



March 31, 2010

VIA EMAIL AND USPS MAIL

State of Washington
Department of Ecology
Attn: Dustin Bilhimer
PO Box 47600
Olympia, WA 98504-7600

RE: Spokane River and Lake Spokane DO TMDL Dispute Resolution

Dear Mr. Bilhimer:

Thank you for the opportunity to participate in the Spokane River and Lake Spokane DO TMDL dispute resolution process. The Idaho Department of Environmental Quality (IDEQ) has participated in the development of the DO TMDL over the past several years and we recognize the difficult challenges that Ecology has faced in developing the final DO TMDL that was submitted to the US EPA last month. There are numerous concerns that have been voiced during the development process, and while we support Ecology's goal to improve water quality in the Spokane River and Lake Spokane, we also share some those concerns associated with the DO TMDL. During the public comment period for the draft DO TMDL last fall, IDEQ submitted comments to Ecology that articulated some of those concerns. Attached is a copy of that comment letter for your reference. We have reviewed the response to comments that Ecology prepared as part of the final DO TMDL that was submitted to EPA.

Please accept the following comments that briefly summarize our review of the final DO TMDL. We have organized our comments in the following manner;

- Original numbered comment from our October 30, 2009 letter to David Moore
- Applicable sections of the Response to Comments that address IDEQ comments (in italicized text)
- Summary statement regarding the adequacy of the response (in bold text)

Comment #5. The TMDL also repeatedly uses the term "equitable distribution", mainly in context with the development of effluent limits and waste load allocations for point sources. Please provide some definition or guidance on what factors are considered to meet these criteria of equitable distribution. It is not clear how it is "equitable" to give the largest dischargers, the city of Spokane and the city of Spokane Valley, WLAs based on 42 µg/L TP while, based upon

the modeling, all the Idaho dischargers will presumably have their permitted mass loadings based on 36 µg/L TP. This appears to be a significant concept used in the TMDL strategy and yet is never adequately described in the document.

Ecology response: See summary response to Part G, page C-24, Equity in effluent concentration for municipal sources.

This response covers a part of the original comment dealing with equity. IDEQ disagrees with Ecology interpretation of the information presented in the EPA protocol document. The document on page 7-4 identifies five possible options for addressing equity of load allocations. It is not known if Ecology evaluated the other options and presented these options for consideration to the Idaho facilities. Although attenuation is not specifically identified as a factor to consider in these options, Ecology acknowledges in other parts of the TMDL that attenuation occurs and discusses attenuation on page C-33. Although not mentioned in Part G, attenuation is a key component of pollutant trading and is used to calculate credit ratios as part of the trading framework. Pollutant trading is a critical component of the DO TMDL for demonstrating compliance with the DO standards. Further confusing their position on attenuation of phosphorus, Ecology has recognized the need to address the issue of bio-available phosphorus and includes bio-availability as a target pursuit action in the Managed Implementation Plan.

Comment #9. The population of salmonids that the Core Summer Salmonid Habitat beneficial use protects has not been described adequately to identify impairment based on dissolved oxygen concentration and DO depth profile. Baseline population data for this water has not been established to show when and how impairment might occur, and without this baseline data, it is not clear how Ecology will determine when the beneficial use is restored. The TMDL focuses on compliance with criteria and bears no documented relationship with the beneficial use of Core Summer Salmonid Habitat.

Ecology Response: See summary response to Part T.

This response does not adequately address the comment. It is a circuitous reference back to the standard without acknowledging the lack of a description of the designated beneficial use in the TMDL related to the designated use support status. There is no discussion about identifying the response in the support status of the designated beneficial use, only reference back to the standard as supported or not supported. The DO standard cannot be a surrogate for the status of the fishery.

Comment #12. The scenarios simulated with the CE-QUAL-W2 model that determine load allocations did not accurately account for the newer, increased flow regimes that are required in the Federal Energy Regulatory Commission (FERC) license for the Post Falls Hydroelectric Project. These new flow regimes from Post Falls Dam are significantly higher than those used to develop the TMDL load allocations. Using lower flow regimes discounts dilution effects and minimizes the waters assimilation response to nutrients through the TMDL reach of the Spokane River and Lake Spokane Reservoir. It is not appropriate to attribute different flows than will

actually occur to the Margin of Safety (MOS) required in TMDLs. Typically the Margin of Safety accounts for 10% of the load allocation to provide a buffer against uncertainty.

