Maple Creek
Off-Channel Restoration Project
2001

BCRP Project Number	
Approved	**May 16, 2001**
Approved Funding	**$30000**
Funding Expensed	**$10464, FN $5000**
Prepared for	**BC Hydro** **Bridge Coastal Fish and Wildlife Restoration Program**
Prepared by	**Maple Creek Watershed Streamkeepers**

Acknowledgements

Financial Contribution and In-Kind Support from:

BC Hydro Bridge Coastal Fish and Wildlife Restoration Program

And

City of Port Coquitlam
Fisheries and Oceans Canada, HEB Resource Restoration
Pacific Salmon Foundation
City of Coquitlam
Fisheries Renewal BC
Province of BC, Water Land and Air Protection
Kwikwetlem First Nation
Pacific Streamkeepers Federation
Carrera Property Group
Bertram Excavating Limited of Coquitlam
Maple Creek Watershed Streamkeepers
Coquitlam River Watershed Society
North Fraser Salmon Assistance Project
Douglas College Institute of Urban Ecology
Douglas College Watershed Restoration Program
Riverview Horticulture Society
Burke Mountain Naturalists
PoCo Scouts and Girl Guides

We wish thank the individuals as well as the organization they represent.

We could not have done this without each and every one of you.

This report is a best effort 2004 reconstructed 2002 report.

Executive Summary

The Maple Creek Off-Channel Restoration Project 2001 was a success, both in meeting the identified objectives of habitat rehabilitation and in the creation of permanent partnerships. It is these partnership that we wish to honour with this report.

The goal of the Maple Creek Off-Channel Restoration Project 2001, as identified in the *Maple Creek Habitat and Enhancement Plan,* was to rehabilitate the fisheries habitat of the lower watershed and increase biodiversity while developing and maintaining meaningful partnerships. This goal was achieved by reaching the four project objectives:

Objective 1 Increase off-channel pool habitat: Outcome- increased outmigration numbers resulting from the additional protection from high flows, low flows, pollution pulses and predators

Objective 2 Increase spawning habitat: Outcome- increased spawners which increased available nutrients in system, increased robustness of juveniles, increased outmigration numbers

Objective 3 Increase riparian vegetation biodiversity: Outcome- increased flora and fauna biodiversity, increased organic inputs, improved water quality, reduced impact erosion, working towards establishment of a historic vegetation template for Coquitlam River Watershed

Objective 4 Increase community stewardship ethic: Outcome- long-term supportive relationships between project participants, creative education and engagement of project partners and community

Rehabilitated and enhanced habitat, inventory and monitoring plans and education and communications programs are the legacy outputs from this project. Together these contribute towards improving the watershed function of the Maple Creek watershed; therefore, improving the Coquitlam River Watershed function.

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BC Hydro Bridge Coastal Fish and Wildlife Restoration Program
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Introduction

The Maple Creek Off-Channel Restoration Project 2001 is part of the on ongoing Maple Creek Watershed Rehabilitation Program as described in the *Maple Creek Habitat and Enhancement Plan* prepared for the Maple Creek Streamkeepers in 1997 by Alan R. Thompson & Associates. This report identifies and prioritizes fish habitat rehabilitation projects in the Maple Creek Watershed. The Maple Creek Off-Channel Restoration Project 2001 was identified as a high priority project.

The Maple Creek Off-Channel Restoration Project 2001 addresses limiting factors identified in the *Bridge-Coastal Fish & Wildlife Restoration Program, Volume 2 Coquitlam River (Buntzen Lake) Watershed Revised Jan 06/0* by creating off channel rearing ponds to help alleviate the loss of rearing, overwintering and salmonid refuge habitat particularly during drawdown regimes (dam spills) and to retain water for improved salmonid access and egress during low flow periods. A spawning reach is incorporated into the habitat project design to increase the salmonid outmigration numbers and adult returns. This critically needed habitat feature will increase the essential inputs of ocean-derived nutrients into the system. These elements, together with the dense replanting of the adjacent riparian areas will increase the biodiversity and productivity of the lower Maple Creek watershed; therefore, improving the aquatic productivity of the Coquitlam River watershed.

The fenced access trail and access-limiting plantings will reduce intrusions into this sensitive habitat. The interpretive signage, though passive education, coupled with informal and direct education will increase personal awareness and build a broader community stewardship ethic.

