

ANNUAL PROGRESS REPORT

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SUMMARY

Job 1. Program development of the Salmon and Trout Enhancement Program.

Objectives:

1. Meet with Salmon and Trout Enhancement Advisory Committee bimonthly to review STEP activities for consistency with ODFW management programs.
2. Make presentations on STEP to citizen groups, schools, and local and state governments.
Distribute informational brochures explaining the STEP program.
3. Develop training brochures on how to do various types of stream surveys and how to incubate eggs.
4. Conduct an annual STEP Volunteer Workshop.
5. Publish a STEP Volunteer Newsletter on a quarterly basis informing the public of STEP activities.

Accomplishments:

- Objective 1. Ten meetings of the STEP Advisory Committee were attended. The Advisory Committee met with representatives of volunteer groups to review policy direction of STEP.
- Objective 2. STEP biologists made over 165 presentations to citizen groups, schools, and other governmental agencies. In addition, STEP displays were presented at local sports shows and county fairs. Over 2,500 information brochures on STEP were distributed.
- Objective 3. The 1986 STEP Volunteer Conference was held on April 5-6, 1986 in Newport, Oregon. Theme of the conference was habitat enhancement. Over 200 volunteers attended.
- Objective 4. Four issues of the STEP Volunteer were published. We distributed over 2,400 copies of each issue.

Job 2. Collect physical and biological stream survey information.

Objectives:

1. Work with district fish biologists and other land managers to identify stream systems or areas where physical and biological stream data and information on fish populations is inadequate.
2. Conduct 10 training sessions to teach volunteers how to conduct physical and biological stream surveys, spawning fish surveys, and compile survey information.
3. Coordinate and supervise volunteer efforts to conduct physical and biological stream surveys and spawning fish surveys on selected streams.

Accomplishments:

Objective 1. STEP biologists reviewed existing records of stream surveys and worked with district fish biologists to identify systems needing updated surveys. Using a method developed by ODFW's Research section, we began to evaluate the natural rearing potential of each stream in the STEP district.

A cooperative effort was undertaken with the US Forest Service and Bureau of Land Management to develop Anadromous Salmonid Habitat Overviews for the Nestucca, Smith (Umpqua) and Chetco river systems. The overviews identify habitat enhancement opportunities with each of the basins.

Objective 2. Thirty-eight training sessions were held to train volunteers to conduct physical and biological stream surveys. Over 200 volunteers were trained and many subsequently undertook stream surveys.

Objective 3. Ninety stream surveys in 36 stream systems were undertaken by volunteers (Attachment 1). Over 125 miles of stream were surveyed and the information provided to management biologists.

Job 3. Habitat Improvement

Objectives:

1. Initiate fish habitat improvement projects on streams or standing waters identified in management programs or plans as in need of habitat improvement.
2. Conduct 10 workshops to instruct volunteers on the various methods to improve fish habitat.
3. Provide technical assistance and materials and supplies to volunteer groups to undertake habitat improvement projects.

Accomplishments:

Objective 1. One hundred and sixty-three fish enhancement projects were undertaken in 45 stream systems (Attachment 1). Most of the work was conducted by volunteers; however, some larger projects were contracted out. Over 1,600 volunteers participated in stream enhancement projects and contributed more than 15,000 hours of their time to the work.

Objective 2. One workshop was held to instruct volunteers on the various methods to improve stream habitat. This subject was also the main topic at the 1986 STEP Volunteer Conference. We had planned to conduct workshops; however, we found the subject matter complex for the volunteers to understand in a classroom situation and instead concentrated our efforts with "on-the-job" training as they undertook the work itself.

Objective 3. Implementing this objective took considerable time by the STEP biologists. They visited each proposed enhancement project site and worked with the volunteers to design and layout the enhancement work. They were also present to assist with the work on most projects and provided materials and supplies as needed.

