

Project Name: Lower Boise River TP TMDL

Report Title: 2015 Total Phosphorus TMDL Addendum for the Lower Boise River, Mason Creek, and Sand Hollow Creek (ver. January 14, 2015)

Commenter: Ada County Highway District; Contact: Erica Anderson Maguire

Submittal Date: February 13, 2015

Comment #	Location in Document (Section, Paragraph, Line)	Reviewer Comment	Response/Resolution
		The following comments are directly related to Stormwater:	
1	Pg 81, Table 86, and Pg 90, Table 31	Supportive of current load estimates for stormwater and "non-stormwater"	
2	Pg 112, Table 43,	Supportive of wasteload allocations for stormwater and "non-stormwater"	

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3	Pg 98 and 99, Table 38,	<p>Supportive of “non-stormwater” percentage of discharge as 50/50%.</p> <p>To the extent that non-stormwater (dry weather) discharges are the result of <u>exempt</u>, non-point source activities originating from agricultural lands (i.e., groundwater infiltration, irrigation <u>flows and</u> pass-through), and other non-storm water flows that are not part of the allowed discharge under the MS4 NPDES permit, they are assigned a load allocation....</p> <p>Need to list all non-storm discharges in NPDES permits to better explain what is excluded under agricultural exemption. See attached table as an example.</p> <p>“other non-storm water flows that are not part of the allowed discharge under the MS4 “NPDES permit),”</p> <p>The “other” non-stormwater flows that are not authorized under the MS4 permits are termed “illicit discharges”. No allocation - load or wasteload should be given.</p>	
4	Pg 137, Table 53	<p>Not supportive of wasteload allocations for authorized “non-stormwater” as these should be set consistent with other NPS reductions as given in Table 54, (pg 139)</p> <p>Oct-Apr authorized non-stormwater load reduction set at 84%. This is not consistent with Tributaries that are given allocations of 72% reduction</p>	

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5	Pg 35, Section 3.1	<p>Introduction of stormwater should include reference to “non-stormwater”.</p> <p>Certain types of stormwater runoff are considered point source discharges for Clean Water Act purposes, including stormwater <u>and authorized non-stormwater</u> that is associated with municipal separate storm sewer systems (MS4s), industrial stormwater covered under the Multi-Sector General Permit (MSGP), and construction stormwater covered under the Construction General Permit (CGP).</p>	

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6	Pg36, Section 3.1	<p>‘True’ ^Sstormwater is produced by runoff from precipitation-driven storm events. As a result, stormwater (“wet weather”) discharges from MS4 systems that result from specific precipitation events will be referred to as stormwater and identified as a point source with a wasteload allocation in this TMDL. <u>Stormwater within the lower Boise River watershed is regulated under either a Phase I or a Phase II NPDES MS4 Permit issued by EPA Region 10. Permitted stormwater is considered point sources and will be assigned “wasteload allocations”.</u></p> <p>“True” stormwater is not standard terminology. Delete all references to “true” stormwater. Use “stormwater” as defined by EPA in 40 CFR §122.26(b)(13) and ACHD’s MS4 NPDES permits (see text below). See comment #7 for terminology clarifications.</p> <p>“Storm water” and “storm water runoff” as used in this Permit means storm water runoff, snow melt runoff, and surface runoff and drainage, and is defined at 40 CFR §122.26(b)(13). “Storm water runoff” means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.</p> <p>40 CFR §122.26(b)(13) (13) <i>Storm water</i> means storm water runoff, snow melt runoff, and surface runoff and drainage.</p>	

