual harmonic mean and are not to be exceeded.” This statement appears to be based on a provision of Idaho’s water quality standards which has not yet been approved by the EPA: “Frequency and duration for human health toxics criteria. Columns C1 and C2 criteria are not to be exceeded based on an annual harmonic mean.” (IDAPA 58.01.02.210.03.d.ii). In general, the human health water quality criteria that are in effect for Clean Water Act purposes are those published in the 2005 Idaho Administrative Code. The 2005 Idaho Administrative Code does not specify how human health criteria are to be averaged, however, the EPA stated in its notice of availability of final revisions to the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health that “we recommend harmonic mean flow to calculate permit limits and taking the geometric mean of ambient water samples to determine attainment” (65 FR 66455).

DEQ has removed reference to annual harmonic mean and the 2.4 L/day drinking water consumption, leaving the section more general and applicable to any change that may or may not be made to the water quality standards.

14. **Section 3.3.2.3, page 60, Narrative Criteria** – This section should point out that IPDES permits must ensure compliance with narrative water quality criteria in addition to numeric

water quality criteria and should cite IDAPA 58.01.25.302.06.a.vi and the federal regulation 40 CFR 122.44(d)(1)(vi).

DEQ included text and a reference to IDAPA 58.01.25.302.06.a.vi to address circumstances in which numeric water quality criterion have not be established. DEQ did not include the CFR reference because the IDAPA reference corresponds to the CFR

15. Section 3.3.2.3.1, page 60-61, Considerations for WET – This section should cite Section 2.3.3 (Page 35) of the EPA’s Technical Support Document for Water Quality-based Toxics Control as the basis for the stated “typical” interpretations of Idaho’s narrative water quality criteria, for acute and chronic toxicity.

DEQ has included a citation to the TSD section 2.3.3.

16. Section 3.3.2.5, page 61, Variances and Intake Credits – The first sentence of this section is awkwardly worded. This could be addressed by deleting the words “from requirements.”

DEQ deleted “from requirements.”

17. Section 3.3.3.2, page 64-66, Determining Applicable Tiers of Protection – Figure 4 is a low-resolution image (perhaps obtained via a screen capture). Please replace with a higher-resolution image.

DEQ replaced Figure 4 with an image adapted from the Idaho Antidegradation Implementation Procedures Guidance.

18. Section 3.4.2, page 67-68, Assess Critical Conditions – The first full paragraph on Page 68 has an incorrect reference to section “0.” We believe the correct reference is Section 3.2.

DEQ has corrected the section reference to 3.2.

19. Section 3.4.3, page 74, Establish an Appropriate Mixing Zone – In Table 22, the direction for the consideration, “Are acute water quality criteria predicted to be exceeded in the mixing zone?” should include a decision as to whether a zone of initial dilution should be approved.

DEQ did not make a change—as part of the mixing zone evaluation and potential authorization, DEQ will evaluate the spatial extent and potential for acutely toxic conditions within the mixing zone, and subsequently the zone of initial dilution. Table 22 provides a summary of various considerations that go into a mixing zone evaluation, it is not meant to define the authorization process for a mixing zone or zone of initial dilution. The decision process for authorizing a mixing zone is more accurately depicted in Figure 6 and is ultimately guided by the rule language at IDAPA 58.01.02.060.01.

20. Section 3.4.3.2.1, page 77-78, Toxicity to Aquatic Organisms – The final scenario (#4) under which it may be assumed that no lethality to passing organisms will occur reads, “A drifting organism, when traveling through the path of maximum exposure, would pass through the acute mixing zone within 15 minutes.” This is inconsistent with Section 2.2.2 of

the TSD (Page 33), which states that: “If a full analysis of concentrations and hydraulic residence times within the mixing zone indicates that organisms drifting through the plume along the path of maximum exposure would not be exposed to concentrations exceeding the acute criteria when averaged over the 1-hour (or appropriate site-specific) averaging period for acute criteria, then lethality to swimming or drifting organisms ordinarily should not be expected, even for rather fast-acting toxicants. In many situations, travel time through the acute mixing zone must be less than roughly 15 minutes if a 1-hour average exposure is not to exceed the acute criterion.” Thus, limiting travel time through the acute mixing zone to 15 minutes is a rule of thumb which is intended to ensure that organisms drifting through the plume along the path of maximum exposure would not be exposed to concentrations exceeding the acute criteria when averaged over a period of 1 hour. Scenario #4 should be rewritten to be consistent with Section 2.2.2 of the TSD.

