

**Bridge Coastal Restoration Program:
Campbell River Watershed – Summary of Agency Priorities**

Species	Priority	Project	Agency
Fish			
Lower Campbell			
Chinook Salmon	high	Target of 4000 spawners in Lower Campbell.	DFO
	high	Gravel placement in mainstem u/s of Second Island.	DFO
	high	Maintenance and monitoring of existing gravel projects. This includes future gravel replenishment as required.	DFO
	high	Future gravel projects will utilize gravels with higher contents of coarse sands which will hopefully result in higher egg to fry survival. Effectiveness monitoring is required.	DFO
	high	Support hatchery project to incubate chinook eggs in the Campbell with the intent of imprinting fish to spawn on gravel projects. Assessment of adult returns needed to determine success of this project.	DFO
	high	Estuarine rearing habitat may be limiting. Assessment of restoration opportunities is required including fry use analysis as well as mapping of area and vegetation. Evaluation of previous projects is also required.	DFO
Chum Salmon	medium	Target of 40,000 spawners. Populations appear to be at or near this target.	DFO
	high	Development of design and implement project immediately d/s of Second Island to reduce stranding during outages at John Hart.	
	low	Other projects directed specifically at chum. Proposed chinook projects will benefit chum spawning.	DFO
Coho Salmon	medium	Interim target set at 1000 spawners.	DFO
	medium	Rearing habitat is limiting and off channel projects offer the best restoration options.	DFO
Pink Salmon	low	No target. Very limited opportunities since gravel requirements are not suitable for the Lower Campbell.	DFO
Sockeye Salmon	low	No targets. Present but in low numbers (~ 100 spawners/yr.).	DFO
Steelhead Trout	high	Targets from GGBSRP set at 1,080 smolts and 140 adults based on habitat capacity. Stocks are an extreme Conservation Concern with only a few fish/km.	MOE
	high	Support for fish culture to enhance a sports fishery based on Tsitika stocks which have been showing up in the Lower Campbell.	MOE
Cutthroat Trout	high	Interim target set at 1000 smolts.	MOE
	high	Projects which would assist in identifying potential off-channel restoration opportunities and ensure connectivity.	MOE

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Multi-species	high	Ongoing monitoring and augmentation/replacement of gravels in Elk Falls Canyon.	MOE
Quinsam River			
Steelhead Trout	high	GGBSRP targets of 4800 smolts and 624 adults based on habitat capacity of the entire watershed. Based on current escapement data populations are likely a conservation concern.	MOE
	high	Fish use is currently skewed to areas d/s of the DFO fence. Investigate opportunities to increase steelhead access above the DFO fence.	MOE
	high	Habitat complexing in the Quinsam mainstem and in Cold Creek.	MOE
	high	Assessment of anadromous fish use in the Middle Quinsam	MOE
	low	Improved access above fall d/s of Lower Quinsam Lake could be a high priority in the long term if habitats below the falls were fully utilized.	MOE
Cutthroat Trout	medium	No targets.	MOE
	medium	Habitat complexing in small tributaries (Flintoff Creek, Cold Creek, etc).	MOE
Other Sport Fish	low	Resident rainbow, Dolly Varden, and kokanee are low priorities from a restoration perspective. MOE does consider resident rainbow and Dolly Varden to be high management priorities.	MOE
All species	high	Currently assessment is underway to look at water storage options at Wokas Lake. Implementation of recommendations from this assessment is considered a high priority.	MOE
Pink Salmon	high	Target set at 100,000 spawners.	DFO
	high	Improved access over Cascade Falls has provided 14 km of spawning habitat. DFO has 20 yrs of data prior to improvements and suggest that effectiveness of the fishway should be assessed (over ~ 8yrs.). This work would also provided valuable information regarding coho and steelhead smolt production.	DFO
	low	Any pink restoration work proposed prior to the above assessments being completed.	DFO
	high	Restoration works identified for chinook would also benefit pinks.	DFO
Coho Salmon	high	Target set at 10,000 spawners.	DFO
	high	Habitat capacity and restoration feasibility assessments for coho and chinook.	DFO
Chinook Salmon	medium	Targets set at 4000 spawners.	DFO

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	high	Habitat productivity assessments are a high priority. Chinook returns are low and this may be due to habitat factors.	DFO
	medium	Once habitat assessments are completed then feasibility for restoration should be undertaken.	DFO
Chum Salmon	low	Targets set at 1000 spawners. Projects directed at chum salmon are a low priority.	DFO
Salmon River			
Coho Salmon	high	Target set at 20,000 spawners (includes use of habitat above the diversion dam). Rearing habitat is considered limiting.	DFO
	high	Evaluate issues related to smolt migration and connectivity above and below diversion dam. (Currently WUP funded)	DFO
	high	Assessment of restoration options including those associated with the above evaluation.	DFO
	high	Potential groundwater channels near Big Tree Creek Main.	DFO
	high	Complete fish passage assessment at the Salmon River diversion. This is currently underway.	DFO
Chinook Salmon	low	Target set at 1200 spawners. Chinook are a high fish management priority but low from a restoration perspective.	DFO
Pink and Chum Salmon	low	No targets provided. Access likely restricted to areas below the canyon and likely unaffected by footprint impacts.	DFO
Steelhead Trout	high	Interim target provided at 20 adults/km.	MOE
	high	Nutrient augmentation u/s of the diversion dam.	MOE
	high	Side channel development specifically Big Tree side channel.	MOE
	high	Resolution of issues related to fish passage at the diversion dam. Implementation of works to improve access by multi species provided consideration is given to impacts on steelhead.	MOE
Upper and Lower Campbell Reservoirs			
Sport Fish (rainbow, cutthroat, Dolly Varden)		No targets provided. Dolly Varden and cutthroat are Blue-listed.	MOE
	high	Development of fisheries management plans and WUP studies should be completed before restoration projects are undertaken in both Upper and Lower Campbell Reservoir.	MOE
	low	Stabilization of Elk River is a low priority at this time. WUP studies may provide information to elevate this priority.	MOE
	medium	Instream Complexing (placement of LWD) in Drum Creek.	MOE