Ecology Response: See response to comment number 29, Part J.

This response does not adequately address the comment because the low flow scenario #1 is based on historic low flow and the model was not calibrated for FERC minimum flow so the report is not capable of shedding light on the newly assigned FERC minimum flow (600 cfs).

Comment #13. In the modeling strategy used to identify dissolved oxygen impairment caused by the operation of Long Lake Dam, Ecology developed a water quality goal or benchmark for total phosphorus in the riverine segment of the water body. Ecology elected to use a criterion of 10 µg/L for total phosphorus. The selection of this criterion influenced the selection of the modeling scenario #1, see page 21, and critically influenced other important decisions that may affect permit limits that EPA develops for the Idaho point sources. The TMDL does not describe the process the Ecology used to select this water quality benchmark and more information is warranted to support the selection of this benchmark value. IDEQ continues to object to the adoption of 10 µg/L water quality goal or benchmark with the following concerns: 1) the upper part of Lake Spokane Reservoir and the area that the water quality goal or benchmark is being applied is in an area that is transitional between EPA's Western Mountains and Xeric West aggregate level III eco-regions. The criteria should also be transitional, somewhere in the range between 10 and 21.88 µg/L; 2) nutrient criteria developers caution the use of reference conditions alone to derive criteria. A weight of evidence approach which addresses all key elements should be pursued; 3) the data base from which EPA's suggested nutrient criteria was developed contains annual medians for some water bodies, and is made from all data available and is not randomly sampled. Random sampling is needed in order to remove bias prior to application of statistics; 4) the data base also contains zeros which EPA assumed is an accurate measurement, and were included in the statistics. Laboratories do not report zero for these types of analysis. Western mountain III aggregate eco-region has not been peer reviewed and there has not been a determination of how many zero values are affecting statistical applications; 5) the data base contains many values below method detection limit (10.0 µg/L, EPA 365.1); 6) data were combined without regard to data quality objectives (accuracy, precision), or field quality assurance and quality control process; 7) peer review of EPA's suggested nutrient criteria concluded that defensible reference conditions could not be derived and that seasons should limit data analysis; 8) The data used to develop the 10 µg/L water quality goal have not been tested for normality even though normal statistics (%tile) have been applied; 9) the frequency distribution approach used by EPA is arbitrary and results in inappropriate, stringent criteria that do not focus on environmental outcomes. By definition 75% of all water will not meet resulting nutrient standards; 10) Ecology's application of oligotrophic lake criteria to a non-oligotrophic riverine assessment point is inappropriate.

Ecology Response: Response contained in Part A (page C-5) and Part T (page C-144).

The response did not adequately address the main focus of the comment regarding the selection of 10 ug/L for total phosphorus as the eco-regional value in the riverine

assessment. Comments included a number of specific technical issues regarding the development of the 10 ug/L value and the response from Ecology did not address any of the technical issues.

Comment #15. Implementation of the Spokane River TMDL calls for reductions in phosphorus, CBOD and NH₃ to meet WLAs by 2019. Monitoring is slated for 2019 to detect a response in Lake Spokane Reservoir that is manifested by increased DO. Adaptive Management is identified in the TMDL to refine load allocations based on monitoring that would occur within 10 years of the TMDL development (not approval of the TMDL, or completion of TMDL implementation). This response is not likely to be detected due to the continued impact of nutrients stored in sediments. It is possible that nutrient reductions prescribed in the TMDL or through implementation monitoring could be masked by persistent sediment oxygen demand that would result in future prescribed nutrient reductions beyond reasonable WLA capabilities and economic feasibility.

Ecology Response: See summary response for Part S.

This response does not adequately the issue. Ecology does not identify a mechanism to take this internal loading and oxygen demand out of the requirements for Avista's implementation efforts. Adaptive management is only directed at more extensive implementation.

Comment #16. The current technologies available (not including reverse osmosis or entirely eliminating the discharges from the wastewater treatment plants to the Spokane River) to treat down to the projected 36 µg/L total phosphorous (TP), as shown in Modeling Scenario #1, may not be able to consistently meet this targeted concentration. The model runs of the Idaho discharges at 50 µg/L (scenario #2) and 100 µg/L (discharger model runs) show very small increases in the dissolved oxygen deficits in Lake Spokane Reservoir. Permitted effluent limits based on 70 µg/L to 100 µg/L for TP would be much more achievable based on the current phosphorus control technology and would provide a greater degree of certainty that facilities constructed over the next seven (7) years will comply with the permit limits and waste load allocations.