DEQ did not make a change—the language in scenario #4 is not inconsistent with the intent of the TSD. Rather, it is a simplification of the TSD rule of thumb that the comment references. This text was adapted from the Idaho Mixing Zone Implementation Guidance that was submitted to EPA along with the Mixing Zone Policy rule and is awaiting action by EPA Region 10. DEQ does not intend to change language in the Idaho Mixing Zone Implementation Guidance until EPA has decided on an appropriate action regarding the Mixing Zone Policy.

21. **Section 3.4.3.4.1, page 84-87, Flowing Waters** – In Table 24, “Phosphorus” should be replaced with the more general term “Nutrients.” The paragraph at the top of Page 86, discussing the methods for determining low flows, should reference Section 3.2.1.

DEQ replaced the subheading “Phosphorus” with “Nutrients” in Table 24 and added a reference to section 3.2.1 in the subsequent text.

22. **Section 3.4.4, page 106-111, Conduct a Reasonable Potential Analysis (RPA)** – An alternative to Equation 26 should be provided for cases where dilution cannot be expressed as percentage of stream flow (e.g., a modeled dilution factor for a discharge to a non-flowing waterbody). This is addressed for effluent limit calculations in Section 3.5.1.1.2 (Equation 31).

DEQ revised Equation 32 for non-flowing water bodies and inserted it as Equation 27 below Figure 10.

23. **Section 3.5.1.1.2, page 114, Nonflowing Receiving Waters** – The description of the dilution ratio for non-flowing waters is misleading. The dilution ratio is “a simple ratio of the effluent volume and the receiving water volume” only if it is determined using equation 32. If the dilution ratio is determined through modeling, then it may reflect incomplete mixing.

DEQ already had text in the short paragraph preceding Equation 33 (formerly Equation 32) identifying that the dilution ratio can be determined through modeling. DEQ did change the text to, “The dilution ratio (D) used in Equation 32 may be a simple ratio... The dilution ratio can either be determined through modeling or using Equation 33:”

24. **Section 3.7, page 129-130, Special Considerations** – A new subsection should be added, addressing the need to establish permit conditions which ensure compliance with the water quality requirements of all affected States, including downstream States and Tribes. This is required by IDAPA 58.01.25.103.03, which reads, “The Department will not issue an IPDES permit for a discharge...when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states.” Federal regulations include the same requirement (40 CFR 122.4(d)). Downstream States and Tribes may have water quality requirements which are more stringent than those in Idaho, including more stringent numeric water quality criteria. Even if a downstream State’s water quality requirements are not more stringent than Idaho’s, pollutants such as nutrients, biochemical oxygen demand, and bioaccumulative pollutants may exert their greatest impact upon water quality in a downstream State. The EPA-issued NPDES permits for POTWs discharging to the Spokane River in Idaho (City of Coeur d’Alene, City of Post Falls and Hayden Area Regional Sewer Board) are examples of permits which include conditions necessary to ensure compliance with the water quality requirements of a downstream State (specifically the State of Washington’s water quality criteria for dissolved oxygen).

DEQ added two sentences in section 3.2 to address the comment, “The permit writer must consider the impact of the discharge to downstream jurisdictions, including affected states and tribes. DEQ will not issue an IPDES permit for a discharge when the permit conditions cannot ensure compliance with the applicable water quality requirements of all affected states (IDAPA 58.01.25.103.03).” DEQ further, cites the User’s Guide Volume 1 and IDAPA 58.01.25.109.01.d.i.3, which identify that DEQ will provide public notice of draft permits and public meetings to all affected federal and state agencies with jurisdiction over fish, shellfish, wildlife, and other natural resources (including downstream states or Canada), state historic preservation officers, and any affected Indian tribe.