Habitat and species diversification and ecosystem function improvement will only occur in the project area through human intervention, by artificially creating it and proactively protecting that which remains; hence, the imperative for the Maple Creek Off-Channel Restoration Project 2001.

Goals and Objectives

The goal of the Maple Creek Off-Channel Restoration Project 2001 and the other companion projects identified in the *Maple Creek Habitat and Enhancement Plan* is to: Rehabilitate the fisheries habitat and increase biodiversity to improve watershed function in the Maple Creek watershed while developing and maintaining meaningful partnerships. This goal is achieved by reaching the following project objectives:

Objective 1
Increase off-channel pool habitat: outcome- increased outmigration numbers resulting from the additional protection from high flows, low flows, pollution pulses and predators

Objective 2
Increase spawning habitat: outcome- increased area for additional spawners resulting from increased outmigration, increased spawners increases available nutrients in system, increasing robustness of juveniles

Objective 3
Increase riparian vegetation biodiversity: outcome- increased organic inputs, improved water quality, reduced impact erosion, increased fauna biodiversity, establishment of a historic vegetation template for Coquitlam River Watershed

Objective 4
Increase community stewardship ethic: outcome- creative education and engagement of project partners and community resulting in long-term supportive relationships between project participants.

Rehabilitated/enhanced habitat, inventory and monitoring plans and education and communications programs are the documented outputs from this project.

Study Area

Location	South of the end of Bedford Street, Port Coquitlam.
Watershed Code	100-024500-00000-00000-000-000-000-000-000-000
Map References	Geodata BC 92G.027 Natural Resources Canada NTS 92G/7
UTM Co-ordinates	Zone 10. 5456500 mN, 515200 mE (NAD83)
Construction Drawings	DFO 11-134-5

Table 1 Study Area Location

The project study area is located on Maple Creek from the Coquitlam River Dike to 2643 Bedford Street, overlapping the boundaries of the Cities of Port Coquitlam and Coquitlam. The project site is a drainage area that during the 1960s was a mixed farm with pasture. Since that time, it has been used as a fill dump and flood protection detention area.

From it's confluence with the Coquitlam River to the south end of Bedford Street (approximately 400 metres) Maple Creek traverses a deciduous woodland comprised of red alder, black cottonwood, and broadleaf maple. Significant sections of this reach monopolized by Japanese knotweed, an undesirable alien species. Salmonberry is the dominant shrub throughout this section of creek and provides high overstream cover with moderate potential for delivery of coarse particulate and dissolved organic nutrients to the creek.

Open sections of creek without crown closure include approximately 35 metres of channel (wetland) located upstream of a side-hinged gated flood box conveying flows beneath the Coquitlam River dike and 50 metres of channel traversing the BC Hydro/Terasen Gas right-of-way.

Channel widths and depths averaged 2.25 and 2.5 metres, respectively. Instream habitat features are primarily run with occasional pool habitat: water depths averaged 0.25 metres at the time of survey. The low structure of the instream environment (i.e. minimal instream complexing, lack of flow diversity, and low productivity substrates) limits the salmonid rearing capacity of this section of creek. The lack of suitable substrates precludes salmonid spawning within this section of creek.

(Edited excerpts from *An Environmental Assessment of the Proposed Bedford-Dixon Connector*", ECL Envirowest Consultants Limited, October, 2000, also, *Bio-Inventory of Maple Creek, Port Coquitlam and Coquitlam*", ECL Envirowest Consultants Limited, April, 1995)

Methods

Project Start Date	March 15 2001	End Date	December 1 2001
Instream Works	August 22, 2001	End Date	August 30, 2001
Project Monitoring	July 15 2001	End Date	July 15 2003

Project Managers
Harold Beardmore, P. Eng, Fisheries and Oceans Canada
Jesse Neri, EIT, Fisheries and Oceans Canada
Allen Jensen, AScT, City of Port Coquitlam
Dianne Ramage, volunteer Maple Creek Streamkeepers

Partners
BC Hydro Bridge Coastal Fish and Wildlife Restoration Program
City of Port Coquitlam
Fisheries and Oceans Canada, HEB Resource Restoration
Pacific Salmon Foundation
City of Coquitlam
Fisheries Renewal BC
Province of BC, Water Land and Air Protection
Kwikwetlem First Nation
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Riverview Horticulture Society
Burke Mountain Naturalists
PoCo Scouts and Girl Guides
Pacific Streamkeepers Federation

