

## Meeting Summary for the May 14, 2014 Model-Techno-Policy Workgroup:

### Discussion Items

#### Model Segments vs. AUs for Periphyton Analyses

- Ben Cope and Bill Stewart (EPA) – concerns over converting model segments to AUs because of the potential averaging and smoothing effects. The more averaging through space and time that is conducted, the more problematic issues become smoothed. Also concern that the model was calibrated in segments and then changing to look at AUs after the fact.

#### Monthly vs. Seasonal Periphyton Analyses

- Ben and Bill – need to be looking at periphyton values on a monthly basis, but nutrient allocations (and permits) should be written for seasonal timeframes that meet the monthly mean 150 mg/m<sup>2</sup> periphyton target.
- Justin Hayes (ICL) – agrees that seasonal averaging would be smoothing out problem areas.
- Lee Van de Bogart (Caldwell) – averaging would help smooth out some short-term peaks and natural variability
- Robbin Finch (Boise) – the target may be less stringent for systems dominated by diatoms and not filamentous or other more-deleterious algae
- Ben – we should be looking at total periphyton biomass and not trying to distinguish the effects of different species
- Ben and Tom Dupuis (HDR) – the Spokane River TMDL required compliance every 2 weeks, but the limits were written on a seasonal basis
- Troy Smith (DEQ) – will run analyses to examine mean monthly periphyton values and will focus on the preferred seasons identified as:
  - Jan-June (mean monthly simulated periphyton appearing < 150 mg/m<sup>2</sup>)
  - July-Sept (increasing periphyton growth and corresponds with MT, CO, MN)
  - Oct-Dec (mean monthly periphyton plateaus ~150 mg/m<sup>2</sup>)
- Michael Kasch (HDR) – All options should still be on the table.
- Troy – agreed.

#### Conversion of OP:TP and BOD for WWTFs

- Michael – working on his response to these questions
  - How to identify the appropriate BOD reductions in WWTF effluent that corresponds with TP treatment and reductions in model scenarios?
  - How to identify the fraction of TP that would be bio-available in WWTF effluent that corresponds with TP treatment and reductions in model scenarios?
- Ben – has questions and concerns about adjusting the fraction of TP that would be bioavailable. This type of analysis is not ready for primetime in regulatory realms. The fraction of TP as bioavailable should be set as 100%. The Spokane TMDL utilized this approach as a Margin of Safety.
- Jack Harrison (HyQual) – treatments can increase the fraction of TP that is soluble with a long residence time.
- Justin – agrees.
- Robbin – seems reasonable that non-bioavailable fraction is generally low and could be used as MOS.

#### Including WWTF loads to Tributaries in Model

- Jonathan Clough responded that this is an appropriate use of the model and is functioning correctly.

#### Potential Scenarios

Troy has run a number of draft course-scale scenarios to present an idea of how periphyton biomass may respond to theoretical allocation scenarios

- Troy will run additional analyses with tributaries and ground water at 0.1 mg/L, clean up spreadsheets, figures, etc. and send to group.

#### To do's for May 28 Meeting

- Everyone
  - Evaluate the monthly segment and AU periphyton biomass under various DRAFT scenarios and provide feedback/recommendations
- Troy
  - Provide monthly segment and AU periphyton biomass under various DRAFT scenarios
- Michael
  - Provide references and recommendations about how to potential determine appropriate BOD and bioavailable TP conversions in model scenarios.
- Robbin
  - Contact Tonya Dombrowski (ODEQ) to discuss exceedance criteria, rationale, and application in the SR-HC TMDL

#### Next Workgroup Meeting

Wednesday, May 28

10 a.m. to Noon

DEQ Boise Regional Office

Phone: 208-373-0101 Bridge 4

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