



October 30, 2009

Mr. David Moore  
Water Quality Program - Eastern Regional Office  
Washington State Department of Ecology  
4601 North Monroe Street  
Spokane, WA 99205-1295

Re: Comments on Draft Dissolved Oxygen Total Maximum Daily Load  
("TMDL") report

Dear Mr. Moore:

On September 15, 2009, the Washington State Department of Ecology ("Ecology") issued the Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load Draft Water Quality Improvement Report, Publication No. 07-10-073 (the "Draft Report"). Comments on the Draft Report were to be due within 30 days, though Ecology subsequently extended the comment period until October 30, 2009. The City of Post Falls ("Post Falls") and the Hayden Area Regional Sewer Board ("HARSB") have reviewed the Draft Report and now offer their comments in response.

#### Summary

Post Falls and HARSB remain committed to excellent water quality for the citizens of this region. Post Falls has demonstrated this commitment for over ten years with sustainable biological treatment that removes about 95 percent of its incoming oxygen-demanding loads year-round. Liberty Lake is the only other steward of the Spokane River who currently utilizes this year-round process. HARSB is the only steward on the river removing all its current loads through reuse in the summer months, even though Idaho's rules to protect our world-class aquifer are the most stringent in the country. HARSB has also installed improvements which remove about 95 percent of its ammonia and biochemical oxygen demands year-round. We intend to continue our stewardship through meaningful investments of our citizens' hard-earned money. Those investments must produce attainable water quality benefits, they must allow regulatory flexibility to achieve those benefits, they must sustain our economy, and they must be fair to all stewards of the river.

The Draft Report is materially flawed. The Draft Report sets water quality limits where it should not and does not set water quality limits where it should. Ecology, through the TMDL process and its Draft Report, has looked upstream to their Idaho neighbors to bear the remedy disproportionately. Ecology has admitted in the Draft Report that any Idaho-discharged phosphorus would be below the ability of science to detect by the time it reaches Long Lake Dam.<sup>1</sup> Idaho did not create this problem but is being asked to bear an unfair share of the burden of meeting Washington's imposed standards.

Notwithstanding our serious concerns about the Draft Report, Post Falls and HARSB remain committed to an equitable solution that addresses our contribution to the problem. Idaho dischargers can be allocated a phosphorus wasteload equivalent to a 100 microgram per liter ( $\mu\text{g/L}$ ) discharge without adversely affecting the wasteloads granted to Washington point sources or the obligations placed on Avista Utilities ("Avista"). Short of such an allocation, Post Falls and HARSB will have no choice but to pursue all available remedies.

These and other comments are set out below.

#### Comments

1. The Draft Report acknowledges that Ecology lacks the authority to establish wasteload allocations for sources outside the State of Washington.<sup>2</sup> Despite this, the Draft Report goes on to effectively do just what it stated it would not do. The Draft Report states that Ecology has made very specific assumptions about the anticipated permit-driven reductions of anthropogenic loading of phosphorus, carbonaceous biochemical oxygen demand, and ammonia from wastewater treatment plants and stormwater in Idaho. These assumptions are based on point sources discharging equivalent pollutant concentrations at wastewater treatment plants in both states, and have been incorporated into the model scenarios supporting this TMDL.<sup>3</sup>

Ecology, in short, assigned values to individual treatment plants within Idaho. Ecology, as a result, made determinations (i) of how to allocate any reduction in pollutant loads between non-point sources or point sources and (ii) of how to allocate any reduction in pollutants between Idaho's three point-source discharges. (Idaho's three point-source dischargers are the three wastewater treatment plants between Coeur d'Alene Lake and the Washington-Idaho border. These plants belong to Post Falls, HARSB, and the City of Coeur

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<sup>1</sup> Draft Report at H-5.

<sup>2</sup> Draft Report at 28.

<sup>3</sup> Draft Report at 29.

d'Alene ["Coeur d'Alene"].) It is not for the State of Washington to make such determinations for the State of Idaho. The Draft Report readily acknowledges the effect of its determination on Idaho. The Draft Report states that "EPA will incorporate permit limits, consistent with the assumptions in this TMDL, into the NPDES permits for Idaho point source dischargers."<sup>4</sup> Whose assumptions are being incorporated into Idaho NPDES permits? The State of Washington's. It is for the State of Idaho, not Ecology, to set any allocations or to make any judgments about whether non-point sources or point sources should bear the burden of any reductions, and, if so, in what ratios. For example, one effect of Ecology's allocations in reductions to the three wastewater treatment plants will be effectively to prohibit growth in these three municipalities. Whether a good judgment or a bad judgment, this determination is not for the State of Washington to make. The Draft Report cannot, and should not, apply beyond the borders of Washington.

