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October 30, 2009

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

**RE: Spokane Tribe's Comments on Ecology's September 2009 Draft Dissolved  
Oxygen Total Maximum Daily Load (Transmitted via email and first-class mail)**

Dear Mr. Moore:

Please accept these comments on Ecology's Draft Dissolved Oxygen Total Maximum Daily Load ("DO TMDL"). These comments are submitted on behalf of the Spokane Tribe of Indians ("Tribe"). These comments were prepared with the invaluable assistance of Brian Crossley and staff at the Tribe's Department of Natural Resources ("DNR"). The Tribe has grave concerns about the DO TMDL in its current form, and cannot support it. Described in detail below are the Tribe's concerns, comments, and suggested changes.

**Introduction**

The health and well-being of the Spokane River ("River") is a paramount interest of the Tribe. The Tribe is concerned not only with the health of the River within its Reservation, but also with the entirety of the River as it flows through the Tribe's ancestral lands. (Ex. 1). The Tribe's Reservation was established in 1877, after the Tribe was removed by force from its domain. *Northern Pac. Ry. Co. v. Wismer*, 246 US 283, 288 (1918). The Reservation's southern boundary is set to the south bank of the Spokane River, which was done to protect the Tribe's subsistence and cultural uses of the River. (Ex. 2). For many decades now, the Tribe's subsistence use of the River has been thwarted by upstream pollution, raised water temperatures, and during certain times of the year portions of the River are uninhabitable for aquatic life due to depressed oxygen levels (Ex.3,4) and high levels of total dissolved gas ("TDG").

In response to the infringement on the Tribe's fishing, cultural, and agricultural rights in the River, the Tribe applied for and received treatment in the same manner as a state status ("TAS") under the Clean Water Act ("CWA"), 33 U.S.C. § 1377, on July 23, 2002. The Tribe's first water quality standards were approved on April 22, 2003. However, projects to improve water quality and control water pollution within the Reservation have not been successful in bringing the River back to health due to upstream pollution and hydropower facilities within the River.

Fortunately, for the Tribe, the CWA protects downstream sovereigns in this very situation. The final DO TMDL will determine the waste load allocations (“WLA”) for the pollution discharges within Washington State that are subject to National Pollutant Discharge Elimination System (“NPDES”) permits. The Environmental Protection Agency’s (“EPA”) regulations require that NPDES permits cannot be issued “when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States.” 40 C.F.R. § 122.4(d). In addition, downstream Tribes and States are free to adopt more stringent standards than upstream States, and the EPA can require that upstream sovereigns comply with the downstream standards. *Albuquerque v. Browner*, 97 F.3d 415, 423-24 (10th Cir. 1996); *See also Montana v. EPA*, 137 F.3d 1135, 1141(9th Cir. 1998). As Ecology is aware, the non-point and point source pollution upstream from Reservation waters causes degradation of the Tribe’s water quality. (DO TMDL, P.13). For this reason, the Tribe is very concerned with the load and wasteload allocations planned for in this Draft DO TMDL. Current versions of the modeling performed on the lower arm of the Spokane River indicate that the TMDL’s WLAs and load allocations (“LA”) fail to ensure that the Tribe’s standards will be met. Improvements in the Tribe’s water quality depend on improvements upstream.

## COMMENTS

These comments are organized in the following manner. Several major concerns are detailed first, followed by technical and grammatical concerns that correspond to specific pages.

### **1. Description of the Tribe’s Involvement**

The Tribe appreciates Ecology’s efforts to implement the principles of the Centennial Accord, and the Tribe is committed to improving and strengthening its government-to-government relationship with the State. However, this DO TMDL overstates the Tribe’s and the State’s relationship in this situation by the use of the term “collaborated”. In various locations throughout the DO TMDL, Ecology states, “the Spokane Tribe of Indians collaborated” with the other agencies and Ecology in developing the TMDL. (DO TMDL P. 14). “Collaborated” does not properly describe what occurred throughout the development of the DO TMDL. Tribal DNR and legal staff were kept informed and consulted with during Ecology’s development of this draft, but in the end, the Tribe did not help write the DO TMDL, nor did it have any decision making power within the process.

**Suggested Change:** Ecology should change this and other similar language referring to the Tribe. For example, it could be changed to, “The Spokane Tribe was kept informed and consulted with throughout the process, but it did not have decision-making power within Ecology’s development of the DO TMDL.”

### **2. New Discharger**

The DO TMDL outlines a method by which Spokane County can be issued a new NPDES permit that is contrary to Federal and State regulations. First, a new permit based on this DO TMDL will violate 40 C.F.R. § 122.4(i). Second, Ecology’s planned use of “offsets” or “delta

management” to allow the new discharger will not comply with Washington State offset regulations.

First, 40 C.F.R. § 122.4(i) as interpreted in the Ninth Circuit likely bars the County NPDES permit under the described method in this DO TMDL. The Regulations state:

No permit may be issued:

(i) To a new source or a new discharger, if the discharge from its construction or operation will *cause or contribute* to the violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of CWA, and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

(1) There are sufficient remaining pollutant load allocations to allow for the discharge; and

(2) The existing *dischargers* into that segment are subject to *compliance schedules designed to bring the segment into compliance* with applicable water quality standards. The Director may waive the submission of information by the new source or new discharger required by paragraph (i) of this section if the Director determines that the Director already has adequate information to evaluate the request. An explanation of the development of limitations to meet the criteria of this paragraph (i)(2) is to be included in the fact sheet to the permit under § 124.56(b)(1) of this chapter.

40 C.F.R. § 122.4(i).

Recently, the Ninth Circuit Court of Appeals in a situation very similar to what is occurring here interpreted this portion of the Regulations. In *Friends of Pinto Creek v. United States Environmental Protection Agency*, 504 F.3d 1007 (9th Cir. 2007), the court reviewed a decision by the EPA that approved a new discharger’s NPDES permit for a water body on the 303(d) list in Arizona. The EPA prepared a TMDL for the waterway that provided for a plan where the waterway “*could* meet the water quality standards if all of the load allocations in the TMDL were met, not that there were sufficient remaining pollutant load allocations under existing circumstances.” *Id.* at 1012. Based on this TMDL, the EPA approved a new discharger’s NPDES permit, stating that the new permit met the legal requirements of 40 C.F.R. § 122.4(i). *Id.* However, the court found that the requirements of 40 C.F.R. § 122.4(i) were not met.

The court first found that there were not remaining load allocations under 40 C.F.R. § 122.4(i)(1). It then went on to find that the TMDL described a scenario where water quality standards could be met, but that not all existing dischargers were “subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.” The court found that 122.4(ii) was not satisfied because not all point sources on the

waterway were subject to compliance schedules. Based on this, the court vacated and remanded the permit to the EPA.

