Funded and Completed Projects

FISH FIRST

RESTORING FISH RUNS

Since 1995

501 (C) 3 Public, Charitable, Nonprofit Organization

Table of Contents

Fish First focuses on Fish Habitat Restoration, Fish Rescue, Nutrient Enhancement, and Remote Site Incubation, as well as sharing their successes with others.

Designed with assistance from
Daina Tekorius-McLean

Projects Requiring Funding, Volunteer, and Donation Information

Please see our Funding Required booklet, or contact Fish First, to obtain additional information about Project Design, Ongoing Programs, Funding, Volunteer and Donation needs.

Habitat Restoration Project Name	Habitat Restoration	Project Cost	Funding Required	Project ETA
Upper Mason Creek	975 Feet	$63,500	($31,300)	2008
East Fork - Cliff House Reach	1,900 Feet	$420,000	($192,000)	2007-2008
East Fork - Powerline Bend	2,360 Feet	$271,000	($241,000)	2008
East Fork - Clark County Maintenance Yards	1,610 Feet	$40,000	($40,000)	2008
East Fork - West Daybreak Reach	2,870 Feet	$520,600	($442,500)	2008
Cedar Creek - Harteloo Chinook Pool	663 Feet	$50,500	($31,800)	2008
Ridgefield Pits Reach	6,300 Feet	$715,000	($715,000)	2008
	15,703 Feet	$1,945,100	($1,590,300)	2007-2008

Fish First Ongoing Programs	Request	Cost	Funding Required	Season or ETA
Fish Rescue	Annual Operating Costs	$8,000	($8,000)	2007-2008
Fish Rescue	New Holding Area	$25,000	($25,000)	2008
Habitat Restoration	New Truck	Unknown	Unknown	2007-2008
Net Pen Program	Upkeep	$8,300	($8,300)	2007-2008
		$41,300	($41,300)	2007-2008

Summary of Projects Completed or In Progress (Funding Complete)

Lewis River Habitat Restoration Project Name	Habitat Restoration (in feet)	Project Cost	Project ETA
Lower East Fork			
Gren Fels Creek	300	$20,379	2007
US Forest Service – Project 1, above Sunset Campground		$40,000	2008
Lower East Fork Swanson Side Channel	760	$85,406	2006
Lower East Fork: Swanson Chum Channel	400	$40,000	2002
Lockwood Creek Check Dam Modification for Fish Passage Improvement	20	$0	2002
Lockwood Creek Culvert Removal		$29,268	1998
Manly Road Creek – Ibrahim Phase I	564	$77,570	2007
Manly Road Creek Pond Bypass Project		$3,900	2002
Mason Creek: Lower Mason Creek Rearing Pool	120	$26,005	2006
North Fork			
Willie Culvert Replacement		$66,880	2007-08
Cedar Creek - Bob Edwards Project below Amboy, WA	1,400	$90,882	2007-08
Cedar Creek - Bill Doty Project	4,240	$300,839	2003
Cedar Creek: Charlie Swift Stream Restoration & Side Channels		$128,907	2002
Cedar Creek: Shimano-Carter Phase II Restoration		$82,798	2000
Cedar Creek: Malinowski Stream Restoration and Rearing Pond Phase I		$69,230	1999
Cedar Creek Battleground Railroad Culvert Removal		$217,310	1998
Cedar Creek: Pigeon Springs Bank Stabilization		$52,071	1997
Jackson Creek Culvert Replacement		$109,403	2002
Cedar Creek Tributary - Bill Harteloo Side Channel Project	237	$18,000	2004
North Fork of Chelatchie Creek - Belkoff Property	1,000	$4,126	1998
South Fork Chelatchie Creek - DuPuis Property Habitat Complexity & Stream Stucture Restoration		$34,672	2001
South Fork Chelatchie Creek - Vrieswyk Dairy		$89,092	1999
South Fork Chelatchie Creek - Price Dairy		$104,265	1998
	9,041	$1,691,003	Prior to 2008

Fish First Ongoing Programs		Cost	Season or ETA
Nutrient Enhancement Program			1999
Mill Creek North Fish Rescue Pond Project Phase II		$6,362	2007
Mill Creek North Fish Rescue Pond Project Phase I		$5,560	2006
Lake Merwin Net Pen		$26,820	1999
Remote Site Incubator Project Initiation		$502	1996
Lewis River, Echo Park Cove, Net Pen Construction		$54,019	1996
		$93,263	Prior to 2008

East Fork(EF) Lewis River and Tributaries Funded and Completed Projects

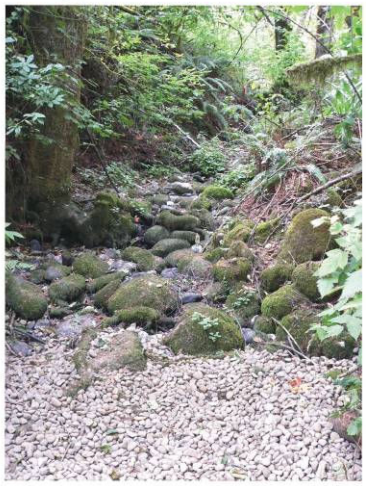
Gren Fels Creek

Gren Fels Creek – 2007

This project is located in a target reach of the East Fork of the Lewis River and was planned to re-establish a critical pool and spawning habitat in a small spring-fed tributary of the East Fork Lewis River used by "T&E" listed native steelhead. This strain of steelhead is known for its unusual size and it is found only in one other stream in North America (British Columbia).

It intends to restore and increase the spawning and rearing habitat of a degraded run of native steelhead. The 300 foot habitat includes a rearing side-channel, pool, and spawning area which had become almost filled-in due to improper land clearing in the head waters of the stream. The head waters are now re-vegetated.

Upper Steelhead Channel



Main Spawning Channel

Gren Fells Ck. T&E Species Spawning & Rearing Restoration Complex Site Near East Fork L. R. - 2007 Photo By Fish First

Juvenile Rearing Side-Channel

Side-Channel Cover Logs

Lower Section Main Channel

Project	East Fork Lewis River: Gren Fels Creek (near Lewisville Park)		
Status	Funded	**Date**	ETA 2007
Partners	Dave Barta		
Cost	Project Manager		($1,480)
		Excavator with Operator	($9,284)
		Hauling and Trucking	($1,600)
		Marooka Tracked with Operator	($1,575)
		Cedar Trees	($600)
		Square Rock	($2,040)
		Root Wads	($3,500)
		Volunteer Planters (donated)	($300)
		Total Cost	($20,379)
Grants and Donations	National Fish and Wildlife Foundation and Salmon Recovery Funding Board Partnership Lower Columbia Community Salmon Fund		$17,295
	Fish First		$3,089
		Total Donations	**$20,295**
		Funding Required	**Funding Complete**

US Forest Service – Project 1, above Sunset Campground – 2007 In Progress

Restore Steelhead spawning beds by adding gravel-holding cross-vanes and large woody debris.

Fish First in conjunction with the US Forest Service designed and created structures to facilitate spawning opportunities for adult steelhead. The stream had a longitudinal profile surveyed with a laser level to determine proper positioning of the structures. At the same time cross section information was collected. Monitoring stations was setup prior to project implementation to take cross sections of the stream, to conduct pebble counts, and to document restoration sites with photo points. The structures were installed using an excavator. Once installed more photo points were taken. Cross sections and pebble counts will be taken on an annual basis following the first winter.

Project is funded, permitted, and waiting contract award for construction in the 2008 field season.

