

# SALMON AND TROUT ENHANCEMENT PROGRAM

## 2006 Annual Progress Report



Prepared by the Oregon Department of Fish and Wildlife

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# CONTENTS

	Page
Executive Summary .....	3
STEP District Descriptions .....	8
Development of the Salmon and Trout Enhancement Program (STEP)	
Introduction and District Summaries .....	14
Characterization of Fish Populations and Their Habitat in Streams	
Introduction and District Summaries .....	24
Habitat Improvement	
Introduction and District Summaries .....	32
Fish Culture	
Introduction and District Summaries .....	38
Table 1. Statewide Summary of STEP Participation .....	50
Figure 1. STEP Fish Releases by Species and Fish Release Program.....	51
Figure 2. STEP Fish Releases by STEP Area Fish Release Program.....	51
Appendices.....	52
<ul style="list-style-type: none"><li>• STEP Program Staff</li><li>• STEP Advisory Committee (STAC) Members</li><li>• Partial List of Schools that Work with STEP</li><li>• Partial List of Groups that Work with STEP</li></ul>	

## EXECUTIVE SUMMARY

This annual report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) in 2006.

STEP was established by the Oregon Legislature 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 (ORS 496.430 through 496.465) and rule (OAR 635-009-0090 through 635-009-0150) specific to the program; however, program activities are also guided by broader ODFW fish and habitat management policies including the Native Fish Conservation Policy (NFCP), Fish Hatchery Management Policy (HMP), and Fish Health Management Policy (FHMP). 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 types of projects conducted through STEP reflect the diverse ways that volunteers can assist with the suite of fish and habitat management needs found throughout Oregon. The issues and priorities within individual watersheds are often unique to that geographic 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** activities inform and educate the public about Oregon's salmon and trout resources, the habitats they depend on, and STEP. Projects include presentations, classes, volunteer training, tours, displays, printed materials, activities, and equipment/facility construction and maintenance.
- **Inventory and monitoring** activities characterize fish populations and their habitat. Projects include stream and riparian habitat surveys, and other methods used to research, monitor, or inventory fish life history, presence/absence, 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.
- **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.

STEP is funded by a combination of the US 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 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 STEP Coordinator and one part-time program Administrative Assistant located in the ODFW Headquarters Office in Salem. It is implemented in the field by ten STEP Biologists located throughout the state in eight of the ten ODFW watershed management districts.

In addition to the program staff, the 13-member STEP Advisory Committee (STAC) is comprised of public members appointed by the Governor. STAC 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 at a regularly scheduled Commission meeting. STAC 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 per project for efforts that further the goals of STEP and are reviewed for approval by STAC at their quarterly two-day meetings. STAC met in 2006 at the following locations:



- January - Corvallis
- April – Central Point
- July – La Grande
- October - Reedsport

In 2006, two new appointments were made to fill positions vacated by members who had resigned. The new members and the areas they represent are:

- Rosemary Furfey, Lower Willamette STEP
- David Dunahay, Central-Southeast Area, Eastern Oregon STEP

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 (SWCD), 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.

Noteworthy in 2006 was the review and renewal of eleven existing STEP fish propagation projects. This included individual project review by ODFW District, Region, and Fish Division staff, review by STAC and the public at a regularly scheduled STAC meeting, and public comment during the review period. The review ensures STEP projects are consistent with the recovery and sustainability of native stocks, and ensures a public process is in place to help review projects and determine their consistency with the Oregon Plan for Salmon and Watersheds and ODFW fish management policies.

The projects reviewed for renewal during 2006 and the program area they are located in were:

North Coast STEP

- Astoria High School
- Warrenton High School

Mid Coast STEP

- Depoe Bay Salmon Enhancement Commission
- Munsel Creek
- Letz Creek

Tenmile, Coos, and Coquille STEP

- Eel Lake Net Pen
- Cunningham Creek (Coquille High School)
- Noble Creek
- Morgan Creek
- Daniels Creek
- Millicoma Interpretive Center

All of the above projects are defined by Administrative Rule as STEP supplementation efforts and were therefore approved for a five-year period. If they continue beyond five years, they will again be due for review in 2011.

Four of the projects (Noble Creek, Morgan Creek, Daniels Creek, and the Millicoma Interpretive Center) collectively comprise the largest STEP fish rearing effort in the state and the largest fall Chinook hatchery program on the Oregon Coast. These and the two other projects in the Tenmile, Coos, and Coquille area were reviewed at the January 2006 STAC meeting held in Corvallis. Due to the level of public interest, public opportunity for review was also provided at a December 2005 public meeting held in North Bend specifically to present and discuss project information. More than 100 members of the public attended the North Bend meeting.

The staff review of the Coos fall Chinook projects included implementation of a comprehensive monitoring and evaluation plan developed with assistance from staff from Bandon Hatchery, the Umpqua Watershed Management District, and the Fish Division Fish Propagation, Recreational Fisheries, and Conservation and Recovery Programs. The review ensured the STEP production

of juvenile hatchery fall Chinook in the Coos River basin will be managed at a level to provide a productive fishery and have minimal impact on populations of wild fish.

Also noteworthy in 2006 was the first full year of implementation under STEP of the Keep Oregon's Rivers Clean (KORC) program to collect and recycle discarded angling line and tackle. KORC began as a pilot effort in 2004 with 26 collection stations located at popular angling access sites in six major river basins. In 2005, the Oregon Legislature made KORC a permanent program under ODFW. Also in 2005, STEP applied for and received an R&E grant for construction materials that allowed the program to expand in 2006 to include more than 50 stations located at stream, river, and lake sites throughout Oregon. The program now includes an informational packet for project volunteers that includes station request and reporting forms and details the process for station installation, operation, and maintenance.

And finally, STEP celebrated its 25<sup>th</sup> Anniversary with the 2006 STEP Conference held October in Reedsport. The conference hosted by Gardiner-Reedsport-Winchester Bay (GRWB) STEP, a



volunteer organization, was highlighted by presentations on a variety of fish management issues and several prominent speakers including Secretary of State Bill Bradbury, a sponsor of the legislation that established the program, and Marla Rae, Chair of the Oregon Fish and Wildlife Commission. STEP's public advisory committee also used the conference to recognize several volunteers and organizations from around the state for their contributions to STEP. In conjunction with the conference, GRWB STEP hosted a salmon fishing derby held in the lower Umpqua River and a youth angling event.

A summary of what was accomplished by the program in 2006 includes:

- An estimated more than 60,000 people participated in STEP training, classes, tours, presentations or workshops, or visited STEP activities or displays at public events. These activities involved over 5,800 youth and adult volunteers.
- More than 1,100 volunteers contributed over 11,600 hours to participate in 128 projects to inventory and monitor fish populations, assess sport fisheries, conduct fish passage inspections, and survey habitat in streams and rivers across the state.
- Approximately 995 miles of waterways were improved for fish use by 762 volunteers through fish passage, instream, riparian, and fish carcass placement projects.
- STEP volunteers released or assisted with the release of nearly 5,000,000 Chinook, coho, steelhead, and trout for enhancement or augmentation purposes; 1,950,000 of these fish were reared (fed and cared for) before release, 1,500,000 were not reared but acclimated, and nearly 900,000 were marked with a fin-clip or coded-wire tag.
- Over 15,000 students participated in the classroom egg incubation program releasing an additional 156,000 unfed fry into lakes, ponds, rivers, and streams across Oregon.

As the amount of work accomplished shows, volunteers contribute a very large effort to STEP and ODFW. Because STEP activities are integral to accomplishing the Department's fish management objectives, ODFW staff also contributes time and resources to the program beyond that funded by the SFR grant. Highlights of the statewide volunteer effort include:

- 8,949 youth and 6,594 adult volunteers in Oregon participated in STEP.
- If volunteer hours and mileage are converted to dollar values and added to actual monetary donations of supplies and services, volunteers contributed well over \$2,800,000 to accomplish 1,206 STEP projects.

Since the program was established in 1981, more than 260,000 adult and youth volunteers have contributed more than 2.3 million hours through STEP. The tally of volunteers and their contribution 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 2006 report, each of the STEP Biologists has provided a narrative that describes their district and gives an overview of activities in that district for each of the four main program components of STEP. These four components are:

- Development of STEP
- Characterization of Fish Populations and Their Habitat in Streams
- Habitat Improvement
- Fish Culture

The appendices include the following program information:

- A list of the current STEP Biologists
- A list of the current STAC members
- A partial list of the schools that work with STEP
- A partial list of the groups and organizations that work with STEP

## STEP DISTRICT DESCRIPTIONS

### Northwest Region

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

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 area in Oregon. A large percentage of all state angling license fees come from people living in this 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 conservation plans, habitat protection issues, and the needs of wildlife management. Still, the district must provide ongoing and improving angling opportunities, improvements to habitat for fish and wildlife, and an overall contribution to the quality of life that people in this area have come to enjoy and expect.

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, trout, sturgeon, and a variety of warmwater fish.

Anticipated in 2007 is the removal of Marmot Dam on the Sandy River, and district staff and volunteers are very much involved in the planning and preparation. This will be a high profile event closely watched by many and a great deal of effort will go into monitoring both the short and long-term impacts to fish, wildlife, and habitat.

An ever increasing population, the associated development and urban growth, and a changing demographic place an immense strain on the district's natural resources. A careful balance must be maintained between fish and wildlife protections, the need and desire for continued opportunities in fishing, hunting or outdoor viewing enjoyment, and the 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 area is a geographically diverse region in the South Willamette Watershed District 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 as it flows from the 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 (North Santiam, South Santiam and Calapooia). Another four (Rickreall, Luckiamute, Marys, and Long Tom) drain the eastern slopes of the Coast Range. The area 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'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 and coho salmon, and summer steelhead. Although the focus of STEP efforts is on the native salmonids, the program through its educational, monitoring and habitat efforts also recognizes and benefits the area's many other native fish.

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, a result has been federal listings under the ESA 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 Oregon Plan. Most importantly, the foundation of STEP is community involvement with these activities; therefore, the focus of STEP in this district has been to involve area groups, schools and individuals in all aspects of ODFW 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 area coordinates volunteer efforts to monitor and restore native populations of salmon and trout within the headwaters of the Willamette River near Eugene. The major river systems include the McKenzie, Middle Fork Willamette, and the Coast Fork Willamette.

Spring Chinook salmon are the only anadromous salmonids native to the area; however, resident and/or fluvial populations of rainbow, cutthroat, and bull trout are also found. Spring Chinook and bull trout are currently federally listed as “Threatened” under the ESA.