25. **Section 3.7.1.1.1, page 130-131, Nitrogen** – This section states that “nitrate has a maximum contaminant level of 10 mg-N/L.” While this is accurate, the more relevant “standard” for nitrate, for IPDES permits, is the EPA’s Clean Water Act Section 304(a) criterion for nitrates, for the consumption of water and organisms, which is also 10 mg/L. IPDES and federal regulations allow for the EPA’s 304(a) criteria to be used to establish effluent limits based on narrative criteria (IDAPA 58.01.25.302.06.a.vi.(2) and 40 CFR 122.44(d)(1)(vi)(B)).

DEQ added the CWA 304(a) and IDAPA 58.01.25.302.06.a.vi.(2) references.

26. **Section 3.7.1.2.3, page 132, Non Impaired Waters** – The ways of determining reasonable potential to cause or contribute to excursions above nutrient criteria for impaired waters listed in Section 3.7.1.2.2 could also be used for non-impaired waters.

DEQ added the methods listed in Subsection 3.7.1.2.2 to be used in nonimpaired waters.

27. **Section 3.7.1.6.1, page 134-135, Use WLAs as WQBELs** – The use of a wasteload allocation (WLA) directly as an effluent limit for nutrients is valid not only in cases where the WLA is from a TMDL, rather, it is also a valid method of establishing effluent limits for

nutrients when the WLA is developed for an individual permit based on a mixing zone or applying the interpreted narrative nutrient criterion at the end-of-pipe.

DEQ added language below Table 37 in section 3.7.1.6.1 to address the use of WLAs for nutrient limits in impaired and nonimpaired waters.

28. Section 3.7.2.2, page 138-139, Receiving Water Temperature Considerations – This section should note that certain waters of the State of Idaho are subject to site-specific water quality criteria for temperature.

DEQ added, “IDAPA 58.01.02.276-299 documents site-specific water quality criteria (section 3.3.2.4).”

29. Section 3.7.2.4, page 139-140, Calculating Effluent Limits – In Equation 49, “ D_f ” is defined as the “dilution factor for flowing receiving water.” It is not clear why a dilution factor from a mixing zone in a non-flowing receiving water could not be used in the same way as a dilution factor for a flowing receiving water, when calculating effluent limits for temperature.

DEQ determined that Equations 25 and 50 are identical, resulting in deletion of Equation 50, and concedes that D_f applies to flowing waters (see Equations 25) and nonflowing waters (see Equation 33). The variable D_f has been changed to a more generic D_x , and this dilution may also be determined through modeling.

30. Section 3.7.7.2, page 144, Receiving Water Characterization – The last paragraph of this section should be edited to clarify that the data and monitoring requirements being discussed are fish tissue data and monitoring requirements.

DEQ inserted “fish tissue” to define what type of monitoring required.

31. Section 3.8.1, page 147, Tier 1 Review – This section states that, “The process of developing WQBELs provides Tier I protection by ensuring that the discharge does not cause or contribute to a violation of WQC.” This is true in cases where there are no existing uses of a receiving water which have not been designated. However, in cases where the receiving water has an existing use, which is not designated, compliance with Tier I antidegradation requirements would require the application of WQC necessary to support the existing uses, in addition to designated uses.

DEQ revised section 3.8.1 to address situations in which there might be existing beneficial uses that are not designated. DEQ protects for existing uses even if they are not designated. DEQ also added a reference to section 3.3, which describes the process for determining the appropriate beneficial uses and associated water quality criteria.

32. Section 4.1.1, page 149-150, Antibacksliding Provisions – This section should note that the anti-backsliding regulatory provisions in IDAPA 58.01.25.200 and 40 CFR 122.44(l) restrict the relaxation of “standards or conditions” in existing permits. Thus, these regulatory

provisions address all types of backsliding not addressed in the Clean Water Act antibacksliding provisions, including relaxation of conditions which are not effluent limitations (e.g., monitoring requirements). See the US EPA NPDES Permit Writers' Manual at Section 7.2.2.

DEQ revised Section 4.1 to expand the provisions prohibiting the relaxation of effluent limits, "...permit conditions, or standards..." in reissued permits.

33. **Section 3.6, page 122, Frequency of testing** – Recommend removing the language re: semi-annual testing being "generally recommended for major facilities." EPA recommends monthly testing for majors and quarterly for minors, so the language re: recommended is not correct. Could revise it to read something to the effect: "For example, semi-annual acute and chronic testing, which is generally required of major facilities, will yield..."

