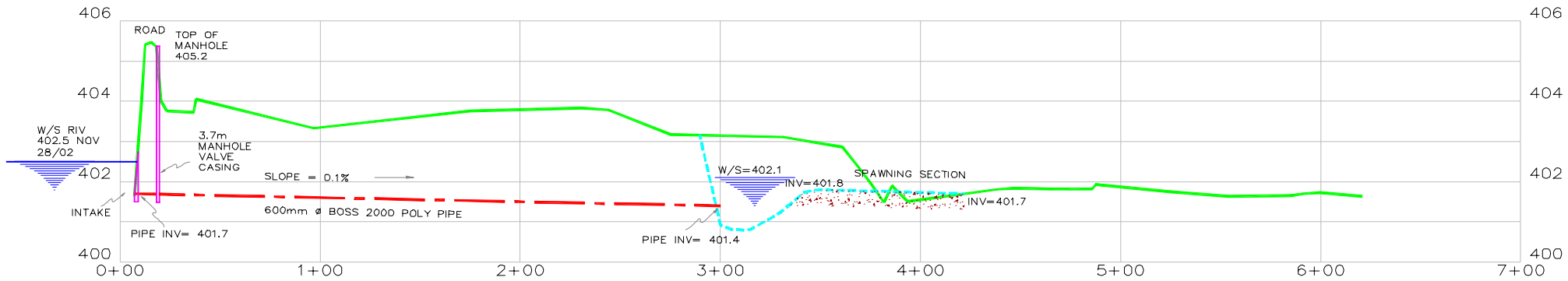
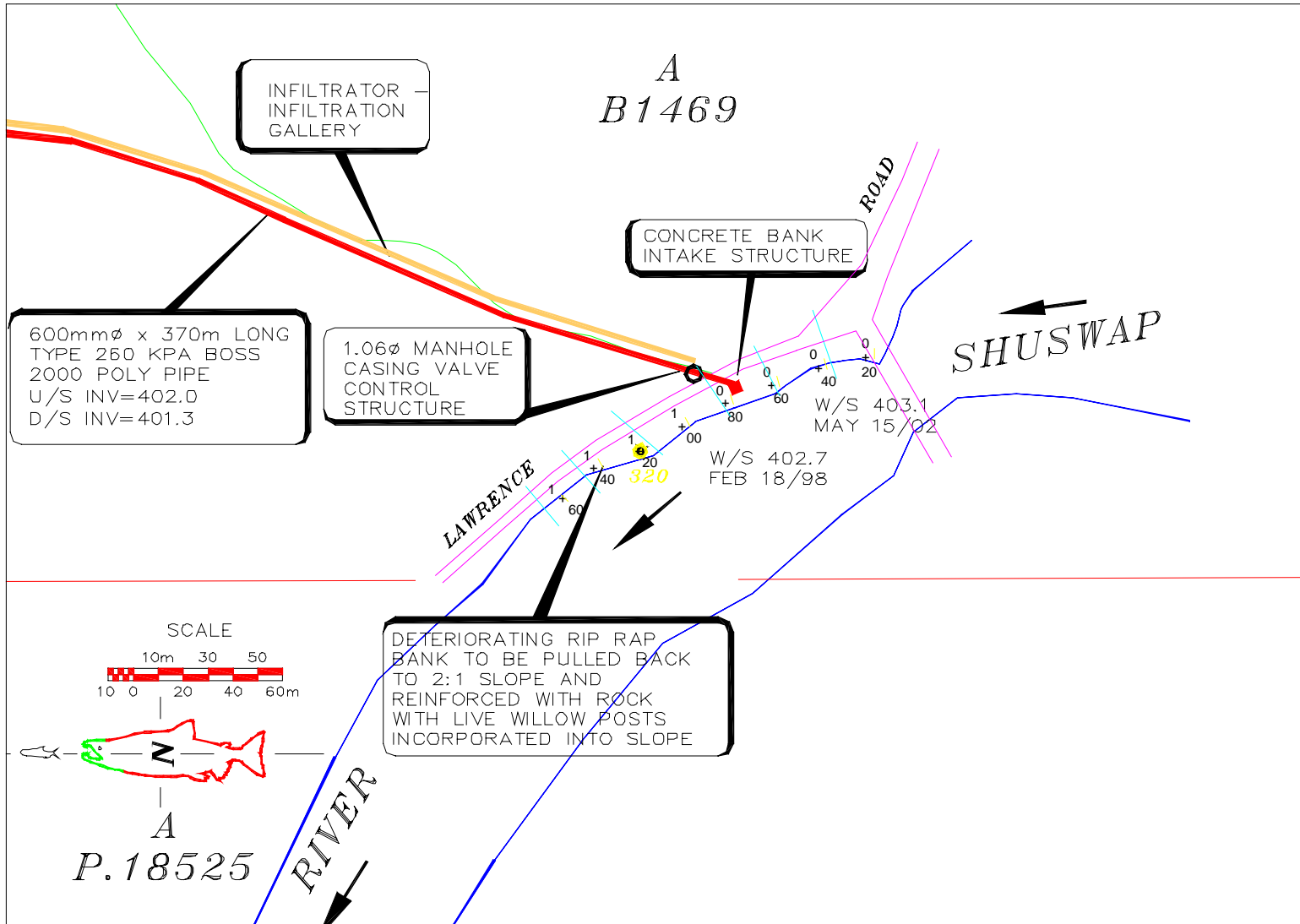


