

Comments and Response Table		
07/06/2015 Ada County Highway District (ACHD)		
Comment #	Section	Comment
1	Pg. xx	<p><i>"if it appears that full support of beneficial uses in the lower Boise River is not being attained during the 5-year review or subsequent post-TMDL implementation,..."</i></p> <p>How would DEQ define non-support? Is it based on periphyton levels above 150mg/m² and if so, how often/how many exceedances?</p>
<p>Response: Limited exceedances above the 150 mg/m² target may be acceptable, so long as they do not impair the beneficial uses. This is a numeric target (150mg/m²) for meeting a narrative standard. The TMDL Implementation Plan will help to develop the appropriate spatial and temporal criteria for monitoring the periphyton growth. Therefore, DEQ will assess the effectiveness of the TMDL implementation based on how the numeric targets relate to the narrative criteria. Continued monitoring and reassessment during the 5-year review will determine an allowable exceedance frequency that is sufficient to maintain full support of beneficial uses.</p>		
2	Pg. xx	<p><i>"...other habitat measures may be considered to further reduce periphyton growth."</i></p> <p>What other measures would be used; could examples be cited?</p>
<p>Response: Other habitat measures considered during the five-year review would include mechanisms other than TP that are determined to be contributing to favorable conditions for periphyton growth. Examples may include but are not limited increasing water depth by decreasing the channel width/depth, increasing riparian shade, and increasing the channel complexity by adding sinuosity and pools. Habitat characteristics will be assessed during the 5-year review of observed conditions, and is not being determined prior to implementation of this TMDL.</p>		
3	Pg. xix, Table B	<p>Current dry weather and Current wet weather concentrations (0.44mg/l) are listed as the same. The data submitted by Stormwater workgroup is not consistent with this concentration. A footnote in the table is necessary to explain how this concentration was determined. It looks like wet weather and dry weather concentrations were averaged $((.75 + .12)/2 = .435\text{mg/l})$</p>
<p>Response: The data submitted by the stormwater workgroup for dry and wet weather concentrations were averaged in order to provide a broader and more robust estimate given the low number of data points and high variability. DEQ did use the wet and dry TP loads (lbs/day) and seasonal flows (cfs) provided by the Stormwater workgroup. A footnote was added to Table B.</p>		

4	Pg. 5, Figure 1	Assessment Unit titled “ <i>Tenmile Creek</i> ” appears to be inaccurate. It should be “ <i>Fifteenmile Creek</i> ”.
Response: Thank you for your comment. Revised to Tenmile Creek-Fifteen mile Creek.		
5	Pg. 38 (Table 9), and Pg. 95 (Table 29)	Footnotes for Canyon Highway District, Nampa Highway District, and Notus-Parma Highway District are labeled incorrectly. They should have footnote of “a” instead of “c”.
Response: Thank you for your comment. Revised tables accordingly.		
6	Pg. 40	Idaho Transportation Department, District 3
Response: Thank you for your comment. Revised accordingly.		
7	Pg. 40	<p><i>“This information does not represent entities with active stormwater management programs or policies, such as retention onsite, within, or outside of permitted areas but not under the regulation of MS4 permits”</i></p> <p>This text is very confusing. The meaning is unclear.</p>
Response: Thank you for your comment. Text was revised for clarity.		
8	Pg. 96, Figure 27	What is the purpose of a figure showing TP concentration targets? Table 29 states DEQ intends wasteload allocation to be expressed as percent load reduction in NPDES permits. The inclusion of Figure 27 creates confusion by adding TP target concentrations to the discussion.
Response: Although the stormwater wasteload allocations are expressed as a percent load reduction in the NPDES permits, the TMDL TP target in the lower Boise River near Parma is expressed as a concentration (≤ 0.07). The purpose of Figure 27 is to illustrate how stormwater TP load reduction targets are projected to also reduce the TP concentrations, if stormwater flow conditions remained the same. Since the TMDL target is concentration based it is important to show that load reductions will correlate to concentration reductions.		
9	Pg. 100, 5 th Paragraph	<i>(i.e., portions of Meridian, Eagle, and unincorporated urbanized Ada County and southwest Boise)</i> Southwest Boise is part of unincorporated, urbanized Ada County.
Response: Thank you for your comment. Revised text accordingly.		

10	Pg. 100, 5 th Paragraph	<i>"These permitted areas receive a are included as load wasteload allocations in the TMDL....</i> Paragraph is incorrect as written. These areas are covered under an NPDES permit and therefore receive a wasteload allocation. The paragraph is confusing. Permittees are not determined by area, but by who is the owner/operator of the MS4 in the urbanized area.
Response: Thank you for your comment. Text was revised for clarity.		
11	Pg. 101, Table 30	Use same table as the one included in <i>Lower Boise River TMDL Addendum</i> (tributary TMDL), Table 30 (Page 53). The "Facility" information as listed in Table 30 (page 101) is incorrect.
Response: Thank you for your comment. Table was revised.		
12	Pg. 107 (Table 33), Pg. 112 (Table 36)	Why is Stormwater Wet Weather Percent Reduction listed as 43%? All other references in document list reduction at 42%
Response: Thank you for your comment. They are actually different. Summer WWx reductions came out to 42%, whereas winter WWx reductions came out to 42.9% (43).		
13	Pg. 118, last paragraph	<i>EPA Gold GBook</i>
Response: Thank you for your comment. Text was revised accordingly.		
07/06/2015 US Environmental Protection Agency (EPA)		
1	General	The first thing to say about this effort is that the Environmental Protection Agency commends IDEQ for the open and thorough way that the staff worked through the inputs to the AQUATOX model and developed consensus among the stakeholders. Every step of the way decisions made in the development of this TMDL were fully vetted and explained to the Watershed Advisory Group, EPA, and all concerned. This open approach contributed in a major way to the successful completion of this document.
Response: Thank you for your comment.		