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

A variety of individuals and area organizations participate in STEP. These include the McKenzie Flyfishers, Cascade Family Flyfishers, Emerald Empire Chapter of the Association of Northwest Steelheaders (ANWST), Trout Unlimited, McKenzie River Guides Association, Backcountry Horsemen, three watershed councils and one watershed partnership. ODFW staff regularly attend meetings of these groups to provide information about the Department, answer questions, and to recruit 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 different school districts. Staff work closely with a number of watershed councils, educators, angling groups, and civic organizations throughout the district.

**Mid Coast STEP** .....*James Ray, STEP Biologist*  
*George Westfall, Assistant District Fish 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, 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.

STEP has worked with Mid Coast communities to undertake a diverse range of projects in fisheries management and conservation, and has shared in successes with those communities; however, the work doesn't stop there. 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**..... *Laura S. Jackson, STEP Biologist*  
*Jim Muck, 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, spring Chinook, and 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 man-made lakes 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 fisheries. Umpqua volunteers in 2006 contributed nearly 17,700 hours to STEP and assisted with 70 projects. Major volunteer groups include: the Umpqua Fishermen's Association (UFA), Gardiner-Reedsport-Winchester Bay STEP (GRWB), the Student Conservation Aid program (SCA), the Umpqua Basin Watershed Council, the Cow Creek Band of the Umpqua Tribe of Indians, Umpqua Fishery Enhancement Derby, and Oregon Equestrian Trails. The program is also strongly supported by Rock Creek Hatchery and other ODFW staff, many individual and local volunteers, and local communities such as Canyonville, Roseburg, and Reedsport.

**Tenmile, Coos, and Coquille STEP** ..... *Shannon Osbon, 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 25 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 STEP area covers the southern Oregon coast from Four Mile Creek south to the California border. This includes the lower mainstem of the Rogue River and tributaries upstream to Mule Creek, the New, Elk, Sixes, Pistol, Chetco, and Winchuck Rivers, Euchre and Hunter Creeks, and numerous smaller coastal basins.

The focus of STEP in this area is to involve volunteers with most all ODFW fish management activities. Although the human population is not large, Lower Rogue STEP works with a number of local clubs, private landowners, timber companies, watershed councils, educators, and school groups. The majority of the area volunteers are members of two organizations: the Oregon South Coast Fishermen (OSCF), and the Curry Anadromous Fishermen (CAF). The OSCF focus their efforts on fish monitoring and habitat enhancement projects. The CAF is responsible for the operation of the Indian Creek STEP Hatchery. Both groups consider community outreach to be a high priority and provide educational opportunities to other youth and adult organizations.

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

Upper Rogue STEP covers the Rogue Basin from Mule Creek located near river mile 48 of the Rogue River upstream for about 200 miles to the basin headwaters near Crater Lake. Cole Rivers, an early Rogue District Fish Biologist, estimated there were about 2,400 miles of stream in the basin. Approximately 400,000 people live in the area, providing a large number of schools, service clubs, sportsman's clubs, and volunteers to assist in a variety of STEP projects that educate citizens and improve fish habitat throughout the basin.

Upper Rogue fisheries include salmon, steelhead, trout, and warmwater fish. The Rogue River is reported to possess the strongest runs of salmon and steelhead of all the coastal streams in Oregon. In terms of federally listed fish species in the Rogue, coho salmon are currently listed as "Threatened".

In 2006, 82 district STEP volunteers contributed 1,515 volunteer hours on the various projects described in this report. These activities focused primarily on the recruitment of youth to angling, and outreach promoting the diversity of angling opportunities provided in the Rogue Basin.

**High Desert and Northeast Regions**

**Eastern Oregon STEP** ..... *Jennifer Bock, STEP Biologist*

Eastern Oregon STEP covers 18 counties and nearly 67,000 square miles. Organized into two ODFW management Regions - Northeast and High Desert - it includes eight ODFW Watershed Management Districts. Major stream or river basins include the Deschutes, Klamath, Malheur, Malheur Lake, John Day, Umatilla, Grande Ronde and Owyhee.

The STEP Biologist and volunteers work with the ODFW watershed management district staff to annually determine the projects requiring volunteer recruitment, training, and supervision. These are projects that have been identified and prioritized by each of the districts as critical to meeting their local fish management needs. STEP efforts in Eastern Oregon currently focus on monitoring trout populations, fish habitat restoration, and aquatic education. Volunteers assist with a variety of surveys including electrofishing, trap netting, and redd and snorkel surveys. ODFW fish biologists use the information gathered from these surveys to evaluate angling regulations, monitor fish species, and guide other fish management activities. Educational efforts that target youth and adults, and particularly teacher training, focus on the area's fish and their habitats. These also involve many STEP volunteers whose enthusiasm with sharing their knowledge of fish and fishing fosters the next generation of conscientious anglers and conservationists.

## DEVELOPMENT OF STEP

### Introduction

STEP Biologists and volunteers conduct a variety of activities that help to 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.

Staff work with a contractor to provide publicity for the statewide program and to produce issues of the joint STEP and ODFW Fish Restoration and Enhancement (R&E) Program publication *Fish Works*. *Fish Works* highlights STEP and R&E Program activities and provides information on upcoming events. The format of *Fish Works* was recently revised to better highlight the value of projects to fish management and provide more in-depth information. The publication also now includes an educational insert providing information on statewide issues or activities of broad interest such as the stream nutrient enrichment program.

Below are some of the STEP development and education activities conducted in the STEP areas during the past year. This is not intended to be comprehensive but instead highlights a few of the activities in each area. A summary of volunteer participation with these efforts and the number of people reached by them can be found under the "Development" category in Table 1. Statewide Summary of STEP Participation.

### Lower Willamette STEP

#### Free Fishing Weekend

In June, the Passport to Fishing event was held for the 13<sup>th</sup> consecutive year at Bonneville Fish Hatchery. This is an annual event conducted during both days of Free Fishing Weekend and is the largest of its kind in the state with attendance in 2006 exceeding 900 youth and 800 adults. At the event, participating youth are taught how to angle for and take care of Oregon's fish resources. Passport to Fishing is sponsored by ODFW and jointly organized by STEP and the NWWD Volunteer Coordinator. The event is made possible with the help and support of ODFW staff and more than 120 youth and adult volunteers from local sportsmen clubs. Many of these volunteers have helped at the event each year since it began.

### Youth Angling

2006 was the third year of youth angling events in the NWWD conducted under the Youth Angling Enhancement Program (YAEP). The YAEP introduces youth to angling and has allowed the district to greatly expand the number of annual events it is able to support. Five 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, West Salish Pond in Fairview/Gresham, and Sheridan Pond in Sheridan. Volunteers from local chapters of the ANWST along with many individual volunteers helped more than 300 youth participate in these events. The program receives financial support from the Oregon Legislature and Oregon Wildlife Heritage Foundation.



STEP and its volunteers also provided fishing gear and instruction for several youth summer camp angling events and an angling event for seniors.

### Salmon Watch

Lower Willamette STEP was again a very active partner in the Oregon Trout Salmon Watch Program providing fish biology insight into both Chinook and coho in area waters.

### Presentations to Schools

The STEP Biologist and volunteers made a number of presentations in local classrooms on fish biology, fishery management, and the importance of salmon to the region and its economy. The STEP Biologist also gave several presentations on career opportunities in fish and wildlife management.

## **Mid Willamette STEP**

### Information and Education

During 2006, the STEP Biologist gave 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.

Many school districts in the Mid Willamette annually host an outdoor school for their students, and these have provided additional educational opportunities for STEP with the biologist having participated in ten outdoor schools in 2006. The STEP Biologist along with volunteers from the Albany Chapter ANWST and the Senior Fishing Buddies led sessions on youth angling at outdoor schools hosted by Polk County Soil and Water Conservation District, OSU Extension Service (4-H), and ODFW's EE Wilson Wildlife Management Area.

In addition to fishing for stocked trout, students learned about fish biology and angling ethics. The STEP Biologist also assisted with Corvallis School District Outdoor School held at Camp Tadmor near Sweet Home. In partnership with the Benton County Soil and Water Conservation District and the City of Corvallis Public Works Department, the STEP Biologist developed a curriculum to teach students about water quality issues, watershed processes, and the complexities of the water cycle.

The STEP Biologist also participated in a Free Fishing Day event, a career fair, three field trips of the Oregon Trout Salmon Watch program, and the Kid's Day for Conservation event in Benton County attended by more than 2,000 local school children and their parents.

#### Technical Assistance

The STEP Biologist and volunteers work with eight watershed councils in a variety of roles including providing general information, providing technical expertise to habitat and inventory projects, assisting with volunteer training, and assisting with the development of action plans and restoration priorities.

#### Angling Access at EE Wilson

Volunteers from the Albany Chapter ANWST and West Salem Boy Scout Troup 150 constructed a universally accessible angler access trail and fishing platform at Adair Pond. The pond is located close to Corvallis and Albany on the EE Wilson Wildlife Management Area. Funding for the project was provided by ODFW's R&E Program.



### **Upper Willamette STEP**

#### Volunteer Training

The STEP Biologist provided training on fish identification, and equipment use and safety to STEP volunteers and University of Oregon and Lane Community College students in preparation for their assistance with fish inventories at Delta Ponds.

#### Technical Assistance

The STEP Biologist served on the Coast Fork Willamette Watershed Council's Technical Committee tasked with periodically providing technical expertise for projects sponsored by the council.

#### Program Outreach

The STEP Biologist gave a presentation on area volunteer opportunities to more than 40 members of the McKenzie Fly Fishers at their August meeting.

STEP partnered with the US Forest Service and several area angling organizations to host the Fish N' Fun exhibit at the Lane County Fair in Eugene. Included in the exhibit was information on stream and riparian habitats, habitat restoration, and local fishing opportunities, several aquariums with live coldwater and warmwater fish and posters identifying the local fish species, a stream simulator, and a miniature golf course with obstacles and educational information designed to teach players about fish life history and struggles in the wild. Angler Education Program Instructors and other volunteers were also on-hand to demonstrate casting techniques and provide instruction.

The STEP Biologist presented a poster on the challenges and benefits of using volunteers in fisheries management projects at the annual meeting of the Oregon Chapter of the American Fisheries Society. Various projects from the district were used as examples to describe how volunteers can be used and how they are managed to ensure proper sampling techniques, coordination, and safety.

#### Youth Angling

STEP volunteers participated in four youth angling events held in Cottage Grove, Creswell, and Eugene. Children attending the events were provided an opportunity to try different kinds of fishing rods, were given casting instruction, and could fish for trout that had been stocked for each event.



#### Student Internships

STEP sponsored student summer internships for Riley Strader of Pleasant Hill High School and Iris Young from South Eugene High School. Riley and Iris participated in a variety of fish management activities including the collection of hatchery broodstock, a study of native fish using PIT tags, seining, assistance with STEP activities at the Lane County Fair and data entry.

