

Bridge Coastal Restoration Program: Campbell River Watershed Plan Update

Public Information Session: Draft Notes Campbell River, BC May 28, 2009

Participant	Organization	Participant	Organization
Al McLean	BC Hydro	Larry Casper	BCRP
Andrew Macdonald	BC Hydro / BCRP	Lynn Wark	City of Campbell River
Anne Walker	BC Hydro	Mark Stewart	Uplands Excavating
Barry Ross	Greenways Land Trust	Mel Sheng	DFO / BCRP
Breanne Patterson	BC Hydro / BCRP	Mike Gage	BCRP
Brent Gurd	MOE / BCRP	Mike McCulloch	MOE / BCRP
Brian Assu	BCRP	Monica Stewardson	Mainstream Biological
Chris Beers	BC Hydro	Patricia Gooch	Greenways Land Trust
Craig Wightman	BCCF	Peter Winter	Campbell River Enviro. Committee
Don Doyle	MOE / BCRP	Rupert Gale	
Ed Hill	BC Hydro	Scott Allen	BC Hydro / BCRP
Erin Pierce	Greenways Land Trust	Shannon Anderson	DFO
Eva Wichmann	BC Hydro	Steve Macfarlane	Contractor
Fran Genaille	BCRP	Steve Watson	BC Hydro
Gary Searing	BCRP	Tania Tripp	Madrone Environmental Services
Harry Brownlow	BC Hydro	Ted Down	MOE
Helen Davis	Artemis Wildlife	Trystan Willmott	Madrone Environmental Services
Ian Douglas		Vivian Birch-Jones	BCRP
Jacob Irwin		Graham Hill	Northwest Hydraulic Consultants
Jim Lane	BCRP	Dave Ewart	DFO
Jim Van Tine	Haig-Brown Institute	Glen Hearn	Compass Resource Management
Joe Painter	Campbell River Salmon Foundation	Lorraine Ens	BC Hydro / BCRP
John Cooper	BCRP	Barry Ross	Greenways Land Trust
Jonathan Turner	Hemera	Dan Ohlson	Compass Resource Management
Ken Farquharson	BCRP	Kevin Conlin	BC Hydro

Morning Session

Introduction

The meeting began with an introduction of participants and a welcome from Mike Gage, Chair of the BCRP Management Board. Brian Assu was introduced as the new Chair.

Ted Down (MOE) explained the purpose of the workshop which was to provide a forum for local community members and First Nations to provide input on fish and wildlife restoration priorities for the Campbell River system, as suggested by BCRP agency partners: Ministry of Environment (MOE), Fisheries and Oceans Canada (DFO), and Canadian Wildlife Service (CWS). The public input received from the session will contribute to a larger initiative of updating BCRP's watershed plans to ensure they reflect the most current restoration needs to continue to address the ecological footprint created by the construction of hydroelectric facilities. The updated plans will serve as a framework for guiding and assessing future restoration proposals seeking BCRP funding.

The Campbell River Hydro-Electric System

Chris Beers (BC Hydro) provided an overview of the Campbell River hydro-electric system.

The Campbell River system consists of three dams: John Hart, Ladore and Strathcona. The lowermost facility is John Hart Dam which impounds John Hart Reservoir and diverts water to a powerhouse located downstream of Elk Falls.

The middle reservoir is Lower Campbell Lake, impounded by Ladore Dam, which also receives additional flows from the Salmon River and Quinsam River diversions. Its powerhouse is adjacent to the dam. This project also includes the Loveland Bay Saddle Dam, and the Big Slide Saddle Dam.

The uppermost Strathcona Dam impounds Upper Campbell Reservoir which backs up into Buttle Lake. This reservoir receives additional water from the Heber River diversion which augments Elk River inflows. The powerhouse is located at the toe of Strathcona Dam.

Eva Wichmann (BC Hydro) discussed the Water Use Plan for the area. Outcomes included operational changes at facilities, monitoring studies and physical works.

Q: Do the projects get posted on a website?

A: Yes, terms of reference and results are posted electronically on BC Hydro web site.