2	pages xvi-xvii (see also Page 133)	<p><i>“This addendum relies on a stated implementation strategy as referenced in US Environmental Protection Agency’s phased TMDL clarification memo (EPA 2006). The staged implementation strategy for the Lower Boise River acknowledges that National Pollutant Discharge Elimination System (NPDES)-permitted point sources will strive to achieve the TMDL target as soon as possible but can be given up to two permit cycles (10 Years from the approval of the TMDL) to achieve their wasteload allocations.”</i></p> <p>This statement conflates “staged implementation” as described in the clarification memo (link below) with compliance schedules in NPDES permits, when, in fact, those are separate and distinct. It’s good that they used the phrase “as soon as possible” to describe the schedule for NPDES permitted sources, but, as written, this makes it seem as if this is something that’s articulated in the clarification memo when, in fact, it’s a regulatory requirement that would apply whether or not there was a TMDL and regardless of any implementation schedule associated with the TMDL (40 CFR 122.47). I suggest they add the regulatory citation for “as soon as possible.” I also suggest they delete the language about “up to two permit cycles” or “10 years.” A TMDL is not the place to make a judgment as to the amount of time necessary to achieve a WQBEL in a permit.</p> <p>http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/tmdl_clarification_letter.cfm</p>
<p>Response: Thank you for your comment. Revised text to state:</p> <p>This addendum relies on a staged implementation strategy as referenced in the US Environmental Protection Agency’s (EPA’s) phased TMDL clarification memo (EPA 2006). The staged implementation strategy for the lower Boise River acknowledges that National Pollutant Discharge Elimination System (NPDES)-permitted point sources will strive to achieve the TMDL target as soon as possible through compliance schedules that will be written into the NPDES permits consistent with 40 CFR 122.47.</p>		
3	Page xxix (see also Page 119)	Figure D would be more clear if the x-axis listed the modeled TP concentration or load from point sources (which is the main thing that changes between different modeling scenarios), instead of the model scenario numbers (which are arbitrary).
<p>Response: Thank you for your comment. DEQ felt that this edit would complicate the figure because the x axis values (scenarios) represent facilities, and nonpoint sources; and also include summer/winter period allocations. The x axis label would be too complicated to describe. A reference to the full scenario descriptions was added to the Figure caption.</p>		
4	Pg. 22	In the second paragraph of Section 2.4.1, I think the authors may have meant to say “total phosphorus” when they said “orthophosphate.”
<p>Response: The meaning of the paragraph is as written. To address the comment concerns about total phosphorus, additional text was inserted to clarify.</p>		

5	Pg. 138	The last sentence in the first paragraph states, “ <i>For water quality trading to be authorized, it must be specifically mentioned within a TMDL document.</i> ” This is not actually correct. EPA’s most recent draft TMDL guidance (2012) says that existing TMDLs don’t need to be reopened to authorize trading. Therefore, while it is best to mention trading in a new TMDL, it isn’t necessarily a requirement. The fact that a TMDL does need to exist before trading occurs is still a true statement.
Response: Thank you for your comment. The sentence was removed from TMDL.		
6	General	Earlier drafts of the Lower Boise River TMDL included TMDLs for Mason Creek and Sand Hollow Creek. These TMDLs were removed from the current draft TMDL document. These seemed to be appropriate TMDLs for impaired waters on the 303(d) List of Impaired Waters. It seems like the exclusion of these TMDLs will result in extra effort and additional expense to the taxpayers to re-evaluate what is already known. New reports will have to be developed and the public process will need to be done all over again.
<p>Response: DEQ appreciates your concerns. Because Mason Creek is not the only impaired tributary to the Boise River, DEQ believes that it would be more appropriately addressed in a separate watershed plan along with the other listed tributaries to the Lower Boise River (LBR) including Indian Creek, Tenmile Creek, and Fivemile Creek. A watershed plan is currently required for the tributaries to the lower Boise River that are impaired, thus adding the work that has been completed for Mason Creek is not expected to result in extra effort. Additionally, Mason Creek and other tributaries to the lower Boise River are listed differently in the Integrated Report (“cause unknown, nutrients suspected”) than the lower Boise River which is listed for TP. Addressing all the tributaries to the lower Boise River with the same listing in one watershed plan is appropriate and efficient.</p> <p>Sand Hollow Creek was removed from the TMDL because it is a tributary to the Snake River, and thus should be addressed in a separate TMDL Addendum to the Snake River Hells Canyon TMDL. A Separate plan will be completed to address the tributaries to the LBR that are impaired for cause unknown—nutrients suspected. Additionally, a separate plan will be completed to address the cause unknown—nutrients suspected impairment in Sand Hollow Creek.</p> <p>Although Mason Creek was removed from the TMDL, it will maintain an allocation at the mouth of 0.07 mg/L year-around corresponding with 56 lbs/day May-Sept and 29 lbs/day Oct-Apr. Sand Hollow Creek, because it is a tributary to the Snake River and not the LBR, will have an allocation of 0.07 mg/L May-Sept and 53 lbs/day.</p> <p>Even with this not being a TMDL for Mason Creek, the loading analysis and allocations for Mason Creek did not change for winter or summer months. Because the loading analysis and allocations for Mason Creek were included in this LBR TMDL, trading in that watershed was not jeopardized. Sand Hollow Creek was completely removed from this TMDL and is more appropriately addressed in addendum to the Snake River Hells Canyon TMDL.</p>		
7	General	The October through April chlorophyll a target of ≤ 150 mg/m ² is stated to be a monthly mean target. Many states use this concentration as a not to exceed level for periphyton chlorophyll a. What is the reason for making this a mean target?

<p>Response: The states that use this concentration as a “not to exceed” level do not include year around targets for chlorophyll-a (typically only June or July through September), as is the case in the lower Boise River. In addition, literature suggests nuisance aquatic algae become apparent between 100 and 200 mg/m² (Welch et al. 1988), therefore DEQ felt that a mean target of ≤ 150 mg/m² was appropriate.</p>		
<p>07/01/2015 City of Nampa</p>		
1	General	The City appreciates the DEQ's diligence and hard work in completing this important document. The City supports the DEQ's goal of improving water quality in the Lower Boise River watershed.
<p>Response: Thank you for your comment.</p>		
2	General	The City supports the use of an adaptive management approach throughout the Lower Boise River TMDL development. Given the limited data set for many key inputs, variability of stormwater data, and calibration of the AQUATOX model, the results of the AQUATOX model should be used in a multiple lines of evidence approach in the TMDL. The AQUATOX model is an important tool that can help us understand the sensitivity of periphyton to specific inputs but should not necessarily be used for the direct calculation of wasteload allocations. The results of this modeling effort and resulting wasteload and load allocations should continue to be compared to changes in the Lower Boise River, and the allocations should be adjusted when needed to meet water quality goals.
<p>Response: Wasteload allocations were calculated outside of the AQUATOX model and were provided as inputs to the model. Wasteload allocations were determined by the USGS mass balance model as well as flow and water quality duration curves based on historical data. Multiple lines of evidence were used in the development of this TMDL; historical data (USGS, ISDA), AQUATOX Model, and 2012-13 USGS synoptic sampling. The 5-Year review process will be used to evaluate the wasteload allocations and their effectiveness at meeting the water quality goals.</p>		
3	General	The City strongly supports the concept of water quality trading as a viable method for meeting water quality goals. While the TMDL is not the correct vehicle for detailing the exact implementation of this approach, which should be discussed in a Trading Framework, the City appreciates the DEQ's inclusion of water quality trading as a potential implementation approach for reducing point and non-point source discharges. Furthermore, the City would encourage the DEQ to continue to support and investigate both water quality trading and integrated water management approaches as viable options for meeting water quality goals.
<p>Response: Thank you for your comment.</p>		
4	2.4.4 (pg. 33) Table 6	The City recommends the addition of modeling as an additional option for more accurately representing and characterizing groundwater, stormwater, and nonstormwater flows in future documents.

