

SALMON AND TROUT ENHANCEMENT PROGRAM (STEP)

2006-07 Annual Progress Report



Prepared by the Oregon Department of Fish and Wildlife

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This project was partially financed with funds obtained through the Federal Aid in Sport Fish Restoration Program.

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BACKGROUND AND SUMMARY

This report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) from October 1, 2006 to September 30, 2007. The Oregon Legislature established STEP in 1981 as a program of the Oregon Department of Fish and Wildlife (ODFW) that seeks to achieve the recovery and sustainability of the state's native salmon and trout through the education of Oregon's citizens and their involvement with fish management efforts. Although this goal will not be achieved by the program acting alone, annual volunteer efforts through STEP to enhance fisheries and restore habitats lend critical support to the management programs of ODFW and contribute to the more extensive statewide efforts toward fish and watershed restoration under the Oregon Plan for Salmon and Watersheds (OPSW).

The role of STEP within ODFW is defined by statute (Oregon Revised Statutes 496.430 through 496.465) and administrative rule (Oregon Administrative Rules 635-009-0090 through 635-009-0150) specific to the program. Program activities are also guided by broader ODFW fish and habitat management policies including the Native Fish Conservation Policy, Fish Hatchery Management Policy, and Fish Health Management Policy. These establish direction for the broader ODFW fish and habitat management efforts that include STEP, provide support for a wide range of STEP activities, and set biological impact thresholds. The policies also allow STEP to work with other ODFW programs for which STEP can provide important volunteer and educational support.

The Oregon Conservation Strategy (Strategy) was implemented in 2006 to provide non-regulatory, proactive statewide approaches to species and habitat conservation. STEP is a natural partner of the Strategy; both strive to leverage limited resources (time, money, and equipment) and encourage voluntary conservation efforts. Volunteer conservation is the Strategy's primary focus, while volunteer enhancement of salmon and trout is the primary goal of STEP. Future STEP projects relevant to key Strategy species (including salmon and trout populations) will be logged in the Strategy's Conservation Registry. This is an online database that records, tracks and maps conservation actions across the landscape.

The types of projects conducted through STEP reflect the diverse ways that volunteers can assist with fish and habitat management needs throughout Oregon. The issues and priorities within individual watersheds are often unique to that area and the focus of STEP efforts can vary across the state. Generally, activities can be grouped into four main categories:

- **Education and Program Development** informs the public about Oregon's salmon and trout resources, their habitats, and STEP. Projects include classroom incubators (also known as the "Fish Eggs to Fry Program"), presentations, classes, volunteer training, tours, displays, printed materials, and equipment construction and maintenance.
- **Inventory and Monitoring** activities characterize fish populations and their habitats. Projects include fish, habitat, angling and spawning surveys, and other

methods used to monitor angling trends and fish life history, presence, distribution, or abundance.

- **Habitat Improvement** activities enhance, restore and protect habitat for native stocks of salmon, steelhead, and trout. Projects include the placement of large woody debris in streams, riparian protection and restoration, fish passage improvement, and fish carcass placement for stream nutrient enrichment. This category also includes aesthetic improvements to lakes and streams achieved through the Keep Oregon's Rivers Clean (KORC) fishing line and tackle recycling program, which was fully implemented in 2006.
- **Fish Culture** activities produce fish to supplement natural fish production, augment fisheries, or, in the case of the classroom egg incubation program, provide educational opportunities. This category also includes fish rescued, transplanted, or reintroduced.

STEP is funded by a combination of the U.S. Fish and Wildlife Service (USFWS) Sport Fish Restoration (SFR) Grant program and ODFW funds (75% federal with 25% state match). Included with the federal grant proposal for 2006-07 was an Environmental Action Statement drafted by staff addressing NEPA categorical exclusions, state and federal permits and approvals, and public involvement process and issues pertaining to the statewide program.

The program has one full-time coordinator and one part-time administrative assistant located in the ODFW headquarters office in Salem. It is implemented in the field by eleven STEP biologists (nine 1.0 FTE and two 0.5 FTE) located throughout the state.

In addition to agency staff, the 13-member STEP Advisory Committee (STAC) is comprised of citizens appointed by the Governor. The Committee advises the Fish and Wildlife Commission and ODFW on policy and the implementation of STEP, and the Committee Chair presents the STEP annual progress report to the Commission. The Committee also administers the STAC Mini-Grant Program, funded through a \$25,000 biennial grant from the ODFW Fish Restoration and Enhancement (R&E) Program. The Mini-Grants are available in amounts up to \$750 for projects that further the goals of STEP and are reviewed for approval by STAC at their quarterly two-day meetings. From October 2006 to September 2007, meetings were held at Reedsport, Clackamas, Astoria, and Klamath Falls.

One new STAC appointment was made during the reporting period; Sammie Mosley of LaGrande was chosen to represent northeast Oregon. Three STAC members, including Chair Armand Peña, Norman Ritchie and Tom Petersen, were reappointed to four-year terms (expiring in 2011).

Within each watershed management district, the STEP biologist can fill several roles including fish and habitat biologist, educator, outreach specialist, community or technical advisor, and lead for volunteer management. The program works with a variety of individuals, groups and organizations including adult and youth volunteers, angling and conservation interests, watershed councils, soil and water conservation districts, private landowners, schools, individual students,

and other state, federal, and local government agencies. Through STEP, these individuals and organizations can work with ODFW to conduct community-based watershed restoration and species recovery efforts throughout Oregon.

The following summarizes accomplishments of the program in 2006-07:

- Over 52,000 people participated in STEP training, classes, tours, presentations or workshops, or visited STEP activities or displays at public events (Table 1). These activities involved over 5,200 youth and adult volunteers. In addition, about 460 individual Fish Eggs-to-Fry classroom projects were implemented, reaching over 14,000 students.
- Nearly 1,000 volunteers contributed 12,535 hours to participate in 91 projects to inventory and monitor fish populations, assess sport fisheries, conduct fish passage inspections, and survey habitat in streams and rivers across the state (Table 2).
- About 900 miles of waterways were improved for fish use by 817 volunteers through fish passage, instream, riparian, and fish carcass placement projects and the KORC program (Table 3).
- STEP volunteers assisted with raising and releasing nearly 4,000,000 Chinook salmon, coho salmon, steelhead, and trout for enhancement or augmentation purposes; 1,765,000 of these fish were reared (fed and cared for) before release, and over 18,500 broodstock fish were collected (Table 4).

As indicated by the amount of work accomplished, volunteers made a substantial contribution to STEP and ODFW. Because STEP activities are integral to accomplishing the Department's fish management objectives, ODFW staff also contribute time and resources to the program beyond what is funded by the SFR grant. Highlights of the 2006-07 statewide volunteer effort include:

- 7,631 youth and 6,071 adult volunteers in Oregon participated in STEP activities.
- Volunteers participated in an estimated 1,548 projects, totaling 118,247 hours.
- Using the estimated dollar value of volunteer time for Oregon in 2006 (U.S. Bureau of Labor Statistics), the value of STEP volunteer hours was \$2,049,221.

Since the program was established in 1981, more than 280,000 adult and youth volunteers (Figure 1) have contributed more than 2.5 million hours (Figure 2) to an estimated 25,000 STEP projects. This data does not include the many additional adult and youth who have participated in presentations, workshops, field tours, or classroom projects conducted through STEP.

For this report, each STEP biologist provided a narrative that describes their district and an overview of activities in that district for each of the four main program components (education and program development, inventory and monitoring, habitat improvement, and fish culture).

The appendices include the following program information:

- A list of the current STAC members (Appendix 1)
- A list of the current STEP biologists (Appendix 2)
- A partial list of the schools that work with STEP (Appendix 3)
- A partial list of the groups and organizations that work with STEP (Appendix 4)

Table 1. Education and development activities, participation, and volunteer effort by STEP district, 2006-07. Activities were defined as those projects having at least one participant or volunteer; figures in parentheses indicate the number of classroom incubator projects.

EDUCATION AND DEVELOPMENT

STEP District	Activities	Participants	Volunteers			
			Youth	Youth hours	Adults	Adult hours
North Coast	29 (8)	3,559	2	12	364	2,914
Mid-coast	62 (9)	3,619	692	2,333	409	2,020
Umpqua	77 (17)	8,764	20	109	522	6,706
Coos-Coquille	70 (10)	6,971	1,283	5,142	757	5,023
Lower Rogue	76 (14)	2,975	10	58	213	998
Upper Rogue	37 (26)	1,262	0	0	102	498
North Willamette	182 (170)	11,927	32	188	330	7,486
Mid-Willamette	114 (55)	6,555	0	0	295	1,002
Upper Willamette	106 (92)	2,987	2	324	54	412
Eastern Oregon	89 (60)	4,028	3	15	122	1,511
Total	842 (461)	52,647	2,044	8,181	3,168	28,570

Table 2. STEP inventory and monitoring activities, miles affected and surveyed, and volunteer effort, 2006-07. Activities were defined as those projects having at least one participant or volunteer.

INVENTORY AND MONITORING

STEP District	Activities	Miles affected	Miles surveyed	Volunteers			
				Youth	Youth hours	Adults	Adult hours
North Coast	3	0	30	0	0	70	1,446
Mid-coast	10	0	16	323	576	89	3,229
Umpqua	4	0	0	1	36	29	936
Coos-Coquille	1	0	2	40	120	10	50
Lower Rogue	8	260	5	16	45	76	1,375
Upper Rogue	6	0	4	0	0	50	1,878
North Willamette	22	0	NA	0	0	44	215
Mid-Willamette	11	0	26	30	110	45	226
Upper Willamette	10	15	55	0	0	48	1,103
Eastern Oregon	16	0	57	26	26	78	1,164
Total	91	275	195	436	913	539	11,622

Table 3. Habitat restoration activities, miles affected and restored, and volunteer effort by STEP district, 2006-07. Activities were defined as those projects having at least one participant or volunteer; figures in parentheses indicate the reported number of river basins where Keep Oregon's Rivers Clean stations were installed and maintained.

HABITAT

STEP District	Activities	Miles affected	Miles restored	Volunteers			
				Youth	Youth hours	Adults	Adult hours
North Coast	8	169	1	28	100	49	392
Mid-coast	4	3	3	0	0	17	116
Umpqua	2	15	0	0	0	17	114
Coos-Coquille	1	<1	<1	32	192	40	80
Lower Rogue	4	46	1	35	155	17	110
Upper Rogue	2 (1)	53	0	0	0	15	190
North Willamette	8 (4)	465	0	313	1,043	184	499
Mid-Willamette	6 (2)	139	<1	2	8	28	430
Upper Willamette	0	0	0	0	0	0	0
Eastern Oregon	5	0	5	10	70	30	211
Total	38 (7)	890	11	420	1,568	397	2,142

Table 4. Fish culture activities and volunteer effort by STEP district, 2006-07. Activities were defined as those projects having at least one participant or volunteer; figures in parentheses indicate the number of classroom incubator projects. For classroom incubation projects, this table reflects only the number of fish reared and released. Participation and volunteer efforts for the classroom incubator program were included under education and development (Table 1).

FISH CULTURE									
STEP District	Activities	Number of fish				Volunteers			
		Broodstock collected	Incubated	Reared	Released	Youth hours	Adults	Adult hours	
North Coast	30 (8)	315	495,015	214,469	536,947	300	652	393	3,825
Mid-coast	28 (9)	195	246,216	34,684	261,016	131	639	263	4,678
Umpqua	35 (17)	435	756,023	251,403	478,047	620	760	243	8,389
Coos-Coquille	31 (10)	17,006	2,090,072	1,182,785	1,966,720	3,649	24,515	780	15,917
Lower Rogue	21 (14)	616	170,012	81,481	144,609	31	185	119	4,427
Upper Rogue	29 (26)	0	8,075	0	8,075	0	0	20	345
North Willamette	189 (170)	7	85,000	0	397,000	0	0	123	748
Mid-Willamette	57 (55)	0	20,350	0	20,350	0	0	3	20
Upper Willamette	96 (92)	0	10,000	0	166,309	0	0	13	101
Eastern Oregon	61 (60)	0	12,000	0	15,000	0	0	10	50
Total	577 (461)	18,574	3,892,763	1,764,822	3,994,073	4,731	26,751	1,967	38,500

Figure 1. Number of volunteers who participated in STEP activities, 1981-2007. Values for 1981-1990 and 1993 are estimates.