Job 4. Egg Incubation Program

Objectives:

1. Investigate and approve volunteer requests to incubate eggs or rear fish under the STEP program.
2. Plan and coordinate the distribution of eggs from ODFW hatcheries to over 300 STEP volunteer projects.
3. Provide fish culture technical assistance to over 300 citizen volunteers participating in the egg incubation program.
4. Develop volunteer operated broodstock development projects (fish rearing) on selected streams.

Accomplishments:

Objective 1. We received requests from over 380 individuals to participate in the egg incubation program. Each applicant was contacted and the potential incubation site investigated for meeting basic requirements.

Objective 2. We coordinated the distribution of over 14.8 million salmon and trout eggs from department or federal facilities to STEP volunteers. We worked with ODFW's Fish Culture Division to ensure all eggs were distributed, and necessary forms recording disposition of eggs were included into the ODFW Hatchery Record system.

Objective 3. Fish culture assistance was provided to 380 volunteers participating in the egg incubation program. With many volunteers hatching multiple fish species, eggs were being distributed and incubated from September through May and required considerable monitoring. Hatching success was good and 13 million salmon and trout fry were released into underseeded streams.

Objective 4. Seventeen rearing projects were undertaken by volunteers with 10 of them operating as brood stock development projects. The brood stock projects raised fish to full term smolts, while the others released fish as fed fingerlings. The first adult returns occurred to sites on the Umpqua, Coos and Rogue rivers. Over 500,000 fish (fingerlings or smolts) were released by the volunteers.

INTRODUCTION

The Salmonid Enhancement and Restoration Program is designed to enhance and restore self-sustaining populations of salmon and trout by undertaking habitat improvement projects and supplemental fish stocking programs. Work is conducted by Oregon Department of Fish and Wildlife (ODFW) personnel and by trained volunteers. A major component of the program is training citizens to undertake projects such as stream surveys, habitat enhancement and fish rearing through the Salmon and Trout Enhancement Program, commonly referred to as STEP. STEP is a program whereby citizens volunteer their labor to enhance the fishery resources of the state.

The departments management programs call, in part, for the collection of physical and biological stream survey information, habitat enhancement work, and fully seeding fish rearing areas. Funding through this contract has allowed us to increase our efforts in these areas.

Job 1. Program development of the Salmon and Trout Enhancement Program.

The job objective was to increase public participation, and develop guidelines for, the Salmon and Trout Enhancement Program (STEP). It was accomplished through the development of guidelines by the STEP Advisory Committee; presentations to sport groups, schools, and government entities; developing instructional brochures; and the distribution of the STEP Volunteer Newsletter.

The 12 member STEP Advisory Committee was established by the legislature to review department policies regarding STEP and make recommendations to the Fish and Wildlife Commission. Members are appointed by the Governor. The Committee met ten times during the contract period. Meetings were held at various locations within the state to allow volunteer groups to discuss their work with the Committee.

Major areas of concern addressed by the Committee were how to increase school participation in STEP, landowner liability, project record keeping, volunteer training, recognition of volunteer efforts, and STEP rearing programs. The Committee plans to review the current STEP guidelines in the coming year and make recommendations for change to the Fish and Wildlife Commission.

Providing training information to the volunteers is a vital component of STEP. We developed four brochures for distribution: 1) STEP Survey Projects - A Look at Fish and Streams, 2) How to do Spawning Fish Surveys, 3) How to Hatch Salmon or Trout Eggs in a Streamside Incubator, and 4) An Introduction to Stream Habitat Improvement. We reprinted "STEP and Oregon's Fish Need Your Help" and "Guidelines for Public Involvement in Cooperative Salmon and Trout Enhancement Projects". Over 2,500 information brochures were distributed to interested citizens.