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	high	Channel and bank stabilization works and habitat restoration projects in the chain of lakes and creeks associated with the Salmon River diversion (Brewster, Gray, Whympier, and Fry Lakes).	MOE
	high	Nutrient enrichment of the above series of lakes.	MOE
	high	Restoration projects specifically directed at cutthroat and Dolly Varden. MOE has identified various projects.	MOE
John Hart Reservoir			
All species	???	Insufficient information is available regarding fish populations and restoration options to identify priority or targets. Well used as a fishery.	MOE

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Wildlife				
Riparian Habitat (High value habitat for many birds, mammals, amphibians)	high	Restoration of damaged riparian areas where feasible Covenants on private lands for long term conservation of riparian habitat Target low-gradient riparian sites as a priority Off-site restoration/securement in compensation for permanent loss of valley-bottom riparian	MoE CWS	na
Old-growth forest (High value habitat for some mammals and birds)	high	Silvicultural treatments of younger forest stands to speed attainment of mature/old-growth characteristics to benefit many wildlife species	MoE	na
Wetlands (High value habitat for many birds, mammals, amphibians)	high	Restoration of damaged wetlands to more natural conditions. Off-site restoration/securement in compensation for permanent loss of valley-bottom wetlands	MoE CWS	na
Roosevelt Elk Blue List	high	Winter range conservation, securement, enhancement Access management Population inventory and monitoring Controlled burns in 2 nd growth forests to enhance spring range foraging habitat	MoE	3,2,3
Vancouver Island Marmot Red List Endangered	high	Projects must be coordinated with the VI Marmot Recovery Team Restoration of populations to former range Population monitoring Research on effects of human activities, global warming, predator/prey interactions on populations	MoE CWS	1,6,1
Red-legged Frog Blue List, Special Concern Western Toad Yellow List, Special Concern	high	Conservation/enhancement of breeding sites Research on effects of reservoir operations on breeding success/populations	MoE	RLFR 3,1,2 WETO 3,2,4
Western Screech-Owl (<i>kennicottii</i> ssp) Blue List Special Concern	high	Riparian dependent Species at Risk, habitat restoration and securement potential. Inventory is needed in some areas Nest box programs?	MoE	3,1,2

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Great Blue Heron Blue List Special Concern	high	Monitoring of nesting colonies Securement/conservation of nesting sites Conservation of intertidal foraging areas	MoE CWS	6,2,3
American Water Shrew (<i>brooksi</i> ssp) Red list	medium	Inventory is very difficult, so manage suitable habitat for this species wherever possible Habitat management using Existing BMPs for riparian areas	MoE	1,6,2
Band-tailed Pigeon Blue List Special Concern	medium	Securement/conservation of critical mineral sites	MoE, CWS	5,2,3
Northern Goshawk (<i>lainji</i> ssp) Red List Threatened	medium	Breeding habitat conservation, landscape level land management Stand treatments (thinning, fertilizing) to speed up old-growth characteristics (larger trees, larger branches for nests, more open stands, higher canopy cover)	MoE CWS	2,6,1
Other Species At Risk Townsend's Big-eared Bat, Ermine, Keen's Myotis, Northern Goshawk, Short-eared Owl, Olive-sided Flycatcher, Sooty Grouse, Northern Pygmy-Owl, Barn Swallow, White-tailed Ptarmigan, Pine Grosbeak, Purple Martin, Barn Owl	medium	Lack of knowledge on occurrence and densities limits management capability. Inventory is needed for many Species At Risk. Where information allows informed decisions, conserve, enhance and secure habitat. Specific projects beyond inventory are difficult to develop	MoE CWS	
Riverine birds (Common Merganser, American Dipper, Harlequin Duck)	Medium-low	This species group affected by multiple BC Hydro operations Research on effects of water quality, stream productivity and fisheries relationships on productivity Conservation, stewardship and management of riparian habitat along rivers Research on genetics and dispersal of birds between river systems, Landscape level assessment of effects of Hydro and IPPs on riverine	CWS	AMD1 6,6,6 HADU 4,1,3 COME 6,6,5
Furbearers	Low	Inventory and landscape-level habitat management	MoE	

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Bald Eagle	Low	Winter roost, nesting habitat conservation Riparian covenants Nest tree management	MoE	6,6,6