

# SALMON AND TROUT ENHANCEMENT PROGRAM (STEP)



## 2011-2012 Annual Progress Report



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## BACKGROUND AND SUMMARY

This report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) from October 1, 2011 to September 30, 2012. The Oregon Legislature established STEP in 1981 as a program of the Oregon Department of Fish and Wildlife (ODFW) that seeks to “achieve the recovery and sustainability of the state’s native salmon and trout through the education of Oregon’s citizens and their involvement with fish management efforts”. Although this goal will not be achieved by the program acting alone, annual volunteer efforts through STEP to enhance fisheries and restore habitats lend critical support to the management programs of ODFW and contribute to the more extensive statewide efforts toward fish and watershed restoration under the Oregon Plan for Salmon and Watersheds.

The role of STEP within ODFW is defined by Oregon Revised Statute (ORS 496.430 through 496.465) and Oregon Administrative Rule (OAR 635-009-0090 through 635-009-0150) specific to the program. Program activities are also guided by broader ODFW fish and habitat management policies including the Native Fish Conservation Policy (NFCP), Fish Hatchery Management Policy (FHMP), and the Fish Health Management Policy (FHMP). These policies 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 fish and habitat management needs throughout Oregon. The issues and priorities within individual watersheds are often unique to those areas and the focus of STEP efforts can vary across the state. Generally, activities can be grouped into four main categories:

- **Education and Program Development** informs the public about Oregon’s salmon and trout resources, their habitats, and STEP. Projects include classroom incubators (also known as the “Fish Eggs-to-Fry Program”), presentations, classes, volunteer training, tours, displays, printed materials, and equipment construction and maintenance.
- **Inventory and Monitoring** activities characterize fish populations and their habitats. Projects include stream and riparian habitat surveys and other methods used to study, monitor or inventory fish life history, presence, distribution or abundance.
- **Habitat Improvement** activities enhance, restore and protect habitat for native stocks of salmon, steelhead, and trout. Projects include the placement of large woody debris in streams, riparian protection and restoration, fish passage improvement and fish carcass placement for stream nutrient enrichment. This category also includes aesthetic improvements to lakes and streams achieved through the Keep Oregon’s Rivers Clean (KORC) fishing line and tackle recycling program.
- **Fish Culture** activities produce fish to supplement natural fish production, augment fisheries, or, in the case of the classroom egg incubation program, provide educational opportunities. This category also includes fish rescued, transplanted, or reintroduced.

- **The 25-year angling enhancement plan** was adopted in February of 2010 to outline strategies for providing diverse, stable and productive angling opportunities and facilitate an increase in angling participation. Because of its strong connection to the volunteer base, and the local needs and interests, STEP is used to directly address recreational fishing priorities; specifically, opportunity, access and mentoring. While the focus is on youth anglers and families it also provides direct and indirect benefits to all anglers.

STEP is funded by a combination of the U.S. Fish and Wildlife Service (USFWS) Sport Fish Restoration (SFR) grant program and ODFW funds (75 percent federal with 25 percent state match). The program has one full-time coordinator and one part-time administrative assistant located in the ODFW headquarters office in Salem. It is implemented in the field by 11 STEP biologists (nine 1.0 FTE and two 0.5 FTE) located throughout the state.

In addition, program oversight is provided by the thirteen-member STEP Advisory Committee (STAC) comprised of citizens appointed by the Governor. The committee advises the Oregon Fish and Wildlife Commission (Commission) and ODFW on policy and the implementation of STEP and presents the STEP Annual Progress Report to the Commission. The committee also administers the STAC Mini-Grant Program, funded through a \$50,000 biennial grant from the ODFW Fish Restoration and Enhancement (R&E) Program. The Mini-Grants are available in amounts up to \$2,000 for projects that further the goals of STEP and are reviewed for approval by STAC at their quarterly two-day meetings. From October 2011 to September 2012, meetings were held at Salem, Reedsport, Brookings, and Newport.

Three new members were appointed to STAC during the reporting period. The members appointed were Jim Phelps for Northeast Oregon, Tom VanderPlaat for the Lower Willamette, and Brian Hudson for the Mid-Coast.

Within each watershed management district, the STEP biologist fill several roles including fish and habitat biologist, educator, outreach specialist, community or technical advisor, and lead for volunteer management. The program works with a variety of individuals, groups and organizations including adult and youth volunteers, angling and conservation interests, watershed councils, soil and water conservation districts, private landowners, schools, individual students, and other state, federal and local government agencies. Through STEP, these individuals and organizations work with ODFW to conduct community-based watershed restoration and species recovery efforts throughout Oregon.

## Summary of Current Efforts

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The following summarizes accomplishments of the program in 2011-2012:

- More than 61,500 people participated in STEP training, classes, tours, presentations or workshops, or visited STEP activities or displays at public events (Table 1). These activities involved over 4,723 youth and adult volunteers. This includes 717 individual Fish Eggs-to-Fry classroom projects that reached over 23,300 students.
- More than 490 volunteers contributed 7,337 hours to participate in 76 projects to inventory and monitor fish populations, assess sport fisheries, conduct fish passage inspections and survey habitat in streams and rivers across the state (Table 2).
- More than 897 miles of waterways were improved for fish use by 765 volunteers through fish passage, in-stream, riparian and fish carcass placement projects and the KORC program (Table 3).
- STEP volunteers assisted with rearing and releasing of approximately 4.5 million Chinook salmon, coho salmon, steelhead and trout for enhancement or augmentation purposes; 2,789,682 of these fish were reared (fed and cared for) before release and 15,119 broodstock fish were collected (Table 4).
- The agency continues to implement the 25-Year Angling Enhancement Plan. Major accomplishments by STEP include continuing to improve access to local angling sites and improved family fishing events. STEP continues to be involved with the Inland Sport Fish Advisory Committee (ISFAC); in fact a STAC member sits on the committee.
- Promoting close and easy access to angling opportunities and providing simple, low cost fishing opportunities for youth and families (i.e. still-water, “bait and bobber”) continues to be a priority for STEP. Assistance by STEP and STEP volunteers to restore inland trout fisheries will continue.

As indicated by the amount of work accomplished, volunteers made a substantial contribution to STEP and ODFW. Because STEP activities are integral to accomplishing ODFW’s fish management objectives, ODFW staff also contributes time and resources to the program beyond what is funded by the SFR grant. Highlights of the 2011-2012 statewide volunteer efforts include:

- 6,157 youth and 6,030 adult volunteers in Oregon participated in STEP activities.
- Volunteers participated in an estimated 1,443 projects, totaling 131,816 hours. This is equivalent to 63.4 full time employees.
- Using the estimated dollar value of \$21.79 for volunteer time in Oregon for 2011, the value of STEP volunteer hours was \$2,815,580.

Since the program was established in 1981, more than 329,500 adult and youth volunteers (Figure 1) have contributed over 3.2 million hours (Figure 2) to an estimated 35,521 STEP projects. This data does not include the many additional adult and youth who have participated in presentations, workshops, field tours, or classroom projects conducted through STEP.

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

The appendices include the following program information:

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

## Tables and Figures

Table 1. Education and development activities, participation and volunteer effort by STEP district, 2011-2012. Activities were defined as those projects having at least one participant or volunteer; figures in parentheses indicate the number of Fish Eggs-to-Fry classroom incubator projects.

STEP District	Activities	Participants	Volunteers			
			Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	57 (167)	15,447	1,568	10,526	1,058	6,085
Eastern Oregon	43 (75)	7,236	0	0	324	2,382
Lower Rogue	56 (9)	3,240	9	37	272	1,583
Mid-Coast	73 (36)	5,672	22	157	481	3,131
Mid-Willamette	95 (70)	8,281	0	0	130	367
North Coast	3 (19)	1,085	0	0	1	20
North Willamette	45 (202)	8,576	0	0	104	772
Umpqua	48 (16)	5,689	242	1,824	322	3,556
Upper Rogue	26 (22)	1,809	4	4	124	358
Upper Willamette	25 (101)	4,372	5	30	44	268
STAC	13(0)	124	0	0	13	1,172
<b>Total</b>	<b>449 (717)</b>	<b>61,531</b>	<b>1,850</b>	<b>12,578</b>	<b>2,873</b>	<b>19,694</b>

Table 2. STEP inventory and monitoring activities, miles affected and surveyed and volunteer effort, 2011-2012. Activities were defined as those projects having at least one participant or volunteer.

**INVENTORY AND MONITORING**

STEP District	Activities	Miles Affected	Miles Surveyed	Volunteers			
				Youth Hours	Youth Hours	Adults	Adult Hours
Coos-Coquille	3	32	32	0	0	21	159
Eastern Oregon	11	55	32	2	12	74	1,113
Lower Rogue	8	247	17	73	236	58	1,213
Mid-Coast	13	0	1	3	100	92	1,324
Mid-Willamette	5	0	18	5	25	41	247
North Coast	1	0	13	0	0	19	365
North Willamette	1	0	30	0	0	2	70
Umpqua	10	0	3	0	0	19	946
Upper Rogue	15	9	3	1	9	42	738
Upper Willamette	9	15	15	2	16	37	764
<b>Total</b>	<b>76</b>	<b>358</b>	<b>164</b>	<b>86</b>	<b>398</b>	<b>405</b>	<b>6,939</b>

Table 3. Habitat restoration activities, miles affected and restored and volunteer effort by STEP district, 2011-2012. Activities were defined as those projects having at least one participant or volunteer.

