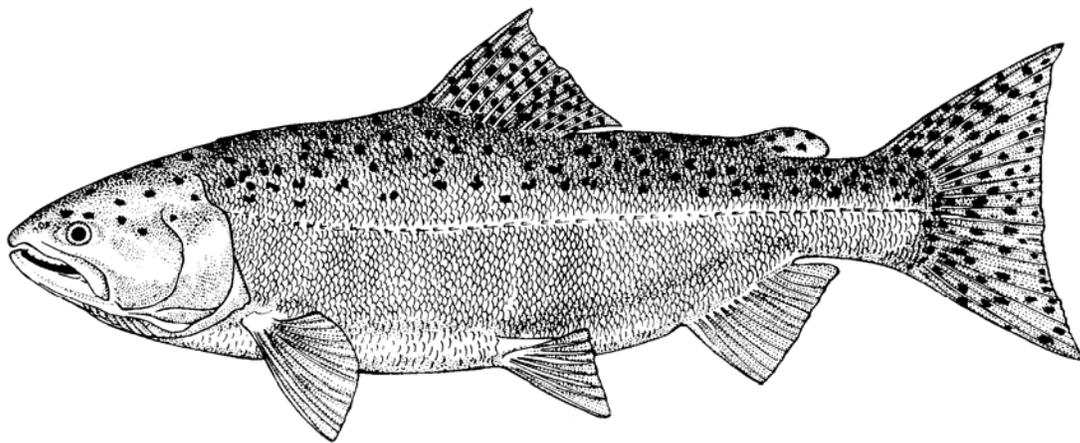




SALMON and TROUT ENHANCEMENT PROGRAM

Annual Progress Report
2005



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

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EXECUTIVE SUMMARY

This annual report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) in 2005.

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). The funding provides for one half-time program coordinator and one part-time program administrative assistant located in the ODFW Headquarters Office in Salem, and ten program 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 2005 at the following locations:

- January - Eugene
- April - Roseburg
- July - Coos Bay
- September - The Dalles

In 2005, there was a considerable change in STAC membership as six new appointments were made to fill positions vacated by members who had served a maximum of two four-year terms. The new members and the areas they represent are:

- Tod Jones, North Coast STEP (Seaside-Astoria Area)
- Robert Rees, North Coast STEP (Tillamook-Pacific City Area)
- Michael Brochu, Umpqua STEP (Roseburg Area)
- Richard Heap, Lower Rogue STEP (Brookings-Gold Beach Area)
- Gary Enoch, Upper Rogue STEP (Medford-Grants Pass Area)
- Lauri Mullen, Upper Willamette 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.

A summary of what was accomplished by the program in 2005 includes:

- An estimated more than 36,000 people participated in STEP training, classes, tours, presentations or workshops, or visited STEP activities or displays at public events. These activities involved over 6,600 youth and adult volunteers.
- Nearly 1,000 volunteers contributed over 10,300 hours to participate in 107 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 720 miles of waterways were improved for fish use by 636 volunteers through fish passage, instream, riparian, and fish carcass placement projects.
- STEP volunteers released or assisted with the release of more than 6,000,000 Chinook, coho, steelhead, and trout for enhancement or augmentation purposes; 2,500,000 of these fish were reared before release (i.e., fed and cared for), 1,500,000 were not reared but acclimated, and over 1,390,000 were marked with a fin-clip or coded-wire tag by volunteers. The classroom egg incubation program, which is primarily an education program, released approximately 140,000 unfed fry into Oregon waters. Nearly 19,000 adult salmonids were collected for broodstock

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

- 6,974 youth and 7,024 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 \$2,200,000 to accomplish 1,165 STEP projects.

For this 2005 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 groups and organizations that work with STEP

STEP DISTRICT DESCRIPTIONS

Northwest Region

Lower Willamette STEP.....*Jeff Fulop, STEP Biologist*
Todd Alsbury, 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 district in Oregon. Also, nearly 65% of all state angling license fees come from people living in the area. The large angler population presents the district with the challenge of meeting the varied needs of a broad demographic. Added to this are fish management constraints associated with species federally listed under the Endangered Species Act (ESA), evolving wild fish management plans, habitat protection issues, and the needs of wildlife management. 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 the district is 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 constituency 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 district is a geographically diverse area 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 district is also one of the most populated regions of Oregon. Salem, Eugene, Corvallis, and Albany are the larger urban areas but a number of smaller cities, towns and rural communities are scattered throughout. The natural resource concerns that have accompanied the area's historical land uses of timber harvest and agriculture have been complicated by the challenges posed by urbanization.

A growing human population and the resulting changes to the landscape have placed exceptional pressures upon the Willamette'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 in this area is on the native salmonids, the program through its educational, monitoring and habitat efforts also recognizes and benefits the basin'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 district 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 within the district. 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 district 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. The district 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 district 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 district 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 (position vacant Mar.- Sept. 2005)*
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 district. 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. District 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 filled the Mid Coast STEP Biologist position in October 2005 and is located in the ODFW Newport office. Ray has lead responsibility for the district program but George Westfall, an ODFW Assistant District Fish Biologist based in Florence, performs STEP duties in the Siuslaw Basin and other district waters south to the Umpqua Basin.

Mid Coast STEP has worked with district 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 biologists in the district 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.

STEP in the Community of Florence

STEP volunteers work for a variety of reasons including personal fulfillment, enjoyment, and education. They may also want to improve fisheries for themselves and other anglers, particularly youth anglers, and ensure wild salmon and trout survive for future generations. Others recognize that volunteer projects can also help to recruit members to an organization that may work toward these same goals. Regardless, the abilities and resources offered by these volunteers can help the Department to achieve its fish management and conservation objectives. An important role of STEP is to direct the volunteer efforts and ensure that fish and watershed recovery is community-based.

Prior to 1995, the Siuslaw River had some of the poorest runs of salmon on the Oregon Coast. However, significant changes have been made to the Siuslaw fish management program during the last ten years that in large part were made possible by the efforts of volunteers.

In 1995, the number of ODFW staff working out of the Florence field office was reduced. Since that time, Florence STEP has been instrumental in assisting with projects that had been previously completed by district staff. Efforts include a variety of education, monitoring, and restoration projects that have improved habitat for wild fish in the Siuslaw and increased fish runs. Coho returns to the Siuslaw peaked in 2001 with an estimated 57,000 adults, Chinook salmon runs have reached record high levels, and cutthroat have recovered so well that angling for them is now legal throughout much of the basin. Much of the habitat work has

been conducted using landowner contacts initially established by volunteers and district staff working on smaller educational projects such as the classroom egg incubation program.

Area STEP volunteers in the late 1990's helped the newly formed Siuslaw Watershed Council (SWC) conduct the Council's initial habitat projects and assisted in the culvert inventory program that became the basis for the first two SWC watershed restoration grant applications. The SWC has since received "The River Prize", an international recognition of river restoration efforts given to a group that has demonstrated community dedication and support for sustaining and improving fish stocks, and the greatest accomplishments toward watershed restoration.

The combined efforts of Florence STEP and the Emerald Empire Chapter ANWST now also help the Department to produce up to 100,000 steelhead smolts from wild broodstock for the Siuslaw. The broodstock program may have been discontinued if the volunteers had not taken on some of the work previously conducted by staff. The annual volunteer contributions of time, mileage, and materials is valued at more than \$95,000 and help provide a fishery that generates 60,000 angler hours per year. Other volunteer projects include implementation of the area classroom egg incubation program, the monitoring of a juvenile fish trap on Knowles Creek, conducting coho salmon spawning surveys, hosting fishing clinics for adults and youth, working with ODFW to open the wild coho salmon fishery at Siltcoos and Tahkenitch Lakes, maintaining fish passage at existing fish ladders, and monitoring of juvenile salmon growth and distribution. These projects have provided opportunities for the community to be involved with fish and watershed recovery, established a strong sense of stewardship of the area's natural resources, and have made Florence and the surrounding communities a better and popular area in which to live.

Southwest Region

Umpqua STEP..... *Laura S. Jackson, STEP Biologist*
Jim Muck, District Fish Biologist

The Umpqua Watershed and STEP district encompasses 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 2005 contributed over 17,700 hours to STEP and assisted with 90 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, Assistant District Fish Biologist
Mike Gray, District Fish Biologist

The Tenmile, Coos, and Coquille STEP district is located on the southern Oregon coast and is recognized as having been the birthplace of STEP nearly 25 years ago. The district 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 district 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 the district volunteer program with the initial habitat projects having taken place even before STEP was formally established. Large numbers of volunteers also continue to be involved in the district's extensive fish culture program that includes broodstock development, spawning, egg incubation, rearing, and acclimation projects. The fish culture operations have the added benefit in that they can, when compared to other individual STEP projects, more easily involve a large number of volunteers.