The 1986 STEP Volunteer Conference was held in Newport, Oregon on April 5-6, 1986. The conference program included instructional sessions on building instream habitat structures, collecting broodstock, how to conduct and use stream surveys, how to "sell" your STEP project to the news media, and the incorporation of STEP in the curriculum of public schools. A highlight was recognition awards to individuals, groups or businesses that made significant contributions to STEP. David L. Stone, a school teacher in Silverton, was selected as Volunteer of the Year for his work with school children in STEP.

Four issues of The STEP Volunteer were published. The Volunteer is used to alert volunteers of work being done state wide in STEP, activities of the STEP Advisory Committee, new techniques for habitat enhancement or egg incubation, and activities in other states. We distributed over 2,400 copies of each issue.

Job 2. Collect physical and biological stream survey information.

The objective was to obtain physical and biological data on fish populations necessary to implement basin management programs. It was accomplished by meeting with district fish biologists and other land managers to identify stream systems where information was lacking; conducting workshops to train volunteers to do surveys; and by coordinating and supervising volunteer survey projects.

A review of existing stream survey information was initiated by each of the 8 STEP biologists. Old survey records were reviewed and those streams identified where surveys have not been conducted or where they have not been done in recent years. This information will be used by the district fish and STEP biologists to direct volunteer survey efforts.

STEP personnel worked with research biologists to develop "Guidelines for Stocking Salmonids in Streams." This information was used to set stocking levels for streams in need of enhancement through the egg incubation program.

Thirty-eight training sessions were held to train volunteers to conduct physical and biological stream surveys. Ninety stream survey projects were undertaken in 36 stream systems by the volunteers. Over 125 miles of stream were surveyed.

Summary of Accomplishments:

Members of the Seaside High School fish and wildlife class, Seaside Heights Grade School, and Warrenton High School surveyed a portion of the Neawana Creek. Limiting factors to fish production were identified. The Grade School has "adopted" the stream and is planning habitat improvement.

Twenty-two biology students from Toledo High School received stream survey training in late 1985. In conjunction with the field outing, the students assisted in conducting population estimates of juvenile salmonids inhabiting Bear Creek (Yaquina River).

A general stream survey workshop was conducted for 20 volunteers in the Roseburg area. After three hours of classroom instruction, the group divided into teams and conducted a survey on a short section of Fall Creek (Little River - Umpqua River).

Juvenile fish sampling surveys were completed by various volunteers on Big Tom Folley Creek, Little River, SF Deer Creek, NF Deer Creek, Weaver Creek, Louis Creek, Sutherlin Creek and Grassy Creek (Umpqua River system).

STEP volunteers completed spawning fish surveys on lower Rogue River tributaries, Hunter Creek, Winchuck River, Chetco River, Pistol River, Floras Creek and New River. The 1985-86 returns were above average.

Twenty-four students from Mount Hood Community College were trained for general and spawning surveys. A field trip was made to the upper Sandy River system for on-site experience.

Two classes were given to the Gales Creek chapter of the NW Steelheaders - general stream survey and spawning fish survey. They subsequently conducted general surveys within the Gales Creek system and spawning fish surveys in selected portions of Gales Creek.

The Santiam Fly Casters conducted a general stream survey on 2 miles of the North Santiam River. Three sections were electrofished, and representative macro invertebrate samples were collected from riffles.

Volunteers completed winter steelhead spawning surveys in the Fifteenmile Creek basin (Columbia River). A total of 17.9 miles of stream were surveyed on Eightmile Creek, Fifteenmile Creek, and Ramsey Creek. Peak redd counts were considerable above recent year counts and indicated a fish ladder recently constructed by volunteers was passing fish.

Job 3. Habitat Improvement

The objective was to enhance fish passage and rearing habitat. It was accomplished by training and supervising volunteers to undertake enhancement projects and providing the materials necessary to do the work.

Sill logs or rock filled wire baskets (gabions) were installed in streams to improve pool/riffle ratios, create adult holding pools or juvenile rearing area, and to trap spawning gravel. Rearing and hiding areas for juvenile fish were created by placing large boulders in the stream. Fish passage was improved by removing log jams, fixing or modifying improperly installed culverts, installing jump pools, or providing passage at impassable barriers. Streamside vegetation was improved by plantings, seeding of exposed areas or fencing to exclude livestock.