2. While Portland State University's River Modeling Scenarios Reports ("PSU River Modeling Scenarios Reports") indicate that Idaho point sources will be issued the same allocations and limits as Washington dischargers, the technical basis for the Draft Report assumption is incomplete and not supported with commensurate water quality and beneficial use improvements. It is, in fact, more justifiable to issue permit limits of 100 µg/L seasonal average for the Idaho dischargers rather than the 36 µg/L input to the selected Draft Report model scenario. That conclusion is based on Spokane River attenuation (see Comment 5 below), all known, available, and reasonable methods of prevention, control, and treatment ("AKART"), and the fact that this standard meets the objective of achieving an equivalent water quality and beneficial use improvement in the reservoir. Although Portland State University did not model the 100 µg/L (72 µg/L wasteload allocation) scenario, the September 2, 2009, letter attachment from Coeur d'Alene to Ecology included those results modeled by LimnoTech. The analysis shows an insignificant 0.7 percent dissolved oxygen impact (0.011 mg/L) during the worst-case period, at the worst-case location, and under worst-case flow conditions. This option does not change Avista's responsibility, as depicted in Table 6 of the Draft Report, or Washington's point source allocations. At the same time, it provides Washington equivalent water quality and beneficial use improvements while providing Idaho the required regulatory flexibility, economic sustainability, and fairness. Therefore, Idaho should be afforded 100 µg/L seasonal average permit values under a consistent

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<sup>4</sup> Draft Report at 29. We do not believe the Draft Report, as written, authorizes EPA to set the types of permit limits described, either in implementing the TMDL or in conducting reasonable potential analyses for permit limits. A load must be set and its basis established. A TMDL may not be used to establish backdoor technological limits.

TMDL and the resulting permitting approach by the U.S. Environmental Protection Agency ("EPA").

3. The Draft Report should be limited to one determination with respect to the State of Idaho: to set a maximum wasteload allocation at the Washington-Idaho border.<sup>5</sup> It is then for the State of Idaho, in conjunction with the EPA, to determine how it will satisfy this wastewater allocation at the border. The State of Idaho can balance the current and future interests of municipalities, agriculture, forestry, and mining as appropriate in light of the total allocation permitted at the border. It is for the State of Idaho and its voters, not for the unelected officials of the State of Washington, to make these determinations about Idaho's future. The State of Idaho, not Ecology, sets the water quality standards within Idaho.
4. Ecology's determination of what should be the maximum wasteload allocation at the Washington-Idaho border has an important limitation. The restriction should be no more than would be required to satisfy the State of Washington's water quality standards at the border. The State of Idaho does have an obligation to satisfy the EPA-approved water quality standards the State of Washington imposes on its own water bodies at the border, but no more. To the extent the State of Washington wishes to have more stringent standards to increase the protection of a water body within the State of Washington, such as Long Lake reservoir, it can do so in two ways. First, it can legally promulgate more stringent water quality standards and then Idaho would have to satisfy the new standard at the Washington-Idaho border. Or second, Ecology can promulgate a TMDL to tighten the standards locally to protect a water body, such as Long Lake, though the TMDL would apply to Washington sources, and would not apply outside Washington.
5. Ecology has allocated reduced point-source discharges for the wastewater treatment plants in Post Falls, HARSB, and Coeur d'Alene. When deciding how much to reduce these three permitted point-source discharges, Ecology stated it would do so "based on an equitable distribution of wasteload allocations."<sup>6</sup> The decision as to what is an equitable distribution between Washington and Idaho is made by the State of Washington without any meaningful consideration of input from the State of Idaho. Idaho Department of Environmental Quality ("IDEQ") representatives have made Ecology's lack of meaningful consideration of the State of Idaho's input abundantly clear on numerous occasions at public meetings during the TMDL process over the past twelve months. The Draft

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<sup>5</sup> We note that our recent sampling on the Idaho side of the border shows phosphorus concentrations in the Spokane River below 10 µg/L.

<sup>6</sup> Draft Report at 13.