The Bridge Coastal Restoration Program in Campbell River

Scott Allen, Program Manager BCRP, provided a summary of BCRP funded projects in the Campbell River watershed since 1999. Overall, BCRP has spent \$15.4 million, of which \$3.8 million has been spent in the Campbell River system (25% of total BCRP investment to date) including the current fiscal year (2009/10). This funding has been spread over 45 fish and 23 wildlife projects. These include: spawning gravel purchases/placements, the Nature Conservancy of Canada Channel, channel stabilizations, fish passage construction at the Quinsam cascades, elk winter range restoration, Vancouver Island marmot work, a wildlife overpass on salmon diversion canal, owl surveys, bat house relocations, Baikie Island purchase and restoration, and Big Tree Salmon River side-channel.

Q: Where does the \$15.4 million come from, what is the funding formula?

A: No easy answer. BCRP money is not directly related to the amount of power generation from the facilities. The other compensation programs are attached to the water licences.

Q: Have you added up the in-kind and other funds with the BCRP investment?

A: Scott thinks for every dollar BCRP invests, it's about a 1:1 match with other funds.

Fish Passage Decision Framework

Kevin Conlin (BCRP Planning Committee) gave a presentation on BC Hydro's new fish passage decision framework. The framework provides a 7-step process under which to consider fish passage projects. The Fish Passage Decision Framework will ensure that fish passage decisions are based on a Triple Bottom Line (TBL) approach, with sound defensible criteria.

In general, the first steps are to be facilitated through the BCRP with input from the agencies and BC Hydro at certain points:

- Step 1: Preliminary Screening
- Step 2: Stakeholder and First Nations Engagement - Strategic Watershed Prioritization
- Step 3: Environmental Feasibility Studies
- Step 4: Preliminary Technical Feasibility Consideration
- Step 5: Compensation Program Endorsement

Further steps are to be carried out by BC Hydro with input and approval from the agencies at key points:

- Step 6: TBL Driven Business Case Development (Environmental, Technical/Financial and Social Benefits Assessments)
- Step 7: BC Hydro Board of Directors Approval

Comment (Mike Gage): >40% of the Salmon River watershed is blocked off by the diversion dam. A fishway is needed. They are at Step 4 in the decision framework in the Campbell Watershed. Climate change increases the urgency to get this done. The upper river will become more important.

Steve Watson: this process is still a work in progress. The Salmon River may be one of the first to go through the whole process.

Q: It's going to be a lot of subjective decisions, nice process, but what weights more at what time (with respect to triple bottom line)? How can this be more transparent?

A: They don't have equal footing. Financial constraints do play a part. The amount of benefit is important (e.g., not just helping 30 fish). Because each system is so unique you can't have a single formula. You have to understand true benefits with respect to cost and risks. The proposed process provides more clarity and more rational, defensible decisions.

Agency Priorities – Wildlife: Ministry of Environment

Don Doyle outlined the provincial government's wildlife priorities for the Campbell River area (see handout).

The provincial government's new Conservation Framework was presented. The 3 goals were explained. The limitations of the Conservation Framework were also discussed,

with an emphasis that game species management is still important to MOE – it is important to “keep common species common” (goal 2 of the Conservation Framework).

The first 3 listed ecosystems (riparian, wetlands, old growth) in the handout table are highly important for wildlife. BCRP needs to look at habitat enhancement out of the footprint area. Because there is only a small amount of old growth left outside the park, there needs to be management of second growth to restore old growth properties (or possibly acquisitions). There is a need for burning, which will increase ungulate forage and improve habitat for other species (e.g., blue grouse) but it needs to be ongoing management due to infill (needs spacing and thinning).

Furbearers are ranked low on the table, but there are short-tailed weasels (ermine; blue listed) present on the Island (4 were photographed during wolverine camera work) that need inventory.

Q: It's good to be choosing indicator species and choosing species that benefits lots of different species... but what does success look like? If you are improving ungulate winter range how do we know we've achieved what we want? How do you measure it? For example, they can count fish and know the escapements have increased. It helps BCRP know what projects to fund.