Project	**Upper East Fork Lewis River – US Forest Service one above Sunset Campground**		
Status	Funded	**Date**	ETA 2007
Cost			($)
		Total Cost	($40,000)
Grants and Donations	United States Forest Service		$40,000
	Fish First – project design		Time and effort
		Total Donations	**$40,000**
		Funding Required	**Funding Complete**

Lower East Fork Restoration

I

Lower East Fork Swanson Side Channel – 2006

The project objective is to improve fish production and survival (salmon and steelhead) by increasing the availability of critical fish habitat. One key missing habitat component in East Fork Lewis is side-channels. Old side channels need to be re-activated to provide cover and rearing habitat. The success of increasing rearing habitat is documented by Fish First in monitoring reports to NOAA-Fisheries

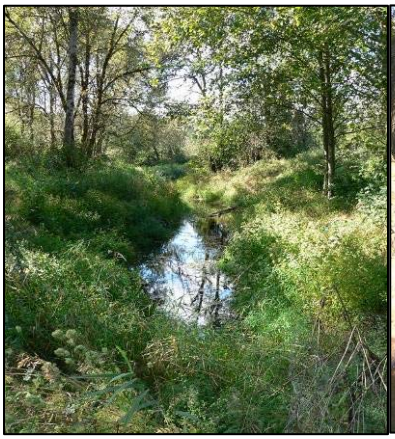


Photo 2: Lower East Fork – Swanson Side Channel Before: blocked and inactive side channel prior to project

Photo 1: Lower East Fork - Swanson Side Channel After: completed re-activation and enlarged side channel with bubbler pipe

About 760 ft. of channel were treated to re-activate the old side-channel. The remnant of the existing channel was excavated to an average depth of 3 ft. and a top width of 15 ft. At the upper end of the channel, a rock cutoff vane was installed at ground level to insure the side-channel maintains functional capability. At the lower end of the channel, a rock J-hook vane was installed to sweep water out of the side-channel and keep the mouth of the side-channel clear of sediment. Root wads and log rafts were added at key locations along the reconstructed channel. Bank re-vegetation includes cedars and willows on the east bank and additional willow clumps on the west bank.

In addition, Fish First and the land owner will establish a setting (including signage) that can provide educational opportunities that promote good land and water stewardship in the community.

Project	**Swanson Side Channel On Lower East Fork – 2006**		
Status	Completed	**Date**	2006 - September
Partners	Washington Department of Fish and Wildlife Lower Columbia Fish Recovery Board Friends of the East Fork	Salmon Recovery Funding Board	
Cost		Equipment	($25,902)
		Operator Labor	($43,650)
		Material	($5,710)
		Monitoring	($ 500)
		Re-vegetation	($6,694)
		Construction Overhead	($2,950)
		Total Cost	**($85,406)**
Grants and Donations	Lower Columbia Fish Recovery Board Fish First		$47,835 $37,571
		Total Donations	**$85,406**
		Funding Required	**Project Completed**

Lower East Fork: Swanson Chum Channel - 2002

This project took place on the Dean Swanson property east of La Center.

Chum salmon, an ESA listed species, were thought to be extinct on the East Fork Lewis River.

Photo 3: Lower East Fork - Swanson Chum Channel 2002

In a survey done by WDFW in June 2001, chum salmon were discovered above Mason Creek. The objective of this project is to improve Chum salmon production by creating a Chum spawning bed in a high ground water area that leads to an existing side channel where it then connects to the East fork Lewis River.

Tons of soil were removed from the site to create at channel approximately 400' long and 30' wide. Although, there is naturally upwelling water at the site, pipes were installed to provide additional water if the need arises. Native vegetation was planted on the banks under existing cottonwood trees.

Project	**Lower East Fork: Swanson Chum Channel 2002**		
Status	Completed	**Date**	2002- September
Partners	Washington Department of Fish and Wildlife Clark-Skamania Fly Fishers	Friends of the East Fork	
Cost		**Total Cost**	**($40,000)**
Grants and Donations	Clark Skamania Flyfishers		$1,000
	Fish America Foundation		$14,180
	Fish First and Other Donations		$24,820
		Total Donations	**$40,000**
		Funding Required	**Project Completed**

Lockwood Creek Restoration

I

Lockwood Creek Check Dam Modification for Fish Passage Improvement – 2002

The project site is on Lockwood Creek east of LaCenter.

A series of five flat logs 15 to 20 feet apart had been place to raise the water up to a culvert so fish had access to upstream habitat. This type of step-pool design system had no fish attractor notches and inhibited passage at low flows. The logs were notched to provide attractors for fish to migrate, better passage for parr at low flow and improved stream oxygenation.

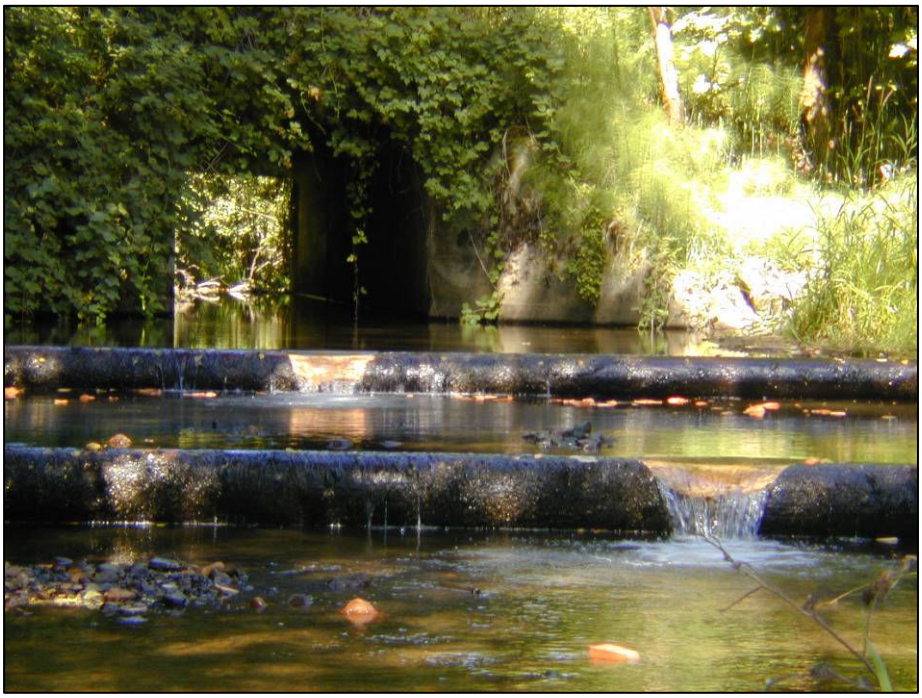


Photo 4: Lockwood Creek After - check dam modification for fish passage improvement.

Project	**Lockwood Creek Check Dam Modification for Fish Passage Improvement**		
Status	Completed	**Date**	2002 - July
Partners	Washington Department of Fish and Wildlife		
Cost		Labor	Labor
		Total Cost	Labor
Grants and Donations	Fish First		Labor
		Total Donations	**Labor**
		Funding Required	**Project Completed**

Lockwood Creek Culvert Removal – 1998

This project site is just upstream from the La Center Bridge on the north side of the river. The culvert denies Steelhead access to a major spawning tributary of the river. The culvert was removed and replaced with a bridge.

Photo 6: Lockwood Creek Before - existing culvert poorly functioning.

Photo 5: Lockwood Creek After - bridge replacing old culvert, restoring creek flow.

Project	Lockwood Creek Culvert Removal		
Status	Completed	**Date**	1998, September
Partners	Washington Department of Fish and Wildlife		
Cost	Culvert Removal, Bridge Construction		($25,000)
	Rock		($380
	Labor		($240)
	Rubber Belting		($278)
	Belting Installation		($270)
	Sign Replacement		($60)
	Riprap Placement		($135)
	Washington State Sales Tax		($2,905)
	Total Cost		($29,268)
Grants and Donations	U.S. Fish & Wildlife Service		$10,000
	Lower Columbia Fish Enhancement Group		$15,000
	Other Donations		$2,368
	Fish First		$1,900
	Total Donations		**$29,268**
	Funding Required		**Project Completed**

Manly Road Creek Restoration

Manly Road Creek – Ibrahim Phase I – 564 Feet - 2007 In Progress

This project aims to restore the loss of stream structure and complexity along 564 fee of the Lower Manley Road Creek channel by digging a pool below the road culvert, creating a new channel where the pond now exists, adding five root wads and building step pools leading to the East Fork of the Lewis River. Seven root wads will be installed along 285 feet of the East Fork south bank, for cover and bank stabilization.

The goal is to eliminate two obstacles for juvenile fish during out-migration time, provide easier passage for Threatened and Endangered listed species of Steelhead and Coho, and stabilize the south bank of a back channel. This is a productive stream spring fed by a large spring located upstream at the headwaters.

