Combined Responses to the Cusimano Report

Sarah Hubbard Gray, for SRSP; 7/23/2012

The SRSP discussed the 10-year assessment and your request for comments on the 2004 Cusimano Spokane River assessment report table of contents. I am providing you with the Spokane River Stewardship Partners (SRSP) over-arching comments and perspectives on the 10-year assessment and individual SRSP members will send you additional comments and suggestions for modifications to the Cusimano table of contents.

Here are some of the over-arching SRSP perspectives relating to the 10-year assessment, based on their discussions, that should be considered when planning for the 10-year assessment and developing the framework for the assessment report:

- Developing the Table of Contents now will help guide implementation measures over the next eight years. The Table of Contents should align with the 10-year assessment goals and objectives and be viewed as a preliminary draft that can be changed/updated over time.
- The 10-year assessment should answer questions regarding:
  - What new data was collected.
  - What are the results of a new model run using the new data (was the same model used or how was the model updated/calibrated).
  - What point source reductions have been achieved.
  - What nonpoint source reductions have been achieved.
  - What Avista WQAP measures were implemented.
  - How is the lake responding.
  - How are fish and habitat responding.
  - Where the TMDL benchmarks achieved.
  - What initiatives have been advanced (e.g., water reclamation, Saltese Flats reclamation, land use application).
  - Based on the TMDL flow chart, how have achievements aligned or deviated from what was originally envisioned (e.g., how was adaptive management applied).
- What information in the 2004 assessment report is not needed in the 10-year assessment report.

Lynn Schmidt, City of Spokane; 7/20/2012

Table of Contents

Introduction [These items can be abbreviated]

Spokane River DO TMDL [Summary of 2010 WQIP]
    Modeling Selection and Results
    Load and Wasteload Allocations
    Avista's DO Responsibility
    Managed Implementation Plan
DO TMDL Implementation Actions: Model Inputs
    Point Source Discharges
        [Implementation efforts for each discharger, results and data]
        Toolbox Elements
    Non-point Sources
        [Avista's work]
        Hangman Creek TMDL
        Little Spokane River TMDL

~~Total Phosphorus TMDL Evaluation~~
    ~~Comments on Total Phosphorus TMDL~~

CE-QUAL-W2 Model Selection, Calibration, and Uncertainty

    [Note any modeling differences between new and old model runs]

Application of Water Quality Criteria [Update]

Design Conditions
    Margin of Safety

Ben Brattebo, Spokane County Utilities; 7/9/2012

Note: Assumed 10 year assessment will take place in 2020

(1) General comments:
   a. Change focus of efforts from a "critical season" to year around
   b. Incorporate impacts of internal phosphorous cycling

(2) What are the goals of the 10 year review? I suggest:
   a. Determine compliance requirements (not just model year 2001) incorporating annual variability so that compliance can be measured with on-the-ground monitoring data
   b. Review of water quality trends, 1977 to 2019
   c. Determine appropriate model statistics, goodness-of-fit requirements, and procedures prior to implementing model changes
   d. Comparison of 2011 model outputs for multiple 2001 to 2019 model years versus measured water quality values
   e. Determine necessary model alterations
   f. Collect new and recollect previously used data
   g. Implement model updates in 2019
   h. Run the 2019 model over a number of model years

(3) Next steps timeline:
   a. 2013 – Continue ambient monitoring in Lake Spokane
      i. Consider monitoring zinc in Lake Spokane to improve long term understanding for possible toxicity impacts
   b. 2013 – Limited review of water quality trends, 2000 to 2012 – DO profiles and TP
   c. 2013 – Determine compliance requirements (not just model year 2001) incorporating annual variability so that compliance can be measured with on-the-ground monitoring data
   d. 2013 – Determine appropriate model statistics, goodness-of-fit requirements, and procedures prior to implementing model changes
   e. 2013 – Begin tracking nonpoint source reduction projects in the watershed
   f. 2014 – Determine data needs for model improvements and trend monitoring
   g. 2015 – Begin collecting data for model improvements and trend monitoring
      i.Include parallel recollection of previously used model data
   h. 2016 – Interim review
      i. Comprehensive review of water quality trends, 2000 to 2015
      ii. Estimate changes in nonpoint pollutant loads
      iii. Review possible impacts of zinc concentration changes on lake primary productivity
      iv. Select additional flow years for model application
   1. High, average, and additional (non-2001) low flow years
   2. Comparison of 2011 model outputs for multiple 2001 to 2015 model year inputs versus measured water quality data
      v. Determine necessary model alterations
   i. 2019 – Update model with new data inputs
   j. 2020 – 10 year review
      i. Comprehensive review of water quality trends, 1977 to 2019
      ii. Estimate changes in nonpoint pollutant loads
      iii. Review possible impacts of zinc concentration changes on lake primary productivity
      iv. Run with 2019 model update the high, average, and low flow scenario years
      v. Run with 2019 model update the 2019 model inputs
      vi. Comparison of 2019 model outputs for multiple 2001 to 2019 model year inputs versus measured water quality data
   k. 2021 – incorporate above efforts into NPDES permit renewals and continuing needs for nonpoint source management in the watershed