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

The Lower Rogue STEP district covers the southern Oregon coast from Four Mile Creek south to the California border. The district 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 district, 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 2005, 84 district STEP volunteers contributed 1,410 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*

The Eastern Oregon STEP district 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 works with the multiple ODFW districts and hatcheries to identify specific projects requiring volunteer recruitment, supervision, or training. Project definition and direction come from the individual districts and are based on the annual management needs. Volunteers and organizations may also propose STEP projects but all STEP activities must meet fish district management goals and objectives before implementation. The STEP Biologist's project load is balanced among districts and hatcheries based on the volume of requests received. Often, ODFW district and hatchery staff other than the STEP Biologist directly supervise Eastern Oregon's volunteer fish management projects. These staff provide project documentation and volunteer time reports to the Eastern Oregon STEP Biologist on a quarterly basis.

The recruitment of Eastern Oregon STEP volunteers is accomplished with assistance from the Conservation Chair of the Central Oregon Flyfishers (COF). Using e-mail, presentations, newsletter postings, phone calls and updates at club meetings, the recruiting service provided by this group is key to the success of Eastern Oregon STEP. Recruiting information is passed on to other angling organizations via the COF newsletter. Many individuals, schools, and members of other organizations like Oregon Trout, Wild Women of the Water, Columbia Gorge Flyfishers, and Klamath Country Flycasters are also valued STEP participants.

In 2005, Eastern Oregon STEP efforts focused on assisting ODFW with monitoring trout populations and conducting aquatic education programs. Under guidance from the STEP Biologist and local District Fish Biologists, volunteers conducted spawning and angling surveys, and assisted with tagging, electrofishing, fish trapping, and snorkel surveys. Several of the 2005 fish inventories included monitoring of non-native fish species and, where appropriate, removal of those fish. Other surveys identified potential fish passage barriers. ODFW fish biologists utilize information gathered from these surveys to evaluate angling regulations, monitor fish species, and meet other fish management objectives. In turn, volunteers including many sport anglers gain a better understanding of fish populations in their local watersheds and perhaps the challenges of fish management.

Activities informing or educating school students, teachers, and the general public about fish populations and their associated habitats are a high priority for Eastern Oregon STEP. At youth fishing events, in addition to angling instruction, STEP volunteers provided information on local salmon and trout populations and habitat requirements. Volunteers are eager to share their knowledge of both fishing and conservation, and their involvement fosters the next generation of conscientious anglers.

DEVELOPMENT OF THE SALMON and TROUT ENHANCEMENT PROGRAM (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 works with a contractor to provide publicity for the statewide program and to produce quarterly 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 revised in 2005 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 districts 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 12th 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 2005 exceeding 800 youth and 700 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 more than 120 youth and adult volunteers from local sportsmen clubs, and over 50 ODFW employees.

Youth Angling Enhancement Program

2005 was the second 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. Three clinics were held in different areas of the district to encourage local access: Commonwealth Pond in Beaverton, West Salish Pond in Fairview/Gresham, and Sheridan Pond in Sheridan. Volunteers from local chapters of the ANWST helped more than 150 youth participate in these events. The program receives financial support from the Oregon Legislature and Oregon Wildlife Heritage Foundation.

Mid Willamette STEP

During 2005, 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. The district works with eight 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. The STEP Biologist also participated in a Free Fishing Day event, a career fair, the Oregon Trout Salmon Watch program, the City of Salem's Salmon in the City event, and the Kid's Day for Conservation event in Benton County attended by 800 local school children and their parents.

Many school districts in the Mid Willamette district send students to outdoor schools and these have provided the STEP Biologist with additional educational opportunities. One such event was the outdoor school for students in Polk County held at Camp Kilowan near Falls City. The STEP Biologist and volunteers from the Albany Chapter ANWST and the Senior Fishing Buddies hosted a fishing station at the school. Trout were stocked in the Camp Kilowan pond and gear was provided along with instruction on fly tying. During the two-day event, 200 students rotated through the angling instruction station and many fish were caught and released. At an outdoor school hosted by ODFW at the E.E. Wilson Wildlife Area, the STEP Biologist assisted the Albany Chapter ANWST and the Senior Fishing Buddies with a fishing station at the wildlife area pond. More than 600 children and their parents attended the event with many visiting the fishing station.

Upper Willamette STEP

A presentation was given to a Willamette High School biology class discussing job opportunities in the natural resource field. The presentation focused on needed school curriculum, opportunities to gain experience through volunteering, and the value of seasonal or summer employment.

A field trip to an area ODFW fish hatchery, and a fish dissection class was conducted for a local chapter of the Northwest Youth Corps. The 50 participating students learned about fish biology, aquatic ecology, and salmon management issues.

Students from Thurston High School in Springfield and Willamette High School in Eugene assisted STEP in building Chinook salmon egg development displays distributed to local

classrooms. The models show the development stages of salmon from fertilized eggs to fry. The models are also used in other STEP educational presentations and programs.

Fish identification training classes were given to University of Oregon (UO) Service Learning students in preparation for their involvement with the monitoring a fish trap in Delta Ponds. The STEP Biologist also developed a fish identification handbook for volunteers to use in this and other district fish trapping projects.

A presentation was given with Bethel Eugene Springfield Together (BEST) providing students a lesson in fish identification and angling regulations.

Volunteers from the Eugene Chapter of Trout Unlimited helped staff place bull trout awareness signs at various locations in the McKenzie River Basin. The signs are strategically located to educate anglers about bull trout identification and current catch and release regulations.

Upper Willamette STEP partnered with the US Forest Service (USFS) and several local angling groups to host the Fish N' Fun exhibit at the Lane County Fair held in Eugene. Visitors to the exhibit had the opportunity to learn how to cast and tie flies with the assistance of Angler Education Instructors and other volunteers. Information presented included materials on riparian areas, habitat restoration, and local fishing opportunities. The booth also had several aquariums with live fish, crayfish, and aquatic insects.

The STEP Biologist joined a Jefferson Middle School class on a float trip on the upper McKenzie River to assist with a youth angling education effort. The students were taught fly-casting and given a presentation by STEP on angler ethics, types of fish in the basin, and other related topics. The students asked many questions and were very interested in learning about fish resources.

STEP sponsored a student internship for Mandy Bishop, an Oregon State University (OSU) Fish and Wildlife student, during the spring quarter. Bishop participated in a variety of district fish management activities including the operation of fish traps, seining local ponds, tagging and tracking native fish, data entry, and riparian restoration projects.

STEP sponsored an Apprenticeship in Science and Engineering (ASE) high school student, Chad Noll, during the summer. Noll participated in a variety of fish management activities including high lakes angling surveys, trout stocking in area rivers and Cascade lakes, and the operation of a variety of fish traps. Noll also assisted at a YAEP event and the Fish N' Fun exhibit at the Lane County Fair.

STEP participated in the Oregon Trout Salmon Watch program by serving on the Eugene area steering committee and taking part in three field trips involving more than 90 students from area schools. Students learned about fish biology, water quality, macroinvertebrate sampling, and riparian habitats during each one-day event.

Two training sessions on fish identification were given to local STEP volunteers who assisted with checking a downstream migrant rotary screw trap in the Coast Fork Willamette River.

North Coast STEP

Education continues to be a primary focus for North Coast STEP. Twenty-eight presentations and field trips involved almost 5,000 students and hundreds of adults. Seven youth fishing events were also held with more than 750 children participating.

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.

For the first time, the National Estuary Program selected Tillamook Bay as a site for their Estuary Live web cast. The web cast involved 35 local students, the STEP biologist, and other natural resource agencies, and covered topics such as estuarine food webs, salmon, and human impacts. More than 195 teachers across the nation registered for the Tillamook Bay broadcast, which reached an estimated 4,000 students. A great deal of preparation went into the broadcast, including numerous classroom visits and field trips with the students involved.

Adult outreach and education presentations were given to various fishing groups and civic organizations such as the ANWST, Rainland Flycasters, Rockaway Beach Lions Club, Washington County Fly Fishing Club, and the Tillamook Anglers. A presentation on working with volunteers was also given to watershed council members and other interested parties at the annual OWEB conference held in 2005 in Ashland.

A class was taught through Tillamook Bay Community College entitled "Celebrate Salmon". Students were led on a field trip exploring fish biology, salmon life history, water quality, and other related issues.

The classroom egg incubation program continued in 2005 with 12 teachers and their students in six North Coast school districts participating in the hatching and release of spring Chinook, fall Chinook, and coho salmon, and winter and summer steelhead fry.