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7	Pg 36, Section 3.1	<p>Clarification needed. For consistency all text related to defining and explaining stormwater, non-stormwater, dry weather discharges, exempt non-stormwater, allowed, non-stormwater, non-point source, etc. should be the same in TP and sed/bacteria TMDLs. The following terminology is recommended:</p> <p>“Stormwater” = authorized, permitted, wet-weather, point source “Authorized Non-stormwater” = authorized, dry weather, point source (see table for list) “Agricultural Exempt Non-stormwater” = irrigation water, pass through, non-point source “Illicit Discharge” = unauthorized non-stormwater</p> <p>MS4 systems in the Treasure Valley also accept <u>convey</u> other inputs of water such as <u>landscape irrigation</u>, <u>building cooling waters</u>, <u>wash waters</u>, agricultural return, and ground water <u>infiltration</u>, <u>and construction discharges</u>. <u>These types of discharges are characterized as non-stormwater discharges.</u></p> <p>In effect, <u>in some situations</u>, MS4 systems in the valley often <u>share</u> “pipes” with <u>agricultural</u> non-point source discharges. <u>This situation is more common in the western end of the valley.</u> These non-stormwater (“dry weather”) discharges can be <u>are</u> authorized in MS4 permits if they satisfy specific conditions (please see individual MS4 permits for more information). <u>A complete list of authorized non-stormwater discharges as defined by local MS4 permits is located in Table XX.</u></p> <p>Authorized non-stormwater discharges need to be explained and expanded. See attached table.</p>	

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8	Pg 36, Section 3.1	<p>As a result, all non-precipitation driven discharges from MS4s will be referred to as non-stormwater and identified as a non-point sources with a wasteload allocation in this TMDL. <u>Non-stormwater discharges originating from agricultural lands e.g. irrigation return flows will be identified as agricultural exempt non-stormwater with a load allocation in this TMDL.</u></p> <p>As drafted, this statement is incorrect. Non-stormwater discharges derived from agricultural lands are exempt from the Clean Water Act and are considered non-point sources. All MS4 NPDES permit-authorized, non-stormwater discharges are point sources. All other non-stormwater discharges, not defined by NPDES permits as authorized are illicit discharges.</p> <p>Groundwater infiltration is listed as an authorized non-stormwater discharge in MS4 NPDES permits. Groundwater infiltration is not covered under the agricultural exemption to the Clean Water Act or any other exemption. Groundwater infiltration is included as part of WWTP wasteload allocation. Groundwater infiltration is authorized non-stormwater and should also receive a wasteload allocation.</p>	

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9	Pg 36, Section 3.1	<p>Text is confusing and inaccurate as written. See edits below. Same/similar text should be in sed/bacteria TMDL too. Recommend adding information for Nampa, Caldwell, etc. or placing all similar info in a table.</p> <p>There are eight several EPA-issued MS4 stormwater <u>permits</u> and <u>12 different</u> permittees <u>in the lower Boise watershed</u>. <u>These entities that</u> discharge phosphorus into the lower Boise River, directly or indirectly, through drains, tributaries, and other hydrological connections (Table 16). Several agencies and organizations share responsibilities for the NPDES MS4 permits. Information and reporting include a five-year report which is available from the partnership internet site: http://www.partnersforcleanwater.org/default.asp.</p> <p>An annual report is published and made available through ACHD's web site: http://www.achd.ada.id.us/Departments/TechServices/Drainage.aspx.</p> <p><u>In the Boise and Garden City area, Ada County Highway District (ACHD), Boise, Garden City, Idaho Transportation Department, Ada County Drainage District 3, and Boise State University</u> Several agencies and organizations share <u>Permittee</u> responsibilities for <u>implementing their</u> NPDES MS4 permit. and in information on meetings, responsibilities, budgets, <u>stormwater management plans</u>, and <u>annual</u> reports <u>are</u> available from the <u>partnership Permittee</u> internet site http://www.partnersforcleanwater.org/default.asp.</p> <p><u>ACHD's</u> An annual report <u>for the area that includes the cities of Eagle, Meridian, and urbanized unincorporated Ada County (urbanized Ada County)</u> is published and made available through ACHD's web site at: http://www.achd.ada.id.us/Departments/TechServices/Drainage.aspx.</p>	