Report later gives some insight into what the State of Washington believes is “equitable” when it notes that the distribution of reductions amongst point sources was “based on point sources discharging equivalent pollutant concentrations at wastewater treatment plants in both states.”<sup>7</sup> While reducing the discharge of pollutant concentrations from Idaho plants so that the discharges are “equivalent” to those from Washington plants might appear to have a certain cosmetic fairness, actually it is everything but. While traveling along the Spokane River, the oxygen-demanding constituents discharged to the river are naturally taken up by the normal environmental processes in the river. This is one reason why the phosphorus concentrations from Idaho plants are not detectable, even by the best scientific measurements, by the time it reaches Long Lake, whose occasional algal blooms are the engine behind this TMDL process. While the phosphorus travels along the river, its concentrations are being reduced or attenuated by natural uptake. Calling for “equivalent” concentrations at the outfalls of the plants does not account for the geography that the Idaho plants are much further from Long Lake reservoir than are the Washington sources. Consider that the City of Spokane is only 9.3 river miles from the start of the reservoir while Post Falls, the nearest of the Idaho plants, is 43.1 miles away.<sup>8</sup> Because of the natural attenuation, Idaho sources cause much less of the problem in the reservoir, though this is not considered in how much Ecology deems that the plants should share the burden. It is like going to dinner at a restaurant, ordering and eating a salad while everyone else orders and eats large steaks, and then being told at the end of the dinner that the “equitable” way to split the bill is equally. While each person pays the same dollar amount, the result is anything but equitable given the much smaller cost of the salad. So too here, the burden the Idaho plants should bear must be in proportion to the harm they cause to Long Lake. To force on them an equal share of the clean-up bill, when they cause so much less of the problem, is not equitable. In our call for fairness, we have not advocated that Washington should give us some of their “meal”; rather, we have asked that our portion of the bill be commensurate with our share of the “meal.”

6. If ultimately implemented, the Draft Report’s determinations would require extensive upgrades to the Post Falls, HARSB, and Coeur d’Alene wastewater treatment plants. Those upgrades are estimated to cost the local Idaho ratepayers over one hundred million dollars over the next 20 years. The plants in Washington will also have to make extensive upgrades. The upgrades in Washington will have a much greater effect on the phosphorus concentrations in

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<sup>7</sup> Draft Report at 29.

<sup>8</sup> The furthest of the three Idaho outfalls, that of Coeur d’Alene, is 52.5 miles from the start of Long Lake.

Long Lake than will the upgrades to the Idaho plants because the Washington plants are so much closer. Ecology, through its Draft Report, is setting in motion a process whereby the local ratepayers of northern Idaho would have to spend additional untold millions of dollars to further reduce a phosphorus load that is already predicted to be undetectable at Long Lake reservoir. This is an unfair and wasteful allocation of public improvement dollars.

7. The proposed changes in the Draft Report are intended to reduce the likelihood of algae blooms on Long Lake reservoir, an artificial water body far from the Washington-Idaho border. Long Lake is created by Long Lake Dam, a dam owned and managed by Avista. Long Lake is, perhaps not surprisingly given its name, a narrow lake that extends almost 24 miles in length. The lake flows slowly from near the City of Spokane to Long Lake Dam. Oxygen in the atmosphere does not exchange with the water in a slow-flowing reservoir as quickly as it would in a fast-moving river. Additionally, any nutrients in the water column can settle out and recycle to encourage algae growth during its slow journey. The effect is that oxygen in the atmosphere does not replenish the oxygen in the water that is naturally taken up by plants and fish. Long Lake is also a deep water body as it approaches the dam, so deeper levels of the lake stratify without exposure to the atmosphere during the summer months. The effect is that once these lower levels become oxygen-depleted through natural processes, the oxygen levels there do not recover until the fall of the year.
8. The Draft Report does not adequately address what action Avista must take to share in the remedy of the problem fairly. Instead, the Draft Report spells out nebulous plans for future meetings to come up with plans. The point dischargers, both Idahoan and Washingtonian, have reductions that have been modeled. The Avista dam instead must merely accommodate a water quality "benchmark" or "goal" 10 µg/L phosphorus at the start of Long Lake by coming up with a Water Quality Attainment Plan within two years. The effect may be to require Avista to install and turn on some aerators at the bottom of Long Lake once every ten years. It may be education programs, non-point source reduction, biological studies (that arguably should have already been conducted by Washington), or some as yet unknown actions. Without an understanding of the magnitude of the burden the Draft Report places on Avista, no one can evaluate whether this is a light burden or perhaps an excessive one. In turn, no one (probably not even Avista) can evaluate whether Ecology has allocated the burden proportionately between the causes of the problem.
9. Ecology has set a 10-µg/L total phosphorus benchmark for the Spokane River at the start of Long Lake reservoir. Beyond this concentration, the Draft Report considers the "remaining dissolved oxygen impairments in the reservoir to be caused by Long Lake Dam and is Avista's responsibility to address." The source

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<sup>9</sup> Draft Report at 35.