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.

Mid Coast STEP

STEP has furthered its partnership with a spectrum of local land and watershed management organizations, such as the Mid Coast Watershed Council (MCWC) and the Lincoln Soil and Water Conservation District (SWCD) Watershed Workforce, in a continued effort to enhance watershed education and awareness in Mid Coast communities, and identify priority areas for

stream habitat restoration and spawning surveys. This working relationship has successfully recruited many private landowners wanting to improve habitat and water quality.

STEP again assisted the Salmon River Keepers, a Lincoln City group, in their continued effort to prevent illegal and unethical angling activity and unsanitary conditions on the Salmon River. The Salmon River Keepers have initiated a weekly river clean up and are working with the Oregon State Police to gather enforcement information.

District STEP biologists assisted with Oregon Trout's popular Salmon Watch program. Field seminars involving more than 200 children were conducted throughout the district including at Whittaker Creek (Siuslaw River) and Clemens Park (Alsea River). Two presentations on salmon life cycles were also given to a 16-member exchange student group from Mexico City and to a naturalist group of women walkers.

Volunteers from Florence STEP provided instruction and equipment for more than 450 youth participating in two YAEP events held in April and May at Carter Lake and Cleawox Lake. The STEP biologists assisted with ODFW Free Fishing Weekend events at Cleawox Lake and Thistle Pond. Twenty-two students at the Siuslaw Middle School who had completed an angler education class also assisted with these YAEP events.

Florence STEP participated in outreach events at the Eugene Sportsman show, at steelhead and Chinook angling seminars hosted by Fred Meyers, and at the July 4th community outreach program at the Port of Siuslaw. For the benefit of new members and the general public, Florence STEP each month also conducts seminars on where and how to fish in the Florence area.

Umpqua STEP

Umpqua STEP educational efforts reached more than 6,000 youth and 6,000 adults in the Umpqua area. Major activities included Free Fishing Day, angler education classes, youth fishing events, and educational field days.

New in 2005 was the use of Eastwood Elementary School as a winter steelhead acclimation site. The entire school learned about steelhead life cycles and fish management, and assisted with the feeding, monitoring and release of the smolts.

The Bowman Pond for the Handicapped flourished this year. Twenty-eight groups ranging from retirement center and the Veterans Hospital residents to special education classes and the YMCA used the site. More than 200 youth and 200 adults fished Bowman Pond with an average catch rate of 1.6 trout per angler.

Tenmile, Coos, and Coquille STEP

Program development in the Tenmile, Coos, and Coquille STEP district in 2005 focused on citizen involvement with fish management projects. Seventy-three STEP projects involved nearly 4,800 volunteers with school and other youth groups providing the majority of volunteers.

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.

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.

For the 15th consecutive year, STEP volunteers continued to work on the development of the Millicoma Interpretive Center. A sidewalk was constructed providing access along the hatchery troughs installed in 2004 to improve access for the thousands of students that visit the site.

The Millicoma Interpretive Center continued to be a popular site for student groups and others to come and learn more about salmon and steelhead. As in 2004, in 2005 the facility received over 3,500 visitors. *The World* newspaper also featured a story about the Center.

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 3,200 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.

A youth angling event was held at Eel Lake where volunteers for the sixth 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.

Volunteers and students installed new displays at the student-run 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. In March 2005, the Fish and Wildlife Commission met in Coquille and was given a tour of the facility by the high school students.

Lower Rogue STEP

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.

Forty-eight presentations were made to students from five 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.

More than 56 youth participated in the annual Free Fishing Day event held at Libby Pond. The event is hosted annually by ODFW and the CAF. STEP volunteers solicited donations from local businesses and groups providing more than 50 new fishing rods with reels and other fishing equipment that were raffled to the participants and ensured all went home with a prize.

To increase STEP participation and encourage volunteer membership with local angling groups, the OSCF and CAF hosted a booth during the third annual Slam'n Salmon Derby held on Labor Day weekend at the Port of Brookings. The booth included information about local STEP activities, an aquarium with live adult salmon, and several portable tanks that the OSCF stocked with rainbow trout to provide a fishing opportunity for young anglers. The event also serves to raise funds for local fish enhancement efforts.

Upper Rogue STEP

Outreach and education was one of the primary components of the Upper Rogue program in 2005. District staff gave a variety of presentations to angling groups, civic organizations, and elementary, high school, and university students. Included among these were the Rogue River Masonic Lodge, Salmon Watch participants, local residents at Williams Creek, the Jacksonville Rotary Club, an underprivileged children group from Grants Pass, Butte Falls High School, and biology classes at Southern Oregon University. Topics included fish life histories, the OPSW, fish passage, habitat restoration, and summer steelhead management in the Rogue Basin.

An article describing a habitat project coordinated with the Boise Cascade Corporation was drafted for the newsletters of the Middle Rogue Steelheaders and the Rogue Flyfishers. The STEP Biologist was contacted for information on fly fishing for steelhead for articles in *Fly Fishing Magazine* and *Fishing and Hunting News*. A poster showing the native fishes of the Rogue River was created for use in outreach events including the Bear Creek Watershed Education Symposium.

The Upper Rogue Watershed District sponsored two YAEP events in 2005: one in March on the first day of "spring break" at Denman Pond near Medford, and one later in the spring at the All Sports Park near Grants Pass. Forty-one children fished Denman Pond and caught rainbow trout, black crappie, bluegill, largemouth bass, and brown bullhead catfish. It was estimated that nearly 400 trout were caught at Denman Pond during the nine-day spring break period. Periodic surveys of youth anglers fishing the pond after the event indicated trout limits were also routinely caught for the next two months. At All Sports Park, more than 80 youth attended the May 12 event. In addition to trout, anglers also caught warmwater fish including bluegill, black crappie, and largemouth bass. Twelve volunteers contributed 96 hours toward these events.

Middle school students at Rogue River were provided training on the STEP Intermediate Stream Habitat Survey.

A student intern spent 75 hours building five hoop traps that will be used to sample urban streams for juvenile and adult salmonids.

A program aimed at fish monitoring and landowner outreach on small, urban, and intermittent streams in the Rogue Valley began to take shape during 2005 as a focal point of area STEP efforts. The project focuses on Rogue summer steelhead, a fish renowned for its unique “half-pounder” life history and the sport it provides to anglers, and the smaller streams it uses for spawning and rearing habitat, including those that go dry in summer. Many of the more productive streams for summer steelhead in the Rogue are found in the same valley areas under pressure from development. Challenges include fish passage barriers at impoundments and poorly placed road-crossing culverts, degraded riparian habitat, and over-appropriation of water that can cause intermittent streams to go dry much earlier in the season and before juvenile fish can outmigrate. The outreach effort is aimed at creating awareness of the fish resources in the small, urban and intermittent streams, gaining additional information to develop species conservation plans, and developing interest and support for restoration activities. The monitoring will begin with upstream migrant trapping to estimate the relative abundance of juvenile salmon and trout using the selected streams in winter. Volunteers began constructing traps for these inventories in 2005. The area media have reported on the program and the importance of these small streams.

Eastern Oregon STEP

Presentations, Volunteer Recruitment

Eastern Oregon STEP participated in a variety of educational efforts involving school students, teachers, and other adults and youth. The STEP Biologist gave presentations and/or trainings at the Creeks & Kids Workshop, Resources and People (RAP) Camp, Oregon Trout Salmon Watch program field trips, Summit High School’s Natural Resources class, the High Desert Museum, Kokanee Karnival, Prineville Fish Festival, Madras’ 4-H Natural Resource Tour, and Paulina Natural Resources Day. The STEP biologist also attended angling club meetings to recruit and recognize volunteers.

Klamath Falls Fish Dissection & Trout Biology Classes

STEP partnered with Klamath County’s OSU Extension Service to provide a training class for teachers on salmon and trout dissection and basic trout biology. Surplus steelhead were delivered to 15 classrooms and lesson plans were provided to the participating elementary and high school teachers.

Kokanee Karnival

The Kokanee Karnival in 2005 hosted eight Central Oregon elementary schools. Partners for the Kokanee Karnival include the Central Oregon Flyfishers, Sunriver Anglers, Central Oregon Llama Association, ODFW, and the Deschutes National Forest. The Kokanee Karnival provides:

- A one-week fall field trip program for students to observe spawning kokanee and learn about stream habitat.

- Field trips to hatcheries for instruction and demonstrations.
- Trout anatomy or dissection classes (trout provided by Fall River Hatchery).
- Delivery of trout eggs to classrooms for incubation during October or February.
- An angler education clinic providing instruction on angler ethics, fishing equipment, fish biology, and angling technique, followed by a barbecue lunch and fishing in nearby Shevlin Pond.
- A community stewardship project such as tree planting, storm drain marking, letter writing campaigns, or a cleanup.

