

Illinois River Project Update Conference Call
December 15, 2011
10:30 -11:30 CT
Call in #: 866-299-3188 **Code:** 2146657396

AGENDA

1. Introduction
2. OK Scenic Rivers TP Criterion Review Updates
3. Draft Project Simulation Plan and Modeling QAPP Comments Review
 - Project Timeline
 - Data Gap Report and Model Selection Technical Memorandum Revision
 - Sensitivity/Uncertainty Analyses
 - Simulation Plan Versus Modeling QAPP
 - Stakeholders Participation/Future Meetings & Conference Calls
 - Hypothetical Phosphorus Load Reduction Strategies Selection
 - Water Quality Parameters To Be Modeled
 - Other Issues/Comments
4. The IRW Modeling and TMDL Development Project Updates
5. Adjourn

Meeting Attendees

Tony Donigian, AQUA TERRA
Andy Stoddard, Dynamic Solutions
Andrew Fang, ODEQ
Edward Dibrberg, ODEQ
Derek Smithee, OWRB
Tom Elkins, Cherokee Nation
Shanon Phillips, OCC
John Bailey, ADEQ
Edward Swaim, ANRC
Randall Rush, EPA
Quang Nguyen, EPA

John Imhoff, AQUA TERRA
John Bailey, ADEQ
Mark Derischweiler, ODEQ
Phil Moershel, OWRB
Jason Childress, OWRB
Greg Kloxin, OCC
Ed Fite, Scenic River Commission
Earl Smith, ANRC
Melinda McCoy, EPA
Richard Wooster, EPA

Purpose of this Call

To provide status updates on the IRW project and discuss comments on the draft Simulation Plan and Modeling QAPP developed for the Illinois River Watershed modeling and TMDL development project.

Notes

1. OK Scenic Rivers TP Criterion Review Updates: Phil Moershel leads topic.
Overview of past activities described: QAPP approved, call for information, Tech

Advisory Group (TAG) meetings and calls organized and held. Currently DFT Report is being developed and will be distributed to TAG, likely early January. Finding in report were verbalized: .037mg./l and 30 day average are adequate standard and consistent with other values cited in other studies.

2. Draft Project Simulation Plan and Modeling QAPP Comments Review

- Project Timeline – Nguyen discussed updated timelines and these were distributed in email as well. Nguyen noted EPA received letter from area Senators and Congressmen requesting extension of time and resources for the project.
- Data Gap Report and Model Selection Technical Memorandum Revision – the reports have been revised to reflect stakeholders' comments and are being reviewed in house. These reports will be distributed once EPA completes review.
- Sensitivity/Uncertainty Analyses – Nguyen mentioned a recommendation was made that EPA support producing a sensitivity/uncertainty analysis. Region 6 will do so.
- Simulation Plan Versus Modeling QAPP – Nguyen and Donigian responded to request for clarifying between Simulation Plan and Modeling QAPP. Simulation plan is road map for project, describes data to be involved, and parameters simulated. Modeling QAPP is for model quality, data quality and calibration. Simulation Plan and Modeling QAPP are companion documents.
- Stakeholders Participation/Future Meetings & Conference Calls – Nguyen acknowledged comments received about how will stakeholders be involved. Region 6 proposes to continue future public meetings, increase frequency of stakeholder conference calls. Next public stakeholder meeting to be hosted by ODEQ, date and location to be determined.
- Hypothetical Phosphorus Load Reduction Strategies Selection – Region 6 to come up with set of reductions. Then AquaTerra will be asked to model reductions at all sites in watershed. ODEQ commented on the ultimate outcomes to be realized from the ongoing model-development work and encouraged EPA to clarify whether the project will or will not result in a TMDL for the watershed, and whether any such TMDL will address Lake Tenkiller. The group determined that a meeting of the Principals in the very near future would seem to be in order, especially in light of Management changes within EPA's Water Quality Protection Division.
- Water Quality Parameters To Be Modeled - Nguyen stated Phosphorus is focused, no other parameters. However, other parameters that effect phosphorus loads will be modeled: TSS, sediment, DO, Nitrogen, Total P, Chlorohyl A.
- Other Issues/Comments - none

3. The IRW Modeling and TMDL Development Project Updates –

WATERSHED MODELING EFFORT:

- Progress has been slower than desired, but it has been steady and significant.
- The Met database has been completed for the entire calibration/validation period, spanning 1992 to 2009. Met segments have assigned, as described in the Simulation Plan, daily precipitation data has been disaggregated to hourly values (required by HSPF), point source flow files have been developed, and the met segmentation has been completed assigned both precipitation and other met data to appropriate portions of the IRW.
- The initial model segmentation has been completed, as described in the Simulation Plan, producing 133 subbasins (land segments), and 126 stream reach segments; some land segments do not have stream reaches as they either drain directly to Tenkiller or the upstream end of a downstream reach. The Simulation Plan shows the segmentation and reach specifications.
- ODEQ provided some clarification on the exact locations desired for the AR/OK stateline, and we appreciated their assistance. We have been waiting for any related comments from ADEQ before making the final adjustments. In all cases the stream breaks will only be adjusted by 0.25 miles or less to match the stateline in a few locations.
- The calibration period had been defined to be 2001 to 2009, with the validation period in the earlier time frame of 1992 to 2000. We may adjust the dividing year to get more years for validation with high-flow (i.e. event) sampling that started in 2000.
- There has been a change to one calibration/validation site, compared to those listed in the Simulation Plan; the IL River @ Viney Grove has limited flow data, ending in 1986, even though it has WQ data through 2007. We are further investigating this, but in the mean time have substituted the Sager Creek near West Siloam Springs as an alternative site.
- Early hydrology calibration results show relatively good correspondence with observed flow volumes, with more than half the sites having less than 10% deviation from the observed data ... but these are still early in the calibration process.
- While the hydrology calibration is ongoing, we are systematically reviewing the available data on the various P sources and developing appropriate procedures for their consideration in the modeling, e.g. we have been corresponding with ANRC on the available litter application rate data, to supplement the 2010 rates they provided earlier for HUC12 subbasins within the AR portion of the IRW.

LAKE TENKILLER MODELING EFFORT:

- Completed acquisition/compilation of observed water quality data sets as station time series/vertical profiles for comparison to EFDC lake model results for calibration/validation; data obtained from OWRB, ODEQ, USACE, and CDM/USGS data collected in 2005-2007

- Obtained bathymetry data collected in 2005; used new bathymetry data to complete revision of the EFDC grid for Lake Tenkiller; new EFDC grid includes 794 cells for a much finer horizontal spatial resolution compared to the 195 cells used in the previous Lake Tenkiller EFDC model developed during 2005-2006.
- Completed coding of pre-processing program to link HSPF results for input to the EFDC lake model; pre-processing program accounts for flow, loads and concentrations provided by stream reach inflows and distributed runoff catchments.
- Control files for linkage of stream reach and distributed runoff inflow locations to the lake model have not yet been setup; the data available from completed segmentation of the HSPF watershed model will be used to setup control files for HSPF-EFDC linkage.
- Sediment bed data collected in 2005 in Lake Tenkiller has been compiled and will be used to define sediment bed conditions for the lake model
- Although EFDC does not represent turbidity as a state variable, the EFDC lake model will represent the material components of turbidity as state variables for inorganic suspended solids, detrital particulate organic matter and algae biomass. Observed data sets for TSS and turbidity will be used to develop a site-specific relationship for Lake Tenkiller between turbidity and TSS so that lake model results can be used to derive a surrogate model output for turbidity that can be compared to water quality criteria/targets for turbidity.