**HABITAT**

STEP District	Activities	Miles Affected	Miles Restored	Volunteers			
				Youth Hours	Youth Hours	Adults	Adult Hours
Coos-Coquille	3	7	1	33	198	47	374
Eastern Oregon	0	0	0	0	0	0	0
Lower Rogue	11	42	2	108	222	35	154
Mid-Coast	10	152	3	0	0	58	261
Mid-Willamette	8	81	0	3	15	13	276
North Coast	5	225	0	12	10	18	110
North Willamette	24	78	0	290	1,115	74	345
Umpqua	1	0	0	0	0	2	10
Upper Rogue	9	168	73	14	44	21	250
Upper Willamette	16	66	0	2	10	35	178
<b>Total</b>	<b>87</b>	<b>819</b>	<b>78</b>	<b>462</b>	<b>1,614</b>	<b>303</b>	<b>1,958</b>

Table 4. Fish culture activities and volunteer effort by STEP district, 2011-2012. Activities were defined as those projects having at least one participant or volunteer; figures in parentheses indicate the number of Fish Eggs-to-Fry classroom incubator projects. For classroom incubation projects, this table reflects only the number of fish reared and released. Participation and volunteer efforts for the classroom incubator program were included under education and development (Table 1).

FISH CULTURE

STEP District	Number of Fish				
	Activities	Broodstock			Released
		Collected	Incubated	Reared	
Coos-Coquille	19 (167)	11,705	1,922,299	1,401,247	2,614,073
Eastern Oregon	0 (75)	0	15,000	0	11,600
Lower Rogue	5 (9)	480	135,639	83,325	126,777
Mid-Coast	8 (36)	2,080	265,233	45,665	269,034
Mid-Willamette	0 (70)	0	19,600	0	9,800
North Coast	12 (19)	363	180,900	279,648	211,683
North Willamette	15 (202)	0	86,500	610,861	685,576
Umpqua	10 (16)	491	426,339	368,936	425,200
Upper Rogue	3 (22)	0	7,050	0	4,261
Upper Willamette	2 (101)	0	10,000	0	162,253
<b>Total</b>	<b>74 (717)</b>	<b>15,119</b>	<b>3,068,560</b>	<b>2,789,682</b>	<b>4,520,257</b>

STEP District	Volunteers				Total Hours
	Youth	Youth		Adult	
		Hours	Adults		
Coos-Coquille	3,235	29,541	978	17,208	46,749
Eastern Oregon	0	0	0	0	0
Lower Rogue	55	403	120	7,793	8,196
Mid-Coast	10	100	245	11,122	11,222
Mid-Willamette	0	0	0	0	0
North Coast	166	760	679	9,545	10,305
North Willamette	3	36	85	515	551
Umpqua	365	655	204	11,476	12,131
Upper Rogue	2	14	46	368	382
Upper Willamette	35	278	92	1,080	1,358
<b>Total</b>	<b>3,871</b>	<b>31,787</b>	<b>2,449</b>	<b>59,107</b>	<b>90,894</b>

Figure 1. Number of volunteers who participated in STEP activities, 1981-2011. Values for 1981-1990 and 1993 are estimates. (Note: 1986-1990 and 1993 were updated in 2011 based on discovery of a 1993 report.)

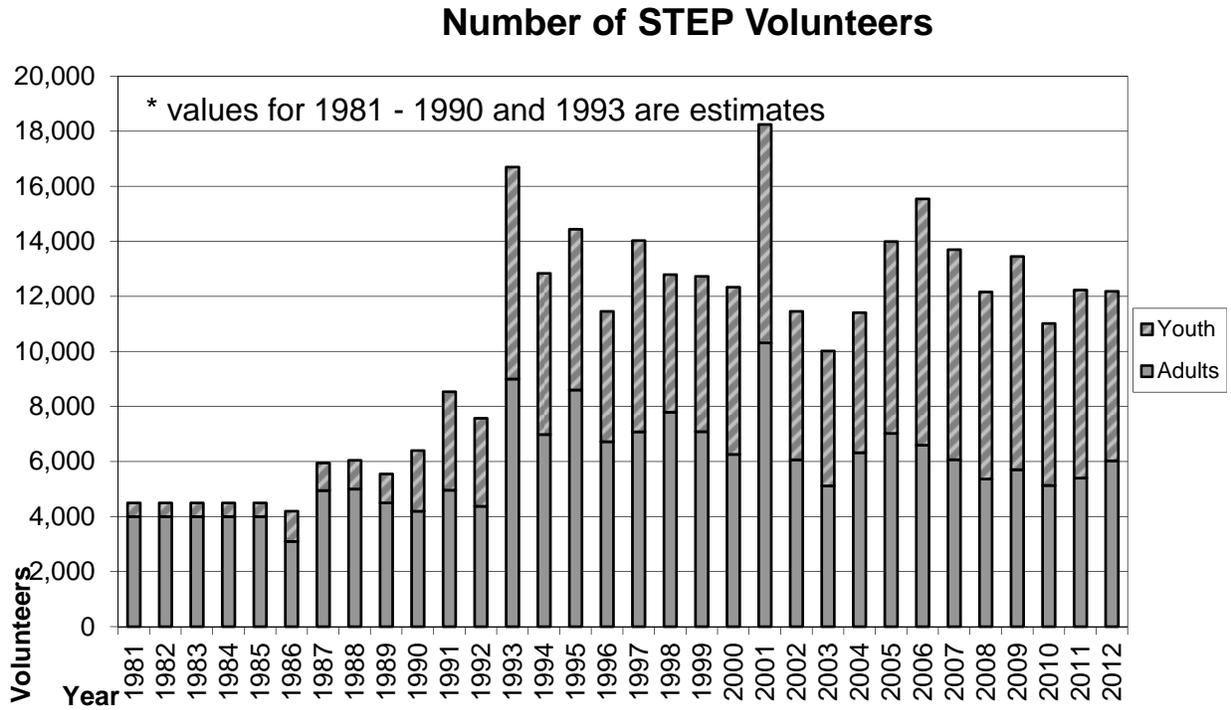
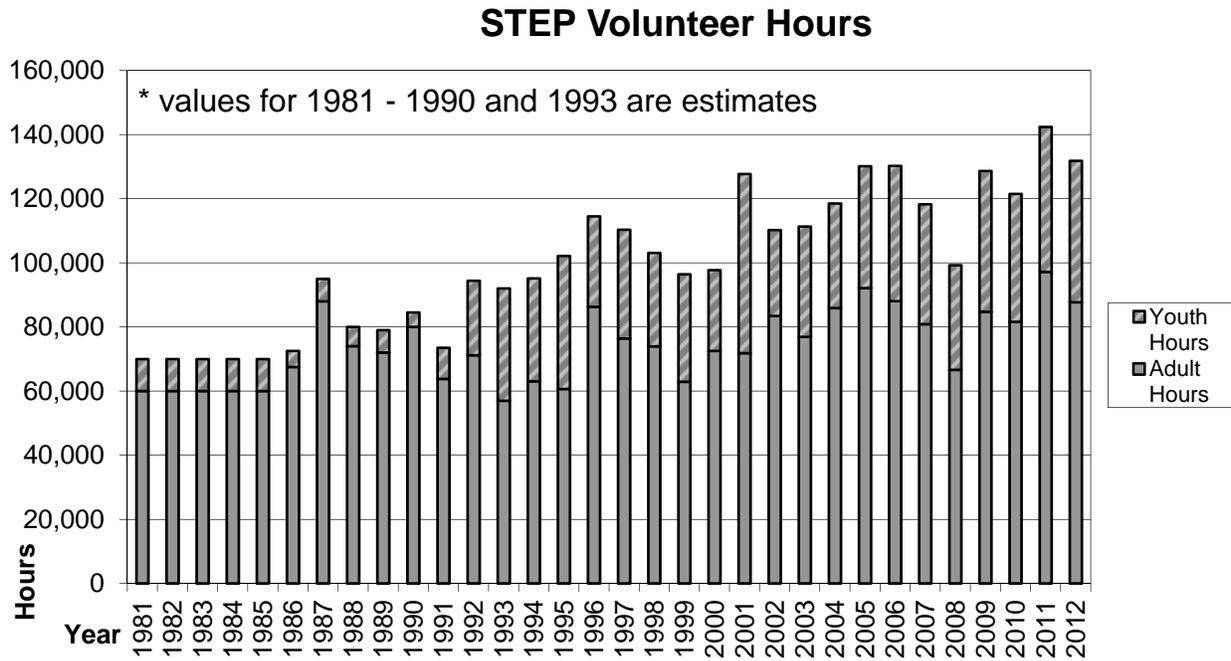


Figure 2. Hours contributed by volunteers towards STEP activities, 1981-2011. Values for 1981-1990 and 1993 are estimates. (Note: 1986-1990 and 1993 were updated in 2011 based on discovery of a 1993 report.)



## INTRODUCTION

### Education and Program Development

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

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

*FishWorks*, a quarterly newsletter, is published to highlight STEP and R&E Program activities and provides information on upcoming events and the value of projects to fish management.