As is here, Ecology contemplates approving a new NPDES permit for the County even though the existing point source dischargers will not be subject to compliance schedules to bring Long Lake in compliance with applicable water quality standards. The compliance schedules and corresponding WLAs will only bring the Spokane River in compliance with applicable water quality standards, if unrealistic non-point source pollution reductions occur. The court in *Pinto Creek* described this very situation. “If there are not adequate point sources to do so, then a permit cannot be issued unless the state or Carlota (the discharger) agrees to establish a *schedule* to limit pollution from a nonpoint source or sources sufficient to achieve water quality standards.” *Pinto Creek*, 504 F.3d at 1015.

Here, there is no fixed schedule in the DO TMDL for the non-point sources to reach their LAs. Until the non-point LAs are met, any new discharge will cause or contribute to water quality violations in both Washington State and the Tribe’s waters. The DO TMDL lists many potential activities that could allow non-point sources to reach their LAs, but there are no specifics, no fixed schedule, and no designated funds. If the proposed reductions of non-point source pollution for the tributaries are to have any reasonable assurance of occurring a schedule must be set, funding must be designated, and Washington State must begin aggressive enforcement actions against landowners of non-point source pollution. None of these activities are planned for or have any reasonable assurance of occurring via this DO TMDL. Like in *Pinto Creek*, this TMDL describes a plan where water quality standards could be met, not that they will be met. For these reasons, the Tribe posits that the proposed method for Spokane County to be granted a NPDES permit is flawed and contrary to 40 C.F.R. § 122.4(i).

Second, the DO TMDL states, “[c]ompliance with the wasteload allocations for this new facility will be met through a combination of advanced treatment and target pursuit actions.” (DO TMDL P.47). “Target pursuit actions” are delta management. (*Id.*) “As described earlier, the term “delta” refers to the difference between what technology improvements can currently achieve and the remaining phosphorus that needs to be reduced through conservation, reduction of nonpoint source pollution and other target pursuit actions to meet the final wasteload allocation.” (*Id.*) In short, “target pursuit actions” or “delta management” are identical to “offsets” described in WAC 173-201A-450 (Ex. 5), and should be treated accordingly.

WAC 173-201A-450, the offset regulation, provides a method by which a *new* discharger can obtain a permit for a water body that does not currently meet the applicable WQS. The regulation states: “The purpose of water quality offsets is to sufficiently reduce the pollution levels of a water body so that a proponent’s actions do not cause or contribute to a violation of the requirements of this chapter and so that they result in a net environmental benefit.” *Id* at (1). Most importantly the regulation states, “[t]he improvements in water quality associated with creating water quality offsets for any proposed new or expanded actions **must be demonstrated to have occurred in advance of the proposed action.**” *Id* at (b). This regulation creates two hurdles for Ecology and Spokane County to overcome prior to permitting a new discharger. The proponents actions must not “cause or contribute to a violation” of water quality standards, which any discharge by the county prior to all of the reductions described in the Draft TMDL

will do. Second, the “offsets”, “delta management,” or “target pursuit actions” whichever label Ecology wants to use, must be demonstrated to have occurred **prior to** the proposed new discharge. The Draft TMDL describes how the County will get a permit long before the pollution is reduced in the Spokane River so that the new discharge will not “cause or contribute” to water quality violations. In addition, it contemplates a situation where the County and all the dischargers get to “offset” their dischargers prior to when the “offsets” are proven to have worked. This is in direct conflict with WAC 173-201A-450.

Furthermore, it is legally questionable whether these “target pursuit actions,” “delta elimination plans,” or “offsets” are allowed under the Clean Water Act. The Court in *Pinto Creek* clearly pointed out, **“there is nothing in the Clean Water Act or regulation that provides an exception for an offset when the waters remain impaired and the new source is discharging pollution into the impaired water.”** *Id* at 1012. In short, it is the Tribe’s position that for the County to receive an NPDES permit, it must first show that the offsets have occurred and that they have been successful in creating enough loading capacity in the River to allow for a new pollution source under WAC 173-201A-450.

**Suggested Change:** (1) The Draft DO TMDL should unequivocally state that the proposed Spokane County wastewater treatment plant will not be granted an NPDES permit until such time when Spokane River has the capacity to accept such pollutant loading, while continuing to meet applicable water quality standards. (2) Ecology should explain the legal authority and legal difference between “target pursuit actions” and “Delta Management” when they appear to be just different terms for water quality “offsets.”

### 3. Margin of Safety

The Margin of Safety (“MOS”) described in the Draft DO TMDL is not legally sufficient. It fails to abide by the following EPA Guidance.

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). EPA’s 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

<http://www.epa.gov/owow/tmdl/guidance/final52002.html> (last visited October 15, 2009). Ecology’s MOS is only the use of the 2001 critical flow year within the modeling to develop the WLAs and LAs. (DO TMDL P. 40). In addition, Ecology mentions the possible beneficial effects the increase flows Avista will be required to achieve under its FERC license. (*Id* at 43). The MOS only takes into account flow conditions. It does not adequately address climate change; the continued development and expansion of groundwater withdrawals from the Rathdrum Prairie Aquifer within Washington and Idaho; and how SOD levels are affected by the year round discharge of CBOD, TP, and Ammonia.

### **a. Climate Change**

Ecology states in this Draft DO TMDL, “[b]y using a critical flow year like 2001 that has seasonal and August low flows that correspond to about a 0.01 exceedance probability to establish pollutant allocations, the water quality in Lake Spokane and the Spokane River should be adequately protected.” (P. 40). Using the data from 2001, may add some measure of protection, it does not acknowledge the likelihood that flows could become much lower due to climate change.

Ecology’s previous Director, Jay Manning, in a recent presentation, described the following as likely effects of global warming on stream flows across the state:

UW Climate Impact Group projects: Nearly 30% reduction in spring snowpack by 2020s, 40% by the 2040s, and 65% by the 2080s. Decrease in April 1 snow water equivalent, across the State on average, of 28-29% by the 2020s, 37-44% by the 2040s and 53-65% by the 2080s.

<http://www.westgov.org/wswc/manning.pdf> (last visited October 15, 2009, P. 6). Utilizing a low flow year like 2001 does not provide an adequate MOS against the very likely threat that low flows become normal events. (See Ex. 7). This Draft DO TMDL does not contain an adequate MOS in light of the effects of climate change on future flow levels, and the effect that will have on Avista’s ability to meet the flow requirements of its FERC license.

**Suggested Change:** The DO TMDL should revisit the MOS, and develop an MOS that addresses climate change.

### **b. Increased Groundwater Withdrawals**

The use of flow year 2001 and the corresponding WLAs and LAs does not provide an adequate MOS for the ever-increasing groundwater withdrawals in both Washington and Idaho. It is widely known that groundwater inflows into the River increase surface flows during the critical low flow times of the year. Without these groundwater inputs flows could be further diminished. As Washington and Idaho have allowed the development of groundwater withdrawals to be virtually unchecked, flows have decreased. (Ex. 6, 7). Again, these increased withdrawals are widely known within DOE and were discussed by Mr. Manning at a recent conference discussing the threats to water bodies within the State. (Ex. 8, available at <http://www.westgov.org/wswc/manning.pdf> (last visited October 15, 2009)). Without explanation by Ecology, the MOS fails to address the future decrease in groundwater inputs caused by the increased withdrawals in Washington and Idaho.

