

Hi Everyone,

Below are the main points/action items I noted from the April 30 Model Work Session:

Upcoming Model Work Session Schedule

- Tuesday, May 7 – **Proposing to Cancel**
- Tuesday, May 14
- **Tuesday, May 21 – No Meeting**
- Tuesday, May 28
- **Tuesday, June 4 – No Meeting**
- Tuesday, June 11

Decision Points

- **Previous** AQUATOX setup and calibration decisions being carried forward:
 1. AQUATOX as a ~~9-segment linked model~~, to be refined as appropriate (on 4/23/13 Dick Park further recommended linking segments in order to accurately model the impact of phytoplankton transport from upstream).
 2. Modeling period will be January 1, 2012 to April 30, 2013.
 - Jan 1 – April 30, 2012, which will be subsequently modeled again for 2013, may be evaluated as an “initial spin-up period,” depending on model performance.
 3. Animals will not be included in the model set up and calibration.
 4. Initial conditions should represent existing conditions to the extent possible and practicable.
 5. Based on Dick Park’s advice and preliminary “test case” presented during the meeting, the periphytic growth parameters modeled will include:
 - Periphytic High and Low Nutrient Diatoms
 - Periphytic greens
 - Potentially include Cladophora and Periphytic Cyanobacteria depending on model performance and goodness-of-fit
 6. ~~The previous 13-segment model set-up will be used as the basis to most efficiently maintain, aggregate, and split segments to develop the appropriate 9-segment version.~~
 7. At this time, the tributaries will be treated as inputs to each segment, and not individual segments. However, questions about how to address potential phytoplankton inputs from these sources will need to be further addressed.
 8. WWTF (and other point source data) will be incorporated into the model even if discharging to LBR tributaries. This will help us to evaluate scenarios with differing point source input levels into the future, regardless of direct discharge location.
- **New** AQUATOX setup and calibration decisions during April 30 meeting:
 1. A 13-segment linked model will be used for initial set-up and calibration, changing from the previous plan to run a 9-segment version (this was suggested by Jack, and supported by others in the group). Rationale for the change include:
 - We may not be gaining much in terms of simplifying the model between 9 vs. 13 segments; Alex’s USGS data can still be fully utilized under the 13-segment model; the model has already been set-up for the 13 segments and may require considerable work to make the change to 9 segments; the appropriateness of the segment breaks is more important than the number of segments.

2. For initial model set-up and calibration, the original 1997/98 USGS pebble count data and previously-implemented normalization will be used.
 - This was based in part on Dick Park's recommendation that the data should still be valid based on long-term river conditions remaining mostly similar.

Action Items

- Michael
 1. Continue working with the 13-segment model (flow balance, etc.).
 - When at an appropriate juncture, share with DEQ et al.

- Continue to gather WWTF and point-source data (to coordinate with Kate), including temperature, pH, ammonia, BOD, TSS, TP, flow, etc. for at least the past few years, or further (e.g. ~1998 if possible).
 1. Matt – Nampa WWTF
 2. Tom/Michael – Meridian WWTF
 3. Lee – Caldwell
 4. Kate – Boise
 5. Troy – Caldwell Housing Authority, Greenleaf, Middleton, Notus, Star, Sorrento, Wilder, Eagle Fish Hatchery (also, Eagle, Kuna,...others??) – I will also compile a list for distribution to help ensure we are covering all of the necessary WLAs.

- Ben and Troy
 1. Identify the pool/riffle/run data previously-used in the 13-segment model. Identify data used, assumptions, etc. Also identify if newer data is available.

Additional Key Discussion Items

- Discussion about how to model periphyton in AQUATOX...AQUATOX presents periphyton results as amount over the entire reach (need to back calculate for available periphyton habitat and pebble count data for each reach)
 1. Ben's presentation and group discussion about understanding/interpreting USGS periphyton data, empirical relationships between periphyton and TP in the LBR, appropriately interpreting/calculating modeled TP and periphyton relationships.
 2. Dick's presentation and group discussion about periphyton modeling approaches and interpreting results using AQUATOX
 3. Tom's discussion of pebble count analysis and how it was used to backtrack in previous model runs.

Please let me know what I missed or misinterpreted. As always, thanks for your participation today, and in between sessions! Cheers,

-Troy

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