Kokanee Karnival continues to receive exceptional support from the volunteer community and the program's financial sponsors. 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 were made possible only with the assistance of STEP volunteers. Volunteers helped with events in Prineville, the Dalles, Paulina, Bend, Camp Sherman, Milton-Freewater, Paisley, and Sunriver. These events included instruction provided by the volunteers on care of catch, fish identification, and water safety.

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
- 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 by each STEP district 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

Clackamas River Basin and Johnson Creek Watershed Temperature 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 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.

Mid Willamette STEP

In 2005, 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 Basin. The surveys provide annual counts of returning adult salmon and estimates of the number of rearing juvenile Chinook salmon and steelhead. 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 reintroduced. This includes the Breitenbush River and upper mainstem North Santiam above Detroit Reservoir, and the upper South Santiam River above Foster Reservoir.

STEP again led the district's small stream sampling effort through the operation of hoop traps. Landowners and members of the Albany Chapter ANWST maintained traps at sites located on tributaries to the North and South Santiam rivers. The primary intent of the program is to document the presence of cutthroat trout, and juvenile salmon and steelhead in waters where little or no fish information exists, and to determine relative abundance. The effort has provided valuable life history information such as the timing and distance of juvenile migration, and has identified areas used by juvenile spring Chinook and winter steelhead for seasonal rearing. These waters may also be seasonal and in urban or low elevation agricultural areas. Often the streams have been severely altered and receive little habitat protection because of a perceived lack of fishery value. The information has in-turn been used by cities, counties, watershed councils, and state and federal agencies to develop habitat restoration and protection plans and to identify restoration opportunities. Hoop traps operated in spring 2005 provided first-time documentation of steelhead in Sucker Slough, Bear Branch, and Smallman Creek, three Santiam tributaries located near Scio. The trap on Bear Branch was located nearly two miles from the North Santiam River and also captured juvenile hatchery steelhead.

Upper Willamette STEP

Using three upstream migrant hoop traps, volunteers in the Upper Willamette district monitored spawning cutthroat trout. The projects collected valuable information on the life history and relative abundance of local cutthroat and other fish populations. The ongoing project provides an important outreach and education tool as it offers volunteers "hands on" experience working with fish in local streams.

Volunteers assisted staff with spring Chinook salmon spawning surveys on the Middle Fork Willamette River above Hills Creek Reservoir and the South Fork McKenzie River above Cougar Reservoir. Eleven miles on the Middle Fork and 14 miles on the South Fork were surveyed. The surveys were used to determine the survival and spawning success of salmon captured then relocated above the impassable dams.

The City of Eugene is currently working with the Army Corps of Engineers (ACOE), ODFW, and other partners to restore fish and wildlife habitat at Delta Ponds, a 154-acre area

bordering the Willamette River. STEP worked with the UO Service Learning Program and the City of Eugene's Stream Team to implement a long-term fish and habitat monitoring program. A two-way fish trap was placed in the lower portion of Delta Ponds to monitor fish moving in and out of the system. Low water from November 2004 to April 2005 limited initial trapping success but a few fish were collected including two cutthroat trout.

Upper Willamette STEP along with the USFS conducted snorkeling surveys for juvenile spring Chinook salmon in the North Fork of the Middle Fork Willamette River. Six reaches were surveyed over two days with numerous juvenile Chinook salmon observed.

STEP volunteers assisted staff with the operation and maintenance of a downstream migrant rotary screw trap in the Coast Fork Willamette River. After the volunteers had been adequately trained, they checked the trap daily with little assistance from ODFW staff. Over 20 volunteers participated in this project from February through June 2005. The project was successful and introduced many community members to the variety and abundance of fish in the Coast Fork Willamette River.

STEP volunteers along with the Eugene Chapter of Trout Unlimited assisted staff with collecting information on fish survival in Cascade lakes. Volunteers hiked into designated lakes to hook-and-line sample for fish presence and gather other physical and biological data. The project is very popular with the public and the information on survival of fish stocked in the lakes is needed.

STEP volunteers collected fish samples from Cottage Grove and Dorena Reservoir for mercury analysis. Volunteers angled and retained trout out of both lakes in June and again in August that were sent to DEQ for testing.

STEP volunteers from the Mid Willamette Flyfishing Club and McKenzie Guides Association surveyed for native rainbow and cutthroat trout by angling in the McKenzie River. All native trout collected were implanted with a passive integrated transponder (PIT) tag and released. The study will assess the distribution, timing of migration, and growth of native rainbow and cutthroat trout in the McKenzie River. More than 100 fish were captured and tagged from April to September. Volunteers will again implant and recover tags in trout during 2006.

Volunteers from the McKenzie Flyfishers assisted with an on-going 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, have a stunted growth, and are a cause of a decline in the lake's population of rainbow trout. In 2005, approximately 2,200 brook trout were relocated to Charlton Lake in the Deschutes Basin where they will provide a fishery. This should allow for improved growth of the fish remaining in Gold Lake.

North Coast STEP

Students from Tillamook High School assisted with fish sampling in Hoquarton Slough. Little information regarding fish use of this area exists and the data collected will help track the success of ongoing restoration efforts.

A volunteer-led creel began for winter steelhead 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.

Mid Coast STEP

Mid Coast STEP volunteers again conducted salmon spawning surveys, stream habitat surveys, and other fish population surveys throughout the STEP district. Lincoln City STEP volunteers and the Hebo District USFS continued to operate a steelhead and coho trap on the South Fork of Schooner Creek in the Siletz Basin. The objective is to establish long-term monitoring of coho and steelhead populations at a basin scale.

Volunteers from Florence STEP assisted with the daily operation of a juvenile fish trap on Knowles Creek in the Siuslaw Basin to monitor the outmigration of juvenile salmon. The initial effort was conducted for up to four months each spring but was expanded to include a two-month fall sampling. Several of the volunteers were trained to assist others with fish identification and fish handling techniques.

Several groups of students conducted monthly stream habitat surveys to map and monitor changes in Hadsall Creek, a tributary of the Siuslaw River. The students use the survey information to develop recommendations for future restoration efforts. A large logjam recently developed and the habitat associated with it changes with every high water event. The accumulation of wood and the scouring of the stream bottom beneath it have provided the students with an excellent example of stream dynamics.

Volunteers in the Yachats area continued to monitor water quality in the Yachats River and estuary. The Mid Coast STEP Biologist assisted with the selection of sampling sites and provided the volunteers with training and technical assistance on the use of the temperature monitors and monitoring protocols. The volunteers also surveyed streams in the Yachats Basin to determine adult escapement and the spawning distribution of fall Chinook and coho salmon, and winter steelhead.

STEP volunteers working on Bailey Creek had the combined 7th grade class from the Florence schools attend a daylong field workshop in the fall and again in the spring at the project site to understand the structure and function of a restored watershed.

Umpqua STEP

Umpqua STEP formed a unique partnership with Yoncalla and Drain High Schools. Ten students (two for each of the five weekdays) were assigned to assist ODFW with checking smolt traps in Big Tom Folley and Brush Creek for 12 weeks as part of an internship program. ODFW staff transported the students to the trap sites each day and returned them to the school after the traps had been checked. Umpqua STEP also had high school job shadow students assist with other sampling efforts such as spawning ground surveys and the operation of various adult fish traps.

Tennile, Coos, and Coquille STEP

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.

STEP volunteers 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. The estuary sampling begins in the spring and continues through the fall of the same year.

Lower Rogue STEP

South Coast Screw Traps

The OSCF operated a downstream migrant trap for juvenile fall Chinook salmon on the Winchuck River upstream of tidewater. The volunteers work in two-person teams to daily identify, count, and mark captured fish, and monitor for recaptures. The STEP Biologist provided a weekly training session on trap safety, fish identification, and fish marking techniques. Weekly expansion estimates for the number of fall Chinook salmon smolts were summarized for the June through August migration period to provide a total population estimate. In 2005, the trap was operated 53 days and sampled nearly 13,400 fall Chinook smolts. This number was expanded for an estimated total of 108,000 fall Chinook smolt outmigrants from the Winchuck River. Operation of the trap represented the continuation of a 15-year database that is one of the district's priority monitoring efforts. The OSCF have assisted with the trap operation in each of the past seven years.

STEP volunteers also assisted staff in the operation of downstream migrant traps on Hunter, Euchre, and Brush Creek.

