Columbia River Temperature TMDL

Information and points of agreement from meeting between EPA, Bureau of Reclamation (BOR), and Army Corps (USACE) in Seattle on March 4, 2008

1) EPA walked through the RBM10 model, assumptions of the TMDL analysis, and the general conclusions of the analysis regarding dam impacts and TMDL load allocations. USACE and BOR described the current status of the CE-QUAL-W2 models available for Lake FDR and the Lower Snake River.

2) The relative importance of boundary condition assumptions to the TMDL outcome would be better understood if we provided information on the following:

(a) screening level model simulations using model boundaries set at estimated natural flows/temperatures for Dworshak (north fork Clearwater), Snake mainstem, and Canadian border.

(b) screening analysis would include "dams in" and "dams out" simulations, similar to the draft TMDL

(c) analysis would require collection of information not readily available to EPA at this time, possibly including estimates from USACE basinwide hydrologic model and historic (pre-dam) data where available.

3) The analysis for the TMDL included data from 1970 to 2000. Data is available for the 2000 to 2008 period. If RBM10 is to remain as the TMDL model, a decision is needed on whether to extend the database/simulation time frame to include the data from recent years. This is a major workload issue. A decision not to extend the time frame will require some consideration of any substantive changes to system operations in the 2000-2008 time frame that may affect temperature conditions, and a clear rationale.

4) We have a common interest in looking at graphical comparisons of tailrace temperatures of upstream and downstream dams (similar to Hells Canyon TMDL evaluation of temperature impacts from the Hells Canyon Complex).

5) 1D and 2D models were discussed. One option is to use 1D model for TMDL goal-setting and 2D model for implementation (and/or UAA support). Issues to be considered include the additional evaluation of the boundary condition assumptions, and model simulation time frames (#2 and #3 above).

6) BOR presented information on the existing 2D, CE-QUAL-W2 models developed by EPA (Yearsley) and Portland State University. BOR does not have funding to improve these models. BOR concerns about existing models include quality of bathymetry data, uncertainty in operating records, and simulated outlet temperatures that are too cold.

7) USACE presented information on their CE-QUAL-W2 model of the lower Snake River that extends from Anatone (or Hells Canyon Dam) to the confluence with the Columbia River. USACE plans to produce a model documentation report to support the use of this model.

8) We have a common interest in convening the states to review and/or confirm the following:

a) water quality standards revisions since the time of the draft TMDL
b) states' interpretation of standards for this TMDL (i.e., how compliance is defined) and method of temperature allocation to the dams.