of Ecology's 10-µg/L benchmark is an EPA guidance document that gives total phosphorus levels for Ecoregion II which range from 3.0-32.5 µg/L with a 25th percentile of 10 µg/L. The current water quality standard for phosphorus in the Long Lake reach of the Spokane River fits within EPA's range at a maximum concentration of 25 µg/L from June 1 to October 31.<sup>10</sup> Ecology's institution of a lower amount in effect creates a new water quality standard that, instead of being applied state-wide, applies to one discretionary location on one river. Ecology lacks the legal authority to set such a benchmark. If Ecology wants this level of clean water, it can do so, it just has to bear that burden throughout Washington and not just pick a location that has the effect of disproportionately burdening Idaho. It also needs to do so through the rulemaking process, not through unilaterally drafting a few paragraphs in a TMDL document. The Draft Report indicates that Ecology applies a "target" of 10 µg/L total phosphorus at the Little Spokane River confluence with Long Lake, and bases its determination of TMDL compliance on that target.<sup>11</sup> In effect, Ecology is attempting to make the "target" into a water quality standard, but exceeds its authority in doing so. The phosphorus standard for Long Lake is listed as 25 µg/L.<sup>12</sup> The 1987 WDOE document titled "The Spokane River Basin: Allowable Phosphorus Loading" (Patmont et al, contract C0087074), reported that WDOE "determined that the 25 µg/L seasonal mean EZ-TP value is an appropriate water quality standard for Long Lake, since it best represents mesotrophic conditions with the lake (L. Singleton, Ecology, personal communication)." In contrast, the TMDL reports that, as basis for the selected scenario: "Implementation of these wasteload allocations will result in an average total phosphorus concentration of 10 µg/L in Lake Spokane (model segment 154) from June through September (see Figure 3)." The Organization for Economic Cooperation and Development's (OECD, 1982) probabilistic classification of trophic states indicates an oligotrophic category for lakes with 10 µg/L phosphorus. For over two decades, Washington has managed Long Lake as a mesotrophic water body; however, it now appears that the classification of the reservoir, and hence the management consequences, is being changed through this TMDL process. This appears to be, in effect, a revision of the designated beneficial use but without the requisite technical basis to do so. If that is Ecology's intent, a Use Attainability Analysis should be conducted before making this change.

As provided in UAA Petitioners' February 22, 2005, letter to David Peeler, Ecology Water Quality Manager, in which a conditional offer to withdraw the

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<sup>10</sup> Wash. Admin Code § 173-201A-602.

<sup>11</sup> Draft Report at 36.

<sup>12</sup> Wash. Admin Code § 173-201A-602.

UAA Petition was made, we continue to retain the right to resubmit the UAA Petition. Further, the burdens imposed may force Post Falls and HARSB to apply for variances from the applicable water quality standards.

10. The appropriateness of the 10- $\mu\text{g/L}$  level of phosphorus to this point in the river is also arbitrary and capricious. It is as if the State of Washington picked a speed limit for a road in Spokane at 45 miles per hour ("mph") simply by mentioning that there is a road in New Jersey that has a 45-mph limit. It may be true that the road in New Jersey has that speed limit. It may also be true that the New Jersey road meets some New Jersey design standard. What is wholly missing is the appropriateness of how that speed limit applies to the specific Spokane road. So too, there are lots of water quality standards out there. The 10  $\mu\text{g/L}$  standard is just one of them. The current 25  $\mu\text{g/L}$  standard also fits well within the range of reference conditions for Ecoregion II. What is missing is a justification for why this one of many possible limits is appropriate for that particular spot in the Spokane River.
11. The 10- $\mu\text{g/L}$  level for Avista burdens Idaho and Washington dischargers by requiring them to satisfy a standard beyond Washington's water quality standards. The State of Washington has designated beneficial uses for the Spokane River and then has assigned water quality standards that it will allow people to use those waters consistent with those uses. For the Spokane River, the State of Washington, through its water quality standards, has stated that 25  $\mu\text{g/L}$  phosphorus is sufficiently clean to allow those beneficial uses to be met. (And EPA has accepted this determination by the State of Washington.) If Long Lake Dam did not exist and so the land under Long Lake was a river segment of the Spokane River, this river segment would have a 25- $\mu\text{g/L}$  limit. The Idaho and Washington dischargers should only bear the responsibility to keep the water consistent with a 25- $\mu\text{g/L}$  limit, the state of the water if there were no Long Lake Dam. Avista, not the Idaho and Washington dischargers, should bear the consequence of having turned the river into a lake by being responsible for an additional remediation. To hold Avista responsible only for clean-up as if it acquired water at 10  $\mu\text{g/L}$  would shift remediation to the dischargers beyond what they caused. With this noted, Post Falls and HARSB have offered a 100- $\mu\text{g/L}$  discharge limit that meets their needs without affecting the obligations either of Avista or of the Washington dischargers.
12. Washington has many homes along both sides of Long Lake's nearly 24-mile length. Most of these homes are on septic tanks, which leach nutrients into the groundwater. Much of this groundwater is hydraulically connected to the water in Long Lake. In turn, the nutrients from these septic tanks, including phosphorus, enters Long Lake. Ecology has created a regulatory structure that has allowed these septic tanks to contribute phosphorus to Long Lake for decades. A count of structures in an aerial photograph shows that there are about 1,600 septic systems in the vicinity of Long Lake, of which about 25