Number of STEP volunteers, 1981-2007

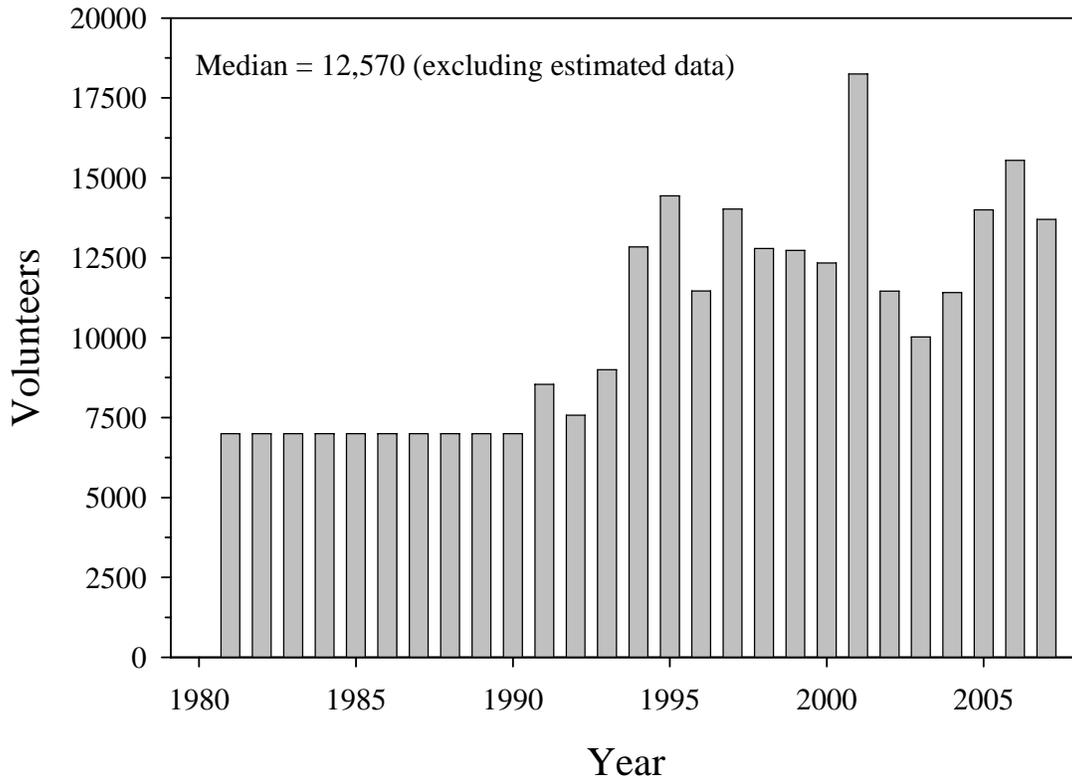
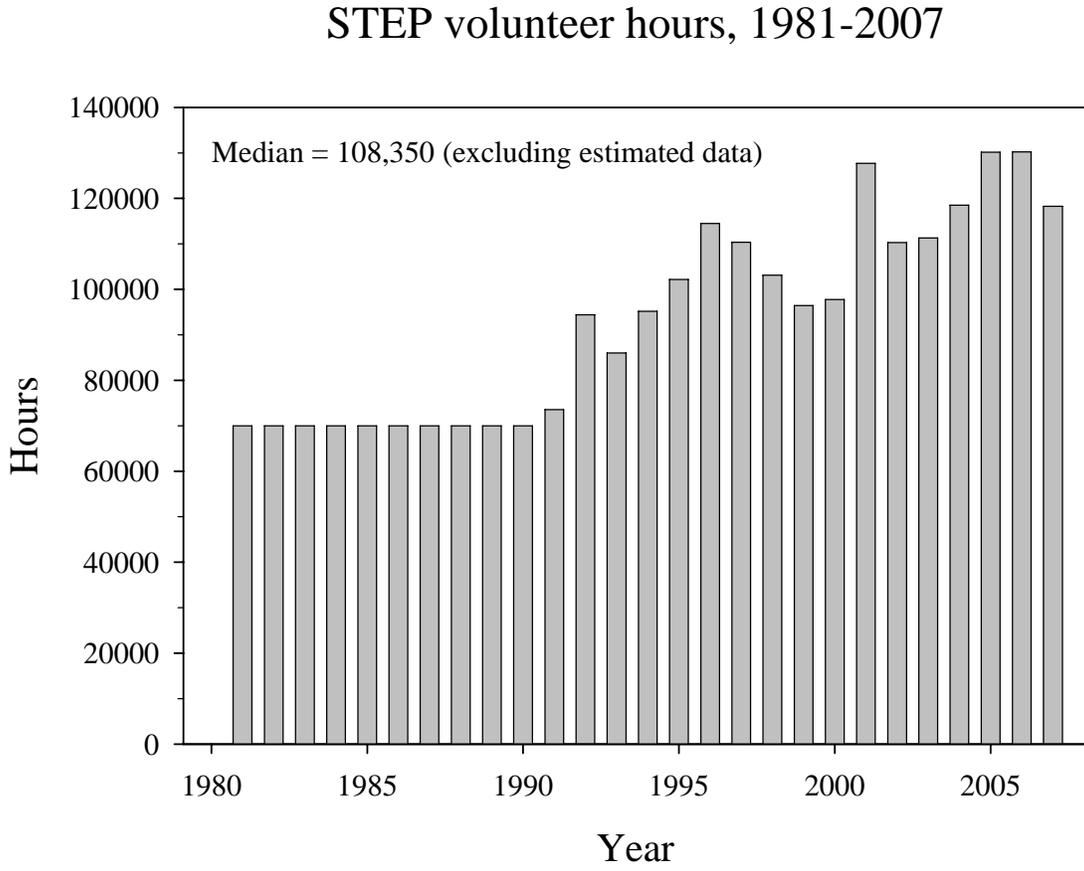


Figure 2. Hours contributed by volunteers towards STEP activities, 1981-2007. Values for 1981-1990 and 1993 are estimates.



STEP DISTRICT DESCRIPTIONS

Northwest Region

Lower Willamette STEP.....*Jeff Fulop, STEP Biologist*
Todd Alsbury, District Fish Biologist
Tom Murtagh, District Fish Biologist

The Lower Willamette STEP covers the Department’s North Willamette Watershed District (NWWD) and with the Portland metropolitan area has the largest population of any STEP district in Oregon. Also, nearly 65% of all state angling license fees comes from people living in the area. The large angler population presents the district with the challenge of meeting the varied needs of a broad demographic. Added to this are fish management constraints associated with species federally listed under the Endangered Species Act (ESA), evolving wild fish management plans, habitat protection issues, and the needs of wildlife management. Despite these constraints, the district must provide new and ongoing angling opportunities, improvements to habitat for fish and wildlife, and an overall contribution to the quality of life.

The district covers waters from the eastern slopes of the Coast Range east to Mt. Hood, and from the city of Clatskanie south to Salem. The larger river basins include the Willamette, Columbia, Sandy, Clackamas, Tualatin, Molalla, Yamhill, and Pudding and their many tributaries. There are numerous lakes and ponds, both public and private. The varied landscape includes farmland, urban, forest, mountains, and wetlands. Fish species include salmon, steelhead, a variety of trout, and sturgeon. There is also growing popularity for warmwater angling, with many species and opportunities available.

The removal of Marmot Dam on the Sandy River was a historical event for the district in 2007. The short and long term impacts to fish, wildlife, and habitat are not yet known. STEP will continue to be involved in broodstock collection along with the pursuit and operation of new acclimation sites to ensure the ongoing success of fisheries in the Sandy River.

The continual increase in population, the associated development and urban growth, and the ever-changing constituency continue to place considerable strain on the district’s natural resources. Staff is dedicated to maintaining a balance between fish and wildlife protections, the need and desire for continued opportunities in fishing, hunting or outdoor viewing enjoyment, and the new demands on the resources that rapid population growth will have.

Mid-Willamette STEP *Karen Hans, STEP Biologist*
Steve Mamoyac, District Fish Biologist

The mid-Willamette STEP district is a geographically diverse area in the South Willamette Watershed District (SWWD), reaching across the Willamette Valley from the crest of the Coast Range east to the crest of the Cascades. The Willamette River travels the length of the district, flowing from McKenzie River confluence downstream to the agricultural lands north of Salem. Within this area, three major stream systems flow from the western slopes of the Cascades into the Willamette; the North Santiam, South Santiam and Calapooia rivers. Another four

(Rickreall, Luckiamute, Marys, and Long Tom rivers) drain the eastern slopes of the Coast Range. The District is also one of the most populated regions of Oregon. Salem, Eugene, Corvallis and Albany are the larger urban areas but a number of smaller cities, towns and rural communities are scattered throughout. The natural resource concerns that have accompanied the area's historical land uses of timber harvest and agriculture have been complicated by the challenges posed by urbanization.

A growing human population and the resulting changes to the landscape have placed exceptional pressures upon the Willamette Valley's natural resources, yet the basin continues to support a diversity of fish. Native species include spring Chinook salmon, winter steelhead, and rainbow and cutthroat trout. Several salmonid species have also been introduced, including fall Chinook salmon, coho salmon and summer steelhead. Although the focus of STEP efforts in this area is on native salmonids, the program also recognizes the benefits of the basin's many other native fish through its educational, monitoring and habitat efforts.

A failure to recognize the importance of watershed rather than just stream health has led to the degradation and loss of aquatic habitats across Oregon. In this area, one of the results has been federal listings under the Endangered Species Act of the mid-Willamette's two native stocks of salmon and steelhead. In response, the State of Oregon and its citizens have initiated a comprehensive and cooperative community-based approach to watershed restoration under the OPSW. Although all ODFW programs have an important role in this effort, STEP finds itself uniquely situated in that its responsibilities include many of the major components of the OPSW. Most importantly, the foundation of STEP is community involvement with these activities. The focus of STEP in this district has been therefore to involve area groups, schools and individuals in all aspects of ODFW's local fish management efforts.

Because the area's population is large and still growing, STEP must emphasize outreach and education in the mid-Willamette basin. This is achieved in part through direct community involvement with many ODFW activities but particularly monitoring and inventory efforts and educational programs. Adult and youth participation with these projects not only demonstrates the ability that communities have to assist with the more technical needs of fish recovery but also provides the "hands on" experience that allows for increased awareness and fosters stewardship. Of special interest have been new inventories on waters that are considered "at risk" and for which little or no fishery information exists. The data gathered has been essential to habitat protection and restoration efforts throughout the basin, especially those in the agricultural and urban areas.

Upper Willamette STEP..... *Erik Moberly, STEP Biologist*
Jeff Ziller, District Fish Biologist

The Upper Willamette STEP district coordinates volunteer efforts to maintain, restore and monitor native populations of salmon and trout within the headwaters of the Willamette River. The major systems include the McKenzie, Middle Fork Willamette and the Coast Fork Willamette rivers. Spring Chinook salmon are the only anadromous salmonid native to the area; however, resident or fluvial populations of rainbow, cutthroat and bull trout are also found in the district. Spring Chinook salmon and bull trout are federally listed as threatened under the ESA.

Responsibility for implementing the STEP program in the Upper Willamette is shared among the STEP biologist and other district staff. Staff believes that assigning the STEP responsibilities broadly among all members allows greater flexibility and more effective integration of STEP throughout all fish management activities.

A variety of individuals and area organizations participate in the upper Willamette STEP program, including the McKenzie Flyfishers, Cascade Family Flyfishers, Emerald Empire Chapter of the Association of Northwest Steelheaders, Trout Unlimited, McKenzie River Guides Association, Backcountry Horsemen, three watershed councils and one watershed partnership. Department staff regularly attend meetings of these groups to provide information about our agency, answer questions and recruit new volunteers. Volunteers are also recruited from area schools, universities and a variety of youth groups.

North Coast STEP..... *Tracy Crews, STEP Biologist*
Keith Braun, District Fish Biologist

The North Coast STEP area includes all of the coastal basins extending from Neskowin Creek north to the Columbia River, and the lower Columbia River tributaries from the mouth up to Plympton Creek. North Coast STEP covers all of Tillamook and Clatsop Counties, and portions of Columbia, Washington, Yamhill, and Polk Counties. This area holds fifteen major river systems and over 2,600 stream miles.

All district fish management staff work with STEP volunteers but the STEP Biologist has primary responsibility for administering, coordinating, and reporting program activities. Projects are identified and guided by local fish management and hatchery needs with a focus on outreach, habitat restoration, and fish propagation efforts.

Volunteer groups in the area have a high interest in fish culture programs. STEP volunteers operate two fish rearing facilities and one acclimation pond, and they provide key support to several ODFW hatcheries. The area also has a small hatchbox program using spring and fall Chinook salmon and a growing classroom egg incubation program involving students from seven school districts. Staff works closely with a number of watershed councils, educators, angling groups, and civic organizations throughout the district.

Mid-Coast STEP *James Ray, STEP Biologist*
Bob Buckman, District Fish Biologist

All of the central Oregon coast watersheds from Salmon River (Cascade Head) south to the Siuslaw River are included in the Mid-Coast STEP area. This area encompasses several large river drainages including the Salmon, Siletz, Yaquina, Alsea, and Siuslaw rivers; a number of smaller direct ocean tributaries that support significant salmon and trout populations such as the Yachats River, Beaver, Big, Tenmile and Cummins Creeks; and Siltcoos and Tahkenitch Lakes, and two large coastal lakes of significant importance for coho salmon. Mid-Coast waters are highly diverse in terms of salmonid habitat usage and extend from the headwater streams on the western slopes of the Coast Range downstream to the coastal estuaries.

James Ray has lead responsibility for the area program but George Westfall, an ODFW Assistant District Fish Biologist based in Florence, performs STEP duties in the Siuslaw Basin and other waters south to the Umpqua Basin.

Mid-Coast STEP has worked with area communities to undertake a diverse range of projects in fisheries management and conservation, and has shared in successes with those communities, but changing demographics and human population increases will necessitate continued efforts. The Oregon Coast is continually attracting more people that bring additional pressures on the district's natural resources. Education and outreach has always been a central part of the Mid-Coast program but STEP will be emphasizing this further in coming years with a focus on youth education. Education, particularly in field settings where participants are immersed in the natural system, increases awareness of important ecological issues and fosters a sense of stewardship. In addition to education, Mid-Coast STEP will be further developing its participation in habitat restoration activities with communities and local landowners.

Southwest Region

Umpqua STEP..... *Greg Huchko, STEP Biologist*
Laura Jackson, District Fish Biologist

The Umpqua Watershed and STEP area encompass Douglas County and extend from Diamond Lake in the Cascades to the Pacific Coast at Reedsport. Douglas County is the fifth largest county in the state and the Umpqua watershed drains 3.2 million acres of land, making it the second largest Oregon coastal watershed. About 90% of the land is forested and approximately 51% is publicly owned. The area is home to more than 100,000 people with Roseburg having the largest population of more than 20,000.

The Umpqua Basin supports runs of coho salmon, spring Chinook salmon, fall Chinook salmon, and winter and summer steelhead. Other angling opportunities include rainbow trout at Diamond Lake, brook trout at various Cascade lakes, and a number of reservoirs that are stocked with trout and support warmwater fish. STEP volunteer efforts range from educational projects and assistance with high lakes stocking, to enhancing winter steelhead and fall Chinook salmon fisheries.

Tenmile, Coos, and Coquille STEP *Gary Vonderohe, STEP Biologist*
Tom Rumreich, STEP Biologist
Mike Gray, District Fish Biologist

The Tenmile, Coos, and Coquille STEP area is located on the southern Oregon coast and is recognized as having been the birthplace of STEP over 26 years ago. The area is bordered on the north and east by the Umpqua Basin, and by the New, Sixes, and Elk Basins to the south. The area holds three major watersheds, the Tenmile, Coos, and Coquille, and several smaller streams that flow directly to the ocean. Both the Coos and the Coquille Rivers have long inter-tidal reaches and large estuaries while the Tenmile is a coastal system dominated by several large freshwater lakes.