**Suggested Change:** The MOS should be redeveloped to address the increased withdrawals of groundwater and such withdrawals effect on flows and the River’s loading capacity.

### c. SOD and year-round discharges

The relationship between the pollutant discharges in the non-critical months and the discharges effect on DO impairments in the critical months is not well understood. EPA regulations require that an MOS “takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.” 40 C.F.R. 130.7(c)(1). Additionally, Ecology acknowledges in this DO TMDL that oxygen impairments occur well within the non-critical months. For example, “Calculated dissolved oxygen values for the reservoir show dissolved oxygen impairments from June 17 through December 31.” (DO TMDL P. 36). However, Ecology considers in this TMDL only March-October as the critical season. Given the uncertainty surrounding SOD and winter discharges, Ecology should explicitly describe in this TMDL the WLAs being considered for November-February, and should consider extending the very low WLAs year round. The Tribe’s modeling shows significant phosphorus loading in the spring and winter as shown in the graph below. (Attachment 1, P. 99).

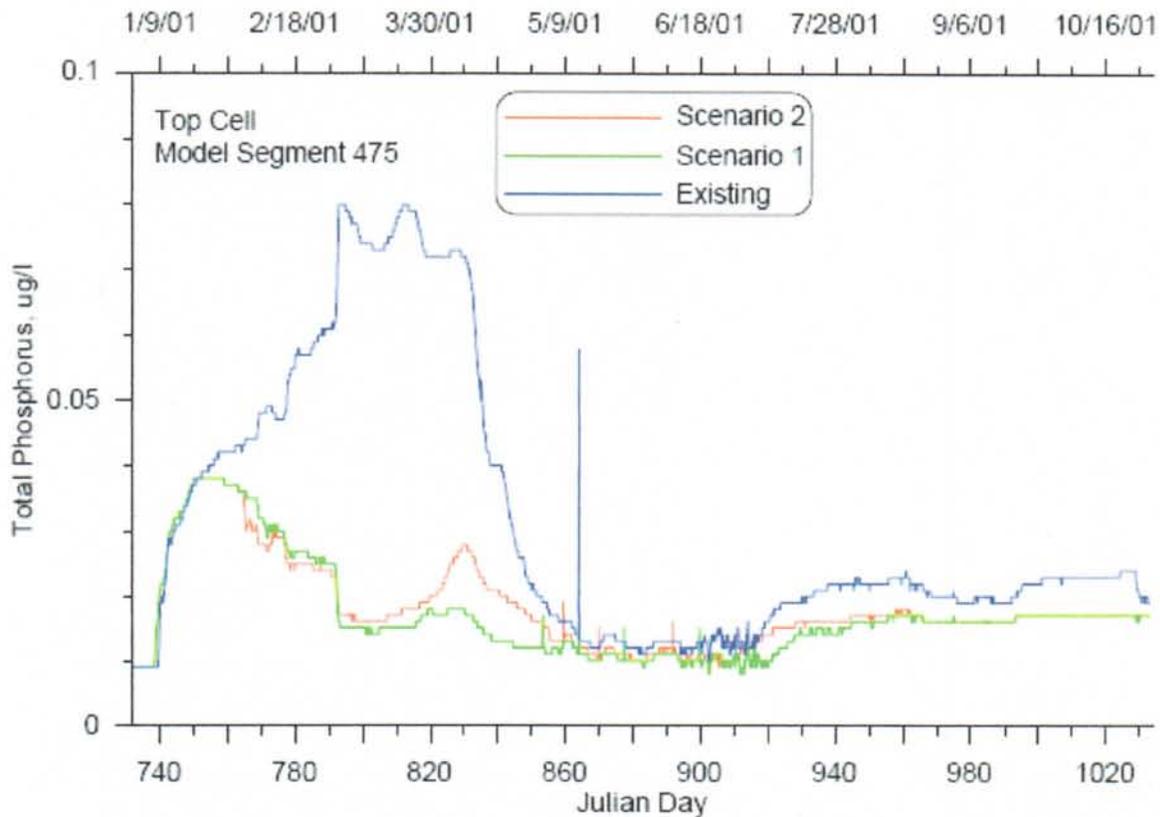


Figure 63. Scenario total phosphorus predictions for surface layer of segment 430 (station SA2).

**Suggested Change:** Ecology should provide an explanation as to why the WLAs are not set year round, or change the WLAs to year round to provide a better MOS.

## 4. Reasonable Assurance

EPA guidance provides the following requirements for approval of TMDLs.

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL.

When a TMDL is developed for waters impaired by both point and nonpoint sources, **and the WLA is based on an assumption that nonpoint source load reductions will occur**, EPA's 1991 TMDL Guidance states that **the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable**. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL load allocations in waters impaired only by nonpoint sources. However, EPA cannot disapprove a TMDL for nonpoint source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

<http://www.epa.gov/owow/tmdl/guidance/final52002.html> (Last visited October 27, 2009).

The DO TMDL fails to provide a reasonable assurance that the non-point source load reductions will be achieved. (DO TMDL P. 40-43). The TMDL lists several actions that have taken place or may take place in the future, but fails to provide funding mechanisms, enforceable agreements, timelines, or a plan on how the State will overcome its historic reluctance to pursue non-point source polluters for violations. *See Id.* The WLAs within the DO TMDL are based upon the reductions of non-point source pollution within the tributaries. Accordingly, Ecology must show more than a hope that reductions in non-point source pollution will take place.

**Suggested Change:** Ecology's Reasonable Assurance section relies on a mixture of actions that have already occurred (i.e. ban on phosphate detergent) and actions that may occur in the future. Ecology should revisit this section, and provide a detailed list and schedule for actions Ecology and others will do to meet the LAs for the tributaries.

## 5. Tribe's Draft Modeling

As Ecology and most of the Stakeholders are aware, PSU has performed modeling on the lower arm of the Spokane River. (Attachment 1). This modeling is still in draft stage and was

readjusted just on October 26, 2009. The Tribe, along with EPA's input, requested that with the limited time and funds available two scenarios for the lower arm be modeled. The existing conditions modeled year 2001 with 2006 water quality data. The first scenario modeled the current draft of the DO TMDL and reset the DO levels to 8mg/l at the tailrace of Long Lake Dam. The second scenario utilized the current draft of the DO TMDL, but dialed back the tributary reductions to 2001 levels and reset the DO levels to 8mg/l at the tailrace of Long Lake Dam. The scenarios utilized DO levels at 8mg/l at the tailrace of Long Lake Dam because Avista has indicated that this is an achievable level. The second scenario utilized 2001 tributary numbers because the reductions in tributary loading upstream do not appear to be achievable at this time. Both scenarios show troubling results for the Tribe's water quality.

For example, the modeling shows that under both scenarios the Tribe's water quality standards are not met during the critical time of the year in the deeper portions of the lower arm of the Spokane River. The following graphs are located on page 94-96 of the Draft Lake Roosevelt/Spokane River Arm Modeling Project. (Attachment 1).