Lower Rogue Coded Wire Tag Recovery

CAF volunteers assisted district staff in collecting coded wire tags from fall Chinook sampled in the lower Rogue Bay fishery and on the spawning grounds. Volunteers placed signs and "snout drop" containers at fish cleaning stations. Several volunteers also surveyed lower Rogue tributaries not covered by annual ODFW spawning ground survey efforts. Data collected will help district staff monitor the success of the Indian Creek STEP Hatchery program.

Upper Rogue STEP

Upper Rogue STEP monitored habitat restoration projects for increased gravel deposition and use by adult and juvenile salmon for spawning and rearing. Five years of spawning fish surveys, annual spawning gravel surveys, and a snorkel survey conducted by STEP volunteers, ODFW staff, and USFS personnel indicated both juvenile and adult coho salmon used spawning gravel and new rearing habitat associated with the habitat improvement structures. Studies conducted by Boise Cascade indicated water temperatures around and

underneath the structures were about a degree cooler than those taken in areas where the stream bottom is bedrock.

Volunteers operated a smolt trap near the mouth of Bear Creek to determine species and relative numbers of fish migrating out of Bear Creek. Estimates of outmigration from Bear Creek in 2005 included more than 300,000 juvenile fall Chinook salmon, over 20,000 steelhead smolts, and more than 20,000 juvenile steelhead. Twenty-four coho fry were also captured, along with four cutthroat and 50 lamprey ammocoetes. The large number of juvenile fish captured in the trap suggests Bear Creek may provide better winter rearing habitat for salmonids fish than previously thought.

ODFW research on summer steelhead conducted in the early 1970's found that seasonal streams in the Rogue Basin are important for steelhead production. In late August, after irrigation flows subsided, STEP volunteers seined Larson Creek and Lazy Creek, two urban tributaries of Bear Creek, for juvenile salmonids. Coho salmon and rainbow trout were sampled in Larson Creek, and rainbow trout were found in Lazy Creek. Other species included non-native crayfish, redband shiner, ruby red shiner, Klamath smallscale sucker, and bluegill. These preliminary results and other reports of salmonids in urban streams prompted the district to plan a five-year study to determine the importance of urban streams to salmonids in the Rogue Basin.

Several years ago, New Zealand mud snails were found in the lower Rogue River near Gold Beach. STEP volunteers in 2005 sampled various locations throughout the Rogue to determine the extent to which they may have moved to areas further upstream. Fortunately, no mud snails were found upstream from Gold Beach.

A STEP volunteer assisted ODFW staff with electrofish and gill net sampling of a number of district lakes to determine the status of trout and warmwater fish populations in those waters.

Fourteen volunteers salvaged more than 3,000 stranded fish from isolated pools in drying streams and transferred them to flowing stretches of the same stream systems. A student intern from Rogue Community College assisted ODFW staff in a fish salvage at a channel relocation project on Jackson Creek near Medford. STEP Volunteers also operated an irrigation diversion bypass trap that otherwise would have been nonfunctional and shut down for much of the summer. The volunteers netted fish out of the trap and released the fish into the flowing Applegate River just downstream of the diversion structure.

In September, a student intern from Rogue Community College conducted angler creel surveys on Lost Creek Reservoir.

Eastern Oregon STEP

Trout Sampling and Brook Trout Suppression, Canyon Creek (John Day Basin)

Brook trout were introduced into the John Day Basin early in the century and became established in many streams including Canyon Creek. Unfortunately, the brook trout compete with the basin's native fish including cutthroat and redband trout. Upper Canyon Creek is a small stream, approximately 5 ft wide and 3 ft deep, and there is a barrier (dam)

approximately 30 miles from the mouth. To protect cutthroat and redband trout, volunteers and agency staff began removing brook trout from Upper Canyon Creek by electrofishing the stream. Cutthroat and redband trout lengths and numbers were recorded and these species were released back into the stream after samplers had passed. The captured brook trout were donated to the High Desert Museum where they were used as feed for the captive otters, eagles, and ospreys. Volunteers from Oregon Trout and the Central Oregon Flyfishers assisted with set-up of electrofishing stations, netting fish, and collecting biological data.

Trapper Creek Bull Trout Population Estimate (Upper Deschutes Basin)

This mark-recapture study was designed to provide important information about the life history of bull trout in the Odell Lake basin. The study involved tagging some juvenile bull trout with a PIT tag and marking others with a fin clip. The PIT tags transmit a signal read by receivers installed at the mouth of Trapper Creek and Odell Creek that identifies individual fish and provides information about the timing of migration, age at maturation, survival, and habitat use of bull trout within the Odell Basin. Divers captured trout with hand nets while working at night. Volunteers supported ODFW Native Trout Project biologists with all aspects of this study, working at night to transport fish, record biological data, and monitor the recovery of sampled fish.

Hood River High Lakes Trout Survey (Hood River Basin)

Volunteers collected information on trout in Warren, Bear, North, Rainy, Black, Wahtum, and Scout Lake. These lakes had been stocked with trout for many years without monitoring of stocking success. ODFW biologists sought information to evaluate the high lakes stocking program including the condition of fish, estimates of trout abundance, and evidence of natural reproduction. Volunteers from the Columbia Gorge Fly Fishers donated more than 150 hours to sample the lakes and record data. Volunteers set gill nets, assisted ODFW staff with snorkel surveys, and angled for trout.

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 in 2005 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 Program grant that allowed for the construction of 50 new collection stations that in 2006 will be placed at stream, river, and lake sites throughout Oregon.

The following is an overview of habitat improvement projects conducted by each STEP district 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

Carcass Placement

The tenth year of the district's stream nutrient enrichment program was completed with cooperation from Sandy River Hatchery, the USFS, and the USFWS Eagle Creek Hatchery. The carcasses are intended to mimic historic run densities of spawning coho salmon in area streams and increase stream nutrient levels for aquatic organisms. This year was the third year of an intensive monitoring project to better quantify the effects of the nutrient

enrichment on watershed productivity. Investigated were nutrient levels, periphyton biomass, benthic macroinvertebrate biomass, smolt abundance, and carcass retention. Carcasses were distributed by helicopter to maximize the quantity placed and gain access to more remote river locations. Approximately 5,700 coho carcasses were placed by helicopter in three tributaries to the upper Clackamas River. Approximately 3,750 coho carcasses were placed in three tributaries of the upper Sandy River. Hand placement of carcasses also occurred in the Sandy, Clackamas, Molalla, Upper Tualatin and Yamhill Basin. Volunteers from the ANWST, students from various local schools, members of the Sandy River Watershed Council, and the Confederated Tribes of the Grande Ronde assisted with the carcass distribution effort.

Mid Willamette STEP

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, stream and riparian habitat, and fish passage restoration projects.

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

In addition to carcass placement, STEP maintains a very active role in stream improvement and fish passage efforts throughout the mid Willamette basin. STEP works with cities, counties, other state and federal agencies, watershed councils, private industries, conservation groups, schools and individual landowners to identify and prioritize opportunities, bring together project partners, provide oversight or supervision, coordinate volunteers, and offer much needed technical expertise. STEP is also in a unique position among these many entities 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 2005, STEP provided technical assistance to the Luckiamute Watershed Council for removal of a failed mill pond dam on South Fork Ash Creek in Independence, the City of Corvallis for fish passage improvements, and to Benton County for its culvert inventory program. STEP also assisted the Benton County Roads Department with two fish salvage efforts during culvert replacement projects and assisted other district staff with fish salvage on the South Santiam River during dewatering for the new fish ladder structure at Lebanon Dam.

Upper Willamette STEP

STEP partnered with the Middle Fork Willamette Watershed Council to restore native riparian vegetation at Elijah Bristow State Park located near the confluence of Lost Creek and the Middle Fork Willamette River. STEP and the watershed council, installed a drip irrigation system that was funded in part by a STEP Mini Grant to help water the plants during the dryer months. STEP volunteers will continue to maintain the project area during the summer of 2006.

STEP facilitated the development of a riparian restoration project along approximately 900 feet of Wagner Creek on private land in the Lost Creek watershed. Several site visits and planning coordination meetings with the East Lane Soil and Water Conservation District were needed to develop a plan and implement the project.

Through STEP's watershed council associations, staff was involved with culvert replacement projects on three streams and numerous landowner riparian planting projects, especially in the McKenzie Basin.

North Coast STEP

Riparian restoration and cleanup efforts were conducted at ODFW access sites on the Tillamook, Trask, Wilson, and Necanicum Rivers by 48 volunteers. Restoration efforts included the removal of invasive blackberry, ivy, knotweed and canary reed grass, and the maintenance of existing plantings.

Dozens of volunteers and students again participated in North Coast stream nutrient enrichment projects, placing approximately 89,000 pounds of salmon and steelhead carcasses over 146 miles in 24 different streams and rivers.

