HAYDEN AREA REGIONIAL SEWER BOARD

Protecting the Aquifer Since '88

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May 7, 2010

Mr. Brian Nickel
US EPA, Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

RE: HARSB'S ANTICIPATED NPDES COMPLIANCE SCHEDULE

Dear Mr. Nickel:

Hayden Area Regional Sewer Board (HARSB) appreciates this opportunity to provide input regarding the compliance schedule that will be associated with EPA's reissuance of our 1999 National Pollutant Discharge Elimination System (NPDES) permit.

When our 2007 draft permit was withdrawn in September, 2008 in order to allow the Washington Department of Ecology (WDOE) to revise its Spokane River/Lake Spokane Dissolved Oxygen Total Maximum Daily Load (TMDL), it created significant uncertainty for HARSB. Based on our available funding, we had already proceeded with a biological capacity upgrade in anticipation of the 10-year needs of the Cities of Hayden, Hayden Lake, Kootenai County Airport and the Hayden Lake Recreational Water and Sewer District. The upgrade included an additional oxidation ditch and secondary clarifier. Initial planning was also done for future Biological Nutrient Reduction (BNR) of nitrogen and phosphorus. The upgrades cost HARSB well over $3 million through completion in late 2008, Additional HARSB treatment improvements need to be funded and constructed to meet the assumed NPDES Permit limits.

While HARSB's Reuse Farm currently irrigates 100% of our effluent water June-September when the River flow falls below 2,000 cubic feet per second (cfs), we are approaching the capacity of the existing reuse farm system. We also reclaim aerobic biosolids through contracted Class A composting, but our solids dewatering processing cannot meet the expanded plant capacity. Our outfall transmission pipe is under design for near-term expansion and would likely completely drain HARSB's cash reserves. We are preparing to complete our Master Plan, but we need clearly defined and achievable permit conditions in order to stay in compliance in the future.

As you know, there is some uncertainty about the final requirements associated with the Spokane River TMDL. The information in this letter is based on the assumptions that the HARSB NPDES permit will have technologically achievable discharge

limitations for phosphorus equivalent to 50 µg/L on a seasonal average, will receive the full waste load allocated to HARSB in the TMDL, and that trading and/or offsets will not be required. We also assume that the NPDES permit will include ammonia or CBOD limits that will not require HARSB to install substantial treatment technology in addition to what will be needed for phosphorus. If these assumptions do not hold true, HARSB's compliance schedule needs may change.

HARSB has stayed closely involved in the TMDL process hoping to obtain waste load allocations (WLAs) and resulting NPDES permits issued by EPA that can be realistically achieved. The **attached compliance schedule** table shows how HARSB intends to work within its regulatory, financial, construction, and operational constraints to achieve compliance within nine years of final permit issuance. This is a significant commitment given the dramatic changes that the 2010 TMDL outlines compared to the 2007 draft permits. While we have substantive disagreements with the final load allocations proposed in the TMDL and some of the specific methodologies utilized to derive anticipated future permit limits necessary to support the TMDL, we recognize and fully support tertiary treatment with aggressive but achievable reductions in oxygen demanding substances for the benefit of the Spokane River system.

Critics have suggested that permit holders along the Spokane River should have continued with all elements of the 2007 draft permit conditions, even after they were withdrawn. That would have proven to be inappropriate for HARSB. For example, Hayden was a primary proponent for the Rathdrum Prairie Wastewater Master Plan, (RPWMP) which was completed in late 2008. The 2007 draft permits were the best available regulatory basis for planning HARSB's service area build-out between the cities of Hayden, Rathdrum, and Post Falls. When WDOE issued the final TMDL in February, 2010, it dramatically devalued our reuse program and the expansion envisioned by the RPWMP under the 2007 permit. The stringent 2010 WLAs now extend four months longer than in 2007, three months beyond our region's growing season, and seasonal averaging is not included in the TMDL. Combining these restrictions with the non-degradation standard applied over the Rathdrum Prairie Special Resource Aquifer in Idaho (no irrigation beyond the growing season), HARSB is forced into more reliance on river discharge and use of end-of-pipe technology to meet effluent limits while servicing the needs of our member agencies. Reuse will only provide a modest advantage for diverting a small portion of our oxygen-demanding constituents during summer months so they do not count against us for the entire permit seasonal averaging period. HARSB reuse will now be even less affordable and practical because of the additional land and storage requirements, while actually providing less capacity benefit. This is partly why HARSB is concerned that the TMDL requirements amount to a de facto growth limit. Again, we need clearly defined and achievable permit conditions in order to stay in compliance and provide for our community's future.

We continue to work with the Idaho Department of Environmental Quality (IDEQ) to find the most appropriate ways to provide wastewater treatment, reuse and to

protect our aquifer. However, it is NOT realistic to count on irrigation or industrial reuse to be the primary recipient of our reclaimed water from March 1st through October 31st every year. We continue to work with WDOE, EPA, the Spokane Tribe, and other permit holders to more accurately determine the bio-availability of various forms of phosphorus in the Spokane River system. The initial phase of that study should be complete in late 2010 and will help regulators and decision-makers more accurately define the constituents that adversely affect the Spokane River system.