A: For some species (like marmots) it's easy to give parameters (more marmots), harder for species like goshawks, but you can quantify it (e.g., more breeding territories). Need to choose the right criteria for different species. Recognizes that open-ended inventory projects are not suitable for BCRP funds.

Q: What about riparian habitats and the effects on song birds?

A: Hard to recreate riparian on steep slopes. Hard to fit into the “footprint”.

Q: What about old growth?

A: Second growth forests are being logged quickly, may need to be acquired, no point in restoring stands that then get logged 10 years later!

Q: You say there is a lack of inventory, could you choose a few indicator species to manage that would improve the broader health of the drainage?

A: Just managing for ungulates may not help bears, should focus more on habitat restoration. Sayward forest is highly fragmented second growth, acquisition and restoration may be the only hope for habitat in that area.

Comment: Prioritizing habitats may be necessary (wetlands). Targets may need to be set for different habitats.

Comment: Some of the fish projects benefit wildlife too. Wildlife people need to let fish people know what else they can do.

Andrew MacDonald: These opportunities have been discussed in other watersheds – mentioned some of the work that has been done in lower mainland.

Q: Acquiring forest lands, do they have to be taken out of the land base entirely, or do you think they could still be harvested and managed for the values you are looking for?

A: Has been done, but eventually economics take over. Now looking at selectively logging old growth reserves.

Agency Priorities – Fisheries: Ministry of Environment

Mike McCullough gave a presentation of MOE management and restoration priorities (see handout) in the Campbell River watershed.

Large lake management plans are currently being drafted by MOE.

Q: What are your top priorities?

A: Salmon. Cutthroat trout versus rainbow trout dynamics. Would like to focus on immediate opportunities. About to start 10 years of studies which will highlight where their focus should be.

Q: Sometimes priorities between agencies don't line up (e.g., BC Parks). There is no parks representatives at the meeting.

A: Need better relationships between partners. Make link to enjoyment of parks by public (they want to see fish in parks).

Ted Down explained that they've got Parks sitting on some committees to get them involved/engaged so that they are part of strategies.

Mike McCullough: they try not to be so fish-centric and acknowledge other values next to restoration sites (amphibian, reptile and bird habitats).

Mike Gage: Parks has been a problem at times, complained about smell of dead fish.

Q: (Mike Gage) questioning the timing of recent smolt release, what is the impact on wild smolts?

A: The steelhead smolts do what they do, can't stop their development. They are leaving very quickly. They are larger than the chum fry, granted. If you delayed the release they would hang around as in-stream predators. If you released them earlier it is even more detrimental.

Agency Priorities – Fish: Fisheries and Oceans Canada

Mel Sheng provided an overview and rationale of DFO's identified priorities (see handout).

The fish passage through the Quinsam cascades had the potential to increase spawning habitat for 40,000 pinks. Fry counts done after the fishway construction show an increase in fry production from 6 to 10 million. Continued monitoring of the effects of this project is a high priority.

Emphasized the need for "native mixes" of gravel sizes (versus screened gravel) for spawning habitat restoration because sculpins are preying on eggs in mixtures that are too coarse. They did an experiment proving the effects.

Recommendations included the need to focus gravel placement at historic chinook spawning sites, provide cover in the form of rock clusters for spawners, and monitor and maintain existing gravel projects.

Climate change may be affecting river temperatures and this should be considered in future work. Example shown of high temperatures seen on Fraser River in 2004.

Q: Given the problems with the gravel porosity... can you adjust it by adding sand or other sizes now?

A: Hasn't really been discussed yet, it is an option. As they add new gravel, better mixes will be used.

Q: On lower Campbell, why aren't chinook utilizing the restored habitats?

A: Chinooks seem to stick to historic sites so DFO is focussing on improving the historic sites because gravel migration improves the downstream sites naturally.

Steve Watson summarized how far things have come in 10 years and the future under the WUP and thanked participants.

