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HABITAT RESTORATION AND SALMON ENHANCEMENT PROGRAM

FINAL REPORT: 1998 PROJECT

Aug. 1, 1997- June 1, 1998

ISLAND STREAM AND SALMON ENHANCEMENT ASS.
BOX 330 GANGES PO, SALT SPRING ISLAND B.C. V8K 2V9

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A. INTRODUCTION

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Background

The salmon streams on the Gulf Islands are miniature versions of the creeks on Vancouver Island. They are however spring fed and they all have had a history of Coho and cutthroat living in them. Since the 1950s they have been steadily degraded by mostly bad farming and land draining practices. Many of them have been turned into clay lined ditches. We have been gradually restoring them since 1984 and working with a wide mixture of private property owners, we feel that we have set an example for other communities to follow. We have identified 20 small streams with the potential to be fish bearing. We have been working on ten of them so far and have been monitoring the remaining ones.

Funding Level : \$48,300

B. PROJECT DETAILS

1. Timetable The project started in August 1997 and will be completed by June 30, 1998. This is because we are still doing off channel work such as planting our work sites, building trails and finishing our fish ladder (off Stream) We are having to fence around all the plants because of the deer and beavers that try to eat them all.

2. Location All the streams are on Salt Spring Island. See map. They are all on private property. We have formed partnerships with the land owners and they have all helped in some way with the work.

3. Personnel Involved We have volunteers and paid help. Our biologist works mostly as a volunteer (14 years) and is from a commercial fishing family. (Husband is a displaced fisherman) Our bookkeeper is also a fisher. She works part time as a volunteer. We have a retired fisherman who takes care of the hatchery. We also supervise young offenders, They do their community service hours on the stream projects. We hired three unemployed fishermen part-time and one is now part of our youth crew. All of our workers are older people who need help finding work or youth deemed to be at risk.

The lawyer who is president of our society, Jonathan Oldroyd is a volunteer He has been involved for 14 years.. We also have Phillip Grange P. Eng. who designs all our work mostly as a volunteer.

We train off island fishers and E=Teams to do stream keepers and stream restoration work.

See the list for the amount of volunteer labour donated by our society.

C. RESULTS -DISCUSSION

The Salt Spring Island Project focused on stream restoration. We worked on six creeks

1. On Bullocks Creek we complexed a new channel with root wads and boulder clusters. We added spawning gravel and had the first trout in many years use it successfully. We extensively planted the riparian zone building on a previous Urban Salmon Habitat -Environment Canada project (we added many more plants). An elementary school class helped during Earth Week. We constructed two footbridges to provide better volunteer and land owner access. The owner donated \$700 cash.

2. On Madrona Creek we worked with a property owner who shared the cost of rebuilding a very badly constructed (1980s) spillway and we made it stable and passable to fish. This creek has a unique run of mini-trout. (mature at 6 " length)

3. On McAfee Creek we made another spillway passable with some very attractive rock work and cleaned out two rearing ponds. We placed boulder clusters in the larger pond to increase fish survival. We also built an emergency rearing or water storage pond on a side channel of the creek because in 1988 -89 it dried out and there was no safe place to put the salvaged fry. The three property owners are pleased with our work and we are invited back any time!! This is a delightful little spring fed stream with Coho and cutthroat trout.

4. On Mansell Creek we transformed a farm drainage ditch into fish habitat. There was no rock or gravel in the clay lined ditch. We added boulders, cobble, and gravel. We dug some little ponds and modified a very impassable log jam. We worked upstream of a Urban Salmon -Env. Canada project that had BC Hydro as a partner. We replaced a washed out spillway below the farm irrigation pond with landscape fabric and rock work. We feel that Mansell Creek is now ready for Coho restocking. Our youth team is building a new public park with trails in the upper reaches of the stream.

5. On Cusheon Creek, we improved fish passage around an old water storage dam that had been built in the 1950s for the districts water supply. The dam had been abandoned but the land owner wanted to keep it in case of future droughts. We had opened the spillway in 1984 but it was very small 2'x2' so during high water the dam was impassable to fish and they had to be caught downstream and transported up by volunteers. It was always our dream to modify the old structure and thanks to HRSEP, Cusheon Creek's Salmon and sea-run trout can now get home on their own. We made the new cement work blend in with the old dam so it looks like the original "work of art" the old timers were so proud of !! The fishers from Cowichan Bay and many volunteers helped count spawners and catch brood stock for the hatchery on this creek. They also helped count spawners in the other Island streams.