Those familiar with municipal (public) systems recognize that each entity has its own unique situations and local constraints to meet compliance. Those challenges include financing through public-approved bond elections, local regulatory approval, design and construction procurement and maintaining full-time, on-going operations. HARSB is committed to protecting the water quality in the Spokane River; however, enforcing the most stringent phosphorus limits in the nation, in one permit cycle, would place an impossible requirement on HARSB. Therefore, the **attached schedule** outlines achievable steps, through two permit cycles, with the important activities described below.

Year 1: During the first year, HARSB would prepare the sampling Quality Assurance Project Plan (QAPP) and begin the sampling required for the new surface water and effluent water monitoring. Additionally, we would finalize our Facility Plan to address expected growth rates, changes in permit conditions, design parameters, and compliance conditions for the next 10-20 years. The sewer rate and fee increases must be approved prior to design and construction contracts are signed. HARSB will also update the financial analysis to support rate increases and/or a bond election needed to fund projected improvements. Simultaneously, the design of overall plant BNR treatment process has been prioritized by our Board to further reduce oxygen demanding substances in our effluent water. In addition, this schedule requires examination of interim full-scale chemical addition in the first year for inclusion with the BNR construction project. Of course, HARSB anticipates continuing 100% reuse June-September during the compliance period. Therefore, we will expand the transmission, storage, irrigation, crop production, and monitoring, of the Reuse Farm, as required. HARSB also intends to work with its member entities to begin monitoring industrial users discharging into their sewer system to better understand and control potential contaminants of concern. Similar to the 2007 NPDES permit conditions, HARSB will submit an annual progress report to EPA and IDEQ to indicate specific elements completed, elements planned for the upcoming year and satisfactory compliance with this schedule.

Year 2: Once the Facility Plan is accepted by IDEQ and EPA, HARSB will conduct public hearings for rate and fee increases to fund the BNR, solids handling and reuse expansion work, as well as re-apply for State Revolving Fund loans. Simultaneously, design would wrap up and bidding would proceed so that BNR construction could begin in Year 2. The rate and fee increases must be approved in order to award a

BNR construction contract. At the same time, HARSB would complete design on interim and full scale chemical feed to enhance phosphorus removal.

Year 3: The third year of the compliance schedule would see the construction of the BNR treatment system, facility upgrades and expanded reuse facilities, as well as the interim, full-scale chemical feed.

Year 4: Year 4 would see start-up, testing, optimization and full-scale operation of the HARSB BNR, solids handling and expanded reuse facilities, as well as the interim chemical feed facilities. Interim chemical addition would provide an opportunity to measure the impact of added Phosphorus precipitation on the solids processes within the entire facility. It will also add data to the on-going Phosphorus Bioavailability Study performed by the University of Washington and sponsored by the Spokane River Stewardship Partners and WDOE.

The HARSB tertiary treatment approaches for the most promising Phosphorus removal technologies to meet the final permit limits would need to be pilot tested on the new BNR effluent. Pilot testing systems' financing, design, procurement, and pilot plant performance plan would be prepared and submitted concurrently with the optimization of the BNR facilities. Phosphorus removal would likely utilize various combinations of chemical addition, mixing, flocculation, settling and filtration. Again, HASRSB would evaluate the need for interim fee and/or rate adjustments to support the pilot plant design, construction and operation. While the pilot work will have similarities to the current efforts underway in Spokane and Coeur d'Alene, HARSB's biological phosphorus removal and oxidation ditch technology must be pilot tested for a year to evaluate compliance with the very low projected effluent limits. Since treatment processes can dramatically change with the character of water that will feed the pilot units and full scale facility, the tertiary treatment system planning, design and construction will follow HARSB's pilot work results.

Year 5: Construction of the pilot-scale installation would occur throughout the fifth year. The application for the next NPDES permit must be submitted no later than half way through Year 5. Earlier timeline elements must be approved and completed to move forward with the facility upgrades. BNR operation, interim chemical addition and summertime reuse would continue with gathering of Phosphorus bioavailability and biosolids production data, as necessary, until the tertiary treatment plant design, construction and startup are completed.

Year 6: Year 6 would see the start-up, optimization, data gathering and analyses for the various combinations of HARSB pilot-scale tertiary treatment systems (chemical types, mixing, enhanced settling, and filtration). The data would be compiled and submitted in report form for approval by IDEQ and EPA. The report would include information on impacts to biosolids processing and disposal, as well as the bioavailability of various phosphorus species, effectiveness in meeting WLAs, costs

of the treatment options and effects of chemical addition on the potential ultraviolet light or ozone disinfection systems.

