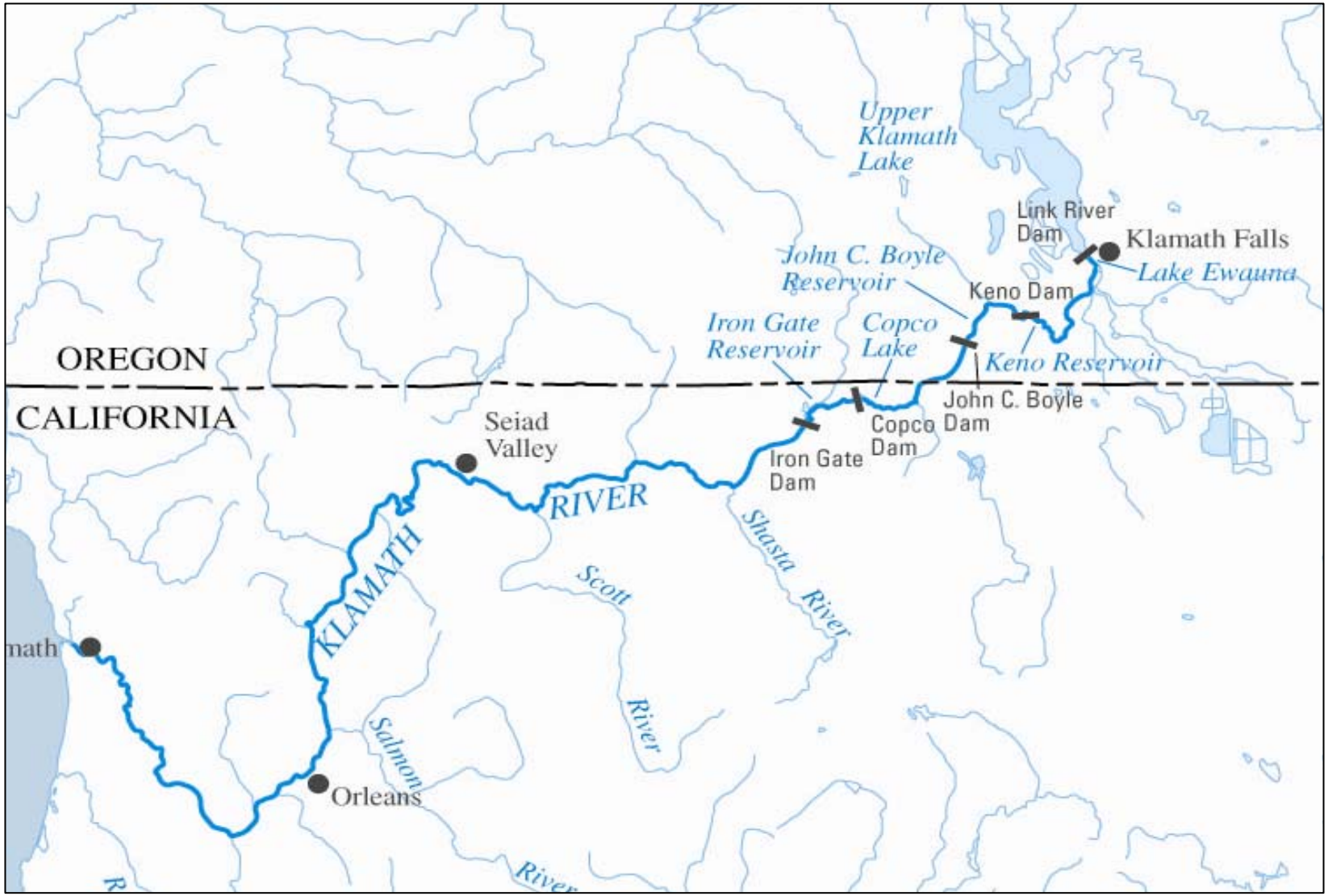
PacifiCorp Primary Comments
on the
Klamath River Total Maximum Daily Loads (TMDL) in California