We undertook 163 habitat enhancement projects in 45 stream systems (Attachment 1).

Summary of Accomplishments:

Seaside High School fish and wildlife class installed a gabion on "Coho Creek" (named by the students). The rock was donated by a local construction company. Thirty students and 2 teachers participated in the project.

John Daper, a dairyman on Illingsworth Creek (Miami River), developed a comprehensive habitat plan for the stream. Work will include fencing, planting willows, a bridge crossing, log sills, log deflectors, and gabions.

The Beaverton chapter of the NW Steelheaders undertook nine projects in the Trask River basin during the summer of 1986. Work included stream surveys, log jam modification, rootwad and log placement, grass seeding, boat ramp improvement, and work at the Trask River Hatchery to improve rearing ponds.

Numerous sites for structure placement were identified and flagged on Deadwood Creek (Siuslaw River) with representatives of Davidson Industries, Siuslaw-Lake Creek STEP, and the US Forest Service (Mapleton Ranger District). Plans are to install log and boulder structures with the intent of creating spawning habitat for fall chinook. Davidson Industries will donate and place the logs, the USFS will donate the boulders from a nearby quarry, and Lake Creek STEP will provide the manpower needed to secure the structures.

The Eugene Ikes completed a passage improvement project on Saleratus Creek (Siuslaw River). Chapter members installed baffles into a culvert that exceeded a gradient of 1%. A boulder berm was also constructed to improve entry into the culvert. International Paper Company donated and delivered the boulders used in the project.

The Middle-Rogue Steelheaders constructed a bypass flume on Fruitdale Creek (Rogue River). Concrete flumes were constructed across two irrigation canals that have caused problems for downstream migrating coho and steelhead. In previous years, club members and ODFW personnel had to trap and transport fish daily below the canals during May and June.

The fish ladder at Savage Rapids Dam on the Rogue River was repaired. Over 1,300 volunteer hours and thousands dollars of donated equipment and materials were provided by Rogue Valley groups including the Rogue Flyfishers, NW Steelheaders, Rogue Guides Association, and Grants Pass Irrigation District. ODFW district and engineering staff provided equipment, design, and blasting expertise. The original cost estimate to complete the work was \$20,000; however, by using volunteers and donated materials, the final cost was less than \$2,000 and paid for by the volunteers.

The Pacific Fisheries Enhancement Corporation in Coos Bay undertook an "Adopt-A-Stream" project on Steel and China creeks, tributaries of the Coquille River. In two Saturdays, over 150 volunteers filled over 700 linear feet of gabions. This represented 25 structures placed in areas where spawning gravel was poor. Coos County donated 120 yards of gravel for the project.

Curry Anadromous Fishermen (CAF) placed gabions and log sills in Hunter and Deep creeks, tributaries of the Pistol River. CAF also assisted in culvert repairs and the placement of log sills by the Curry County Roads Department on Sanders Creek. All three county commissioners assisted in the culvert repair by operating the heavy equipment.

The Mount Hood Steelheaders completed work on Salmon River (Sandy River) to provide juvenile rearing and adult holding areas. A pair of spring chinook salmon utilized spawning gravel just below one of the structures within 5 days of installation.

Members of the Albany NW Steelheaders, Corvallis NW Steelheaders, Corvallis Izaak Walton League, and Crescent Valley High School students undertook habitat enhancement work on Kin Creek (Calapooia River). Log sills, rock weirs and willow plantings were activities completed.

Representatives from Corvallis High School, the 106th Neighborhood Association, and local landowners installed cedar logs for cover, gravel collection and pool creation on SF Rock Creek (Mary's River - Willamette R).