The area program emphasizes citizen involvement with all efforts to protect and enhance salmon, steelhead, and trout. Early in the development of STEP, education and outreach became a significant part of the program as it was recognized that educating the public and particularly area youth would be important toward achieving the long-term goals of STEP. Education through involvement increases awareness about the needs of native fish while at the same time furthering recovery and protection efforts. In addition to outreach activities, habitat restoration has long been an important part of STEP with the initial habitat projects having taken place even before the program was formally established. Large numbers of volunteers also continue to be involved in the area's extensive fish culture program that includes broodstock development, spawning, egg incubation, rearing, and acclimation projects.

Lower Rogue STEP.....*John Weber, STEP Biologist*
Todd Confer, District Fish Biologist

The Lower Rogue Watershed District is part of the Rogue Watershed District. The Lower Rogue Watershed District includes coastal basins from Four Mile Creek south to the California border. New River, Elk and Sixes Rivers, Euchre Creek, Rogue River upstream to Mule Creek, Hunter Creek, Pistol River, Chetco River, Winchuck River and other small coastal tributaries are included in this district.

The focus of the STEP program within the district is to utilize volunteer resources to accomplish fish management objectives. The STEP Biologist works primarily with local clubs, landowners, timber companies, watershed councils, educators and school groups. The majority of volunteers that engage in STEP program activities in this watershed district belong to one of two local STEP clubs: the Oregon South Coast Fishermen (OSCF), and the Curry Anadromous Fishermen (CAF). The OSCF and CAF consist primarily of retired individuals interested in performing meaningful work that will help restore and maintain fish populations within local watersheds. Aquaculture is a primary focus for the Curry Anadromous Fishermen, with activities centered around operations at Indian Creek Hatchery. The Oregon South Coast Fishermen activities focus on population monitoring, broodstock collection and habitat restoration. Both groups consider fishery education a high priority and often cooperate with other local entities to accomplish common objectives.

Volunteers in 2006-07 participated in projects associated with fish culture, youth education, habitat restoration and population monitoring. Fish culture and population monitoring comprise the majority of the volunteer effort.

Upper Rogue STEP.....*Charles A. Fustish, STEP Biologist*
Dan VanDyke, District Fish Biologist

The Upper Rogue STEP district extends from Mule Creek near river mile 48 of the Rogue River upstream for about 200 miles to where the river begins as a spring near Crater Lake. Approximately 400,000 people live in the district, providing a large number of schools, service clubs, sportsman's clubs, and volunteers to assist in various STEP projects that educate citizens and improve fish habitat throughout the basin.

Area fisheries include salmon, steelhead, trout, and warmwater fish. The Rogue River has one of the strongest runs of salmon and steelhead among all the coastal streams in Oregon. The coho salmon is the only fish in the district listed (as threatened) under the federal ESA.

In 2006-07, activities focused on program development, recruiting youth to enjoy the diverse angling opportunities in the Rogue River basin, and monitoring fish in small streams, urban streams and intermittent streams in the watershed, including surveys of juvenile salmonid winter rearing habitat. Fish health sampling was continued with the help of volunteers in areas that have not been routinely sampled for disease organisms and parasites in the past.

High Desert and Northeast Regions

Eastern Oregon STEP*Jennifer Luke, STEP Biologist*
(Eight District Fish Biologists)

The Eastern Oregon STEP program is administered by the ODFW High Desert and Northeast regions. These regions together cover the entire state east of the Cascades, which is nearly 67,000 square miles. This area includes the following major watersheds: Deschutes, Klamath, Malheur, Malheur Lake, John Day, Umatilla, Grande Ronde and Owyhee.

The STEP Biologist and local volunteers work with ODFW districts and hatcheries to identify specific projects requiring volunteer recruitment, supervision, or training. Project definition and direction come from the individual fish management districts and are based on annual needs. The STEP program focuses its efforts on monitoring trout populations, conducting aquatic education programs and restoring fish habitat. Volunteers assist with a variety of surveys including electrofishing, trap netting, and redd and snorkel surveys. Department fish biologists use information gathered from these surveys to evaluate angling regulations, monitor fish species and meet fish management objectives.

Activities involving schools, teacher education, and general public education about fish populations and their habitats are a high priority for the Eastern Oregon STEP district. STEP volunteers eagerly share their knowledge of both fishing and conservation and their involvement fosters the next generation of conscientious anglers and conservationists.

EDUCATION AND PROGRAM DEVELOPMENT

Introduction

STEP biologists and volunteers conduct a variety of activities that help develop the program and educate the public about Oregon's fish resources. These include:

- Presentations to groups, teaching classes, conducting tours, and holding workshops.
- Hosting displays or booths at fairs and festivals, and preparing written materials such as articles, news releases, websites, brochures, and STEP publications.
- Training STEP volunteers or project cooperators with the technical skills that allow them to conduct or assist with projects.
- Maintaining or constructing equipment or facilities.
- Assisting with program administration and other activities.

A publicist works with staff to provide publicity for the statewide program and to produce issues of the joint STEP and Fish Restoration and Enhancement (R&E) Program publication *FishWorks*. *FishWorks* highlights STEP and R&E Program activities and provides information on upcoming events and the value of projects to fish management. The publication also includes an educational insert providing information on broader statewide issues such as aquatic invasive species.

Following are summaries of development and education activities conducted in STEP districts during 2006-07 (Table 1). This narrative is not intended to be comprehensive, but instead highlights a few of the major activities in each area.

Lower Willamette STEP

Free Fishing Weekend



In June, the Passport to Fishing event was held for the 14th consecutive year at Bonneville Fish Hatchery. This is an annual event conducted on Saturday of Free Fishing Weekend and is the largest of its kind in the state with attendance in 2007 exceeding 800 youth and 700 adults. At the event, participating youth are taught how to angle and care for Oregon's fish resources. Passport to Fishing is sponsored by ODFW and jointly organized by the NWWD Volunteer Coordinator and STEP. The event is made possible with the help and support of more than 150 youth and adult volunteers from local sportsmen clubs, and over 50 ODFW employees.

Youth Angling Enhancement Program

2007 was the fourth year of youth angling events in the NWWD conducted under the Youth Angling Enhancement Program (YAEP) and STEP. The YAEP introduces youth to angling and

has allowed the district to greatly expand the number of annual events it is able to support. Six clinics were held in different areas of the district to encourage local access: St Louis Pond in Gervais, Trojan Pond in Rainier, Commonwealth Pond in Beaverton, two events at West Salish Pond in Fairview/Gresham, and Sheridan Pond in Sheridan. By adjusting the event dates to match fish stocking schedules the district was able to purchase some large trout for each event. As a result, attendance and catch increased dramatically in 2007. Volunteers from local chapters of the Association of Northwest Steelheaders (ANWST), other angling clubs, along with individual volunteers, helped over 1,200 youth participate in these events. The program receives financial support from the Oregon Legislature and Oregon Wildlife Heritage Foundation.

Additional Activities

The STEP classroom incubator program continued to be hugely successful, growing to over 170 classrooms participating in raising and releasing salmon and trout fry. It would not be possible to accommodate this growth without considerable help from ANWST volunteers and mentor-oriented experienced classroom teachers. STEP anticipates that this growth will continue as new participation requests come in weekly.

The NWWD STEP was involved in numerous educational and outreach activities in 2006-07. STEP was again active in the Oregon Trout Salmon Watch Program, providing fish biology education pertaining to Chinook salmon and coho salmon in local district waters.

STEP, along with several volunteers, provided fishing gear and instruction for youth summer camp angling events and assisted Aquatic Education at youth angling events. Several hundred rainbow trout were also provided by STEP to ANWST for youth angling events during the year.

Volunteers and staff made presentations in local classrooms and summer camps discussing fish biology and fishery management, as well as discussing the importance of salmon and trout in our local society and economy. Opportunities for careers in fish and wildlife were also presented.

Mid-Willamette STEP

Program Outreach

During 2006-07, the STEP Biologist provided numerous presentations detailing fish resources, management issues and ODFW volunteer opportunities to a variety of interests including: students, teacher or other educational organizations; angler and conservation groups; watershed councils; and other federal, state and local agencies.

Technical Assistance

The district works with eight watershed councils in a variety of roles including providing general information and technical expertise to habitat and inventory projects; assisting with volunteer training, and the development of action plans and restoration priorities. Technical assistance was provided to many agencies and organizations on fish-related matters including the removal of

Brownsville Dam, road-related repair and culvert replacements in Linn, Lane, Polk and Benton Counties, DSL regulatory actions, and habitat restoration projects throughout the district.

Youth Education

The STEP biologist participated in ten Outdoor Schools, two summer camp fishing clinics, a youth angling class through the Boys and Girls Club of Corvallis, Willamette Water Festival for Salem area youth, four Salmon Watches, and Kid's Day for Conservation which 2,000 local school children and parents attended.

The STEP biologist, the Albany Chapter of the Northwest Steelheaders and the Senior Fishing Buddies hosted fishing stations at outdoor schools and summer camps hosted by the Polk County Soil and Water Conservation District, OSU Extension Service (4-H), and ODFW's EE Wilson State Wildlife Refuge. In addition to catching stocked trout, students learned about catch and release techniques and fish biology. One of the most popular activities at outdoor school was fish dissection. The students shared a juvenile steelhead or salmon to dissect while learning the internal and external anatomy and physiology of the fish.

Upper Willamette STEP

Technical Assistance

The STEP biologist served on the Coast Fork Willamette Watershed Council's Technical Committee tasked with providing technical expertise for projects sponsored by the council. STEP has assisted the council in obtaining funding to implement many of the projects in the watershed.

Youth Education

The STEP biologist participated in an outdoor school in Cottage Grove, leading a fish dissection class for 50 middle school students who all had the chance to dissect a steelhead smolt and learn about fish anatomy.

The STEP biologist partnered with a local middle school's riparian restoration project located at the Springfield Mill Race. Fish traps were deployed and collected in the mill race. Fish were brought to shore where staff discussed life history characteristics and habitat requirements to over 40 students and parents.

STEP also participated in a career fair at Pleasant Hill High School. Staff presented information on college requirements, volunteering with natural resource agencies, how to find available jobs and work related job duties. Over 60 students participated in this event.

STEP gave a presentation to middle school students who completed a four-day youth angling instruction class. Over 20 students and parents attended the event where students learned casting techniques, angling ethics and other fishing related topics from ODFW Angler Education Instructors.

Program Outreach

Upper Willamette STEP, partnered with the U.S. Forest Service and several local angling groups to host the “Fish N’ Fun” exhibit at the Lane County Fair in Eugene. Visitors to the exhibit had the opportunity to learn how to cast a fly or spinning rod with the assistance of Angler Education Instructors and other volunteers. Information presented at the fair included materials on fish species found in the area, habitat restoration, fishing techniques and local fishing areas. The booth also had two 100-gallon aquariums set up with coldwater and warmwater fish. Also included was an interactive stream simulator table which educated youth on watershed functions.

Staff and volunteers assisted with operating an Education and Information booth at the Eugene Sportsman Show. Educational materials and displays were presented during the three-day show. Staff were available to answer questions and listen to concerns from the public.

A presentation was given to the “Friends of Mosby Creek” group which was developed to bring landowners in the Mosby Creek area together to accomplish a variety of small restoration activities. The presentation was sponsored by the Coast Fork Willamette Watershed Council, with over 50 landowners attending.

Volunteers constructed and placed an informational kiosk at the Garden Lake Park in Creswell and at the East Regional Park in Cottage Grove. Both parks are involved in various fish and wildlife restoration projects; the added kiosks will provide educational opportunities and will assist in publicizing volunteer efforts.

Youth Angling

Staff and volunteers participated in Youth Angling Events located in Cottage Grove, Creswell and Eugene. These events provided youth with the chance to try out a fishing rod, obtain instructions on casting and to catch one of the many trout that were stocked in each of the locations.

Student Internship

Through Portland State University’s Saturday Academy program, STEP sponsored a student internship during the summer. Kevin Chaney from South Eugene High School participated in a variety of fish management activities including snorkeling, habitat surveys, water quality monitoring, assisting with the Lane County Fair, and data entry. He gave a presentation of his summer activities to other interns and mentors at Portland State University.

Salmon Watch

STEP staff participated in the Oregon Trout Salmon Watch program by serving on the Eugene area steering committee and taking part in two field trips involving more than 60 students from area schools. Students learned about fish biology, water quality, riparian habitats and macroinvertebrate sampling.

North Coast STEP

Education and Outreach

Education continues to be one of the main focuses for the North Coast STEP program. Twenty-one presentations and field trips involving over 1,000 students and adults occurred. An additional seven youth fishing events were conducted, with over 750 youth participating.

North Coast staff continued to participate in the Oregon Trout-sponsored Salmon Watch Program, conducting twelve field trips, educating elementary through high school students on the biology and life history of salmon. Presentations to over 400 students also occurred at the Children's Clean Water Festival and through school field trips and classroom visits.

Other outreach and educational activities occurring in 2006-07 included exhibits at the Cannon Beach Earth Day Celebration, the City of Vernonia's annual Salmon Fest and presentations to the Tualatin Valley and North Coast chapters of the Association of Northwest Steelheaders. Staff also participated in Career Day for local high schools.

The North Coast STEP classroom incubator program involved delivering eggs and presentations to students in ten schools (elementary through high school), which participated in the hatching and releasing of spring Chinook salmon, fall Chinook salmon, winter steelhead and summer steelhead fry into approved streams. In addition, Warrenton and Astoria High Schools continued to operate full hatchery programs, rearing Fall Chinook salmon, coho salmon, and winter steelhead until the end of the school year when they were released as pre-smolts.

The North Coast STEP biologist worked with the Tillamook Estuaries Partnership and others to develop educational brochures for a newly developed Water Trail on the Nehalem River system. The brochure described salmon and trout life history, the importance of instream and riparian habitats, and threats to populations including disturbance and the spread of invasive species.

Youth Angling Enhancement Program events were held at six sites and involved over 700 youngsters and their parents. Youth fishing events also occurred at Camp UKANDU (a weeklong camp for children with cancer) and Camp Rosenbaum (a leadership camp for at-risk youth) with the help of STEP volunteers.

Mid-Coast STEP

Youth & Adult Education

Throughout the district over 410 students were involved in 11 stream ecology field trips that were developed in partnership between Mid-Coast STEP, Lincoln County School District, Mid-Coast Watersheds Council, Salmon/Drift Watershed Council and OSU Extension Service. The field trips focused on invertebrate communities, water quality, in-stream and riparian habitat and fish life cycles. Mid-Coast STEP and District staff also continued to support the Oregon Trout Salmon Watch Program.