#### Salmon Watch

Upper Willamette STEP again 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, stream macro-invertebrates, and riparian habitat during the one day event.

### **North Coast STEP**

#### Youth and Adult Education

Education continues to be a primary focus for North Coast STEP. Twenty-five presentations and field trips involved more than 1,000 students and dozens of adults.

Other outreach and educational activities in 2006 included exhibits at the Cannon Beach Earth Day Celebration, the City of Vernonia's annual Salmon Fest and a presentation to the Astoria-Warrenton chapter of the Kiwanis Club.

#### Salmon Watch and Youth Education

North Coast staff continued to participate in the Oregon Trout Salmon Watch Program, conducting 13 field trips that educated elementary through high school students on the biology and life history of salmon. Presentations reaching more than 600 students were given at Outdoor School, Children's Clean Water Festival, and Down by the Riverside, and during school field trips and classroom visits.

#### Youth Angling

YAEP events were held at six sites and involved hundreds of youngsters and their parents. Arrangements for fishing activities at Camp UKANDU, a one-week camp for kids living with cancer, and Camp Rosenbaum, a one-week leadership camp for at-risk youth, were also made.

#### Construction

Volunteers from several angling groups donated thousands of dollars and numerous hours repairing and updating the Hughey Creek fish collection and acclimation facilities, installing a backup generator and constructing a new building.

Volunteers from the Rockaway Beach Lions Club helped remove old disintegrating foam floats from the Lake Lytle fishing dock and replaced them with new encapsulated flotation.

### **Mid Coast STEP**

#### Youth Education

Mid-coast STEP has made significant headway with its goal of increasing participation with youth education throughout the district. Relationships with school districts, OSU, 4H educators, non-profit organizations and the Mid Coast Watershed Council (MCWC) have all been strengthened, resulting in much greater participation by STEP addressing a broader spectrum of watershed issues with children of all ages.

Eight STEP volunteers working on Bailey Creek had the entire 7<sup>th</sup> grade class from the Florence schools attend a daylong workshop in the fall and again in the spring to understand the structure and function of a restored watershed.

#### Community Partnerships

STEP has maintained its partnerships with a variety of local land and watershed management organizations, such as the MCWC and the Lincoln SWCD Watershed Workforce, in a continued effort to enhance watershed education and awareness in mid-coast communities. This working relationship has successfully recruited many private landowners wanting to improve habitat and water quality.

### Youth and Adult Angling

Volunteers from Florence STEP provided instruction and equipment for two YAEP events held in April and May at Carter Lake and Cleawox Lake. More than 350 youth, 150 parents and, 22 STEP volunteers participated in these events. An interesting note to the Cleawox Lake event was when 20 parolees from a Portland program unexpectedly showed up late in the afternoon to fish at the lake and were also provided gear and assistance by the volunteers. Most of the gentlemen were from urban areas and had never fished before.

ODFW staff and volunteers from Florence STEP, Mid-coast Chapter ANWST, and Longview Hills Fishing Club assisted with Free Fishing Weekend events at Cleawox Lake, Thistle Pond, and Big Creek Reservoir. Thirty Siuslaw Middle School students who had recently completed an angler education class assisted with the Cleawox Lake event as well as two earlier YAEP events.

Volunteers from Florence STEP participated in the Fred Meyers Sportsmen Seminars for steelhead and Chinook angling, Rhododendron Days, and the Port of Siuslaw July 4<sup>th</sup> community outreach program. The group each month also conducted seminars on where and how to fish in the Florence area for new members and the general public.

### **Umpqua STEP**

Umpqua STEP educational efforts reached 4,123 youth and 4,140 adults through fishing events, festivals, tours, and presentations.

### Youth Education

Umpqua STEP participated in the Eastwood Elementary Regional Educational Committee. The goal of the committee is to develop a curriculum and activities for various outdoor stations located on the 40-acre school site. The stations included an oak upland, riparian corridor, wetland, steelhead acclimation site, grasslands, and a Native American plank house. Ultimately, schools will be able to order the curriculum in advance and plan a self-guided field trip to Eastwood to learn about fish life cycles, riparian and wetland functions, water cycles, food webs, energy webs, and Native American culture.

### Disabled Angling Opportunities

Umpqua STEP hosted Camp Shriver at the Bowman Pond for the Handicapped. Five Shriver camps were established across the country this year by the national Kennedy Foundation. The camp held in Roseburg was conducted through the YMCA. This was the only camp to offer fishing which proved to be a very positive activity for the thirty handicapped kids and their partners. Members of the Umpqua Fishermen's Association (UFA), Special Olympics, YMCA staff, and local volunteers helped set-up rods, bait hooks, and net and clean the rainbow trout that had been stocked in the pond for the event. The fishing day was recognized as one of the most popular event held at the camps.

### Construction

Water flow alarms were placed at the GRWB STEP Hatchery and the Canyonville acclimation site. If water flow is interrupted, each alarm automatically calls the STEP Biologist and up to 10 of the project volunteers to warn of a water emergency. This allows

24 hour monitoring at the sites and improves the chances of saving the fish in the event of a problem with the water flow.

For the Canyonville acclimation facility UFA received a grant from the Umpqua Fishery Enhancement Derby to apply an epoxy-type paint coat to the interior raceway. The coat is much smoother than exposed concrete to prevent algae buildup on the walls and will protect the raceway from deterioration when it is cleaned.

### 25<sup>th</sup> Anniversary STEP Conference

In October, Gardiner-Reedsport-Winchester Bay STEP hosted the 2006 STEP Conference celebrating STEP's 25<sup>th</sup> Anniversary. The conference held in Reedsport was a huge undertaking for the volunteers and included tours, a social, speakers and demonstrations on a variety of topics, displays, silent auction, a youth fishing event, and a Saturday evening banquet with entertainment.



### **Tennile, Coos, and Coquille STEP**

Program development in the Tennile, Coos, and Coquille STEP area in 2006 focused on citizen involvement with fish management projects. Eighty-seven STEP projects involved nearly 4,200 volunteers with school and other youth groups providing the majority of volunteers.

### Program Outreach

Presentations about salmon and trout, and tours of enhancement sites were given to a number of local service or other civic groups. These were instrumental in promoting conservation awareness and recruiting STEP volunteers.

### Media

STEP again received excellent coverage by the local written and broadcast media. *The World* newspaper of Coos Bay regularly wrote articles about, and provided pictures of, current STEP activities.

### Construction

For the 16<sup>th</sup> consecutive year, STEP volunteers continued to work on the development of the Millicoma Interpretive Center (MIC). Volunteers this year expanded the MIC egg incubation capabilities, constructed a storage building for the model stream, and installed a removable cover over the model. The stream model receives a great deal of use and the storage area will ensure children will not have access to it when they are unsupervised. MIC continued to be a popular site for student groups and others to come and learn more about salmon and steelhead and 2006 received over 3,700 visitors.

### Youth Angling

A number of youth angling opportunities were provided in the district with assistance from the Oregon Wildlife Heritage Foundation, Bay Area Sportsman Association, and other area STEP volunteer organizations. A YAEP event was held at the Millicoma Interpretive Center where 1,000 rainbow trout were stocked in the steelhead acclimation pond. This was an enormous success with hundreds of children participating and many having caught their very first fish.

As part of the annual Child Advocacy Center's Family Fun Day, a youth angling event was held at Empire Lake in the City of Coos Bay. Department staff and volunteers provided the fishing gear and were on hand to assist youths and families fish for the 3,000 rainbow trout that had been stocked for the event.

A youth angling event was held at Eel Lake where volunteers for the seventh consecutive year hosted a fishing clinic during the June Free Fishing Weekend. The event featured a course where children learned everything from knot tying to fish identification. The children fished for 1,000 rainbow trout that STEP volunteers had reared in a net pen in Eel Lake for three months prior to the event.

### Coquille High School (Cunningham Creek)

With the assistance of both students and volunteers, educational activities continued at the Coquille High School STEP facility used to spawn and rear fall Chinook salmon. On each Tuesday afternoon throughout the winter, the high school students teach visiting elementary school classes about salmon. The event has come to be known as "Tour Tuesday" and provides a wonderful learning experience for the younger students and their teenage instructors. In the spring, hundreds of Coquille High students marked the juvenile fall Chinook prior to release.

### Morgan Creek

One of the largest efforts undertaken by the STEP volunteer community in the Coos Bay area has been the recent acquisition of the land where the existing Morgan Creek STEP Hatchery is located. A coalition of area volunteer and angling groups received community donations to fund purchase of the land where they are proposing to construct a replacement STEP hatchery facility and a small classroom for visiting students. The new hatchery facility will provide improved fish rearing and marking capabilities, and significantly reduce the project's footprint on Morgan Creek. The land purchase will also allow for further stream and riparian habitat enhancements on Morgan Creek and the smaller tributary of Priorli Creek.

## **Lower Rogue STEP**

### Media

Lower Rogue STEP volunteers drafted several news releases for local newspapers, radio, and television stations in an effort to recruit volunteers, inform the public about STEP projects, and recognize STEP volunteers for their accomplishments.

### Tours and Presentations

Presentations were made to students from six area schools. Topics included salmonid life history, fish anatomy, fish culture, and habitat protection and restoration. Many of the presentations included field trips to STEP project sites.

### Youth Angling

More than 60 youth of age 2 through 13 participated in the annual Free Fishing Day event hosted by ODFW and the CAF at Libby Pond. In addition to the catchable-size fish stocked in Libby Pond, the Department stocked 50 “trophy trout” prior to Free Fishing Weekend. The CAF volunteers provided angling instruction and lunch for the participants, nearly all of whom caught a rainbow trout. The OSCF and local businesses donated funds to purchase fishing rods and equipment that were given away to the youngsters via a raffle.

### Angling Access

The OSCF successfully negotiated a lease agreement with a Chetco River landowner for angling access at Ice Box, a popular site among local anglers. During the past ten years, the OSCF has been involved with clean-up and maintenance at Ice Box; however, litter and illegal camping had recently increased prompting the landowner to close access to the site. The OSCF worked with the landowner to ensure the gate will remain open to public access during the salmon and steelhead fishing seasons.

## **Upper Rogue STEP**

### Youth Angling

Volunteers worked with ODFW staff to coordinate YAEP events at Whetstone Pond in March and All Sports Park in June. About 40 youth participated in the All Sports Park event at which Crater Bass volunteers helped bait hooks and mend broken rods. District staff also assisted volunteers from GI Joes and a local church at a Free Fishing Day event held at Expo Pond.