Project Phases
Project Acceptance
Public Information
Final Design
Project Funding/Partnerships
Project Review and Approvals
Implementation
Monitoring

Project Activities
Building partnership, site tours, partner education
Insure volunteers and site visitors
Topographic surveying of site, design drawings,
Acquiring all permits, insurance and authorizations
Development of a tender selection matrix
Receive quotes, selection of companies to undertake project work
Photographing site before, during and after project
Community notification signs and notices in local newspapers about project and habitat disturbance education
Site staging, project monitoring, work site security, site breakdown at completion
Brush sawing shrub layer to force plant dormancy in preparation for harvesting and replanting

	Salvaging and hand replanting shrub, fern and moss layer plants Excavating 24m of creek to remove approximately 37m³ of silt deposits from the creek Creating 40m² of spawning habitat by placing 45m³ of washed river gravel in the 24m dredged reach Excavating 555m³ for the south pond, Samsung EX200 Tracked Hydraulic Excavator Placement and grading of 555m² of silt and gravel on the high ground south of the pond Excavating 650m³ for the north pond, Finning Caterpillar 300L Tracked Hydraulic Excavator Placement and grading of 650m³ of silt and gravel on the high ground south and east of the pond Pumping excessive rainfall runoff from project site Deposition of 30m³ of large woody debris in the ponds Construction and surfacing of 225 metres of trail and 3 rail split cedar fencing Plant additional >600 native plants Live staking > 300 red osier dogwood streambank stabilization Design and commissioning of two interpretive signs Organizing community project-site work days, media releases, publicity and education Low Flow Access for all fish species through Dike Flood Box and Trash Rack Project tracking, report writing
Materials Required	Volunteer insurance Angular rock for erosion protection outlet channel, steep slopes Woody debris and anchor cables, rootwads (Western redcedar logs with rootwads intact, min. 45cm DBH) Revegetation materials (according to the planting plan) Silt fencing Snow fencing Project partnership and education signs Large boulders Spawning gravel Polyethylene rolls Straw mulch Hydro-seed native grasses Split rail fencing and fence posts Crush for trail surfacing Two permanent interpretive signs
Equipment	Excavator c/w hydraulic thumb Articulated heavy duty dump truck Pump
Environmental Protection	Tree protection policy adopted during project development Exposed slopes of the pond and stockpiled excavation materials required sediment control measures such as polyethylene sheeting, silt fences and straw mulch.

	The construction of the ponds outlets required the outlet area to be isolated from the stream with sand bags until the tie-in.
Community Education	Tree removal and other disruptive works within the perimeter of ponds could have caused concern for adjacent landowners and community; therefore, site education signs and landowner contact was undertaken prior to construction
Volunteer Involvement	Volunteers undertook site revegetation, fencing, design and installation of education signs, post-construction monitoring, report preparation, record keeping duties, landowner contact and other education programs.

Results

Project General

Maple Creek Streamkeepers received in-kind contributions from the Department of Fisheries and Oceans (DFO) as opposed to a cash contribution. This in-kind contribution significantly exceeded the cash amount anticipated. The cash outlay for a project manager, the site plans, engineering studies and consultant fees were eliminated by the DFO contribution.

Consequently the Pacific Salmon Foundation has authorized the rollover of surplus funds into the second phase of this project the Unnamed Tributary Water Quality Improvement Project scheduled for the fisheries window 2005.

The onsite survey with all agencies present determined that two larger ponds as opposed to three smaller ponds would better provide the sustainable habitat critical to this creek.

Project Objectives

Objective 1 Results
Increase off-channel pool habitat: 1200m^3 of off channel pool habitat with 30m^3 of large woody debris as cover

Objective 2 Results
Increase spawning habitat: 40m^2 of spawning habitat. Chum, 42 count, first successful documented spawning in many years, Coho, 3 spawned in spawning reach 2001

Objective 3 Results
Increase riparian vegetation biodiversity: over 50 species planted, 37 in planting plan, 13 from native plant salvages from Greenfield development sites within 40 kilometre radius

Objective 4 Results
Increase community stewardship ethic: 225 metres of trail with two viewing pads, commissioning of two interpretive signs, community project-site work days, Junior Streamkeepers pilot, new partnerships, pedestrian habitat education >100 per pleasant day, owners not allowing dogs into creek >50% of pedestrians

Monitoring and Assessment

Ongoing gee trapping is being conducted to assess salmonid utilization of the ponds in the summer (early September) and winter (mid-February) in 2002, 2003, and 2005. Riparian planting success is being evaluated, 2002, 2003, and 2005. Fisheries and Oceans, Canada and the City of Port Coquitlam are participating in site meetings to evaluate the effectiveness of the project, 2002, 2003 and 2005.