Additionally, educational presentations ranging from promoting volunteer opportunities to salmonid life history and habitat requirements were given to over 275 adults belonging to numerous civic groups throughout the district.

Classroom Egg Incubation

Over 450 students from ten area schools participated in the classroom egg incubation program using stocks of local winter steelhead. The program enables students to observe the development of salmonid eggs, alevins and fry, and to gain a better understanding of fish life cycles and habitat requirements. The STEP biologists have intensified their role in local schools by conducting multiple classroom visits in association with this project, using it as a vehicle to address broader watershed issues in the context of a science curriculum.

Student Internships

The Mid-Coast STEP biologist trained and supervised four OSU undergraduates from the Fisheries and Wildlife Program. For four months interns were responsible for the operation of a fish trap on the North Fork of the Alsea River facilitating and monitoring the recolonization of habitat by wild fish above a water diversion dam. The internship program gave the students an opportunity to gain field experience and develop new skills, while providing valuable assistance to ODFW staff. The STEP biologist also acted as a mentor for two OSU undergraduates working on the Coastal Ecology and Resource Management (CERM) course for 2.5 months. This included giving guidance and providing equipment to develop, implement and report on a field project with management applications. Additionally, the STEP biologist worked with a high school student from Waldport High School undertaking his senior project.

Youth Angling

Mid-Coast STEP biologists and volunteers from the Mid-Coast Chapter ANWST, Longview Hills Fishing Club, Florence STEP group and the Central Coast Fly Fishers organized and assisted with Kids Angling events at Big Creek Reservoir, Cleawox Lake and Eckman Lake. These events were highly successful and 961 children supported by 555 adults participated throughout the district. Also 168 children and 32 adults participated in Aquatic and Angler Education classes taught by STEP volunteers from Longview Hills Fishing Club and the Florence STEP Group. Numerous students who were involved in the Angler Education classes assisted with the Cleawox and Eckman lakes angling events.

Umpqua STEP

Education

The Umpqua STEP program helped coordinate educational events that reached 4,872 youth and 3,876 adults. This included six Free Fishing Day events that occurred in Douglas County. The STEP program also worked with partners in the Eastwood Regional Education Committee to field test the curriculum and “passport” that the committee developed. The committee also

developed educational material on water cycles, food webs, macroinvertebrates, Indian culture, and fish life cycles. The curriculum for each topic was summarized in a 4th grade level “passport” that had puzzles, word searches, and fill-in the blanks or drawings to further explain the topic. The event reached 360 youth from six different schools over three days. Ultimately the committee hopes to improve the program to the point that teachers can plan and conduct events for individual classes, rather than holding one large event.

Development

One of the major development projects undertaken in 2006-07 was revising the STEP propagation proposals for both the Umpqua Fishermen’s Association (UFA) and Gardiner-Reedsport-Winchester Bay STEP (GRWB). Both of these programs produce fall Chinook to enhance recreational fishing opportunities. The proposals were approved by STAC in July 2007.

This year the UFA also replaced their old plastic-lined swimming pool with a new fiberglass tank for rearing fish at Cooper Creek. In addition to rearing fall Chinook salmon, the site is also used as a staging area to hold trout for events such as Free Fishing Day. The UFA also helped Rock Creek Hatchery install new indoor rearing troughs. The troughs allow the hatchery to rear fry inside during the summer so they can receive filtered and ultra-violet treated water to enhance their survival.

Tennile, Coos, and Coquille STEP

Program Outreach

The primary method of program development is to obtain direct citizen involvement in management programs to protect and enhance salmon and trout populations. A total of 70 projects were conducted in the district during 2006-07 using 2,040 volunteers. School groups and youth organizations provided the majority of the volunteers used in District programs. A total of 6,971 people participated in the program in some manner.

Millicoma Interpretive Center

The Millicoma Interpretive Center continues to be a popular place for student groups and others to come and learn more about the life histories of salmon and steelhead. This past year the facility received its largest number of visitors since the facility began. Over 3,800 visitors came to participate in the programs at the site.

For the 17th year, ODFW staff and volunteers continue to work on the construction and upkeep of the Millicoma Interpretive Center. In 2006-07 volunteers and staff constructed an access stairway to the raceway. A new stairway provides access in a safe and easy manner. Volunteers also completed a rock stream that will be decorative as well as a way to channel water away from the classroom at the center.

Youth Angling Education Program

The Youth Angling Education Program again provided funding for youth angling opportunities. A total of 1,000 rainbow trout were purchased or provided for stocking in the vacant steelhead acclimation pond at the Millicoma Interpretive Center. This was a huge success with hundreds of children participating in the catching of these trout. Volunteers and hosts at the center passed out many “first fish” certificates again this past spring.

A separate event was held at Empire Lake in the City of Coos Bay as part of the annual Child Advocacy Center’s Family Fun Day. About 3,000 rainbow trout were stocked into the lake specifically for the event with department staff and volunteers on hand to assist. This was a great event with numerous families participating in the angling portion of the event. Angling was very good and many children went home with their first fish.

Free Fishing Weekend

On Eel Lake, volunteers held a fishing clinic on Free Fishing Weekend for the eighth straight year. This event features a course that youth can take and learn everything from knot tying to fish identification. Once the children complete the course at various stations they have a sure chance of catching a fish to take home. Children are allowed to fish in the net pen and the fishing is always very good. Volunteers with the STEP group rear about 1,000 trout in a net pen in Eel Lake specifically for this event.

Coquille High School

Volunteers and students continued to work on the Coquille High School educational hatchery during the year. New informational and educational displays were installed at the site. During the winter, the high school students continued to be teachers themselves each Tuesday, in what is now known to be “Tour Tuesday”. Elementary school classes devote an afternoon learning about salmon life histories and their struggle to survive. Students at the high school spawn and incubate salmon and steelhead eggs at the station - which provides a “hands on” experience for the young students. This is an excellent example of teachers and students working together to impart resource awareness and education to younger students.

For the second year in a row, hundreds of Coquille High School students were involved with the marking of juvenile fall Chinook salmon that are spawned and raised at the facility. This was a great opportunity for students to take part in marking these fish so that they could be better monitored as they migrate to the ocean and back again to the facility. Many students said that marking the fish was the highlight of their entire school year.

Morgan Creek Educational and Fish Cultural Facilities

Reconstruction of the educational and fish cultural facilities commenced at Morgan Creek during the report period. Students from Marshfield High School construction class devoted time during the entire school year to the construction of a training facility. This facility has two large bathrooms, a utility room, office, and a large instruction room. This training facility, when

completed, will be a valuable educational component. After nearly three years, all of the permits were secured to reconstruct the fish culture facilities as well. Construction of a new raceway, fishway, and diversion dam began in July 2007. Over 100 youth and other volunteers with the Upward Bound program devoted seven weeks to the completion of the fish facilities. Over the course of the next four years volunteers are expected to devote over 25,000 hours to the completion of the Morgan Creek facilities.

Lower Rogue STEP

Program Outreach

Thirty-seven news releases were written for local newspapers, radio and TV stations. The objective was to recruit volunteer involvement, inform the public of project results and give volunteers recognition for their accomplishments.

District staff gave 32 presentations at organized fisherman group meetings. Primary topics discussed were: fish management policy, habitat problems and solutions, angling regulations, STEP guidelines, district management objectives and volunteer recruitment.

A total of 54 presentations were made to local students. Topics included salmonid life history, fish anatomy, fish culture, habitat protection and restoration. Some of the presentations involved a field trip relative to the topics discussed.

Free Fishing Day

On Saturday, June 9th, 2007, the annual Free Fishing Day event took place at Libby Pond. Fifty youth registered for the event organized by ODFW and the USFS. Curry Anadromous Fisherman (CAF) volunteers sponsor the derby annually and were on hand to sign up children 2-13 years of age.

The volunteers assisted kids with fishing tips, instruction, registration and measurement of trout. The CAF provided free hot dogs and drinks for the event. Fifty-eight participants caught over 100 rainbow trout during the derby. In addition, Oregon South Coast Fishermen (OSCF) and CAF, along with local businesses, donated money to purchase fishing rods and equipment to be given away in a raffle. Many of the young anglers received a fishing rod or tackle to ensure their fishing future.

Salmonid/Bait Fish Poster

In an effort to educate the public in fish identification, the OSCF developed a poster to help fishermen differentiate salmonids from marine bait fish. Volunteers with OSCF noticed salmonid juveniles being harvested as baitfish, which prompted the group to take action. The poster was reviewed by STEP and posted at key locations around the Chetco boat basin and estuary.

Curry County Fair

The Curry Anadromous Fishermen and the Oregon South Coast Fishermen teamed up to sponsor and operate a booth at the Curry County Fair in Gold Beach. ODFW provided a large aquarium stocked with Rogue River Chinook salmon, steelhead and juvenile green sturgeon as part of the display. Both groups provided displays of their activities. In addition, posters were developed that discussed non-native pikeminnow and their effect on native species. The exhibit helped make the public aware of the activities of both STEP groups and provided a venue for interaction between the South Coast STEP groups.

Upper Rogue STEP

Education and Outreach

Volunteers spent over 1,000 hours this year on educational efforts, teaching people of all ages about the life history of salmon and steelhead, winter rearing habitat, and habitat needs of salmonids in small, urban, intermittent, and ephemeral streams throughout the Rogue River basin.

The STEP biologist and two volunteers helped develop newspaper articles about fish in a small stream in Medford with a tall dam that was removed in late summer 2007, presence of coho salmon in a slough near the Rogue River, fish surveys in small streams of Josephine County, and a study to determine the impacts of concrete linings on the bottoms of small urban streams on water temperature.

Youth Angling

Volunteers and district personnel coordinated one Youth Angling Enhancement Program event on May 19, 2007 at Reinhart Park in Grants Pass. A total of 32 youth caught two rainbow trout over 15 inches and 11 that ranged from 10-12 inches at this event. Fourteen volunteers from Crater Bass, a local church, and the public devoted time at this event and at Free Fishing Day at Expo Pond in Medford on June 9, 2007.

Eastern Oregon STEP



Kokanee Karnival

Kokanee Karnival continues to be a popular education program for Deschutes, Jefferson and Crook County elementary students. In 2006-07, 300 students participated in the Kokanee Karnival Comprehensive Education Program. The program includes classroom activities as well as field trips focused on learning about salmon and their habitat. Students and teachers also tour a hatchery and attend a spring fishing clinic. Approximately 1,500 students participated in the 2006-07

Kokanee Karnival Electives Program in which teachers sign up for classroom activities such as raising trout, basic trout biology, and angler education. Kokanee Karnival receives exceptional support from both the volunteer community and our financial sponsors. Currently, the program is increasing its capacity to accommodate more Comprehensive Education Program classes. Partners for the Kokanee Karnival include STEP, Central Oregon Flyfishers, Sunriver Anglers, Wolfree Inc., the Central Oregon Llama Association and the Deschutes National Forest. The Eastern Oregon STEP biologist serves on the Kokanee Karnival steering committee, coordinates portions of the program and provides training, technical assistance and volunteer recruitment.

Outreach Events

Eastern Oregon STEP staff and volunteers continued to participate in salmon and trout-related outreach activities for students of all ages. STEP presented information and conducted activities for events sponsored by the following groups: Oregon Trout's "Salmon Watch", Madras 4-H Extension Outdoor Science School, High Desert Museum's "Make a Splash" Festival, Prineville's Fish Festival and "RAP" (Resources and People) Camp. Over 1,500 students participated in these events.

Youth Angling Events

Two Youth Angling Enhancement Events were coordinated by the STEP biologist and the assistant district fish biologist. The STEP biologist arranged event locations, recruited volunteers, solicited businesses for prizes and provided instruction and supervision at the event. Volunteers were on hand to assist with casting and landing fish. Sixty children from Central Oregon had the opportunity to catch trophy size trout.

Creeks and Kids Workshop for Teachers

The Eastern Oregon STEP biologist was an instructor at a week-long teacher workshop, "Creeks and Kids," coordinated by the Jackson Bottom Wetland Association. Teachers received instruction on stream-related activities to enhance their school curriculum. Many of their activities are drawn from the STEP publication, The Stream Scene. The STEP biologist was responsible for field and classroom instruction of trout sampling methods and procedures, fish identification, basic trout biology and trout habitat. Twenty-eight teachers participated in this workshop.

Storm Drain Marking

The STEP biologist provided guidance and materials for a storm drain marking project conducted by Eagle Scouts. About 250 storm drains were marked with "Dump No Waste, Protect Your Ground Water" and informational brochures were distributed. Thirteen volunteers contributed 100 hours to this project.

INVENTORY AND MONITORING

Introduction

Volunteers assist the Department in conducting a variety of inventory, monitoring, and evaluation projects to provide information on Oregon's salmon, steelhead, and trout; their habitats, and associated fisheries. The major types of activities conducted through STEP are:



- Angler or creel surveys
- Fish passage or culvert inspections
- Fish population or distribution survey or monitoring
- Fish life history or other investigations
- Stream and other aquatic habitat surveys
- Miscellaneous monitoring activities (e.g., water quality monitoring)

To conduct these surveys, volunteers become skilled in sampling methods and learn a wide variety of fish or fishery sampling techniques, including adult and juvenile fish traps, electrofishing gear, seines, gill nets, trap nets, snorkeling, hook and line, radio telemetry, and creel surveys.

The following is an overview of STEP fish population and stream habitat characterization activities conducted in each area during 2006-07 (Table 2). This narrative is not intended to be comprehensive, but instead reflects the range of STEP activities for each area.

Lower Willamette STEP

Winter Steelhead Spawning Ground Surveys

STEP, ODFW staff, and ten volunteers performed winter steelhead spawning ground surveys in the Sandy River Basin and the Clackamas River Basin during February-May 2007. Using inflatable kayaks or walking surveys the surveyors were successful in identifying active redds and the presence of live adult winter steelhead. This was the second year of a two-year STEP and volunteer-driven project; funding will likely be requested to allow continuance of the project beyond 2007. The intention is to identify and map spawning activity and adult population abundance, providing information that is currently limited or nonexistent in these basins.