### Working with STAC

Upper Rogue STEP hosted the April STAC meeting that was well attended by area volunteers. At the meeting, STAC awarded a \$700 Mini Grant to the Rogue Guides Association to mail Stream Care Brochures to landowners with property adjacent to Evans Creek. On the second day of the meeting, area volunteers gave a tour of their fish inventory efforts in the small and sometimes seasonal streams in the Medford area. The volunteers discussed the sampling techniques used and the importance of the streams to local fish populations.

## Eastern Oregon STEP

### Klamath Falls Trout Dissection & Basic Trout Biology Classes

STEP partnered with Klamath County's OSU Extension Service to provide a teacher training on trout dissection and basic trout biology. Surplus steelhead trout from Cole Rivers Hatchery were delivered to 15 classrooms and lesson plans were provided to the participating elementary and high school teachers.

### Kokanee Karnival:

Eight 4<sup>th</sup> and 5<sup>th</sup> grade classes took part in the Kokanee Karnival Comprehensive education program. Each class participated in a field trip to learn about salmon, a hatchery tour, a one day angling clinic, a trout dissection class, angler education in the classroom, a classroom incubator project, and a community stewardship project. Kokanee Karnival continues to receive exceptional support from both the volunteer community and the financial sponsors.

Producing partners for the Kokanee Karnival include STEP, Central Oregon Flyfishers, Sunriver Anglers, Wolfree, Central Oregon Llama Association, and the Deschutes National Forest. Volunteers run the majority of the program while the STEP biologist serves on the Kokanee Karnival steering committee, coordinates portions of the program and provides training and technical assistance.



### Youth Angling

Many of Eastern Oregon's youth angling events continue to be possible only with the help of STEP volunteers. Volunteers provided instruction at youth angling events in Prineville, The Dalles, Bend, Camp Sherman, Paisley, and Sunriver. The events included instruction on "care of catch," fish identification, and water safety held at stations run by volunteers.

## CHARACTERIZATION OF FISH POPULATIONS AND THEIR HABITAT IN STREAMS

### Introduction

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

- Angler or creel survey
- Fish passage or culvert inspection
- Fish population or distribution survey or monitoring
- Fish life history or other investigations
- Stream and other aquatic habitat survey
- Miscellaneous monitoring activities (including water quality monitoring)

To conduct these surveys, volunteers become skilled in sampling methods and learn to operate and maintain a variety of gear including:

- Adult fish trap
- Juvenile fish trap
- Hoop trap
- Rotary fish trap
- Backpack, raft, or boat electrofisher
- Seine
- Gill net
- Trap net
- Snorkel gear
- Hook-and-line
- Angler interview or creel
- Telemetry equipment

The following is an overview of STEP fish population and stream habitat characterization activities conducted in each STEP area during this past year. These summaries are not intended to be comprehensive but instead reflect the range of STEP activities in that area. A summary of stream/river distances surveyed and volunteer participation can be found under the "Characterization" category in Table 1. Statewide Summary of STEP Participation.

### Lower Willamette STEP

#### *Water Quality Monitoring*

In conjunction with the Oregon Department of Environmental Quality (DEQ), the Johnson Creek Watershed Council, and the Clackamas River Basin Council, ODFW staff and STEP volunteers monitored stream water temperatures in the Clackamas River and Johnson Creek watersheds. The two watersheds have "high profile" streams, Clear Creek and Johnson

Creek, in populated areas. In recent years there have been intensive efforts by ODFW and the watershed councils to improve habitat and restore salmon and steelhead runs. The monitoring was conducted using thermographs that recorded water temperature throughout the summer. The project data was provided to the watershed councils and DEQ.

#### Winter Steelhead Spawning Surveys

Volunteers assisted staff with winter steelhead spawning ground surveys in the Sandy and Clackamas River basins from February through May. The surveys conducted on foot or through the use of inflatable kayaks were successful in identifying active redds and the presence of live adult winter steelhead. 2006 was the first year of a two-year project that may be extended beyond 2007. The objectives are to identify and map areas of spawning activity and to estimate adult population abundance.

Volunteers from the Tualatin River Watershed Council assisted staff with winter steelhead spawning ground surveys on Gales Creek, a tributary of the Tualatin River. Although stream flows were high throughout much of the winter and spring and made surveying difficult, valuable information was collected that will assist surveyors in 2007. The surveys will be conducted annually and may expand beyond the current reaches to include tributary streams.

### **Mid Willamette STEP**

#### Snorkel Surveys

In 2006, STEP conducted physical or biological surveys in most all of the major sub-basins in the mid-Willamette area. The more popular of volunteer activities remains 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 gained only from the surface. The 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 out-migration 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. These include the Breitenbush River and upper mainstem North Santiam 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, staff from the US Forest Service, volunteers from the Marys River and South Santiam Watershed Councils and the Albany Chapter ANWST, and students from Oregon State University and Philomath High School, maintained and tended traps at sites located on tributaries to the



Willamette, Marys, and South Santiam Rivers. The primary intent of this program has been to document the presence of cutthroat trout, juvenile salmon and/or juvenile steelhead in waters where little or no fish information exists and to estimate relative abundance. The information has in-turn 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. In the winter and spring of 2006, hoop traps were operated in Burkhart and Truax Creeks (Willamette River), Mill Creek, Noble Slough, and Ames Creek (South Santiam), Winter Creek (Luckiamute River), and Newton Creek (Marys River).

## **Upper Willamette STEP**

### *Hoop Traps*

STEP volunteers operated two upstream migrant hoop traps to monitor spawning cutthroat trout. The projects collected valuable information on the life history and relative abundance of local cutthroat and other fish populations. This ongoing project provides an important outreach/education tool as it provides volunteers with a good “hands on” experience working with fish in local streams.

### *Spring Chinook Spawning Surveys*

Volunteers assisted staff with fall spawning ground surveys for spring Chinook salmon on eleven miles of the Middle Fork Willamette River above Hills Creek Reservoir, one mile of Swift Creek, and one mile of Salmon Creek. The surveys were used to determine the survival and spawning success of salmon captured then relocated above the impassable dams.

### *Delta Ponds*

The City of Eugene is currently working with the Army Corps of Engineers, ODFW, and other partners to restore fish and wildlife habitat at Delta Ponds, a 154 acre area that borders the Willamette River. STEP worked with the University of Oregon, Lane Community College, and the City of Eugene’s Stream Team to implement a long term fish and habitat monitoring strategy. Hoop traps, minnow traps, and a five-foot long rotary screw trap were used to collect information on fish using and migrating through the pond complex. Chinook salmon and several other native fish species including cutthroat trout were collected in these traps during the sampling season.



### *High Cascade Lakes*

STEP volunteers along with the Eugene Chapter of Trout Unlimited assisted staff with collecting information on fish survival in the High Cascade lakes. In what has become a very

popular annual effort, volunteers hiked into the surveyed lakes, sampled for fish presence using hook-and-line, and collected a variety of other physical and biological data.

Volunteers from the McKenzie Flyfishers assisted with an ongoing project to trap and remove brook trout from Gold Lake in an effort to restore the lake's rainbow trout fishery. Brook trout are abundant in Gold Lake and do not grow to a large size. They are also responsible for decreasing the size and number of rainbow trout in Gold Lake. In 2006, approximately 442 brook trout were relocated to provide a brook trout fishery in Charlton Lake in the Deschutes Basin, which should allow for additional growth on the remaining fish in Gold Lake. An additional 998 brook trout were transferred from Gold Lake to Fish Lake in the Rogue River Basin.

#### McKenzie River Trout Investigations

STEP volunteers participated in angling surveys for native rainbow and cutthroat trout in the McKenzie River. All native trout collected were implanted with a Passive Integrated Transponder (PIT) tag and released. The movements of the tagged native rainbow and cutthroat trout could be monitored to assess the distribution and timing of migration in the McKenzie River. Any fish recaptured could also be monitored for growth. More than 300 fish have been tagged since the beginning of the project. Volunteers will again be used to implant and recover PIT tags during 2007.

### **North Coast STEP**

#### Winter Steelhead Creel

A volunteer-led creel for winter steelhead continued on the North Fork Nehalem River. Data collected by volunteers will help determine the contribution of the various winter steelhead stocks to the local fishery and their performance.

#### Spring Chinook Recycling Program

More than a dozen volunteers from angling groups assisted this summer with sorting, tagging, and recycling spring Chinook salmon and summer steelhead from Trask River Hatchery. Starting in mid-June, over 1,100 fish were recycled from the hatchery and released in the lower Trask River and upper Tillamook Bay to provide additional angling opportunity. Fish were tagged and recorded in an attempt to determine how recycled fish contribute to the local recreational fishery and if any straying occurs.

### **Mid Coast STEP**

#### Spawning and Population Surveys

Mid Coast STEP volunteers again conducted salmon spawning surveys and other fish population surveys throughout the STEP district. Volunteers played a larger role in assisting with the Siletz River trap, which operates year round and provides volunteers the opportunity to work with multiple fish species. Volunteers continued to survey streams in the Yachats Basin to determine adult escapement and the spawning distribution of fall Chinook and coho salmon and winter steelhead.

Four volunteers from Florence STEP assisted the USFS Mapleton Ranger District with the daily operation of a juvenile fish trap on Knowles Creek in the Siuslaw Basin. The project to

monitor the outmigration of juvenile salmon requires the trap be monitored daily. The effort was conducted for up to four months last spring and each day includes a group of four-to-ten school children and their parents. A core group of STEP volunteers has been trained to assist others with correct fish identification and fish handling techniques.

#### Little Woahink Coho

Florence STEP volunteers continued to operate trap facilities for adult coho salmon at Little Woahink Lake and pass all returning fish above a dam that blocks natural passage.

### **Umpqua STEP**

#### Coho Genetic Pedigree Project

Student interns, job shadows, and volunteers from the UFA continued to support the Umpqua Coho Genetic Pedigree Project on the Calapooya. Volunteers assisted with fish trapping, netting, and data recording at the Nonpareil fish trap, and spawning ground surveys above the trap. The goal of the research project is to evaluate hatchery techniques and the survival, fecundity, and potential genetic impact of coho with multi-generation hatchery, new generation hatchery, and native backgrounds. The project is in its second of three years of returning F1 generation coho, and will continue until 2009 after three consecutive generations of F2 coho return. It is being conducted in cooperation with Oregon State University and with funding from the Oregon Watershed Enhancement Board.

#### South Umpqua Falls Fish Trap

Volunteers from the UFA played a significant role this year in checking, passing, and collecting winter steelhead at South Umpqua Falls. The trap requires at least four people to effectively collect or pass fish. UFA members checked the trap two-to-three times each week and contributed over 300 hours to its operation.