Response: DEQ anticipates that additional data will be collected by permittees and plans to include any newly collected data in the 5-year review.		
5	4 (pg. 51)	<p>The first sentence of the first paragraph states:</p> <p><i>"Information concerning pollution control efforts for POTWs, urban and suburban storm drainage, and agricultural and other nonpoint sources (including rural roads, septic systems, and sewer lines) can be found in the 2013 Phase I and 2009 Phase II permits."</i></p> <p>The permits referenced are MS4 permits, and, therefore, do not pertain to all of the sectors listed. Please revise this description. Additionally, this section appears to be lacking an introduction. Please add an introduction to provide context.</p>
Response: Thank you for your comment. Revised first sentence to include all NPDES permits and added an introduction.		
6	3.1.2 (Pg. 52) Table 8	<p>The Clean Water Act lists the allowable non-stormwater discharges included in permits. It is suggested that this serve as the basis for the data in Table 8 rather than referring to a typical permit, which may not be applicable to all permit holders. The text in this section should be updated to match this reference as well.</p>
Response: IDEQ declines to make the changes requested by the commenter. The federal National Pollutant Discharge Elimination System (NPDES) regulations establish the categories of "allowable non-stormwater discharges" which can flow through a regulated MS4, provided such discharges are not identified as sources of pollutants, nor deemed to be significant contributors of pollutants, to waters of the United States. [See 40 CFR 122.26(d) (2) (iv) (B) (1)), and 40 CFR 122.34(b) (3) (iii), respectively.] Since 2006, IDEQ has incrementally consulted with the U.S. Environmental Protection Agency, Region 10 (EPA) – (in EPA's capacity as the NPDES Permitting Authority for the State of Idaho) to refine the categories of "allowable non-stormwater discharges" cited in Idaho's MS4 permits to ensure consistency with the Idaho water quality standards and respond to public input. The categories of "allowable non-stormwater discharges" listed in Table 8 of the LBR TMDL are fully consistent with the federal regulations and interagency discussions between EPA and IDEQ.		
7	5.1.2 (Pg. 65)	<p>The City supports DEQ's approach to establish the appropriate exceedance frequency as a part of the 5 year review. As a starting point, it is suggested that the toxics exceedance criteria (i.e. 1 in 3 year frequency) be used as an upper limit for this frequency as the periphyton target is aesthetics-based. The City believes that an exceedance frequency of 1 in 3 years for the periphyton target would support beneficial uses while not overly burdening dischargers.</p>
Response: Limited exceedances above the 150 mg/m ² concentration may be acceptable, so long as they do not impair the beneficial uses. This is a numeric target for meeting a narrative standard. Therefore, DEQ will assess the effectiveness of the TMDL implementation based on how the numeric targets relate to the narrative criteria. Continued monitoring and reassessment during the 5-year review will determine an allowable exceedance frequency that is sufficient to maintain full support of beneficial uses.		

8	5.3.1.3 (Pg. 75)	<p>Additional modeling may be an alternative means to better define existing stormwater loads. Along these lines, the City suggests that the last sentence of the first paragraph be modified as follows:</p> <p><i>"This known uncertainty will be addressed during implementation planning through additional monitoring, modeling, and further characterization of stormwater."</i></p>
<p>Response: Thank you for your comment. Revised text to state which may include additional modeling.</p>		
9	5.3.2 (Pg. 83)	<p>The City agrees with the DEQ's approach for separating wet weather and dry weather (i.e., agricultural return and groundwater) loads. It is the City's view that the dry weather flows are allowable as non-contaminated flows under its current NPDES permit. However, the City does not have and does not intend to implement any method for controlling these flows outside of routine maintenance. The City assumes that background water quality conditions for dry weather flows are allowable discharges, will be managed as a load allocation, and are not included in the waste load allocation for the MS4.</p>
<p>Response: Comment noted. Using the information available, DEQ has estimated pollutant loading occurring through regulated MS4 discharges during dry weather. DEQ concurs that certain types of uncontaminated groundwater and irrigation water are "authorized non-stormwater discharges" under the current MS4 permit(s) for Nampa and other regulated MS4 entities. While MS4 operators are not obligated to implement controls for such irrigation and ag return flows, DEQ's analysis supports the implementation of additional, new actions by MS4 permittees specifically, to identify all existing MS4 outfalls discharging during dry weather, and to sufficiently characterize such flows to identify the type and source of such flows, including to confirm whether such groundwater and/or irrigation water flows are indeed "uncontaminated." DEQ expects such actions to be required by the applicable MS4 permit(s) to be issued in the future by the EPA.</p>		