DEQ changed "generally recommended" to "generally required."

34. **Section 3.6, page 122, Acute vs Chronic testing** – In the second paragraph of Section 3.6 it states, "For an RPTE analysis, data should be available for acute and chronic testing...." It is exceedingly rare for a permittee to be required to do both acute and chronic toxicity testing as the type of testing required is driven by the dilution allowance provided to the permittee, which rarely approaches 1000:1 (acute tests are recommended if the dilution factor is close to 1000:1). Recommend revising this language to reflect that for the reasonable potential analysis acute and/or chronic testing data should be available and used.

DEQ changed the sentence to, "For an RPA, data should be available for acute and/or chronic testing..."

35. **Section 3.6.1, page 123, Endpoints vs TU** – This section states that each endpoint (NOEC/LOEC/IC/EC) can be converted/translated to Toxic Units, but that is not correct. Acute Toxic Units are defined as 100/LC50, and chronic toxic unit is 100/NOEC or EC/IC25. This section should be revised to include LC50 as an endpoint, and also clearly define the TU_a and TU_c.

DEQ added LC as an endpoint and clarified endpoint conversions.

36. **Section 3.6.2, page 125, RPA** – This section is confusing as it has calculating WLAs as the first step, when ideally a permit writer would review the data, determine RP using the procedures outlined in Box 3-2, Section 3.3.2 of the TSD. If RP is determined, then the permit writer should proceed to WLA determinations and limit development.

DEQ revised this section to address WET RPA and WLA process—DEQ removed the equations, referenced subsection 3.6.2.2, where Equations 31 and 32 are cited for use in assessing RPA in flowing and nonflowing water bodies, respectively.

37. **Section 3.6.2.1, page 126, RPA** – Suggest revising this to state that a RPA can be performed quantitatively using effluent data and statistical procedures, as well as qualitatively using the procedures and considerations outlined in TSD Section 3.2. This section does specify that

permit writers can still conduct an RPA if they have less than 10 data points by referring them to Section 3.4.4.1 (which references TSD Section 3.2), but it should be revised to state that the procedures can also be used when there is no effluent data at all, not simply less than 10. Suggested language: "If less than 10 acute or chronic data points are available, or in cases where no effluent data is available, an RPA may still be performed..." Also suggest expanding upon the list of things to consider when conducting RPA with minimal or no data, to include those factors identified in TSD Section 3.2 (ie. type of industry, compliance history, type of receiving water and designated use, etc.)

DEQ incorporated the recommended language changes addressing situations in which no data is available. However, DEQ did not include the expanded list of factors recommended because the additional factors are in TSD Section 3.2, which is referenced in Section 3.6.2.1 of the ELDG. IPDES permit writers will refer to the TSD directly.

38. Section 3.6.2.2, page 126, RPA – See comment above re: RPA with no data. This section implies RPA can only be conducted "...if there are least 10 valid WET test results..."

DEQ incorporated language to clarify that reasonable potential to exceed (RPTE) may also be assessed, "...when less than 10 test results are available or in cases where no effluent data are available using the procedures in section 3.4.4.1."

39. Section 3.6.3.2-3, page 127-128, Acute and Chronic WET Limit – Should include language specifying how the MDL and AML will be interoperated and enforced. For instance, R8, 9 and 10 WET guidance recommends the following for MDL and AML: "The permit should contain a condition indicating that the MDL is interpreted as the maximum acute or chronic WET result for that calendar month unless otherwise specified by State requirements. The AML is the highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month, unless otherwise specified by State requirements." In addition, for deriving the AML, guidance should be provided for how many samples (ie. n) the permit writer should assume in situations where the monitoring frequency is once per month or less. The TSD recommends an n of 4 in those situations (TSD 5.5.3).

DEQ added section 3.6.3.4 to address the expression and reporting of chronic and acute WET Limits in permits. DEQ set the default in equations 44 and 47 as n=4 in situations where monitoring frequency is less than or equal to once per month.