Volunteers from the ANWST made repairs to the fish ladder at East Fork Trask Pond, improving adult fish passage.

Mid Coast STEP

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.

Mid Coast fish habitat restoration projects were completed at Beaver Creek, Salmon River, the mainstem Siletz River, and the North Fork Alsea River. These included riparian restoration, and fish passage improvement projects and erosion control. In 2005, 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.

Fifteen volunteers from Florence STEP assisted the USFS Mapleton Ranger District for two days with securing instream structures in the mainstem of the North Fork Siuslaw River. The volunteers drilled holes in bedrock and boulders, and ran cable through logs to anchor the placed wood at two project sites.

Umpqua STEP

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

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.

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 district and several projects were conducted this past year.

Fish passage was improved at an acclimation pond located on the North Fork Coquille River near La Verne County Park. Upstream passage of both juvenile and adult salmonids was delayed at the acclimation pond during some stream flows by an old dam structure. Several volunteers spent a day dismantling the dam structure and removing the materials.

The property where a portion of the existing Morgan Creek STEP hatchery facility is located fell under new ownership in 2005. One of the objectives of the purchase was to improve stream and riparian habitat on Morgan Creek and the smaller tributary of Priorli Creek. This included removing a pig feed lot that was compromising water quality above the hatchery facility. The pigs were removed shortly after the property changed hands but water quality continued to be impaired for several months after. A dike, ditch, and drain field were then constructed to prevent further run-off from the feedlot and into the stream and water quality immediately improved. More habitat projects including fish passage improvements are planned for the recently purchased property.

Salmon carcasses were again placed in district streams as part of the stream nutrient enrichment program. Volunteers and ODFW staff processed and placed 8,443 salmon and steelhead carcasses into 16 different streams. Most of the carcasses used were fish that had been released from, then returned to Coos Basin STEP hatchery facilities.

Lower Rogue STEP

Indian Creek Dam

The failing water diversion dam for the Indian Creek STEP hatchery facility was replaced with a more modern and “fish friendly” structure, a project that has for many years been a priority for the CAF. The old dam limited upstream passage for adult fish and prevented juvenile fish passage. Using grant funding provided by the ODFW R&E Program and design assistance from ODFW staff, CAF volunteers constructed the new diversion structure to meet

all current fish passage and screening criteria. Shortly after the project was completed, adult fall Chinook were observed in the stream above the dam. The CAF volunteers will continue to monitor the restored fish use of the upstream areas.

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 second year carcasses were placed in the Chetco River and the eighth 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

For many years, improperly discarded monofilament fishing line has been a problem for people and wildlife at popular fishing locations throughout the state. A pilot program initiated in 2004 by Jason Atkinson, State Senator, encouraged anglers to dispose of tackle and monofilament line properly. The problems associated with discarded monofilament line in the local environment became clear when STEP volunteers last year began looking for sites where line and tackle collection stations could be installed in the Upper Rogue Watershed District. The STEP volunteers install and maintain the stations, and process the collected material for recycling or proper disposal. During their survey for stations sites, the volunteers noted the ground at one very popular angling location on the Rogue River below Lost Creek Dam was nearly covered with crisscrossing strands of monofilament line.

In 2004, the line and tackle collection stations that had been installed collected nearly 47 lbs. of monofilament line. In 2005, STEP volunteers processed more than 37 lbs. of collected line. Many anglers interviewed felt the stations were an excellent idea and expressed their willingness to use them. Having trash receptacles in the same area as the stations, however, reduced the amount of non-angling waste deposited in the collection bins. Interest in the program is growing and participants now include many individuals, landowners, the Jackson County Parks Department, and several US Army Corps of Engineers facilities.

To provide stream nutrient enrichment in areas where coho salmon spawn and rear, 963 coho salmon carcasses or more than 8,000 lbs. of fish were placed in Elk, Bitter Lick, Sugarpine, and Taylor Creeks by STEP volunteers from area watershed councils and angling organizations.

Eastern Oregon STEP

Blitzen River Riparian Restoration (Malheur Basin)

The goals of the Blitzen River riparian restoration project were to stabilize eroding stream banks, improve riparian condition, and improve habitat for the uniquely adapted redband trout that rear in Malheur Lake and spawn in the upper headwaters of the Blitzen, Little Blitzen, Bridge, and Mud Creek. Water-jet stingers were used to drill holes 5-6 ft. deep to reach the water table from the high banks and irrigate the new plantings. Volunteers from

the COF and Malheur Wildlife Associates cut and planted hundreds of willow and dogwood whips along more than three miles of stream bank.

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 many 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.

Oversight of STEP propagation projects 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 that the program will meet fish management objectives and is consistent with policies regarding potential impact to native fish populations. STEP propagation activities are integrally linked with ODFW fish management programs. Specific legal limitations regarding STEP also exist which, in addition to ensuring that 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.

Despite certain STEP-specific legal requirements, STEP's importance to Oregon's fish resources does grant it some legal protection such as not having to obtain water rights to operate a facility as a STEP project is defined as a "beneficial use" of the state's waters. The STEP Biologists work closely with the volunteers to ensure that the 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 guidance. Most 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.

In 2005, staff worked with STAC to develop a revised STEP fish propagation project application form and project review process. The revised process includes opportunity for the public to review and comment on STEP propagation project proposals. The development of the revised application form and the changes made to the review process were actions taken under the current STEP Review. The STEP Review was initiated to ensure STEP projects are consistent with the recovery or sustainability of native stocks, and ensure a public process is in place to help review projects and determine their consistency with the OPSW and ODFW fish management policies. Included was a review of all existing STEP fish propagation projects to ensure none were undermining the recovery and sustainability of native fish stocks. The Department's Native Fish Conservation Policy Task Force was provided in 2005 updates on the progress of the STEP Review via presentations at two Task Force meetings.

The following is an overview of STEP fish culture projects from each of the STEP districts. These summaries are not intended to be comprehensive but instead reflect the range of STEP activities in that area. 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 stage of fish development) and Figure 2 (STEP fish releases by STEP district and stage of fish development).

Lower Willamette STEP

Classroom Egg Incubation Program

Nearly 150 school classroom projects incubated and released more than 74,000 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 Projects

The NWWD has for many years used net pens to acclimate juvenile salmon and 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 2005. An additional 160,000 salmon smolts were directly released into Clackamette Cove without acclimation also in 2005. 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 75,000 winter steelhead smolts and 40,000 spring Chinook salmon smolts were acclimated and released into the Clackamas River in the spring of 2005. 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. STEP is currently looking for additional acclimation sites to be operated by volunteers on both the Clackamas and Sandy River.

Mid Willamette STEP

ODFW fish propagation programs in the mid Willamette basin have evolved greatly over the last 15 years. 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. Still, some opportunities for a traditional hatchbox effort still exist. For example, in 2005, STEP reared 160,000 unfed spring Chinook fry for release into Quartzville Creek above Green Peter Dam as part of a broader effort to investigate the potential for re-introducing salmon to historic habitat in the Middle Santiam Basin.

In 2005, schools from both rural and urban areas participated in 41 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 small, isolated ponds. These releases have at a couple of locations

provided an added benefit of establishing a quality trout fishery 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 that the classroom program reached well over 1,000 students in the STEP district this past year. It is likely that the actual number even exceeds this as many projects involve multiple classes or, in the case of smaller communities, the entire school. Many of these projects have benefited from significant donations of equipment, or funds to buy equipment, from numerous groups and individuals within the local communities or from sponsoring groups, thus furthering STEP's outreach efforts.

Upper Willamette STEP

Many of the district's remote Cascade lakes are stocked annually with fingerling trout. In 2005, a helicopter was available to conduct much of the stocking but STEP volunteers from a local Boy Scout troop continued to stock two of the lakes. The Scouts released more than 1,500 fingerlings in Melakwa Lake and 400 fingerlings in Irish Camp Lake. This has become an annual project the Scouts look forward to and receive a merit badge for completing.

More than 9,000 spring Chinook salmon eggs were incubated by 81 projects in 47 different schools as part of the classroom egg incubation program. The unfed fry were released by the individual classes at several sites in the Upper Willamette Basin.

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 are to develop a native winter steelhead broodstock and supplement the Siuslaw steelhead fishery. Volunteers from both Upper Willamette and Mid Coast STEP assisted with the project by capturing broodstock, fertilizing and incubating eggs, and rearing then releasing the juvenile steelhead.

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

North Coast STEP

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

In 2005, the Wild Winter Steelhead Broodstock Collection Program continued on the Nestucca and Wilson Rivers. Dozens of volunteers collected almost 200 fish to be used as broodstock for this program.