percent are within 500 feet of the shoreline. Spokane County's 2007 Facility Plan Amendment indicates on Table 11-2 about 0.02 pounds per day loading to groundwater upon each septic tank's breakthrough. That could amount to 4,000 pounds of total phosphorus each season from unregulated septic tanks near the reservoir, depending on the soil retention factor. This source of phosphorus, directly adjacent to slow-moving Long Lake, is not identified in the Draft Report. The Clean Water Act requires septic systems to be regulated as point sources in facts such as these. U.S. v. Lucas, 516 F.3d 316, 329 (5th Cir. 2008) (holding that septic tanks that discharge into waters of the United States are point sources); see N. Cal. River Watch v. City of Healdsburg, 496 F.3d 993, 997-98 (9th Cir. 2007) (holding that point source was discharging illegally into a pond that is hydrologically connected to a water of the United States). In modeling from where the sources of phosphorus are coming, Ecology has made a judgment to ratchet down the far-away dischargers in Idaho, rather than clean up the septic tanks adjacent to the problem areas in Long Lake reservoir. This is not permissible.

13. A number of serious deficiencies in the TMDL and its modeling approach have been summarized in the attached October 19, 2009, memo from water quality expert Gene Welch. It provides detailed analyses and background information that were presented earlier in modeling meetings and input to PSU. Since it does not appear that the Draft Report adequately addresses Mr. Welch's input, we are including it as part of this comment letter for the record.
14. There are also additional detailed comments in the attached Exhibit A.

Post Falls and HARSB hope Ecology can find ways to accommodate these comments in a revision of the TMDL and in the development of a management implementation plan that is fair to Idaho.

If you have any questions or need additional information, please contact the undersigned.

Sincerely,

/s/Clay Larkin  
Clay Larkin, Mayor  
City of Post Falls

/s/Gerry House  
Gerry House, Chairman  
Hayden Area Regional Sewer Board

Cc: C. L. "Butch" Otter, Governor of the State of Idaho  
Mike Crapo, U.S. Senator for the State of Idaho  
James Risch, U.S. Senator for the State of Idaho  
Walt Minnick, U.S. Representative for the 1st District of the State of Idaho  
Toni Hardesty, Director, Idaho Department of Environmental Quality  
Christine Psyk, U.S. Environmental Protection Agency, Region X

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## Exhibit A

**A. Idaho Dischargers Have Been Treated Unfairly Compared to Washington Dischargers.** The Draft Report states, “Because all the impacts causing the water quality impairment are considered, the proportional share that each discharger bears is less than in earlier draft TMDLs.”<sup>13</sup> This is not true for Idaho dischargers. Idaho dischargers bear a greater proportional share. Earlier draft TMDLs resulted in 2007 draft NPDES permits where Idaho dischargers were held to a monthly average discharge of 50 µg/L phosphorus from June through September with commensurate waste load allocations. Seasonal shoulder months allowed additional loading that amounted to a combined seasonal phosphorus load of 7,880 pounds. The PSU River Modeling Scenarios Report shows an assumed total phosphorus load allocation of 1,177 pounds for Idaho dischargers from March through October, a 670 percent decrease in seasonal loading.<sup>14</sup> Conversely, the 2007 draft Washington permits and the Draft Report showed the Washington dischargers at a combined load allocation of 1,634 pounds per season<sup>15</sup> compared to the Draft Report which shows a combined 6,245 pounds of total phosphorus per season – a 382 percent increase.<sup>16</sup> It is clear that Washington has received a comparative implementation advantage when it comes to the consequences of the Draft Report. In addition to the obvious loading reallocations, Idaho communities do not have the economy of scale that Spokane enjoys for economic effectiveness. Idaho also has fewer opportunities for offset credits to manage the delta envisioned by the Draft Report. Furthermore, Idaho receives unfavorable phosphorus load allocation assumptions (36 µg/L compared to 42 µg/L for Spokane and Spokane County). Washington has less rigorous aquifer protection controls. Idaho stakeholders have not treated equitably in the resolution of this watershed-wide issue. Idaho is being hurried through closing doors as Ecology avoids exploring a broader range of choices that could better manage the watershed. There has been a lack of effort to develop a partnering relationship between the stakeholders responsible for water quality on the Spokane River. Post Falls and HARSB insist, and federal and state regulatory authorities should insist, on fairness in implementing the TMDL and in NPDES permitting. In that regard, a interstate Memorandum of Understanding could address these concerns similar to the September 2008 Memorandum of Understanding between the Idaho Department of Environmental Quality, EPA Region 10, and the Shoshone-Bannock Tribes.

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<sup>13</sup> Draft Report at xii.

<sup>14</sup> September 2009 PSU River Modeling Scenarios Report at 5, Table 2.