40. Section 3.6.2, page 125, Equation 40 – An alternative to Equation 40 should be provided for cases where dilution cannot be expressed as percentage of stream flow (e.g., a modeled dilution factor for a discharge to a non-flowing waterbody). This is addressed for effluent limit calculations in Section 3.5.1.1.2 (Equation 31).

See DEQ's response to EPA Region 10 comment #36.

41. Section 3.6.3.1, page 127, Equation 41 – An alternative to Equation 41 should be provided for cases where dilution cannot be expressed as percentage of stream flow (e.g., a modeled

dilution factor for a discharge to a non-flowing waterbody). This is addressed for effluent limit calculations in Section 3.5.1.1.2 (Equation 31).

See DEQ's response to EPA Region 10 comment #36.

42. **Section 3.7, Special Considerations** – We had previously commented that IDEQ should add a subsection to Section 3.7 to address the need to establish permit conditions which ensure compliance with the water quality requirements of all affected States.

We further recommend that this new subsection describe the methods that IDEQ permit writers will use to assess the impact of the discharges that it permits upon the waters of other States and Tribes.

For dischargers located on waterbodies shared with another State or Tribe, (e.g., reaches of the Snake River which form the border with Oregon or Washington) or for other discharges located a short distance upstream from a State or Tribal border, such that the discharge will not mix completely with the receiving water before reaching the downstream State or Tribe, (e.g., the Clearwater Paper mill in Lewiston), the same techniques used to evaluate mixing zones could be applied to evaluate the discharge's impacts upon waters of the downstream State or Tribe. For example, Cormix could be used to determine the dilution factor at the State or Tribal boundary.

For discharges located a substantial distance upstream from another State or Tribe, a simple mass balance assuming complete mixing and no degradation of the discharged pollutants could be used as a screening-level analysis to determine if a discharge could potentially cause or contribute to violations of applicable water quality requirements in the waters of downstream States or Tribes. If this simple analysis indicates that the discharge may cause or contribute to violations of water quality requirements in waters of the downstream State or Tribe, the permit writer could proceed with establishing limits necessary to meet the downstream State based on the mass balance.

Alternatively, the permit writer could perform a more sophisticated analysis of the fate and transport of discharged pollutants. Surface water quality models, including those developed by the EPA's Center for Exposure Assessment Monitoring (CEAM, <https://www.epa.gov/exposure-assessment-models/surface-water-models>) could be used to evaluate the impact of an Idaho discharge upon a downstream State and calculate limits. This would be necessary if there is reason to believe a simple mass balance would be invalid, or if there is a need to determine the waterbody's response to discharged pollutants in addition to the concentrations of the pollutants themselves (e.g., for nutrients or oxygen demand).

Whenever DEQ determines that waters of another State or Tribe are affected by a draft IPDES permit, DEQ must notify such affected State or Tribe. Although IDAPA 58.01.25.109.d.i.(3) requires such notification when a draft permit is issued for public review and comment, we recommend notifying affected States or Tribes as soon as an effect upon their waters is identified and coordinating with the downstream State or Tribe to ensure that

the draft permit will ensure compliance with their water quality requirements. See also Clean Water Act Section 402(b)(3).

See DEQ's response to EPA Region 10 comment #24.

Association of Idaho Cities (AIC):

1. **Section 3.4.4.1, page 111, Insufficient or Inadequate Data Available to Establish A WQBEL and/or RPA** – When determining the need for a WQBEL, a permit writer uses any available effluent and receiving water data as well as other information pertaining to the discharge and receiving water (e.g., type of industry, existing TBELs, compliance history, stream surveys), as the basis for a decision. And, the permit writer may include data collection and reporting as a condition of the new permit (Section 3.4.4, pg. 106). Section 3.4.4.1 states that, when the permit writer determines that monitoring is required, the ... "permit will include effluent and receiving water monitoring and reporting requirements that allow DEQ to complete an RPA and evaluate any appropriate mixing zones." As DEQ faces these situations, AIC recommend the DEQ (1) support reliable, appropriate, and sufficient data collection by allowing sufficient time to collect data prior to the establishment of costly effluent limits; and (2) avoid schedules of compliance and data collection conditions that have the potential to lead to major permit modifications..