### Inventory and Monitoring

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

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

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

### Habitat Improvement

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

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

Although the stream nutrient enrichment program is not strictly a STEP activity, many carcass placement projects rely heavily on the manual labor of STEP volunteers, as access to sites can be poor and carcasses must be placed in a manner that simulates natural distribution and conditions.

Carcass placement occurs in streams where populations of spawning anadromous salmonids are well below historic levels.

STEP is in a unique position in that it can bring all aspects of restoration under one program. These include pre and post project monitoring, technical guidance, equipment, labor, and access to funding and outreach.

KORC program was created to collect and recycle discarded angling line and tackle continued in 2011-2012. Currently, over 100 stations have been installed and are being maintained by volunteers within the fish districts.

## **Fish Culture**

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

Because STEP fish culture projects are an integral part of ODFW fish management programs, oversight of STEP propagation activities occurs in a variety of ways. Initially, STEP propagation proposals go through an approval process at the local, regional, and Fish Division levels within ODFW to ensure the projects will meet fish management objectives and are consistent with policies regarding potential impact to native fish populations. Specific legal limitations regarding STEP also exist that, in addition to ensuring the projects are in compliance with other applicable goals, policies, rules, and plans, limit the duration and size of projects. STEP propagation projects operate on three to five year cycles depending on the type of project and fish species involved. Once the cycle is complete, the project must be reviewed through a formal renewal process. In addition, STEP propagation projects that rear and release more than 100,000 fish must receive authorization from the 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, ODFW may choose to hold additional public meetings to present and discuss projects under review.

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

The purpose of STEP fish propagation programs is to rehabilitate or supplement populations of naturally-produced salmon and trout or augment fisheries with hatchery fish. Thousands of

volunteers have assisted Oregon's fisheries through their involvement in STEP and their donation of money, materials, equipment, and countless hours of time and labor. Without these efforts, ODFW's propagation ability would be greatly diminished in many areas. Many projects have more than a single purpose and often serve as educational opportunities to increase public understanding and stewardship of Oregon's fish resources and the aquatic environment.

STEP fish culture projects are generally grouped into the following types:

- Classroom egg incubation program projects that release unfed fry, also known as the "Fish Eggs-to-Fry" program.
- Stream hatchbox projects that release unfed fry.
- Fish rearing projects. All activities included here involve feeding and caring for fish.
- Projects that acclimate fish before release.
- Projects that collect adult broodstock.
- Miscellaneous activities including volunteer help at ODFW hatcheries for maintenance, broodstock collection, spawning, marking, stocking, and other duties, and salvage of wild fish.

## Northwest Region

### Lower Willamette STEP

Jeff Fulop, STEP Biologist

Danette Faucera, Assistant District Fish Biologist

Todd Alsbury, District Fish Biologist

Tom Murtagh, District Fish Biologist

Lower Willamette STEP covers the Department's North Willamette Watershed District (NWWD), and with the Portland metropolitan area inside its boundaries, has the largest population of any STEP district in Oregon. The large angling population presents the district with the challenge of meeting the varied needs of a broad and changing demographic. There are also numerous fish management constraints associated with conservation and recovery of native fish species and species listed under the Endangered Species Act (ESA). The district mission is to provide ongoing and improving angling opportunities, improvements to habitat for fish and wildlife, and a continuing 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 Columbia, Willamette, Sandy, Clackamas, Tualatin, Molalla, Yamhill and Pudding and their many tributaries. The varied landscape includes farmland, urban areas, forest lands, mountains and wetlands. Fish species include salmon, steelhead, a variety of trout and sturgeon. There is also a wide diversity of warm water angling opportunities with several species of warm water game fish present in the district.

Population growth along with the associated development and urban sprawl, and the ever-changing constituency continue to place considerable strain on the natural resources. District staff strives to maintain a balance between fish and wildlife protections, continued opportunities

in fishing, hunting or outdoor viewing enjoyment, while meeting the new demands on the resources associated with rapid population growth and development.

## EDUCATION AND PROGRAM DEVELOPMENT

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### Free Fishing Weekend

The Passport to Fishing event held annually for eighteen years was replaced in 2012 by a less structured fishing event at St. Louis Ponds near Woodburn. Although the event was scaled back from “Passport” attendance was still high with over 700 adults and youth enjoying the day along with about 25 volunteers and five ODFW staff. At the event, volunteers assisted participants with setting up gear, bait, angling techniques, and handling their catch. This Free Fishing Weekend event is sponsored by ODFW and jointly organized by the NWWD Volunteer Coordinator and STEP.

### Family Fishing Events

STEP coordinated and produced nine Family Fishing Events in the NWWD, continuing the efforts of getting local youth and adults actively involved and interested in fishing. With most of the people in the district residing in urban areas, holding these close-in events provides opportunities for participants of all ages to experience the outdoors while discovering that they can remain close to home.

For 2011-2012 the events were held at Canby Pond in Canby, St. Louis Pond in Gervais, Trojan Pond in Rainier, Mt Hood Community College Pond, and Sheridan Pond in Sheridan. The events attracted over 1,260 participants, many of them first-time anglers. Several hundred trophy trout in addition to legal-sized trout were stocked for the events.

Under the guidance of the STEP biologist, volunteer groups including the Association of Northwest Steelheaders (ANWS), ODFW Angler Education Instructors, and members of the angling community provided assistance in teaching kids about fishing, handling their catch and selecting the right equipment, as well as how to interact with the environment. Volunteers also assisted in setting up equipment and provided help at the registration areas. More than sixty volunteers donated over 450 hours of time helping to make these events successful.

### Fish Eggs-to-Fry Program

NWWD STEP has experienced tremendous growth in the classroom incubator program. An expanding enthusiasm and desire to implement the program into classroom curriculum continues to bring new schools to STEP as once again over 200 classrooms participated. These incubation projects hatched eggs and released nearly 80,000 unfed salmon and trout fry into a dozen different STEP-approved lakes, ponds and streams within the NWWD. Several local chapters of the ANWS, the local OSU Extension Service (4-H), Center for Research in Environmental Sciences & Technologies, and Reed College sponsored classroom incubation projects in schools around the Portland Metro Area. With the ongoing growth of the program, its implementation would not be possible without the dedication of the many volunteers. More than 30 volunteers from ANWS contributed over 250 hours and nearly 900 miles of travel to the program. This extensive 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.

## Other Outreach

STEP staff continued to write the angling recreation report for the NWWD, providing updated information to local anglers about all types of fishing opportunities in the area. This report is published weekly on the ODFW website and is one of the most popular destinations on the site.

STEP staff continued to take the lead as author and editor of the NWWD portion of the Spring Fishing Forecast and the Winter Steelhead Guide both found on the ODFW website, various online publications, and distributed to local media.

STEP staff attended monthly meetings of several local angling groups, keeping this valuable volunteer base aware of upcoming opportunities and issues. Monthly meetings also provide a venue to show appreciation for volunteer efforts.

STEP staff participated in several outreach activities by attending summer camps and visiting classrooms to assist at fishing events, and discuss STEP in the schools and career opportunities in the natural resource fields.

STEP staff represented the NWWD at the 2011 Oregon State Fair and the 2012 Sportsmen's Show providing information and updates about ODFW activities and STEP opportunities in the NWWD and around Oregon.

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## INVENTORY AND MONITORING

### Sandy River Creel Surveys

STEP, along with the Sandy Chapter of ANWS, assisted NWWD staff performing creel surveys on the Sandy River in an effort to determine catch and effort by anglers fishing for winter steelhead, spring Chinook salmon and summer steelhead. Anglers were interviewed at boat ramps and along the river banks as part of an ongoing effort to evaluate ODFW hatchery strategies on the Sandy River.

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## HABITAT IMPROVEMENT

### Stream Nutrient Enrichment Program

The 18th year of the district's stream nutrient enrichment program was completed with cooperation from the Clackamas Hatchery, Sandy River Hatchery, the United States Forest Service, and the USFWS Eagle Creek Hatchery. The carcasses are intended to mimic historic run densities of spawning Chinook and coho salmon in area streams and increase stream nutrient levels for aquatic organisms.

More than 290 youth volunteers and 70 adult volunteers contributed to the project, placing nearly 60,000 pounds of coho and Chinook salmon carcasses in the Sandy River Basin, the Clackamas River Basin, and the Yamhill Basin. Volunteers from the ANWS, students from various local schools, SOLV (Stop Oregon Litter and Vandalism), members of the Sandy River Watershed Council and Clackamas River Watershed Council, Timber Lake Job Corp, and the Confederated Tribes of the Grande Ronde assisted with the carcass distribution effort.

### Line and Tackle Collection

In an effort to expand the KORC program three new gear collection stations were installed at St. Louis Ponds during the spring of 2012, much of the work being performed by volunteers from the ANWS. These new sites will go along with four line and tackle collection stations in their

sixth year of use on the Sandy River. STEP and volunteer members of the Sandy Chapter of ANWS maintained the stations. Stations in their fourth or fifth year of use can also be found on the Clackamas River, Blue Lake Park, Herman Creek, and Salish Ponds, all maintained through volunteer efforts. Additional materials are being prepared for new stations to be installed in several popular fishing spots in the district.