The new channel removes a lethal thermal and physical barrier to eliminated the risk that the juvenile fish will get stranded in and above the pond during out-migration time. The step pools allow easier fish entry and exit during lower stream flows. The root wads stabilize the bank and create cover for the fish.

Project	**East Fork Lewis River Tributary: Manly Road Creek – Ibrihim Phase I**		
Status	Funded	**Date**	ETA 2007
Cost		Project Manager (Donated)	($3,273)
		Volunteer Coordinator (Donated)	($500)
		Bookkeeping (Donated)	($130)
		Permitting (Donated)	($450)
		Design (Donated)	($1,000)
		On-site Installation Supervision (Donated)	($2,400)
		20 Native Trees (12' Tall, Donated)	($1,000)
		200 Native Species Plants (Nine Bark, Pacific Willow, etc.)	($300)
		Spawning Gravel	($8,440)
		Drop Structure Rock (including shipping)	($2,910)
		Root Wads and Installation	($9,100)
		Channel Liner	($4,000)
		Sediment Blanket (Donated)	($300)
		Sediment Barrier Straw (Donated)	($7.50)
		Step Pool	($9,150)
		Lower Pool Fill and New Channel	($19,560)
		Water Quality Monitoring (Donated)	($1,200)
		AMERICORP Team Post-Project Maintenance (incl. Spawning Gravel, 5 years)	($2,500)
		Washington Sales Tax	($3,850)
		Total Cost	($77,570.50)
Grants and Donations	National Fish and Wildlife Foundation and Salmon Recovery Funding Board Partnership : Community Salmon Fund		$50,000
	Fish First and other donations		$27,570.50
		Total Donations	**$77,570.50**
		Funding Required	**Financing Complete**

Manly Road Creek Pond Bypass Project – 2002

Photo 7: Manly Road Creek Before - old man-made pond in middle of creek leaking flow and drying up.

In the summer, Manly Road Creek flows through a man-made pond that dries up, stranding juvenile salmonids. WDFW electro-shocking had discovered juvenile steelhead, Coho and resident trout in the creek above this pond. The project consists of running an insulated pipe so juvenile fish have access to the East Fork Lewis River and can migrate out without getting stranded as the pond heats up or dries out in summer.

Monitoring of the project has found that on a typical summer day when the air temperature reaches 89°F, the pond will reach 87°F but the water in the pipe will generally not exceed 67°F. The creek above is fed by a series of large springs and maintains a relative consistent and cool year-around flow. A Fish First project is now funded and being permitted to convert the pond back into a natural streambed that will flow year-around.

Project	**Manly Road Creek Pond Bypass Project – 2002**		
Status	Completed	**Date**	2002, June
Partners	Clark-Vancouver Parks and Recreation Friends of the East Fork	Washington Department of Fish and Wildlife	
Cost		Pipe, posts, fiber cloth	($3,400)
		Construction Overhead	($500)
		Total Cost	($3900)
Grants and Donations	Friends of the East Fork		$500
	Fish First		$3,400
		Total Donations	**$3,900**
		Funding Required	**Project Completed**

Mason Creek Restoration

Mason Creek: Lower Mason Creek Rearing Pool – 2006

The project objectives were to improve fish production and survival (salmon and steelhead) by increasing the availability of critical rearing habitat. One missing key component in the habitat is deep pools that are in the vicinity of either up-stream or down-stream riffles with suitable and adequate spawning gravel. The effectiveness of re-establishing deep pools that support the proper pool-riffle ratio of a stream has been demonstrated on other projects. The success and functioning of pools associated with spawning reaches is documented by Fish First in annual monitoring reports to NOAA-Fisheries.

Photo 8: Mason Creek Before - sediment filled pool with no LWD cover.

Photo 9: Mason Creek After - deep pool and root wad (LWD) cover and habitat.

Public/Community awareness and interaction is also an important component of this project. Fish First and the land owner have established a setting (including signage) to provide educational opportunities that promote good land and water stewardship in the community.

About 120ft. of channel were treated to re-activate the existing sediment filled pool. The existing pool was excavated to an average depth of 8 ft. and a maximum top width of about 30 ft. At the upper end of the channel, a rock cutoff vane was installed just above streambed level to insure the channel maintains proper functioning capability. At the lower end of the channel, a rock cross-vane step was installed to sweep water through the pool and maintain pool gradient. Root wads were added at key locations along the reconstructed pool. Bank re-vegetation includes planting cedars and willows at the pool, and on both banks above and below the pool.

Project	**Mason Creek Rearing Pool – 2006**		
Status	Completed	**Date**	2006, September
Partners	Washington Department of Fish and Wildlife Friends of the East Fork Clark-Skamania Fly Fishers	Lower Columbia Fish Enhancement Group	
Cost		Construction	($12,231)
		Design and Construction Supervision	($3,450)
		Material	($5,374)
		Monitoring	($4,950)
		Total Cost	($26,005)
Grants and Donations	Lower Columbia Fish Enhancement Group		$14,400
	Clark-Skamania Flyfishers		$8,000
	Fish First		3,605
		Total Donations	**$26,005**
		Funding Required	**Project Completed**

North Fork Lewis River and Tributaries
Funded and Completed Projects

North Fork

Willie Culvert Replacement – 2007-08 In Progress

Build step-pools to mouth of culvert to allow Coho Salmon access to creek watershed and spawning grounds above.

Project	North Fork Lewis River – Willie Culvert		
Status	Funded	**Date**	ETA 2007
Cost			($)
			($)
		Total Cost	($66,880)
Grants and Donations	Fish America		$49,100
	Fish First		$17,780
		Total Donations	**$66,880**
		Funding Required	**Funding Complete**

Cedar Creek Restoration

Fish First, with the assistance of its sponsors, government grants, donations, and volunteers, has restored eight miles of Cedar Creek. Visitors are able to see evidence of their work by viewing Periwinkles; evidence of freshwater clams, crawdads, and otters; as well as Salmon spawning on the gravel beds. These projects really impacted not only the fish habitat, but the environment surrounding the fish habitat as well. Please see the monitoring report for additional information.

Cedar Creek – Bob Edwards Project below Amboy, WA – 1,400 feet – 2007-08 In Progress

This project aims to restore the structure and complexity of 1,400 feet of stream channel that, because of anthropogenic activities (splash dams, excessive logging, and grazing), has essentially become one long shallow and unstable “run” with no riffles, pools, or protective cover for all the life stages of salmonid fish (Coho, Chinook, and Steelhead) that once made extensive use of this reach of Cedar Creek, on the North Fork of the Lewis River System. This is one of the few tributaries below the power dams that cut off fish migration on the North Fork. The project components involve adding root wads to provide in-stream LWD, gravel holding cross-vanes to return the pool-to-riffle ratio function and enable eroded banks to re-vegetate, trees and shrubs to provide shading and cover, and re-activation of a small side-channel to furnish rearing and flood protection to fry and juveniles. Results expected are new high quality spawning production and resting pools, cover and protection for adult and parr, rearing habitat for parr, bank re-vegetation, and reduced summer stream temperatures in this reach.

In permitting process for 2008.

Project	North Fork Lewis River: Cedar Creek – Bob Edwards Project, below Amboy, WA		
Status	Funded	**Date**	ETA 2007
Cost		Project Coordinator (Donated)	($4,000)
		Finance and Accounting (Donated)	($300)
		Volunteer Coordination (Donated)	($400)
		Design (Donated)	($2,000)
		Permitting (Donated)	($480)
		Onsite Installation and Supervision	($8,000)
		Heavy Equipment Rental, Operation, Trucking, and Hauling	($43,300)
		28 Root Wads	($8,400)
		RW Rock and Pins	($7,000)
		Cross-vane Rock	($1,100)
		Spawning Gravel	($400)
		150 Planting Materials (Donated)	($6,000)
		Pre- and Post-Monitoring	($3,000)
		NOAA Monitor Report (Donated)	($1,020)
		Washington State Sales Tax (Donated)	($5,482)
		Total Cost	($90,882)
Grants and Donations	Fish America Foundation and NOAA Restoration Center – Community-Based Habitat Restoration Projects		$71,200
	Fish First		$19,682
		Total Donations	**$90,882**
		Funding Required	**Funding Complete**

Cedar Creek - Bill Doty Project - 2003

This project restored degraded salmonid spawning habitat, improved stream complexity and cover, and restored rearing habitat on 4,240 feet of the Amboy to Pigeon Springs reach of Cedar Creek, a tributary of the North Fork of the Lewis River in Clark County. Two species listed as threatened (Chinook and Steelhead) and one candidate for listing as threatened (Coho) are present in this system. Sea-run Cutthroat Trout are also present. The WRA 27 Watershed Rpt., the EDT Studies of the WA F&W, and the Lower Columbia Steel head Conservation Initiative both identify the Lewis River System as sanctuary habitat in need of restoration and protection.