DEQ will take these recommendations into consideration where allowed under the CWA.

2. **Section 3.7, page 120, Integrated planning** – Add a subsection introducing the background and concept of integrated planning.

DEQ did not make a change—this topic may be addressed in the Permit Writer Supplement which is scheduled for development in spring 2018. Additionally, this topic was addressed in the User's Guide Volume 1, section 3.2.3.1.

3. **Section 3.7, page 120, Nutrient Incentive Program** – Add a subsection introducing the background and concept of a nutrient incentive program.

DEQ did not make a change—this topic may be addressed in the Permit Writer Supplement which is scheduled for development in spring 2018.

4. **Section 3, page 47, WQBEL calculations** – DEQ has stated they intend to adopt the "Idaho TSD Workbook template rev 0827171.xls" spreadsheet from EPA as is for WQBEL calculations and effluent limitations. This spreadsheet contains extensive EPA policy inherent to the calculations performed. AIC requests DEQ present this spreadsheet and its inherent policy and technical aspects for public comment.

DEQ intends to present the reasonable potential analysis (RPA) spreadsheet at the initial 2018 guidance development meeting. Many of the calculations and policies inherent to the RPA workbook are discussed throughout the ELDG, which has gone through public comment. Further, the RPA workbook calculations and resulting effluent limits will be described in each permit's fact sheet which is available for public comment as part of the IPDES permit development process.

5. **Section 3.4.3.2.3, page 78-79, Zone of passage** – Some of the avoidance threshold concentrations in Table 23 are very low values in relation to typical metals concentrations in municipal wastewater and even ambient concentrations in some receiving waters. These values in Table 23 will function as effective receiving water numeric standards without ever having been subject to the necessary and appropriate scrutiny of a formal rule-making process for water quality criteria. AIC has previously commented on and expressed concern about this topic and has requested that these values be removed from the ELDG.

DEQ did not make a change—the metal values listed in Table 23 were obtained from Table 2 of the Idaho Mixing Zone Implementation Guidance. These values are thresholds and not expressed as water quality criteria.

6. **Section 3.7.2.3, page 139, Temperature RPA** – This section states that the 95th percentiles values be used for both effluent and upstream river for the RPA analysis for temperature. These assumptions will likely lead to overly conservative RPA decisions in many cases. AIC requests that this be deleted in this version of the ELDG recognizing that temperature evaluations and limits require special considerations for reasonable implementation in Idaho. The choice of percentiles should be deferred to this subsequent guidance.

DEQ clarified that the 90th to 95th percentile of background receiving water conditions, and the 95th percentile of effluent conditions will typically be used to determine RPTE. If DEQ uses a different appropriate percentile, it will be justified in the fact sheet. Further, the RPA workbook calculations and resulting effluent limits described in each permit's fact sheet will be available for public comment as part of the IPDES permit development process.

7. **Section 3.7.2.4, page 139-140, Temperature Limits** – This section states that both daily maximum and daily average limits are needed for temperature. Although this is consistent with the averaging period for typical criteria, it does not address all criteria averaging periods (e.g., weekly average of daily maximums). And having two different daily limits may not be necessary or appropriate depending on how effluent temperature monitoring is to be conducted (e.g., continuous versus daily grab). AIC requests that this be deleted in this version of the ELDG recognizing that temperature evaluations and limits require special considerations for reasonable implementation in Idaho. The choice of averaging periods for limits should be deferred to this subsequent guidance.

DEQ changed the flow from 1Q10 to 7Q10 in the 3rd paragraph to be consistent with the low flow conditions in Table 24 and the Idaho Mixing Zone Implementation Guidance. Additionally, we changed temperature limit to be an instantaneous maximum "or" maximum daily average. Finally, DEQ removed Equation 50 because it was a rearranged duplicate of Equation 25.

8. **Section 3.7.2.4, page 140, River Flow** – The second paragraph on this page says that the 1Q10 should be used for the river flow. There is no basis for this indicated in the text, and in fact is contradictory to Table 24 on page 85 which says that the 7Q10 should be used for temperature. AIC recommends use of the 7Q10 for temperature.

See DEQ's response to AIC comment #7.