Afternoon Session

Breakout Groups

During the afternoon session, two breakout groups were facilitated – one for fish and another for wildlife. The general direction provided to the groups was to first review and discuss the initial agency priority ratings and identified project areas. Then, participants were asked to indicate their level of support, to suggest any potential changes, and to provide supporting rationale for their comments.

Fish Breakout Group – Summary

The fish breakout group was facilitated by Dan Ohlson (Compass Resource Management). The breakout group reviewed and commented on the agency priorities in the handout table.

In general, there was broad support and agreement on the identified agency priorities and projects for the watershed (unless noted otherwise below). Specific comments by location and species are summarized below.

Location / Species	Priority	Comments and Projects
Lower Campbell River		
Chinook	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Chinook. • Strong support for the ongoing priority on gravel placement, and in particular on the use of a more 'native' mix/size gravel specification. • The need for attention to the i) timing and duration of gravel placements, ii) monitoring of water quality, and iii) pro-active public communications with respect to the potential for turbidity issues was emphasized. • Strong support for the high priority on an assessment of restoration opportunities in the estuary. Integration of this assessment with the process underway regarding Fish & Wildlife Management Areas was suggested.
Chum	Med	<ul style="list-style-type: none"> • There was support for the Medium priority on Chum. • Strong support for the High priority on a project to reduce stranding downstream of Second Island.
Coho	Med	<ul style="list-style-type: none"> • There was support for the Medium priority on Coho noting the linkage with the Wild Salmon Policy. • Additional ideas regarding the potential for future off channel projects included: i) the need to first conduct an assessment of the effectiveness of existing channels, and ii) the need to thoroughly assess the feasibility of any potential new channels (e.g., Bjornason Channel).
Steelhead	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Steelhead noting the extreme conservation concern.

Location / Species	Priority	Comments and Projects
		<ul style="list-style-type: none"> • There was discussion regarding the fish culture project based on Tsitika stocks including the questions: i) was a tagging component included and would it be effective?, and ii) what is the potential influence on the potential for wild stocks to recover?
Cutthroat Trout	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Cutthroat Trout. • The general lack of good baseline information and the need for data gathering and assessment as an important step in identifying restoration opportunities was emphasized. • The linkage with Coho assessments was also emphasized.
Quinsam River		
Steelhead	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Steelhead noting the extreme conservation concern. • There was discussion regarding the potential project aimed at assessment of fish use in the Middle Quinsam area, noting that the DFO fence was not in fact a fish passage barrier. The general objective to improve fish use in upstream habitats was confirmed.
Cutthroat Trout	Medium	<ul style="list-style-type: none"> • There was support for the Medium priority on Cutthroat Trout. • The opportunity for improving stream stability as part of any habitat complexing projects was noted.
Pink & Coho	High	<ul style="list-style-type: none"> • There was support for the High priority on both Coho and Pink Salmon.
Salmon River		
Coho & Steelhead	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Coho and Steelhead. • There was discussion regarding the potential project aimed at assessment of restoration opportunities, emphasizing that this should include opportunities in the Upper Salmon watershed (assuming the fish passage issues could be eventually resolved/improved).
Chinook, Pink and Chum	Low	<ul style="list-style-type: none"> • There was support for the Low priority on Chinook, Pink and Chum noting that there were limited opportunities for restoration gains in this watershed.
Upper and Lower Campbell Reservoirs		
Dolly Varden and Cutthroat Trout	High	<ul style="list-style-type: none"> • There was strong support for the High priority on Dolly Varden and Cutthroat Trout. • Regarding potential project opportunities, the following discussion points were emphasized: <ul style="list-style-type: none"> • There is an opportunity to link in with the forthcoming WUP monitoring studies. • There already are an identified set of potential project opportunities. • All good projects would be given thorough consideration.

Wildlife Breakout Group – Summary

The wildlife breakout group was facilitated by Glen Hearn (Compass Resource Management). The breakout group reviewed and commented on the agency priorities in the handout table. There was consensus on most of the rankings but there were some disagreements and changes to priority projects as a result of the public input.

