

Phase I - - Plan of Study and Priority Activities				
Activities 100 - - Plan of Study and Priority Activities				
Item	Sub-Item	Objectives	Tasks	Primary Data Base
101. Organize Study Implementation Team		101. Establish a core group to develop the Plan of Study (POS)	1. Upper Columbia Area Office (UCAO) Area Manager will appoint a team to develop a POS and identify and expeditiously implement priority work activities in FY 2003.	
102. Develop the POS		102. Describe the study approach and process, including a detailed POS, budget, and schedule.	1. Develop the overall study framework and define the major study activities and key policy questions and issues. 2. Develop the detailed POS.	

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103. Implement Priority Activities	103.1 Black Rock Topography	103.1 Create a topographic base map suitable for feasibility grade study of the Black Rock project.	<p>1. Acquire Contractor for aerial photography, photogrammetry, and LiDAR mapping. Reclamation acquire access to project site.</p> <p>2. Conduct work including establishing survey control network for aerial photo-control panels, stereo aerial photographs for use in geologic mapping, preparation of digital orthophotographs, data processing, and development of digital terrain model with sufficient resolution for 2-foot contour maps.</p>	

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	103.2 Black Rock Geologic Mapping	103.2 Expand work completed by Washington Infrastructure Services (WIS) to feasibility grade study level.	<ol style="list-style-type: none"> 1. Acquire Contractor and Reclamation access to project site. 2. Conduct field mapping at alternate dam site and scope future geologic mapping activities for the Black Rock project area. 3. Prepare report describing work conducted and conclusions. 	Black Rock Reservoir Study, Final Report, WIS, May 2002.
	103.3 Black Rock Seismotectonic Evaluation	103.3.1 Update Reclamation's 1990 work on earthquake risk of project area.	<ol style="list-style-type: none"> 1. Further evaluate the seismicity and earthquake risk of the complex series of folds and associated faults within the area. 2. Conduct an enhance literature evaluation to develop more extensive data from previous studies, including work at the Hanford site. 	

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			3. Prepare report on the results of the evaluation.	
		103.3.2 Conduct additional seismotectonic activities.	<p data-bbox="1222 467 1572 862">1. Augment Hanford/Pacific Northwest Labs existing seismic network to provide coverage in Black Rock project area. Annual operation and maintenance would be required to carry this activity into post-construction monitoring.</p> <p data-bbox="1222 906 1572 1299">2. Conduct geophysical work (reflection and surface-to-bore hole shear wave tests) in area between WIS dam site and possible alternate site to determine extent of possible fault. This will require drilling of 15-20 five foot deep “shot” holes.</p>	

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	103.4 Black Rock Groundwater Evaluation	103.4.1 Analyze existing data to assess the storage capability of the reservoir basin.	<p>1. Compile available groundwater data, identify data gaps, assemble well logs, analyze extent and characteristics of aquifer, and review borehole pressure and water test data of WIS work.</p> <p>2. Prepare report of findings on groundwater database, aquifer characteristics, and storage capability of reservoir basin.</p>	

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	103.5 Black Rock Exploratory Drilling	103.5 Determine depth to bedrock at possible alternate dam site.	<p>1. Following geologic mapping of the possible alternate dam site, drill one hole to determine depth to bedrock and composition of materials. Record physical description of geologic units from core loggings. Install instrumentation equipment for groundwater monitoring.</p> <p>2. Evaluate findings from drill hole and those from prior drilling by WIS at downstream dam site and develop recommendations on further drilling and geological exploration program as may be required for feasibility study.</p>	

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	103.6 Geology Liaison	103.6 Coordinate and facilitate Black Rock project geology-related activities.	1. A Reclamation staffer will coordinate and monitor geology, seismotectonic and topography activities.	
	103.7 Modeling Capability	103.7 Enhance Reclamation modeling capability for assessing hydrologic operations and fish production.	1. Upgrade River Ware model. 2. Develop data management interface (linkage) between River Ware and Range of Variability Approach (RVA) models. 3. Select an existing model (EDT or SALMOD) or develop a new fish production model and interface with River Ware.	

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	103.8 Black Rock Project Review	103.8 Review WIS reconnaissance work and conduct site review.	<p>1. Review recent reconnaissance level study for use in plan formulation. Document findings in a Letter Report.</p> <p>2. Form technical Site Review Team and conduct field review to assess Black Rock project dam and reservoir sites, alternate pumping plant sites, and alternate inlet and outlet works alignments. Prepare summary report of findings and recommendations concerning technical evaluations prerequisite to feasibility designs and cost estimates.</p>	WIS “Black Rock Reservoir Study Final Report, May 2002” and supporting appendices.

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	103.9 Fish and Wildlife Resources.	103.9 Initiate F&WL activities with early emphasis on review of documents and ongoing fish and wildlife work in the Hanford Reach, the Black Rock project area, and the Yakima River basin.	<p>1. Through conjunctive arrangements with the FWS and WDFW, assemble and review fish and wildlife documents and ongoing work associated with potential storage sites. Identify resource aspects surrounding the siting, construction, and operation of potential storage facilities. These aspects include anadromous fish and other aquatic, riparian/wetland, and terrestrial aspects.</p> <p>2. Prepare summary report on prior work of what has been done and additional fish and wildlife resources work which may be required for the feasibility study. Prepare draft scope(s) of work</p>	<p>Public Utility District No. 2 of Grant County Draft License Application for Priest Rapids.</p> <p>Sub-basin planning and salmon recovery documents for Yakima River basin.</p>

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	103.10 Cultural Resources	103.10 Review of prior cultural resources work (Class I Survey).	<p>1. Review cultural resources reports and ongoing work associated with (a) Priest Rapids Dam and Hanford Reach in vicinity of Black Rock project alternate pumping plant and intake facilities, and (b) Black Rock project alternate inlet works alignments, reservoir area, and alternate outlet works alignments.</p> <p>2. Review cultural resources reports associated with Yakima basin potential projects.</p> <p>3. Prepare summary report indicating what has been done and additional work which may be required for feasibility study. Prepare draft scope(s) of work</p>	<p>Public Utility District No. 2 of Grant County Draft License Application for Priest Rapids.</p> <p>Prior Yakima basin cultural resources reports.</p>

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	103.11 Public Involvement (PI) Plan and Program.	103.11 Design PI Plan and implement PI Program.	<p>1. Select a Contractor to (a) review related past public involvement program activities, and (b) develop a scope of work for a PI Plan and Program for the Storage Study which can be used for soliciting a Contractor.</p> <p>2. Solicit and select a Contractor to prepare a PI Plan and assist in the PI Program.</p> <p>3. Prepare PI Plan and initiate PI Program.</p>	

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104 Informational Meeting		104 Conduct informational meeting	1. Develop agenda, schedule, and prepare for meeting to inform congressional delegation and staff; Federal, State, and local entities; organizations and the public of status of feasibility study and work activities. 2. Conduct meeting.	
105 Status Report		105 Provide status report on Phase 1.	1. Prepare report describing what activities are underway, what has been completed, and what is scheduled for initiation. For completed activities describe findings and conclusions.	