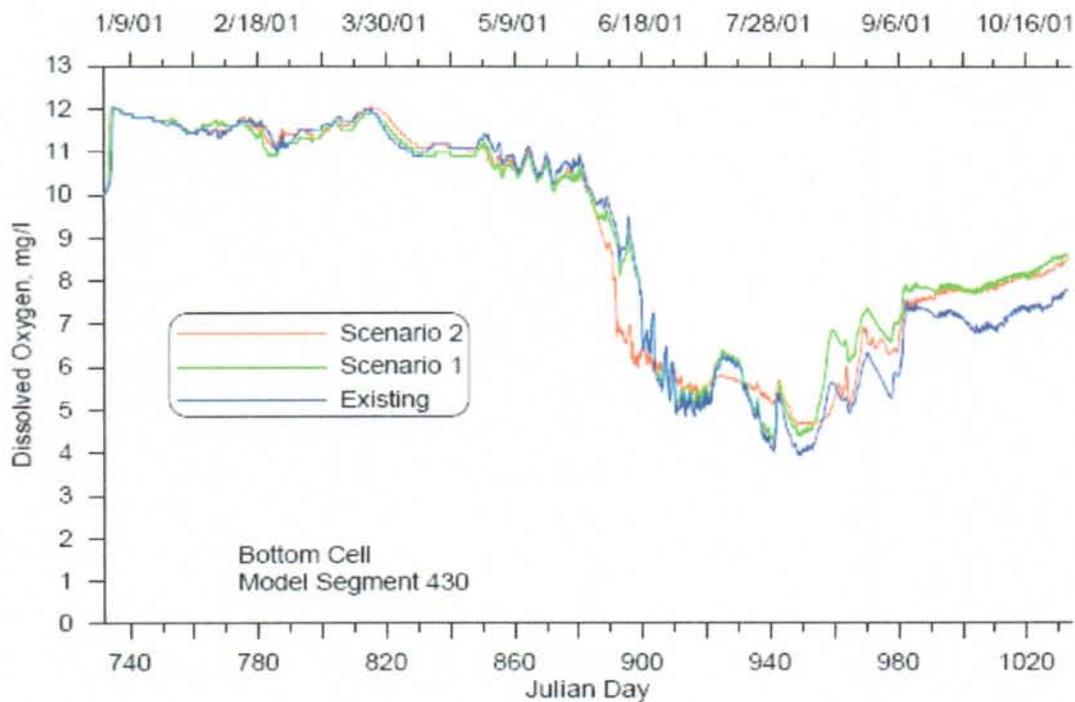


Figure 54. Scenario dissolved oxygen predictions for bottom layer of segment 430 (station SA2).

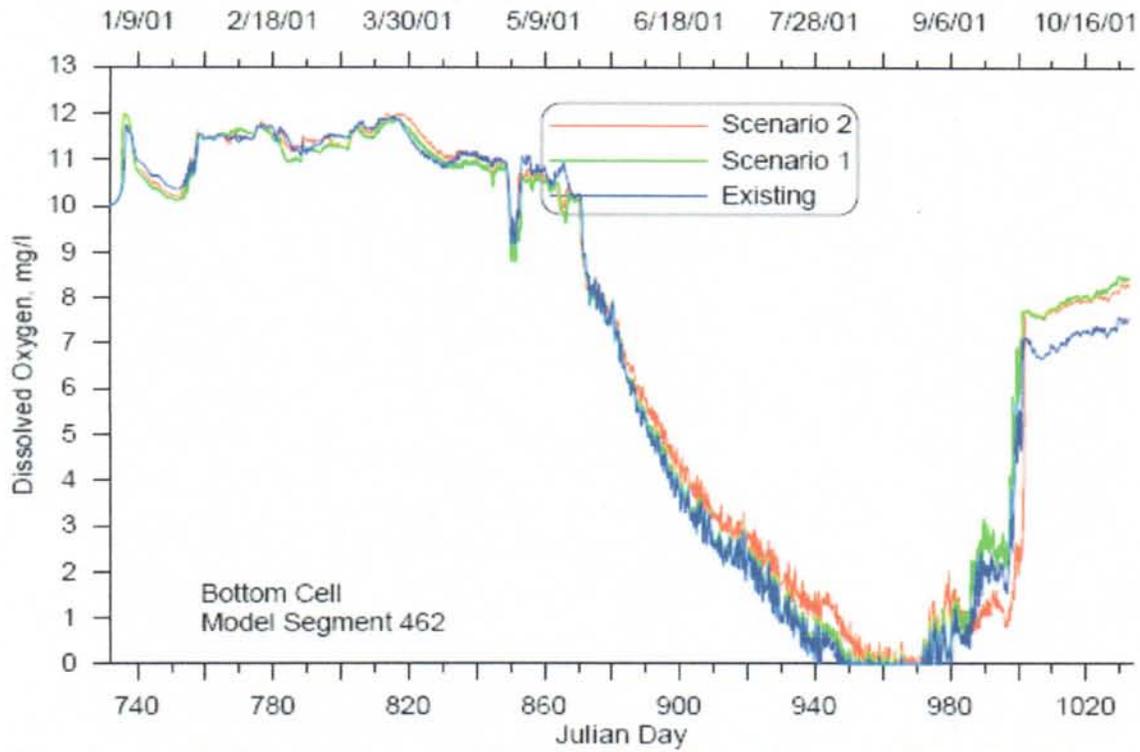


Figure 56. Scenario dissolved oxygen predictions for bottom layer of segment 462 (station SA3).