9. **Section 3.7.2.4, page 140, Regulatory Options for Temperature** – The two bullets on the bottom of page 140 do not mention one the most important regulatory options specific to temperature, namely, the 316(a) variance process. And the 316(a) process, along with the other regulatory options identified in the two bullets, all will still be potentially applicable to the paragraphs above regarding limits for receiving waters not impaired for temperature. AIC requests that all of these options be noted for all of the impairment status situations, or these sections should be deleted in recognition of the special considerations guidance for temperature that is still to be developed.

DEQ added a third bullet to reference the 316(a) variance, EPA's 2008 guidance, applicable IDAPA and CFR citations, and section 8.2.1 of the IPDES User's Guide Volume 1, which discusses the 316(a) variance in more detail.

10. **Section 3.5, page 112, Early Nutrient Reduction Incentive** – Add a subsection introducing the background and concept of a Voluntary Early Nutrient Reduction Incentive Program.

DEQ did not make a change—this topic may be addressed in the Permit Writer Supplement which is scheduled for development in spring 2018.

11. **Section 3.5.4, page 112, Early Nutrient Reduction Incentive** – New subsection 3.5.4 Voluntary Early Nutrient Reduction Incentive Program. An incentive program will encourage utilities to make voluntary reductions of nutrients earlier than required and in exchange the utility will receive an extended compliance schedule for final effluent limits. The extended compliance schedule will provide additional time to comply with effluent limits based on water quality standards, TMDLs, variances, or other nutrient related wasteload allocations. Extended compliance schedule time will be earned for each month in which actual effluent performance bests interim limits, in proportion to the extent of attained towards the final limits based on linear scaling. Incentive months earned will be tracked monthly and summarized annually. Incentive months can be earned and accumulated over a period of years. Incentive months earned will be rounded down to the nearest whole month and partial months will not be incorporated into extended compliance schedules. Receiving water quality will benefit because nutrient reductions will be achieved earlier and extend for a longer period than would otherwise occur.

See DEQ's response to AIC comment #10.

12. **Section 3.7, page 112, Early Nutrient Reduction Incentive** – Add a subsection 3.7.1.X Voluntary Early Nutrient Reduction Incentive Program. Receiving water quality may benefit from earlier nutrient reductions resulting from wastewater treatment optimization, pilot testing, stress testing, new technology trials, etc. An incentive program will encourage utilities to make voluntary reductions of nutrients earlier than required and in exchange the utility will receive an extended compliance schedule for final effluent limits.

See DEQ's response to AIC comment #10.

13. **[User's Guide Volume 2] Section 5.4, page 112, Early Nutrient Reduction Incentive** – New subsection 5.4 Voluntary Early Nutrient Reduction Incentive Program. An incentive program will encourage utilities to make voluntary reductions of nutrients earlier than required and in exchange the utility will receive an extended compliance schedule for final effluent limits. The extended compliance schedule will provide additional time to comply with effluent limits based on water quality standards, TMDLs, variances, or other nutrient related wasteload allocations. Extended compliance schedule time will be earned for each month in which actual effluent performance bests interim limits, in proportion to the extent of attained towards the final limits based on linear scaling. Incentive months earned will be tracked monthly and summarized annually. Incentive months can be earned and accumulated over a period of years. Incentive months earned will be rounded down to the nearest whole month and partial months will not be incorporated into extended compliance schedules. Receiving water quality will benefit because nutrient reductions will be achieved earlier and extend for a longer period than would otherwise occur.

See DEQ's response to AIC comment #10.