10	5.4.1.3 (Pg. 94)	<p>The City recommends that the DEQ evaluate methods for separating stormwater baseflow in order to identify the dry weather flows as part of the 5 year review. For example, the following two public-domain tools can separate base flow:</p> <ul style="list-style-type: none"> • Web-Based Hydrograph Analysis Tool (WHAT) - https://wiki.epa.gov/watershed2/index.php/WebBased_Hydrograph_AnalysisTool_(WHAT) • PART - http://water.usgs.gov/ogw/part/ <p>Along these lines, it is suggested the following being added to the first paragraph in Section 5.4.1.3 NPDES-Permitting Municipal Stormwater and Nonstormwater:</p> <p>"Stormwater (wet weather) allocations were derived from data provided by the LBWC stormwater workgroup (Appendix C) through several meetings and correspondence. The stormwater load estimates were not derived from the AQUATOX or mass balance models; therefore, refinements should be made as additional characterization information becomes available. For example, analytical methods for separating stormwater baseflow would allow for the refinement of the dry weather flow estimates. Further, these TP wasteload and load allocations may need to be adjusted to reflect MS4 boundary and land use changes in the subbasin."</p>
Response: Thank you for your comment. Added text as stated.		
11	5.4.1 (Pg. 98)	<p>The rationale and feasibility of the assumed 42% and 84% load reductions are unclear based on the description provided in the text. Many stormwater BMPs remove only 10-45% of influent phosphorus loads (Simpson and Weammert, 2007). It is neither technically nor economically feasible to treat all stormwater runoff from a locality, and, thus, the percent required load reductions may not be achievable since they are near the maximum of the noted removal efficiencies which represent ideal conditions. Moreover, on a dollar-per-pound basis, the costs of reducing urban stormwater loads can be 2-3 orders of magnitude higher than other sectors (Jones, 2010; Wieland, 2009). For these reasons, the reduction value should not be interpreted as an appropriate goal for any single locality or MS4 permit. Rather, TMDL-related activities by the stormwater sectors should be determined on a locality-by-locality basis, based on a reasonable level of effort in individual permit terms. Trading with other sectors and sources should be allowed and encouraged, to facilitate cost-effective load reductions.</p>

<p>Response: The 42% is within the range of loads that BMPs can remove. If load reductions were decreased below 42%, all other sources/sectors would require a higher reduction (Simpson and Weammert, 2007).</p> <p>The 84% derived from information in Appendix E (Table 2), which was provided by the stormwater workgroup. The 84% reduction for non-stormwater was based on the estimated current TP load (394 lbs/day) that was provided by the stormwater group that will be required to attain the equivalent loading of 0.07 mg/L (63 lbs/day). The 72% reduction allocation given to tributaries is an average of the tributary load reductions with a range of 34-80%, and average POTW reductions were 95% (May-Sept) and 82% (Oct-Apr).</p>		
12	General	Monitoring to assess compliance with dry weather loads and wet weather loads could become very challenging given the variability in stormwater runoff.
<p>Response: Thank you for your comment.</p>		
13	5.4.1.3 (Pg. 99)	<p>The City supports DEQ's approach to modifying the baseline stormwater loads should additional data or evaluations provide more detailed information. The City requests that the following statement be added to the TMDL:</p> <p><i>'Should baseline stormwater load estimates change, these changes will be reflected in the percent reduction requirements for this sector based on the wasteload and load allocations established in this TMDL.'</i></p>
<p>Response: The requirements for this sector would be applied and implemented through wasteload and load allocations in the appropriate NPDES permit.</p>		
14	5.4.1.3 (Pg. 99)	<p>Add the following as the last sentence of the second paragraph in the Concentration vs. Load section:</p> <p><i>"Trading with other sectors and sources should be allowed and encouraged to facilitate cost-effective load reductions."</i></p>
<p>Response: Thank you for your comment. Added text to section 5.4.1.3.</p>		
15	Table 28 (Pg. 94) and Table 35 (Pg. 110)	The City supports the wasteload allocation approach for large WWTFs in the Lower Boise River watershed (i.e., wasteload allocation based on 0.1 mg/L and 0.35 mg/L discharge from WWTFs). While this concentration still approaches the current limits of technology, the proposed wasteload allocations provide some operational flexibility.
<p>Response: Thank you for your comment.</p>		

16	5.4.3.1 (Pg. 117)	The City supports the DEQ's proposed approach (i.e., channel modifications in the Lower Boise River) to further improve water quality in the Lower Boise River. The growth of periphytic algae in the Lower Boise River, like any system, is complex with any number of factors influencing the ultimate concentrations in the river. Because of this, there appears to be a limit to the effectiveness of total phosphorus controls to meet water quality goals, as shown in Figure 47. It is important that the DEQ continues to look for the most cost-effective methods for improving water quality.
Response: Thank you for your comment.		
17	5.4.3.1 (Pg. 118)	The City supports the DEQ's use of AQUATOX for the quantification of the periphytic algae in the Lower Boise River. However, as discussed in Comment No. 2, there is still uncertainty associated with the use of the calibrated AQUATOX model. Because of this, the City requests that the DEQ use a multiple lines of evidence approach in the development of this TMDL and the review of its effectiveness in the future. This approach would be further supported by the collection of additional water quality data that could serve to better calibrate the current AQUATOX model.
Response: Wasteload allocations were calculated outside of the AQUATOX model and were provided as inputs to the model. Wasteload allocations were determined by the USGS mass balance model as well as flow and water quality duration curves based on historical data. Multiple lines of evidence were used in the development of this TMDL; historical data (USGS, ISDA), AQUATOX Model, and 2012-13 USGS synoptic sampling. The 5-Year review process will be used to evaluate the wasteload allocations and their effectiveness at meeting the water quality goals.		
18	5.4.7 (Pg. 132)	Allocation for future municipal growth is critically important to the City. Therefore, the City supports DEQ's proposed approach to allocating loads for future growth, which both achieves water quality goals and allows cities to grow.
Response: Thank you for your comment.		
19	Appendix C	The City requests that Appendix C be removed from the TMDL documentation. This document was not developed by the Stormwater Group, as referenced in the document, and, as such, does not necessarily represent the views of the entire group. This document should be viewed similarly to other input received from stakeholders throughout the process, which is not included in the formal TMDL documentation. This is not consistent with other information provided. The City recommends that either DEQ include all major contributing documents as appendices or reference them as additional information.

Response: Appendix C will remain in the TMDL for reference. This was the information provided to DEQ by LBWC Stormwater workgroup to help develop the stormwater loading estimates and allocations. However, the names referenced above (Cheryl Jenkins, Mike Mieyr, and Ted Douglass), who have since requested to be removed from Appendix E, will have a strike through on their name on the Title Page of Appendix C, indicating their request to be removed from the document. The administrative record will illustrate that the referenced names were involved in the stormwater workgroup.