### **Tennile, Coos, and Coquille STEP**

#### Estuary Surveys

STEP volunteers again conducted annual surveys for juvenile fall Chinook salmon in the Coos and Coquille estuaries. The Coos Basin fall Chinook hatchery program is large and requires a continual evaluation of the potential impact to wild fish. One assessment method monitors the growth and abundance of juvenile Chinook in the estuary as an indication as to whether the carrying capacity for rearing juvenile Chinook has been reached or exceeded. The estuary sampling begins in the spring and continues through the fall of the same year.

#### Culvert Fish Passage Surveys

Throughout the district, habitat for salmon, steelhead, and trout has been compromised because of road crossing culverts that block fish passage for adult and juvenile fish. Volunteers have spent considerable effort to correct the known passage problems, but more work is needed to identify additional barriers and develop the needed corrections. Stream habitat and culvert surveys remain a high priority for the STEP district inventory efforts.

## Lower Rogue STEP

### Chetco Estuary Survey

Volunteers from the OSCF completed their 16<sup>th</sup> year of conducting seine surveys of the Chetco River estuary. The volunteers set a juvenile beach seine at selected stations twice a month from May through August. These are index surveys used to characterize abundance and the development of native fall Chinook smolts. The data is used annually to indicate the time during which hatchery Chinook smolt releases will have the least impact on native fish using the estuary.



### Rogue River Survey

STEP volunteers contributed more than 350 hours to the Huntley Park seining operation conducted July 15 through October 31 at Huntley Park on the lower Rogue River. The project was the annual continuation of what is now a 30-year effort used to monitor stock abundance, composition, and the hatchery-to-wild ratio of summer steelhead, coho, and fall Chinook salmon in the lower Rogue River. Later in the season, the operation serves to collect wild fall Chinook broodstock the STEP Indian Creek Hatchery facility. The volunteers assist a four-person ODFW crew with the effort that is a very high priority for the district staff and salmon harvest managers.

## Upper Rogue STEP

### Creel

For his senior project, a student from Grants Pass High School conducted a creel census of angling activity at Whetstone Pond.

### Rogue Spring Chinook Investigations

A STEP volunteer initiated a research effort to determine movement and life history patterns of Rogue spring Chinook salmon using radio telemetry.

### Bear Creek Fish Inventory

A Southern Oregon University Masters Degree student worked with volunteers to operate a smolt trap on Bear Creek near Talent to monitor fish outmigration. The study estimated 1,526 juvenile coho, 550 juvenile Chinook salmon, 26 cutthroat trout, and 13,000 juvenile steelhead migrated downstream past the trap site from March through May.

### Hoop Traps

A hoop trap operated on Military Slough in a relatively unimproved area of Touvelle Park and the Denman Wildlife Area captured more than 650 juvenile coho salmon and more than

110 juvenile steelhead. Military Slough is a small, seasonal tributary to the Rogue River. A hoop trap located on Larson Creek, a small seasonal tributary in urban Medford captured 10 juvenile coho salmon, more than 60 juvenile steelhead, and one juvenile Chinook salmon. Both projects were part of a larger effort to determine the value of small and sometimes intermittent streams for seasonal salmonid rearing habitat in the upper Rogue Basin. The information will be used as ODFW develops conservation plans for fish in the Rogue Basin. It can also be used to generate interest in, and support for, restoration and protection activities on these small streams as thus far there has been good media coverage of the sampling efforts.



#### Lake and Reservoir Sampling

A STEP volunteer assisted staff with multiple electrofishing and net sampling efforts to determine the status of trout and warmwater fish in a number of area lakes and reservoirs.

Volunteers worked with ODFW Fish Health staff to sample fish in basin waters that had not previously been sampled in an effort to locate sites that would present minimal disease concerns and therefore be appropriate for fish stocking.

### **Eastern Oregon STEP**

#### Redband Trout Evaluations in Ochoco North Fork Tributaries

Volunteers worked with ODFW staff to sample with backpack electrofishers multiple sites in the North Fork Ochoco Basin to evaluate native redband trout population trends. Population



size and density were estimated in Deep Creek and other North Fork Crooked River tributaries. Volunteers from the Central Oregon Flyfishers and Trout Unlimited contributed more than 200 hours carrying gear, setting block nets, netting fish, and recording data. Monitoring will occur every three years in these tributaries that provide important spawning and rearing habitat.

*Ollalie Lake Basin Trout Surveys*

Volunteers collected information on trout in Dark, Long, Monon, Nep-te-pa, Mangriff, Timber, and View Lakes, waters that had been stocked with fish for many years without monitoring of stocking success. Information gathered included fish condition, evidence of natural reproduction, and abundance. Volunteers from the Columbia Gorge Fly Fishers assisted with snorkel surveys, angled for trout, and recorded the collected data. Information from these surveys will be used to evaluate the district's high lakes stocking program.

## HABITAT IMPROVEMENT

### Introduction

Volunteers each year conduct or assist a large number of 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

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. Additionally, a responsibility of the STEP Coordinator is to provide coordination for statewide carcass placement efforts. Carcass placement occurs in streams where spawning anadromous salmonids are less abundant than historically.

A new effort for STEP last year was the expansion of the Keep Oregon's Rivers Clean (KORC) program to collect and recycle discarded angling line and tackle. 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 were very much involved with monitoring and maintaining stations during the pilot effort and it was determined that the permanent program would be most effective if administered by STEP. STEP volunteers help to identify sites where collection stations are needed and install and maintain them. To facilitate the program expansion, STEP applied for and received an R&E grant that allowed for the construction of 50 new collection stations that in 2006 volunteers had begun to place at stream, river, and lake sites throughout Oregon.

The following is an overview of habitat improvement projects conducted in each STEP area during this past year. These summaries are not intended to be comprehensive but instead reflect the range of STEP activities in that area. A summary of stream/river distances affected, and volunteer participation can be found in under the "Habitat" category in Table 1. Statewide Summary of STEP Participation.



## Lower Willamette STEP

### Stream Nutrient Enrichment

The eleventh year of the stream nutrient enrichment program in the Lower Willamette STEP area was completed with assistance from Clackamas Hatchery, Sandy River Hatchery, the USFS, and the USFWS Eagle Creek Hatchery. The carcasses supplement annual natural returns to mimic historic run densities of spawning coho salmon in area streams and restore stream nutrient levels for aquatic organisms. Approximately 7,400 coho and Chinook carcasses were placed in the upper Sandy River and tributaries. Over 5,000 additional coho and Chinook carcasses were placed in the upper Clackamas River and tributaries. Placements also occurred in the Molalla, upper Tualatin, and Yamhill Basins. Volunteers from the ANWST, students from several local schools, Stop Oregon Litter and Vandalism (SOLV), members of the Sandy River and Clackamas River Watershed Councils, the Native Fish Society, Confederated Tribes of the Grande Ronde, and Tualatin Riverkeepers assisted with the carcass distribution effort.



### Angling Line and Tackle Collection

Under the KORC program, four line and tackle collection stations were operated on the Sandy River for the second year. With increased public awareness of the stations, the interest in and proper use of the receptacles increased dramatically from last year. Volunteers from the Sandy Chapter ANWST helped maintained the sites and several pounds of line and tackle were collected. The materials for six new stations have been secured and planning is underway for installation at other strategic locations in the Portland area.

## 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. In 2006, STEP made numerous site visits to offer technical and grant funding recommendations to landowners throughout the South Willamette Watershed District. The STEP Biologist provided technical assistance to the Long Tom Watershed Council on several culvert replacement and instream restoration projects, and assisted the Council with project fish salvage. The STEP Biologist also assisted Benton County Roads Department with fish salvage efforts for three of the county's culvert replacement projects.

### Stream Nutrient Enrichment

The placement of salmon and steelhead carcasses into area streams for nutrient enrichment is accomplished only 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, fish were placed in 14 different streams and across 167 miles. Volunteers from the Albany Chapter ANWST and the Santiam Flycasters contributed many hours toward carcass placement efforts in the Mid Willamette area.

### Angling Line and Tackle Collection

In early 2006, volunteers from the Albany Chapter ANWST gathered at ODFW's Maintenance Shop at the EE Wilson State Wildlife Refuge on two occasions to cut, glue, and

assemble 96 receptacles for use in the line and tackle collection program. The receptacles were then distributed throughout the state for 48 new fishing line collection stations.



Albany Chapter ANWST volunteers placed four additional stations on the South Santiam River to supplement the four existing stations on the North Santiam River. Volunteers from the Salem and Albany Chapters ANWST, and the Senior Fishing Buddies monitored the stations throughout the year and processed the collected line.

## **Upper Willamette STEP**

### Coast Fork Clean-up

Upper Willamette STEP assisted with a river cleanup sponsored by the Coast Fork Watershed Council on the Coast Fork Willamette River. Nearly 20 volunteers participated by boating down the river and picking up garbage that had been discarded in the water and along the river banks. A local landfill allowed the group to dispose all the garbage at no charge.

## North Coast STEP

### Riparian Restoration

Riparian restoration and cleanup efforts were conducted at ODFW-owned access sites on the Tillamook, Trask, Wilson, and Necanicum Rivers by 50 volunteers. Restoration efforts included the removal of invasive blackberry, ivy, knotweed and canary reed grass, and the maintenance of recent plantings. In addition, several hundred new trees were planted by 7<sup>th</sup> grade students from Broadway Middle School as part of an ongoing restoration effort at a site on the Necanicum River.

### Stream Nutrient Enrichment

Dozens of volunteers including students, members of angling groups, Boy Scouts, and area local watershed council members participated in the North Coast Stream Enrichment Program, placing over 97,000 salmon and steelhead carcasses in 12 North Coast rivers and their tributaries. Three volunteers donated 250 hours distributing carcasses in over 190 miles of streams.

## Mid Coast STEP

### Partnerships and Technical Assistance

Mid Coast STEP worked with local volunteers, landowners, the Mid Coast Watershed Council, the Siuslaw Watershed Council, basin planning teams, and area county, state, and federal agencies to assess and review activities that alter, restore or enhance fish and wildlife habitat and fish populations. STEP played an active role in providing technical assistance, information, and comments on a variety of watershed restoration projects.

### Instream and Riparian Habitat

Mid Coast fish habitat restoration projects were completed at South Fork Beaver Creek, Yachats River, and tributaries of the Siletz and Alsea Rivers. These included riparian restoration, fish passage improvement projects, and erosion control. In 2006, STEP volunteer, landowner, and agency partnerships contributed many pre and post project hours of labor, transportation mileage, and equipment to develop these projects. The pre-project process included multiple on-site meetings, site mapping, efforts to estimate project cost, and grant writing.