Presentation to the

State Water Resources Control Board
Tuesday, September 7, 2010

Klamath River



Water Temperature

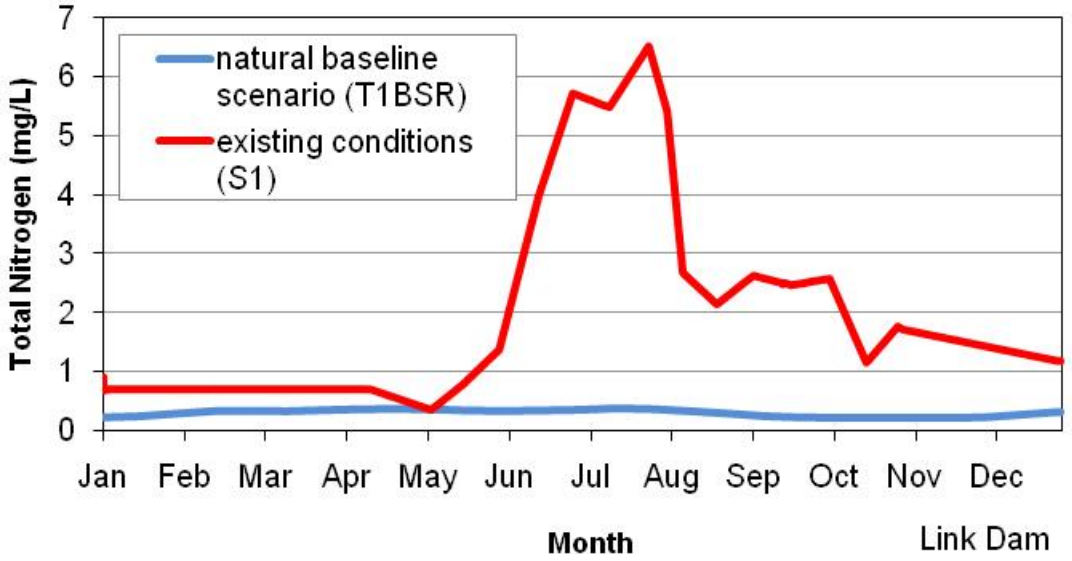
- **Concerns:**
  - **20% reduction of solar radiation in models**
  - **Inconsistent application of model runs**
  - **Objectives unrealistic for Klamath River**
- **Implications:**
  - **“Current” effects are overstated because “natural baseline” understated**
  - **Assumed “natural baseline” temperatures are unachievable**

Nutrients & Organic Matter

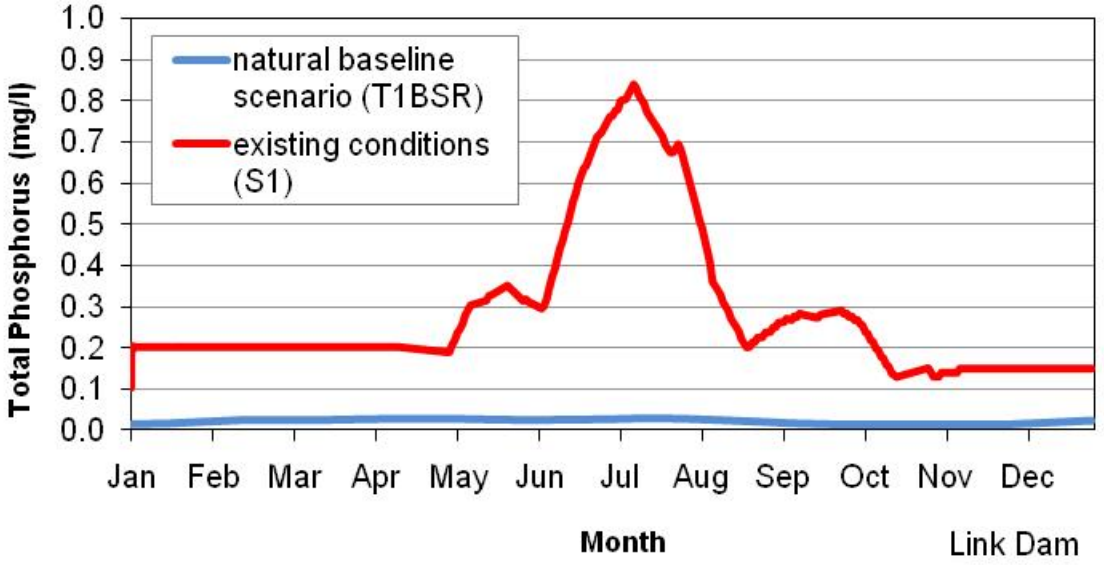
- **Concerns:**
  - **Unrealistic upstream “boundary conditions”**
  - **Assumed conditions do not reflect natural enrichment in system**
  - **Modeled conditions not realistic or achievable**
- **Implications:**
  - **TMDL allocations and targets are unrealistic**
  - **TMDL requires a reduction in system trophic state at Upper Klamath Lake**