## FISH CULTURE

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### Fish Acclimation Projects

Acclimation facilities have become a key component of fish release strategies in the NWWD and operation of these facilities is an important function of STEP. Releases from acclimation sites are intended to coincide with hatchery production and provide increased angling opportunities on the Willamette, Clackamas, and Sandy Rivers. Recent improvements in local fisheries can be attributed to these acclimation projects.

The Foster Creek facility continued to be a productive site for STEP. From that site 51,000 spring Chinook salmon smolts, 25,000 winter steelhead smolts, and 16,000 summer steelhead smolts were acclimated and released into the Clackamas River in the early spring of 2012. This pond is located on property owned by the Bradshaw family. Under the guidance of STEP the Bradshaw's and additional volunteers maintained the facility, performed all fish culture activities, and assisted with release.

The Clear Creek Acclimation Facility was completed and put into production in spring of 2009. Spring of 2012 marked the fourth year of releases from this site. Feeding and daily maintenance was provided by volunteers from the McLoughlin Chapter of ANWS who donated over 180 hours to this project. During the months of March and April over 145,000 spring Chinook salmon smolts were acclimated and released to provide additional returns to the extremely popular Willamette River and Clackamas River sport fisheries.

The Eagle Creek Acclimation Facility, located at Eagle Fern Park, was completed and put into production in early 2010. With funding from a Fish Restoration and Enhancement Program the Oregon Wildlife Heritage Foundation was able to build this facility on the banks of Eagle Creek a few miles up from the confluence with the Clackamas River. This site is operated in cooperation with STEP, the NWWD staff, Clackamas County Parks, and volunteers. Feeding and daily maintenance was provided by youth and adult volunteers who donated nearly 100 hours to this project, with instrumental support provided by the Clackamas County Parks Department.

The Eagle Creek Acclimation project provided for the acclimation and release of nearly 240,000 spring Chinook salmon smolts into Eagle Creek. As a major tributary of the Clackamas River these smolt releases will be instrumental in providing additional returns to the Willamette and Clackamas Rivers, as well as reintroducing a once popular spring Chinook fishery to Eagle Creek.

The Bull Run River acclimation facility saw its second year of production in 2012 at the site of the decommissioned Portland General Electric Bull Run Powerhouse. Releases of spring Chinook salmon from this site are part of a district strategy to address stray rates by giving the salmon a return destination away from the wild fish sensitive Upper Sandy Basin. The Bull Run site saw over 130,000 spring Chinook salmon smolts released in spring of 2012, with tremendous help from volunteers with the Sandy Chapter of ANWS.

## Mid-Willamette STEP

Karen Hans, STEP Biologist  
Alex Farrand, Assistant District Fish Biologist  
Steve Mamoyac, District Fish Biologist

The Mid Willamette STEP district is a geographically diverse area in the South Willamette Watershed District (SWWD) reaching across the Willamette Valley from the crest of the Coast Range east to the crest of the Cascades. The Willamette River travels the length as it flows from McKenzie River confluence downstream to the agricultural lands north of Salem. Within this area, three major river systems flow from the western slopes of the Cascades into the Willamette (North Santiam, South Santiam, and Calapooia). Another five (Glen/Gibson, 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.

In spite of the growing human population and resulting changes to the landscape the Willamette River Basin continues to support a diversity of fish. Native among these include spring Chinook salmon, winter steelhead, rainbow and cutthroat trout. Several salmonid species have also been introduced including fall Chinook salmon, coho salmon, and summer steelhead. Although the focus of STEP efforts in this area is upon the native salmonids, the program through its educational, monitoring, and habitat efforts also provides benefits to the basin's many other native fish.



*Aquatic Sampling at Adair Summer Program*

A failure to recognize the importance of watershed rather than just stream health has led to the degradation and loss of aquatic habitats across Oregon. In this area, one of the results has been federal listings under the 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 Oregon Plan. 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. The focus of STEP in this District has been therefore to involve area groups, schools and individuals in all aspects of ODFW's local fish management efforts.

Because the area's population is large and still growing, STEP must emphasize outreach and education in the Mid Willamette basin. This is achieved in-part through direct community involvement with many ODFW activities but particularly monitoring and inventory efforts and educational programs. Adult and youth participation with these projects not only demonstrates the ability that communities have to assist with the more technical needs of fish recovery but also provides the "hands on" experience that allows for increased awareness and fosters stewardship. Of special interest have been new inventories on waters that are considered "at risk" and for

which little or no fishery information exists. The data gathered has been essential to habitat protection and restoration efforts throughout the basin, especially those in the agricultural and urban areas.

## EDUCATION AND PROGRAM DEVELOPMENT

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### Technical Assistance

During this period, the STEP Biologist gave 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 watershed councils in a variety of roles including providing general information, providing technical expertise to habitat and inventory projects, assisting with volunteer training, and assisting with the development of action plans and restoration priorities. The STEP Biologist provides technical assistance to many agencies and organizations on fish related matters including the road related repair or culvert replacements in Linn, Lane, Polk and Benton Counties, Department of State Lands regulatory actions, Oregon Department of Forestry enforcement actions, and habitat restoration projects throughout the district. The STEP Biologist is a member of the Oregon Watershed Enhancement Board Region 3 Technical Review Team; the Glen Gibson Watershed Council, Long Tom Watershed Council, Calapooia Watershed Council, and Luckiamute Watershed Council's technical teams; and the Benton County Wetland and Riparian Workgroup. During the contract period the STEP Biologist attended fifteen meetings, offering technical advice and fishery perspectives on a variety of district fish issues.

### Youth Education

Many school districts in the mid-Willamette district send students to outdoor schools and this has provided the STEP Biologist with additional educational opportunities for the program. The STEP Biologist, or STEP volunteers, participated in 15 Outdoor Schools/Days and summer camp fishing clinics, and four youth angling events. The STEP Biologist also taught fish biology at the Northwest Flytiers Expo; and taught salmon biology at three Salmon Walks sponsored by the



*Kids Fishing at 4H pond.*

Oregon Wildlife Heritage Foundation and the Sierra Club; as well as Forest Expo Day, Corvallis/Philomath District Spring Field Day; and Kid's Day for Conservation. The STEP Biologist, along with volunteers from the Albany Chapter of ANWS, ODFW Angler Education Instructors, and the Senior Fishing Buddies, hosted stations on fishing and fish biology at outdoor schools and summer camps organized by the Boy Scouts, Polk County Soil and Water Conservation District, OSU Extension Service (4-H), Corvallis School District, and U.S. Forest Service. At the fishing stations, students catch trout and sunfishes, and learn about catch and release techniques. At outdoor schools with fish biology stations, students learn about fish anatomy, physiology, environment adaptations, habitat needs, and challenges posed by humans. One of the most popular activities at outdoor school is fish dissection. The students share a juvenile steelhead or salmon to dissect and learn the internal and external anatomy and physiology of the fish. The STEP Biologist also teaches watershed process to students at

outdoor schools or at their schools. Two camp facilities have in-ground “river boxes” or a portable stream table is brought to the school to show how stream systems function.

One of the STEP Biologists most popular activities are fish dissection at district area elementary, middle, and high schools. Steelhead smolts from the South Santiam Hatchery are frozen individually each year and are then used for the dissections. Students work in teams to dissect the fish. Volunteers from the ODFW’s Angler Education Program, the Albany Chapter of ANWS, and the Senior Fishing Buddies, as well as many parents and school volunteers assist with the dissection. For many students, this is their only opportunity to do a dissection on any type of animal as opposed to a plastic model or virtual computer program. The STEP biologist includes information on fish biology, such as how fish hear, see, detect odors, and osmoregulate in fresh and saltwater, as well as similarities between fish and human biology. The STEP Biologist will also dissect an adult salmon or steelhead carcass at Family Science Night events. During this reporting period, the STEP Biologist and volunteers hosted fish dissections at eleven elementary, middle school, high school classes, and Family Science Nights in the district.

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## INVENTORY AND MONITORING

### Fish Populations and Their Habitat in Streams

STEP again led the district’s small stream sampling effort with fish surveys and hoop traps. These efforts involved students from local schools and district area landowners. The primary intent of this program has been to document the presence of cutthroat trout in waters where little or no fish information exists and to get a sense of relative abundance. However, additional benefits from the program come from raised awareness for the “little brown fishes” in the area and educational opportunities for students. Information on fish presence has in-turn been used by cities, counties, watershed councils, and state and federal agencies to develop habitat restoration and protection plans as well as to identify individual project opportunities. The data gathered from traps and surveys will be used in the future to plan habitat restoration projects.

### Jane Goodall Environmental Middle School

In the Salem area, students from Jane Goodall Environmental Middle School and other local high schools assisted the STEP Biologist to sample local streams with seine nets and electroshocking. Students collected fish, macroinvertebrate, and habitat data on two reaches of Pringle Creek; one above and one below where the creek goes underground for several hundred feet. Data from the sampling efforts will be used to produce a fish presence report on Salem area streams. The report will be made available to City, County, and State Agencies, as well as citizen groups and watershed councils.



*Electroshocking as part Cutthroat Study*

### Cutthroat Trout Surveys in the Long Tom River

STEP also partnered with the Long Tom Watershed Council on a study of cutthroat trout in three Long Tom River Basin sub-watersheds. The study, funded by a Fish Restoration and Enhancement Program grant, is investigating the movements of cutthroat trout in Ferguson, Bear, and Owens Creeks by capturing fish then monitoring their movements around the basins

with array stations. Data collected will also provide information on growth, survival, and population numbers. Volunteers worked together to monitor the traps, electroshock the creeks, tag the fish, and record data for the study. Teams of three volunteers worked in all weather conditions to check the traps three days a week from January to May. In all, 35 volunteers assisted with the study.