Photo 10: Cedar Creek Before, almost one mile of long, sterile, run.

Photo 12: Cedar Creek After construction using root wads, cross veins, and re-created spawning beds and deep pools.

The property historically provided excellent spawning and rearing habitat that had become seriously degraded due to past removal of most large woody debris and various land-use activities. That removal has resulted in loss of stream structure and complexity as well as loss of access to high quality rearing habitat. Much of the riparian area was also pastured to the creek banks; this had seriously degraded stream cover. The project restored stream complexity and overall habitat productivity by the installation of rock vanes, associated pools and spawning gravel and placement of over 60 root wads in the stream bank.

Over 700 feet of old stream channels (side-channels) were re-connected to the stream and developed as year round rearing habitat. Finally, 2,200 feet of riparian area have been restored by tree plantings. Annual salmon carcass placement will provide stream nutrient enhancement. **This was a highly integrated project using advanced technology. The project reach is intensively monitored since it was completed. Spawning & rearing show large increases.**

Photo 11: Cedar Creek After one of three re-activated side channels.

Project	Cedar Creek - Bill Doty Project - 2003		
Status	Completed	**Date**	2003, Fall
Partners	Lower Columbia Fish Recovery Board Clark Conservation Board Washington Department of Fish and Wildlife		
Cost		**Total Cost**	($300,839)
Grants and Donations	Salmon Recovery Funding Board		$237,129
	Fish First Match		$63,710
		Total Donations	**$300,839**
		Funding Required	**Project Completed**

Cedar Creek: Charlie Swift Stream Restoration & Side Channels – 2002

Photo 14: Cedar Creek After newly created deep pool with root wads for cover.

The project objectives are to improve fish production (salmon and steelhead) by rehabilitation of fish habitat, increase the quantity and quality of spawning gravel available, provide more vegetative cover to improve stream bank stability, provide effective large woody debris (LWD), re-open side channels to provide cover and rearing, add compression rocks for improving stream structure, and establish a setting that can provide educational opportunities that promote good land stewardship.

Photo 13: Cedar Creek After root wad series providing fish cover and bank revegetation.

The Cedar Creek watershed and stream channel has been adversely affected by a variety of natural and anthropogenic (people related) activities in the watershed above over the past forty years. This included Yacolt burn and other wildfire impacts, timber harvest splash dams, out-of-date harvesting and land development practices, extensive removal of LWD from the channel, and lack of good land stewardship practices in some areas.

A series of treatments that improve fish habitat and proper functioning of the channel and flood plain have been incorporated into the restoration and rehabilitation design. The treatments include bank vegetation planting (trees) side channel re-activation, root wads to provide LWD, compression rock clusters for riffle structure, and gravel holding and pool enhancement rock cross-vanes. Each individual treatment type is adapted to that specific point in the stream reach or cross section location within the channel, to maximize treatment effectiveness.

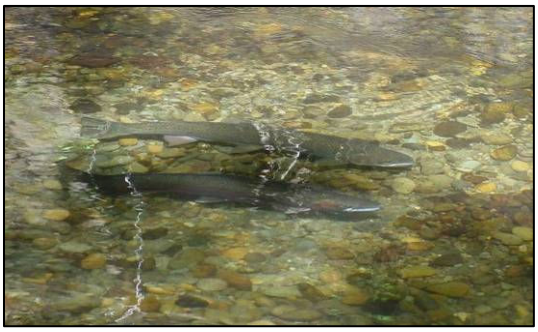


Photo 15: Cedar Creek after restoration, Steelhead pair spawning on new gravel above cross vane.

Project	**Cedar Creek: Charlie Swift Stream Restoration & Side Channels**		
Status	Completed	**Date**	2002, Fall
Partners	Washington Department of Fish and Wildlife	US Fish and Wildlife Service	
Cost		**Total Cost**	($128,907)
Grants and Donations	Salmon Recovery Funding Board		$100,857
	Fish First and In-Kind		$28,050
		Total Donations	**$128,907**
		Funding Required	**Project Completed**

Cedar Creek: Shimano-Carter Phase II Restoration - 2000

Stream Restoration and Side Channel Rearing Area, this project is a continuation of the Malinowski Project.

Photo 16: Cedar Creek Before - poor structure and complexity.

Another large section of the creek was improved with cross-vanes and spawning gravel. See the prior description for details.

In addition, a dried up side-channel was developed for rearing small fish and as shelter from high-flow events.

Photo 17: Cedar Creek After - cross vane with deep pool below and spawning gravel at head of vane along with LWD root wads.

Photo 18: Cedar Creek After - new side channel rearing area with a juvenile fish viewing bridge.

Project	Cedar Creek: Malinowski-Shimano-Carter Phase II Restoration - 2000		
Status	Completed	**Date**	2000, Fall
Partners	Washington Department of Fish and Wildlife US Fish and Wildlife Service		
Cost	Carcass Placement (nutrient enhancement)		($690)
	Side Channel Construction		($7,142)
	Project Management		($7,127)
	Permitting Overhead		($2,000)
	Project Monitoring		($10,000)
	Rock Vanes		($14,782)
	Spawning Gravel Placement		($17,409)
	Woody Debris Placement		($9,070)
	Engineering		($10,075)
	Washington State Sales Tax		($4,503)
	Total Cost		($82,798)
Grants and Donations	**SRFB** Funding		$66,421
	Cash Donations		$2,000
	Equipment Donations		$1,000
	Fish First and other Donors		$13,377
		Total Donations	**$82,798**
		Funding Required	**Project Completed)**

Cedar Creek: Malinowski Stream Restoration and Rearing Pond Phase I - 1999

This project consists of a stream restoration and a rearing pond enhancement.

Historically, this section of Cedar Creek was highly productive for the spawning and rearing of salmonids. Before the project, there virtually no spawning gravel present and pools had been converted to long shallow runs. There was little structure and complexity in the stream and consequently limited effective habitat.

To restore salmonid habitat in the stream, spawning gravel, gravel-holding cross-vanes, compression rocks, large woody debris, and anchored root wads were placed in the stream. Cross-vanes, as shown above, help balance and restore the hydrology of the stream. They create pools for resting and turbulence for fish passage. They also serve to hold spawning gravel in place above them. In low flows, they provide a channel for fish passage.

Photo 19: Cedar Creek After - in-stream cross-vane with spawning gravel added above.

Compression rocks are groupings of three or more rocks placed in a certain relationship to on another to produce a seam of fast and slow water for fish feeding and resting. These structures also provide protection from predators.

Large woody debris (LWD) in the form of root wads were also placed in-stream for cover. Root wads provide fish cover and habitat for insects. When anchored and placed properly, they also cause pool formation.

Photo 20: Cedar Creek After - spring fed rearing pond just off stream channel.

The second part of the project was a spring-fed, off-channel rearing system with a step pool that allows juvenile and adult fish passage to and from the pool. The pool is about 175' long with a maximum depth of 8'. Large woody debris was placed for fish cover. A spawning area 6' by 21' was placed in the shallow end of the pool. The step pool system provides a terraced fish waterway connecting the pool and the stream.

This project has been used in the education of community groups, elementary, middle school and high school students.

Photo 21: Cedar Creek After - step pools connecting rearing pond and stream.

Photo 22: Cedar Creek After - Washington Fish and Wildlife stocking pond with juvenile salmon.

Photo 23: Cedar Creek - community involvement - local school students site visit.

Photo 24: Cedar Creek After – underwater fish feeder system and remote site incubator (egg box).