The City of Silverton, Silverton NW Steelheaders and Silverton Ikes completed a restoration/repair project on the city park fishway. Shortly after completion, 21 adult coho were observed passing through the structure.

A Metolius River (Deschutes River) enhancement project was completed by 20 volunteers from Trout Unlimited and others. One log deflector and 38 boulders were placed with the use of a skidder winch. Altogether, 119 boulders, 6 trees with rootwads, 15 deflector logs, and 2 log weirs were placed in the 3 work days. After the instream work was completed, the disturbed areas were reseeded.

Two spawning gravel placement projects were completed by Sunriver Anglers and by Klamath Country Flycasters. The Sunriver Anglers placed 57 cu yds of gravel into Spring River (Deschutes R) - within 2 weeks, numerous large brown trout were observed using the area. Klamath County Flycasters placed 95 cu yds of gravel into Spring Creek (Williamson River) to provide spawning area for rainbow trout. In January, approximately 150 fish were observed using the spawning area.

Members of the Milton Freewater Steelhead Enhancement Club installed log sills and deflector logs into Couse Creek (Walla Walla River). The structures will provide needed pools and trap gravel for use by summer steelhead.

The Mid-Columbia Chapter of the NW Steelheaders cabled fallen logs and large woody debris and constructed rock berms in Tony Creek (MF Hood River) to enhance winter steelhead habitat. A local logger donated the use of a skidder and operator to winch logs into the stream.

Job 4. Egg Incubation Program

The objective was to enhance populations of naturally produced salmon and trout through the release of fry or smolts. The work was accomplished by using volunteers to incubate salmon or trout eggs and releasing the resultant fish in underseeded streams. Volunteers were also involved in broodstock development programs.

We coordinated the distribution of over 14 million eggs to 380 volunteers. Hatching success was good and approximately 13 million fry were released.

Fry releases through STEP, 1985-86. 1/

Species	Coastal Systems	Columbia R System	Total
Chum Salmon	0	42,904	42,904
Coho Salmon	3,122,021	1,608,087	4,730,108
Spring Chinook	403,429	476,948	880,377
Fall Chinook	1,640,383	89,925	1,730,308
Summer Steelhead	439,594	182,521	622,115
Winter Steelhead	3,701,234	865,249	4,566,483
Cutthroat Trout	257,449	0	257,449
Rainbow Trout	0	114,978	114,978
	9,564,110	3,380,612	12,944,722

1/ Fry released into streams or rearing ponds.

Seventeen rearing projects were undertaken to develop broodstock for Department and STEP programs. Initial returns to project sites on the Rogue, Umpqua, and Coos river systems were encouraging.

Summary of Accomplishments:

Spring chinook brood fish (85 brood) were captured at Soda Springs and Rock Creek (Umpqua River) for hatchery and STEP needs. Over 20 volunteers participated in gill netting the fish. Volunteers also assisted once a week with the spawning of the fish at Rock Creek Hatchery.

A fence trap was installed by volunteers on Cow Creek (Umpqua River) to capture fall chinook (85 brood) for department programs. Nineteen females and 6 males were captured to provide eggs for the programs. Four volunteers split eight 24 hour/day shifts manning the trap. All of the materials and labor was provided by the volunteers.

The Gardiner broodstock rearing project on the lower Umpqua River experienced its first returns during the 85-86 winter. Sixteen males, 22 females, and 74 coho jacks were trapped. Eggs (1985 brood) were taken for use in the broodstock program and for lower Umpqua River hatchboxes.

The 1984 brood Gardiner coho smolts were released on site on April 8, 1986 at 9.6 fish per pound. The 8,544 smolts were fin clipped by the volunteers prior to release.

Students from Coos Bay's Marshfield High School were actively involved in enhancement projects. A major part of the students curriculum for the past year in their fish and wildlife classes was working on STEP projects. They were involved in capturing adult broodstock for spawning, and caring for the resultant eggs. They also drafted a project proposal to rear chinook fry in a pond constructed on the school campus. The class subsequently reared and released 1,900 fall chinook into Coalbank Slough in Coos Bay.