Staff worked with volunteers from STEP, Oregon State University, and watershed councils to assist with snorkel surveys on the Calapooia River, Crabtree Creek, and the Little North Fork Santiam River.

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## HABITAT IMPROVEMENT

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### Partnerships and Technical Assistance

Because much of the land in the Mid Willamette basin is privately owned, restoration efforts rely heavily on the cooperative participation of private landowners. In addition to efforts with other state, local and federal agencies, STEP works closely with watershed councils, industry, individuals and the more traditional landowner assistance agencies to conduct stream nutrient enrichment, in-stream and riparian habitat, and fish passage restoration projects.

STEP is in a unique position in that it can bring all aspects of restoration under one program. These include pre and post project monitoring, technical guidance, equipment, labor, access to funding, and outreach. During this time period, STEP made ten site visits to offer technical and grant seeking advice to landowners throughout the district. The STEP Biologist provided technical advice to the USFWS, US Forest Service, Bureau of Land Management, as well as the Calapooia, Luckiamute, North Santiam, South Santiam, Long Tom, and Mary's River Watershed Councils on the fish passage and habitat restoration projects.

In the upper Long Tom Watershed, a significant habitat restoration project was completed in 2012. The owners of the Polyrock Ranch worked with the Long Tom Watershed Council, OWEB, the US Fish and Wildlife Service, and STEP to remove an irrigation dam on Jordon Creek. The project was part of a comprehensive plan to improve in-stream and riparian habitat along the creek. The restoration project also included upgrading or removing six culvert/ford crossing, fencing hundreds of feet of creek frontage, and planting thousands of trees and shrubs.

### Carcass Placement

The placement of salmon and steelhead carcasses into area streams for nutrient enrichment is accomplished only through the efforts of volunteers and has surprisingly become one of the more popular STEP activities. To replicate historic abundance and distribution, fish are placed in five different rivers and streams in the district. This past year, salmon and steelhead carcasses that were used as brood for programs at the South Santiam Fish Hatchery were again placed in the Santiam and Calapooia basins. Volunteers from the Albany Chapter of ANWS and STEP contributed many hours toward carcass enrichment efforts in the mid-Willamette district. Hundreds of spring Chinook salmon and summer steelhead carcasses were distributed to the South Santiam River and its tributaries. Volunteers assisting with carcass distribution included students from Sweet Home High School.

ODFW fish propagation programs in the Mid Willamette basin have evolved greatly over the last decade. With greater emphasis now placed upon the restoration and conservation of the basin's wild fish resources and the current federal listings of upper Willamette spring Chinook salmon and winter steelhead under the ESA, 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.

### Fish Eggs-to-Fry Program

The Egg to Fry Classroom Program within the District is for educational purposes only and is not intended to contribute to fish production goals. However, as an educational program, it is



*Students Releasing Fry*

without a doubt one of the most successful and cost effective ways to teach a large number of students about salmon and trout biology. In addition, students and adults participating in the program come away from the experience with a respect and appreciation for salmon and trout, and for their habitat. In the mid-Willamette STEP District, schools with students from kindergarten to high school and from urban and rural areas participate in the program. During this period, 47 classrooms raised 13,000 spring Chinook salmon and 24 schools raised 6,300 rainbow trout.

Eggs are delivered to each classroom by ODFW staff or volunteers. A brief presentation helps to prepare the students for the project and convey the importance of their effort. STEP volunteers, members of the Senior Fishing Buddies, ODFW's Angler Education Instructors, and members of the Albany Chapter of ANWS provide invaluable assistance with the classroom egg incubation program. These volunteers have recruited and "adopted" a number of schools in their local areas for which they provide information and incubation equipment, lend technical expertise, and assist during field trips to the release sites. The Senior Fishing Buddies have been particularly active in the Salem area where, with financial assistance from a STAC Mini Grant, they have placed incubators in area schools.

Spring Chinook salmon fry were released into the North Santiam, South Santiam, and Calapooia River Basins. Rainbow trout are released at a number of selected locations scattered throughout the valley including reservoirs and many local, isolated ponds. The fry stocking program in the ponds has had surprising success. One location is Pagoda Pond at the Oregon 4-H Center near Salem where hundreds of children every year participate in outdoor school and summer camp fishing programs.

## Upper Willamette STEP

Shannon Richardson, STEP Biologist  
Kelly Reis, Assistant District Fish Biologist  
Jeff Ziller, District Fish Biologist

The Upper Willamette STEP district coordinates volunteer efforts to maintain, protect, restore, and monitor native populations and the habitats of salmon and trout within the headwaters of the Willamette River. The major river systems in the district are the McKenzie, Middle Fork Willamette, and the Coast Fork Willamette. Spring Chinook salmon are the only anadromous salmonid native to the area, although a summer steelhead run has been established in the McKenzie, Middle Fork, and mainstem Willamette Rivers. Resident and/or fluvial populations of rainbow trout, cutthroat trout, and bull trout are also found within the district. Releases of hatchery spring Chinook salmon, summer steelhead, and rainbow trout are conducted in various streams and rivers within the district. In addition, rainbow, cutthroat, and brook trout are released into a number of High Cascade Lakes to provide a unique fishery that is popular among anglers. Spring Chinook salmon and bull trout are federally listed as “Threatened” under the ESA.

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

A variety of individuals and local organizations participate in STEP, including the McKenzie Flyfishers, Cascade Family Flyfishers, Emerald Empire Chapter of ANWS, Trout Unlimited, Coastal Conservation Association, McKenzie River Guides Association, Backcountry Horsemen, and three watershed councils. In addition, STEP works with industrial timber companies such as Weyerhaeuser, Guistina Land and Timber, Guistina Resources, and Rosboro Lumber on a variety of habitat improvement projects within the district. ODFW staff regularly attends meetings of these groups to exchange information between agencies and organizations, answer questions, and to recruit new volunteers. Volunteers are also recruited from area schools, universities, and a variety of youth groups.

The Upper Willamette STEP biologist would like to recognize the dedicated staff from Leaburg Hatchery, McKenzie Hatchery, Willamette Hatchery, and Dexter Hatchery for all their hard work in working with the STEP program. Hatchery staff assists STEP with many projects that could not be conducted without their help.

### EDUCATION AND PROGRAM DEVELOPMENT

#### Technical Assistance

The STEP Biologist served on the Coast Fork Willamette Watershed Council’s Technical Committee tasked with providing technical expertise for projects sponsored by the council. STEP assisted the council to obtain funding for and implement several projects in the watershed.

The STEP Biologist participated in the Cedar Creek Planning Group which was formed to bring resource agencies and landowners together to address water quality and habitat issues in Cedar Creek, a tributary to the McKenzie River. The group obtained a STEP Water Right Exemption in order to ensure sufficient in-stream flow in Cedar Creek to support aquatic life.

There is a five-year evaluation period associated with this water right exemption. Members of the group worked together with volunteers to evaluate and monitor conditions and act as an advisory group for restoration actions that occur in Cedar Creek.

The STEP biologist chaired the local Salmon Watch Steering Committee, which was formed in early 2012 to address the need for a grassroots organization and support. The Steering Committee elected to hire a part-time coordinator in partnership with McKenzie Watershed Council. With the support of the coordinator and many dedicated volunteers, this group was able to bring more than 1,300 local students into the field to learn about salmon ecology.

### Youth Education

STEP staff and volunteers hosted three Youth Angling Enhancement Program events located in Cottage Grove and Eugene. These events provided kids with the chance to check out a fishing rod, obtain instructions on casting, and to catch one of the many trout that were stocked in each of the locations. These events continue to become more popular and repeat participants are seen each year. The third event, held at Eugene's Alton Baker Park, occurred on Free Fishing Weekend in place of the event that had previously been held at the Leaburg Hatchery. The event was a huge success with approximately 600 participants.



*A proud angler with his first two fish.*

STEP staff participated in a number of Salmon Watch field trips this year at Carmen Smith Spawning Channel along the McKenzie River and Whittaker Creek. During these field trips, local students learn about salmon ecology, including lessons on macroinvertebrates, riparian zones, water quality, and salmon biology.

STEP biologist helped plan and participate in a Kid's Adventure Club event in partnership with Travel Lane County. This event served over 200 school-age children and provided them with the opportunity to cast both spinning gear and fly rods, tie their own flies, create fish-themed art projects, observe watershed function at the stream table, and see trout and salmon in the demonstration aquarium.

The Springfield district office hosted a Fisheries Division intern this summer, coordinated through the STEP biologist. The intern participated in many projects, including High Lakes stocking, High Lakes monitoring, fish sampling and restoration planning. He also had the opportunity on several occasions to cross train with wildlife staff.

### Program Outreach

STEP Biologist gave presentations to a variety of groups including the Cascade Family Flyfishers and Trout Unlimited. Talks were focused on issues regarding fish populations, habitat, and the fishery in the Upper Willamette Basin. STEP also recruited volunteers from these presentations to participate in a variety of upcoming projects. STEP staff also presented at the City of Creswell's Earth Day celebration held at Garden Lake Park.