Discussion

Project Expertise- In-kind donation

Fisheries and Oceans Canada's (DFO) project design and assessment standards were used. DFO finalized project objectives, designs, and provided an engineer for constant site supervision to ensure that the highest safety standards and instream works best management practices for works in and around water were maintained. Habitat rehabilitation project objectives were met by providing habitat biologists, watershed/habitat restoration experts, engineers, hydrologists and surveyors and by approving of contractors selected. Short-term post project inventories have been forwarded to DFO for their assessment. Long term monitoring is ongoing and results are forwarded to DFO.

The City of Port Coquitlam provided engineers, topographic surveyors, draftsmen, GIS/GPS technicians and ongoing project support, supervision and periodic inspection from an engineer to ensure that designs and standards were maintained for works on city property. The city also pre-approved all contractors selected by the group. Short-term post project inventories have been forwarded to the City for their assessment.

Photographs were taken by a professional photographer, accounting services were provided by a CGA, species survey and stock assessment was done by a fisheries technician, fencing was inspected by a professional fencing contractor, water quality monitoring in ponds was done by an engineer. An artist did the graphics for the signs.

Project Tenders and Contracts

Contactor selection was done using a triple bottom line matrix. Past experience with DFO, environmental infraction history, local business, member of BBB, past commercial fisherman, currently employs First Nations, will employ FN on project, fair wages policy on city property and bid total were used.

Kwikwetlem First Nations, funded by BCRP, provided site archeological observations, assisted the contractor to construct the split rail fencing and provided general project labour.

Successes

Partnerships and friendships made with , not just with their organizations, resulted from or brought about the financial partnership aspects of the projects. Kwikwetlem First Nations, DFO, City of Port Coquitlam, Fisheries Renewal BC, BC Hydro Bridge Coastal Restoration Program, Bertram Excavating, Gibraltar Fencing, Artcraft Advertising and other companies, groups and individuals contracted and or volunteered their time and expertise.

The spawning habitat is a success. Maple Creek had several fish kills sweep through the lower reaches and few dead juveniles were found in the pond habitat that were designed to provide refuge for them as these pulses of pollution travel through the system.

Community education lead to increased awareness by hosting “Be a Streamkeeper for a Day” event, developing and piloting a Junior Streamkeepers Program, participating in BC Rivers Day, Tree Fest, Hyde and Hoy Creek Salmon Festivals, community plant rescues and planting days. Scouts and Guides Canada and Douglas College students conducted carcass recoveries and adult enumerations, bioengineering work bees and creek talks. Seasonal signage and permanent interpretive signage that engages and challenges the community to protect and conserve habitat have been developed.

We worked with our partners and the community to have many of the services and supplies donated or volunteered leading to reduced drawdowns on approved grants. Fisheries and Oceans contributed the largest amount of these resource (engineers, project supervisor, biologists, hydrologist, draftsmen) to this critically needed and viable project fearing it would not receive funding; however it did, leading to funders surpluses. Both cities donated expertise as well; another huge saving.

Community individuals, including the machine contractor donated operator and machine time, a local landowner allowed site access, which saved us the large expense of building temporary access across a sensitive right of way. The Institute of Urban Ecology at Douglas College provided over 300 native plants and the manpower to plant them. Douglas College Watershed Restoration Program students volunteered time and expertise to the project. Other stewardship groups rescued plants and planted them, DFO Headquarter employees donated a day to the project to rescue more plants, live stake the banks, replant the new trail perimeters. Many others demonstrated instances of kindness and support.

Kwikwetlem First Nations youth who were employed on the project came back after they were finished and donated their time as well. North Fraser Salmon Assistance Project volunteered to supervise our volunteer work to keep us on track and to help with the monitoring for adult spawners and to continually remove (almost daily for a while) the overnight efforts of the beavers to protect the new habitat.

The positive feelings and habitat improvements that came about from this project are overwhelming!