At the Cusheon Creek Hatchery we raised 14000 coho for release into Cusheon, Okano and Duck Creeks. There was a large natural spawn of over 60 fish in Cusheon and we estimated 100 fish back to Fulford Creek, where they were right up to the falls.

6. Our most serious work was on Stowe Creek. It has a pristine watershed of 600 hectares. There is excellent fish habitat in this drainage system, with a 25 acre lake and several swamps. The South Salt Spring Residents Association has wanted to have this watershed restored for many years. The main problem was that the creek had been culverted badly by highways when the road along Fulford Harbour (Morningside Drive) was built in the 1950s. The pipe had a 10 foot drop at the end and was placed at a 5% slope and was impossible to fish ladder. The Association donated \$1000 and an artist \$500 toward the cost of the work. Highways supplied a new pipe and we placed it at a better angle for fish laddering. The fish ladder is under construction and we will send a picture when it is done.

The fishers from Cowichan Bay helped with this project. They agreed that there are many bad culverts under roads along the coast of British Columbia, and Highways simply cannot afford to replace all of them at once. But if the community chips in financially then it is possible.

The cement work is being done during the month of June. It is all off channel with the old culvert still being used. Our youth team and their supervisors are helping with the rock work. Our professional engineer has donated many hours to the project. A professional project manager, also a volunteer oversaw the culvert work.

We will now have a whole new watershed to restock with the Coho from our hatchery. This will be an on going project for a few more years as will be explained later in the report.

7. We used our own funds to share in the costs of a small spring fed pond in the upper reaches of Okano Creek. The owner is very keen to help the creek by providing water or a rearing area for the Coho in times of drought. We provided willows (and fencing to protect them) as well as \$800 toward the costs. This owner did not want to spend "the taxpayers money" so we assured him that we used our donated funds.

8. The size of our project -it was the biggest in 14 years resulted in our receiving a Youth Services grant of \$100,000 to employ our at-risk young people for 6 months. The crew of 10 and a supervisor have been tending the hatchery, releasing fry and planting. As well they are building linear parks and trails along some of the creeks. We find that allowing the public to see some of the creeks actually helps obtain much more community education and support. All the parks and trails are carefully planned so there is no damage to the sensitive eco-systems. We have now built a strong partnership with the local CRD Parks and Recreation Commission. (They have shared in the Youth Services Program

Other important partners we have started to work with are the local Chamber of Commerce, the sports fishing industry and the fish buyers and processors. We have decided to form a community fisheries council to try to find projects for the displaced fishing industry workers. It will be called the Gulf Islands Community Fisheries and Watershed Council. We will be the lead partner.

D. QUANTIFIED RESULTS

1. Obstructions made passable to fish
 - 3 spillways modified, Madrona, Mansell, McAfee
 - One culvert in progress new 600 hectare watershed to restore.
 - One log jam modified
 - One old dam modified (Cusheon Cr.)
2. Meters of streambed modified
 - Bullocks Creek 200 meters complexed with root wads and boulders
 - Mansell Creek 100 meters
3. Ponds dug or restored
 - Mc Afee Creek 2 old ponds cleaned out , one new one constructed
 - Mansell Creeel 2 new small ponds created
 - Okano Creek-one water storage pond
4. Riparian Zone planted
 - We grew many plants from cuttings and dug up many wild rose bushes.
 - As well we spent \$300 on plants from nurseries (We get charged the wholesale price)
 - We purchased several rolls of wire to protect the plants frfom deer and the beavers.
5. Indicators of Sustainability of the Salt Spring Island SEP project
 - Six more landowners are actively involved and donating cash or services.
 - A new Youth Training project resulted from our HRSEP project.
 - Ten youth employed for 6 months. many training courses provided.
 - Three new parks along the creeks were built for the community, we now have public parks on Madrona, Duck, Mansell, Fern and Ganges Creek

 - If there is a drought we have many places to raise our fish through the summer. There are water storage ponds along all the endangered smaller creeks.

 - We have improved access enough that the fish can return on their own without needing human intervention.

 - We have built new partnerships in the community.
6. Five members of Fishing families hired part-time. One hired full time on the youth team. (He is also from First Nations background)
 - Our part time biologist and volunteer, Kathy Reimer (Fishing Family) has returned to school to study for her Masters of Environmental Management focusing on Sustainable Fisheries.
7. Ten off island fishers trained in Stream Restoration and planting.