07/03/2015 Idaho Conservation League

1	General	<p>We support the May 1st - Sept 30th TP concentration target of less than or equal to 0.07 mg/l and the corresponding waste load allocations for point sources and load allocations for non-point sources.</p> <p>We support the mean monthly Benthic Chlorophyll-a target of less than or equal to 150 mg/m² and the TP allocations associated with this target during both the May 1- Sept 30 and Oct 1 – April 30 time periods.</p> <p>That said, we believe that DEQ needs to develop an in river TP target for the Oct 1 –April 30 time period. DEQ makes repeated reference to its belief that adherence to the Benthic Chlorophyll-a target will result in TP concentrations of less than or equal to 0.1 mg/l, but falls short of articulating this 0.1 mg/L as an actual target.</p> <p>TP concentrations of less than or equal to 0.1 mg/l would be an acceptable target during the Oct 1 – April 30 time period and should be explicitly adopted as such. An in river concentration target is necessary to ensure compliance and gauge progress towards achieving the TP goals of the TMDL during the Oct 1 – April 30 time period.</p>
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Response: DEQ appreciates your concerns. The May 1st – Sept 30th TP concentration of ≤ 0.07 was established in this TMDL to specifically meet the target at the mouth of the Boise River to ensure the target in the Snake River Hells Canyon TMDL is met. This target, did not address wintertime concentrations.

A separate in stream target for chlorophyll-a (≤ 150 mg/m²), which included wintertime allocations, was established to address the impaired segments of the lower Boise River. This ≤ 150 mg/m² is a numeric target for meeting Idaho’s narrative criteria. Continued monitoring and reassessment during the 5-year review will determine if the targets in the TMDL are sufficient to maintain full support of beneficial uses. Further, it is identified in the TMDL’s Reserve for Growth (Section 5.4.7) that, “...an allowance for future growth is not recommended at this time, unless new or expansion of existing point sources discharging directly or indirectly to the lower Boise River: (1) receive a mean monthly NPDES permit limit for TP of ≤0.07 mg/L May through September and ≤0.10 mg/L October through April...”

2	General	<p>We are comfortable with the decision to adopt a ‘staged implementation’ strategy. However, DEQ needs to incorporate limits on the implementation timeframes. Failure to do so will allow timelines to slip, as mere ‘recommendations’ will not be adhered to.</p> <p>Regarding point sources and NPDES permits, DEQ provides that dischargers should strive to meet the targets “as soon as possible but can be given up to two permit cycles (10 years from the approval of the TMDL).” This is an acceptable schedule to ICL. However, there is a track record of facilities operating on permits for years after the effective expiration date of the permit. We ask the DEQ clarify that facilities must meet their waste load allocations in 10 years – irrespective of whether or not there are still operating on their second (or first) permit since TMDL approval.</p> <p>Regarding agricultural non-point sources, we object to DEQ’s failure to provide any implementation timeframes for these sources. Failure to provide any schedule whatsoever dooms agricultural implementation to failure and makes it virtually impossible to monitor progress towards achieving the goals of the TMDL. DEQ must develop some benchmarks so that implementation can be gauged at the 5-year review and beyond.</p>
<p>Response: In consultation with DEQ, appropriate compliance schedules may be incorporated into point source permits on a case-by-case basis, consistent with 40 CFR 122.47. All tasks and deliverables in these compliance schedules will be NPDES permit requirements and must be achieved by the date identified in the NPDES permit. Administrative extension of any expired permit will not affect the date compliance is required. This TMDL addendum, however, does not define an implementation time frame for nonpoint sources; rather, implementation would begin as soon as possible and continue as quickly as possible until the load allocation targets are met. This acknowledges that successfully achieving the TMDL target and allocations will depend in part on the installation of voluntary BMPs.</p>		
3	General	<p>We are concerned that three stream reaches appear to have been removed from consideration in the later stages of drafting this TMDL. It is not clear to us why this occurred. Could DEQ please explain this in the response to comments? Also, could DEQ please explain what the implications are of not including these stream reaches in the TMDL?</p>

Response: DEQ appreciates your concerns. Because Mason Creek is not the only impaired tributary to the Boise River, DEQ believes that it would be more appropriately addressed in a separate watershed plan along with the other listed tributaries to the Lower Boise River (LBR) including Indian Creek, Tenmile Creek, and Fivemile Creek. A watershed plan is currently required for the tributaries to the lower Boise River that are impaired, thus adding the work that has been completed for Mason Creek is not expected to result in extra effort. Additionally, Mason Creek and other tributaries to the lower Boise River are listed differently in the Integrated Report (“cause unknown, nutrients suspected”) than the lower Boise River which is listed for TP. Addressing all the tributaries to the lower Boise River with the same listing in one watershed plan is appropriate and efficient.

Sand Hollow Creek was removed from the TMDL because it is a tributary to the Snake River, and thus should be addressed in a separate TMDL Addendum to the Snake River Hells Canyon TMDL. A Separate plan will be completed to address the tributaries to the LBR that are impaired for cause unknown—nutrients suspected. Additionally, a separate plan will be completed to address the cause unknown—nutrients suspected impairment in Sand Hollow Creek.

Although Mason Creek was removed from the TMDL, it will maintain an allocation at the mouth of 0.07 mg/L year-around corresponding with 56lbs/day May-Sept and 29 lbs/day Oct-Apr. Sand Hollow Creek, because it is a tributary to the Snake River and not the LBR, will have an allocation of 0.07 mg/L May-Sept and 53 lbs/day.

Even with this not being a TMDL for Mason Creek, the loading analysis and allocations for Mason Creek did not change for winter or summer months. Because the loading analysis and allocations for Mason Creek were included in this LBR TMDL, trading in that watershed was not jeopardized. Sand Hollow Creek was completely removed from this TMDL and is more appropriately addressed in addendum to the Snake River Hells Canyon TMDL.

4	General	<p>It appears that both Sand Hollow and Mason Creek did receive concentration based targets of .07 mg/L TP at their mouths from May through September, consistent with the SR-HC TMDL. However, it appears that no loading analysis was included in the final version of the draft TMDL. Could DEQ please discuss this in the response to comments and explain why this occurred?</p> <p>We are concerned that jeopardizes the potential for pollutant trading in these tributaries.</p> <p>Could DEQ please discuss this in the response to comments and explain what impact this will have on pollutant trading?</p>
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Response: Although Mason Creek was removed from the TMDL, it will maintain an allocation at the mouth of 0.07 mg/L year-around corresponding with 56 lbs/day May-Sept and 29 lbs/day Oct-Apr. Sand Hollow Creek, because it is a tributary to the Snake River and not the LBR, will have an allocation of 0.07 mg/L May-Sept and 53 lbs/day.