Link Dam Boundary Conditions

Total Nitrogen

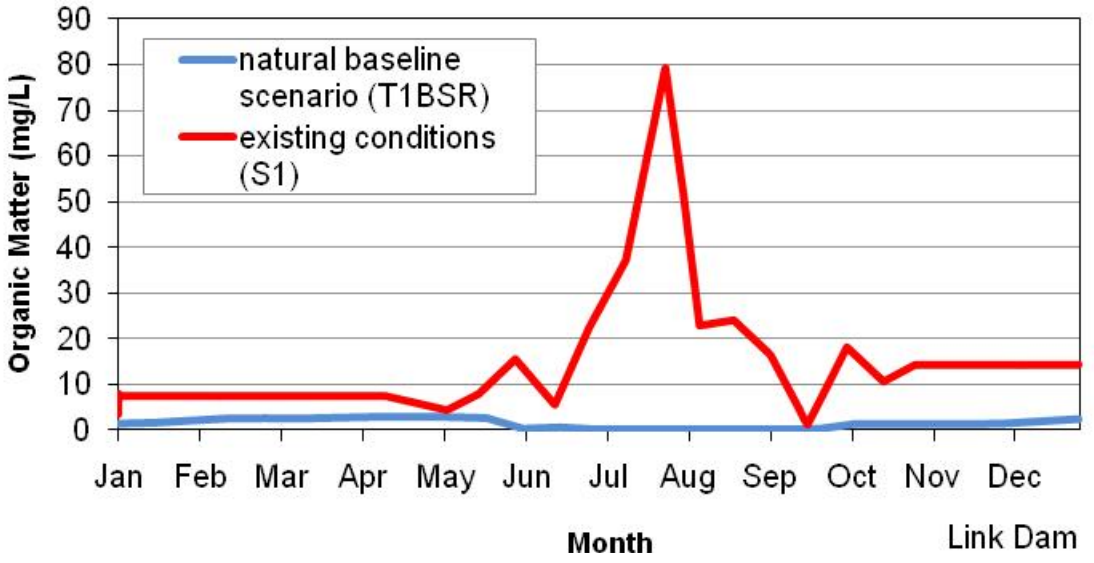


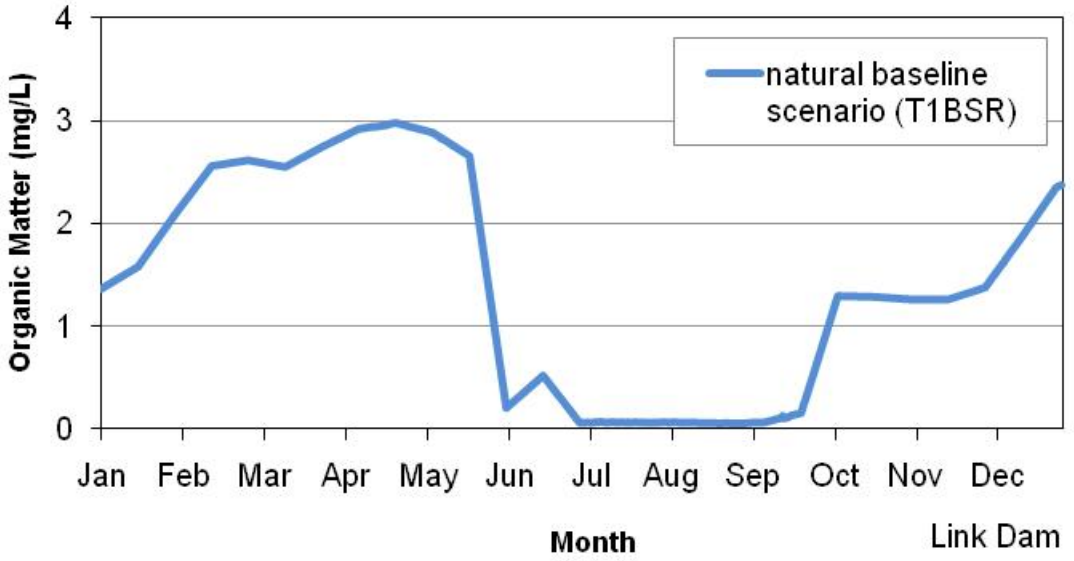
Total Phosphorus



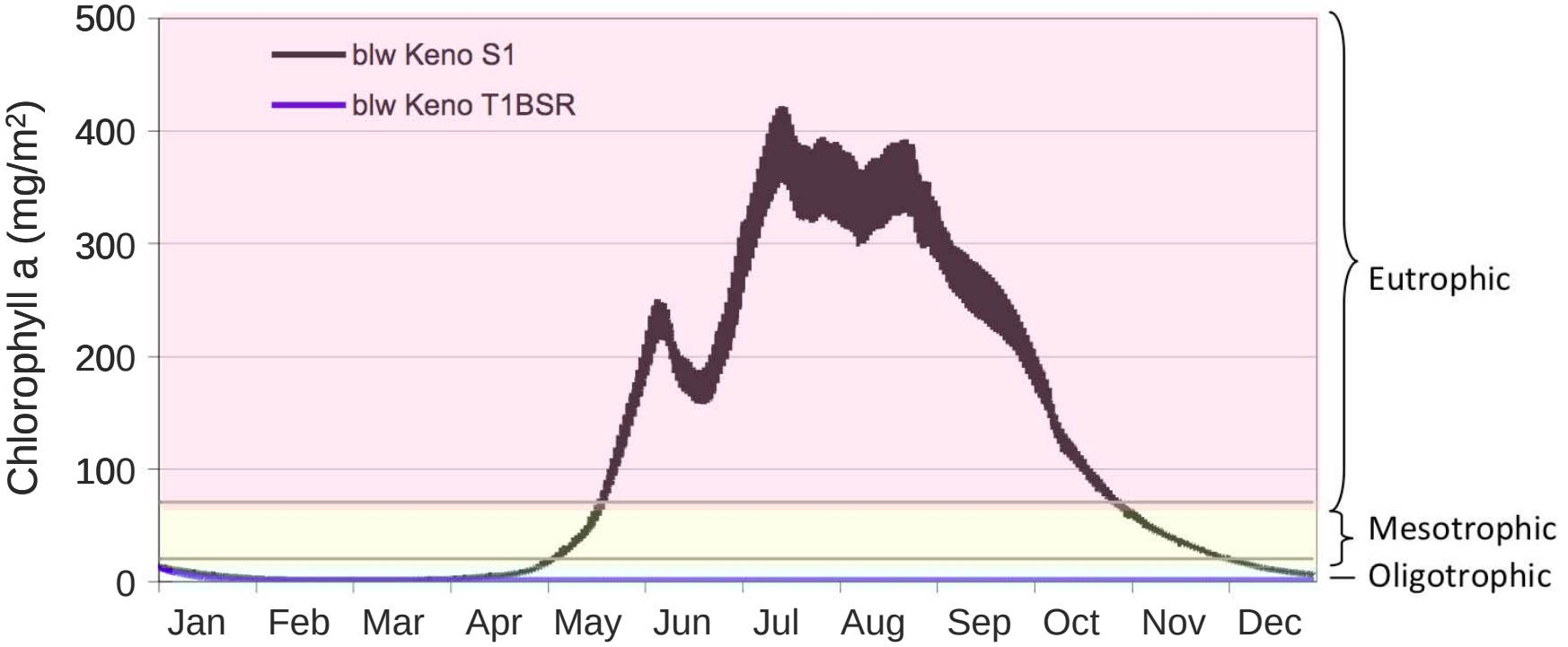
Link Dam Boundary Conditions

Organic Matter



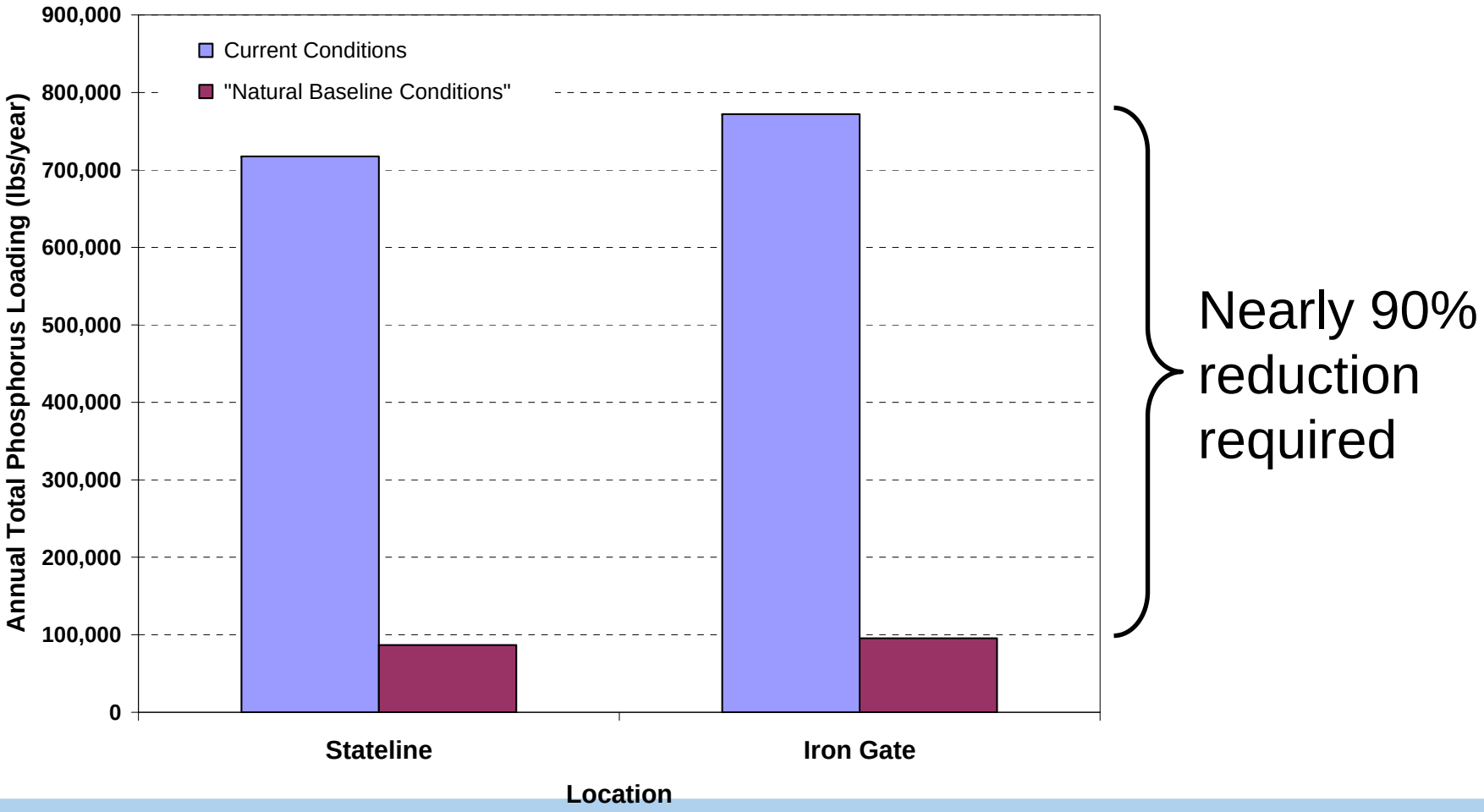


Klamath River Simulated Benthic Algae



Trophic classifications for streams based on annual mean chlorophyll a concentrations (after Wetzel, 2001)

Magnitude of Resulting Nutrient Load Reductions Required by the TMDL



Recommendations

- Establish realistic temperature objectives for the Klamath River (using SSO, UAA, or other Basin Plan Amendments)
- Correct model solar radiation discrepancy or recalibrate
- Redo thermal loading analysis and revise temperature offsets
- Establish realistic nutrient & OM objectives for the Klamath River (using SSO, UAA, or other Basin Plan Amendments)
- Correct model with feasible and achievable nutrient & OM boundary conditions at Link Dam

Recommendations (cont.)

- Assess variability of conditions prior to setting TMDL load allocations
- Revise TMDL load allocations to reflect actual load contributions and load reductions that are reasonably achievable
- Provide analysis of realistic and feasible methods for achieving reductions that the TMDL will require, including timing of upstream reductions
- Conduct workshops with stakeholders on updated TMDL scope and analysis
- Make other revisions recommended in previous comments