# APPENDIX A

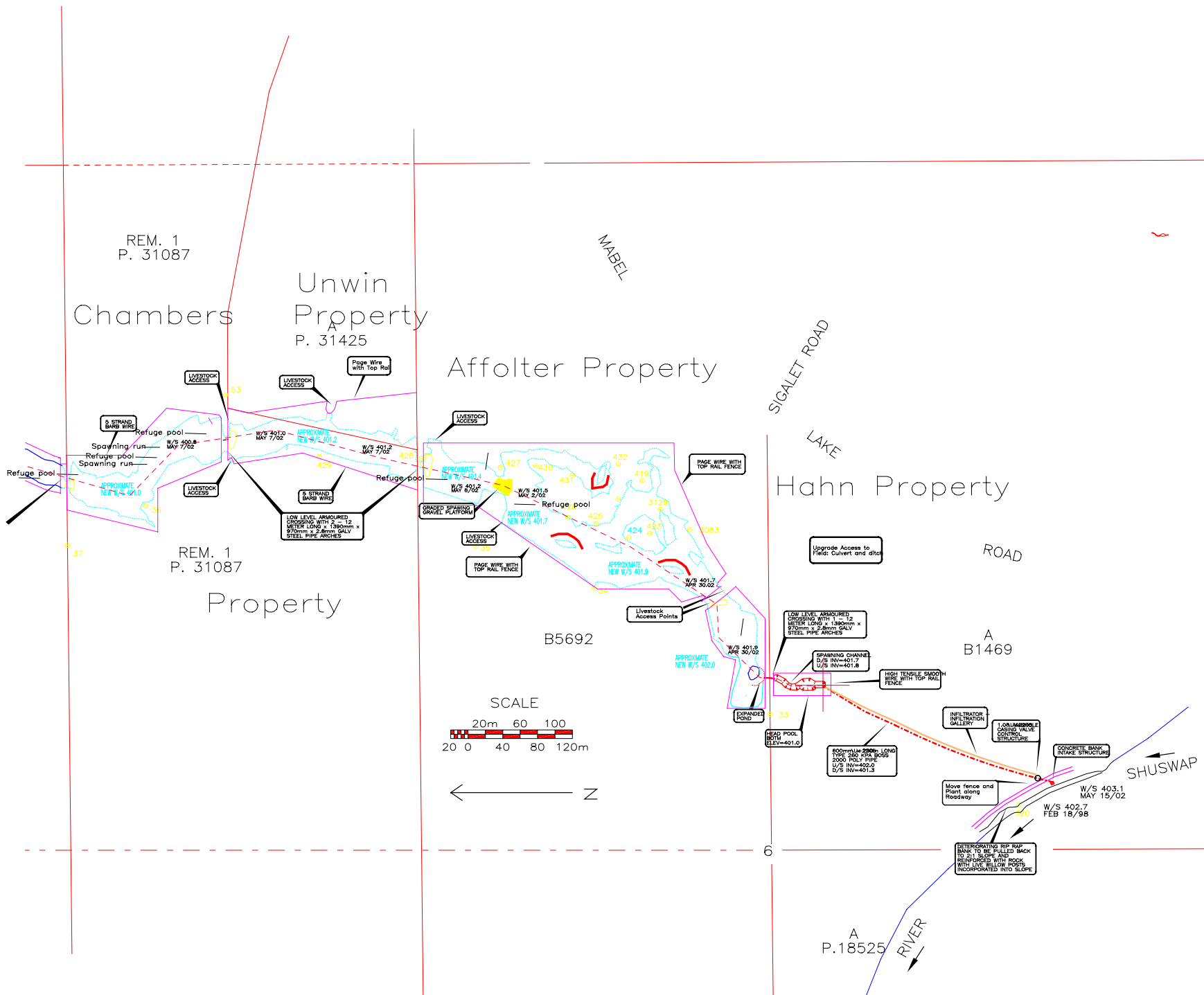
## MAPS AND DRAWINGS



Profile of the intake pipe



Plans for intake, control valve and the alterations done to Lawrence Road





# APPENDIX B

## BEFORE AND AFTER PICTURES



Before 1: An upstream view of the Shuswap River showing the riprap along Lawrence Road downstream of the Bailey bridge. The riprap was steep and self-launching where the intake was placed.