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
Riparian Habitat	High	<p>Riparian habitats are of high value for many birds, mammals and amphibians. Priority projects:</p> <ul style="list-style-type: none"> • 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. <p><i>The group agreed on high priority but not projects:</i></p> <ul style="list-style-type: none"> • <i>Yes, these habitats are important, but must conserve the remnants of what is left. Identification and conservation of remnants is a higher priority. Need to identify remnants, evaluate its quality and contact the landowners. Need an overall strategy so you don't end up with small fragments, need municipalities on side.</i> • <i>Not much opportunity to restore riparian, need to conserve what's left.</i> • <i>Need a strategy on the best path to achieve the best result (action plan needed.) Start with mapping, need an inventory to see what there is to conserve (and what is limiting).</i> • <i>There are major issues with data privacy that will make it difficult to conduct an assessment of priority habitats for conservation.</i> 	n/a
Old-growth forest	High	<p>Old-growth forests are high value habitats for some mammals and birds. Priority projects:</p> <p>Silvicultural treatments of younger forest stands to speed attainment of mature/old-growth characteristics to benefit many wildlife species.</p> <p><i>The group agreed on high priority.</i></p> <ul style="list-style-type: none"> • <i>Old growth was also discussed in the morning session.</i> • <i>If you're going to put in the effort you need to have security of the land status.</i> • <i>Currently there is no rotation age (<50 years), it's what is economically feasible.</i> • <i>You need to purchase logical pieces of land that link high priority areas you want to get at (old growth around wetlands).</i> • <i>If there are old growth patches left behind in places</i> 	n/a

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
		<p>where logging companies are selling land (i.e., TimberWest) could they be purchased to achieve the conservation goals?</p> <ul style="list-style-type: none"> • Need a partnership approach to land acquisitions. And yet you need to be able to move quickly. 	
Wetlands	High	<p>Wetlands are high value habitat for many birds, mammals, amphibians. Priority projects:</p> <ul style="list-style-type: none"> • Restoration of damaged wetlands to more natural conditions. • Off-site restoration/securement in compensation for permanent loss of valley-bottom wetlands. <p><i>The group agreed on high priority.</i></p> <ul style="list-style-type: none"> • Restoration of damaged wetlands needs to be done as well as conservation of what exists. Need a multi-tiered approach. (Restoration is easier than creation of new wetlands). • There may be opportunities associated with the significant wetlands around Campbell Lake. • It was felt that Estuaries should also be a habitat area for consideration under BCRP (added below). 	n/a
Roosevelt Elk	High	<ul style="list-style-type: none"> • Winter range conservation, securement, enhancement • Access management. • Population inventory and monitoring. • Controlled burns in 2nd growth forests to enhance spring range foraging habitat. <p><i>There was a great deal of discussion on what priority elk should be. MOE feels it's a high priority, First Nations feel it's a high priority, but not everyone at the workshop felt it should be high (particularly in relation to other species), Possibly it should be med-high?</i></p> <ul style="list-style-type: none"> • <i>What is the difference between burning and logging? More forbs from burning (higher quality spring habitat). Effects only last 5-15 years.</i> • <i>Burning is beneficial but very, very costly (\$40-50,000 for 20-30 ha)and effects are very short term.</i> • <i>Socially very high priority for recreationists and First Nations. And burning is culturally appropriate.</i> • <i>Could Roosevelt elk be back at historic levels? Not good historic information.</i> • <i>Discussion on whether BCRP should fund socially important species especially ones that do seem to be doing well. Don Doyle: very sensitive to over-hunting (which is MOE's jurisdiction) AND they were directly impacted by loss of lower elevation habitats. Ken Farqueson, as a board member, didn't feel it important.</i> • <i>Maybe elk winter range in Thelwood and spring range around Campbell lakes is a high priority, not elk</i> 	3, 2, 3 Blue list