Problems

This project was well supported and had few problems, even the weather was cooperative; however, it was difficult for the volunteers to find enough time to be on site during the entire construction phase to answer questions or to sign off on invoices.

Ensuring that everyone’s feelings and concerns are validated and addressed during stressful, busy times of the project so that all partners and individuals have a positive experience was given top priority by our group.

Lessons Learned

The fisheries window is very short and a lot has to be coordinated and happen in it. Be prepared for the stress.

Value Added

In terms of the value added benefits defined by the Board, the additional results of this project are the engagement of Kwikwetlem First Nations as archeological observers during deep excavations at their traditional women's fishing village site and the education opportunities this brought for the non-native community. Increased community appreciation of the value of fish and wildlife habitat was another benefit.

The Maple Creek Streamkeepers are dedicated in their pursuit of awareness initiatives and stewardship as noted in their direct support and collaboration in the publication, *Living Near Streams: A Homeowners Guide to Stream Stewardship*.

Our group's commitment to providing the volunteer hours required to reduce the project costs wherever possible, as well as actively recruiting new volunteers and increasing our group's long term capacity has created the capacity within our group and our partnerships to undertake the long-term projects and their monitoring needed to continue to rebuild a viable salmonid run in this stream.

Coho, chum, cutthroat, steelhead/rainbow densities will increase as a result of this restoration project.

Recommendations

Degraded water quality remains a significant issue and one of the outstanding limiting factors for this creek. Improved water quality will be the goal of ongoing rehabilitation proposals

Our group recommends that funding sources, such as the BCRP, ensure that their programs and funds are available to the volunteer stewardship community and do not, through increased administrative demands and refusal to fund wages or administrative costs, become the sole domain of consultants, government agencies and academia.

The leveraging of increasingly scarce rehabilitation dollars by the volunteer community and the capacity it builds by this action is invaluable to the efforts of all to rehabilitate and protect our natural environment.

We support the sustained requirement of BCRP to have informed letters of support from local community groups and first nations and the added value component remain integral to a successful application for funding.

Our watersheds will benefit by these requirements.

References

Maple Creek Habitat and Enhancement Plan
Alan Thomson

Bio-inventory/Identification of Enhancement Opportunities on Maple Creek
Envirowest Consultants

An Environmental Assessment of the Proposed Bedford to Dixon Connector
Envirowest Consultants

Maple Creek Drainage Study
Associated Engineering

Land Development Guidelines
Fisheries and Oceans Canada

Maple Creek Study
Doug Bennie

Maple Creek Fish Presence Survey
Dianne Ramage

Living Near Streams: A Homeowner's Guide to Stream Stewardship
Various Authors

Appendix I
Financial Statement

Maple Creek Streamkeepers did not receive BCRP funds, invoices went directly to BCRP.

Project Maple Creek Restoration Project 2001
Financial Statement Form

	BUDGET		ACTUAL	
	BCRP	Other	BCRP	Other
INCOME				
Total Income by Source	20000		10464	
Kwikwetlem	5000		?	
Grand Total Income (BCRP + other)				
EXPENSES				
Project Personnel				
Wages				
Consultant Fees				
(List others as required)				
Materials & Equipment				
Equipment Rental and Materials Purchased			10464	108981
Travel Expenses				
Permits				
(List others as required)				
Administration				
Office Supplies				
Photocopies & printing				
Postage				
(List others as required)				
Total Expenses				
Grand Total Expenses (BCRP + other)			10464	108981
BALANCE (Grand Total Income – Grand Total Expenses)			0	0

The budget balance should equal $0
The actual balance might not equal $0*
* Any unspent BCRP financial contribution to be returned to: BC Hydro, BCRP
6911 Southpoint Drive (E14)
Burnaby, B.C. V3N 4X8
ATTENTION: JANICE DOANE

Appendix II
Performance Measures

Maple Creek Restoration Project 2001				
Habitat Type	**Tributary Instream**	**Mainstem Instream**	**Riparian**	**Upland**
Off Channel Pool	**1200m^3**			
LWD	**30 m^3**			
Spawning Gravel	**45 m^3**			
Spawning Reach	**40 m^2**			
Riparian Planting			**1000 m^2**	
Plant Species			**50**	
Plant Count			**>1000**	
Interpretive Trail, Fenced				**225 m**

Appendix III
Communications Plan

The Maple Creek Streamkeepers issued a press release, purchased an advertisement in the local paper, produced education signs and held a public meeting at Douglas College. Multiple articles in both local papers, creek side walk and talks with reporters, delegations to both city councils, site tours with city administrators and council members, posted signs about project and what was going on as it was happening, took local developer on project tour, First Nations Guardians talked to pedestrians about project as did watershed stewards, took First Nations on project walk and talk, networked with community for "Be a Streamkeeper for a Day" to promote project, highlighted it in three community environmental events, plus BC Rivers Day interpretative education venue. Partnerships and funders were honoured at each opportunity.