Jack coho salmon returned to the Priorli Creek rearing site in January and February 1986 from releases made at the site in 1984. A total of 712 jacks returned from a release of 17,000 smolts for an excellent return rate of 4.2%. Adults will return during the 86-87 winter.

Adult and jack coho returned to the Benson Creek rearing facility in the Tenmile Lakes drainage (January - February 1986). A total of 71 females, 41 males, and 90 jacks returned to the pond. An additional 38 female, 19 male and 2 jacks were captured in a trap on main Benson Creek. The progeny of the egg take will be reared at ODFW's Bandon Hatchery for use in the Tenmile Lakes rehabilitation program.

The Indian Creek (Rogue River) broodstock development project had its first adult chinook returns in the fall of 1986. Approximately 1,500 adults and jacks returned to the facility to assure meeting the egg requirements for all of the lower Rogue programs. Fish excess to hatchery needs were released back into the river to enhance the sport fishery or to spawn naturally.

Attachment 1. Summary of activities, by major stream system, carried out under Jobs 2, 3, and 4.

	Job 2	Job 3	Job 4	
	Physical & Biological Surveys	Habitat Improvement Projects	Egg Incubation	Brood Stock Devel.
Tillamook STEP Dist.				
Merrill Cr	X			
Lewis & Clark R		X		
Walluski R			X	
Youngs R			X	
Clatskanie R		X	X	
Necanicum R	X	X	X	
Nehalem R		X	X	
Miami R		X	X	
Kilchis R		X	X	
Wilson R		X	X	
Trask R	X	X	X	
Tillamook R			X	
Nestucca R	X	X	X	
Lincoln STEP Dist.				
Salmon R	X	X	X	
Siletz R	X	X	X	X
Depoe Bay Cr			X	
Yaquina R			X	
Alesea R	X	X	X	
Yachats R		X		
Siuslaw R	X	X	X	X
Umpqua & Upper Rogue STEP Dist.				
Smith R			X	
Umpqua R	X	X	X	X
Upper Rogue R		X	X	
Coos STEP Dist.				
Tenmile Lakes		X	X	X
Millicoma R		X	X	
Coos R	X	X	X	X
Coquille R		X	X	
So. Coast STEP Dist.				
New R	X			
Elk R	X	X		
Hubbard Cr			X	

Attachment 1. Summary of activities, by major stream system, carried out under Jobs 2, 3, and 4 (continued).

	Job 2	Job 3	Job 4
	Physical & Biological Surveys	Habitat Improvement Projects	Egg Incubation Brood Stock Devel.
So. Coast STEP Dist. (continued)			
Brush Creek		X	
Euchre Cr	X		X
Lwr Rogue R	X	X	X
Hunter Cr	X	X	X
Pistol R	X	X	X
Chetco R	X	X	
Winchuck R		X	X
Deep Cr		X	
Floras Cr		X	
Butte Cr		X	
Lwr Willamette STEP Dist.			
Scappoose Cr	X	X	X
Lwr Willamette Tribs	X	X	X
Sandy R	X	X	X
Tualatin R	X	X	X
Mid & Upper Willamette STEP Dist.			
Mollala R		X	X
Yamhill R	X	X	X
Mill Cr	X		X
Rickreall Cr			X
Luckiamute R	X		X
Santiam R	X	X	X
Calapooia R	X	X	
Mary's R	X	X	X
McKenzie R	X		X
MF Willamette R	X		
Pudding R	X	X	
Agency Cr	X	X	
Grande Ronde R		X	
Mid-Columbia STEP Dist.			
Hood R	X	X	X
Mosier Cr	X		
Deschutes R	X	X	X
Umatilla R			X
Rock Cr	X		
Mill Cr	X		
Klamath R		X	