<sup>15</sup> Draft Report at Table ES2.

<sup>16</sup> Draft Report at 17, Table 3.

**B. Washington Water Quality Standards Do Not Comply with Washington's Cost/Benefit Analysis Statute.** Washington adopted new water quality standards in 2003 and revised them in 2006 to implement an EPA requirement for salmonid spawning, rearing, and migration, core summer salmonid habitat, spawning, and char use. A Washington statute requires that, before adopting a significant legislative rule, the relevant Washington agencies determine that the probable benefits are greater than the probable costs, taking into account both qualitative and quantitative analysis and the specific directives being implemented.<sup>17</sup> The statute also requires the agency to analyze alternatives to rule making and the consequences of not adopting the rule, and determine that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and objectives of the statute requiring it. Washington, in implementing the new water quality standards, did not consider the impacts on neighboring states and Avista and the adoption of the water quality standards is therefore incomplete.<sup>18</sup>

**C. Washington's Water Quality Criteria for Protecting the Designated Beneficial Uses for Long Lake are Not Science-Based.** According to a case study, when Washington replaced its class-based standards in 2002 with new use-based standards, "the uses for each class were simply rolled over into the use-based system without any site-specific consideration of the appropriateness of those uses for any water body". Many of the former criteria were also directly carried over. Despite significant efforts toward developing proposed dissolved oxygen criteria to address specific aquatic life uses, Ecology elected to withdraw the portion of the rule that changed the dissolved oxygen criteria and continued to use the former criteria applied to classes. For example, the same minimum dissolved oxygen levels specified to support Class A waters (8.0 mg/L) are now also specified for "salmon and trout spawning, noncore rearing, and migration." The technical basis for the original criteria has long since been lost, and efforts toward developing scientifically based criteria were not applied to the rule change.<sup>19</sup>

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<sup>17</sup> Wash. Rev. Code § 34.05.328.

<sup>18</sup> WSR 03-01-124, Proposed Rules, Department of Ecology, Order 02-14 Filed December 19, 2002; Chapter 173-201A WAC, Benefit, Cost, and Least Burden Analysis for Amendments to Washington's Surface Water Quality Standards, November 2006, Publication Number: 06-10-094.

<sup>19</sup> "Exploring Use Attainability Analysis," 2007 National Association of Clean Water Agencies and Water Environment Research Foundation, at 7.

Ecology has indicated that a thorough evaluation of the fisheries of Long Lake reservoir is needed to answer the fundamental question of the beneficial uses that are to be protected. Washington Administrative Code has designated the Lake Spokane reservoir for core salmonid summer habitat (and other uses), with a corresponding dissolved oxygen standard of 9.5 milligrams per liter (mg/L).<sup>20</sup> It has also designated the Spokane River for salmonid spawning, rearing and migration with a dissolved oxygen standard of 8.0 mg/L. In contrast, EPA's Quality Criteria for Water<sup>21</sup> recommends a dissolved oxygen criteria of 9.0 mg/L for slight production impairment in the embryo and larvae life stages (spawning) and 8 mg/L for no salmonid production impairment in all other life stages (rearing and migration). The Gold Book standards were based on science and remain in place as recently as EPA's 2009 National Recommended Water Quality Criteria. There is no apparent basis for Ecology's oxygen standards. The physical conditions of Long Lake, such as flow rate and substrate or sediment, have not been evaluated to determine the suitable oxygen level for salmonid spawning. Since the purpose of the TMDL is to protect the designated beneficial uses, Ecology must determine whether the beneficial use will be protected or achieved. Ecology must determine before or as part of this TMDL (i) the baseline condition of the salmonid fishery, (ii) the protected condition of the fishery, and (iii) the plan for monitoring improvement to the fishery. Unless Ecology bases the designated beneficial uses and the supportive water quality standards for Long Lake on scientific principles, the resulting implementation of any technological changes may be (a) over-protective and costs hundreds of millions of dollars in necessary expenditures or (b) under-protective and endanger the fish populations. Ecology should commit to these assessments before or as part of the TMDL so that the benefit derived from the TMDL outweighs the demand for dedication of significant public and private expenditures over an undetermined number of decades.

- D. Known Pollutant Sources Adjacent to Long Lake Which Contribute to the Non-Attainment of Washington's Water Quality Standards Have Not Been Included in the Draft Report.** The Draft Report does not include an evaluation of known pollutant sources, such as septic tanks (as discussed above), landscaping, and large agricultural fields. The effect is to skew the effects on dissolved oxygen in 2001 to other sources. The Model Update and Calibration Check Report prepared by Portland State University in support of the TMDL acknowledges the potential for septic tank impacts in the groundwater around the lake when it excludes those well test results.<sup>22</sup>

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<sup>20</sup> Wash. Admin. Code § 173-201A-200(1)(d).