Three volunteers from Florence STEP assisted the USFS Mapleton Ranger District for two days with securing instream structures on the Siuslaw River tributary of Knowles Creek. The volunteers drilled holes in bedrock and boulders, and ran cable through logs to anchor the placed wood at one project site.



## **Umpqua STEP**

In the Umpqua Basin, STEP plays a limited role in stream and riparian habitat restoration efforts as two ODFW Habitat Biologists are assigned to the district specifically to conduct restoration projects. The biologists work with local watershed councils and both private and public landowners.

### *Stream Nutrient Enrichment*

GRWB STEP volunteers placed fish carcasses for stream nutrient enrichment in the North Fork of the Smith River.

## **Tennile, Coos, and Coquille STEP**

Habitat restoration efforts continue to be an important part of the volunteer program in the Tennile, Coos, and Coquille STEP area and several projects were conducted this past year.

### *Stream Nutrient Enrichment*

Salmon carcasses were again placed in area streams as part of the stream nutrient enrichment program. Volunteers and ODFW staff processed and placed 2,554 salmon and steelhead carcasses into nine different streams. Most of the carcasses used were fish that had been released from, and then returned to Coos Basin STEP hatchery facilities.

### *Riparian Restoration*

Students from Sunset Middle School and several adult volunteers planted hundreds of willows, alders, spruce, fir, and cedar along two actively eroding sections of stream bank as part of a riparian restoration project on Morgan Creek.

STEP volunteers began an extensive riparian restoration project on an unnamed tributary to Coos Bay flowing along the Cape Arago Highway. The channel had recently been altered and the banks armored with rock in response to erosion concerns. Volunteers worked to restore riparian vegetation along the impacted reach by planting dozens of willows, alders, spruce, fir, and cedar.

## **Lower Rogue STEP**

### *Stream Nutrient Enrichment*

Volunteers with the CAF and OSCF assisted ODFW staff with the placement of fall Chinook salmon carcasses for stream nutrient enrichment. Fall Chinook carcasses from Elk River Hatchery and the Indian Creek STEP facility were distributed in the Chetco River and lower Rogue River tributaries. This was the third year carcasses were placed in the Chetco River and the ninth year for the lower Rogue. The streams chosen for placement had lower adult spawning densities and were the focus of recent habitat restoration efforts such as riparian plantings and large wood debris placement.

## **Upper Rogue STEP**

### *Stream Nutrient Enrichment*

To provide stream nutrient enrichment in areas where coho salmon spawn and rear, 1,589 coho salmon carcasses or nearly 13,000 pounds of fish from Cole Rivers Hatchery were

placed in Elk, Bitter Lick, Sugarpine, and Taylor Creeks by STEP volunteers from area watershed councils and angling organizations.

#### Habitat Restoration

Habitat restoration plans were drafted for projects to be conducted in 2007 by students from Crater High School. Project sites include Expo Park, Mingus Creek, and several properties owned by the Oregon Department of Transportation. Recent STEP fish inventory efforts have also led to restoration project planning for streams on the Denman Wildlife Area.

#### Angling Line and Tackle Collection

The angling line and tackle collection program in the Upper Rogue STEP area continued for the third year with much less line having been collected than in previous years. In 2004 and 2005, more than 46 pounds and 37 pounds respectively of monofilament line were collected. In 2006, only 13 pounds had been recycled. The program has been very well received by anglers so the reduced amount may be due in-part to greater public awareness of the line disposal issue but a curtailed spring Chinook salmon fishery and reduced angling activity may have also contributed.

### **Eastern Oregon STEP**

#### Little Lava Lake, Tui Chub Removal and Trout Evaluation

Volunteers from the Sunriver Anglers removed tui chub from Little Lava Lake by operating trap nets during the chub spawning season. The goal of the project is to reduce the competition for food and space the invasive and prolific tui chub present to trout in the lake which is considered the source of the Deschutes River. Redband trout and mountain whitefish are native to Little Lava Lake, and the Department also stocks 10,000 rainbow trout annually to support a popular sport fishery. In 2006, it was estimated approximately 25% of the adult chub spawning population was removed and a goal is to increase that number with an additional trap net in 2007. STEP volunteers also monitored zooplankton levels and collected biological data on any captured trout. The monitoring program should indicate whether manually removing tui chub can improve food availability and trout survival.



## 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/or releasing fry, juveniles, smolts, and adults. 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. Regardless of whether these activities are carried out in conjunction with an ODFW hatchery, 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 to continue must be re-approved through a formal renewal process. In addition, STEP propagation projects that rear and release more than 100,000 fish must receive authorization from the 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 and/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 in many areas of the state be greatly diminished.



Many projects have more than a single purpose and often, or perhaps more importantly, 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. The primary purpose of this program is education but, because fish are released into open waters, the fish 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, though not all fish are necessarily marked.
- 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 an overview of STEP fish culture projects from each of the STEP areas. These summaries are not intended to be comprehensive but instead reflect the range of STEP activities in those areas. A summary of volunteer participation can be found under the “Fish Culture” category in Table 1. Statewide Summary of STEP Participation. A summary of the numbers of fish released can be found in Figure 1. STEP fish releases by species and fish release program and Figure 2. STEP fish releases by STEP district and fish release program.

## Lower Willamette STEP

### Classroom Egg Incubation

More than 160 school classroom projects incubated and released over 80,000 unfed salmon and trout fry into 14 lakes, ponds, and streams in the Portland Metro Area. Many of these projects are sponsored by local chapters of the ANWST and the OSU Extension Service. The ANWST commitment to the schools includes the purchase of the incubation equipment, delivery of the fish eggs to the classroom, and support services to each of the participating schools.

### Fish Acclimation

The NWWD has for many years used net pens to acclimate juvenile salmon to enhance the popular spring Chinook sport fishery in the Willamette and Clackamas River. 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 acclimated and



released 80,000 spring Chinook salmon smolts in 2006. Volunteers from the McLaughlin Chapter ANWST work with ODFW staff to assemble the net pens and maintain them, feed and release the acclimated fish, and then disassemble the net pens for storage.

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 the help of the Cassidys, more than 20,000 winter steelhead and

50,000 spring Chinook salmon smolts were acclimated and released into the Clackamas River in the spring of 2006. The Cassidys help 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 the summer of 2006, STEP began work on a new winter steelhead and spring Chinook salmon 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 is being funded through an R&E grant secured by the Oregon Wildlife Heritage Foundation.

ODFW is currently looking for additional acclimation sites on the Clackamas and Sandy Rivers. With the removal of Marmot Dam scheduled for summer 2007, acclimation sites on the Sandy will be particularly important toward maintaining the quality angling opportunities currently offered.

## **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 1980's. Concern surrounding the potential impacts of introduced fry upon 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*

In 2006, schools from both rural and urban areas participated in 45 classroom egg incubation projects raising rainbow trout and spring Chinook salmon fry. Spring Chinook salmon fry were released into the North Santiam, South Santiam, and Calapooia River basins, and as a means of fostering further public involvement with ODFW's educational efforts along urban streams, many Salem area schools released their spring Chinook salmon fry into Mill Creek. Rainbow trout are released at a number of locations throughout the valley including reservoirs and many local, isolated ponds. The fry stocking program in the ponds has had surprising success with the establishment of two quality trout fisheries where none had before existed.

Eggs are delivered to each classroom by ODFW staff or, in many cases, STEP volunteers where 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 ANWST assist 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 more than ten schools. It is conservatively estimated the classroom program reached well over 1,000 students in the STEP district this past year.

## **Upper Willamette STEP**

### *Classroom Egg Incubation*

More than 10,000 spring Chinook salmon eggs were incubated by 83 projects in 46 different schools as part of the classroom egg incubation program. Each project released the unfed fry in the Alton Baker Canoe Canal.

### *McKenzie River Trout Stocking*

STEP worked with the McKenzie River Guides Association and local hatcheries to stock over 35 contiguous river miles of the McKenzie River with 70,000 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.

### High Cascade Lakes Stocking

Many of the area's remote Cascade lakes are annually stocked with fingerling trout. The fish are placed in plastic bags filled with ice water and oxygen is added before the bags are sealed. When the fish are loaded into backpacks, each hiker can be carrying up to 45 pounds. In 2006, volunteers stocked fish into 53 lakes. In what has become an annual project, two additional lakes were stocked by members of a local Boy Scout troop who can earn a merit badge for their efforts.



## **North Coast STEP**

### Whiskey Creek and Rhoades Pond

The Tillamook Anglers continue to operate Whiskey Creek Volunteer Hatchery, rearing almost 100,000 spring Chinook smolts and an additional 100,000 fall Chinook unfed fry for release into the Wilson and Trask Rivers. The Nestucca Anglers also continue to operate Rhoades Pond, reaching their target of 100,000 fall Chinook smolts for release into Three Rivers and the Nestucca River.

### Winter Steelhead Broodstock

The wild winter steelhead broodstock collection programs on the Nestucca and Wilson Rivers continued in 2006. More than 45 volunteer anglers collected 200 adult steelhead to be used as broodstock for the hatchery programs.

### Hatchboxes

A small hatchbox program continues to operate in the North Coast STEP area with eight operators hatching and releasing spring and fall Chinook salmon unfed fry into the Necanicum, Miami, Kilchis, Wilson, Trask, and Nestucca Rivers.

## **Mid Coast STEP**

### Depoe Bay Coho

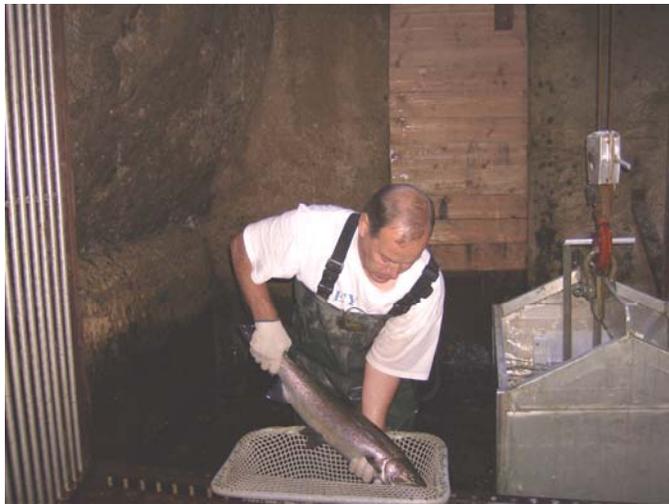
The Depoe Bay Salmon Enhancement Commission (SEC) continued a coho salmon supplementation and watershed education effort on North Depoe Bay Creek. The project continues to exemplify the role of STEP in the community and reaches beyond the scope of a simple hatchbox supplementation project. It provides a community resource for understanding salmon and the importance of healthy watersheds, not just for salmon habitat, but also for the community. 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.