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
		<i>themselves.</i>	
Vancouver Island Marmot	High	<ul style="list-style-type: none"> • 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. <p><i>The group agreed on the priority ranking.</i></p> <ul style="list-style-type: none"> • <i>VI marmots are a very high priority under the CF, higher than spotted owls (which are considered a peripheral species).</i> • <i>Socially very high priority due to all the PR they've received.</i> 	1, 6, 1 Red list Endangered
Red-legged Frog (A-RAAU) Western Toad (A-BUBO)	High	<p>Suggested projects:</p> <ul style="list-style-type: none"> • Conservation/enhancement of breeding sites. • Research on effects of reservoir operations on breeding success/populations. <p><i>Agreed upon on as high priority species and projects.</i></p> <p><i>Added:</i></p> <ul style="list-style-type: none"> • <i>Amphibians are high priority because they are a footprint impacted species that have been directly affected by inundation.</i> • <i>Identification of key habitat is important (for conservation etc.) such as Strathcona and Patterson.</i> • <i>Added importance of bullfrog expansion and Chytrid fungus sampling.</i> 	A-RAAU 3, 1, 2 Blue list Special Concern A-BUBO 3, 2, 4 Yellow list Special Concern
Western Screech-Owl (<i>kennicottii</i> ssp)	High	<p>Suggested projects:</p> <ul style="list-style-type: none"> • Riparian dependent Species at Risk, habitat restoration and securement potential. • Inventory is needed in some areas. • Nest box programs? <p><i>The group agreed with the high priority ranking.</i></p> <ul style="list-style-type: none"> • <i>Add project: evaluate effectiveness of nest box program.</i> • <i>Not necessarily new inventory but long term monitoring.</i> • <i>May be able to link the work here to work done in the other areas like the Shuswap.</i> 	3, 1, 2 Blue list Special Concern
Great Blue Heron	High (medium)	<ul style="list-style-type: none"> • Monitoring of nesting colonies. • Securement/conservation of nesting sites. • Conservation of intertidal foraging areas. <p><i>One of the few priorities that changed, from high to medium.</i></p> <ul style="list-style-type: none"> • <i>For MOE it's a high priority on Vancouver Island but medium priority in Campbell River watershed</i> • <i>Estuaries are an important habitat for great blue heron</i> 	6, 2, 3 Blue list Special Concern

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
		<i>(especially the Salmon River Estuary)</i>	
American Water Shrew (<i>brooksi</i> ssp.)	Medium	<ul style="list-style-type: none"> • Inventory is very difficult, so manage suitable habitat for this species wherever possible. • Habitat management using Existing BMPs for riparian areas. <p><i>Agreed on medium priority due to rarity and need for riparian habitat.</i></p> <ul style="list-style-type: none"> • <i>There are existing BMPs that should be used if you think they may be present.</i> 	1, 6, 2 Red list
Band-tailed Pigeon	Medium	<p>Suggested projects:</p> <ul style="list-style-type: none"> • Securement/conservation of critical mineral sites <p><i>The group agreed that it is a medium priority, but it was pointed out that CWS considers it a high priority.</i></p> <ul style="list-style-type: none"> • <i>Numbers are decreasing drastically in other places, not sure here.</i> • <i>Project priority: identification of mineral sites (need to be close to breeding sites. Could be done through radio-telemetry monitoring.</i> • <i>Efforts could partner with other agencies (including Federal)..</i> 	5, 2, 3 Blue list Special Concern
Northern Goshawk (<i>laingi</i> ssp)	Medium	<p>Suggested projects:</p> <ul style="list-style-type: none"> • 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). <p><i>The group agreed on the medium priority.</i></p> <ul style="list-style-type: none"> • <i>Could do more inventory but conservation of forest with old growth characteristic are a higher priority (use inventory to know where the breeding territories are).</i> • <i>You could enhance a nest territory if you knew where it was (they are relatively small). You wouldn't want to do it if you didn't have agreement on long-term management of the forest.</i> • <i>Could enhance land set aside under WHAs- it is protected so would be worth enhancing.</i> 	2, 6, 1 Red list Threatened
Other Species At Risk Townsend's Big-eared Bat, Ermine, Keen's Myotis, Short-eared Owl, Olive-sided Flycatcher,	Medium	<p>Suggested projects:</p> <ul style="list-style-type: none"> • 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. 	