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10	Pg 36, Section 3.1	<p>Other agencies and stakeholders in the subbasin are in the process of applying for stormwater NPDES permits and have yet to develop or implement the voluntary stormwater activities.</p> <p>Text is dated and is no longer relevant. Delete.</p>			
11	Pg 36, Section 3.1	<p>Stormwater within the lower Boise River watershed is regulated under either a Phase I or a Phase II NPDES Permit issued by EPA. Permitted stormwater entities are considered point sources and will be assigned "wasteload allocations".</p> <p>Moved text up in section. See comment #6.</p>			
12	Pg 38, Table 16	<table border="0"> <tr> <td>Source Boise/Ada County MS4</td> <td>NPDES Permit No. IDS-028185 & IDS 027561</td> </tr> </table> <p>There is no Boise/Ada County MS4 and is inaccurate as written. Please list out permittees as in Table 17, pg 39.</p>	Source Boise/Ada County MS4	NPDES Permit No. IDS-028185 & IDS 027561	
Source Boise/Ada County MS4	NPDES Permit No. IDS-028185 & IDS 027561				
13	Pg 38, Table 16	<p>Footnotes 3 and 4 need to be rewritten to ensure consistent terminology for stormwater and non-stormwater. See comment # 7 for recommended terminology.</p> <p>Footnote 2 – Not sure what this means. What is the total service area for the MS4? Where did the contribution area come from?</p>			
14	Pg 39, Table 17	<p>Table 17. MS4 NPDES permit holders and permit areas and non-permitted jurisdictions and areas 2010 Census Boise Urbanized Area and other areas (prepared by ACHD).</p>			

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15	Pg 45, Table 19	Delete ACHD MSGP permit IDR05CM22 from the table. Notice of Termination submitted 05/07/2014.	
16	Pg 48, Section 3.2.1	Section 3.2.1 Agricultural Discharges is inappropriately titled. Should be "Tributary and Drain Discharges." While a substantial fraction is from agricultural sources also includes groundwater, wastewater, stormwater and non-stormwater.	
17	Pg 49, Section 3.2.2	Section 3.2.2 Background includes important and appropriate estimates. Water flows into the watershed with a concentration. To be technically sound, any load analysis or model needs to account for this load.	
18	Pg 50, Section 3.2.3	Section 3.2.3 Ground Water and Unmeasured Sources needs to explain that this does not include shallow ground that drains into and discharges with the tributaries and drains. It should also be explained that during Oct-Apr period most of the flow in the tributaries and drains is the shallow ground water draining agricultural lands.	
19	Pg 51, Section 4	Past and Present Pollution Control Efforts. The document references 2008 Implementation plan which is based on 2003 sed/bacteria implementation plan. We recommend referencing the 2013 Phase I permit along with the 2009 Phase II permits as an appendix. These permits document the requirements of the permittees. Additionally, status of implementing permits is included in stormwater management plans and annual reports which are included on permittee websites as required by the permits.	

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20	Pg 68, Section 5.2.1	Section 5.2.1 Load Capacity for May-Oct relies on a “load capacity model, which is a simplified mass balance applied at a range of flows. In addition to coarse estimates of loads, it includes a number simplifying assumptions, such as (1) a flow balance that relies on groundwater/unmeasured for flow adjustment and (2) and mass balance that is adjusted with ratios (e.g., TP inputs reaching Parma). This model needs to be more fully explained and qualified.	
21	Pg78 and Pg83	In the discussion on nonpoint source loads, DEQ states “Flow, TP concentrations, and loads are also presented by removing the flows and TP loads attributed to NPDES-permitted facilities.” In Table 27, the loads are footnoted “Tributary flows and loads calculated by subtracting WWTF flows and loads.” This needs to be further explained and information provided to support subtracted the “flows and loads”	
22	Pg 86, Section 5.3.2	Agricultural returns and lawn watering are not an issue this time of the year. Delete as shown below: <u>During the October 1 through April 30 time period</u> ...including but not limited to agricultural returns , shallow ground water, urban/suburban sources (e.g. lawn watering construction discharges), and other unmeasured sources.	
23	Pg 86 and Pg91	In the discussion on nonpoint source loads, DEQ states “Flow, TP concentrations, and loads are also presented by removing the flows and TP loads attributed to NPDES-permitted facilities.” In Table 32, the loads are footnoted “Tributary flows and loads calculated by subtracting WWTF flows and loads.” This needs to be further explained and information provided to support subtracted the “flows and loads”	
24	Pg 86	In the subsection on Nonpoint Tributary, Ground Water and Unmeasured, DEQ needs to explain that this is mostly shallow ground that drains from agricultural areas into and discharges with the tributaries and drains.	