STEP and members of the Tualatin River Watershed Council again conducted winter steelhead spawning ground surveys on Gales Creek, a tributary of the Tualatin River. Some of the survey reaches were altered slightly after access problems and high water issues in 2006 made surveying

difficult for some volunteers. It is expected that these surveys will be conducted annually and possibly expanded beyond the current reaches, or even into additional tributaries.

Mid-Willamette STEP

Surveys

During 2006-07, mid-Willamette STEP staff and volunteers conducted physical or biological surveys in most of the major sub-basins in the mid-Willamette area. The more popular of the volunteer activities continues to be assistance with ODFW's annual summer snorkel surveys in the North Santiam, South Santiam and Calapooia basins. To the volunteers, these surveys offer an opportunity to explore waters not often accessible to the public and provide a view of the stream that is much different from that seen only from the surface. These surveys provide annual counts of returning adult salmon as well as estimates of the number of juvenile Chinook salmon and steelhead present in the rivers before their outmigration to the ocean. Of particular interest has been salmon production in those areas above the larger dams where, after having been excluded for many years, spring Chinook salmon and winter steelhead have only recently been re-introduced. This includes the Breitenbush and upper mainstem North Santiam rivers above Detroit Reservoir and the upper South Santiam River above Foster Reservoir.

Hoop Traps

STEP again led the district's small stream sampling effort through the operation of hoop traps. Landowners and volunteers from the Marys River Watershed Council, the Albany Chapter of the Northwest Steelheaders, and students from Oregon State University, Hoover Elementary School and Philomath High School maintained and tended traps at sites located on tributaries to the Willamette and Marys Rivers. The primary intent of this program was to document the presence of cutthroat trout, juvenile salmon, or juvenile steelhead in waters where little or no fish information exists and to get a sense of relative abundance. However, additional benefits from the program come from raised awareness for the "little brown fish" (native, non-salmonid species) in the area and educational opportunities for students. Information on fish presence has been used by cities, counties, watershed councils, and State and Federal agencies to develop habitat restoration and protection plans as well as to identify individual project opportunities.

Upper Willamette STEP

Water Quality Monitoring

STEP partnered with Weyerhaeuser in conducting extensive water temperature monitoring in Mosby Creek; a tributary to the Coast Fork Willamette River. Water temperature has been identified as a factor limiting fish production in the basin so long-term monitoring will provide a measure for the success of future restoration projects.

Fish Presence / Absence Surveys

STEP conducted a variety of fish presence surveys in the district. These surveys documented fish presence for timber harvest operations, culvert replacements and long-term monitoring.

Mosby Creek Rotary Screw Trap

STEP staff and volunteers operated a rotary screw trap in Mosby Creek, a tributary to the Coast Fork Willamette River. The purpose of trap operation was to evaluate our “out-planted” Chinook salmon in the basin. Many Chinook salmon fry were collected along with other native fish species. This was the first time a rotary screw trap had been operated in Mosby Creek.

Hoop Traps

Four upstream migrant hoop traps were operated by staff and volunteers to monitor migrating cutthroat trout. The projects collected valuable information on the life history and relative abundance of local cutthroat trout and other fish populations. This ongoing project is an important outreach and education tool, providing volunteers with good hands-on experience working with fish in local streams.

Snorkel Surveys

Snorkel surveys were conducted in a variety of waters to obtain population data on salmon and trout in the district. The surveys were conducted in the McKenzie, Middle Fork Willamette and Coast Fork Willamette River basins.

Habitat Surveys

STEP partnered with Weyerhaeuser Company to conduct a habitat survey in Mosby Creek, a tributary to the Coast Fork Willamette River. These surveys will be used to identify and prioritize areas for future in-stream and riparian restoration activities.

Delta Ponds Restoration

STEP volunteers spent two days sampling the Delta Ponds, a 154-acre area that borders the Willamette River. Minnow traps were used to collect information on fish species distribution through 10 ponds in the complex.

High Cascade Lakes Fish Survival Surveys

Volunteers assisted staff with collecting information on fish survival in the High Cascade Lakes. Volunteers hiked into designated lakes, sampled for fish presence with hook and line, and recorded various physical and biological data. This project is very popular with the public and will continue to be conducted to provide needed information on fish survival in the High Cascade Lakes.

McKenzie River Native Trout Investigations

Volunteers from the South Willamette STEP program participated in angling for native rainbow and cutthroat trout in the McKenzie River. This study will be used to assess the distribution, migration timing and growth of native rainbow and cutthroat trout in the McKenzie River.

Gold Lake Brook Trout Removal

Volunteers from the McKenzie Flyfishers assisted with an ongoing project to trap and remove brook trout from Gold Lake in an effort to enhance the lake's rainbow trout fishery. Brook trout are numerous in Gold Lake, which tends to cause them to become stunted and are also responsible for decreasing the size and number of rainbow trout in Gold Lake. This year approximately 1,400 brook trout were relocated to Charlton Lake in the Deschutes Basin which should allow for additional growth on the fish remaining in Gold Lake and provide a brook trout fishery in Charlton Lake.

Culvert Inspection Surveys

STEP volunteers surveyed culverts in the Middle Fork Willamette River basin. Volunteers worked together to ground-truth culverts that were identified as passage barriers. Data collected is entered into a database which then can be used to identify culverts that may need modification or replacement.

North Coast STEP

Water Temperature Data Loggers

Volunteers from Oregon Trout deployed nine water temperature data loggers in the Salmonberry River system to help characterize summer water temperature. Other water temperature data loggers were deployed by Rainland Flycaster volunteers in the Necanicum River as part of project monitoring for a habitat restoration site.

Water Quality Monitoring

A pilot study to determine estuarine use by salmonids and distribution according to various water quality parameters was initiated. The Association of Northwest Steelheaders provided funds to purchase water quality monitoring equipment for this study. Test seines revealed extensive use of sloughs and other tidal areas by numerous fish species and distribution of salmonids in water temperatures above 70° F in some instances.

Mid-Coast STEP

Schooner Creek and Siletz Falls Traps

Thirty volunteers from Long View Hills Fishing Club, Mid-Coast Chapter, ANWST, Central Coast Fly Fishers and Salmon River-Drift Creek Watershed Council donated over 1,500 hours assisting with fish monitoring activities through operating fish traps at Schooner Creek and Siletz Falls. Schooner Creek is operated for six months of the year and Siletz Falls is a year-round operation. These trap operations are essential to district fisheries management in the Siletz Basin and provide an index of abundance for winter and summer steelhead, spring Chinook salmon and coastal coho salmon. Additionally, these traps provide vital monitoring information on the stray rates of hatchery fish and also act as a location for collecting brood fish. The STEP biologist is responsible for coordinating the volunteers and training them in trap operations, including proper fish handling, species and gender identification and accurate data recording. Volunteers are also trained in safety procedures and trap maintenance.

This year volunteers were pivotal in refitting the Schooner Creek trap to meet state safety standards using funding provided by the ODFW Restoration and Enhancement Program. These volunteers were also instrumental in repairing the trap when it was severely damaged in the early December storms of 2007.

Spawning and Population Surveys

Mid-Coast STEP volunteers continued to assist with adult salmon and steelhead spawning surveys in the Yachats Basin and multiple streams in the Siuslaw Basin. Florence STEP volunteers maintained trap operations for adult coho salmon at Little Woahink Lake and passed all returning fish above a dam that blocks natural passage.

Juvenile fish surveys were also conducted in the Siuslaw Basin. Four volunteers from Florence STEP assisted the USFS Mapleton Ranger District with the daily operation of a juvenile fish trap on Knowles Creek and juvenile fish from Bailey Creek were sampled using a seine net.

Umpqua STEP

Nutrient Enrichment

The Gardiner-Reedsport-Winchester Bay (GRWB) STEP group continued its participation in the stream nutrient enrichment program by placing Chinook salmon carcasses in the North Fork of the Smith River. The program also joined with other local partners to participate in a beach cleanup at Winchester Bay. Since many GRWB members have boats, they cleaned sections of the beach not accessible by vehicles. Several dump truck loads of debris were removed from the beaches.

Tennile, Coos, and Coquille STEP

Throughout the District, habitat for salmonids has been compromised because of past land use practices and culverts that block passage for adult and juvenile fish. Volunteers have expended a considerable amount of time and effort to correct these passage problems. More work is needed in the form of habitat surveys that identify problem culverts and subsequent follow-up corrections.

Estuary sampling

The most important monitoring operation that district volunteers are involved with each year is the fall Chinook salmon recruitment surveys that are conducted in the Coos and Coquille estuaries. In the Coos River basin volunteers release in excess of three million juvenile Chinook salmon annually. With the large numbers of fish released, an evaluation of the impacts on wild Chinook salmon is needed. One way to measure the impacts is to monitor the growth and abundance of Chinook salmon in the estuary. Research has indicated that if the mean fork length of juvenile Chinook salmon at the ocean entrance during fall is below 12 cm the carrying capacity for the basin may be exceeded. Volunteers in the STEP program play a key role in this long-term monitoring project.

Lower Rogue STEP

Estuary Seining

Oregon South Coast Fishermen volunteers completed their 17th year of seining juvenile Chinook salmon in the Chetco River estuary. The project consists of volunteers setting a beach seine at select stations bi-weekly from June through September. These index surveys characterize abundance and development of native fall Chinook salmon smolts. The data is used annually to estimate the time hatchery Chinook salmon should be released to minimize impacts on native fish using the estuary.

Screw Traps

Under district supervision, the OSCF operate a downstream migrant trap just upstream of the Winchuck River estuary in an effort to characterize populations of fall Chinook salmon on the Winchuck River. The trap has contributed data for the past 17 years. OSCF have operated the trap for the past nine years, doing work that would otherwise not be accomplished under current district staffing levels. The 2007 Winchuck trapping season concluded with 55 days of trap operation, 14,540 fall Chinook salmon smolts sampled, and a population estimate of 175,572 fall Chinook salmon smolt outmigrants.

With their years of experience operating screw traps, the OSCF and district staff decided to take on an additional screw trap. The trap was placed in Jack Creek, a tributary of the Chetco River Basin, to determine the presence of coho salmon. Jack Creek represents the highest quality of off-channel rearing habitat in the area, but little data was available. The Jack Creek Screw Trap

Project would not have been possible without the veteran experience of the OSCF (results are pending).

The operation of screw trap projects represents volunteer hours in installing, maintaining, and removing traps, as well as daily operations in counting, identifying, marking, and observing recaptured fish. Weekly operations include a training session by the STEP biologist in trap operation, fish identification and marking techniques. Volunteers work in two-person teams to monitor the trap daily. Weekly expansion estimates for fall Chinook salmon smolt are summarized throughout the migration period (June-August) to provide a population estimate.

Huntley Park Seining

The Huntley Park seining operation represents a continuation of a 32-year adult salmonid monitoring database, and is a high priority to the district and salmon managers. Seining occurs annually from July 15 through October 31 at Huntley Park on the Lower Rogue River.

A four-person ODFW seasonal crew conducts the sampling. The Huntley Park data is used to monitor stock abundance, age composition and hatchery/wild ratio of summer steelhead, coho salmon and fall Chinook salmon. Later in the season, wild fall Chinook salmon broodstock are collected for the STEP Indian Creek Hatchery facility. The OSCF provided extra volunteer hours at Huntley Park, allowing one Experimental Biology Aide to work on a separate project addressing green sturgeon on the Rogue River. A number of STEP and local volunteers loyally show up every year; one dedicated volunteer accounted for approximately half of the total of volunteer hours alone. The sixteen-week study in 2007 comprised 47 days of data collection with approximately 520 hours of volunteer service.

Indian Creek Hatchery Monitoring

To better evaluate the effectiveness of the Indian Creek Hatchery program, the CAF maintained voluntary snout recovery stations around the Port of Gold Beach. Information obtained from the snout recoveries will be used to determine harvest and survival of program fish.

Upper Rogue STEP

Fish Traps

In 2006 the Oregon Department of Fish and Wildlife implemented a program of increased monitoring and outreach on small streams, urban streams, and intermittent streams of the Rogue Watershed. A key component is surveying for the relative abundance of salmon and trout that use these streams during winter high flow periods in the Upper Rogue Watershed. The information is collected in part to help inform the public about the importance of small streams as refugia for salmonids during winter storms. Volunteers recruited through STEP were trained to monitor and identify fish species captured in the traps throughout the winter. Hoop traps were implemented in Sand, Pickett, Lazy, Mingus, and Military Slough Creeks. Several species of fish, aquatic plants, and snails not native to the area were captured or found near the traps, including fathead minnows, pumpkinseed sunfish, crayfish, and redbside shiners.

Fish Health Sampling

Fish health sampling was initiated with the help of volunteers to locate disease-free stocking locations throughout the basin. In addition, 10 volunteer anglers spent over 300 hours angling for trout above dams to inventory for fish diseases and parasites in the upper parts of the Rogue and Applegate River basins.

Eastern Oregon STEP

South Fork Crooked River Redband Trout Evaluation

As part of an ongoing project to restore trout to the South Fork Crooked River, STEP volunteers annually assist with fish stocking, habitat improvements, and trout survival monitoring. This year eleven volunteers spent 250 hours catching, weighing and measuring trout from the South Fork Crooked River. Trout were implanted with passive integrated transponder (PIT) tags so growth and condition factors can be monitored over time.

Little Lava Lake Tui Chub Removal and Rainbow Trout Monitoring

The goal of this project is to reduce competition for food and space from an invasive and prolific tui chub population in Little Lava Lake. Indigenous species include redband trout and mountain whitefish, and 10,000 rainbow trout fingerlings are stocked annually. During the chub spawning season, Sunriver Angler volunteers removed tui chub using two trap nets at either end of the lake. This was the second year of chub removal and an estimated 30% of the adult spawning population were removed. Volunteers also monitored zooplankton levels and collected biological data from trout. Twenty volunteers took part in this labor-intensive project, contributing 350 hours.

Trout Diet Analysis

The STEP biologist conducted a trout diet analysis with the assistance of twenty Mt. View High School students. Students analyzed stomach contents of 40 Crane Prairie Reservoir rainbow and brook trout that were caught in gill nets by ODFW staff. Diet results were distributed to district fish staff.

Spawning Surveys

The STEP biologist and other ODFW staff trained and supervised volunteers for ongoing, annual bull trout, brown trout and redband trout spawning surveys in various watersheds. Rivers surveyed were Upper Malheur and North Fork Malheur, Upper Deschutes, Metolius and Fall River. Volunteers were paired with local biologists and trained to identify and count redds. Twenty-eight volunteers donated over 300 hours to these surveys. Survey results are used by ODFW district staff and distributed to volunteers and angling clubs.