Volunteers from the Nestucca Anglers also helped with the collection of fall Chinook broodstock for Cedar Creek Hatchery via angling. Twenty-five pairs of fish were collected by volunteer anglers and transported to the hatchery over several days. The volunteers also helped operate the trap at Cedar Creek Hatchery, collecting spring Chinook and summer steelhead broodstock.

Mid Coast STEP

The Depoe Bay Salmon Enhancement Commission (SEC) continued a coho salmon supplementation project on North Depoe Bay Creek. Eggs are incubated, and fry reared short-term in floating net pens at a site located above the dam at Depoe Bay Reservoir. Pre-smolts are marked and then released into the reservoir to rear naturally before outmigration. This program is well supported by the Depoe Bay community and reaches beyond the scope of a simple hatchbox supplementation project. The combination of enthusiasm, commitment, and technical expertise involved in the program have provided a community resource for understanding salmon and the importance of healthy watersheds, not just for salmon habitat but also for the community. The project has 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. The volunteer day attracts a range of people from local charter boat skippers who directly benefit from the supplementation program, to youth and adults who want to know more about fish, streams and watershed health. Stream habitat improvement has also taken place in association with this project with support from the city and local landowners. Additionally, members of the SEC work with and educate private landowners in the importance of intact riparian zones within watersheds.

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. The project includes wild broodstock collection, smolt acclimation and release from an acclimation site owned by the Oregon Coast Aquarium.

Alsea River 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.

Throughout the district, 539 students from 10 schools participated in the STEP classroom egg incubation program using local stocks of steelhead. The program allows students to observe the development of eggs, alevin, and fry, and gain a better understanding of salmonid life cycles and fish habitat requirements.

Florence STEP and the Emerald Empire Chapter ANWST coordinated the winter steelhead adult capture and smolt acclimation projects in the Siuslaw, with up to 60 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 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 five fish traps in the Siuslaw Basin. As in past years, the effort produced close to 100,000 smolts for ODFW's hatchery steelhead program. There is also an important outreach and education component to this program, with up to 30 school, civic, and sportsman groups involved with the hands-on spawning and release of adult winter steelhead.

Florence STEP volunteers continued to operate trap facilities for adult coho salmon at Little Woahink Lake. Additionally, Florence STEP began an adult coho monitoring project at the Siltcoos and Tahkenitch fish ladders. The Emerald Empire Chapter ANWST also monitored adult coho at the Letz Creek fish trap and found more than 40 coho moved above the trap weir, bypassing the trap at high flows.

Umpqua STEP

In cooperation with Rock Creek Hatchery, GRWB STEP released fall Chinook smolts at the Discovery Center near Unger's Landing. GRWB transferred eyed eggs to Rock Creek Hatchery where the fish were reared to the smolt stage. The smolts were transferred back to GRWB STEP and acclimated in net pens located behind the Discovery Center Museum. Acclimation at this site expanded the Chinook fishery in the Umpqua estuary eight miles further upstream and gave the program a great deal of public exposure.

GRWB STEP and the UFA also teamed together this year to conduct a fall Chinook recovery program at Paradise Creek. Paradise Creek is a tributary of the lower Umpqua River and the volunteers captured wild, lower Umpqua fall Chinook brood for the program. The UFA raised the fish from the eyed egg stage to pre-smolts. ODFW R&E Program funds were used to mark the pre-smolts and help evaluate the program. Several habitat restoration projects were conducted in Paradise Creek in the late 1990's and more are planned for the stream in the next several years. Combined with these improvements to habitat, the program hopes to speed the recovery of fall Chinook in Paradise Creek.

Tenmile, Coos, and Coquille STEP

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

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 18 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.

The number of area schools participating in the classroom egg incubation program continued to increase. Five new classroom aquarium units with a combined value of nearly \$4,500 were obtained for use in the growing program. Many of the students at the participating schools also assist at the STEP hatchery facilities where the eggs are spawned.

STEP involvement with the Coos River fall Chinook hatchery program continued in 2005. Nearly 4,700 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 to mark all of the fall Chinook released from the Millicoma Interpretive Center. Since the fall Chinook hatchery program began, students have marked over one million Chinook released in the Coos River Basin.

Of the fall Chinook that returned to the Coos Basin STEP facilities, 3,615 fish deemed to be surplus were donated to the Oregon Food Bank.

Lower Rogue STEP

Indian Creek STEP Hatchery

CAF volunteers reared and released over 75,000 fall Chinook salmon to augment the lower Rogue Bay fishery. In 2005, 19,935 unfed salmon fry were also released into Edson and Saunders Creek. To provide for this program, 72 wild fall Chinook broodstock were collected from the mainstem lower Rogue River and transported to the STEP facility. Of the adult hatchery fish that returned to the facility, 175 fall Chinook were donated to local food banks. CAF volunteers also provided numerous tours of the facility for interested groups.

South Coast Broodstock Collection

OSCF volunteers assisted ODFW staff in collecting broodstock for the Chetco River hatchery programs. A total of 346 fall Chinook and 81 winter steelhead were collected and transported to Elk River Hatchery. The transportation of brood to Elk River Hatchery requires travel of more than 70 miles and the volunteer assistance with this task is invaluable.

Upper Rogue STEP

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 2005, 26 schools incubated 8,250 spring Chinook salmon

eggs received from Cole Rivers Hatchery. A total of 6,486 or 78% of these survived to the unfed fry stage then were released into the Rogue River near Medford or Grants Pass, depending on which location was closest to the school. Volunteers assisted in the distribution of the eggs to various schools throughout the district and gave talks and project assistance on request.

Eastern Oregon STEP

Backcountry Fish Stocking (Deschutes and Sprague Basin)

STEP volunteers stocked three backcountry lakes in 2005. 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 Lake 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.

Broodstock and Egg Collection

STEP volunteers were instrumental collecting broodstock for ODFW hatcheries by angling and trapping fish. Under the guidance of ODFW staff, volunteers participated in redband and steelhead trout broodstock collection from the Grande Ronde River, Upper Deschutes, Crooked River, and Ochoco Creek. Volunteers also assisted hatchery staff with kokanee egg collection at Paulina and Odell Lake, and rainbow trout egg collection from Crane Prairie Reservoir.

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 STEP Participation.

Project Category	Projects	Measure ^a	Volunteers			
			Youth	Youth Hours	Adults	Adult Hours
Development	391	>36,000	2,821	13,141	3,793	24,771
Characterization	107	404	472	1,670	482	8,639
Habitat	106	720	234	763	402	2,758
Fish Culture						
Broodstock	14		67	507	266	8,149
Fry Release	25		437	1,282	180	4,620
Rearing ^b	16		2,063	16,189	753	21,380
Acclimation	32		791	4,100	508	9,643
Other ^c	22		89	365	259	2,255
Subtotal	109		3,447	22,443	1,966	46,047
Classroom	452	>11,000			381	9,900
Total	1,165		6,974	38,017	7,024	92,115

^{a.} 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.

^{b.} Fish Rearing projects can include activities associated with several life history stages of the fish reared including spawning, egg incubation, feeding of reared fish, and marking of fish released.

^{c.} Other 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 stage of fish development. Unfed fry releases include classroom incubator fry. Smolt and pre-smolt releases include acclimated fish.

