Model-Techno-Policy Workgroup

Workgroup Update
Lower Boise Watershed Council - TAC
April 24, 2014
TMDL MODELING

AQUATOX Model

- Quantify chlorophyll a and phosphorus relationships
- Allocation tool to meet the chlorophyll-a target of 150 mg/m²

USGS Mass Balance Model and Duration Curves

- Quantify current TP loads
- Allocation tools to meet the May-September 0.07 mg/L TP target at the mouth
WORKGROUP OBJECTIVES

- Apply AQUATOX and other lines of evidence toward:
  - Developing TP targets and allocations to meet the periphyton target
  - In the two impaired assessment units of the lower Boise River
    - Middleton to Indian Creek
    - Indian Creek to the Mouth
Meeting summaries and decision points will be posted after each meeting on the DEQ LBR WAG webpage.

Model revisions and documentation will be posted, as completed, on the FTP site via the DEQ LBR WAG webpage.

The Model Report will remain draft until concurrent completion of the TMDL in order to ensure all analyses in the report are consistent with the model findings and application in to the TMDL.

Subsequent report drafts will be posted on the DEQ LBR WAG webpage.
WEIGHT OF EVIDENCE APPROACH

- Other Environmental Stressors
  - e.g. flow, temperature, alteration, management
- Historical Conditions
- Critical Conditions
- Other
DURATION

- Potential Seasons
  - Jan-Apr, May-Sept, Oct-Dec
  - Dec-Feb, Mar-May, June-Aug, Sept-Nov
  - Dec-Feb, Mar-Apr, May-Sept, Oct-Nov
Daily periphyton biomass $\leq 150 \text{ mg/m}^2$ for $\geq 50\%$ of days each season

Mean daily periphyton biomass $\leq 150 \text{ mg/m}^2$ for each season
Not to exceed periphyton target more than 1 in \( ? \) (3) years

Monte Carlo application and/or running model for \( ? \) years of previous flow conditions
Target applied on an assessment unit basis

Utilize a weighting methodology to convert segments to AUs

- AU 005_06b (Middleton to Indian Creek)
  - Begins within segment 9 and extends into segment 10

- AU 005_06 (Indian Creek to Mouth)
  - Begins within segment 10 and extends through segment 13
POTENTIAL SCENARIOS

• May-Sept TP = 0.07 mg/L to meet SR-HC TMDL
• Others?
  – TSS <37%
  – Lines of evidence
  – Historical Conditions
  – Critical Conditions
• Timelines
¡THANK YOU!

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