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
Sooty Grouse, Barn Swallow, White-tailed Ptarmigan, Pine Grosbeak, Purple Martin, Barn Owl, Marbled Murrelet		<p><i>Group suggestions:</i></p> <ul style="list-style-type: none"> • <i>Need inventory.</i> • <i>Need security of land management.</i> • <i>Removed goshawk and pygmy owls because they are dealt with elsewhere in this table.</i> • <i>Purple martin nest boxes would be very beneficial on pilings in Salmon Estuary and on some of the lakes.</i> 	
Riverine birds (Common Merganser, American Dipper, Harlequin Duck)	Medium-low	<p>Suggested projects:</p> <ul style="list-style-type: none"> • 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 birds. <p><i>Comments:</i></p> <ul style="list-style-type: none"> • <i>Would have been directly affected by reservoirs, and if you want to keep the common species common... especially harlequins.</i> • <i>COME and AMDI would be low and Harlequins should be separated to its own section and be given a medium priority.</i> 	<p>AMDI 6,6,6 HADU 4, 1, 3 COME 6, 6, 5</p>
Furbearers	Low	<p>Suggested projects:</p> <ul style="list-style-type: none"> • Inventory and landscape-level habitat management. <p><i>Comment:</i></p> <ul style="list-style-type: none"> • <i>Ermine is of highest concern, it's a medium priority and is listed as such under species at risk</i> 	
Bald Eagle	Low	<p>Suggested projects:</p> <ul style="list-style-type: none"> • Winter roost, nesting habitat conservation. • Riparian covenants. • Nest tree management. <p><i>Bald eagles have a very high social value, but are of low conservation concern.</i></p> <ul style="list-style-type: none"> • <i>There has been a lot done in terms of pole placement and Baikie land acquisition (and all fish stock increases benefit eagles).</i> 	<p>6, 6, 6 Yellow list Not At Risk</p>
Estuary Habitats	High	<p><i>Added to list as a high value habitat.</i></p> <ul style="list-style-type: none"> • <i>Is there enough already? The threat: development.</i> 	n/a
Northern	High	<i>Added to list.</i>	5, 1, 3

Species/ Ecosystem	Priority	Comments and Project*	STATUS (conservation framework, provincial, COSEWIC)
Pygmy-Owl (<i>swarthi</i> ssp.)		<ul style="list-style-type: none"> • <i>Need inventory specifically for pygmy owls, not well served by the multi-species inventory that has been conducted previously.</i> 	Blue list
Invasive species	Medium	<i>Added to list.</i> <ul style="list-style-type: none"> • <i>Has to serve a priority – invasive species management with respect to what other priorities it serves.</i> • <i>Projects: outreach, education</i> 	n/a
Osprey	Medium	<i>Added to list.</i> <ul style="list-style-type: none"> • <i>High social value.</i> • <i>Easy to do.</i> • <i>Projects: add nest platforms.</i> 	6, 6, 6 Yellow list
Invertebrates and Plants		<i>Added to the list.</i> <ul style="list-style-type: none"> • <i>Need inventory - gastropods, butterflies.</i> 	

* non-italicised text is what was presented to workshop participants, italicised text is input from participants.

General Comments and Questions

- It was generally felt that a balance needed to be struck between focussing projects on species and habitat. Habitat issues were seen to be a priority due to their impact on many species. Clearly, however, projects are also important for specific species not captured by habitat issues. Conservation and preservation were seen as higher priority than restoration of habitat for wildlife due to the costs associated with restoration. Also, it is difficult to restore or create valley bottom habitat in flooded valleys. Identification of high value wildlife habitat should be undertaken (including the status of the land in question). Priority areas should be identified within an action plan in case opportunities arise for land acquisition.
- The need for on the ground activities needs to be better conveyed to proponents. Encourage partnerships for future work (e.g., state in proposal who will implement the future restoration actions).
- There was a discussion on the existence of a lot of data collected during impact assessments during BC Hydro works (e.g., dam upgrades) that is “public”, but maybe not highly accessible. Proponents should access these reports (as well as data gathered by First Nations). There will be new search functions on the new website that will make this easier.
- Access to data collected by proponents was also discussed, maybe there should be a requirement to submit data to the CDC or SPI databases?
- General inventory needed by a “SWAT team” of experts for rare and unusual species such as butterflies, rare plants, SAR, etc. Action plans need to be written.