After 1: The same view after the road was pulled back 2 m and 40 loads of rock added. Willow stakes were planted in between the rocks.





Before 2: The Hahn property looking south from the Affolter property line before the sediment pond was excavated in October 02.



After 2: The same view in May 03.



Before 3: A northward view of the Hahn/Affolter property line in October 02.



After 3: The same view with the sediment pond in May 03.



Before 4: View of Affolter property looking northward from the Hahn property line in October 03.



After 4: Same view in May 03.



Before 5: Affolter property looking north towards main crossing October 02



After 5: Looking north towards the Affolter main crossing in May 03.



Before 6: Looking south from center livestock access point on the Affolter property in October 02



After 6: Looking south from center livestock access point on the Affolter property in May 03.



Before 7: Looking west along the Affolter-Chambers property line. The bridge was barely functional for foot traffic.



After 7: The same view as above with the bridge replaced by a culvert.



Before 8: Looking eastward across the old bridge.



After 8: The new access is 20 ft wide.



Before 9: Looking west across the southern most water access point on the Affolter property.



After 9: The access point has been rocked, graveled and fenced.



Before 10: The Chambers crossing looking westward. There were no functioning culverts before construction.



After 10: Two culverts have been placed and the riparian area fenced.



Before 11: A view of the Chambers crossing looking east.



After 11: Culverts have been added and the crossing graveled and fenced. There are cattle access points on both sides of the crossing.



Before 12: Looking south from the Chambers crossing in October 02.



After 12: The October photo shows an improved crossing with a 2x6 board fence.



Before 13: A view of the channel looking upstream (south) on the property owned by the limited company in January 03.



After 13: The same view as above in May 03 with the water flowing.



Before 14: This side channel on the Ltd property is dry in October before the water is diverted.



After 14: The diverted water makes this ideal rearing habitat for Coho.



Before 15: The old culvert had washed out and the crossing had been trampled to the point that it was no longer usable. This is the southernmost crossing on the property owned by the 459218BC Ltd.



After 15: Culverts have been added and the crossing graveled and fenced.



Before 16: The old culvert had been plugged from trampling by cattle making this crossing unusable most of the year.



After 16: This tributary crossing on the 459218BC Ltd property after a culvert and gravel were placed and the fence rebuilt.



Before 17: A tributary to the Procter Channel flows through the farmyard of the 459218BC Ltd property.



After 17: The tributary has been redefined and fenced to prevent future trampling and sedimentation of the channel.



Before 18: Cattle had free access to the channel and tributary due to downed fences on the 459218BC Ltd property.



After 18: The road has been upgraded and the fence rebuilt to keep cattle from entering the water and trampling the stream banks.



Before 19: This section of the channel was dry in October. The old rail fence that is lying on the ground in this photo was reused at the crossings on the 459218BC Ltd property.



After 19: The same section of the channel with water in May 03.



Before 20: A view from the old crossing facing upstream (south) on the Procter property. This section was dry except during freshet.



After 20: The sod was removed from the channel and the crossing upgraded.



Before 21: A downstream view from the Procter crossing in October 02.



After 21: With the diverted flow, this gravel on this section of the channel will be kept clean for spawning.



Before 22: From the crossing downstream was dry on the Procter property from July through May before the water was diverted.



After 22: Same view in May 03.



Before 23: Upstream view of the channel on the Procter property in Oct. 02.



After 23: Photo taken in May 03.



Before 24: Procter property in October 02.



After 24: May 03



Before 25: The crossing on the Procter property had several 8 – 10” pipes for culverts.

After 25: The small pipes were replaced with larger fish-friendly arches to handle the additional flow.





Before 26: An upstream view of the channel on the Procter property from the Huwer fence line. This area trapped fish when the high water dropped.



After 26: The new low water level provides year round habitat.



Before 27: The channel just before re-entering the Shuswap River in Oct. 02.



After 27: The diverted water is now able to keep the spawning gravel clean in the lower channel.



Before 28: The water had to make a 90<sup>0</sup> bend before entering the Shuswap.



After 28: The corner was rounded and armoured to prevent erosion.



Before 20: The water would often break over the bank at the sharp corner and scour a hole that would trap fish.



After 29: The bank at the corner is armoured and the scour hole filled.



Before 30: A different view of the hole scoured on the backside of the 90<sup>0</sup> corner on the Huwer property.



After 30: The same view as above with the corner rounded and armoured and the hole filled.