Interpretive Signs

Commissioned Artcraft	BCRP and other partner's logos to go on both
Sign Text Objective	To link personal behavior and attitudes with the environment, and to engage the individual to promote change
SIGN ONE	Placement – Pond One (South pond) Topic – Source Control Title - **Maple Creek Watershed, Yours to Protect** This habitat and the fish and wildlife dependant on it are threatened by pollution. Take the Maple Creek Watershed Protection Challenge! Be a responsible pet owner Reduce your lawn area and your yard maintenance-Naturescape® Reduce pollutants entering the creek through the storm drains Let the city do your composting Redirect your roof downspouts to ground Drain your pool or hot tub into the sanity sewer or your lawn
SIGN TWO	Placement – Pond Two (North pond) Topic- What do they can name, they will care about Title – **The Maple Creek Watershed Fish and Wildlife** Maple Creek, its wetlands and its adjacent riparian areas provide critical habitat for salmon and many other fish species. It also provides the food, water, shelter and travel corridors that 80% of terrestrial species in British Columbia are dependant on.

MEDIA RELEASE

For Immediate Release

Contact: Susan Cote 464-5217, Dianne Ramage 464-1099

August 9, 2001

Local Fish and Wildlife Benefit From Human Partnerships

The Maple Creek Streamkeepers and Kwikwetlem First Nations have partnered with The City of Port Coquitlam, Fisheries and Oceans Canada, BC Hydro's Bridge Coastal Restoration Program, Pacific Salmon Foundation and Fisheries Renewal BC to improve fish and wildlife habitat on lower Maple Creek. August 20, 2001 is the prospective start date for the construction of two rearing ponds and 50 meters of spawning habitat for the creek's coho, chum, rainbow/steelhead and cutthroat populations.

This rehabilitation of the lower creek will provide habitat not only for these salmonid species but also for the other local fish, amphibian, bird and mammal populations that depend on the local riparian areas.

Local birders, walkers and joggers have expressed delight that the project includes a new walking trail and two wildlife viewing platforms with interpretive signage. The Streamkeepers want to reassure all the concerned neighbours that the equipment and construction happening north of the flood box is not destruction but another phase of the rehabilitation of the lower watershed to eventually return it to the highly productive ecosystem it once was.

The two mature black cottonwood trees being felled are to be used in their entirety as large wood debris (LWD) in the creek system, as LWD is an integral part of a natural watershed. Previously to the area being disturbed, it will be checked for rare/endangered plants or animals. The gravel for the new spawning reach will be reclaimed from the Hyde Creek rehabilitation project being completed at the same time.

Kwikwetlem River Guardians working on the project as artifact curators, fish and wildlife enumerators and contractor assistants will be on site to answer questions. Interested citizens may also contact Maple Creek Streamkeepers at 464-1099/464-5217 or the City of Port Coquitlam at 944-5411.

Local Area Signage

What's going on here?

The Maple Creek Streamkeepers and Kwikwetlem First Nations have partnered with The City of Port Coquitlam, Fisheries and Oceans Canada, BC Hydro's Bridge Coastal Restoration Program, Pacific Salmon Foundation and Fisheries Renewal BC to improve fish and wildlife habitat on lower Maple Creek. August 21, 2001 is the prospective start date for the construction of two rearing ponds and 50 meters of spawning habitat for the creek's coho, chum, rainbow/steelhead and cutthroat populations, as well as the other local fish, amphibian, bird and mammal populations that depend on the local riparian areas.

The Streamkeepers want to reassure all the concerned neighbours that the equipment and construction is not destruction but another phase of the rehabilitation of the lower watershed to eventually return it to the highly productive ecosystem it once was.