Project	**Cedar Creek: Malinowski Stream Restoration and Rearing Pond Phase I - 1999**		
Status	Completed	**Date**	1999, Fall
Partners	Washington Department of Fish and Wildlife US Fish and Wildlife Service		
Cost		**Equipment & Labor**	($30,810)
		Materials	($9,119)
		Contractor Overhead	($8,056)
		Engineering	($14,895)
		Signage	($1,000)
		Planting	($3,000)
		Washington State Sales Tax	($2,350)
		Total Cost	($69,230)
Grants and Donations	US Fish and Wildlife Service		$32,110
	Donor		$1,352
	Donor		$9,771
	Donor		$11,895
	Donor - property owners		$11,102
	Fish First		$3,000
		Total Donations	**$69,230**
		Funding Required	**Project Completed**

Cedar Creek Battleground Railroad Culvert Removal - 1998

Photo 25: Cedar Creek Before - undersized and impaired Battleground Railroad culvert.

The culvert under the Battleground Railroad has been a significant obstacle since the mid '50's to adult salmonids trying the access the 27 miles of Cedar Creek above it. Much of this basin is excellent spawning and rearing habitat.

Fish First is jointly funding the removal of the culvert with Clark County. As a separate project, a 25 ft. wide culvert was installed and the railroad tracks replaced. A year later, Clark County replaced the undersized culvert about 600 ft downstream on the Amboy-Yacolt Road.

Photo 27: Cedar Creek In Progress - streambed prior to domed culvert placement.

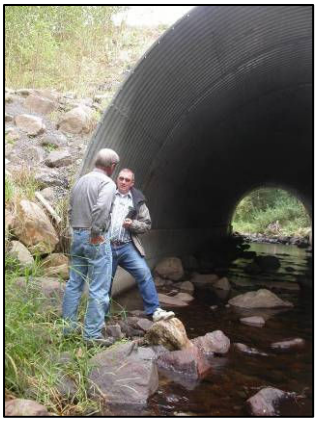


Photo 26: Cedar Creek After - new culvert in place with "fish friendly" bottom.

Project	**Cedar Creek Battleground Railroad Culvert Removal - 1998**		
Status	Completed	**Date**	1998, Fall
Partners	Clark County		
	Washington Department of Fish and Wildlife		
Cost		Culvert Removal	($95,475)
		Bank Restoration	($40,675)
		Culvert Footing Installation	($65,811)
		Washington State Sales Tax	($15,349)
		Total Cost	($217,310)
Grants and Donations	Washington Department of Fish and Wildlife - Project Design & Drawings		$23,248
	Washington Department of Ecology		$50,000
	Clark County		$144,062
	Fish First		
		Total Donations	**$217,311**
		Funding Required	**Project Completed**

Cedar Creek: Pigeon Springs Bank Stabilization – 1997

This project includes the stabilization of badly eroded stream banks and re-establishment of riparian vegetation. The purpose is to enhance fish spawning and rearing habitat by reducing siltation from erosion, shading portions of the stream, adding Large Woody Debris (LWD) and providing bankside cover.

The site is near the intersection of Cedar Creek and Pup Creek upstream from the bridge on Cedar Creek. There are three eroded sections of 100', 200', and 400'. Stabilization is accomplished with large rock toed into the creek bed. The banks are bound in layers of coconut cloth and staked to hold the banks in place until vegetation can establish a foothold.

Photo 29: Cedar Creek Before - eroded banks.

Photo 28: Cedar Creek After - stable revegetated banks and root wads.

Project	**Cedar Creek: Pigeon Springs Bank Stabilization**		
Status	Completed	**Date**	1997, Fall
Partners	Clark County Conservation District	Washington Department of Fish and Wildlife	
	Habitat Partners	Natural Resources Conservation Services	
	Lower Columbia Fish Enhancement Group		
Cost		Rock 3' & up	($305)
		Pit Run 12", 6", 4" - 157 Ton	($1,571)
		Coconut Cloth	($3,020)
		Trucking for Rock	($2,255)
		2 Site Trucks for 3 Weeks	($13,200)
		416 Person Hours	($4,000)
		EL240 CAT Excavator	($10,800)
		CAT-TD8 International	($6,000)
		Equipment Move In & Out	($750)
		Large Trees and Tree Spade	($1,650)
		Barbed Wire Fencing	($5,000)
		Sign	($195)
		Washington State Sales Tax	($3,325)
		Total Cost	($52,071)
Grants and Donations	Donor		$3,020
	Donor		Hydro Seed
	National Fish Wildlife Foundation		$40,000
	Donor		Rock
	Donor		$401
	Fish First and other donors		$8,650
		Total Donations	**$52,071**
		Funding Required	**Project Completed**

Jackson Creek Restoration

Creek is a tributary to Cedar Creek which is a tributary to the North Fork of the Lewis River, down to the Columbia and onto the Pacific Ocean.

Jackson Creek Culvert Replacement On Cedar Creek Tributary - 2002

The Jackson Creek Barrier Culvert Replacement was a Clark County project that was transferred to Fish First to complete in 2002. The barrier culvert correction was to replace an undersized culvert under the Cedar Creek Road and to remove a second undersized culvert just upstream under an old abandoned county road just outside of Amboy toward Woodland. The barriers consisted of two undersized culverts 4 feet in diameter. The culverts were inadequate to handle the stream with an average width of 12 to 14 feet and created a velocity barrier for juvenile salmon. The upstream abandoned road culvert outfall was elevated above the stream level, creating a barrier for adults as well.

Photo 30: Jackson Creek before culvert replacement.

The project was started at 8:30 am on October 2nd. The culvert was in place and traffic moving by 1am the next morning. The total project time for stream work and construction was 5 days.

Photo 31: Jackson Creek After new culvert placement.

The County was amazed that a culvert could be installed so quickly and without cutting corners. They were there for almost the entire culvert installation time. Since then Clark County has been in communication with Fish First to cooperate on more fish barrier culvert corrections throughout the entire county. This could be a real benefit to opening fish passage to habitat that is currently blocked because of barrier culverts. It would be a cooperative effort between Fish First, the county, WDFW and the federal regulating agencies and a major step forward in fish recovery for the Lower Columbia Basin.

Project	**Jackson Creek Culvert Replacement On Cedar Creek Tributary**		
Status	Completed	**Date**	2002, October
Partners	Clark County	LWC Consulting (Lonnie Crumley)	
	Washington Department of Fish and Wildlife		
Cost		**Total Cost**	($109,403)
Grants and Donations	Salmon Recovery Funding Board		$82,570
	Clark County		$23,953
	Fish First and In-Kind donations		$2,880
		Total Donations	**$109,403**
		Funding Required	**Project Completed**

Cedar Creek Tributary

Cedar Creek Tributary - Bill Harteloo Side Channel Project - 2004

The site is owned by Fish First member, Bill Harteloo, and utilizes a large spring outflow path that runs into Cedar Creek. The quality of the flow and water is exceptionally good. This reach of Cedar Creek is badly in need of side-channels for rearing of salmonid parr and for their protection and survival during the winter flood flow season.

Photo 32: Cedar Creek Tributary After side channel, main pool, and step-pools leading to the spring above.

The side-channel pond (53 ft. long and about 6 ft. deep) was built to provide rearing and flood flow protection. The pool size is restricted by the presence of two culverts and was placed between them. This required the installation of a series of step-pools (34 ft) above the pool to allow movement of fish up the spring outflow path where there is potential for spawning. About 170 ft. of debris filled channel was cleaned out and spawning gravel added.

Near the upper end of the spring near the Amboy-Woodland road, there is a pool below the access road culvert. This pool was cleaned, deepened, enlarged, and rock lined to allow better fish passage through the culvert. Spawning gravel was also added to the flow path below. Native trees and shrubs were added to the step-pool and new pool perimeter on both sides and the entire area was treated with grass seed.

The step-pools were lined with a heavy duty rubber pond liner to prevent leakage and to maximize water flow during summer low flow. Small rock was used on the sides of the step-pools to stabilize the pond liner and facilitate re-vegetation. A light woven fiber cloth was draped over the pond sides to prevent erosion before grasses emerge.

This site offered an exceptional opportunity to combine high quality water supported side-channel benefits as well as providing some additional spawning space in a reach of Cedar Creek that does not have an adequate level of these critical supporting components.