Crooked River Population Survey

The STEP biologist coordinated and supervised volunteers who assisted with a drift boat electrofishing survey on Crooked River. Volunteers assisted biologists by releasing fish upstream after they were sampled; they also recorded biological data and informed downstream anglers about the sampling boat. Five volunteers contributed 60 hours to this study. The results from this bi-annual population estimate show trout populations decreasing significantly.

Redband Migration Study – Crooked River

Volunteers assisted the Crooked River biologist and the STEP biologist with a new study which will monitor migrating behavior of redband trout in Ochoco and McKay creeks, two major tributaries to the Crooked River. Volunteers contributed 100 hours to help fish sample and set up PIT tag reader stations. In conjunction with this study, twenty trout were implanted with radio tags and tracked for 6-7 months. Volunteers assisted with all aspects of this study. The radio tracking data showed half of the trout moved between rivers.

HABITAT IMPROVEMENT

Introduction

Each year, volunteers conduct or assist with numerous habitat improvement projects on private and public lands throughout Oregon. These include efforts to improve or restore:

- Fish passage
- Instream habitat
- Riparian, off-channel, wetland, or floodplain habitat
- Stream nutrients through fish carcass placement
- Aesthetic qualities through the Keep Oregon's Rivers Clean program

Although the stream nutrient enrichment program is not strictly a STEP activity, many carcass placement projects rely heavily on the manual labor of STEP volunteers, as access to sites can be poor and carcasses must be placed in a manner that simulates natural distribution and conditions. Carcass placement occurs in streams where populations of spawning anadromous salmonids are well below historic levels.

In 2006-07, the STEP Coordinator worked with the Oregon Department of Environmental Quality to remove the requirement for a National Pollutant Discharge Elimination System permit. Upon review, we determined that fish carcasses placed by hand into streams did not constitute a "point source" pollutant, so no permit is required. This change will allow STEP biologists greater flexibility to distribute carcasses and enhance stream nutrients.



The expansion of the Keep Oregon's Rivers Clean (KORC) program to collect and recycle discarded angling line and tackle continued in 2006-07. KORC began as a pilot effort in 2004 with 26 collection stations located at popular angling access sites in the Sandy, North Santiam, Salmon, Rogue, North Umpqua, and Crooked River Basin. In 2005, the Oregon Legislature made KORC a permanent program under ODFW. STEP volunteers highly involved with monitoring and maintaining stations during the pilot effort and staff determined that the permanent program would be most effective if administered by STEP.

Currently, about 100 stations have been distributed to the fish districts (primarily coastal and Willamette Valley), and many have been installed and are being maintained by volunteers. A review of the program is in progress.

The following is a summary of habitat improvement projects conducted in each STEP area during 2006-07 (Table 3). This narrative is not intended to be comprehensive, but instead highlights a few of the major activities in each area.

Lower Willamette STEP

Carcass Placement

The 12th year of the district's stream nutrient enrichment program was completed with cooperation from the Clackamas Hatchery, Sandy River Hatchery, the USFS, and the USFWS Eagle Creek Hatchery. The carcasses are intended to mimic historic run densities of spawning coho salmon in area streams and increase stream nutrient levels for aquatic organisms.

Approximately 12,000 coho and Chinook salmon carcasses were placed in the upper Sandy River Basin, the upper Clackamas River Basin, the Molalla River Basin, the Upper Tualatin Basin, and the Yamhill Basin. Volunteers from the ANWST, students from various local schools, SOLV, members of the Sandy River Watershed Council and Clackamas River Watershed Council, the Molalla Native Fish Society, and the Confederated Tribes of the Grande Ronde, and the Tualatin Riverkeepers assisted with the carcass distribution effort.

Line and Tackle Collection

As part of the KORC program, four line and tackle collection stations were in their third year of use on the Sandy River. STEP and volunteer members of the Sandy Chapter of the NW Steelheaders maintained the stations. Several pounds of line and tackle were collected. New stations were also added in 2007 at popular local lakes. Stations were constructed for the Clackamas River, Blue Lake Park, Herman Creek, and Salish Ponds. These stations are all monitored by local volunteers. The materials for new stations have been secured, and planning is underway for installation at strategic locations in the Portland area, likely along the Willamette River.

Mid-Willamette STEP

Partnerships and Technical Assistance

Because much of the land in the mid-Willamette basin is privately owned, restoration efforts rely heavily on the cooperative participation of private landowners. In addition to efforts with other state, local and federal agencies, STEP works closely with watershed councils, industry, individuals, and the more traditional landowner assistance agencies (soil and water conservation districts, Natural Resources Conservation Service, USFWS) to conduct stream nutrient enrichment, instream and riparian habitat, and fish passage restoration projects.

STEP is in a unique position in that it can bring all aspects of restoration under one program. These include pre- and post-project monitoring, technical guidance, equipment, labor, access to funding and outreach. During 2006-07, STEP staff made numerous site visits to offer technical and grant-seeking advice to landowners throughout the district. The STEP biologist provided

technical advice to the Calapooia Watershed Council on the removal of the Brownsville Dam, and assisted Linn County Roads Department and the Long Tom Watershed Council with fish relocation associated with culvert replacements.

Stream Nutrient Enrichment

The placement of salmon and steelhead carcasses into area streams for nutrient enrichment is accomplished completely through the efforts of volunteers and has surprisingly become one of the more popular STEP activities. This past year, salmon and steelhead carcasses that were used as brood for programs at Marion Forks and South Santiam Fish Hatchery were again placed in the Santiam and Calapooia basins. To replicate historic abundance and distribution, carcasses were placed in 14 different streams covering 167 miles. Volunteers from the Albany Chapter of the ANWST and the Santiam Flycasters contributed many hours toward carcass enrichment efforts in the Mid Willamette district.

Habitat Restoration

STEP partnered with ODFW's habitat program, the Marys River Watershed Council, Benton County Soil and Water Conservation District, River Design, and the U.S. Fish and Wildlife Service to assist a landowner, Wade Ebert, restore a section of Reece Creek in south Benton County. Reece Creek has pockets of excellent cutthroat trout habitat, especially just above the Ebert property, and is listed as essential fish habitat for Chinook salmon. The Marys River Watershed Council is trying to recruit landowners in south Benton County to participate in habitat improvement projects and Mr. Ebert's project provided an opportunity to raise local awareness of the council. On Mr. Ebert's property, the creek was channelized and incised, and filled with old batteries and oil drums. Technical assistance was provided to Mr. Ebert on how to pull back and reshape the creek banks. STEP funds were used to hire an ODFW habitat technician and equipment to rework the active channel of the creek into a more natural sinuous pattern, add boulders and large wood for structure, and reconnect the creek to its former floodplain swales during high water events.

Upper Willamette STEP

Riparian Restoration

STEP and the Coast Fork Willamette Watershed Council worked together to obtain a \$95,000 grant to restore a section of creek and adjacent backwater habitat at Garden Lake Park in Creswell. Invasive plant species are being removed and replaced with native plant species along the banks of Garden Lake and Hill Creek, a tributary to the Coast Fork Willamette.

North Coast STEP

Stream Nutrient Enrichment

Dozens of STEP volunteers and students again participated in North Coast stream enrichment activities during 2006-07, placing over 141,000 pounds of salmon and steelhead carcasses over 165 miles in 40 streams and rivers to benefit salmonids and other species.

Habitat Restoration

Volunteers from the Tualatin Valley Chapter of the Association of Northwest Steelheaders helped remove a low water fish barrier on Blue Bus Creek, a tributary to the East Fork Trask River, improving adult fish passage for steelhead and cutthroat trout. The barrier consisted of a small dam, trash rack and associated pipes from an old water diversion. Due to the remote location, heavy equipment could not be used and all work had to be done by hand. The project should open approximately two additional miles of habitat for use by steelhead.

Riparian Restoration

Riparian restoration work continued at four ODFW fishing access sites on the North Coast with help from the Tualatin Valley Chapter of the Association of Northwest Steelheaders, the Rainland Flycasters, and an Eagle Scout troop. Invasive species were removed and hundreds of native trees planted and protected along the Necanicum, Wilson and Tillamook rivers.

Mid-Coast STEP

Instream and Riparian Habitat

STEP completed a habitat restoration project on South Beaver Creek, including coordination with three private landowners, Lincoln Soil and Water Conservation District, Mid-Coast Watersheds Council and The Oregon Wildlife Heritage Foundation. The STEP biologist wrote and administered grants, coordinated contractors and worked with local volunteers in placing large wood into two miles of stream and planting and protecting riparian vegetation.

STEP volunteers from the Long View Hills Fishing Club assisted with a cooperative ODFW/USFS helicopter large wood placement project. Four public safety volunteers were involved in 'sweeping' roads before helicopter start up, blocking roads and coordinating passage for public vehicles with USFS personnel.

Volunteers from Florence STEP assisted the Siuslaw Soil and Water Conservation district in planting native riparian trees in various tributaries throughout the basin covering approximately two miles of stream bank. Florence STEP also continued to assist the USFS in monitoring habitat restoration projects previously implemented in Knowles Creek.

Tennile, Coos, and Coquille STEP

Habitat Restoration

Habitat restoration projects are an important component of volunteer projects in the district. The largest habitat improvement project conducted by volunteers was the restoration of the project site around the new fish facilities at Morgan Creek. Volunteers placed hundreds of willows into a hydroponics system at the Millicoma Interpretive Center. Forty students from North Bend High School and volunteers planted the willows along Morgan Creek to restore the riparian habitat that had been compromised from decades of unrestricted grazing by livestock. The workforce also planted grass and placed straw for mulch over ground that was disturbed by the project. About 200 feet of silt fence was placed to protect sensitive waterways and wetlands from disturbed ground. The students participated in the project as part of their annual community service project.

Riparian Restoration

Dozens of students and volunteers participated in a riparian restoration program along Morgan Creek. Students from Sunset Middle School and several adult volunteers planted hundreds of willow, alder, spruce, fir, and cedar trees along two actively eroding portions of the stream bank. This property had been inaccessible until it was purchased by the Coos County STEP Commission.

Stream Nutrient Enrichment

Salmon carcasses were again placed in district streams during 2006-07. Researchers have determined that marine-derived nutrients are extremely valuable to stream ecosystems. Agency staff and volunteers processed and placed 1,842 salmon and steelhead carcasses into seven streams; most of these carcasses were fish that had returned to spawn at Coos Basin STEP facilities.

Lower Rogue STEP

Carcass Placement

Volunteers with the Curry Anadromous Fishermen and Oregon South Coast Fishermen assisted ODFW staff with placement of fall Chinook salmon carcasses. Fall Chinook salmon carcasses from Elk River Hatchery and the Indian Creek STEP facility were distributed in Chetco and Lower Rogue River tributaries. Sites chosen were those with lower salmon spawning densities and recent habitat restoration improvements such as tree plantings and large woody debris placement. The carcass placement effort is intended to increase nutrient levels to benefit primary production and growth of aquatic organisms.

River Cleanup

Students from Brookings and Gold Beach high schools participated in a Lower Rogue River cleanup, a collaborative effort sponsored by the United States Forest Service (USFS). The USFS, ODFW, Mail Boats, Jerry's Rogue Jets and local guides shuttled volunteers by boat to gravel bars located on the lower 35-mile reach of the river. The effort resulted in 15 cubic yards of trash being removed from the gravel bars. Since most gravel bars on the lower Rogue River are only accessed by boat, the river cleanup effort consists of local agencies and businesses donating boats, drivers and equipment to ensure program success.

Upper Rogue STEP

Keep Oregon's Rivers Clean Program

The monofilament recycling program is in its fourth year of implementation in the Upper Rogue River and will run on an experimental basis through 2008. Poor salmon returns and reduced angling effort were reflected in the amount of monofilament collected. Four years ago, 46 pounds, 11 ounces of line was collected; this year 3 volunteers drove 1,395 miles to collect 9 pounds, 14 ounces. Most anglers were willing to use the bins and thought they were a great idea. Just having trash receptacles in the same area as the bins has helped.

Nutrient Enrichment

To increase the nutrient load and food in stream habitat where coho salmon spawn and rear, 1,140 coho salmon carcasses (8,662 lbs.) from Cole Rivers Hatchery were placed in Elk, Bitter Lick, Sugarpine, and Taylor creeks by volunteers from watershed councils and fishing clubs.

Eastern Oregon STEP

Riparian Planting

The STEP biologist and ODFW's mitigation and enhancement biologist coordinated riparian planting projects using water-jet stingers. Water-jet stingers are a useful planting tool when restoring vegetation to water bodies where water levels significantly fluctuate. The STEP biologist recruited volunteers, provided transportation, lunches and provided planting equipment. The stingers were used to punch 5 to 6-foot deep holes in the soil, and willows and dogwoods were planted where water levels exhibited extreme fluctuation associated with reservoir management. Volunteers cut and planted hundreds of willow and dogwood stalks. Planting occurred at Prineville Reservoir, Crooked River and the Upper Deschutes River.

FISH CULTURE

Introduction

STEP volunteers conduct or assist with all stages of fish propagation, including collecting and spawning adult fish, incubating eggs, and rearing, acclimating, and releasing juvenile fish. STEP volunteers often work in conjunction with ODFW fish hatcheries at one or more of the stages in the fish production cycle. In a few locations where there are no ODFW hatchery programs due to lack of facilities or hatchery capacity, STEP volunteers operate facilities that perform the entire rearing cycle from broodstock collection to release. In both cases, STEP propagation efforts are guided by ODFW management objectives and are consistent with the guidelines, practices, and protocols outlined by hatchery management policy.

Because STEP fish culture projects are an integral part of ODFW fish management programs, oversight of STEP propagation activities occurs in a variety of ways. Initially, STEP propagation proposals go through an approval process at the local, Regional, and Fish Division levels within ODFW to ensure the projects will meet fish management objectives and are consistent with policies regarding potential impact to native fish populations. Specific legal limitations regarding STEP also exist that, in addition to ensuring the projects are in compliance with other applicable goals,



policies, rules, and plans, limit the duration and size of projects. STEP propagation projects operate on 3-5 year cycles depending on the type of project and fish species involved. Once the cycle is complete, the project must be reviewed through a formal renewal process. In addition, STEP propagation projects that rear and release more than 100,000 fish must receive authorization from the Oregon Fish and Wildlife Commission. Presentation of the project at a Commission meeting also serves as an opportunity for public comment. Public comment during the propagation project review process can also be submitted directly to staff or can be provided when the project is presented for review by STAC at a regularly scheduled STAC meeting. If public interest warrants, the Department may choose to hold additional public meetings to present and discuss projects under review.

