

Meeting Summary for the April 30, 2014 Model-Techno-Policy Workgroup:

Discussion Items

The conversion for calculating model-simulated periphyton biomass relative to the mean 150 mg/m^2 target on an Assessment Unit (AU) basis vs. the biomass on a model segment basis as is provided by AQUATOX. These calculations can then be directly applicable to the TMDL and resulting TP allocations. The Segment to AU conversion is as follows:

- AU 005_06b (Middleton to Indian) begins within segment 9 and extends into segment 10
 - Coordinates = 43.69143; -116.626776
 - Length = 5.49 miles
 - Length and percent by segment
 - 3.95 miles in segment 9 (71.9 % of AU length)
 - 1.54 miles in segment 10 (28.1 % of AU length)
 - Conversion calculation
 - $\text{AU005_6b peri} = (\text{Seg 9 peri} \times 0.719) + (\text{Seg 10 peri} \times 0.281)$
- AU 001_06 (Indian Creek to mouth) begins within segment 10 and extends to end of segment 13
 - Coordinates = 43.677534; -116.705394
 - Length = 18.64 miles
 - Length and percent by segment
 - 6.78 miles in segment 10 (36.4 % of AU length)
 - 5.06 miles in segment 11 (27.1 % of AU length)
 - 1.83 miles in segment 12 (9.8 % of AU length)
 - 4.97 miles in segment 13 (26.7 % of AU length)
 - Conversion calculation
 - $\text{AU001_6 peri} = (\text{Seg 10 peri} \times 0.364) + (\text{Seg 11 peri} \times 0.271) + (\text{Seg 12 peri} \times 0.98) + (\text{Seg 13 peri} \times 0.267)$
- Troy to provide spreadsheet to group

Much discussion was had pertaining to the appropriate seasonal divisions for applying the mean periphyton biomass target $\leq 150 \text{ mg/m}^2$ target relative to evaluating potential model scenarios. Pros and cons of different seasonal groupings were discussed. The two seasonal groupings below will be the focus of further analysis:

- Seasonal Grouping 1 = Jan-Apr, May-Sept, Oct-Dec
 - Pros: Limit of 3 seasons (late winter to spring, summer to early fall, fall-early winter); maintains SR-HC as a May-Sept season
 - Cons: May not accurately represent the periphyton seasonal growing conditions
- Seasonal Grouping 3a = Dec-Apr, May-Aug, Sept-Nov
 - Pros: Limit of 3 seasons (winter to spring, summer, fall); may more accurately represent the periphyton seasonal growing conditions
 - Cons: splits up the SR-HC May-Sept timeframe
- Troy to provide spreadsheets and figures to group

Troy recommended periphyton target exceedance criteria more than 1 in 5 years (previous meeting discussions had focused on 1 in 3 years). The rationale for this includes:

- The LBR mean periphyton 150 mg/m^2 target is a less restrictive value relative to MT, MN, and CO which have implemented maximum periphyton targets of 150 mg/m^2
- MT, MN, and CO have implemented exceedance criteria of 1 in 5 years, 1 in 10 years, and 20%. Therefore, a 1 in 5 year exceedance criteria for the LBR would be more consistent with other states.

- Troy to further investigate the periphyton exceedance criteria by these states.

Discussion about appropriate conversion of OP:TP and BOD for WWTFs under TP reduction scenarios

- 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?
- Robbin and Michael provide references and recommendations about how to potential determine these values and provide to group.

Discussion about how to appropriately include all WWTF discharge in the model scenarios

- Michael (and others) to investigate appropriate potential approaches
- Troy will contact Dick and Jonathan about this and use of Monte-Carlo type of simulations

Troy recommends that potential scenarios attempt to match:

- Values that appear to meet the May-Sept 0.07 mg/L TP target under the load duration/mass balance scenarios (e.g. WWTF (~0.1), nonpoint (~0.07), and groundwater (~0.07)
- TSS < 37% for completed TMDL

To do's for May 14 Meeting

- Everyone
 - Evaluate the Segment-to-AU conversions and provide feedback/recommendations
 - Evaluate potential seasons to apply periphyton target provide feedback/recommendations.
- Troy
 - Provide Segment-AU conversion spreadsheet to group
 - Provide seasonal spreadsheets and figures to group
 - Further investigate exceedance criteria in other states
 - Contact Dick and Jonathan about including WWTF as point sources in model tributaries
- Michael
 - Investigate potential approaches to include WWTFs as point sources in model tributaries
- Robbin and 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 14

10 a.m. to Noon

DEQ Boise Regional Office

Phone: 208-373-0101 Bridge 4

Unfortunately, our remote web access isn't available; I email documents before/during the meeting.