Ecology Response: Response covered generally in Part G, pgs. C-24-27.

In the response to comments, Ecology dismisses any increases in DO deficits that might occur from allowing increased concentrations from Idaho point sources. Ecology rejected the notion of allowing different effluent concentrations in the development of the modeling scenarios and then did not conduct any sensitivity analysis to determine impacts from variable concentrations of effluent. Ecology states that it is unacceptable for Idaho sources to receive higher permit limits that will cause any increase in the DO deficit. The independent modeling conducted by the Idaho sources with an effluent limit of 100 ug/L TP showed the maximum DO deficit would increase from approximately 0.10 mg/L to 0.11 mg/L. According to the TMDL model results, all of the WA sources (point and non-point) with controls applied will contribute to a DO deficit of approximately 0.99 mg/L, well above the standard of 0.2 mg/L. [1.29 (Table 12 PSU 2009) – 0.1 (Idaho point sources Table

14 PSU 2009) – 0.2 (DO standard)] **The TMDL assigns this difference to Avista. The TMDL and response to comments does not include a discussion that identifies Avista’s limitations for handling their share of the DO problem so how is it known that they cannot handle any additional burden?**

Comment #17. In Appendix E of the TMDL, the term “limit of technology” is used to describe how the effluent limits were established in developing the modeling scenarios. The TMDL does not provide any details on what constitutes the limit of technology, and as mentioned in comment #6, delta management creates further confusion about the certainty and availability of technology to achieve the proposed waste load allocations.

Ecology Response: Presented on pg. C-136 and the response is on pgs. C-118-120.

The response does not adequately address the comment.

Comment #18. In the section on Load and Wasteload Allocations, Ecology shows equation #1 to describe how waste load allocations are calculated from an effluent concentration. Table 4 lists the effluent concentrations for each point source which were derived from Scenario #1. The TMDL and the modeling report by PSU referenced in the TMDL do not adequately describe the differences between the permit limits and the modeling limits and why Ecology chose to use the lower effluent limits versus the maximum monthly averages to calculate the waste load allocation.

Ecology Response: Presented and responded to on pg. C-74.

The response does provide an explanation but it is still not covered well in the TMDL report.

Comment #19. The TMDL provides a WLA for a new point source discharge- Spokane County (8 mgd at a TP concentration of 42 µg/L for a load of 2.80 lb./day). It is not clear how this is considered an “equitable” distribution of the point source reductions when it is actually an additional load. The allowance for population growth within Spokane County that this WLA provides takes away from the other existing point sources and the loads that can be discharged in Idaho. Please provide a more complete explanation of the logic behind allowing a new source and load to an already over-allocated watershed.

Ecology Response: Presented on pg. C-83 and the response is on pgs. C-80-81.

A more thorough explanation is needed for how “offsets” and applicable case law will be considered in allowing a new discharge to this impaired waterbody. Not adequately addressed.

Comment #20. It is recommended that the September 15, 2009 Portland State University report titled “Spokane River Modeling Scenarios Report 2009” be included in the appendix of the final Ecology TMDL report.

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Ecology Response: Presented and responded to on pg. C-64.

Still only included by reference.

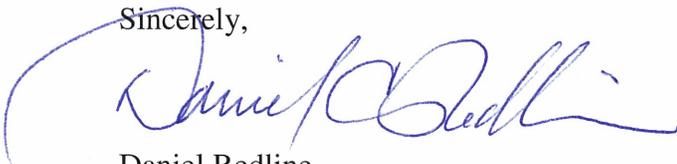
Comment #21. The September 2009 modeling report from Portland State University contains a model run with higher flows as prescribed by the new FERC license issued to Avista for the operation of the Post Falls dam. The modeling report and the TMDL do not discuss the results of the FERC flow model run nor is there a discussion of how these model results would be used in the waste load allocation process.

Ecology Response: Presented and responded to on pg. C-64.

This model run was only done for informational purposes and never was going to be considered in the WLA process. Ecology still contends this is part of the unquantified MOS which exceeds a reasonable component of a cumulative implicit MOS. Not adequately addressed.

Thank you again for the opportunity to participate in the dispute resolution process.

Sincerely,



Daniel Redline
Regional Administrator

Enclosure

CC: Barry Burnell, IDEQ
Doug Conde, IDEQ