### Yaquina Fall Chinook

STEP volunteers in the Newport area assisted ODFW staff with the capture of wild adult fall Chinook broodstock in the Yaquina River for the Yaquina Bay supplementation program. The goal of the program is to generate a small sport fishery for fall Chinook in the lower Yaquina Bay, which compliments and enhances the wild fall Chinook fishery that is centered further upstream. In 2006, local advocates for Chinook salmon in the Yaquina organized the 'U-DA-MAN' fishing derby for which 287 people registered and \$16,000 was raised to assist the program. The project includes wild broodstock collection, smolt acclimation and release from an acclimation site owned by the Oregon Coast Aquarium.

### 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. The 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. In association with volunteers from this project, an evaluation of handling and holding techniques was conducted at the Oregon Hatchery Research Center and Alsea Hatchery to determine the effects of certain types of handling on fish survival. This evaluation will be conducted for another year before results are assessed.

Florence STEP and the Emerald Empire Chapter ANWST coordinated the winter steelhead adult capture and smolt acclimation projects in the Siuslaw, with up to 30 volunteers working three days each week for four months. 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.

STEP volunteers in the Siuslaw again donated a great deal of effort to the collection of winter steelhead broodstock at four fish trap sites in the Siuslaw Basin. As in past years, the effort produced nearly 100,000 smolts for ODFW's hatchery steelhead program. Floods earlier this year damaged three of the main winter steelhead adult holding and trapping sites. The Greenleaf Creek weir and trap were completely destroyed but some parts were salvaged up to one-half mile downstream in the mainstem of Lake Creek. Three replacement traps and weirs were constructed using donations from local civic organizations and other fund raising efforts. All four traps were back in operation by late January when stream flows returned to normal. Volunteers and several school groups helped net fish from above the trap weirs and

built and adjusted weir bypasses to allow downstream passage for the many fish that had escaped upstream during the high water period.

Volunteers from the Emerald Empire Chapter ANWST continued to operate a winter steelhead rearing facility on Letz Creek in the Siuslaw Basin. The objectives of the Letz Creek project have been to develop a winter steelhead hatchery program using native broodstock and augment the Siuslaw steelhead fishery. Volunteers from both the Upper Willamette and Mid Coast STEP areas assisted with the project by capturing broodstock at the Letz Creek trap, fertilizing and incubating eggs, and rearing then releasing the juvenile steelhead. The volunteers also continued to monitor adult coho movement at the trap site.



#### Classroom Egg Incubation

Over 550 students from 10 schools participated in the area's classroom egg incubation program using stocks of local steelhead. The program allows students to observe the development of salmonid eggs, alevin, and fry, and gain a better understanding of fish life cycles and habitat requirements. The area STEP Biologists have intensified their role in local schools by conducting multiple classroom and field visits in association with this project, using it as a vehicle to address broader watershed issues in the context of a science curriculum.

### **Umpqua STEP**

#### Umpqua Fall Chinook

The South Umpqua fall Chinook hatchery program was relatively unsuccessful this past year as changes in trap design, heavy movement in the stream of algae and moss, and high stream flows hampered adult trapping efforts. The poor success of the trapping effort impacted the UFA's Lookingglass-Olalla project. However, the UFA in cooperation with GRWB STEP was able to rear enough lower Umpqua fall Chinook to release 35,144 pre-smolts in Paradise Creek.

Much like several other coastal and Columbia River fish hatcheries, GRWB STEP suffered abnormally high fry loss due to cold water temperatures. Normal water temperatures at the facility at fish ponding range from 46–48°F at GRWB, rising to 52–57°F in April. However, this year the water temperature was 43–45°F at ponding and still only 49°F on April 5<sup>th</sup>. Through work with ODFW Fish Health Services, the fish food manufacturer, and other hatcheries, the volunteers discovered that in water temperatures less than 45°F, the Chinook fry do not feed well on dry fish food, do not flourish, and tend to be susceptible to mortality. GRWB STEP has been using a dry starter feed since 2002 but this is the first year since then

the facility has had such cold water temperatures. GRWB STEP plans to purchase a moist starter feed for 2007 but the company that normally supplies food for ODFW hatcheries has discontinued its moist food line so an alternative source will need to be found.

#### Umpqua Winter Steelhead

Nearly 65,000 winter steelhead smolts were acclimated and released by volunteers at the Canyonville, Seven Feathers, and Eastwood Elementary acclimation sites. In addition to the fish acclimation, volunteers at both Canyonville and Eastwood Elementary conducted a variety of educational programs about fish life cycles and habitat needs.

### **Tenmile, Coos, and Coquille STEP**

The area's fish culture program is extensive as STEP volunteers conduct broodstock development, spawning, egg incubation, rearing, and acclimation efforts.

#### Propagation Project Review and Renewal Approval

In 2006, ODFW staff, the STEP project volunteers, and interested public took part in a comprehensive review of the six existing STEP fish propagation projects in the Tenmile, Coos, and Coquille area. These included the Eel Lake net pen rainbow trout project, the Cunningham Creek fall Chinook project at Coquille High School, and the four Coos River fall Chinook projects at the Millicoma Interpretive Center, Morgan Creek, Daniels Creek, and Noble Creek. This was a scheduled five-year project review required by STEP for project renewal. An additional requirement of the four Coos River projects was review by the Fish and Wildlife Commission to gain approval for individual project releases of more than 100,000 fish.

The review was extensive but few changes were made to the Eel Lake and Cunningham Creek projects. However, a number of changes were made to the Coos River fall Chinook projects including discontinuation of any smolt releases, conversion of all releases to pre-smolt, and



marking a higher percentage of fish released by each project to allow for more effective monitoring and evaluation of project contributions to fisheries and any potential straying into areas of natural production. The review also eliminated the release of fall Chinook unfed fry that could not be marked and subsequently monitored or evaluated.

These changes have presented some challenges for the projects including the need for greater volunteer involvement to mark fish and to assist with monitoring and inventory efforts, and will require some of the existing facilities be modified to accommodate the rearing and more

extensive marking requirements. However, they also provide additional volunteer opportunities for the area program and will result in more effective fish production efforts.

### Coos River Fall Chinook

STEP involvement with the Coos River fall Chinook hatchery program continued in 2006. Nearly 5,600 STEP volunteers were involved in the district's fish culture programs, the majority participating in projects to fin-mark hatchery fish released from the Coos facilities. More than 100,000 salmon were again marked this year in an effort to evaluate the success or impact of the various release groups. Students from visiting school groups helped mark all of the fall Chinook released from the Millicoma Interpretive Center and many of the fish released at Morgan Creek. Since the fall Chinook hatchery program began, students have marked over one million Chinook released in the Coos River Basin.

Of the 7,700 fall Chinook that returned to the Coos Basin STEP facilities in 2006, 400 fish deemed to be surplus were donated to the Oregon Food Bank. The remainder were used as hatchery broodstock and for instream nutrient enrichment through carcass placement.

### Coquille High School

2006 marked the highest return of fall Chinook salmon to the Cunningham Creek Hatchery at Coquille High School since the project began with more than 90 fish returning to the facility.

### Broodstock Collection

Volunteers involved in the collection of naturally produced salmon and steelhead for incorporation into hatchery programs donated a significant amount of time toward the labor-intensive effort. For the past 19 years, many of the steelhead broodstock have been acquired through angler donations. In the Coos River basin, about 60% of the steelhead broodstock were donated by anglers.

### Classroom Egg Incubation

The number of area schools participating in the classroom egg incubation program continued to increase with a total of 11 classroom projects at 10 different schools. Many of the students at the participating schools also assist at the STEP hatchery facilities where the eggs are spawned.

## **Lower Rogue STEP**

### Broodstock Collection

OSCF volunteers assisted with the collection of broodstock for the Chetco River hatchery programs. A total of 277 fall Chinook and 64 winter steelhead were collected and transported to Elk River Hatchery. The transportation of brood fish to the hatchery requires travel of more than 70 miles.



### Trout Stocking

Volunteers from both the Upper and Lower Rogue STEP areas assisted staff with stocking grade-out steelhead into area lakes. Most of the lakes are on USFS land and were appropriately screened prior to stocking. Stocking consisted of short hikes with the fish transported in six gallon buckets carried on backpacks. Five of the six lakes have not been successfully stocked for 30 years.

### Euchre Creek Hatchbox

The CAF and a local Boy Scout troop relocated the Euchre Creek hatchbox to private property on Cedar Creek, a tributary of Euchre Creek. The new location provides better access and water supply for what is primarily an educational effort. The Scouts successfully released 9,900 fall Chinook fry into the Euchre Creek drainage.

## **Upper Rogue STEP**

### Classroom Egg Incubation

Since the early 1980's, the STEP classroom egg incubation program has been a popular means for teachers to engage students from grade school through high school on conservation education topics. In 2006, 23 schools incubated 6,950 spring Chinook salmon eggs received from Cole Rivers Hatchery. The unfed fry were then released in 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 the various schools and gave talks and project assistance on request.

### Fish Salvage

Fourteen volunteers salvaged more than 2,000 fish from several southern Oregon streams as dry and warming weather reduced stream flows and isolated the fish in areas where they were not likely to survive. The fish were then relocated to flowing reaches within the same stream systems. Volunteers also operated an irrigation bypass trap during the summer months when it otherwise would have been shut down thereby isolating fish in areas where they were unlikely to survive.

## **Eastern Oregon STEP**

### Backcountry Lake Stocking

STEP volunteers stocked three area backcountry lakes in 2006. Volunteers from the High Desert Trail Riders used mules and horses to carry 3,000 rainbow trout fingerlings to Blue Lake in the Gearhardt Mountains. A second backcountry fish stocking project occurred at Doris and Blow Lakes in the Central Oregon Cascades. With the help of the Central Oregon Llama Association, 2,000 trout fingerlings were packed on llamas and carried 2.5 miles for release in these lakes. The high lake fisheries continue to provide very good angling opportunities for those seeking a backcountry trout fishing experience.



Classroom Egg Incubation Program

Rainbow trout eggs were distributed to 66 schools for classroom egg incubation projects. The STEP Biologist provided training to Bend volunteers who assisted teachers with tank setup, delivered eggs, and conducted trout life cycle presentations. The large program is made possible because volunteers from the Central Oregon Flyfishers, Sunriver Anglers, and Klamath Country Flycasters are willing to provide both personnel and monetary support. The classroom incubator fry are released into ponds without outlets or to water bodies stocked with the same stock of fish.





Table 1. Statewide Summary of 2006 STEP Participation.

