

**YAKIMA RIVER BASIN STUDY  
PLAN OF STUDY SUMMARY  
For YRBWEP Work Group**

**DRAFT: 11/23/09**

Reclamation and Ecology will conduct a Basin Study to establish the technical basis and decision support for the Yakima River Basin Integrated Water Resource Management Plan (Integrated Management Plan). The Integrated Management Plan is being developed under authority provided to Reclamation by the existing Yakima River Basin Water Enhancement Project (YRBWEP) Act (P.L. 103-434, October 31, 1994, as amended by P.L. 105-62, October 13, 1997, and P.L. 106-372, October 27, 2000). This effort, in effect, constitutes the next phase of YRBWEP. The study will supplement information provided through previous efforts to evaluate water supply and aquatic resource problems as well as to identify potential remedies.

A YRBWEP Work Group representing a wide range of stakeholders' interests was convened by Reclamation and Ecology in 2009 to develop a preliminary Integrated Management Plan. During 2010, the Basin Study effort will evaluate the efficacy of the preliminary plan in addressing the water and aquatic resource needs of the Yakima River Basin. Upon completion of the Basin Study, the YRBWEP Work Group will be asked to provide recommendations concerning the content of a Final Integrated Management Plan. It is anticipated that such recommendations will include identification of specific elements and projects to be included in the Final Integrated Management Plan as well as the timing (phasing) of those elements and projects.

The Basin Study and Final Integrated Management Plan are intended to accomplish the following objectives:

- 1) Achieve stakeholder consensus around a well defined set of strategies for resolving water supply and stream flow imbalances as well as other aquatic resource issues,
- 2) Delineate a clear pathway for short-term and long-term Integrated Management Plan implementation, and
- 3) Provide the basis for a request by Ecology and stakeholders for Congressional and State Legislative authorization and appropriations for the Integrated Management Plan.

The scope of the Basin Study is summarized as follows:

Task 1 - Characterize and quantify the water resources of the basin.

Task 2 - Determine the current and future water needs for out-of-stream uses for defined planning periods (phases). This includes the following water use components: municipal and industrial uses, domestic (exempt) well uses, and demand for irrigated agriculture, particularly focusing on quantifying additional supplies needed to provide dry year/drought relief for

proratable irrigation districts. Future irrigation needs will be predicated on no increase in irrigated acreage, which is consistent with YRBWEP legislation.

Task 3 – Quantify instream resource needs by major reach, by season.

Task 4 – Develop detailed descriptions for elements and projects identified in the preliminary Integrated Management Plan.

Task 5 – For each element and project, conduct an analysis of potential environmental, engineering, and/or legal barriers to implementation and estimated costs. At the completion of this task, the YRBWEP Work Group may decide to modify the preliminary Integrated Management Plan before proceeding to subsequent tasks.

Task 6 – Using models such as Yakima RiverWare and other analytical tools, evaluate the efficacy of various strategies for meeting out-of-stream and instream needs, including both storage (above ground and aquifer storage) and non-storage options (demand reduction, agricultural and municipal conservation measures, and water banking/marketing). Evaluations will consider the cumulative effect of multiple water supply options implemented in combination, and will do so under different operation scenarios to optimize the Integrated Management Plan.

Task 7 - Using models and other analytical tools, evaluate the total ecosystem benefits of implementing instream water supply strategies in conjunction with efforts to achieve other aquatic resources objectives, including fish passage at major Reclamation reservoirs in the Basin and habitat restoration.

Task 8 – Using models and other analytical tools, evaluate the manner in which potential climate impacts might affect the selection and timing of elements and projects that may be included in the Final Integrated Management Plan. Such evaluations will also address means by which flexible approaches and adaptation to climate change and other uncertainties could be built into the Integrated Management Plan.

Task 9 – Based on the evaluations conducted as part of Tasks 6-8, develop recommendations for timing and sequencing of projects, including identification of triggers for commencing projects contained in the second phase of the plan,

Task 10 – Assist the YRBWEP Work Group in developing final recommendations for the Integrated Management Plan. The Integrated Management Plan elements and projects may be adjusted by the YRBWEP Work Group based on analytical outputs related to the sensitivity of the elements and projects to environmental and socioeconomic concerns and uncertainties.

Task 11 – Prepare Basin Study Report and Final Yakima River Basin Integrated Water Resource Management Plan.

Milestones for Workgroup Meetings:

Meeting 1 – Report on quantified needs out-of stream and instream by reach. March 2010

Meeting 2 – Detailed description component projects April 2010

Meeting 3 – Engineering/Environmental/Legal/ constraints to implementation May 2010

Meetings 4-8 (as needed) – Analytical Outputs, Optimization– modeling and combination of alternatives synergy and linkages – resulting in most effective package - June – Sept 2010

Meeting 9 – Formal Recommendation October – November 2010