Inland Northwest Water Resources
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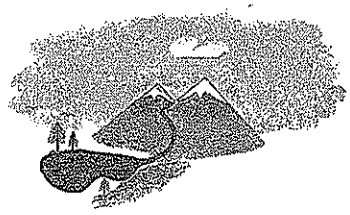

November 13, 2007

Dear Mr. Knight:

This letter represents my comments as a water resources professional interested in the Spokane River. As such the following comments represent my personal opinion and should not be construed in any way to reflect the views of Spokane County or any other individual or agency for whom I have provided professional services in the past.

In general I believe the staged approach represented in the Draft Water Quality Improvement Report dated September 2007 is a feasible and economically viable approach to improving River quality that is implementable by the responsible agencies. Its biggest shortfall is the reliance on "targets" to achieve the needed loading reductions over time. Ecology must continue to work collaboratively with the implementing agencies to insure that all are moving toward the agreed upon targets. You are well aware of the hard work involved in the two years of collaboration required to get to the point where we are today. I believe that same level of effort will be required for at least the first ten years of the program. I visualize this as including both frequent face to face meetings between Ecology and each of the several implementing agencies and businesses and periodic public meeting that will allow Ecology to describe to the public how progress is being made toward the targets.

A major responsibility of Ecology will be to insure that the appropriate data is collected during the initial ten-year phase to conduct the "thorough assessment" called for in the Improvement Report and Foundational Concepts. Fundamental to this is the continuation of the expanded testing of the Spokane River through Ecology's Ambient Monitoring Program. We need to move quickly, before March of 2008, to outline a long-term strategy for continued funding of this effort.

Ecology will need to reaffirm the need for QAPP's for all data collected by other agencies for use in any updates of the CE QUAL W2 model. This will assure suitability of the data for developing regional water quality goals and assessing progress toward them.

Data collection needs extend beyond just Spokane River quality. Table 3 on page 13 of the Improvement Report includes several values presumably used in the initial model calibration that I view as suspect. First is the May flow value of 1959 cfs. I presume this is the total ground water recharge to the river in the described reach. Based on my understanding of the interchange between the rive and the aquifer there are three primary gaining reaches, Barker Road to Plantes Ferry, Upriver Dam to Greene Street and from Monroe Street to the head of the 9-Mile pool. In May of 2001 the total difference between Barker Road and Monroe Street was about 790 cfs. I do not have data for the loss between Plantes Ferry and Upriver for 2001, but typically the loss in this reach is in the 100 – 300 cfs range. At 300 cfs loss this produces a net gain of groundwater to the river of about 1100 cfs in the Barker – Plantes Ferry and Upriver – Greene Street reaches. Several measurements done for the Bi-state Aquifer Study and WRIA 54 ISF work yield

increases in flow of between 250 cfs and 350 cfs below Monroe. Data my disposal suggests that the total groundwater gain by the river is around 1450 cfs, over 500 cfs less than indicated in the table. As the aquifer discharge to the river will be a vital component in assessing the effect of septic tank elimination on river quality, any model recalibration must include a thorough analysis of the river aquifer interaction. Second, the groundwater phosphorus concentration of 0.001 mg/L for October is inconsistent with both the bulk of the available groundwater phosphorus data and common sense. Common sense denies that 90% of the phosphorus could disappear form the aquifer in one month. Were the value several times higher than the average river concentration on could make the argument for dilution of near stream groundwater by river water and this is the source of return flow. However, as it originates from Lake Coeur d'Alene, before any point source additions, the river has at least six times this concentration of phosphorus. Though admittedly there are inconsistencies in phosphorus numbers in Spokane County's aquifer quality data base, there are several years worth of fairly consistent data. At no time does the data show shifts like those assumed to occur between September and October in Table 3. Further, the County's data suggests that, especially in areas impacted by septic tanks the groundwater phosphorus is about double the concentration assumed in Table 3.

In addition to the expanded Ambient River Quality monitoring, both river – aquifer interaction and groundwater phosphorus need to be better quantified before any model recalibration is attempted. The current work to improve the Bi-sate Aquifer model is likely the most fruitful area of effort for obtaining better interaction flow data. Likewise, working with the County to improve the QA/QC on the phosphorus data being collected in their program is the best approach to improving that data. This could be accomplished either as part of the Bi-state non-point study or by direct assistance, both technical and financial to the county.

Finally, I would like to point out that I, along with several other professionals wonder if controls on discharges of point and non-point loading of phosphorus and oxygen demanding substances will result in significant improvement in water quality in Lake Spokane. We need to keep this in mind as we move ahead with our load reduction efforts. The adaptive management framework of the proposed TMDL gives us the flexibility to initiate new actions in areas of water quality improvement unforeseen today. We need to move in new directions as soon as a probable area of water quality improvement opens up.

In closing I would like to thank you for the opportunity to comment on this work and would be glad to assist you in any way I can to make this effort a success.

Sincerely,

Stan Miller