<sup>21</sup> 1986 Gold Book.

<sup>22</sup> June 2009 PSU River Modeling Scenarios Report at 25.

The aerial photography review shows about 900 agricultural and landscaped acres along the lake, of which about 14 percent are within 500 feet of the shoreline. The actual applied load of phosphate fertilizers on these areas is unknown, but we estimate several tons are required for crop and turf management each year. Recommended application rates for phosphate fertilizer vary widely depending on soil conditions and crop type. For example, the recommended phosphate application rates for alfalfa may be as high as 200 pounds per acre to establish an irrigated crop. Maintenance applications would need to satisfy the uptake rate of 8 to 16 pounds of phosphate removed per ton of alfalfa produced. Irrigated ground produces around 6 to 8 tons of alfalfa per acre.<sup>23</sup> In addition, recommended application rates for phosphates on established lawns is about 22 to 34 pounds per acre.<sup>24</sup> If fertilizer management is within the tighter agricultural guidelines, only 25 percent of the applied phosphorus would be available for runoff, wind erosion, soil adsorption and leaching. This could amount to between 12 and 32 pounds per acre per year or between about 10,000 and 30,000 pounds of phosphorus per year added to the non-point lake loading but uncounted in the TMDL. Those near-shore sources could far exceed the entire 7,700 pound seasonal loading from regulated point sources currently included under TMDL Scenario #1.

Additionally, the PSU River Modeling Scenarios Report states that ground water is well-aerated, it follows that the ammonia discharges of septic systems is aerobically converted to nitrate and completely mobile in ground water.<sup>25</sup> The potential linkage between land use in the vicinity of the lake and undesirable algae blooms has been discounted when further investigation should be pursued in order to make substantive and observable water quality improvements. At the TMDL public meeting on September 24, 2009, Ecology emphasized that septic systems are significant sources of phosphorus to the Spokane River. Rightfully, the cost of controlling nutrients from the septic systems should be born by the parties who own them.

Similar to the above comment, the fish hatchery on the Little Spokane River is not specifically accounted for in the TMDL. It should have a corresponding waste load allocation assigned and an appropriate discharge permit or mitigation strategy formulated. According to Ecology report "Quality and Fate of Fish Hatchery Effluents During the Summer Low Flow Season" (Publication No. 89-

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<sup>23</sup> "Nutrient Management Guide for Dryland and Irrigated Alfalfa in the Inland Northwest," 2009, Pacific Northwest Extension.

<sup>24</sup> "Fertilizing Lawns," 2009, University of Minnesota.

<sup>25</sup> September 2009 PSU River Modeling Scenarios Report at 18.

17) the Spokane Trout Hatchery had 45,000 pounds of trout on hand, and discharged fourteen cubic feet per second with an effluent total phosphorus concentration of 40 µg/L. This equates to a total phosphorus load of three pounds per day going into the Little Spokane River immediately upstream of the lake or 735 pounds seasonally. By comparison, this loading is the amount that the TMDL implies is the maximum allowable loading from a population of up to 125,000 people in Idaho. Ignoring obvious contributing conditions in favor of assigning the responsibility to the upstream regulated communities is not in the spirit or the letter of the Clean Water Act.

**E. The Draft Report and the PSU River Modeling Scenarios Report incorporate invalid loading and permit assumptions.**<sup>26</sup> Nationally-recognized experts representing the Spokane River Stewardship Partners (the “SRSP”) presented numerous reasons why Appendix J is invalid in the attached April 10, 2009, letter to EPA and Ecology. The largely unsupported leaps of logic contained in Appendix J appear to be an attempt by EPA Region 10 to refute EPA’s own two-volume, peer-reviewed document issued only six months earlier.<sup>27</sup> EPA clearly states on page ES-3 of their peer-reviewed document, “Technologies are available to reliably attain an annual average of 0.1 milligrams per liter (mg/L) or less for TP and 3 mg/L for TN.” That report quantifies its statement with a common statistical basis and an average annual operating plant performance of 70 µg/L TP with an average standard deviation of 30 µg/L for the eight “very low” phosphorus removal facilities having adequate data to produce statistical results. In addition, the SRSP representatives reviewed the attached peer-reviewed limits of technology (LOT) and variability paper with Ecology and EPA on several occasions in June and July 2009. The information shows definitively why EPA’s 2008 document uses annual averages and statistical variability as the correct basis for evaluating permit and/or waste load allocation compliance. It shows that maximum weekly variations at these very low phosphorus removal levels will likely be three to five times higher, and maximum monthly values will likely be two to three times higher than the annual average removal performance.

