



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

NOV 13 2007

Reply To: OWW-134

Dave Knight  
Eastern Regional Office  
WA Department of Ecology  
4601 N. Monroe Street  
Spokane, WA 99205

Re: Comments on the Draft Spokane River Dissolved Oxygen TMDL

Dear Mr. Knight:

The Environmental Protection Agency (EPA) appreciates this opportunity to provide comments on the draft Spokane River Dissolved Oxygen TMDL, and applauds Ecology staff and the Spokane River TMDL Collaboration Members for the time spent working together to develop this water quality improvement report. EPA's review of the TMDL did not include a review of the Managed Implementation Plan, or of those portions of the Water Quality Improvement Report document that deal with implementation.

1. **Water Quality Standards.** EPA will be basing its review and approval/disapproval action on the most recent standards, which may be Ecology's 2006 standards. While there is no substantive difference between the 1997 and 2006 dissolved oxygen standards for the Spokane River, that portion of the Spokane River from Long Lake Dam to Nine Mile Bridge (i.e., Lake Spokane) which was designated as a lake in the 1997 standards is not specifically designated as a lake in the 2006 standards. The TMDL therefore needs to explain why the lake criteria at 173-201A-200(1)(d)(ii) can be appropriately applied to Lake Spokane using the definitions of "lake" and "mean detention time" in Ecology's 2006 standards.
2. **Wasteload Allocations and Water Quality Targets.** Please clearly identify the WLAs developed by the TMDL which, when combined with the load allocations and margin of safety will result in water quality standards being met in the Spokane River. EPA will not be taking action on those allocations which are interim in nature (e.g., Table ES 2) or which apply in the future (2017 and 2027). Rather, EPA takes action on the loading capacity, load allocations and wasteload allocations that are developed to ensure that water quality standards are met.

3. Total Phosphorus. The wasteload allocations are mathematically linked to the tributary load allocations and can only be "rounded-up" from 7ug/l or 8ug/l to 10ug/L when the in-stream capacity for this adjustment exists. The limitation of on-site analytical equipment is not a reasonable basis to change WLA values that are established in the allocation approach and calculation. Please develop WLAs that, in combination with the load allocations and margin of safety, reflect a condition that is compliant with water quality standards as assessed using the water quality model.
4. WLA units. The TMDL states that the WLAs are based on the estimated instream concentration when tributary "background" loads are low enough to achieve water quality standards. However, the actual WLAs are expressed in units of pounds/day, and the lbs/day calculation is not based on current flow in order to ensure that the point source effluent is meeting the instream target (e.g., 7 or 8 ug/L for total phosphorus). Thus, the actual WLA is not aligned with the stated allocation approach. One option is to express the WLA in units of concentration (ug/L) which can then be converted into a daily load using an appropriate flow rate (e.g. the lbs/day WLA may be expressed as an equation with current effluent flow as the variable). This issue applies to ammonia and CBOD as well as phosphorus.
5. If Ecology expresses WLAs as loads (i.e. lbs/day) in the final TMDL, please clearly state what "discharge volume estimates" have been used to calculate the WLAs.
6. Ammonia. It's unclear how the ammonia targets were calculated. Multiplying ammonia concentrations from Table 5 by corresponding flows do not result in ammonia WLAs in Table 6. The 2027 and 2017 targets for Liberty Lake and City of Spokane should also be different since their projected flows increase from 2017 to 2027.
7. Although stormwater is not typically a source of contaminants during the critical period, it's important that a numeric wasteload allocation be established for stormwater in order to account for occasional discharge events.
8. Loading Capacity. The TMDL states that the loading capacity is the sum of load and wasteload allocations. However, for this type of TMDL, it's not meaningful to add the allocations since it regulates three pollutants (phosphorus, ammonia, and CBOD) that indirectly affect the 303d-listed parameter (dissolved oxygen), and these pollutants are "processed" in the river over space and time by processes such as phytoplankton uptake/growth/death and bacterial decomposition. The only context in which the allocations sum to the loading capacity is in the model simulation that achieves the standard while accounting for all processes acting on the pollutants. Alternatively, the TMDL can express the loading capacity in concentration units (ug/L), stating that the LC is the less than 0.2 mg/L decrease DO from natural conditions. Either way, please clearly express the loading capacity numerically: as a concentration, decrease in concentration, or in units of pounds / day.

9. Please clarify the averaging period for the in-stream targets and allocations (Tables 4, 5, and 6), and explain why the averaging periods are protective of water quality. It is important to identify and explain the averaging period associated with the in-stream targets, because this averaging will be used to evaluate in-stream data to determine whether the TMDL targets are being met. It is also important to identify and explain the averaging periods for the allocations. The averaging period for the wasteload allocations will directly impact the development of NPDES permit limits.

10. Spokane Tribe waters. Tribal waters for Spokane Tribe are immediately downstream of the study area below Long Lake dam. Please briefly describe how the TMDLs may affect Spokane Tribe's waters.

If you have any questions about our comments, please feel free to call me at 206-553-6694, or Don Martin of my staff at (208) 665-0458.

Sincerely,

A handwritten signature in cursive script that reads "David Croxton".

David Croxton, Manager  
Watershed Unit