The importance of STEP fish culture efforts to Oregon's fish resources do grant program activities some legal protections such as not having to obtain water rights to operate a facility as a STEP project is defined as "beneficial use" of the state's waters. The STEP biologists work closely with volunteers to ensure a facility complies with the applicable operating and reporting requirements for ODFW fish hatchery facilities and those of STEP. The program biologists also help carry out the project logistically, work with other ODFW staff to coordinate cooperative propagation efforts, and provide technical assistance. STEP fish propagation facilities are funded, built, operated, and maintained by the volunteers with ODFW assistance and oversight.

The purpose of STEP fish propagation programs is to rehabilitate or supplement populations of naturally-produced salmon and trout or augment fisheries with hatchery fish. Thousands of volunteers have assisted Oregon's fisheries through their involvement in STEP and their donation of money, materials, equipment, and countless hours of time and labor. Without these efforts, ODFW's propagation ability would be greatly diminished in many areas.

Many projects have more than a single purpose and often serve as educational opportunities to increase public understanding and stewardship of Oregon's fish resources and the aquatic environment. STEP fish culture projects are generally grouped into the following types:

- Classroom egg incubation program projects that release unfed fry, also known as the "Fish Eggs to Fry" program. The primary purpose of this program is education; however, because the fish are released into open waters, they are managed and regulated as part of a production program and are included in this section of the report.
- Stream hatchbox projects that release unfed fry
- Fish rearing projects. All activities included here involve feeding and caring for fish.
- Projects that acclimate fish before release
- Projects that collect adult broodstock
- Miscellaneous activities including volunteer help at ODFW hatcheries for maintenance, broodstock collection, spawning, marking, stocking, and other duties, and salvage of wild fish

The following is a summary of STEP fish culture projects from each of the STEP areas (Table 4). This narrative is not intended to be comprehensive, but instead highlights a few of the major activities in each area.

Lower Willamette STEP

Classroom Egg Incubation Program

Over 170 school classroom projects incubated and released more than 80,000 unfed salmon and trout fry into twelve lakes, ponds, and streams near Portland. Many of these projects are sponsored by local chapters of the ANWST and the OSU Extension Service. The ANWST's extensive commitment to the schools includes the purchase of incubation equipment, delivery of the fish eggs to the classroom, and support services to each of the participating schools.

Fish Acclimation Projects

The NWWD has for many years used net pens to acclimate juvenile salmon and enhance the popular spring Chinook salmon sport fishery in the Willamette and Clackamas rivers. Although the number of net pens has been reduced during the last several years, the project located near the confluence of the Clackamas and Willamette River at Clackamette Cove again acclimated and released 80,000 spring Chinook salmon smolts in 2007. An additional 160,000 salmon smolts were directly released into Clackamette Cove without acclimation in 2007. Volunteers from the McLaughlin Chapter ANWST worked with ODFW staff to assemble and maintain the

net pens, feed and release the acclimated fish, and disassemble the net pens for storage. This is a very labor-oriented, volunteer-driven project.

A second STEP fish acclimation site is located at Cassidy Pond, a private pond owned by Larry and Naomi Cassidy adjacent to the Lower Clackamas River. With their help, more than 20,000 winter steelhead smolts and 50,000 spring Chinook salmon smolts were acclimated and released into the Clackamas River in spring 2007. The Cassidys helped place the fish into the pond, monitor, maintain, and feed them, then release the smolts at the end of the acclimation period. Much like the STEP net pens at Clackamette Cove, the Cassidy acclimation project contributes to the Department's larger Clackamas River spring Chinook salmon hatchery program.

In summer 2006 STEP began work on a new acclimation site on Foster Creek, a tributary of the Clackamas River. The site is located on property owned by Ris and Janet Bradshaw and construction was funded through an R&E grant secured by the Oregon Wildlife Heritage Foundation. This new acclimation site was completed and fully operational in February 2007. The Bradshaws and additional volunteers assisted with the feeding, maintenance, and spring release of 50,000 spring Chinook salmon smolts and over 40,000 winter steelhead smolts.

We are currently looking for additional acclimation sites to be operated by ODFW and volunteers on both the Clackamas and Sandy rivers. Of particular importance is the Sandy River, as the NWWD and STEP assess the need for acclimation sites now that Marmot Dam has been removed. Acclimation and broodstock collection could play an important role in maintaining quality angling opportunities on the Sandy River.

Mid-Willamette STEP

ODFW fish propagation programs in the mid-Willamette basin have evolved greatly over the last decade. With greater emphasis now placed upon the restoration and conservation of the basin's wild fish resources and the current federal listings of upper Willamette spring Chinook salmon and winter steelhead under the Endangered Species Act, the STEP District's fish culture program looks much different from that of the 1980s. Concern surrounding the potential impacts of hatchery fish on native populations and the primary need for habitat enhancement in those streams identified as deficient in natural production have changed the focus of the program's efforts.

Classroom Egg Incubation

The Fish Eggs to Fry classroom program in the District is for educational purposes only and is not intended to contribute to fish production goals. During 2006-07, schools from rural and urban areas participated in 59 egg incubation projects raising rainbow trout and spring Chinook salmon fry.

Eggs are delivered to each classroom by ODFW staff or STEP volunteers. A brief presentation or question/answer period helps to prepare the students for the project and convey the importance of their effort. Individual volunteers, members of the Senior Fishing Buddies, and members of the Albany Chapter Northwest Steelheaders provided invaluable assistance with the classroom

egg incubation program. These volunteers have recruited and “adopted” a number of schools in their local areas for which they provide information and incubation equipment, lend technical expertise, and assist during field trips to the release sites. The Senior Fishing Buddies have been particularly active in the Salem area where, with financial assistance from a STAC Mini Grant, they have placed incubators in area schools. We conservatively estimate the Fish Eggs to Fry Program reached well over 1,000 students in our district this past year.

Spring Chinook salmon fry were released into the North Santiam, South Santiam and Calapooia river basins. Rainbow trout are released at a number of locations scattered throughout the valley including reservoirs and many local, isolated ponds. Fry releases into these ponds has unintentionally resulted in the establishment of two quality trout fisheries where none had before existed. One of these is Pagoda Pond at the 4H Center near Salem where hundreds of children every year participate in outdoor school and summer camp fishing programs.

Upper Willamette STEP

Chinook Salmon Outplanting

STEP partnered with Weyerhaeuser Company to release 43 adult Chinook salmon into Mosby Creek, a tributary to the Coast Fork Willamette River. These fish were released into Mosby Creek to allow for natural reproduction and stream nutrient enrichment.

High Cascade Lakes Stocking

Many of the South Willamette Watershed District’s remote High Cascade lakes are stocked annually with fingerling trout. This year, the majority of these lakes were stocked using a helicopter; however, some were reserved for a local Boy Scout troop and our horse packer groups. The scouts in the troop look forward to this event every year and receive a merit badge for completing this project.

Classroom Egg Incubation

More than 10,000 spring Chinook salmon eggs were incubated by 92 teachers in 50 different schools as part of the classroom incubator program. The unfed fry were released by individual teachers during December at Alton Baker Canoe Canal in Eugene.

McKenzie River Trout Stocking

STEP worked with the McKenzie River Guides Association and local hatcheries to stock over 35 continuous river miles of the McKenzie River with legal-sized rainbow trout. The guides navigated an ODFW stocking boat downriver while the STEP volunteers netted fish into the river. Eight guides led 17 stocking trips from late April to early September.

Fin Marking

STEP staff and volunteers adipose-marked cutthroat trout for placement in the High Cascade Lakes and Carmen Reservoir. Both groups of marked fish will be used for research purposes.

North Coast STEP

Whiskey Creek Volunteer Hatchery

The Tillamook Anglers continue to operate Whiskey Creek Volunteer Hatchery, releasing almost 100,000 spring Chinook salmon smolts and an additional 100,000 fall Chinook salmon fry into the Wilson and Trask rivers. The Nestucca Anglers also continue to operate Rhoades Pond, rearing approximately 85,000 fall Chinook salmon smolts for release into Three Rivers and the Nestucca River.

Wild Winter Steelhead Broodstock Collection Program

This year, the wild winter steelhead broodstock collection programs continued on the Nestucca and Wilson rivers. Over 50 volunteer anglers participated in these programs, collecting over 200 wild winter steelhead to be used as broodstock by ODFW hatcheries.

Mid-Coast STEP

Depoe Bay Coho Salmon

The Depoe Bay Salmon Enhancement Commission (SEC) continued a coho salmon supplementation and watershed education effort on North Depoe Bay Creek. This 20,000 eyed egg hatchbox program provides a community resource for understanding salmon and the importance of healthy watersheds. There is significant educational value through informational signage, tours of the rearing site with members of the SEC, and a volunteer day when people from the community help mark the juvenile coho salmon.

Yaquina Fall Chinook Salmon

STEP volunteers in the Newport area assisted ODFW staff with the collection of wild broodstock in the Yaquina River. The goal of the program is to generate a small sport fishery for fall Chinook salmon in the lower Yaquina Bay. The project includes wild broodstock collection, smolt acclimation, and release from an acclimation site owned by the Oregon Coast Aquarium. This year 17 wild brood fish were collected and 50,000 smolts released. Local sport fishermen also organize the annual 'UDAMAN' fishing derby to raise money for the program.

Winter Steelhead Broodstock and Hatchery Production

Alsea and Siletz River fishermen and local guides assisted ODFW staff with the collection of wild winter steelhead broodstock by drift boat and bank angling. This STEP project will

enhance and extend the winter steelhead sport fishery in these two rivers by developing and maintaining a new hatchery broodstock using the wild steelhead caught by anglers.

Florence STEP and the Emerald Empire Chapter ANWST coordinated the winter steelhead adult capture and smolt acclimation projects in the Siuslaw River, producing nearly 100,000 smolts for ODFW's hatchery steelhead program. The winter steelhead smolt acclimation projects on Whittaker Creek, Greenleaf Creek, and Letz Creek have reduced the straying of hatchery steelhead into wild fish spawning areas. Adult return rates, the condition of returning fish, and the hatchery contribution to the fishery have all improved in recent years as a result of the wild broodstock program.

Umpqua STEP

Fall Chinook Production

Both the Umpqua Fishermen's Association (UFA) and the Gardiner-Reedsport-Winchester Bay STEP (GRWB) met their 2006 brood production goals and successfully reared and released their fall Chinook salmon. The GRWB conducted its own marking, and was able to maxillary-clip 25,000 Chinook salmon using their volunteer labor. Since the UFA will also start marking a portion of the fish they release, several UFA members helped GRWB mark their fish. In the future, the program should be able to adipose mark their fish which is an easier mark to clip than a maxillary mark.

In addition to rearing their own fish, the UFA also assisted the ODFW with rearing some fish used for a Pacific Power and Light research project. Rock Creek hatchery needed the pond space for other rearing needs so the research fish were sent to the volunteer rearing pond at Barrett Creek.

Tenmile, Coos, and Coquille STEP

Coos River Watershed

The facilities in the Coos River watershed were designed to produce fall Chinook salmon to replace production from spawning habitat that was lost in the splash-dam era. These fish are released as unfed fry or partially-reared pre-smolts and are intended to complete their rearing in the under-utilized Coos Bay estuary. This program has become an augmentation of the Chinook salmon to enhance fisheries in the watershed and in the ocean. The program has been very successful, increasing the fishery in Coos Bay approximately ten fold. In 2003, punch card analyses estimated there were 5,500 fall Chinook salmon harvested in Coos Bay, an increase of over 95% relative to harvest before the program began. About half of the fish harvested in the basin are fish raised in STEP facilities.

Large numbers of volunteers continue to be involved in the extensive fish culture programs in the District. There are 10 broodstock development, eight spawning, 16 egg incubation, six rearing, and 12 acclimation projects in the district. In recent years, volunteer participation has increased for district fish culture activities.

Broodstock Collection

Broodstock collection and development programs in the district continue to be a success. Volunteers involved in the collection of naturally-produced salmon and steelhead for incorporation into hatchery programs donated a substantial amount of time. In 2006-07, about 60% of the steelhead broodstock were donated by anglers.

Classroom Incubators

In 2006-07, ten classroom incubators were operated at nine schools. Many of the students at each school participated in spawning the eggs that were provided for the classroom aquaria. Classroom aquaria have proven to be invaluable teaching tools that truly impart resource awareness to thousands of children each year. More classroom aquaria are planned for the near future.

Marking

Fin-marking of reared fish in the district demands a larger number of participants than any other volunteer project. In spring 2007 a total of 566,000 fall Chinook salmon were marked at five facilities. An additional 120,000 Chinook salmon were marked with an adipose clip and coded-wire tag at three facilities. Over 1,000 students and volunteers were involved in fin-marking. Forty-two school groups devoted an entire day to the fin-marking at five facilities; most of the students were also involved with spawning Chinook salmon earlier in the season.

Rearing and Acclimation

Volunteers operated a total of 23 rearing or acclimation projects in 2006-07. One of the largest challenges that volunteers and staff encountered was the inability to use most of the existing fish facilities at the Morgan Creek Hatchery. The facility was scheduled to rear 650,000 fall Chinook salmon to 75/lb in the spring of 2007. Only the upper raceway was useable and the capacity for rearing is limited to 75,000 Chinook salmon. The 575,000 fall Chinook salmon that could not be accommodated at Morgan Creek were reared at Millicoma, Cole Rivers, and Elk River hatcheries.

The incubation and rearing facilities were not useable at the Daniels Creek facility in 2006-07. To offset the loss of the production at Daniels Creek, additional Chinook salmon were reared at the Noble Creek STEP Hatchery. A total of 107,385 were transferred into a temporary acclimation pond on Daniels Creek and released.

