

**Chief Joseph Hatchery Program
Mitigation Action Plan
March 2010**

Resource (s)	Implementation plans, monitoring, mitigation	Responsibility and Timing
General	<p>Project design and construction will meet all environmental requirements of the hatchery land lease agreement, the easements for the hatchery water pipeline and well field and all applicable permit regulations (all are in development at this time). Construction will incorporate industry standard Best Management Practices (BMPs) such as erosion control, hazardous material handling, waste management, water quality control, dust control, weed management, fire prevention, and work hour and noise considerations. Site design and construction will incorporate measures such as retaining riparian vegetation, landscaping with native plants, shielding facility lighting, and providing for public safety.</p>	<p>Colville Tribes, BPA, & U. S. Army Corps of Engineers</p> <p>Design phase and during construction</p>
	<p>At existing pond sites, construction will be staged to accommodate on-going irrigation and fish rearing operations and reduce environmental impacts.</p>	<p>BPA</p> <p>During construction</p>
	<p>To control noise, construction will be restricted to daytime hours (i.e. typically 7 a.m. to 7 p.m.). Contractors will be required to muffle equipment.</p>	<p>BPA</p> <p>During construction</p>
Fish and Aquatic Habitat	<p>Construction, operations & maintenance (O & M), monitoring and evaluation (M & E) shall comply with all terms and conditions of the Incidental Take Permit applied to this project by NOAA Fisheries Biological Opinion (NMFS 2008, pp. 96-102). Monitoring reports will be submitted to NOAA and U. S. Fish and Wildlife Service annually.</p>	<p>Colville Tribes & BPA</p> <p>During construction and long-term operations</p>
	<p>Instream structures and screens will meet applicable NOAA Fisheries and U. S. Fish and Wildlife Service design requirements.</p>	<p>BPA</p> <p>During construction and long-term operations</p>

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	Instream work will be performed to comply with applicable regulations and permits (Joint Aquatics Resource Permit Application (JARPA)/Clean Water Act (CWA), National Pollutant Discharge Elimination System (NPDES), Floodplain Development, Shoreline Management, etc.), and would be conducted within the regulatory agency('s) specified work window.	BPA During construction
	Water pumped out of instream work areas would be routed through a settling basin (or similar sediment treatment device) prior to discharge back into the river.	BPA During construction
	During dewatering of in-water construction areas, qualified fish biologists will remove fish from cofferdam locations and transport them back to the river at a safe distance from the construction area.	Colville Tribes During construction
	Sedimentation and erosion control measures, such as silt fencing, straw bales, and covering exposed soils with plastic sheeting, jute matting or mulching to minimize erosion, shall be used to prevent sediment from entering waterways and wetland habitats.	BPA During construction
	Construction contracts will stipulate that all heavy equipment should use synthetic hydraulic oil. Equipment will be maintained to prevent fluid leaks and would be serviced outside the riparian corridor.	BPA Before and during construction
	Disturbance to riparian vegetation will be the minimum necessary to achieve construction objectives, minimize habitat alteration and control erosion and sedimentation.	BPA During construction
	A comprehensive Monitoring and Evaluation (M & E) plan will be developed that will annually collect necessary data to assess program risks and benefits. The M & E plan will be designed to function with the recently initiated Okanogan Baseline M & E Program. M & E shall be conducted without harming ESA-listed species.	Colville Tribes & BPA Concurrent with construction & long-term operations
	Chinook salmon released into the Okanogan River and Columbia River shall be based on monitored effects to the listed species in the Okanogan River.	Colville Tribes Long-term operations