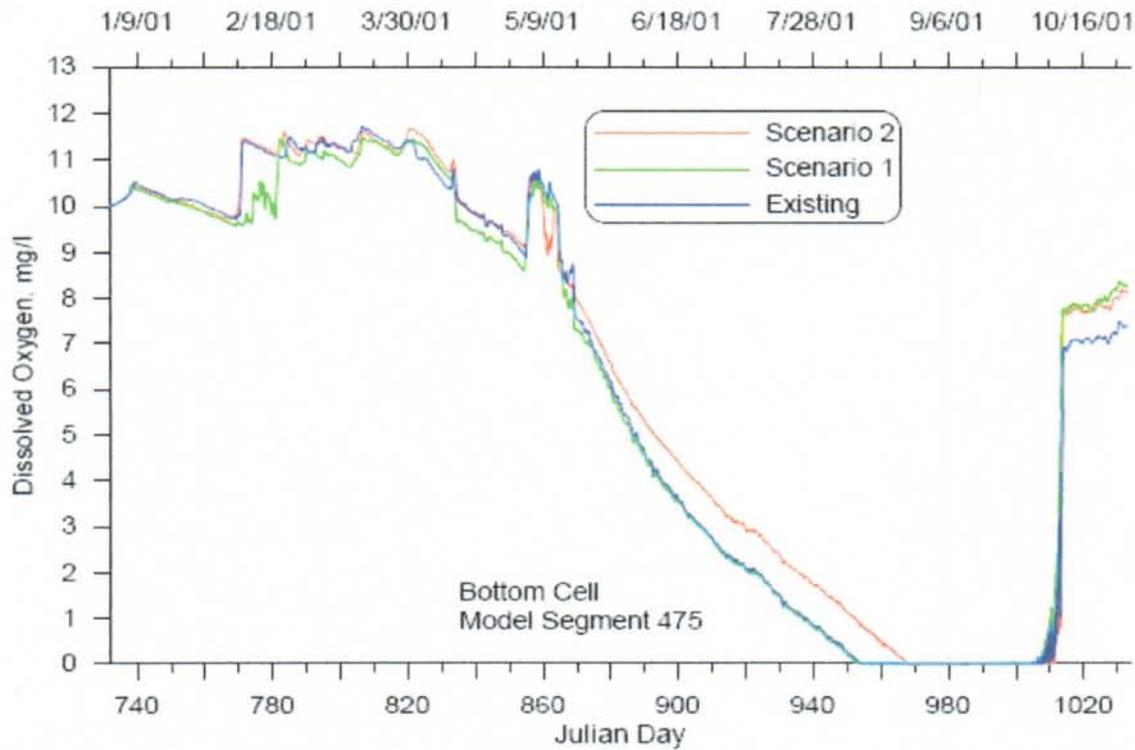


Figure 58. Scenario dissolved oxygen predictions for bottom layer of segment 475 (site 4).

These preliminary results indicate that the WLAs and LAs upstream from the Tribal waters will not be adequate to meet the Tribe's water quality standards. As the Tribal representatives suggested on numerous occasions, Ecology should utilize the lower arm model and the upstream model to develop WLAs and LAs in this TMDL. Such use of the modeling could allow for more assurance that the Tribal standards will be met. In addition, the modeling suggests that any NPDES permits issued under this DO TMDL will fail to meet the requirements of 40 C.F.R. § 122.4(d) & (i).

**Suggested Change:** Ecology's modeling efforts should be adjusted so that the WLAs and LAs in this TMDL meet the downstream water quality standards of the Tribe.

## **6. Offset use for existing dischargers**

The DO TMDL contemplates the use of offsets by the existing dischargers to meet their WLAs. (DO TMDL P.40-41, 47-48). However, the offset regulations clearly state that offsets are designed, "for the purpose of creating sufficient assimilative capacity to allow **new or expanded discharges**..." WAC 173-201A-450(1) (Ex. 5). Ecology in this DO TMDL describes the use of offsets by existing dischargers that are reducing their discharges, not increasing them. The Regulations do not appear to give Ecology the authority to take such measures when working with existing dischargers.

**Suggested Change:** Ecology should explain its legal authority to allow for the use of offsets by existing dischargers in this DO TMDL.

### **The following are the Tribe's comments and suggestions that correspond to specific pages.**

**Page 1:** "A TMDL is a numerical value representing the highest pollutant load a surface water body can receive and still meet water quality standards. Any amount of pollution over the TMDL level needs to be **reduced or** eliminated to achieve the water quality standard." In the second sentence, "reduced or" should be deleted.

**Page 7-8:** DO concentrations may not decrease "more than .2 mg/L below estimated natural conditions." Then again, on Page 8 Table 2 "No measurable (0.2mg/L decrease from natural conditions." However, nowhere in this DO TMDL is the estimated natural condition clearly stated. On **Page 16**, the Draft TMDL states, "The dissolved oxygen water quality standard for Lake Spokane is the No Source scenario minus 0.2mg/l." Then on **Pages 22-23**, Ecology provides a chart that hints at what the standard will be at the various depths. However, nowhere is the numeric goal and sampling location clearly stated. Ecology should insert into either Table 2 the numeric value of the estimated natural condition and where that numeric value applies, or create a new Table that explicitly states, the DO standard for Lake Spokane is X at this location. This would allow all parties involved to know the numeric goal for Lake Spokane. In addition, it will allow interested parties to determine if actions are successful.

**Page 13:** Ecology should change a portion of the first sentence from "and contribute to degradation of downstream water quality on the Spokane Tribe of Indian's Reservation" to

“cause and contribute to the violation of the Spokane Tribe’s Water Quality Standards for the Spokane River.”

As Ecology is aware, very little, if any, of the nutrient loading resulting in the violation of Tribal Water Quality Standards comes from sources between the tail race of Long Lake Dam and the Reservations Boundary or from within the Reservation.

**Page 14:** Ecology should change “Spokane Tribe of Indians collaborated” to “the Spokane Tribe was kept informed and consulted with throughout the process, but it did not have decision-making power within Ecology’s development of the TMDL.”

**Page 16:** Ecology states the following, “Nonpoint source pollution in groundwater is defined in this TMDL as concentrations of phosphorous in groundwater above 6µg/L, which was the lowest measured value in valley aquifer wells.” Upon review of the groundwater data, there are 849 samples with phosphorous data less than 6µg/L. Accordingly, Ecology’s use of the 6µg/L over-estimates phosphorous loads under natural conditions. Ecology should explain its use of 6µg/L in groundwater when the data shows concentrations much lower in the samples.

**Page 18:** Footnote 6 describes the percentage reduction in tributary nutrient loads. Ecology should clearly explain how the reductions were reached and their scientific support.

**Page 21:** “Lower phosphorous levels benefit dissolved oxygen in Lake Spokane and Tribal waters downstream.” As Comment #5 discusses above, the reductions in this proposed TMDL minimally improve the Tribe’s water quality, and this sentence should be altered to indicate that the Tribal water quality standards would not be met by the proposed reductions.

**Page 24:** “In other words, Long Lake Dam causes Lake Spokane to violate water quality standard for dissolved oxygen by making the lake more sensitive to pollutants than the River.” This sentence is confusing and the presumed premise should be more closely analyzed. The Tribe observes in Lake Roosevelt much better DO conditions throughout the Lake, which is created by a dam. This DO condition is a result of very little anthropogenic phosphorus loading upstream from Tribal waters.

In addition, on **Page 24** the Draft states: “The TMDL *contemplates* reducing this load by an average of approximately 66 percent during the March to October within ten years.” This should be changed to *requires*.

**Page 27:** Wasteload allocations are only set for March-October. On **Page 36** the TMDL states: “Calculated dissolved oxygen values for the reservoir show dissolved oxygen impairments from June 17 through December 31.” It is fair to say that it is not well understood how winter discharges of TP, CBOD, and Ammonia affect the critical periods dissolved oxygen levels. Furthermore, the Tribe is very concerned about how winter discharges of TP, CBOD, and Ammonia affect oxygen levels in Tribal waters during the months dissolved oxygen is at its lowest. Given this uncertainty, Ecology should set stringent year-round LAs and WLAs in this TMDL.