Lower Rogue STEP

South Coast Broodstock Collection

Oregon South Coast Fishermen (OSCF) volunteers assisted ODFW staff in collecting broodstock for the Chetco River hatchery programs. A total of 270 fall Chinook salmon and 119 winter steelhead were collected and transported to Elk River Hatchery. The transportation of brood to

Elk River Hatchery required travel of more than 70 miles and the volunteer assistance with this program was invaluable.

Chetco River Fish Marking

The OSCF participated with two other fishing groups to help fund 100% fin clipping of Chetco fall Chinook salmon smolts hatched and reared at Elk River Hatchery. Funds raised were used to mark 125,000 of the 150,000 program fish.

Joe Hall Creek Acclimation

Volunteers with OSCF acclimated 5,000 Chetco River fall Chinook salmon smolts in Joe Hall Creek, a tributary of the Chetco estuary. Volunteers fitted a concrete box culvert (8'x 100') with dam boards and a release gate. With a limited amount of flow, only 5,000 of the 25,000 fish planned for the site could be reared. The fish were acclimated for 14 days and successfully released. The goal of the project is to acclimate fish close to the estuary in an effort to maximize harvest in the estuary fishery. The project will continue with minor modifications.

Indian Creek (Lower Rogue)

Wild lower Rogue River fall Chinook salmon broodstock are collected, transported, and spawned at the Indian Creek Hatchery STEP facility. The resulting offspring are incorporated into a smolt program for supplementation of lower Rogue Chinook salmon stock. A total of 80,623 fall Chinook salmon were reared by volunteers and released into the Rogue River estuary as smolts in 2007. Excess eggs collected for the smolt program were released as unfed fry. Also in 2006-07, 57,646 fall Chinook salmon fry were incubated at Indian Creek Hatchery and released as unfed fry into Edson Creek, Foster Creek and Saunders Creek (lower Rogue River tributaries). In addition, the Indian Creek Hatchery propagation review was approved and will operate under the current guidelines through 2012.

Upper Rogue STEP

Classroom Egg Incubation

The classroom incubator program has been a popular means for teachers to interest students from grade school through high school in fish conservation topics since the STEP program originated in the early 1980s. Teachers and students often remember this experience long after they have left the classroom. This year 25 schools hatched 6,552 spring Chinook salmon eggs obtained from the Cole Rivers Hatchery. About 70% of the eggs survived from eyed to swimup stage. At this stage they were released into the Rogue River near Medford or Grants Pass, depending on which location was closest to the school. Volunteers assisted in the distribution of the eggs to various schools throughout the district and gave talks and assistance on request.

Fish Salvage

Twenty volunteers salvaged more than 11,088 stranded salmonids from isolated pools in drying streams and transferred them to flowing stretches of the same stream systems. Among the fish

salvaged, 8,476 (76%) were coho salmon. Volunteers also operated an irrigation bypass trap that otherwise would have been nonfunctional and shut down for much of the summer.

Eastern Oregon STEP

Backcountry Fish Stocking - Sprague Basin

Twenty-five volunteers from the High Desert Trail Riders used their mules and horses to carry 3,000 rainbow trout fingerlings to Blue Lake in the Gearhardt Mountains. The STEP biologist recruited volunteers, transported the fish and trained volunteers in fish releasing procedures. Blue Lake is out of the way for the helicopter stocking route, so this volunteer service saved ODFW time and money. This high lake fishery continues to provide very good angling opportunities for those seeking a backcountry trout fishing experience.

Fish Eggs to Fry: Classroom Incubators in Eastern Oregon

Thirty classrooms from all over Eastern Oregon, including Klamath Falls, Milton-Freewater, Elgin, Drewsey and Vale, raised trout in classroom incubators and used STEP publications, Fish Eggs To Fry and The Educator's Resource Guide for Hatching Salmon in the Classroom. The STEP biologist coordinated these classroom trout incubator projects and trained volunteers to assist teachers and give presentations. Fifteen volunteers spent over 80 hours delivering trout eggs, presenting related materials and assisting teachers with setup and trout release. All trout were released in local ponds or reservoirs.

APPENDICES



Appendix 1: Salmon and Trout Enhancement Program Advisory Committee (STAC)

STAC Position	Member	Term ¹	Expires
Lower Willamette	Norman Ritchie	2 nd	June 2011
Lower Willamette	Rosemary Furfey	1 st	June 2010
Mid-Willamette	Bill Hastie	1 st	March 2012
Upper Willamette	Lauri Mullen	1 st	July 2009
North Coast (Seaside-Astoria)	Tod Jones	1 st	September 2009
North Coast (Tillamook-Pacific City)	Robert Rees	1 st	August 2009
Mid-Coast	Tom Petersen	2 nd	July 2011
Umpqua	Mike Brochu	1 st	June 2009
Tenmile, Coos, and Coquille	Armand Peña	2 nd	July 2011
Lower Rogue	Richard Heap	1 st	March 2009
Upper Rogue	Gary Enoch	1 st	August 2009
Eastern Oregon (Central-Southeast)	Dave Dunahay	1 st	September 2010
Eastern Oregon (Northeast)	Sammie Mosley	1 st	November 2011

¹ A maximum length-of-service policy of two 4-year terms was implemented in 1996.



Appendix 2: Oregon Department of Fish and Wildlife Salmon and Trout Enhancement Program (STEP) Staff

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Appendix 2 (continued)

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Appendix 3: Schools that work with STEP

The following is a partial list of schools and school districts that work with STEP. This includes schools conducting volunteer projects and those participating in the Classroom Incubator Program. Also included are the universities and community colleges whose students intern with or volunteer for the program. Due to the large number of schools, it is possible that some were inadvertently left off this list. Please contact the STEP Coordinator at 503-947-6232 if your school has been overlooked.

Elementary, Middle, and High Schools

- Albany Christian
- Altamont Elementary
- Arcadia School
- Astoria High School
- Aumsville Elementary
- Baker Charter School
- Bear Creek Elementary
- Blossom Gulch Elementary
- Bonanza Elementary
- Broadway Middle School
- Brookings School District
- Brush College Elementary
- Buckingham Elementary
- Burns High School
- Cascade Elementary
- Cascade Middle School
- Central Christian School
- Central Elementary
- Chapman Hills Elementary
- Clover Ridge Elementary
- Condon Grade School
- Conger Elementary
- Coquille High School
- Corvallis School District
- Crook County Middle School
- Dallas High School
- Douglas High School
- Drewsey Elementary
- Driftwood Elementary
- East Elementary
- East Hills Elementary
- Eastwood Elementary
- Elgin High School
- Elk Meadow Elementary
- Englewood Elementary
- Estacada High School
- Evergreen Elementary
- Falls City High School
- Ferguson Elementary
- Franklin Elementary
- Frost Elementary
- Fullerton Elementary
- Garibaldi Grade School
- Gervais School District
- Gold Beach High School
- Hamilton Creek Elementary
- Hartman Middle School
- Hermiston High School
- High Lakes Elementary
- Highland Elementary
- Hines School
- Hoover Elementary
- Inavale Elementary
- Jefferson Elementary
- Jewell Elementary
- John Tuck Elementary
- Judson Middle School
- Juniper Elementary
- Kingsview Christian School
- Klamath School District
- Knappa High School
- Lakeview High School
- LaPine Elementary
- Lava Ridge Elementary
- Liberty Elementary
- Linkville Academy
- M.A. Lynch Elementary
- Mark Twain Middle
- McNary High School

Appendix 3 (continued)

- Miller Elementary
 - Millicoma Middle School
 - Mitchell High School
 - Mt. Vernon Middle School
 - Myrtle Crest School
 - Myrtle Point High School
 - Nestucca Valley Elementary
 - Nestucca High School
 - Newport Middle School
 - North Bay Elementary
 - North Bend Junior High School
 - North Douglas High School
 - North Salem High School
 - Oregon School for the Deaf
 - Parkdale Elementary
 - Paulina School
 - Peterson Elementary
 - Philomath Elementary
 - Philomath High School
 - Philomath Middle School
 - Pilot Butte Middle School
 - Pine Eagle High School
 - Pioneer Elementary
 - Powell Butte Elementary
 - Reedsport High School
 - Reynolds School
 - Riley Creek Elementary
 - Rock Creek Hatchery
 - Salem Heights
 - Sandstone Middle School
 - Sandy Middle School
 - Seaside High School
 - Seven Oaks Middle School
 - Seven Peaks Elementary
 - Sisters Elementary School
 - Sisters Middle School
 - Siuslaw Middle School
 - South Prairie Elementary
 - South Umpqua High School
 - St Francis School
 - Stanfield High School
 - Stayton High School
 - Summit High School
 - Taft Elementary
 - Taft Middle School
 - Terrebonne Elementary
 - Terrebonne Middle School
 - The Dalles Middle School
 - Tillamook High School
 - Tillamook Junior High School
 - Toledo Elementary
 - Toledo High School
 - Toledo Middle School
 - Tumalo Elementary
 - Vale Elementary
 - Vern Patrick Elementary
 - Waldo Middle School
 - Waldport Elementary
 - Waldport High School
 - Wallowa Elementary
 - Warrenton High School
 - Washington Elementary
 - Westside Elementary
 - Whitworth Elementary
 - Willow Creek Elementary
 - Willow Elementary
 - Yaquina View School
- Colleges and Universities**
- Mount Hood Community College
 - Oregon State University
 - Umpqua Community College
 - University of Oregon

Appendix 4: Groups that work with STEP

The following is a partial list of volunteer organizations, agencies, and other groups that work with STEP. Due to the large number of participants, it is possible that some groups were inadvertently left off this list. Please contact the STEP Coordinator at 503-947-6232 if your group has been overlooked. Although we appreciate all of their efforts, it is also not possible to list the names of the thousands of affiliated and unaffiliated individuals that volunteer with STEP.

Organizations

- . 4-H
- . Abby's Pizza
- . Alsea Guides
- . Americorps
- . ANWST - Association of Northwest Steelheaders
- . ANWST - Albany Chapter
- . ANWST - Emerald Empire Chapter
- . ANWST - Mid Coast Chapter
- . ANWST - McLoughlin Chapter
- . ANWST - Portland Chapter
- . ANWST - Salem Chapter
- . ANWST - Sandy River Chapter
- . ANWST - SW Oregon Chapter
- . ANWST - Tualatin Valley Chapter
- . Backcountry Horsemen
- . Bay Area Sportsmen's Association
- . Bi-Mart
- . Boy Scouts of America
- . Brookings Senior Center
- . Cascade Family Flyfishers
- . Cal-Or Guides Association
- . Camp Shriver
- . Central Oregon Flyfishers
- . Central Oregon Llama Association
- . Columbia Gorge Flyfishers
- . Coos River STEP
- . Coquille River STEP
- . Crater Bass
- . Curry Anadromous Fishermen
- . Depoe Bay Salmon Enhancement Commission
- . Diamond Lake Resort
- . Discovery Center
- . Eel/Tenmile STEP
- . Federation of Fly Fishers
- . Florence STEP
- . Freemont Book Club
- . Gardiner-Reedsport-Winchester Bay STEP
- . Joe's Outdoors
- . Girl Scouts of America
- . Hatfield Marine Science Center
- . Healthy Waters Institute
- . High Desert Trail Riders
- . Klamath Country Flycasters
- . Longview Hills Fishing Club
- . Lower Umpqua Flycasters
- . McKenzie Family Flyfishers

- McKenzie River Guides Association
- Menasha
- Middle Rogue Steelheaders
- Millicoma STEP
- Molalla River Keepers
- Native Fish Society
- Natural Resource Education Center
- Nestucca Anglers
- Nestucca Connections
- North Santiam River Guides
- Northwest Youth Corps
- Oregon Bass and Panfish Club
- Oregon Black Bass Action Committee
- Oregon Equestrian Trails
- Oregon South Coast Fisherman (OSCF)
- Oregon Trout
- Oregon Wildlife Heritage Foundation
- Pepsi
- Rainland Flycasters
- Rockaway Beach Lions Club
- Rogue Fly Fishers
- Rogue Guides and Sportsman's Association

Appendix 4 (continued)

Organizations

- Rotary
- Santiam Flycasters
- Senior Fishing Buddies
- Southern Oregon Fly Fishers
- Starker Forests
- Student Conservation Association
- Sunriver Anglers
- Tillamook Anglers
- Tillamook Bay Boating Club
- Tillamook Guides Association
- Tillamook Estuaries Partnership
- Trout Unlimited
- Tualatin River Keepers
- Umpqua Valley Bass Masters
- Umpqua Fishermen's Association
- Umpqua Flycasters
- Weyco
- Wild Women of the Water
- Wolfree Inc.
- Women Flyfishers
- YMCA

Government

- Association of Soil & Water Conservation Districts
- Benton County
- Bureau of Land Management
- City of Canyonville
- City of Corvallis
- City of Depoe Bay
- City of Eugene
- Confederated Tribes of the Grand Ronde
- Cow Creek Band of Umpqua Tribe of Indians
- Douglas County
- Lincoln County
- Lincoln Soil and Water Conservation District
- Linn County
- NOAA Fisheries
- Oregon Department of Corrections
- Oregon Department of Environmental Quality

- Oregon Department of Forestry
- Oregon Department of Transportation
- Oregon Division of State Lands
- Oregon National Guard
- Oregon Parks and Recreation Department
- Oregon State Police
- Oregon Watershed Enhancement Board
- SOLV
- US Army Corps of Engineers
- USDA Natural Resource Conservation Service
- US Fish and Wildlife Service
- US Forest Service

Watershed Councils

- Calapooia Watershed Council
- Clackamas River Basin Council
- Coast Fork Willamette Watershed Council
- Crooked River Watershed Council
- Glenn/Gibson Watershed Council
- Long Tom Watershed Council
- Lost Creek Watershed Group
- Luckiamute Watershed Council
- Marys River Watershed Council
- McKenzie River Watershed Council
- Mid Coast Watershed Council

- Middle Fork Willamette Watershed Council
- Middle Rogue Watershed Association
- Mohawk River Watershed Partnership
- North Santiam Watershed Council
- Rickreall Watershed Council
- Sandy River Basin Council
- Siletz Watershed Council
- Siuslaw Watershed Council
- South Coast Watershed Council
- South Santiam Watershed Council
- Tillamook Bay Watershed Council
- Tualatin River Watershed Council
- Umpqua Basin Watershed Council

Appendix 4 (continued)

- Upper Nehalem Watershed Council
- Upper Rogue Watershed Association
- Williams Creek Watershed Council