Ecology should not expect the public to willingly expend hundreds of millions of dollars on the pretext that our local treatment facilities can meet seasonal waste load allocations 58 to 64 percent below EPA’s peer-reviewed values. EPA’s fifteen-page memo in Appendix J of the Draft Report simply does not justify

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<sup>26</sup> Draft Report at 17, Table 3; September 2009 PSU River Modeling Scenarios Report at Tables 2-4.

<sup>27</sup> Municipal Nutrient Removal Technologies Reference Document, EPA 832-R-08-006, September 2008.

Ecology's approach. Ecology is creating a framework whereby peer-reviewed scientific evaluation is ignored and the resulting TMDL and permits will be unattainable. This approach is not in alignment with the Draft Report which states, "These waste load allocations will be achieved by the installation of the most effective feasible nutrient removal technologies and implementation actions (target pursuit actions) . . . ."<sup>28</sup> It is also not in alignment with the Washington Administrative Code which requires application of AKART under antidegradation.<sup>29</sup> The Washington Administrative Code definition says AKART "shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge." EPA's September 2008 peer-reviewed document describes AKART at 70 µg/L TP on an annual average basis with a standard deviation of 30 µg/L TP for "very low" phosphorus removal technology. The Draft Report does not adhere to that requirement.

**F. The Draft Report Favors Larger Treatment Plants over Smaller Ones.**

The Draft Report has taken the position that larger treatment plants (Spokane and Spokane County) are operated and sampled more consistently and therefore worthy of 17 percent more waste load allocation than all the other point sources on the Spokane River.<sup>30</sup> This is unjustified in Appendix J and simply places disproportionately more responsibility on Idaho entities with the least impact on the Spokane River and Long Lake. Sampling frequency should not be a determinant of discharge concentration and load limits. While the argument has been made by Ecology and EPA leading up to the Draft Report that all entities will receive the same permit values, regardless of their waste load allocation, the further statement regarding the Liberty Lake Water and Sewer District example,<sup>31</sup> shows that the Draft Report intends to hold the point sources to the waste load allocation values rather than any future permit values. Ecology cannot justify that these professionally operated smaller facilities should receive disproportionately lower waste load allocations for this Draft Report than the larger dischargers with the largest impacts on Long Lake.

**G. The Idaho-Only Model Scenario's Place is Unclear.** The Draft Report leaves unclear the significance and use of the Idaho-only model scenario.

Portland State University developed the Idaho-only model scenario as part of its

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<sup>28</sup> Draft Report at xi.

<sup>29</sup> Wash. Admin Code § 173-201A-300(2)(d).

<sup>30</sup> Draft Report at 28, Table 4.

<sup>31</sup> Draft Report at 30.

PSU River Modeling Scenarios Report but was not mentioned in the Draft Report.<sup>32</sup>

- H. The Load Sources for Long Lake Dam Should be Identified.** The Draft Report states that Avista is responsible to “improve dissolved oxygen impairments that occur in the reservoir downstream” of the Little Spokane river confluence, where the model indicates total phosphorus will meet Ecology’s pristine target of 10 µg/L at the confluence.<sup>33</sup> Table 6 indicates Avista must improve the dissolved oxygen concentration at Segment 188 from August 16 to 31 by 1.2 mg/L. The Draft Report does not indicate the equivalent TP wasteload reduction that would be needed to achieve the dissolved oxygen requirement. Since the Draft Report study relies upon phosphorus reductions as the means to achieve the dissolved oxygen standard, it is imperative that the corresponding load sources be identified, quantified, and evaluated for reduction potential. Without this information for Avista’s responsibility, reasonable assurance that the dissolved oxygen standard is achievable appears invalid.

Also, we question the use of the 2001 flow conditions as the reasonable worst-case because minimum flows have subsequently been raised to 500 cubic feet per second. Valid river TP data at these flow rates and times of year are readily available and should be accurately reflected in the modeling analysis.

- I. The Results of Any Trading Program Should be Included in the TMDL Process.** A trading program can be a useful tool to help manage the delta or to otherwise accommodate pollutant loads. Rather than trying to set up a trading program after final permits have been issued, a better idea is to allow the results of any trading program to be incorporated into the TMDL process before final permits are issued. In this way, final permits can be written to reflect any agreements for reductions that have already been accomplished. This is often a lot more administratively effective.
- J. Idaho was Not Part of a Collaborative Process with Ecology.** The Draft Report states that a collaborative process involving all stakeholders was employed in the development of the TMDL. Unfortunately, the Idaho stakeholders believe that they have been systematically ignored by Ecology during the bi-state modeling effort. As a result, Idaho stakeholders were compelled to ask their congressional delegation to intervene, yet Idaho’s repeated pleas for use attainability analysis and a reasonable range of scenario modeling went unheeded.

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<sup>32</sup> September 2009 PSU River Modeling Scenarios Report at 24-26.

<sup>33</sup> Draft Report at 36.