The loading analysis and allocations for Mason Creek did not change for winter or summer months and remain included in the TMDL. Because the loading analysis and allocations for Mason Creek were included in the TMDL, trading in that watershed was not jeopardized. Sand Hollow Creek was completely removed from this TMDL and is more appropriately addressed in addendum to the Snake River Hells Canyon TMDL.

5	General	<p>While we are generally supportive of the potential for pollutant trading to be used as a tool to restore water quality in the Lower Boise River, we are most comfortable with pollutant trading when it is orchestrated between two point sources. We have grave concerns about the potential for pollutant trading between point and non-point sources.</p> <p>Our concern stems from the fact that it will be very difficult to ascertain if non-point sources are actually securing the reduction in TP discharge. If non-point sources are to be included in trading, the DEQ must develop some means of actually measuring TP reductions from each participating non-point source.</p>
<p>Response: Thank you for your comment. DEQ supports trading between point and non-point sources. Trading between point and non-point sources is also consistent with EPA's 2003 Trading Guidance. DEQ believes the safeguards for trading are in place within our 2010 Water Quality Pollutant Trading Guidance, and have been working to update it as a Water Quality Pollutant Trading Guidance "pilot" that integrates the necessary tracking, verification, and oversight we believe ICL may be concerned with. Actual trades will be fully vetted and must be consistent with a Trading Framework or individual trading plan as appropriate. Trades are also subject to review through the NPDES permit and DEQs 401 water quality certification with the result being a net environmental benefit to the water body/watershed. To be clear, the burden of a trade between the point and non-point source is squarely upon the point source who must ensure that the credits generated that are eligible to be purchased are real, reliable and verifiable on the ground and available during the time frame that the purchaser needs them. Trading between point and non-point sources is the key to accelerating clean-up of watersheds in many locations because non-point source compliance remains voluntary under the Clean Water Act. Trading helps incentivize action and participation for early adopters. Phased baselines will further help "ratchet up" getting to clean water for Lower Boise watershed.</p>		
<p>07/04/2015 Jack Harrison</p>		
1	General	<p>My primary concern is the 100 ug/L wastewater wasteload allocation given to municipal wastewater treatment facilities versus the 70 ug/L load allocation for tributaries and groundwater. As discussed below, there is a high level of uncertainty in developing the proposed load and wasteload allocations. In general, the higher the level of uncertainty, the more conservation allocations should be. Contrary to this DEQ is proposing to give "extra" load allocation to municipal wastewater dischargers, who are the one major source group that has relatively low uncertainty, is more controllable, and has the resources to implement control measures.</p>

Response: The USGS mass balance models (Etheridge 2013) indicate that significant point source phosphorus reductions will likely translate into significant reductions in nonpoint source loads downstream. As a result, the 95% WLA reduction from point sources will likely result in a subsequent load reduction in tributaries, drains and groundwater. This cumulative effect of decreasing phosphorus from the main stem of the Boise River should make the reductions for tributaries and groundwater more achievable. Additionally, the TP loading from nonpoint sources is expected to decrease further with the implementation of BMPs, and additional treatment methods. DEQ ran additional AQUATOX reduction scenarios with point source allocations reduced to ≤ 0.07 mg/L year-round, and 0.05 mg/L year-round—which is the approximate limit of technology—the additional scenarios showed a small net gain in environmental benefit for a large technological investment. The difference of the annual average periphyton growth between scenario 3 (point sources at 0.1 summer/0.35 Winter; NPS 0.07) and Scenario 7 (point sources at 0.05 year-round) is only 8 mg/m².

2	General	<p>There is a high level of uncertainty in each of the following areas, which are critical to setting these allocations:</p> <ul style="list-style-type: none"> • Estimates of the individual components of non-point source loads • Potential for non-point source load reductions to be achieved (i.e., full implementation with necessary reductions) • Models used to demonstrate effectiveness of load reductions
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Response: DEQ acknowledges that uncertainty exists in estimating and modeling the current phosphorus loads and load reductions, and this TMDL and associated reference documents (e.g. AQUATOX modeling report, USGS mass balance report) identify those uncertainties to the extent practicable. Further, the estimates and analyses in this TMDL utilized the most current, complete, and scientifically robust data, whenever possible. DEQ recognizes that additional monitoring and data gathering will be required to better characterize the tributary/groundwater loading to the lower Boise River. Additional data gathering will be an integral part of the implementation of this TMDL and will be used for future refinements of loads and implementation schedules.

- The USGS mass balance model (Etheridge 2013) characterizes the nonpoint source inputs.
- The load allocations in the TMDL are simply the amounts of pollutants that can be discharged from each source category, but the TMDL does not specify how the discharges must attain their particular load allocation. During the initial implementation planning each source will investigate alternatives and feasibility for meeting individual allocations. Calculations of load reduction effectiveness are a routine part of the TMDL implementation program and will also be addressed during the 5-year review.
- Two papers presented to the TAC on April 25, 2014 address best management practices effectiveness specific to the Lower Boise River projects.