Project	Cedar Creek Tributary Bill Harteloo Side Channel Project		
Status	Completed	**Date**	2004, October
Partners	Washington Department of Fish and Wildlife		
Cost		**Total Cost**	($18,000)
Grants and Donations	Fish First		$18,000
		Total Donations	**$18,000**
		Funding Required	**Project Completed**

Chelatchie Creek - A Tributary Of Cedar Creek

North Fork of Chelatchie Creek - Belkoff Property - 1998

The purpose of this project is to reforest the riparian zone on a 1000' section of the North Fork of Chelatchie Creek owned by the Belkoff's. Approximately 2,000 alders, willows, cedars, and Red Osier Dogwoods were planted. Seedlings were protected from beaver and deer with wire or plastic netting.

Photo 33: North Fork of Chelatchie Creek after plantings and fencing to protect stream.

Project	North Fork of Chelatchie Creek - Belkoff Property		
Status	Completed	**Date**	1998, Februrary
Cost		Excavation and Plants	($3,000)
		Plant Protectors	($1,000)
		Labor	($126)
		Total Cost	($4,126)
Grants and Donations	Clark County Conservation District		$1,126
	Fish First		$3,000
		Total Donations	**$4,126**
		Funding Required	**Project Completed**

South Fork Chelatchie Creek - DuPuis Property Habitat Complexity & Stream Stucture Restoration – 2001

The project objectives are to improve fish production (salmon and steelhead) by rehabilitation of fish habitat, restoring sediment filled pools, increase the quantity and quality of spawning gravel available, improve stream bank stability, provide large woody debris, add effective stream cover using root wads and re-vegetating banks and riparian area, while establishing a setting that can provide educational opportunities that promote good land stewardship.

The goal of the project is to clean up the stream, provide Coho spawning habitat, and rearing habitat for Coho and Steelhead.

Photo 34: South Fork Chelatchie Creek After two deep new pools with root wads, vanes, and spawning beds.

Project	**Creek Name?? - DuPuis Property Habitat Complexity & Stream Stucture Restoration**		
Status	Completed	**Date**	2001, August
Cost		Project Design	($3,346)
		Equipment Rental	($17,120)
		Labor	($8,400)
		Materials	($3,566)
		Washington State Sales Tax	($2,240)
		Total Cost	($34,672)
Grants and Donations	Donor		$7,940
	Fish First and other donors		$26,732
		Total Donations	**$34,672**
		Funding Required	**Project Completed**

South Fork Chelatchie Creek - Vrieswyk Dairy – 1999

The existing layout of this dairy farm allows cattle access to the creek. Consequently, waste from the herd enters the stream untreated and the riparian area is badly damaged. Fish First works with the dairy owners to modify the layout of the farm. Fencing will be constructed to keep the herd out of the creek, riparian zone, and adjacent wetlands. The riparian zone will be re-vegetated trees, shrubs, and grasses. A bridge will be put in place so the cattle can have access to pasture on both sides of the stream without walking through it. A watering tank and associated plumbing will be installed to provide livestock with drinking water as an alternative to using the stream

Photo 35: South Fork Chelatchie Creek After plantings and fencing to protect stream.

Photo 36: South Fork Chelatchie Creek After new bridge, expanded grazing area, and stream fencing.

The goal of the project is to clean up the stream, provide Coho spawning habitat, and rearing habitat for Coho and Steelhead.

Project	**South Fork Chelatchie Creek - Vrieswyk Dairy**		
Status	Completed	**Date**	1999, October
Partners	Washington Department of Fish and Wildlife USDA National Resource Conservation Service		
Cost		Bridge	($24,625)
		Land Clearing for Buffer Zone	($6,620)
		Watering Tank	($4,951)
		Riparian Re-Vegetation	($29,034)
		Fencing	($14,707)
		Washington State Sales Tax	($6,155)
		Total Cost	($86,092)
Grants and Donations	National Resource Conservation Service		Cultural Resource Inventory
	US Fish & Wildlife Service		$8,000
	Lower Columbia Fish Recovery Board		$55,936
	US Conservation Service		$22,156
	Fish First		
		Total Donations	**$86,092**
		Funding Required	**Project Completed**

South Fork Chelatchie Creek - Price Dairy - 1998

The existing layout of this dairy farm allows cattle access to the creek. Consequently, waste from the herd enters the stream untreated and the riparian area is badly damaged. Fish First will work with the dairy owners to modify the layout of the farm. Fencing will be constructed to keep the herd out of the riparian zone, which will be re-vegetated with Red Cedars, Willows, Red Osier Dogwoods and grasses. A 40 foot bridge will be put in place so the cattle can have access to pasture on both sides of the stream without walking through it. A settling pond for organic waste will also be constructed. Swamp areas will be deepened and channeled to provide smolt habitat and bio-filtration for runoff.

The goal of the project is to clean up the stream, provide Coho spawning habitat, and rearing habitat for Coho and Steelhead.

Photo 37: South Fork Chelatchie Creek during construction – cattle bridge, re-vegetation, and stream fencing.

Project	**South Fork Chelatchie Creek - Price Dairy - 1998**		
Status	Completed	**Date**	1998, September
Partners	Washington Department of Fish and Wildlife USDA National Resource Conservation Service	Clark County Conservation District	
Cost		Bridge	($6,994)
		Streambank Repair & Vegetation	($32,847)
		Bridge Installation	($11,888)
		Pasture Reclamation	($31,634)
		Fencing 4,000 feet	($12,629)
		Concrete for Bridge	($3,766)
		Miscellaneous costs	($4,507)
		Total Cost	($104,265)
Grants and Donations	Washington Department of Fish and Wildlife - **Project Design & Drawings**		$20,000
	National Resource Conservation Service		Cultural Resource Inventory
	US Fish & Wildlife Service		$20,000
	Lower Columbia Fish Enhancement Group		$24,000
	Donor		$10, 000
	Washington Department of Ecology		$6,432
	Clark County Conservation Service		$6,500
	Fish First		$27,333
		Total Donations	**$104,265**
		Funding Required	**Project Completed**

Ongoing Programs

Fish First works on three ongoing programs – nutrient enhancement, fish rescue, and remote site incubators.

North and East Fork of the Lewis River and its Tributaries

Nutrient Enhancement Program – Established 1999

North Fork & East Fork Lewis River Program
Al Fulcer, Program Director

This program imitates the nutrient distribution that used to take place naturally when wild salmonids were abundant. Fish carcasses from the Lewis River Hatchery and the Speelyai Hatchery (Washington Department of Fish and Wildlife) are distributed in the South and North Forks of Chelatchie Creeks, the East Fork of the Lewis River, Green River, Rock Creek and the Lewis River. Members of Fish First, local landowners, cub scouts, members of the Battleground High School Kaycee Center and members of the Clark-Skamania Flyfishers participate in the distribution. The program runs from October through March.

Photo 38: Frozen spawned hatchery salmon carcasses ready for in-river distribution.

Photo 41: Hand distribution of salmon carcasses to key Lewis River locations.

Photo 40: Spawned-out salmon carcasses being put back into stream system to increase nutrient levels.

Photo 39: Nutrient Enhancement - salmon carcasses are also distributed by truck and chute system.

Results

Year	Labor (hrs)	# Carcasses	Weight (lbs)
1999	123	4,959	37,000
2000	312	13,000	85,000
2001	200	11,000	72,000
2002	117	4,000	26,000
2003		5,000	45,000
2004	424	11,613	75,500
2005	488	14,299	93,024
2006	471	14,282	92,913

Initial Project Costs

Project	Nutrient Enhancement Program – Initial Setup		
Status	Startup Complete	**Date**	1999
Partners	Washington Department of Fish and Wildllife	Lower Columbia Fish Enhancement Group (LCFEG)	
Cost			**Fish Carcasses, Distribution Trucks, Labor**
		Total Cost	**Fish Carcasses, Distribution Trucks, Labor**
Grants and Donations	Washington Department of Fish and Wildlife		**Fish Carcasses, Distribution Trucks, Labor**
	?? Freezers Labor Fish First		
		Total Donations	**Fish Carcasses, Distribution Trucks, Labor**
		Funding Required	**Project Completed**
See Also	**Ongoing Projects Requiring Funding or Volunteers**		

East Fork of the Lewis River

Mill Creek North Fish Rescue Pond Project Phase II – 2007

Dave Brown, Program Manager and Director

This project maintained and run by Dave Brown with assistance from Washington Fish and Wildlife.