**Page 31:** Table 5 should be explained in more detail. It appears that Groundwater allocation is significantly increased. Table 5 sets load allocation for groundwater at 103lbs/day during the months of March-May, June is set to 59lbs/day, and July-October 47lbs/day. However, on **Page M-3** a chart describing groundwater flows per month states that March is 53.8lbs per day, April is 51.6 lbs/day, and May is 202.5lbs/day. Under the proposed allocations, TP pollution would be increased for the months of March and April, and decreased only in May. What is the scientific reason for this? The same type of increase is set out for Aug-Oct. Again, within the TMDL there is no explanation for such monthly increases.

**Page 45:** Ecology states: “reductions in ammonia may be used to offset equivalent loads of phosphorous as a target pursuit action.” Ecology should explain the reasoning behind this statement.

**Page 47:** In the first full paragraph, “downstream of Lake Spokane by the Spokane Tribe of Indians” should be changed to “by EPA.”

**Page 52:** Data surrounding the phosphorous levels in the groundwater is not fully understood and has been exaggerated by Ecology’s use of older data and the use 6µg/L within the modeling as “natural.” No entity on the River should be given offset credit until the Septic Tank Elimination program is proven scientifically defensible.

**Page 56:** Ecology states: “The TMDL considers that Dischargers will meet the wasteload allocations in Table 4 within ten years (2019).” Ecology should change “considers” to “requires.”

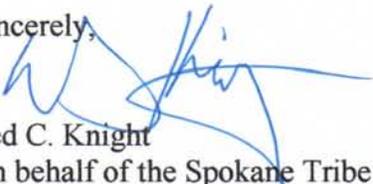
**Page 57:** “In addition, the Spokane County’s new wastewater treatment plant is currently under construction and will be in operation after this TMDL is approved.” This sentence is under the section: “What is the schedule for achieving water quality standards?” This sentence should be removed from this section. Construction of the new plant will increase pollution discharges in the River, and should not be listed as a scheduled action item for achieving the opposite goal.

**Page 56-58:** Ecology discusses schedules in this section, but there is no fixed schedule as required by *Pinto Creek* for the non-point source reductions “sufficient to achieve water quality standards”. See 504 F.3d at 1014. Ecology should develop schedules for the non-point source reductions.

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In conclusion, because of upstream pollution the Tribe’s water quality is degraded and portions of the Tribe’s waters are left uninhabitable for aquatic life. The Tribe is hopeful that Ecology will make the necessary changes to this DO TMDL to make it a legally and scientifically defensible document.

Sincerely,

  
Ted C. Knight  
On behalf of the Spokane Tribe of Indians

**cc:** Polly Zehm, Interim Director, Department of Ecology  
Laurie Mann, EPA, Washington TMDL Program Manager

Exhibit 1



**Exhibit 2**

The Office of the President of the United States

(Executive Order)

WASHINGTON

SPOKANE RESERVE

September 3, 1880

(Colville Agency; area, 240 square miles.)

(Special Field Orders No. 3.)

Whereas in consequence of a promise made in August, 1877, by E. C. Watkins, inspector of the Interior Department, to set apart, or have set apart, for the use of the Spokane Indians the following-described territory, to wit: Commencing at the mouth of Cham-a-kane Creek, thence north 8 miles in direction of said creek, thence due west to the Columbia River, thence along the Columbia and Spokane Rivers to the point of beginning - - the Indians are still expecting the Executive order in their case, and are much disturbed by the attempts of squatters to locate land within said limits: It is hereby directed that the above-described territory, being still unsurveyed, be protected against settlement by other than said Indians until the survey shall be made, or until further instructions. This order is based upon plain necessity to preserve the peace until the pledge of the Government shall be fulfilled, or other arrangements accomplished.

The commanding officers of Forts Coeur d'Alene and Colville and Camp Chelan are charged with the proper execution of this order.

By command of Brigadier-General Howard.

H. H. PIERCE, First Lieutenant, Twenty-first Infantry, Acting Aid-de-Camp.

EXECUTIVE MANSION, January 18, 1881.

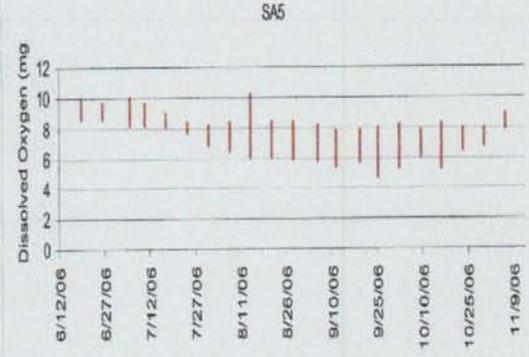
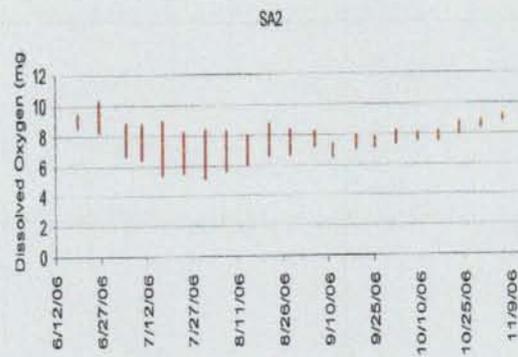
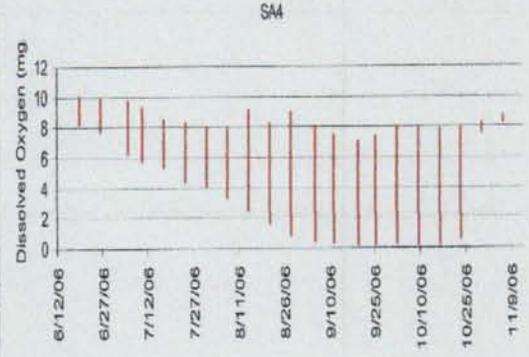
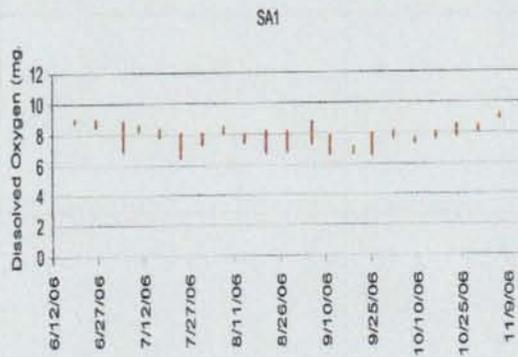
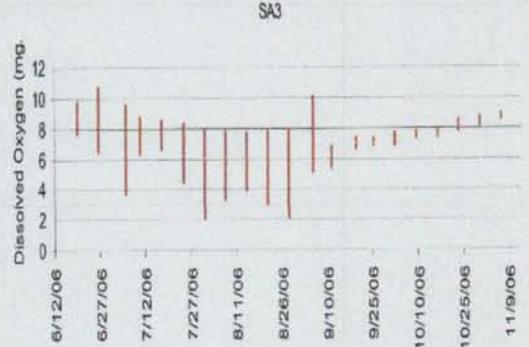
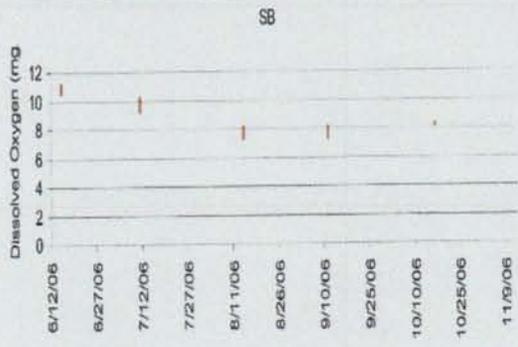
It is hereby ordered that the following tract of land, situated in Washington Territory, be, and the same is hereby, set aside and reserved for the use and occupancy of the Spokane Indians, namely: Commencing at a point where Chemakane Creek crosses the forty-eighth parallel of latitude; thence down the east bank of said creek to where it enters the Spokane River; thence across said Spokane River westwardly along the southern bank thereof to a point where it enters the Columbia River; thence across the Columbia River, northwardly along its western bank to a point where said river crosses the said forty-eighth parallel of latitude; thence east along said parallel to the place of beginning.