The STEP Biologist presented a half-day program to staff at Camp Lutherwood regarding fish populations and habitats, and ways to incorporate young campers into habitat preservation and restoration activities.

STEP staff, in cooperation with volunteers, presented a paper at the poster session of this year's Oregon Chapter American Fisheries Society meeting in Eugene. The poster exhibited results of the first two years of a five-year mark-recapture study of native rainbow trout on a five-mile reach of the McKenzie River.

## INVENTORY AND MONITORING

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### Fish Surveys

STEP staff worked with volunteers to conduct minnow trap surveys of fish presence in Cedar Creek. This information will be used to examine fish distribution and to evaluate the STEP water right exemption. During this year's sampling, Chinook salmon fry and Oregon chub were captured within Cedar Creek. STEP biologist also conducted culvert assessments with staff from McKenzie Watershed Council.

STEP volunteers participated in an angler mark-recapture population estimate for rainbow trout on a five mile reach of the McKenzie River. The project was intended to determine a baseline population size (fish per mile) of rainbow and cutthroat trout following the cessation of stocking hatchery rainbow trout in the reach. STEP staff conducted training for volunteers regarding how to floy tag fish and record data.



*STEP volunteers attend a radio tracking training.*

Staff assisted the Long Tom Watershed Council with fish inventory along Amazon Creek. While Amazon Creek is a tributary to the Long Tom River, which is within the Mid Willamette management area, it was more practical from a geographic standpoint for the Upper Willamette District to perform the work. There were three hoop traps at various locations that were run largely by volunteer efforts and conducted additional electro-fishing surveys.

### High Cascade Lakes Sampling

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

### Gold Lake Trapping

Volunteers from the McKenzie Flyfishers assisted with an on-going project to monitor brook trout in Gold Lake in an effort to enhance the lake's rainbow trout fishery. Brook trout are numerous in Gold Lake, and promote decreased condition of both brook and rainbow trout. With this effort, the group sought to disrupt brook trout spawning by electro-fishing in the spawning tributaries to Gold Lake. A total of sixty fish were removed and sent to ODFW pathology. A later trapping effort in June resulted in length and weight data for 110 fish.

## HABITAT IMPROVEMENT

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### Carcass Placement

STEP staff worked with staff from the McKenzie Hatchery to out plant carcasses. Nearly 1,500 adult carcasses totaling almost 18,000 pounds were distributed into the mainstem McKenzie River and spawning tributaries. In addition, STEP volunteers out planted approximately 1,200 carcasses to Little Fall Creek in the Middle Fork Willamette basin and approximately 250 carcasses to Mosby Creek in the Coast Fork Willamette basin.

### Riparian Restoration

STEP staff, along with multiple local agencies, participated in a partnership to conduct a variety of water quality and habitat restoration projects in Cedar Creek, a tributary / side channel to the McKenzie River. This partnership is a long term effort designed to increase flows to restore native fish habitat and water quality. In addition, STEP is working with landowners to conduct riparian and in-stream habitat improvements that are intended to reduce water temperatures and improve habitat conditions for native fish and wildlife.

### Mosby Creek fish habitat enhancement

STEP staff continues to partner with Coast Fork Willamette Watershed Council on the Mosby Creek habitat enhancement project. Funds were obtained from the Oregon Watershed Enhancement Board to conduct a rapid bio-assessment within the Mosby basin; the work will occur in the spring of 2013. Temperature monitoring of Phase I construction is on-going and funds for Phase II in-stream work are tentatively in place.

## FISH CULTURE

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### High Cascade Lakes Backpack Stocking

STEP staff coordinated the bi-annual backpack and horseback stocking event for the High Cascade Lakes. Volunteers packed approximately 58,000 fingerling cutthroat and rainbow trout into 62 High Cascade Lakes. This continues to be enormously popular, and requires significant coordination from staff.



*Two young volunteers getting backpacks loaded with fish*

### Classroom Egg Incubator

Approximately 10,000 spring Chinook salmon eggs were incubated by 86 teachers in 48 different schools as part of the Classroom Incubator Program. The unfed fry were released by individual teachers in December at Alton Baker Canoe Canal in Eugene.

### McKenzie River Trout Stocking

Staff and volunteers worked with the McKenzie River Guides Association and local hatcheries to stock over thirty river miles of the McKenzie River with legal-sized rainbow trout. The guides navigate an ODFW stocking boat downriver while a volunteer nets fish into the river.

## North Coast STEP

Ron Rehn, STEP Biologist  
Robert Bradley, Assistant District Fish Biologist  
Chris Knutsen, District Fish Biologist

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

### EDUCATION AND PROGRAM DEVELOPMENT

#### Education and Outreach

Other outreach and educational activities that occurred this year included: exhibits at the Tillamook County Fair, Washington Elementary Salmon Watch, Tillamook School Salmon Watch, presentations to the North Coast Chapter of ANWS, and Tillamook County Children's Clean Water Festival. The Tillamook County Children's Clean Water Festival is a day-long event in which every fourth grader in Tillamook County participates in activities and hands-on interactive displays pertaining to overall watershed health. Over 250 students were involved in this event.

#### Fish Eggs-to-Fry Program

The North Coast STEP classroom incubator program this year involved delivering eggs and giving presentations to students in ten schools, elementary through high school, the Bay City public library, and the Tillamook Forest Center. These programs participated in the hatching and releasing of spring Chinook salmon, fall Chinook salmon, winter steelhead, and summer steelhead fry into approved streams.

#### Improvements to Fishing Access

In June of 2011, plans funded through a Fish Restoration and Enhancement Program grant were completed for the Loren's Pond Enhancement Project. This project aims to provide diverse, stable, and productive angling opportunities by improving the aesthetic quality, and adding features such as restrooms, picnic tables, ADA access points, and improving angler access at the Loren's Pond/Drift access site along the Trask River. The STEP program assisted the Tillamook

Bay Watershed Council in securing another grant to implement the design beginning spring of 2012. The project is currently under construction and is scheduled for completion June 2013.



*Replacement Lake Lytle Fishing Dock*

The North Coast STEP Program assisted the Rockaway Beach Lions & Lioness Clubs with a project to replace the fishing dock on Lake Lytle. This dock was constructed and installed on Lake Lytle by ODFW in 1988 to allow angler access to open water beyond shoreline vegetation, and is operated under a City of Rockaway Beach Conditional Use Permit with ODFW. Lake Lytle is located a couple of miles north of Rockaway Beach along Hwy 101, and since its construction, the dock sees almost daily use from late winter through fall. Through several years of use and

winter storms, the dock has been repaired on a number of occasions and now must be replaced. The Rockaway Beach Lions & Lioness Clubs and NCWD STEP program secured an R&E Grant and the project was completed spring of 2012.

### Family Fishing Events

During this reporting period, 616 people participated in North Coast Watershed District (NCWD) Family Fishing Events and other organized fishing events. The Tualatin Chapter of ANWS assisted the NCWD STEP program in providing guidance in basic fishing skills at these events.



*Volunteer with youth at Hebo Lake.*

A Disabled Angler Fishing Day also occurred in conjunction with Camp Rosenbaum, the YMCA, and the Tillamook Anglers. Individuals from across the region come to Camp Rosenbaum and enjoy a day of fishing, fun, and a BBQ. Approximately 325 people with disabilities participated in this year's event.

## INVENTORY AND MONITORING

### Temperature Monitoring

The Salmonberry STEP Monitoring Project continues to provide valuable data through winter steelhead spawning surveys and temperature and macroinvertebrate monitoring on the Salmonberry River. This information is utilized by ODFW and many other resource groups and agencies. Headed by Ian Fergusson, the Salmonberry STEP Monitoring Project has utilized volunteers from AmeriCorps, Clark-Skamania Flyfishers, Native Fish Society, Northwest Steelheaders, Oregon Trout, Rainland Flycasters, Sierra Club, and Trout Unlimited since 1993 to carry out these monitoring projects.

## Nehalem River Radio Telemetry Study

In December 2011 a radio telemetry project to determine baseline migration characteristics of adult hatchery and wild steelhead returning to the North Fork Nehalem River began. This project is an attempt to improve the winter steelhead sport fishery in the lower North Fork Nehalem and increase angler catch rates of hatchery fish. The project will consist of a four to five-year study (depending on interim results) to evaluate the North Fork Nehalem winter steelhead fishery. The objectives are to use radio telemetry to describe general migratory behavior of adult wild and hatchery-origin winter steelhead, and evaluate the relationships between hatchery steelhead juvenile release location and subsequent adult catch by sport anglers. Stray rates relative to release location will also be documented where possible.

## HABITAT IMPROVEMENT

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### Stream Nutrient Enrichment

As part of the ODFW stream nutrient enrichment program the STEP Biologist and other NCWD staff directed and assisted volunteers in the distribution of over 137,462 pounds of fish carcasses into 222 miles of North Coast rivers and streams from the Little Nestucca to the lower Columbia River tributaries to benefit salmonids and other species.