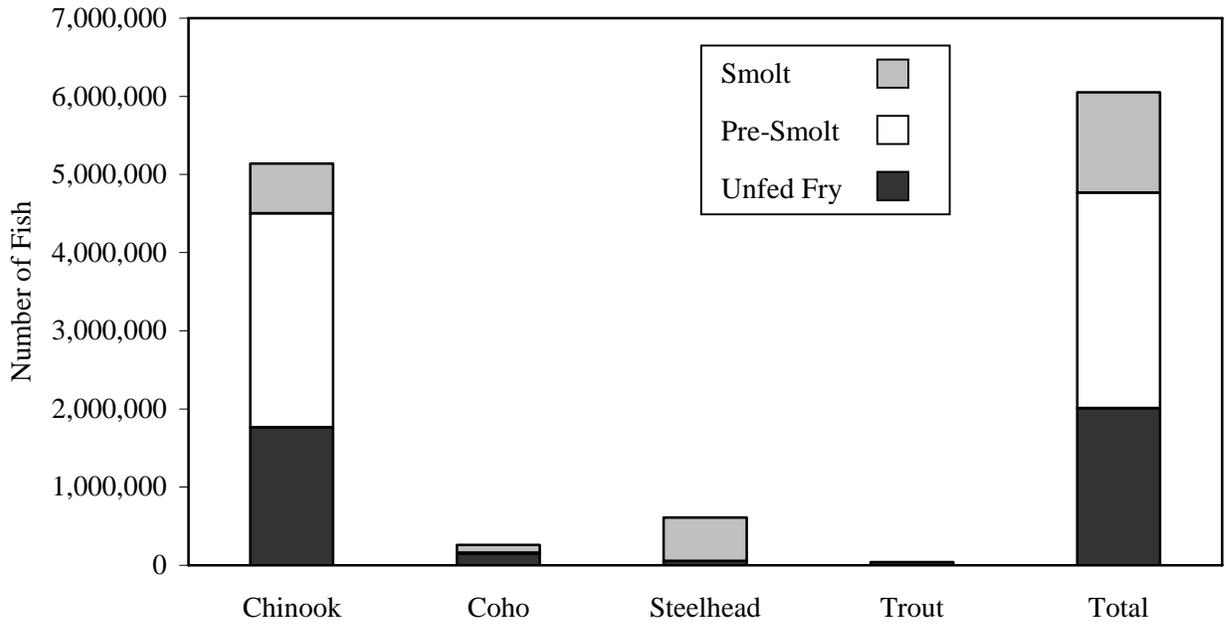
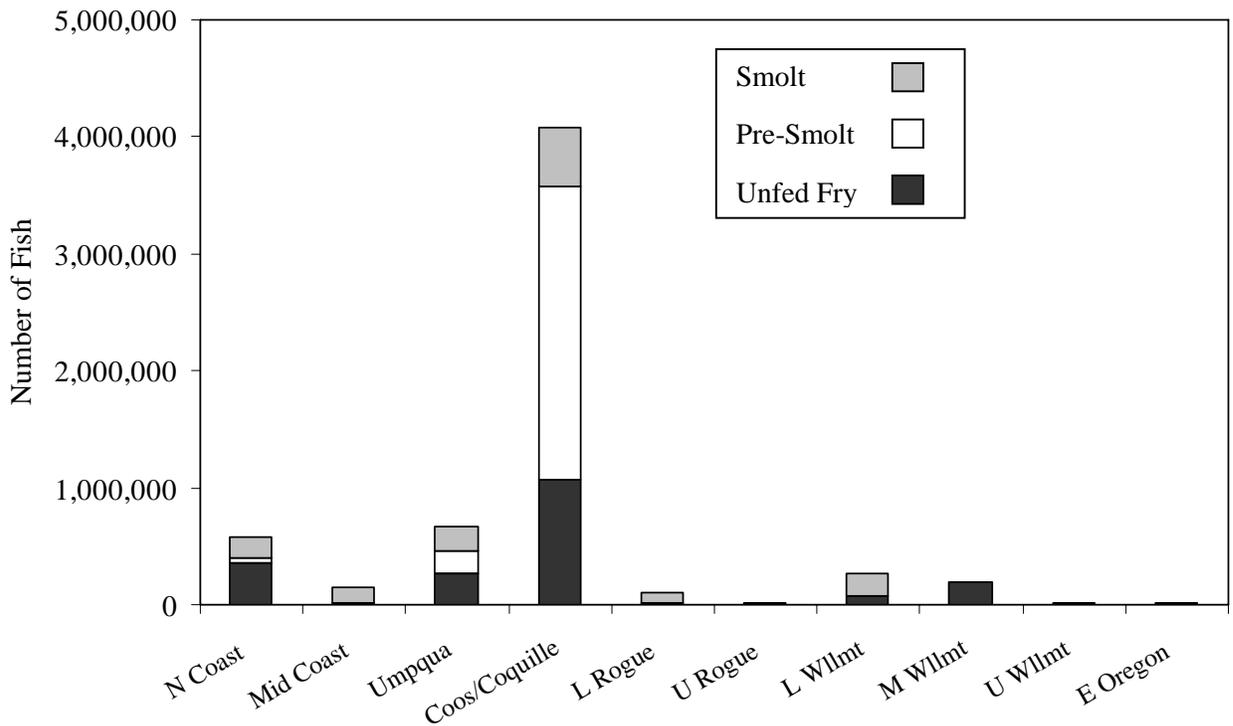


Figure 2. STEP fish releases by STEP district and stage of fish development. Unfed fry releases include classroom incubator fry. Smolt and pre-smolt releases include acclimated fish.



APPENDICES



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Salmon and Trout Enhancement Program Advisory Committee (STAC)

STAC Position	Member	Term	Expires
Lower Willamette	Norman Ritchie	1 st	Sept 2007
Lower Willamette	Kaitlin Lovell	1 st	July 2007
Mid Willamette	Cindy Heller	2 nd	July 2009
Upper Willamette	<i>Ralph Perkins</i>	<i>2nd</i>	<i>May 2005</i>
	Lauri Mullen	1 st	July 2009
North Coast (Seaside-Astoria)	Tod Jones	1 st	Sept 2009
North Coast (Tillamook-Pacific City)	<i>Russ Patterson</i>	<i>2nd</i>	<i>May 2005</i>
	Robert Rees	1 st	Aug 2009
Mid Coast	Tom Petersen	1 st	July 2007
Umpqua	<i>Dave Grosjacques</i>	<i>2nd</i>	<i>May 2005</i>
	Mike Brochu	1 st	June 2009
Tenmile, Coos, and Coquille	Armand Pena	1 st	July 2007
Lower Rogue	Richard Heap	1 st	Mar 2009
Upper Rogue	<i>Wayne Brown</i>	<i>2nd</i>	<i>May 2005</i>
	Gary Enoch	1 st	Aug 2009
Eastern Oregon (Central-Southeast)	Dick Mayer	2 nd	Jan 2009
Eastern Oregon (Northeast)	<i>Paul Cilvik</i>	<i>2nd</i>	<i>May 2005</i>
	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 2005 are listed in italics.

Partial List of Groups that Work with STEP

The following is a list of volunteer organizations, agencies, and other groups that worked with STEP in 2005. Due to the large number of STEP participants, it is possible that some groups were inadvertently left off of this list. Please contact the STEP Coordinator at 503-947-6232 if your group has been overlooked. The hundreds of elementary, middle, and high schools participating in classroom egg incubation or other educational activities were not included in this list. Also excluded are the universities and community colleges whose students intern with, or volunteer for the program. 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
- Americorps
- ANWST - Association of Northwest Steelheaders
- ANWST - Albany Chapter
- ANWST - Emerald Empire 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
- Boise Cascade
- Boy Scouts of America
- Cascade Family Flyfishers
- Central Oregon Flyfishers (COF)
- Central Oregon Llama Association
- Columbia Gorge Flyfishers
- Coos River STEP
- Coquille River STEP
- Crater Bass
- CREST
- Curry Anadromous Fishermen (CAF)
- Depoe Bay Salmon Enhancement Commission
- Discovery Center
- Eel STEP
- Florence STEP
- Gardiner-Reedsport-Winchester Bay STEP
- Girl Scouts
- Hatfield Marine Science Center
- High Desert Trail Riders
- Inner City Youth Institute
- Klamath Country Flycasters
- Klamath Land Trust
- Lower Umpqua Flycasters
- McKenzie Family Flyfishers
- McKenzie River Guides Association
- Millicoma STEP
- Nestucca Anglers
- North Santiam River Guides
- Northwest Youth Corps
- Oregon Bass and Panfish Club
- Oregon Black Bass
- Oregon Equestrian Trails
- Oregon South Coast Fisherman (OSCF)
- Oregon Trout
- Oregon Water Trust
- Oregon Wildlife Heritage Foundation
- Pepsi
- Polk County Sportsmen
- Rainland Flycasters
- Rockaway Beach Lions Club
- Rogue Fly Fishers
- Salemtowne Association
- Salmon River Keepers
- Santiam Flycasters
- Senior Fishing Buddies
- Southern Oregon Fly Fishers
- Starker Forests
- Student Conservation Association
- Sunriver Anglers
- Tenmile STEP
- Tillamook Anglers
- Tillamook Bay Boating Club
- Tillamook Guides Association
- Trout Unlimited
- Tualatin River Keepers
- Twin Rocks Friends
- Umpqua Bass Masters
- Umpqua Fishermen's Association
- Washington County Fly Fishers
- Weyco
- Wild Women of the Water

- 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
- City of Salem
- City of Sweet Home
- Confederated Tribes of the Grand Ronde
- Cow Creek Band of Umpqua Tribe of Indians
- 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
- Pacific States Marine Fisheries Commission
- 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
- 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
- Siuslaw Watershed Council
- South Coast Watershed Council
- South Santiam Watershed Council
- Umpqua Basin Watershed Council
- Upper Rogue Watershed Association
- Williams Creek Watershed Council