VOLUNTEER HOURS : SEP PROJECT 1997-98
(Conservatively estimated) (up to Mar. 98)

**These are just the regular volunteers, not the many ones who
 donated less than 10 hours**

1. Jonathan Oldroyd-president of our society And lawyer 14 years	150 hours	\$4500
2. Deborah Nostdal- teacher and education co-ordinator Part-time volunteer, paid part time by School 14 years Involvement	60 hours	\$1200
3. Kathleen Reimer, Biologist and Project Manager 14 years as a volunteer	4 months	\$16,000
4. Kathy Conner Bookkeeper	100 hours	\$1500
5. Jane Stack fundraising, planting	100 hrs.	\$1200
6. Michele Layard (14 yrs.) fund raising, planting, brood stock capture, hatchery maintenance	80 hrs.	\$960
7. Clark Moggridge retired engineer Beaver Dam maintenance, reading gauge-Bullocks creek Has worked every day since 1994	160 hours	\$2400
8. Dick Sims semi-retired fisherman Running the hatchery, feeding fish, transportation. Firewood hauling and sales.. Public Education Donating nets, chainsaw work, raffle ticket sales 1/2 hr. every day at least even weekends	200hrs.	\$3000
9. Phillip Grange, P. Eng. donated engineering and channel design		\$2000
10. James Beardsell our chief fish catcherIII Part-time paid part time volunteer for 10 years	60 hours	\$600
11. Ed (Grampa) Reimer Tool repair and pump maintenance 12 years involvement	40 hours	\$600

Value of Donated Time \$ 33,960

ADDITIONAL SOURCES OF DONATED TIME

John Howard Society ---100-200 hrs./year \$ 1,000
 School children from several classes
 Property owners along the creeks

IN KIND LABOR

10 fishers from Cowichan Bay (2 wks.)
 6 member E-Team from Veins Of Life Society (2 weeks)

E. FOLLOW UP --FUTURE WORK NEEDED

Our volunteer project is on going . We have a new generation of volunteers who will replace all of us when we are too old to carry on. We feel that by doing all the education work with the schools, the youth and the property owners, we have woven the Salmon Enhancement Project into the "Fabric " of our community.

The riparian zones are now protected in the SSI new Community Plan. We spent many months in meetings hashing out a compromise with the farming community. We feel that the little creeks are adequately protected on the ALR lands. On land with other zoning the setbacks are greater.

The parks and trails we have built can be easily maintained by CRD Parks or clubs like the Trail and Nature Club. We will maintain them with help from John Howard Society volunteers and our part time youth for as long as our society exists . (Maybe forever)

Future Work Needed on Salt Spring Island

1. Cusheon Creek- more storage and overwintering habitat
2. Stowe Creek- More year round water flow- storage in upper watershed
3. Bullocks Creek--- A Fish ladder at the Culvert under Long Harbour Rd.
More Spawning beds, better beaver control pipes.
Restoration of the wetland in the lower reaches.
4. Mansell Creek--enhanced summer flows and a few new ponds.
5. Madrona Creek -- a new owner on the Swamp!!! The owner who hates the fish has his place for sale.
6. Okano-- enhanced water storage in the salty swamp, more storage in upper watershed.
7. Ganges Creek-- Summer water supply needed-- possible source could be developed.
6. Improvements to the Fulford Creek tributaries and side channels.
7. Restoration of St. Mary Lake watershed and a weir to maintain summer flows in Duck Creek.

Island Stream and Salmon Enhancement Association
1997-1998 Habitat Restoration SEP Project
F. FINANCIAL SUMMARY

INCOME

Fisheries and Oceans	\$48,300		
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EXPENDITURES**1. Labor Costs**

Wages	26,100		
Revenue Canada	3400		
Workers Comp.	330		

Total		\$ 29,830	
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2. Materials

Plants	270		
Mulch hay	300		
Sand Bags	113		
Building Materials, tools, cement	3300		

Total		\$ 3983	
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3. Contracting

Flagging traffic	697		
Jackhammering	2027		
Survey and Engineering (Stowe Creek)	722		
Rentals	546		

Total		\$ 3992	
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4. Trucking and Excavating

Canal Excavating	3600		
JMB excavating	2333		
Ken Byron Backhoe	380		
Mark Hughes Exc, Gulf Island Trucking and Excavating	1070		
	5570		