- Ted Down: there are drivers of the program other than conservation of species (both fish and wildlife); sustainable use is a valid objective. There are management targets and conservation targets.
- Don Doyle: agreed with Ted's comments, would like to see elk do even better because of the high demand for hunting. Questioned whether it should be a BCRP objective though?
- There was a discussion on constraints of water use for wetland construction/restoration. Provision of water, even seasonally, is difficult (being studied under WUP). Perhaps protection of existing wetlands is a better use of funds.
- Larry Casper: grizzly bears in Lillooet have been coming into town due to 3 hard winters... needed mitigation and education of residents instead of restoration. It's important to keep the ultimate goal in mind (in this case, conservation of grizzly bears).

Q: How will these priorities be used?

A: Will give proponents an idea of what will be funded. The final priorities table will not identify which priorities belong to which agency.

Q: Can you do projects that improve things for impacted species without recreating the destroyed habitat (e.g., do burning to compensate for the riparian destroyed by impoundment)?

A: Yes, it's part of the vision on how we want things to look in the future.

Q: (Mike Gage) Has a burn ever been paid for by BCRP?

A: All the background work was done but the burn never took place due to uncooperative weather conditions.

Final Plenary Session

Each break out group summarized their discussions and comments during a plenary discussion.

General Comments and Questions

- The need for stated objectives and targets for all projects was emphasized.
- The potential opportunities for wetland projects were discussed noting both pros and cons: i) existing side channels could be utilized to raise the water table and flood newly created depressions, and ii) water provision and maintenance should be considered up-front.
- The general opportunity to develop joint Fish and Wildlife projects, or more generally projects that had side benefits to other species was highlighted. The desire to improve collaborations was emphasized.

Q: What is the life span of the Hydro facilities?

A: There are no plans to decommission any of the facilities.

Q: (Mel) The way priorities have been set here is within the old BCRP frameworks, but if that is changing... if you're enhancing steelhead and it's impacting pinks, could you propose a project that would evaluate that interaction?

A: Yes.

Q: Would BCRP fund fish culture if the demise of a stock was caused by the installation of Hydro facilities?

A: Kevin Conlin: Yes, that's a new thing for BCRP. Ted Down: if that helps reach the future desired condition. Andrew MacDonald: and that has to be clear to proponents and boards that that is the case. Need to do the strategic planning to get all this in place.

Q: Is there a way to create a watershed team that could coordinate between the fish and wildlife people to better coordinate mutually beneficial projects?

A: Scott Allen: find out who the members of the wildlife TRC are, could contact them. Andrew MacDonald: gave the Ash example of a coordinated approach within the watershed.

Q: Is there a way to have a list of people that one would contact when developing a project that would be more inclusive? For instance not only wildlife people for projects that are wildlife projects but fish people where it might have synergy?

Q: Should there be a new category of projects that ties together fish and wildlife projects (e.g., creating side streams for amphibians) – creating value-added projects?

A: Yes.

- Ted Down: a need for a strategic plan on habitat actions for wildlife was identified, within fisheries there are ~4 activities (habitat management/restoration, stabilization etc.). There should probably be a prioritization of habitats by watershed in order to consolidate them into an implementation plan. These include sustainable use objectives and should incorporate stakeholder and ministry (Federal and Provincial) objectives for fish and wildlife.

Next Steps

The next steps expected towards updating the watershed plans were discussed as follows:

- Prepare and distribute draft workshop notes to participants,
- Finalize workshop notes,
- Agency representatives will review and finalize their agency priorities for the watershed,
- Agency priorities and public feedback will inform the updating of the watershed plans (likely in an addendum to the plan), and,
- Updated watershed plans (addendum) will be prepared and made available before the next funding cycle.