R. B. HAYES

1880 WL 32483 (Exec.Ord.)

**Exhibit 3**

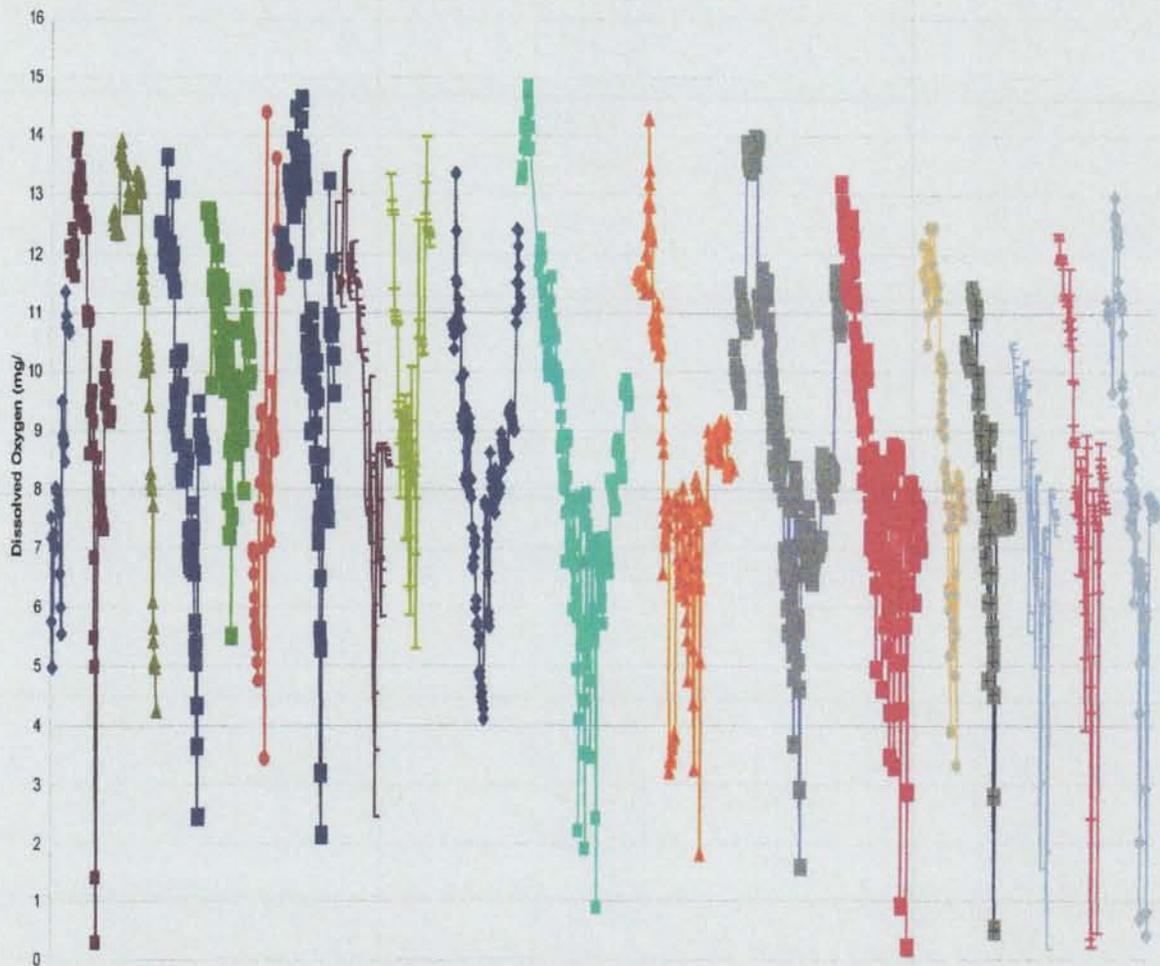
**Dissolved Oxygen ranges from profile data collected in the Spokane River and Seven Bays 2006.**



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**Exhibit 4**

**Dissolved Oxygen ranges from profiles collected from 1988 to 2006 at Porcupine Bay.**



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## Exhibit 5

### WAC 173-201A-450

### Water quality offsets.

(1) A water quality offset occurs where a project proponent implements or finances the implementation of controls for point or nonpoint sources to reduce the levels of pollution for the purpose of creating sufficient assimilative capacity **to allow new or expanded discharges**. The purpose of water quality offsets is to sufficiently reduce the pollution levels of a water body so that a proponent's actions do not cause or contribute to a violation of the requirements of this chapter and so that they result in a net environmental benefit. Water quality offsets may be used to assist an entity in meeting load allocations targeted under a pollution reduction analysis (such as a total maximum daily load) as established by the department. Water quality offsets may be used to reduce the water quality effect of a discharge to levels that are unmeasurable and in compliance with the water quality antidegradation Tier II analysis (WAC 173-201A-320).

(2) Water quality offsets may be allowed by the department when all of the following conditions are met:

(a) Water quality offsets must target specific water quality parameters.

**(b) The improvements in water quality associated with creating water quality offsets for any proposed new or expanded actions must be demonstrated to have occurred in advance of the proposed action.**

(c) The technical basis and methodology for the water quality offsets is documented through a technical analysis of pollutant loading, and that analysis is made available for review by the department. The methodology must incorporate the uncertainties associated with any proposed point or nonpoint source controls as well as variability in effluent quality for sources, and must demonstrate that an appropriate margin of safety is included. The approach must clearly account for the attenuation of the benefits of pollution controls as the water moves to the location where the offset is needed.

(d) Point or nonpoint source pollution controls must be secured using binding legal instruments between any involved parties for the life of the project that is being offset. The proponent remains solely responsible for ensuring the success of offsetting activities for both compliance and enforcement purposes.

(e) Only the proportion of the pollution controls which occurs beyond existing requirements for those sources can be included in the offset allowance.

(f) Water quality offsets must meet antidegradation requirements in WAC 173-201A-300 through 173-201A-330 and federal antibacksliding requirements in CFR 122.44(l).