The primary structure is a large specially-designed pond lined with concrete in order to expand fish-rearing capabilities for fish rescued from local streams before they dried out. Fish are contained in ponds and specially designed rearing pens marked with their originating stream and reared so that they can be re-released into the same streams after the streams are running, usually in the fall. This pond includes shelter so that the fish learn to hide from predators, netting to prevent predation, automatic fish feeders to supplant volunteer feeders, and double-filtered cool spring water to maintain survival temperature.

The purpose of this project is to concrete the bottom of the two remaining ponds. The actual project work includes:

- Cleaning out the bottom of the ponds.
- Building pond walls of concrete blocks.
- Pouring concrete pond bottoms.
- Re-plumbing two ponds.

Project	Mill Creek North Fish Rescue Pond Project Phase II – 2007			
Status	Complete	**Date**	2007	
Cost	Backhoe Excavation			($935)
	Concrete Pumping			($700)
	Concrete			($2,575)
	Concrete Blocks			($1,000)
	25 Bags of Concrete			($72)
	10 yards River Rock			($225)
	10 yards Crushed Rock			($225)
	200 Feet – 2” Pipe			($159)
	Washington State Sales Tax			($471)
				($6,362)
Grants and Donations	Donor			$5,000
	Fish First			$1,362
		Total Donations		**$6,362**
		Funding Required		**Project Completed**
See Also	**Ongoing Projects Requiring Funding or Volunteers**			

Mill Creek North Fish Rescue Pond Project Phase I – Established 2006

Project Completed and Ongoing on the Lower East Fork of the Lewis River tributary.

In 1992 Dave Brown, landowner and fisherman, noticed that wild juvenile salmonids were dying in tributaries to the East Fork Lewis River as these tributaries dried up in the summer. In conjunction with the Washington Department of Fish and Wildlife, he started a pilot program to save these fish by collecting and rearing them in ponds on his property until the fall rains came and releasing them back into the streams. The site has excellent cold water springs to support large numbers of juveniles over the summer.

This project has grown over the years and been funded mostly by Dave with some small contribution of materials from WDFW, Fish First, and Friends of the East Fork. This project's momentum is building as more adults return each year and correspondingly more juveniles are found in the streams in the summer. Most of the fish in this project are Coho salmon, although some Steelhead juveniles are rescued as well. Fish First partnered with Dave to upgrade the system to reduce maintenance requirements and to expand the capacity to rear 20,000 juveniles.

The actual project work included:

- upgrading the water supply system to make it more reliable and require less maintenance
- replacement of bird nets to keep predators out
- restructuring the ponds to make moving fish in and out easier
- lining unlined ponds to prevent seepage
- adding ponds to increase capacity

Project	**Mill Creek North Fish Rescue Pond Project Phase I – 2006**		
Status	Completed	**Date**	2006, March
Partners	Dave Brown Washington Department of Fish and Wildlife		
Cost		Plywood	($1,350)
		Backhoe and operator	($1,400)
		Treated Lumber	($270)
		Pond Liner	($600)
		Sand	($130)
		Bird Nets	($180)
		Pipe, fittings, hardware, paint	($1,430)
		Washington State Sales Tax	($330)
		Total Cost	($5,560)
Grants and Donations	Donor		$4,560
	Fish First		$1,000
		Total Donations	**$5,560**
		Funding Required	**Initial Setup Completed**

North Fork Lewis River and Tributaries

Lake Merwin Net Pen – 1999-Present

Dan Balch, Program Director

Ongoing project on the North Fork of the Lewis River tributary. Setup completed 1999.

The ongoing program works in conjunction with the Merwin Hatchery in the raising of summer steelhead for the Lewis River and Kokanee for Lake Merwin.

Photo 42: Net Pens: Adding juvenile salmon into rearing pens.

Smolt are moved from the hatchery to Lake Merwin for the final stage of growth prior to release into the North Fork of the Lewis River. Two 30' X 30' and six 20' X20' pens 10' deep are utilized. Fish First will build the pens and manage the nets when not in use. The Merwin Hatchery Staff will tend the fish while they are in the pens.

Results

Year	Kokanee	Steelhead
1998-9	39,876	60,000
1999-0	39,772	21,901
2000-1	50,466	62,174
2001-2	50,236	60,000
2002-3	52,980	66,371
2003-4	48,000	60,000
2004-5	41,000	60,000
2005-6	49,000	63,000
2006-7	53,350	59,975

Initial Setup Costs

Project	**Lake Merwin Net Pen Construction – 1999**		
Status	Completed Pens and Program Initiated	**Date**	1999
Partners	Washington Department of Fish and Wildlife		
Cost	3 - 20' X 20' Used Pens		($8,000)
	3 – 20' X 20' New Pens		($2,835)
	3 – 24' X 24' Bird Nets		($135)
	2 – 30' X 30' Used Pens (donated)		($0)
	Foam Floatation		($1,200)
	Labor to Manufacture 3 Net Pens		($14,650)
	Total Cost		($26,820)
Grants and Donations	Washington Department of Fish and Wildlife		fish, labor, feed
	Donor		Aluminum for 3 Pens
	Donor		$6,000
	Clark County PUD		Two 30' X30' Pens
	Fish First		Labor and funds
	Total Donations		**$26,820**
		Funding Required	**Initial Setup Completed**
See Also	**Ongoing Projects Requiring Funding or Volunteers**		

Remote Site Incubator Project Initiation – Established 1996

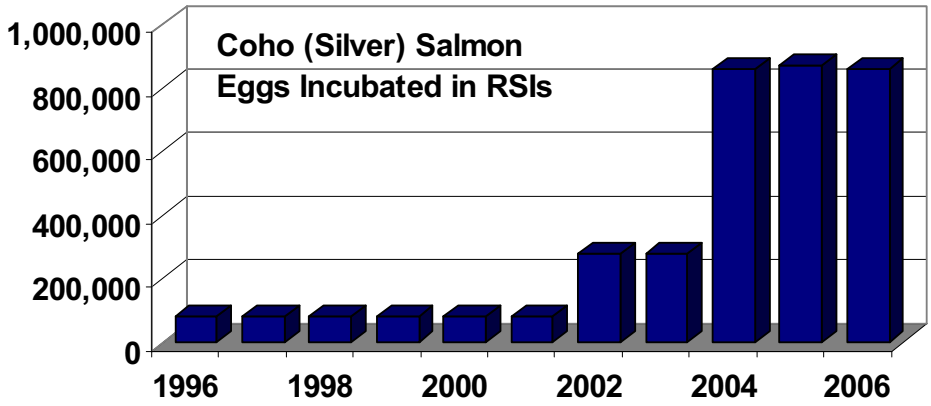
Mike Moss, Program Director

This project re-introduces natural spawning Coho salmon into several small tributaries of the North Fork. Remote site incubators (RSIs or "Egg Boxes") are used to hatch Coho eggs from the Lewis River Hatchery.

For the first time in 1996, RSI's were placed in Hayes, Robinson, Ross, Cotton, and Houghton Creeks. Approximately 80,000 eggs were hatched. This program will continue until enough Coho salmon are returning to these streams to sustain their runs.

Although the project was established in 1996, it is ongoing. Please see: **Funding and Volunteer Requirements for** additional information.

Photo 43: Egg Boxes - Remote Site Incubators (RSIs) installed on a tributary stream with spring water feed.



Project	**North Fork Tributaries Remote Site Incubator Projects**		
Status	Program Initiated	**Date**	1998
Partners	Washington Department of Fish and Wildlife		
Cost		Incubators	($370)
		Miscellaneous Materials	($132)
		Labor	Donated
		Total Cost	($502)
Grants and Donations	Washington Department of Fish and Wildlife		Wild Fish Eggs
	Fish First		Time and Effort
		Total Donations	
		Funding Required	**Initial Setup Completed No Annual Operating Expense**
See Also	**Ongoing Projects Requiring Funding or Volunteers**		

Lewis River, Echo Park Cove, Net Pen Construction – Established 1996

Dan Balch, Program Directors

Photo 44: Lewis River, Echo Park Cove Net Pens.