## FISH CULTURE

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### Volunteer Hatchery Programs

The Tillamook Anglers continue to operate Whiskey Creek Volunteer Hatchery, releasing approximately 100,881 spring Chinook salmon smolts and an additional 99,000 fall Chinook salmon fry into the Wilson and Trask rivers. The Nestucca Anglers also continue to operate Rhoades Pond, rearing 67,306 fall Chinook salmon smolts for release into Three Rivers and the Nestucca River. This year, the Wild Winter Steelhead Broodstock Collection Programs continued on the Nestucca and Wilson Rivers. Over sixty volunteer anglers participated in these programs, collecting over 230 wild winter steelhead to be used as broodstock by ODFW hatcheries.

### High School Hatcheries

Astoria High School's hatchery program released 34,750 coho salmon and 19,485 Chinook salmon presmolts into Young's Bay. Warrenton High School's program released 5,623 coho salmon, 7,936 Chinook salmon, and 350 winter steelhead presmolts into Skipanon River.



*Installing new lining in Rhoades Pond.*

### Rhoades Pond Upgrades

Nestucca Anglers obtained funding through an R&E grant in August of 2011 to make much-needed repairs to the facility. The pond liner was damaged during a flood event several years ago. In addition, the outlet structure is in overall poor shape and due for a total replacement (this structure is from the original 1976 construction). In addition, the intake at the river and supply line needs replacement. Total project cost is estimated at \$90,000 and is scheduled for completion spring of 2013.

## Mid-Coast STEP

Christine Clapp, STEP Biologist  
John Spangler, Assistant District Fish Biologist  
Derek Wilson, Assistant District Fish Biologist  
Bob Buckman, District Fish Biologist

The Mid Coast District includes coastal watersheds from the Salmon River (Cascade Head) to Tahkenitch Lake, extending from headwater streams on the western slope of the Coast Range to their estuaries. This includes several large rivers including the Salmon, Siletz, Yaquina, Alsea, and Siuslaw. Direct ocean tributaries such as the Yachats River and Beaver, Big, Tenmile, and Cummins Creeks also support Mid Coast salmonid populations. Siltcoos and Tahkenitch Lakes are two large coastal lakes in the southern Mid Coast that are especially important for coastal Coho salmon. In addition to Coho salmon, Mid Coast waters support populations of spring and fall Chinook salmon, summer and winter steelhead, Chum salmon, cutthroat trout, and other native non-game fishes.

Christine Clapp has lead responsibility for STEP program activities in the Mid Coast, and John Spangler performs STEP duties in the Siuslaw basin. The Mid Coast program works with local community members from various volunteer groups on a diverse range of projects focused on fisheries management and conservation. Mid Coast STEP volunteer groups include the Depoe Bay Salmon Enhancement Commission, Florence STEP, Longview Hills Fishing Club, Central Coast Fly Fishers, the OSU Fish and Wildlife Department, and the ANWS.

Education and outreach is a central part of the Mid Coast program and will become more important as population growth on the Oregon Coast continues and pressure on the region's natural resources increases. Inventory and monitoring of Mid Coast fish populations through STEP includes the operation of eight fish traps and volunteer assistance with spawning surveys. Habitat restoration is also an essential focus of the Mid Coast STEP, fostering collaboration between landowners, watershed councils, interest groups, fishing clubs, and volunteers. The Mid Coast also contains one of the oldest STEP propagation programs in the state, and fish culture continues to attract volunteers and provide an additional education component to the Mid Coast program.

### EDUCATION AND PROGRAM DEVELOPMENT

#### Fish Eggs-to-Fry Program

During the 2011-2012 school year, the Fish Eggs-to-Fry classroom incubator program was active at the Beverly Beach Visitor's Center, Neighbors for Kids After-School Program, and in 39



*Students learning about aquatic food webs and steelhead habitat prior to fry release*

classrooms (preschool-12), representing eleven schools in Lincoln and Lane counties. Biologists and volunteers used the Fish Eggs-to-Fry program to teach students about salmon and trout life-cycles, habitat requirements and good natural resource stewardship. Conducting the program includes training assistants, providing and maintaining equipment, delivering eggs, providing presentations and field trips, and coordinating with hatchery staff.

The program includes an introductory classroom presentation upon egg delivery, a habitat requirements and restoration goal presentation after incubation, and a field trip for fry release. Adult steelhead dissections are also provided to add a comparative, hands-on approach to understanding salmonids and their habitat requirements by learning about their anatomy and physiology. For the first time on the Mid Coast, a high school intern mentored four of the third grade classrooms that participated in the Fish Eggs-to-Fry Program.

### Education

Mid Coast biologists and volunteers offered additional educational opportunities to many children within the Lincoln and Siuslaw School Districts, including classroom dissections, after-school program activities, and support for the Florence Stream Team. Salmon biology and aquatic ecology were also taught at several outdoor schools, after-school programs, and fifth grade field trips in Lincoln County.

Mid Coast STEP also partnered with the Hatfield Marine Science Center for several of their summer Sea Camp programs, as well as education days with eighth graders from the Lincoln County School District. In addition to fish dissections, Mid Coast STEP led an estuary seining trip in Yaquina Bay for camp participants to learn about juvenile fishes. Participants in the Fisheries Investigation Sea Camp also spent a day at the Siletz Falls fish trap learning about adult salmonid identification, fisheries management, aquatic insects, food webs, and salmonid biology.



*Mid Coast STEP volunteers leading a steelhead dissection*

Five Oregon State University students were also mentored as ODFW interns, assisting with trap operations and learning about fisheries management while gaining hands-on experience in a wide variety of district activities. The Mid Coast STEP biologist also participated in various public meetings and presented at volunteer meetings addressing Mid Coast issues and volunteer opportunities. Trap operation training was also held at South Fork Schooner Creek for members of the Longview Hills Fishing Club who operate this trap twice per week.

The Mid Coast STEP biologist received STAC mini-grants to develop youth fishing libraries and an aquatic science reference library on the Mid Coast. Four youth fishing libraries were installed throughout Lincoln County to provide fishing poles and cast practice poles for kids ages three to seventeen to check out for two weeks at a time. The aquatic science reference library contains books about fish biology and ecology, watershed function, stream hydrology and ecology, and fish and macroinvertebrate identification to use for ODFW and Lincoln County School District education programs, and to loan to volunteers who are interested in learning more about freshwater science and salmonids.

## Family Fishing Events



*Participants at a Family Fishing Event.*

Volunteers led five successful family fishing events in the Mid Coast at Olalla Reservoir, Eckman Lake, Big Creek Reservoir, Cleawox Lake, and at the Lhuuke Illahee Fish Hatchery near Siletz. Additional youth angling events were offered at the Salmon River Hatchery and at Thissell Pond by Alsea Hatchery staff and volunteers.

## Creeks and Kids

The 24<sup>th</sup> annual Creeks and Kids Workshop took place this year to train K-12 teachers how to teach watershed education. Participants learned how to integrate Stream Scene, Project WET and Project WILD Aquatic activities into their curriculum to meet state standards while educating their students about watershed health and aquatic ecosystems. The Mid Coast STEP biologist taught the aquatic ecology/macroinvertebrate focus group during the week and is working to expand the Creeks and Kids program to Lincoln County. Teachers attended from Prineville, Bend, Portland, and schools throughout the Willamette Valley.

## INVENTORY AND MONITORING

### Population Monitoring

Volunteers helped monitor fish populations at several fish traps including South Fork Schooner Creek, Palmer Creek, and Siletz Falls in the Siletz basin, the Bohannon fish trap on Drift Creek in the Alsea basin, Munsel Creek, Green Creek, and Whittaker Creek in the Siuslaw basin, and Little Woahink Creek trap in the Siltcoos basin. District staff coordinated, trained and assisted volunteers in fish trap operations including correct fish handling, species and gender identification, accurate data recording, and safety procedures.

Volunteers organized all trap operations on South Fork Schooner Creek and assisted with various trap maintenance projects throughout the season. These trap operations provide essential information on fish returns for district management.

Five Oregon State University (OSU) interns were also hired and trained to assist with trap operations on the North Fork Alsea River, Siletz River, Palmer Creek, and Drift Creek. In addition, interns assisted with broodstock collection, snorkel surveys, estuary seining, and family fishing events. District volunteers and OSU interns also assisted ODFW staff with spawning surveys in the Siletz and Alsea basins, and the Depoe Bay Salmon Enhancement Commission completed spawning surveys on North Depoe Bay Creek.



*Fisheries Investigation Sea Camp participants operating the Siletz Falls fish trap*

## HABITAT IMPROVEMENT

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### Habitat Restoration

STEP volunteers maintained 45 SOLV and 15 monofilament line recycling stations throughout the year, which also involved picking up litter at popular fishing sites. STEP volunteers organized beach clean-ups, helped ODFW staff remove dock debris along Alsea Bay, and restored access and removed pressure treated wood debris from South Fork Schooner Creek. Volunteers continue to help maintain restored riparian habitat within the Tami Wagner Wildlife Area on the Yachats River by participating in the wildlife staff's annual work party. The local STEP biologist also completed a large wood restoration project on Cougar Creek.

### Nutrient Enrichment

As part of the ODFW stream nutrient enrichment program, biologists directed and assisted volunteers in the distribution of over 22,063 pounds of fish carcasses into 72 miles of Mid Coast streams.