The two mature black cottonwood trees being felled are being used as large wood debris (LWD) in the creek. Prior to the area being disturbed, it will be checked for rare/endangered plants or animals. The gravel for the new spawning reach will be reclaimed from the Hyde Creek rehabilitation project.

Kwikwetlem River Guardians working on the project as artifact curators, fish and wildlife enumerators and contractor assistants will be on site to answer questions. Interested citizens may also contact Maple Creek Streamkeepers at 464-1099/464-5217 or City of Port Coquitlam at 944-5411.

Appendix IV

Tender Evaluation Matrix

Maple Creek Streamkeepers

2714 Goldstream Crescent
Coquitlam BC
V3C 5G5

REQUEST FOR QUOTE

Approximately 217 meters of installed fencing

Maple Creek Streamkeepers are inviting you to submit a quote for the installation of a three-tiered split rail fence along the Bedford-Coquitlam River Dike Connector Path in Port Coquitlam. Public access is gained from the south end of Bedford Street. The fencing is:

To run from the BC Gas Right-of way south along the west side of the path, corner
Up the north side of the secondary path ending in a three metre square viewing area at Pond Number 2,
Along the south side of the secondary path, corner
Continue south towards Pond Number 1, corner
Along the north side of the secondary path ending in a 3 metre square viewing area
Continue along the south side of this path, corner
Continue south along the main path to the toe of the dike.

We would like the fencing installed as soon as possible. Please provide a quote by October 26, 2001, 12:00 Noon to fax number 604 945-0162 for the following:

Split cedar 3 rail fence
Labour
Supplies
Details of fencing

Split 3 rail fence
Labour
Supplies
Details of fencing

City of Port Coquitlam Fencing Detail Attached

Your anticipated installation completion date:

Awarding of this contract is based on a matrix that incorporates social, environmental and economic criteria into the selection process:

Criteria	YES	NO	Comments
Do you have previous habitat restoration experience with Fisheries and Oceans Canada or other major stream stewardship group			
Do you have previous working experience with City of Port Coquitlam			
Have you had fisheries or other environmental regulations violations			
Are you First Nations or currently employ a status FN			
Do you belong to the Better Business Bureau of BC			
Are you local			
How long have you have been in business			
When working on city property, wherein the jurisdiction of city union employees do you have a fair wage policy			
Are you a past commercial fishermen or do you have some on staff			
I _____sign that all information provided is true and accurate _X_____Date_____			

Appendix V
First Nations Positions

Maple Creek Streamkeepers
2714 Goldstream Crescent
Coquitlam BC
V3C 5G5

April 20, 2001

Ms. Carol Lamont
BC hydro Fish and Wildlife
Bridge Coastal Restoration Program
Vancouver BC

Dear Ms. Lamont

Maple Creek Streamkeepers Funding Increase Application

The Maple Creek Streamkeepers are requesting a funding increase of $1800.00, together with the increase requested by the Kwikwetlem Band for $3200.00. This brings the total increase request from both parties to $5000.00.

This additional funds is required to employ two Kwikwetlem Band members to work together with our group during the restoration project.

Position 1:	Rod-holder/ Artifact Curator Wages, overtime, holiday pay, and employer costs of employment (EI. CPP. WCB) @$80.00 per day, approximately 20 days	$2250.00
Position 2:	Watershed Monitor/Onsite Interpreter Wages, overtime, holiday pay, and employer costs of employment (EI. CPP. WCB) @$80.00 per day, approximately 20 days	2250.00
	Safety Equipment Hardhat with face screen, high visibility vest, chest waders, artifact containers 2 sets	500.00
	Total application increase requested	$5000.00

All unused funds will be returned to the Bridge Coastal Restoration Program.

Thank you for considering this request.

NOTE: The funding for First Nations did not flow through our group, BCRP directly engaged the band members. We confirmed employment hours only.

Appendix VI
Planting Plan

Appendix VII
Photos

2nd Port Coquitlam Scouts, Douglas College Institute of Urban Ecology and Riverview Horticultural Society Participated in Native Plant Rescues and Planting Events.

2nd Port Coquitlam Scouts Learn Streambank Bioengineering

First Chum To Spawn in Maple Creek in Approximately 25 years, November 2002

Split Cedar Rail Fencing Protects New Habitat and Humans (looking North)

North Rearing/Refuge Pond, Ebb Tide, Site of Flora Fauna Interpretative Sign