Project Category	Projects	Measure <sup>a</sup>	Volunteers			
			Youth	Youth Hours	Adults	Adult Hours
Development	420	>60,000	2,726	13,998	3,130	22,163
Characterization	128	199	450	881	683	10,777
Habitat <sup>b</sup>	85	995	450	1,469	312	1,671
<b>Fish Culture</b>						
Broodstock	11		74	431	232	4,148
Fry Release	38		1,017	1,937	198	5,034
Rearing <sup>c</sup>	15		2,345	16,099	742	18,382
Acclimation	41		1,839	7,076	626	10,764
Other <sup>d</sup>	17		48	284	335	5,342
Subtotal	122		5,323	25,827	2,133	43,670
Classroom	451	>15,000			336	9,751
<b>Total</b>	<b>1,206</b>		<b>8,949</b>	<b>42,175</b>	<b>6,594</b>	<b>88,032</b>

<sup>a.</sup> Measures are as follows:

Development – number of adult and youth participating in STEP development activities.

Characterization – distance surveyed in miles; if point sampling occurred, such as with a trap, no mileage is included.

Habitat – distance restored in miles; if point restoration occurred, such as with fish passage improvement, no mileage is included.

Fish Culture, Classroom – the number of students participating in the classroom egg incubation program.

<sup>b.</sup> The number of habitat projects does not include individual fish carcass placement for stream nutrient enrichment projects.

<sup>c.</sup> Individual fish rearing projects may include activities associated with several life history stages of the fish reared including broodstock collection, spawning, egg incubation, feeding of reared fish, and marking of fish released.

<sup>d.</sup> Other fish culture projects include fish salvage, and volunteer assistance at ODFW hatcheries (e.g., maintenance, spawning, fish marking, fish stocking). Does not include volunteer contribution independently reported by individual ODFW hatchery facilities.

Figure 1. STEP fish releases by species and fish release program. Rearing and acclimation include smolt and pre-smolt releases. Unfed fry does not include classroom projects.

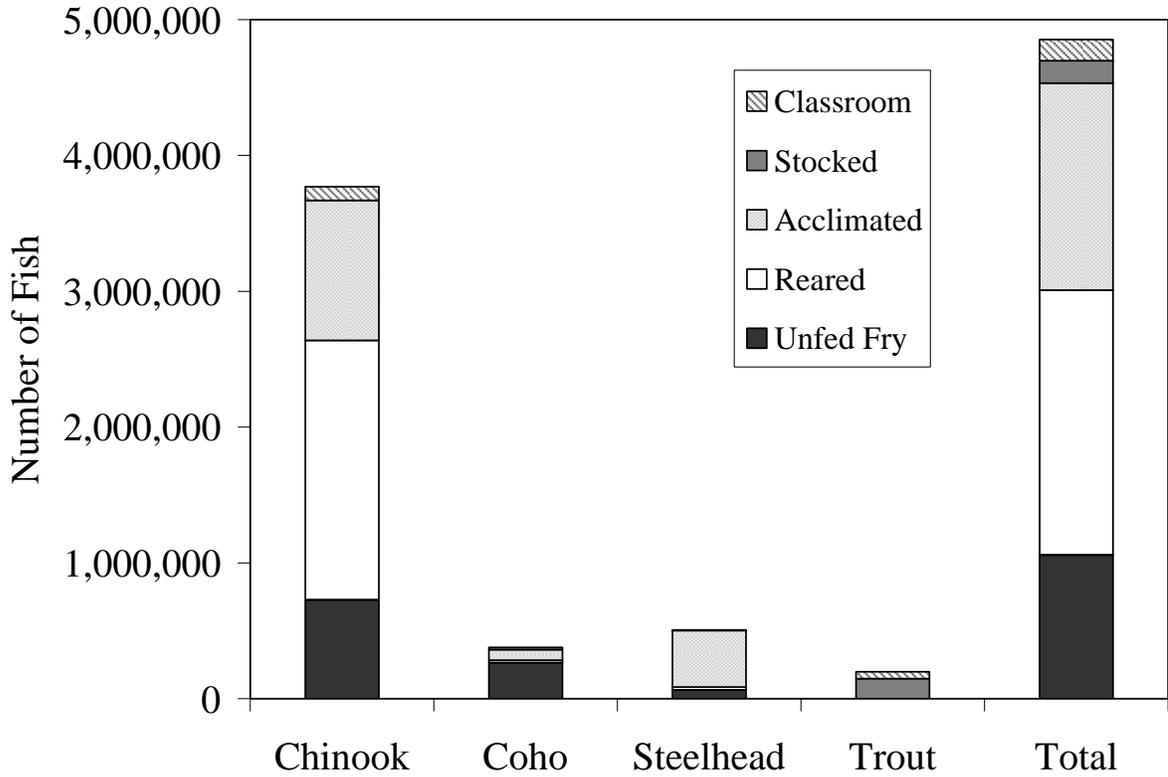
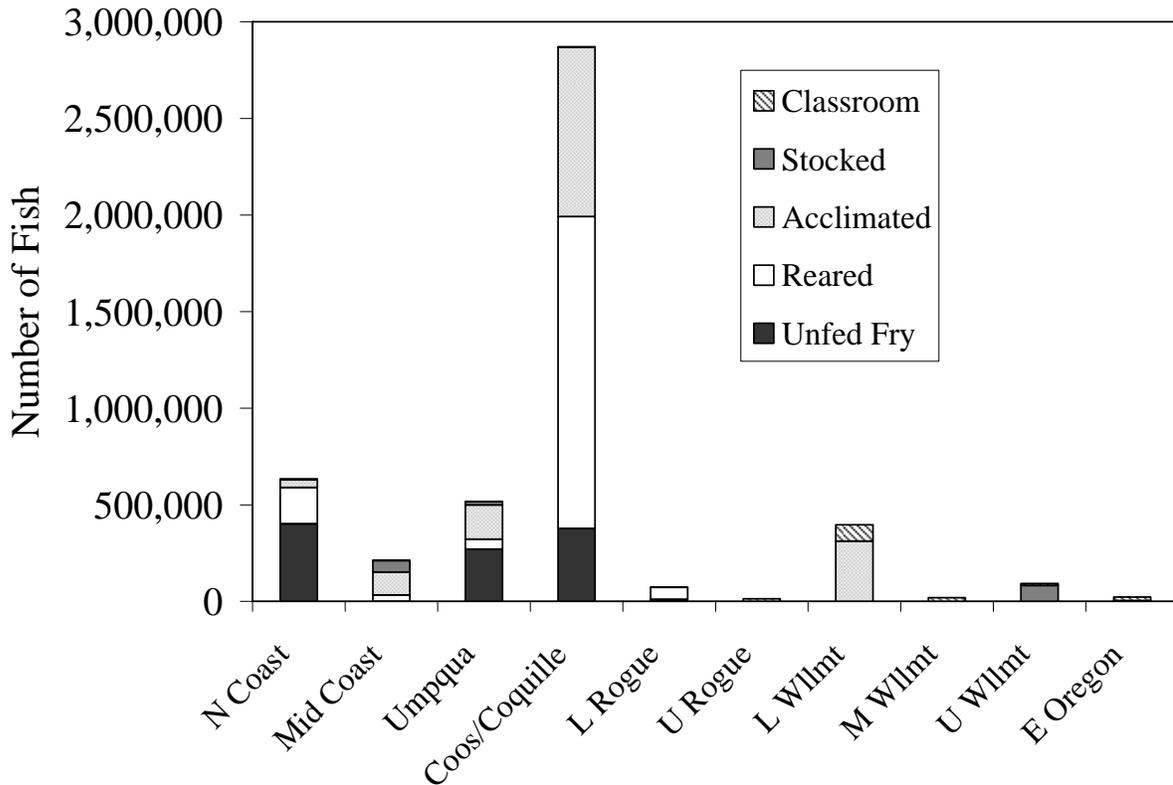


Figure 2. STEP fish releases by STEP area and fish release program. Rearing and acclimation include smolt and pre-smolt releases. Unfed fry does not include classroom projects.



## **APPENDICES**



## Salmon and Trout Enhancement Program 2006 Program Staff

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## Salmon and Trout Enhancement Program Advisory Committee (STAC)

<b>STAC Position</b>	<b>Member</b>	<b>Term</b>	<b>Expires</b>
Lower Willamette	Norman Ritchie	1 <sup>st</sup>	Sept 2007
Lower Willamette	<i>Kaitlin Lovell</i>	1 <sup>st</sup>	July 2007
	Rosemary Furfey	1 <sup>st</sup>	June 2010
Mid Willamette	Cindy Heller	2 <sup>nd</sup>	July 2009
Upper Willamette	Lauri Mullen	1 <sup>st</sup>	July 2009
North Coast (Seaside-Astoria)	Tod Jones	1 <sup>st</sup>	Sept 2009
North Coast (Tillamook-Pacific City)	Robert Rees	1 <sup>st</sup>	Aug 2009
Mid Coast	Tom Petersen	1 <sup>st</sup>	July 2007
Umpqua	Mike Brochu	1 <sup>st</sup>	June 2009
Tenmile, Coos, and Coquille	Armand Pena	1 <sup>st</sup>	July 2007
Lower Rogue	Richard Heap	1 <sup>st</sup>	Mar 2009
Upper Rogue	Gary Enoch	1 <sup>st</sup>	Aug 2009
Eastern Oregon (Central-Southeast)	<i>Dick Mayer</i>	2 <sup>nd</sup>	Jan 2009
	Dave Dunahay	1 <sup>st</sup>	Sept 2010
Eastern Oregon (Northeast)	Vacant		

Note: A maximum length-of-service policy of two 4-year terms was implemented in 1996. Members whose service on the committee ended in 2006 are listed in italics.

## Partial List of 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, 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
- Dalles Middle School
- Douglas High School
- Drewsey Elementary
- Driftwood Elementary
- East Hills Elementary
- Eastwood Elementary
- Elgin High School
- Elk Meadow Elementary
- Englewood Elementary
- Estacada High School
- Evergreen Elementary
- Fall 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
- Miller Elementary
- Millicoma Middle School
- Mitchell High School
- Mt. Vernon Middle School
- Myrtle Crest School
- Myrtle Point High School
- Nestucca Valley Elementary
- Newport Middle School
- North Bay Elementary
- North Bend Junior High School
- North Douglas High School
- North Salem High School
- Oregon School for 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
- Tillamook 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

## Partial List of Groups that Work with STEP

The following is a list of volunteer organizations, agencies, and other groups that work with STEP. Due to the large number of STEP 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
- GI Joes
- Girl Scouts
- 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
- 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
- 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
- National Oceanic and Atmospheric Administration (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
- Tualatin River Watershed Council
- Umpqua Basin Watershed Council
- Upper Nehalem Watershed Council
- Upper Rogue Watershed Association
- Williams Creek Watershed Council