This project is a co-operative effort with the Lewis River and Merwin hatcheries.

Net pens, constructed by Fish First are used for the final stages of rearing Spring Chinook and Steelhead smolt.

The purpose of the pen rearing is to raise smolt to a larger size prior to release and to acclimate these fish to an area other than the hatchery.

Pens yield a healthier smolt due to the decreased rearing density relative to the hatchery.

Smolt and fish feed are supplied by the Washington Department of Fish and Wildlife as an ongoing program.

Photo 45: Lewis River, Echo Park Cove, Net Pen work team preparing to load smolt size fish.

Results

Release Date	Summer Steelhead	Spring Chinook
1995-6		55,872
1996-7	50,167	155,177
1997-8	50,044	144,400
1998-9	48,443	127,590
1999-0	70,082	147,550
2000-1	60,000	137,341
2001-2	75,262	148,647
2002-3	0	149,249
2003-4	0	150,688
2004-5	0	150,300
2005-6	113,000	150,000
2006-7	114,675	150,000

Annual Operating Expense

Project	Lewis River, Echo Park Cove, Net Pen Annual Expense – Ongoing		
Status	Net Pens Constructed	**Date**	Ongoing
Partners	Washington Department of Fish and Wildlife		
Cost		Yearly Operating Expense	($7,762)
		Yearly Labor	($525)
		Total Cost	($8,287)
Grants and Donations			
		Total Donations	**$0**
		Funding Required	**($8,287)**
See Also	**Ongoing Projects Requiring Funding or Volunteers**		

Initial Setup Costs

Project	Lewis River, Echo Park Cove, Net Pen Construction – 1996		
Status	Net Pens Constructed	**Date**	1996
Partners	Washington Department of Fish and Wildlife		
Cost		Miscellaneous materials and costs	($33,981)
		Aluminum	($28,000)
		Pen Construction	($16,320)
		Feeders	($1,226)
		Nets	($7,000)
		Total Cost	($54,019)
Grants and Donations	Washington Department of Fish and Wildlife		Smolt and Feed
	Donor		$28,000
	National Fish and Wildlife Service		$40,000
	U.S. Fish and Wildlife Service		$14,000
	Lower Columbia Fish Enhancement Group		$5,000
	Northwest Women Flyfishers		$1,000
	Fish First, and other donors		Data unavailable
		Total Donations	**$88,000**
		Funding Required	**Initial Setup Completed**
See Also	**Ongoing Projects Requiring Funding or Volunteers**		

How Can I Help Fish First?

Fish First is a 501 (c)3 public, charitable, non-profit organization. Fish First appreciates donations of time, money, products, or services year-round. Donations may be a charitable contribution deduction, please consult your tax advisor for details. There are many ways to contribute to Fish First. To contact Fish First regarding your contribution:

- Email info@fishfirst.org or visit http://www.fishfirst.org
- Call John DiVittorio, Executive Director: 360-713-7460
- Write Fish First at:
  Fish First
  P.O. Box 1505
  Woodland, Washington 98674

Here are just some of the ways to help Fish First!

Join Fish First!

Please consider joining Fish First. Members receive a decal to place on vehicles or boats, newsletters, action alerts and invitations to special events and auctions. Membership levels are:

Coho Salmon: Standard 1 Year Membership - $35

Chum Salmon: Students $15

Cutthroat Trout: Smolts Club (Kids) $20

Steelhead: Sponsor Membership $250

Chinook Salmon: Life Membership $1000

Join electronically on the Fish First website: http://www.fishfirst.org. Or send a letter and check to Fish First at the above address.

Donate Project or Program Funds

Choose a specific project or program, or donate to the general fund used for all programs and projects. There are three ways to donate:

- Checks made out to Fish First. If donating for a specific project or program, please note it in the check memo field and in your letter, then mail to the address above.
- Locally, at any branch of Columbia Bank
- Electronically on the Fish First website: http://www.fishfirst.org

Pledge Funds for an Endowment

Fish First welcomes pledges that would help create a perpetual fund to benefit Fish First habitat restoration, fish rescue, net pen, and remote site incubation projects and programs.

Plan Your Estate to Aid Fish First

Planning your estate may offer tax savings from deductions, help avoid capital gains tax due, and may provide other benefits to you and your heirs. Speak to an estate attorney or financial adviser and discuss options for contributing to Fish First, such as through a Charitable Remainder Trust, Charitable Lead Trust, Charitable Gift Annuity, or Retained Life Estate.

Volunteer Your Time

As a largely volunteer organization, we welcome your skills and enthusiasm. Due to the nature of the work, you must be 18 years of age and a Fish First member to work on any of the projects and programs. Send us an email, give us a call, or send us a letter to discuss joining our team.

Donate Services, Equipment, or Materials

Fish First has a number of items, such as rock, gravel, tree root wads (long tree trunks with roots still attached) that are used in many projects. Hydrologists design the projects, and heavy construction equipment and crews are needed to complete many of the projects. Review our **Error! Reference source not found.** and our Programs to find out more about the items that may be donated, or contact us to learn more.

Donate Fundraising Items or Services

The Fish First annual auction occurs in May of each year. Donations for the fundraiser are accepted throughout the year. Please contact us to discuss your donation of goods or services.

FISH FIRST DONATION, VOLUNTEER, AND MEMBERSHIP FORM

Please mail to: Fish First, Post Office Box 1505, Woodland, Washington, 98764,
or contact us at 360-713-7460 or info@fishfirst.org.

Name		Date	
Address		Company	
City, State, Zip Code		Telephone	
Email (Optional)			
	☐ Please email me the Fish First monthly newsletter.		

Donation Information: Fish First is a 501 (c) 3 public, charitable, non-profit organization.
If no project name is indicated, your donation will be applied where it is needed most.

☐ Project Donation		Amount	$
Project or Program Name (Optional)			
Comments:			

Please attach details for any of the following:

☐ Endowment Funds ☐ Planned Estate ☐ Stocks, Bonds or Other Gifts

☐ **Please recognize my donation** (Check options, below) ☐ **Anonymous Donation**

☐ Billboard On-Site (if installed) ☐ Fish First Newsletter
☐ News Articles ☐ Project Book (including Web Site)

Non-Monetary Donation Please attach details, such as quantities or items donated.

☐ Equipment ☐ Root Wads ☐ Plants (Trees 4' or larger)
☐ Gravel ☐ Rock ☐ Fundraising Items or Services
☐ Other

Volunteer: Must be 18 years or older and a Fish First member due to insurance coverage.

☐ Nutrient Enhancement (Oct. – Mar.) ☐ Net Pens (Oct. – Mar.)
☐ Egg Boxes (RSIs) (Nov. – May) ☐ Annual Fundraising Auction (Oct. – May)
☐ Other (Please describe below)

Join Fish First! Receive a decal to place on vehicles or boats, newsletters, action alerts, and invitations to special events and auctions. Annual Memberships:

☐ Steelhead - Sponsor $250 ☐ Coho Salmon – Adults $35
☐ Chum Salmon - Students $15 ☐ Cutthroat Trout - Kids $20

Lifetime Membership: ☐ Chinook Salmon ($1,000)

Payment Type Please do not send cash in the mail.

☐ Enclosed is a check payable to Fish First.

☐ Please charge to my Visa/Mastercard: $

Number		Expiration	
Signature			

☐ My company will make a matching contribution. Company name:

Thank you for your consideration and donation of time, money, goods, or services to help Pacific Northwest native fish and improve environments wherever the fish run!

Lewis River

Let it begin with us!

Watershed Restoration, Fish Habitat,
Off Channel Spawning — More and Better Fish!

McCormick Creek
Lockwood Creek
Brush Creek
North Fork
Riley Creek
Ocean Runs
Breeze Creek
Big Tree Creek
Mill Creek
Basket Creek
Lake Merwin
64 miles of river system
Jenny Creek
Bitter Creek
Manly Road Creek
Yacolt Creek
East Fork
Pup Creek
Chelatchie Creek
Mason Creek
Jackson Creek
Cedar Creek
Salmon Creek
Rock Creek

Fish First

Post Office Box 1505
Woodland, WA 98674

360-713-7460
http://www.fishfirst.org
501 (C) 3 Public, Charitable, Nonprofit Organization