3	General	There is limited data available on the actual loads that are contributed from agriculture, stormwater, septic and other sources of phosphorus. Because of this uncertainty, they are grouped into loads for tributaries and groundwater, and are given the same load reduction target even though some may be almost impossible to control.
<p>Response: DEQ acknowledges these data gaps. Implementation plans could include details regarding future data collection from these sources. As discussed in the February 2015 WAG meeting, septic system evaluation will be included in the implementation plan. Additionally, stormwater loading was largely derived from the data provided to DEQ by the stormwater workgroup. Implementation activities over the first 10 years are anticipated to involve actions that identify all existing MS4 outfalls discharging during dry weather and to sufficiently characterize such flows. Collected data such as these are expected to help refine the implementation of the TMDL.</p>		
4	General	Agricultural representatives have expressed concerns that the proposed reductions cannot occur without major changes to current agricultural practices. The load allocation given to agricultural (also requiring an 84 % reduction) is based on the load discharging from tributaries and drains. Agriculture has stated that meeting a 70 ug/L concentration target in field runoff is impossible, and that conversion to sprinkler is not realistic. And yet, there are assumptions that this can and will occur.
<p>Response: The 95% WLA reduction from point sources will have a corresponding load reduction in tributaries, drains and groundwater. This cumulative effect of decreasing phosphorus from the main stem of the Boise River should make the reductions for tributaries and groundwater more achievable.</p> <p>The USGS mass balance models (Etheridge 2013) indicate that significant point source phosphorus reductions will likely translate into significant reductions in nonpoint source loads downstream. As a result, the 95% WLA reduction from point sources will likely result in a subsequent load reduction in tributaries, drains and groundwater. This cumulative effect of decreasing phosphorus from the main stem of the Boise River should make the reductions for tributaries and groundwater more achievable. Additionally, the TP loading from nonpoint sources is expected to decrease further with the implementation of BMPs, and additional treatment methods.</p> <p>Although DEQ recognizes that groundwater needs better characterization and that implementation could take years, DEQ also recognizes that without groundwater load reductions, the point source load allocations would endure the majority of the reductions needed to meet the set targets, thus making the technological upgrades for point sources economically infeasible.</p> <p>DEQ ran additional AQUATOX reduction scenarios with point source allocations reduced to ≤ 0.07 mg/L year-round, and 0.05 mg/L year-round—which is the approximate limit of technology—the additional scenarios showed a small net gain in environmental benefit for a large technological investment. The difference of the annual average periphyton growth between scenario 3 (point sources at 0.1 summer/0.35 Winter; NPS 0.07) and Scenario 7 (point sources at 0.05 year-round) is only 8 mg/m².</p>		

5	General	<p>There are many assumptions regarding the effectiveness of implementation for other non-point source load reductions that are inaccurate and/or questionable. For example, there has been very little effort toward estimating septic loads that appear to have been given a load allocation requiring an 84% reduction. There are major concerns as to how the existing load can be controlled by the counties and other jurisdictions when Idaho currently does not have any approved approaches for reducing phosphorus in future septic discharges (let alone methods for decreasing existing loads).</p>
<p>Response: As discussed in the February 2015 WAG meeting, septic system evaluation and other nonpoint source loading will be included in the implementation plan. Options for addressing nonpoint source include 319 funding and other grant money directly tied to nonpoint sources. However, in order to receive funding to address such nonpoint source pollution, a watershed plan with a loading analysis must first be completed.</p>		
6	General	<p>There have been significant stormwater management efforts to “disconnect” surface discharge of stormwater through groundwater infiltration. Many assume that this stormwater infiltration is 100% effective at removing phosphorus. However, there are numerous studies that show this assumption is not correct. Yet again, we assume that this approach can be used to accomplish the 84% reduction goals.</p> <p>The water quality models used to model the river and to assess the load allocations are highly complex, include many simplifying assumptions, and are understandable by only a few. These models appear to show that targets can be met. The high level of uncertainty in the construction of the models is readily acknowledged. Furthermore, the only way the model could be used to show that the targets were achieved was by adding additional assumptions to the “calibrated” model. These additional assumptions included setting instream and river bottom sediments at almost background levels. Another assumption was that future nitrogen and organic matter reductions would be generally comparable to the targeted phosphorus reductions even though target reductions were not set for these nutrients.</p>

<p>Response: DEQ agrees that the collection of additional data could serve to refine the AQUATOX model and other analyses used in this TMDL. DEQ also acknowledges that the load allocations are highly complex and include assumptions. In the development of this TMDL every effort was made to obtain the best available information pertinent to the loading analysis, while still considering the time constraints and limited resources for collecting additional data.</p> <p>DEQ facilitated over 30 model workgroup meetings to vet the modeling process through interested LBWC members and the public, and DEQ facilitated AQUATOX discussions during 6 additional LBWC and TAC meetings. DEQ acknowledges that uncertainty exists in estimating and modeling the current phosphorus loads and load reductions, and this TMDL and associated reference documents (e.g. AQUATOX modeling report, USGS mass balance report) identify those uncertainties to the extent practicable. Further, the estimates and analyses in this TMDL utilized the most current, complete, and scientifically robust data, whenever possible.</p> <p>The assumptions in the TMDL reduction scenario discussed above (instream river bottom sediments, future nitrogen and organic matter, etc.) had very little impact on the periphyton results in the model. In addition, it is reasonable to assume that with the installation of BMPs, nitrogen, and organic matter reductions would occur simultaneously with TP reductions.</p>		
7	General	<p>There is a general expectation that municipalities will trade with nonpoint source loads. This is considered to be a major funding source for the voluntary agricultural non-point source reductions and would be helpful in meeting the non-point target reductions for the watershed. However, the extra allocation given to the cities will actually discourage this trading, and further increases the uncertainty relatively to meeting instream and downstream water quality targets.</p>
<p>Response: DEQ supports trading between point and non-point sources. “Extra loading” was not given to the cities. DEQ ran additional AQUATOX reduction scenarios with point source allocations reduced to ≤ 0.07 mg/L year-round, and 0.05 mg/L year-round—which is the approximate limit of technology—the additional scenarios showed a small net gain in environmental benefit for a large technological investment. The difference of the annual average periphyton growth between scenario 3 (point sources at 0.1summer/0.35 Winter; NPS 0.07) and Scenario 7 (point sources at 0.05 year-round) is only 8 mg/m².</p> <p>The 95% WLA reduction from point sources will have a corresponding load reduction in tributaries, drains and groundwater. This cumulative effect of decreasing phosphorus from the main stem of the Boise River should make the reductions for tributaries and groundwater more achievable. Additionally, the TP loading from nonpoint sources is expected to decrease further with the implementation of BMPs, and additional treatment methods.</p>		
8	General	<p>Considering all the uncertainty, it would seem much more prudent to hold any “extra” load in reserve to address future growth in areas where capacity is most limited or give extra allocation to the smaller, downstream cities, which face much higher treatment costs. Another option would be to “not allocate the extra load” if future conditions indicate targets cannot be met (an outcome many suspect will occur).</p>

Response: There is no “extra” load in reserve. If a 5-year review indicates that TP reductions have led to full support of beneficial uses and state water quality standards being met, additional growth could be allowed. Otherwise, the TMDL Reserve for Growth section identifies, “Because these allocations are necessary to achieve the May–September TP concentration target and the mean monthly periphyton target, an allowance for future growth is not recommended at this time, unless new or expansion of existing point sources discharging directly or indirectly to the lower Boise River: (1) receive a mean monthly NPDES permit limit for TP of ≤0.07 mg/L May through September and ≤0.10 mg/L October through April, (2) a DEQ 5-year review identifies a growth reserve calculated as the difference between current TP loads and TP allocations, where the difference is divided among new/existing point sources, (3) implement approved water quality offsets or trading occur, (4) no additional discharge occurs, or (5) DEQ accepts studies and technical papers demonstrating the proposal to discharge meets the TMDL target. However, any changes to the TMDL would need to be made through the 5-year review process and an addendum to the TMDL.”