# APPENDIX C FINANCIAL REPORT

## Shuswap River - 02 sh 36

### Statement of Income and Expenditures

#### REVENUE

Grant - BC Hydro Water Restoration	258,460.00
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<b>Earned Grant Revenue:</b>	258,460.00
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#### EXPENSES

Wages:		
	Project Supervisor	16,535.00
	Crew	28,994.00
	Spring Planting 2003	21,126.00
	Total Wages	66,655.00

Other Expenses:		
	Equipment and related expenses	164,898.00
	Overhead & Administration expenses	23,698.76

<b>Total expenses:</b>	255,251.76
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<b>Net Income</b>	3,208.24
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**Note: Total grant revenue rec'd to date - \$ 228,823.69**

# APPENDIX D

## ACKNOWLEDGEMENTS



# PROCTER CHANNEL

## SALMON HABITAT RESTORATION PROJECT



A section of the Procter Channel in February shows the pond and cattail habitat ideal for over-wintering Coho.



Seven landowners, Fisheries and Oceans Canada and Whitevalley Community Resource Centre Society worked together to create over four kilometers of rearing habitat for juvenile salmon and trout.

Water was diverted from the Shuswap River to flow year-round in a remnant channel that provides over 13 hectares (over 30 acres) of stream, ponds and wetlands.

Shortly after the salmon fry emerge from the spawning gravel in May, they seek refuge in protected areas such as this channel. The Coho and some of the Chinook will remain here for a year. In the spring of their second year, they will smolt and migrate to the ocean.



The above photo shows a view of the channel before work began. The photo below shows the same view after the water was diverted into the channel.



### Partners in this project are:

Robin Hahn and Kelly Law	Bruce Unwin	Fisheries and Oceans Canada
Rudy and Melanie Affolter	The Procter Family	
Art Chambers	Jim and Charlene Hauer	Whitevalley Community Resource Centre
Doris and Darrel Squair	459218BC Ltd.	

### Funding provided by:

BC HYDRO  
**FISH & WILDLIFE**  
BRIDGE COASTAL RESTORATION PROGRAM

# \* Salmon Restoration Project goes ahead on Shuswap

Whitevalley Community Resource Centre (WCRC) in co-operation with BC Hydro's Bridge

Coastal Fish and Wildlife Restoration Program (BCRP), The Department of Fisheries and Oceans and local land owners have begun construction on a \$250,000.00 salmon enhancement project in the Mabel Lake area.

This project will divert

water from the Shuswap River at Lawrence Road to a remnant channel. This will create a year round stream over 3 km long that will provide flowing water to over 40 acres of ponds and cattail marshes, all excellent rearing habitat for coho and chinook salmon

and rainbow trout.

The project involves seven property owners who have agreed to call the new side channel the Procter Channel after the family that pioneered the Mabel Lake valley.

The project will divert approximately 8 M<sup>3</sup>

of water from the Shuswap River through 300 m of pipe to an existing channel. This existing channel currently flows only during high water from May until June and becomes isolated as the river level drops. The introduced water will provide a year-round flow that will enable both spring and fall spawning and over-winter rearing habitat.

The project will provide employment for fencing and planting crews and local equipment contractors. Plant stock and over 5 km of fencing material will be

purchased from local suppliers.

BCRP funds projects to restore fish and wildlife populations and habitats in watersheds impacted by the construction of hydroelectric generation facilities in the Bridge River/Coastal Generation Area. These 15 watersheds are located throughout the Fraser Valley, Vancouver Island, Coastal, Bridge River and Shuswap areas. The BCRP provides \$1.5 million in annual funding to support eligible fish and wildlife projects within these watersheds.

## Salmon Habitat Project on Shuswap River nears completion

Whitevalley Community Resource Centre Society (WCRC) is nearing completion of the Procter Channel, a salmon habitat enhancement project on the Shuswap River. Water was diverted from the Shuswap River at Lawrence Road approximately 6 km downstream (north) of the Wilsey Dam on Mabel Lake Road. This water will supply a year-round flow to 4 kms of remnant channel, cattail marshes and ponds.

The 6 kms of river between the diversion and hydro dam is one of the heaviest spawning areas on the Shuswap River. Once the fry emerge from the spawning beds, they seek calmer water to rear. The Procter channel will provide habitat for many of these juvenile salmon and trout. The ponds and marsh areas provide abundant food as well as protection from birds, larger fish and other predators. The area, which covers approximately 30 hectares, also provides excellent habitat for other wildlife as well.

WCRC worked closely with the staff of from Fisheries and Oceans Canada and seven landowners along the Shuswap River to complete this project. Funding was provided by B.C. Hydro's Bridge Coastal Fish and Wildlife Restoration Program (BCRP).

BCRP funds projects to restore fish and wildlife populations and habitats in watersheds impacted by the construction of hydroelectric generation facilities in the Bridge River/Coastal Generation Area. These 15 watersheds are located throughout the Fraser Valley, Vancouver Island, Coastal, Bridge River and Shuswap areas. The BCRP provides \$1.5 million in annual funding to support eligible fish and wildlife projects within these watersheds.

LYT  
May 14/03