Total		\$12, 953	
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5. Office and administration

Phone, office services	1000		
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Total		\$1000	
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Total Expenditures for project		\$51,758	
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Extra cash outlays by ISSES		\$4,820	
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Estimated value of donated labour		\$ 33,960	
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VALUE OF ENTIRE PROJECT		\$ 90,538	
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<u>DFO share</u>	<u>53%</u>		
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5 pages financial
Statement Dec-Jan 97

Financial Statement Jan. 1 to Dec. 31, 1997

- A. Regular Account (6334-7)**
B. Environmental Partners Account (738-104)
C. Casino Fund (733-709)

A. Salmon Enhancement Regular Account (6334-7)

1. Cash on hand Jan. 1, 1997	333.90
2. Income	
Veins of Life donation	5,800.00
Market proceeds and fall fair	377.69
Firewood donation	560.00
Ganges Village Market donation	271.85
Dept. Fisheries and Oceans	48,910.50
Environment Canada	1,276.00
Mel Topping Job	4,000.00
Madrona Park Trail Job	4,250.00
South Island Streams	793.53
Save Georgia Straights	240.00
Urban Stream	6,000.00
South Salt Spring Island residents Assoc.	1,000.00
Russell Spencer	307.34
Sea Change Sea Foods	250.00
Kathleen Reimer	313.00
Nancy Wigen	100.00
Simon Rook	50.00
Thrifty Foods	100.00
Clark Moggridge	100.00
Transfer in	460.00
Misc.	291.91
Total income	75,459.82
Cash on hand	333.90
Total	<u>75,793.72</u>

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Expenditures

Wages	9,525.11
Trucking, tractor, excavator	24,868.40
Rentals	2,974.99
Supplies	7,066.34
Utilities	
Telephone	822.80
Hydro	924.58
Capilano College (training fees)	870.00
Worker's Compensation	150.00
Revenue Canada	696.00
Casino Expenses	235.94
Insurance	1,002.00
Misc. (office, bank)	1,374.45
transfer out	8,300.00
Total	58,810.61
cash on hand Dec. 31, 1997	16,983.81
Total	<u>75,793.72</u>

(3)

B. Environmental Partners Fund (738-104)

1. cash on hand Jan. 1, 1997	2,289.48
2. Income	
GST rebate	1,400.78
ARD Corp	2,728.60
Dept. Fisheries and Oceans	600.00
Keith Wilson donation	500.00
Kathy Reimer donation	60.00
Salty Shop donation	85.00
firewood donation	160.00
misc.	235.00
transfer in from reg acct	8,300.00
transfer in from casino	1,000.00
Total	15,069.38
cash on hand	2,289.48
Total	<u>17,358.86</u>

3. Expenditures

wages	8,410.10
supplies	1,775.65
truck, tractor, excavator	4,738.80
Worker's Compensation	274.64
Revenue Canada	200.00
Flader and Green (audit)	465.45
misc. (bank, office, photos, hydro)	1,151.62
transfer out to reg acct	300.00
Total	17,316.26
cash on hand	42.60
Total	<u>17,358.86</u>

**C. Casino Fund 1997 (733-709)**

Cash on hand Jan 1, 1997	6,099.54
Income	0
Total	6,099.54

Expenditures

Excavator, trucking	1,530.25
Supplies	2,845.51
Misc.	515.75
Transfer out	1,160.00
Total expenses	6,051.51
Cash on hand Dec. 31, 1997	48.03
Total	<u>6,099.54</u>

**Summary of all Salmon Enhancement Accounts 1997
excluding all transfers**

Income

1. Regular Account (6334-7)	74,999.82
2. Environmental Partners	5,769.38
3. Casino Fund	0
Total	80,769.38

Cash on Hand Jan 1, 1997

1. Regular Account	333.90
2. Environmental Partners	2,289.48
3. Casino Fund	6,099.54
Total Cash on Hand	8,722.92
Total Income and Cash on Hand	<u>89,492.12</u>

Expenditures

1. Regular Account	50,510.61
2. Environmental Partners	17,016.26
3. Casino Fund	4,891.51
Total Expenses	72,418.38

Cash on Hand Dec. 31, 1997

1. Regular Account	16,983.11
2. Environmental Partners	42.60
3. Casino Fund	48.03
Total Cash on Hand	17,073.74
Total Cash on Hand and Expenses	<u>89,492.12</u>