

Yakima River Basin Study Report Outline

Volume I – Integrated Water Resource Management Plan

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Volume II – Yakima River Basin Study Technical Appendices

Technical Memorandum (TM) 1 – Yakima and Columbia Basins Water Resources Characterization

TM 2.1 - Current and future water needs assessment: M&I, exempt/domestic/rural residential wells, and irrigated agriculture

TM 2.2 – Unit Cost Comparison

TM 2.3—Economic Effects Analysis

TM 3 – Instream Flow Needs

TM 4.1 – Fish Passage

TM 4.2- Wapatox Conveyance Improvements

TM 4.3- Roza/Chandler Power Subordination and Power Balance Sheet

TM 4.4- KRD Main Canal/South Branch Modifications

TM 4.5 - Cle Elum 3' Pool Raise

TM 4.6 - Keechelus-to-Kachess Pipeline

TM 4.7 - Wymer Reservoir

TM 4.8 - Bumping Reservoir Enlargement

TM 4.9 - Reservoir Inactive Storage

TM 4.11 - Groundwater Infiltration

TM 4.12 - Mainstem Floodplain Restoration - Reach Assessment

TM 4.13 - Agricultural Conservation

TM 4.14 - Municipal Conservation

TM 4.15 - Facilitate Market Transfers

TM 4.16 - Columbia River Pump/Storage Feasibility Study Scope of Work

TM 4.17 – Integrated Plan Energy Production/Consumption

TM 5.1 – Cost Estimates

TM 5.2 – Environmental, Policy and Legal Barriers

TM 6 – Hydrologic Modeling

TM 7.1 – EDT Modeling

TM 7.2 – Ecosystem Benefits

TM 8 – Climate Change

TM 9 – Timing, Sequencing and Triggers Recommendations

Table 1
Decision Document Elements
(Summary for Sections 2 - 5 of the Integrated Water Resource Management Plan)

Plan Element	Description	Resource Document(s)	When Presented at 2010 Workgroup Meetings
Section 2 - In and Out of Stream Needs	<ul style="list-style-type: none"> Characterize in and out of stream needs to be met through Integrated Plan 	<ul style="list-style-type: none"> 9/16 draft findings documents on In and Out of Stream needs Supporting handouts and technical memoranda 	July - September
Section 3 Preliminary Integrated Water Resource Management Plan			
3.1 Integrated Plan Projects and Actions Summary	<ul style="list-style-type: none"> List of projects to include in the Integrated Plan along with brief descriptions (Purpose, description, cost) 	<ul style="list-style-type: none"> Presentations and handouts on projects and actions Summary findings 	July – November
3.2 Recommended Path Forward, Priorities and Schedule	<ul style="list-style-type: none"> Next steps, timing and sequence, and discussion of applicable triggers In-basin (and out of basin, as triggered) 	<ul style="list-style-type: none"> Triggers, Timing and Sequence memo and presentation 	October - November
3.3 Benefits Summary (Integrated Plan)	<i>Water supply, instream flow, habitat and ecosystem benefits, and mitigation items in plan</i>		
3.3.1 Water Supply Benefits	<ul style="list-style-type: none"> Modeling information on TWSA, improvements to meet 70% reliability Characterize how Roza, WIP and KRD benefits. Other proratable rights not seeking supply. KID supply needs met. 	<ul style="list-style-type: none"> Handouts and presentations on hydrologic modeling results Summary findings 	July - November
3.3.2 Instream Flow Benefits	<ul style="list-style-type: none"> Describe flow benefits by reach 	<ul style="list-style-type: none"> Hydrologic modeling approach handouts and presentations Summary findings 	June – November
3.3.3 Aquatic Habitat/ Ecosystem Benefits	<ul style="list-style-type: none"> Characterize species/habitat benefits/lifestages Characterize bull trout benefits 	<ul style="list-style-type: none"> Presentations on EDT, AHA and DSS modeling results Qualitative for bull trout Summary findings 	October - November
3.3.4 Mitigation	<ul style="list-style-type: none"> Describe mitigation components in the plan 	<ul style="list-style-type: none"> Mitigation and barriers presentation Summary findings 	October

3.4 Plan Adjustments During Implementation (Adaptive Management)	<i>Generally characterize adaptive management program for applicable plan elements. Includes but is not necessarily limited to: operations flexibility, periodic demand updates and adjustments to climate change, as necessary</i>		
3.4.1 Flexibility of Operations	<ul style="list-style-type: none"> • Describe how updated flow management/river operations regime will be established to meet in and out of stream needs, e.g., <ul style="list-style-type: none"> ○ Carryover storage ○ How new supply will be managed 	<ul style="list-style-type: none"> • Handouts and presentations on hydrologic modeling results • Summary description of operational considerations 	August - November
3.4.2 Rolling Demand and Supply Analysis	<ul style="list-style-type: none"> • Describe current need and projected demands • Characterize how demands will be updated over time • Describe how information will be used – relationship to triggers 	<ul style="list-style-type: none"> • Technical memoranda and presentations on need and future demands • Triggers, Timing and Sequence memo and presentation • Summary description 	June - November
3.4.3 Climate Change Considerations	<ul style="list-style-type: none"> • Range of potential impacts considered • Effect on supply and ability to meet needs • Triggers 	<ul style="list-style-type: none"> • Handouts and presentations on hydrologic modeling results • Triggers, Timing and Sequence memo and presentation • Summary description 	October - November
3.5 Appraisal Costs Summary	<ul style="list-style-type: none"> • Describe appraisal cost methodology • Range of accuracy • Future refinements 	<ul style="list-style-type: none"> • Cost estimate results handouts • Summary cost table 	September - November
4. Comparative Benefits Matrix for Scenarios	<ul style="list-style-type: none"> • Describe scenarios and results: <ul style="list-style-type: none"> ○ Future w/o Integrated Plan ○ Integrated Plan (Include variations: non-structural and climate change) 	<ul style="list-style-type: none"> • Benefits comparison matrix 	October/ - November
5. Economic Effects	<ul style="list-style-type: none"> • Describe economic effects of Integrated Plan 	<ul style="list-style-type: none"> • Presentation on economics • Supporting handouts and technical memoranda • Summary findings 	November