Year 7: Once the treatment approach, based on the information gathered and submitted in Year 6, provides a tertiary treatment plan, HARSB can update their Facility Plan with any changes in technology, performance or costs that have been determined during the first six years of effort. The sewer rate and fee increases must be approved prior to design and construction contracts are signed. The HARSB entities would conduct public outreach to gain ratepayer support for bond funding approval through an election or Judicial Confirmation that must occur in Year 7. The design of the tertiary improvements would begin in order to be ready for bidding and construction as early as possible in Year 8.

Year 8: In the eighth year, we would bid, award and construct the tertiary treatment plant improvements, assuming that the bond funding efforts were successful in Year 7. If bond funding is not approved in Year 7, HARSB would be forced to attempt another public outreach effort and/or seek an emergency declaration and judicial ruling on the "ordinary and necessary" nature of the proposed expenditures. BNR, interim chemical addition, and summer reuse would continue with gathering of bioavailability and biosolids production data, as necessary.

Year 9: The ninth year of the permit cycle would see construction completion and start-up of the HARSB tertiary treatment plant improvements necessary to meet the WLAs. All additional work to optimize the processes must occur with full-scale demonstration of process performance by late in Year 9 to meet the final permit WLAs. It is clear that Year 9 has little to no schedule flexibility to account for unforeseen obstacles from earlier activities such as securing adequate and timely financing. Too many previous activities rely on sequentially completing multiple tasks to expect complete permit compliance in Year 9. HARSB's ability to divert some of their flow to their existing Reuse Farm will be critical to assure compliance in Year 10. Year 9 would see termination of interim chemical addition in lieu of operating full tertiary treatment with more moderate chemical inputs. Filter rates, cleaning cycles, side-stream impacts, biosolids production, and Phosphorus bioavailability data would be evaluated and submitted to EPA and IDEQ for validation of the process suitability at the end of Year 9.

Year 10: This would be the first full year of compliance under the NPDES Compliance Schedule. It would also be the year that HARSB reapplies for its NPDES permit and actively participates with WDOE and the Spokane River Stewardship Partners to reevaluate the TMDL and water quality improvements in the Spokane River and Lake Spokane. Additionally, HARSB will have to work with its member entities to re-evaluate their growth projections and determine the steps necessary to provide reliable capacity for their citizens. Reuse projects protecting the Special Resource Aquifer may be more readily accepted and documented. Bioavailability of

Phosphorus after these aggressive tertiary treatment efforts may prove to be a small fraction of the total Phosphorus and more protective of the receiving water than previously understood.

Based on this detailed schedule, HARSB would support the following compliance schedules, interim limits and milestones in the NPDES permit:

A 10-year schedule of compliance for phosphorus
Interim requirements for schedule of compliance:

By one (1) year after the effective date of the pending new permit (New Permit) replacing the current 1999 NPDES permit, the permittee would provide a Facilities Plan to EPA and IDEQ outlining the studies and schedule required to achieve New Permit effluent limitations. This schedule would include a timeline for BNR system (design, construction, and optimization), full scale BNR pilot testing (design, construction and operational data) and tertiary system (design, construction and optimization).

By four (4) years after the effective date of the New Permit, the permittee would provide written notice of the construction, start-up and operation of the BNR treatment system, facility upgrades and expanded reuse facilities.

By six (6) years after the effective date of the New Permit, the permittee would provide written notice that pilot studies of phosphorus removal technologies have been completed, and submit to EPA and IDEQ a report of the pilot results.

By eight (8) years after the effective date of the final permit, the permittee would provide written notice to EPA and IDEQ that tertiary treatment system design has been completed and bids have been awarded to build the facilities necessary to comply with the final effluent limitations. Provided, however, that this requirement and the requirement in paragraphs e. and f. shall be extended by (1) one year if the permittee has exercised best efforts, but has been unable to obtain financing within seven (7) years.

By ten (10) years after the effective date of the New Permit, the permittee would provide written notice to EPA and IDEQ that tertiary treatment system construction, startup evaluation and optimization of phosphorus has been completed on the facilities necessary to comply with the final effluent limits for phosphorus.

By third, fifth and tenth years after the effective date of the New Permit, the permittee would submit to EPA and IDEQ reports of progress, which outline the progress toward achieving compliance with the total phosphorus effluent limitations. At a minimum, the reports would include:

An assessment of the previous year's effluent data and comparison to the effluent limitations.

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A report on progress made towards meeting the effluent limitations.
A report on progress made toward completing remaining interim requirements of this compliance schedule.
Further actions and milestones targeted for the upcoming year.

HARSB recognizes the need to move forward to protect the Spokane River, Lake Spokane and our Rathdrum Prairie Aquifer and is prepared to take these steps. These efforts will not be easy, and they will be expensive. We must take the steps in a thoughtful and proactive manner that fully engages the public with their costs, benefits and full impacts on our community. We believe that we have laid out a compliance schedule that will accomplish these goals in a responsive and responsible manner. We look forward to your comments and working with EPA and IDEQ to achieve our mutual objectives for the public's benefit.

Sincerely,

Hayden Area Regional Sewer Board

Ken Windram, Manager

cc: John Tindal - IDEQ
HARSB Board

Enclosures;