[Statutory Authority: Chapters 90.48 and 90.54 RCW. 03-14-129 (Order 02-14), § 173-201A-450, filed 7/1/03, effective 8/1/03.]

## Exhibit 6

# Water Warning: The Spokane River is Gradually Disappearing

August 27th, 2009

Inlander, William Stimson

Spokane has been measuring the flow of water under the Monroe Street Bridge for over 100 years, and for over 100 years the level of that flow has been falling.

In 1900, even a dry summer still saw a presentable plunge of about 1,500 cubic feet per second going past the old wooden bridge. Today a dry summer produces only a third of that — the relative trickle we see in August.

The gradual drying of the river is, surprisingly, a relatively recent discovery. People knew, of course, that the river canyon looked parched in the summer months. But particularly dry years were always traceable to some immediate explanation: less snowfall, hotter weather, new pumpers and the like. And then there were occasionally wet summers to blur the picture.

Measurements kept since 1891 of the "7-Day Low Flow" of the river — the stretch of seven days each summer when the least water is coming down — gives a very reliable picture of what's going on with the river. When John Covert and other hydrologists with the Washington Department of Ecology stepped back and saw all the measurements of a century as one chart, an unsettling pattern was clear. The lines bounced up and down each decade, all right, but overall they sloped relentlessly downward.

What's happening to the water? Over the last century, it's been trimmed away for various human uses.

The wild mountain river that pioneers found disappeared with the construction of the Post Falls Dam in 1906. No one thought anything of it at the time because the dam still allowed plenty of water to flow down river.

Then in 1941, the emergency of World War II required raising the level of Lake Coeur d'Alene to facilitate the floating of logs needed for the war effort. It turned out that raising the lake level just 1.5

feet kept a great deal of water out of the Spokane River basin. The change was supposed to be temporary, but people built docks at the new level and consequently lobbied to keep the lake where it was. There's no chance of reversing it now.

In the meantime, agriculture grew up in the Spokane Valley and began pumping the aquifer, one of the sources of river water.

Then came the insatiable lawns of urban sprawl. The average amount of water each person in Spokane uses increases five-fold in the summer because of soaking and over-soaking lawns. Because water is cheap here, Spokane uses more water per capita than almost any city in the country. Spokane people even water at mid-day, when much of the water poured on grass goes straight up in evaporation.

While this water comes from the aquifer, which eventually recharges itself, the river is indirectly affected because some of its flow comes from the aquifer.

For the average Spokaneite, Covert concedes, the lowering of the river is — for the moment — mostly an aesthetic problem: We don't get to see the plunging water in the summer.

But as he points out, it's more serious for other species that rely on the river water. A shallower river is warmer, and warmer water stresses the plant life and insects at the bottom of the food chain. That stress works its way up from insects to fish and hawks and all other life dependent upon open water. For land animals, it's harder to find the tiny ponds and ribbon streams that are their water supply in the summer.

Spokane is exceptional in that it is better off than most places in the world. Seven southwest states (including California, where most of the nation's fruit is grown) are facing absolute water shortages. Towns as close as Pullman and Walla Walla are lowering their aquifers, a situation that cannot continue for long.

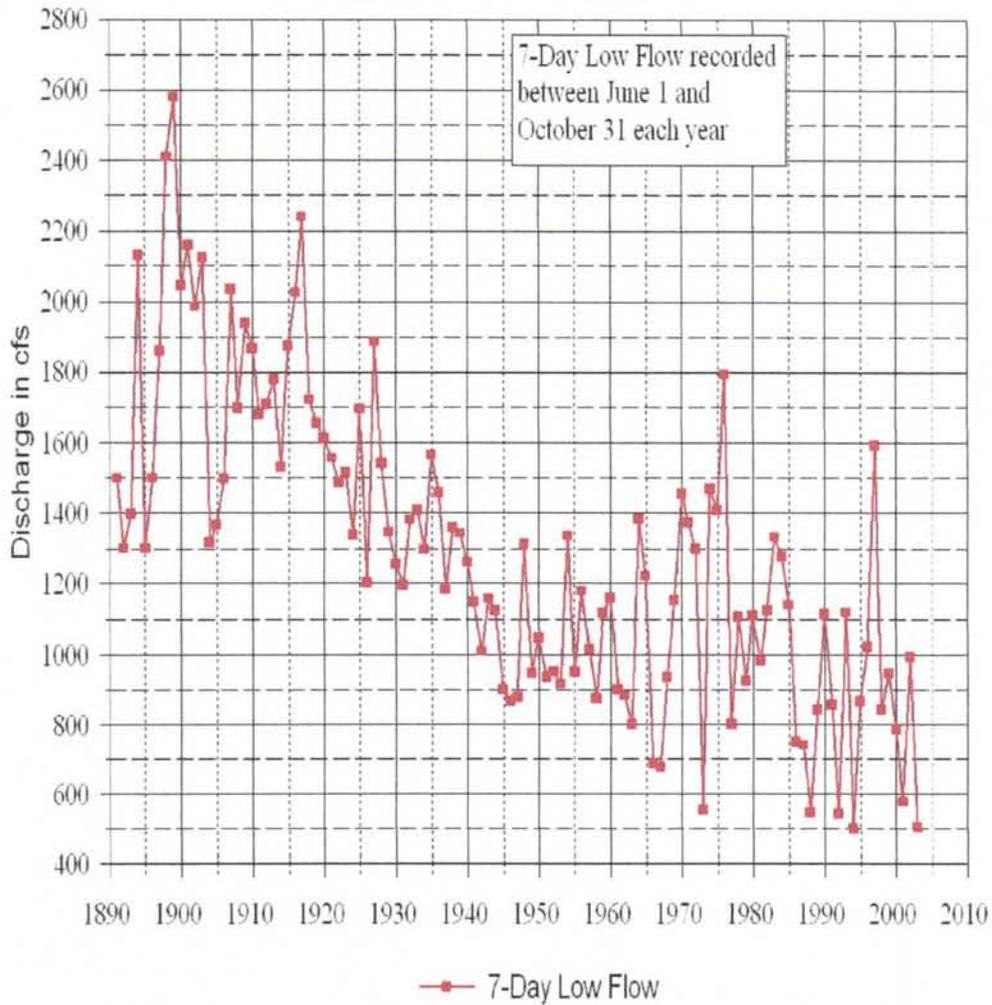
When Covert and other water specialists (such as Geoff Glenn, a pollution analyst for the city of Spokane) talk about the charts and trends, you can detect a tone of urgency and even dread. If Spokane, a city with a relatively small population, surrounded by snow packs, rivers and streams, and underlain by a gigantic aquifer, notices diminishing water, it does not bode well for the future. Says Covert: "It's the canary in the mine shaft."

William Stimson is director of the Journalism Program at Eastern Washington University.

Available at <http://www.spokaneriver.net/?p=2088> (Last visited October 23, 2009).

**Exhibit 7**

### Spokane R at Spokane Summer/Fall Low Flow



**Exhibit 8: Growth of Groundwater Withdrawals**