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25	Pg 90, Table 31	See Comment 12.	
26	Pg 99, Table 38	<p>See Comment 12.</p> <p>Table 38. Estimates for the percentage of agricultural exempt non-stormwater (dry weather) MS4 discharge attributable to nonpoint sources originating from agricultural lands. These estimates are very approximate, and are based on professional judgment, rather than hard data.</p>	
27	Pg 99, Table 38	<p>ACHD (and co-permittees) Phase 1 IDS-027561</p> <p><u>Boise City</u></p> <p><u>Garden City</u></p> <p><u>Ada County Drainage District 3</u></p> <p><u>Idaho Transportation Department, District 3</u></p> <p><u>Boise State University</u></p> <p>There should be a percentage for each Permittee.</p>	
28	Pg 99, Table 38	<p>At this time ACHD does not have enough understanding and data on the volume of dry weather flows that originate from exempt, agricultural non-point sources. Until such time that ACHD can make this determination, ACHD will assume 50% (the default) of the non-stormwater discharged from ACHD's storm drain system is attributable to agricultural exempt non-stormwater for Permit #'s IDS-027561 and IDS-028185.</p>	

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29	Pg 112, Table 43	See Comment 12.	
30	Pg 114, Figure 46	This graph shows measured stormwater concentrations and reduced concentrations based on target. Stormwater allocations are load reductions and not intended to reduce concentrations. Therefore this is misleading and should be removed.	
31	Pg 137, Table 53	See Comment 12.	
		The following comments are directed toward basic TMDL development.	
A	Pg 17	Nuisance Algae Target is given as a "Mean monthly benthic chlorophyll a of < 150 mg/m2". This was selected based on work done on the Clark Fork River. They set a mean of 100, with a max of 150. This indicates that the Boise River target would be under protective, and could lead to 50% more periphyton. Please explain the technical basis for the lower target.	

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B	Pg 48	Septic systems are identified as part of Nonpoint source load, but there is no attempt to quantify it a fraction of the total load. Rough estimates of septic TP loads indicated that the phosphorus loads from septic systems could easily exceed the loads contributed by the smaller tributary point sources (excluding Nampa and Meridian), background, fish hatcheries, and wet weather stormwater. The lack of a more informed assessment of this substantial current and “growing” contribution to the watershed is a major flaw in the TMDL.	
C	Pg 98	We have concern about wasteload allocation of 0.1 mg/L for WWTFs at this time. There is too much uncertainty regarding capacity to meet 0.07 mg/L targets for the tributaries, drains and groundwater. Also lessens ability for trading to take place in the watershed.	
D	Pg116	The Final Model Scenario (#3) included reductions in nitrogen and organic matter. These reductions need to be more fully explained in section on “Final Aquatox Model Scenario and TMDL Allocation Structure”. Furthermore, it noted that without these reductions the targets cannot be met. This suggests that nitrogen and organic matter targets and allocations should be considered.	
E	Pg 123	The yearly average periphyton figure shows an averaged level that covers too long a period to be informative. And, more importantly, this figure is used to support the conclusion that reducing TP to lower levels will not reduce periphyton. This conclusion is counter to a body of technical literature (e.g., Suplee et al., 2013), and is not consistent with the lower periphyton levels reported for the upper reach of the river.	
F	Pg 124	Maximums (or 95 percentile) periphyton concentrations should be assessed when considering acceptable reductions. To do this, Figures 48 and 49 should be revised to show modeled range of periphyton. This will allow the reader the ability of see the full range of modeled predictions and reductions at each of the segments, and better understand how well targets are met.	

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