14. **Use of specific percentiles (multiple sections)** - Recommend IDEQ consider alternate percentiles for reasonable potential analyses to prevent compounding conservatism that will generate limits more stringent than necessary to protect aquatic life and human health. Other Pacific Northwest states, as well as Alaska, have adopted the use of percentiles lower than the 95th proposed for Idaho. For example, Alaska has adopted the 85th percentile for pH, temperature and hardness concentrations to be used in reasonable potential analyses, as well as the 15th percentile for background hardness values. Similarly, Oregon has adopted the 90th percentile for temperature and pH values, and alkalinity concentrations, to be used in reasonable potential analyses. Washington RPAs use the 90th percentile of receiving water ambient concentrations for metals calculations.
- a. **Section 3.3.2.1.1, page 58, Metals and ammonia criteria** - 95th percentile pH and temperature
 - b. **Section 3.4.3, page 69, Mixing zones** – 95th percentile of effluent data
 - c. **Section 3.4.3.1.4.3, page 102, Mixing zones - receiving water quality** – 95th percentile for background concentrations
 - d. **Section 3.4.3.14.3, page 103, Mixing zones - receiving water quality** – 95th percentile ambient pH and temperature, 5th percentile hardness
 - e. **Section 3.4.3.14.4, page 104, Mixing zones - receiving water quality** – 5th percentile background hardness
 - f. **Section 3.7.1.5, page 134, Reasonable Potential Analysis for Nutrients** – 95th percentile of daily maximum effluent concentrations
 - g. **Section 3.7.2.3, page 139, Reasonable Potential Analysis for Temperature** – 95th percentile receiving water temperature, 95th percentile daily maximum effluent temperature
 - h. **Appendix D, page 170-172, Equation 20-22, 28**

DEQ has identified in section 3.2.2 of the ELDG that the 90th to 95th percentile will typically be used in assessing background data to characterize the receiving water quality, depending on factors such as environmental conditions, data quality, and data quantity. Any changes to the percentiles used will be documented in the fact sheet.

DEQ intends to present the reasonable potential analysis (RPA) spreadsheet at the initial 2018 guidance development meeting. Many of the calculations and policies inherent to the RPA workbook are discussed throughout the ELDG, which has gone through public comment. Further, the RPA workbook calculations and resulting effluent limits will be described in each permit's fact sheet, and will be available for public comment as part of the IPDES permit development process.

DEQ believes there is not always a direct translation among the percentiles used and the stringency of the effluent limits in other states. For example, Washington found that EPA's metals/hardness equations generally underestimated toxicity in Washington-specific water bodies. They in turn developed their own equations, resulting in larger confidence intervals (5 vs 2.5), but more narrowly-applicable equations.

EPA Water Permits Division:

1. **Abbreviations and Acronyms, page viii – ix**, – Recommend adding two Acronyms used in the document – Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

DEQ did not add the two acronyms because they are not used in the ELDG text.

2. **Section 3.4, page 66-68, Reasonable Potential** – § Define Reasonable Potential”, pg. 67, last paragraph, last sentence – sentence does not contain all three parts of reasonable potential (RP) as is provided in the first paragraph of this section which includes “...will cause, have the reasonable potential to cause, or contribute to an excursion...” Therefore, the last sentence is inconsistent with the first paragraph in this section and is also inconsistent with EPA RP regulations. It is missing the “potential to cause.” Sentence says only, “...reasonable potential to cause or contribute to an excursion...”

DEQ made text changes in several locations of the ELDG to include “will cause, have the reasonable potential to cause, or contribute to an excursion...”

3. **Section 3.6.2.2, page 126, RPA Assessment** – § The first sentence states, “An RPA can be assessed if there are at least 10 valid WET test results for acute, chronic or both (whichever is applicable), ...” The requirement for a minimum number of test results is a prerequisite to determining RP and therefore is inconsistent with EPA's NPDES RP regulations which have no minimum threshold requirement. IN addition, the Idaho document itself at Section 3.4.4.1, “What to do if Data are not Available”, pg. 111 provides how to do a RP determination using a qualitative approach when no data are available and appropriately references EPA's 1991 TSD's Section 3.2. Therefore, Section 3.6.2.2 is inconsistent both with EPA's RP regulations and Idaho's draft itself. Finally, most importantly not assessing RP for a discharger is not protecting the state's WQS for possible excursions which can impair the receiving stream, and impact aquatic life.

See DEQ's response to EPA Region 10 comment #37.

Mike Settell

1. The guidance presumes that the Engineer is the only professional that complete the application. Please replace the word “engineer” with “environmental professional”. This does not exclude qualified individuals from completing the work.

DEQ does not use the term “engineer” in the ELDG. DEQ uses the term “engineer” one time in the User’s Guide Volume 2, but specifically in reference to preparing a facility plan. The term “engineering” is used both documents in association with “aspects,” “plans,” and “reports” and remains in the guidance.