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	The diversion reaches on the Okanogan River (between the intake and outfall) will be monitored during extreme low flow periods to determine if Omak and Riverside pond's water withdrawals have harmful effects to any nearby redds. Contingency measures will be implemented as necessary.	Colville Tribes Long-term operations
Wildlife, Plants and Terrestrial Habitat	Leave snags, perch trees and riparian vegetation when practicable. Retain or landscape with native vegetation as much as possible to provide wildlife habitat.	Colville Tribes & BPA During construction and long-term maintenance
	Minimize disturbance of riparian vegetation to the amount necessary to achieve construction objectives while limiting the effects of erosion, sedimentation and habitat alteration.	BPA During construction
	Control noxious weeds on the project sites in accordance with the Okanogan County Noxious Weed Control Board.	Colville Tribes & BPA During construction and long-term operations
	Re-establish native plants in temporarily disturbed sites.	BPA During construction
Geology, Soils, Site Productivity	A grading plan and a temporary erosion and sedimentation control plan will be developed before site work begins to ensure earthwork impacts are minimized. Cut and fill volumes will be balanced to the extent feasible within each site to reduce the need for either imported or exported soil.	BPA Before and during construction
	Clearing limits would be identified on all construction drawings and established with silt fences or orange construction fencing.	BPA Before construction

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	Temporary sediment ponds will be used as a first step in grading and will be made functional before any additional soil disturbance occurs.	BPA During construction
	During clearing, grading and construction activities, all exposed areas at final grade or remaining bare for any period of time will be protected from erosion using weed-free straw mulch, plastic covering or a similar method.	BPA During construction
Hydrology, Floodplains and Water Quality	Equipment operated instream or beside the river will use synthetic hydraulic oil. All equipment will be free of petroleum, hydraulic or fuel leaks and will be serviced outside the riparian corridor.	BPA During construction
	Water quality monitoring will be conducted as specified by JARPA/CWA and NPDES permits (permit applications in process). Reports will be submitted as required to regulatory agencies (Washington Department of Ecology & U. S. Environmental Protection Agency).	Colville Tribes & BPA During construction and long-term operations
	At all sites, construction, O & M, and M & E shall comply with stipulations of JARPA/CWA permits, Shoreline Management Permits, zoning or rezoning conditions, and Floodplain Development permits.	Colville Tribes & BPA During construction and long-term operations
Cultural Resources	A qualified archaeologist will monitor construction activity at Omak and Riverside ponds as stipulated by the Memorandum of Understanding (in progress) among the Colville Tribes and BPA for National Historic Preservation Act Section 106 mitigation.	Colville Tribes & BPA During construction
	At sites other than Omak and Riverside ponds, implement BPA's Inadvertent Discovery Protocol to stop work, and to protect and assess any incidental finds.	Colville Tribes & BPA During construction

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Aesthetics	Plant and maintain native species for facility landscaping and to screen structures from public view.	Colville Tribes & BPA During construction and long-term maintenance
	Construct and maintain buildings that incorporate materials, colors, and architectural styles reflective of local character.	Colville Tribes & BPA During construction and long-term maintenance
	Shield exterior lighting to direct light down, not off-site.	BPA During construction
Land Use, Recreation, Transportation, and Public Safety	Meet conditions of the local zoning ordinances for the applicable zoning permits or rezoning requirements at the hatchery site, employee housing area, and Riverside and Omak ponds.	Colville Tribes & BPA During construction and long-term maintenance
	Allow for safe passage and/or traffic control on all roads and trails in the vicinity of project sites where public traffic might be impeded.	BPA During construction
	Fire prevention measures will be implemented such as training of staff, on-site first aid and emergency preparedness kits, equipment inspections and routine maintenance, water sources and fire extinguishers in homes and other proposed facilities.	Colville Tribes & BPA During construction and long-term operations
	Post safety signs around construction sites and access roads as needed.	BPA During construction

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	Establish a communication plan between the construction contractor, construction oversight contractor, BPA and hatchery manager/operator to identify, discuss and mediate for unanticipated safety related issues, and to communicate that information to local residents.	Colville Tribes & BPA Before construction
Air Quality	Implement dust abatement as necessary at all project sites.	BPA During construction