The selected WLA scenario was vetted by and approved by the watershed stakeholders, including small municipalities.

07/04/2015 Idaho Rivers United

1	General	<p>Idaho Rivers United strongly agrees with state and federal agencies that have determined that phosphorus is polluting the Lower Boise River and many of its tributaries and impairing beneficial uses. Therefore, Idaho Rivers United supports the adoption of the 2015 Total Phosphorus Addendum with one significant modification.</p> <p>Idaho Rivers United does not support the 0.1 mg/L wasteload allocation for waste water treatment plants for May – September. Idaho Rivers United supports a wasteload allocation of 0.07 mg/L.</p>
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Response: Through the TMDL and modeling analyses, DEQ identified that the current TP load and wasteload allocations are necessary to achieve the May–September TP concentration target and the mean monthly periphyton target. Further, DEQ ran additional AQUATOX reduction scenarios with point source allocations reduced to ≤ 0.07 mg/L year-round, and 0.05 mg/L year-round—which is the approximate limit of technology—the additional scenarios showed a small net gain in environmental benefit for a large technological investment. The difference of the annual average periphyton growth between scenario 3 (point sources at 0.1summer/0.35 Winter; NPS 0.07) and Scenario 7 (point sources at 0.05 year-round) is only 8 mg/m², which also represents a further reduction than is necessary to achieve the May–September TP concentration target and the mean monthly periphyton target.

2	General	<p>Phosphorus loads from agriculture, stormwater, septic and other nonpoint sources are estimated based on limited data. At this time, we don’t know the extent to which these loads can be controlled, how expensive such control is and whether unpermitted polluters have any means or incentive to control the loads. Despite these gross shortcomings in knowledge, they are being assigned a load allocation of .07 mg/L – and the attainment of beneficial use depends on them not exceeding that allocation.</p>
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Response: The USGS mass balance models (Etheridge 2013) indicate that significant point source phosphorus reductions will likely translate into significant reductions in nonpoint source loads downstream. As a result, The 95% WLA reduction from point sources will likely result in subsequent load reduction in tributaries, drains and groundwater. This cumulative effect of decreasing phosphorus from the main stem of the Boise River should make the reductions for tributaries and groundwater more achievable. Additionally, the TP loading from nonpoint sources is expected to decrease further with the implementation of BMPs, and additional treatment methods.

DEQ ran additional AQUATOX reduction scenarios with point source allocations reduced to ≤ 0.07 mg/L year-round, and 0.05 mg/L year-round—which is the approximate limit of technology—the additional scenarios showed a small net gain in environmental benefit for a large technological investment. The difference of the annual average periphyton growth between scenario 3 (point sources at 0.1summer/0.35 Winter; NPS 0.07) and Scenario 7 (point sources at 0.05 year-round) is only 8 mg/m² which also represents a further reduction than is necessary to achieve the May–September TP concentration target and the mean monthly periphyton target.

3	General	<p>Idaho Rivers United believes that phosphorus impairs beneficial use of Indian Creek, Mason Creek, Ten Mile Creek, and Five Mile Creek. This impairment was first recognized by the Environmental Protection Agency more than twenty years ago. Idaho DEQ is obligated to develop phosphorus TMDL for those Boise River tributaries.</p> <p>IRU is disappointed that this 2015 addendum doesn't address all of the tributaries. It's not a judicious use of tax dollars to write numerous TMDLs when they can be dealt with at the same time. IRU is especially disappointed that this TMDL no longer applies to Mason Creek. DEQ must start work on a TMDL addendum to address the impaired tributaries.</p>
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Response: DEQ appreciates your concerns. Because Mason Creek is not the only impaired tributary to the Boise River, DEQ believes that it would be more appropriately addressed in a separate watershed plan along with the other listed tributaries to the Lower Boise River (LBR) including Indian Creek, Tenmile Creek, and Fivemile Creek. A watershed plan is currently required for the tributaries to the lower Boise River that are impaired, thus adding the work that has been completed for Mason Creek is not expected to result in extra effort. Additionally, Mason Creek and other tributaries to the lower Boise River are listed differently in the Integrated Report (“cause unknown, nutrients suspected”) than the lower Boise River which is listed for TP. Addressing all the tributaries to the lower Boise River with the same listing in one watershed plan is appropriate and efficient.

Sand Hollow Creek was removed from the TMDL because it is a tributary to the Snake River, and thus should be addressed in a separate TMDL Addendum to the Snake River Hells Canyon TMDL. A Separate plan will be completed to address the tributaries to the LBR that are impaired for cause unknown—nutrients suspected. Additionally, a separate plan will be completed to address the cause unknown—nutrients suspected impairment in Sand Hollow Creek.

Although Mason Creek was removed from the TMDL, it will maintain an allocation at the mouth of 0.07 mg/L year-around corresponding with 56 lbs/day May-Sept and 29lbs/day Oct-Apr. Sand Hollow Creek, because it is a tributary to the Snake River and not the LBR, will have an allocation of 0.07 mg/L May-Sept and 53 lbs/day.

Even with this not being a TMDL for Mason Creek, the loading analysis and allocations for Mason Creek did not change for winter or summer months. Because the loading analysis and allocations for Mason Creek were included in this LBR TMDL, trading in that watershed was not jeopardized. Sand Hollow Creek was completely removed from this TMDL and is more appropriately addressed in addendum to the Snake River Hells Canyon TMDL.

4	General	Idaho Rivers United supports establishment of TP load allocations for October 1 – April 30. USGA data show that algae grows throughout the year when conditions are right. Also, phosphorus persists in the aquatic ecosystem for months, if not years. There should never be a “free” period when phosphorus can be discharged without restriction into the Boise River. River conditions during this time period should be closely monitored and more research conducted in coming years to augment the existing limited data and body of knowledge to better inform decision makers during the five-year TMDL review.
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Response: DEQ acknowledges the need to collect more data and encourages more collection.