## FISH CULTURE

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### Broodstock Collection



*Mid Coast STEP volunteers trying to shut down the Siletz Falls fish trap head gate during a winter storm*

This year wild winter steelhead broodstock collection programs on the Alsea and Siletz Rivers were supported by 36 volunteer anglers. Wild winter steelhead are spawned at the Alsea Hatchery to enhance smolt stocking in these rivers. The hatchery winter steelhead program on the Siuslaw River was also supported by over 96 volunteers. STEP volunteers collect winter steelhead for broodstock at Green Creek, Whittaker Creek, and Letz Creek in the Siuslaw basin. The Florence STEP group also spawned Coho salmon at the Munsel Creek trap to use as broodstock for a small educational program at the Munsel Creek hatchery.

### Fish Acclimation Projects

Mid Coast biologists provided coordination, technical support, and assistance to over 100 volunteers from the Florence STEP Group and the Emerald Empire Chapter of ANWS to operate the Siuslaw River winter steelhead hatchery program. Volunteers operated adult capture facilities, spawned fish, and reared eggs to the eyed staged. Mid Coast volunteers also assisted with winter steelhead smolt acclimation projects. Trapping and acclimation sites are located at Palmer Creek, Whittaker Creek, Green Creek, Munsel Creek and Letz Creek. The Florence STEP group acclimated winter steelhead smolts at Green Creek and Whittaker Creek. The Emerald Empire Chapter of ANWS reared an estimated 15,000 winter steelhead smolts for release from the Letz Creek facility. Longview Hills Fishing Club and Central Coast Fly Fishers also helped operate an acclimation site at Palmer Creek in the Siletz basin for approximately 50,000 winter steelhead smolts.

### North Depoe Bay Creek

The Depoe Bay Salmon Enhancement Commission operated an educational Coho salmon hatchbox project with 20,000 eggs from the Trask Hatchery. Eggs were incubated in two hatchboxes along North Depoe Bay Creek and then transported to North Depoe Bay Reservoir where they rear over winter prior to release. This program is supported by the community, and youth from the Neighbors for Kids after-school program by assisting with the daily care and operation.

### Munsel Creek Hatchery

Volunteers from the Florence STEP group operated an egg incubation facility on Munsel Creek to provide eyed eggs for the Siuslaw River winter steelhead program. Green eggs were collected from broodstock captured at Green Creek and Whittaker Creek and taken to the Munsel Creek Hatchery. Volunteers incubated approximately 192,000 eggs to provide enough eyed eggs for 85,000 smolts and twenty classroom incubators. In addition to steelhead, approximately 10,000 Coho salmon were incubated, reared, fin-clipped, and released from the Munsel Creek Hatchery.

## **Southwest Region**

### **Umpqua STEP**

Greg Huchko, STEP Biologist  
Holly Huchko, Assistant District Fish Biologist  
Laura Jackson, District Fish Biologist

The Umpqua Watershed and STEP area encompasses Douglas County and extends from Diamond Lake in the high 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, and is the second largest coastal watershed in Oregon. About 90 percent of the land is forested and approximately 51 percent is publicly owned. The area is home to more than 100,000 people with Roseburg having the largest population of more than 20,000.

The Umpqua Basin supports runs of coho salmon, spring 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 reservoirs that are stocked with trout and support warm water fish. STEP volunteer efforts range from educational projects and assistance with high lakes stocking to enhancing winter steelhead and fall Chinook salmon fisheries.

The Umpqua Watershed had another successful year with volunteers donating 20,298 hours. The program completed and/or developed seventy projects this year and reached over 3,000 people with its public outreach efforts.

### **EDUCATION AND PROGRAM DEVELOPMENT**

The Umpqua STEP biologist helped coordinate 25 different educational events that reached 3,657 youth and 1,524 adults. This included six Free Fishing Day events that occurred in Douglas County, sixteen classroom incubators projects, as well as salmonid life cycle classes and angler education programs.

### Eastwood Elementary Outdoor Days

The STEP biologist worked with partners in the Eastwood Regional Education Committee to further enhance the Eastwood Elementary Outdoor Days. This program focuses on water-cycles, food webs, macro invertebrates, Native American culture, and fish life-cycles. The curriculum for each topic was also summarized in a fourth grade level passport that included puzzles, word searches, fill in the blanks, or drawings to further explain the topic. Each child attending the field event received a passport and a string for a necklace. At the conclusion of each forty-minute time frame, the child's passport was stamped and they received a bead for their necklace before moving to the next station.

### Angler Education

The STEP biologist also worked with US Forest Service and other state, federal and private organizations during the TSALILA Festival in Reedsport. This year's event featured identification of native and non-native fish of the Umpqua River as well as game fish and non-game fish. Each session was finished with a game called "Fish On" to help promote fishing and angling safety in which students cast fishing lines at fish targets. Other educational programs completed this year included the Glide Forestry Tour, Creek Days in Myrtle Creek, and multiple YMCA events.

Angler education programs took place at Bowman's Pond, Herbert's Pond, and the Roseburg YMCA. These programs focused on knot tying, identifying various game and non-game fish, and how to use different types of fishing gear.

### Canyonville Education Events

The Canyonville acclimation site had over 600 students and 60 adults attend the releasing, life cycle, and fin clipping seminars. This included four different schools from southern Douglas County. There were over 80 volunteers with five stations for the three days of winter steelhead releasing. These different stations included the following subjects: anatomy, health condition, trap and ladder operation, aquatic life, habitat, and fishing/boater safety that were all taught by volunteers. The STEP biologist did hands-on weighing, measuring, and smolt condition data collection with the kids.

### Nichols Park Boat Ramp



*Nichols Park Boat Ramp, opened fall 2012*

The Nichols Park boat ramp project located on the South Umpqua in Winston was completed this past fall. This will open up over 11 miles of river access to anglers for winter steelhead and smallmouth bass. The Umpqua Fishermen Association (UFA) is working on a possible phase II that will involve an acclimation site as well as an educational outreach center.

### Additional developments

The classroom incubator program will be expanding in cooperation with the Partnership for Umpqua Rivers.

The Umpqua STEP biologist revised and updated the "50 Places to Fish within 60 Minutes of Roseburg" pamphlet and map. These pamphlets have been available to the public via the Roseburg ODFW office as well as the Roseburg Visitors Center and various outdoor stores in

town. Last year 5,000 copies were distributed and there are plans to increase that number to 10,000 copies this spring. A large map showing these locations has been posted at Winchester Dam, where nearly 70,000 people visit every year.

Another project that was developed was the partnership between ODFW, the UFA, and the Douglas County Food Bank. Hatchery coho adults collected from Cow Creek at the Galesville trap that are considered excess and not needed for broodstock were taken to the food bank. These fish were distributed to those in need throughout the county and were a welcome meal to those families and individuals that received them last year. This program was successful and will be continued this year.

The Umpqua Fishermen Association received a grant from the Cow Creek Tribe for \$2,000 to help purchase fishing gear and food for free fishing day. Since the 1980's Free Fishing Day has been one of our biggest events and gets local organizations to work together to help educate kids.

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## INVENTORY AND MONITORING

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The STEP biologist coordinated with volunteers and staff in monitoring steelhead, coho salmon, and fall Chinook salmon at various trapping locations throughout the district. This data is used during regulation proposal reviews as well as propagation proposals.

### High Lakes Surveys

Three high lakes in the district were surveyed this year. This data is used to analyze the stocking strategies for the high lakes. Multiple volunteers helped with this project and we plan to continue these efforts into the future.

### Fall Chinook Salmon Spawning Surveys

Further monitoring efforts for fall Chinook salmon included incorporating volunteers during spawning ground surveys in lower Umpqua tributaries and the Calapooya. These surveys provide information regarding both wild returning fish and hatchery origin fish distribution and abundance.

### Creel Log Books

Creel log books were given to several fishing guides on the Umpqua River to help collect fall Chinook salmon catch rates and effort of anglers. This will assist the district in evaluating the hatchery fall Chinook salmon STEP program.

### Gardner Lake

Gardiner-Reedsport-Winchester Bay (GRWB) STEP is going to set up a water monitor system on Gardner Lake to help improve water quality going into the hatch house. Water temperature, Ph, dissolved oxygen and algae will be monitored by Douglas Soil and Water Conservation and Oregon State University research staff.

## Diamond Lake

The STEP biologist and Diamond Lake staff assisted with the effort to remove and monitor the shiner population in Diamond Lake. This includes the removal of over 100,000 shiners and the monitoring of the lake's food availability.

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## HABITAT IMPROVEMENT

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### Carcass Placement

Gardiner-Reedsport-Winchester Bay (GRWB) STEP continued its participation in the nutrient enrichment program by placing carcasses from spawning events at the hatchery into the North Fork of the Smith River.

### Camp Creek

The in stream design work has been completed for additional restoration projects to take place in Camp Creek. This habitat project would help fall Chinook salmon, Coho salmon, winter steelhead, and cutthroat trout. Camp Creek is a tributary to the lower Umpqua River. The STEP Program, GRWB volunteers and PUR will be working together to complete the project.

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## FISH CULTURE

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Umpqua Fishermen Association volunteers will be releasing nearly 237,000 pre-smolt fall Chinook salmon into Calapooya Creek in the spring. They also assisted with broodstock collection of coho salmon and the release of 60,000 coho salmon smolts. Gardiner-Reedsport-Winchester Bay (GRWB) STEP volunteers will release approximately 80,000 pre-smolt fall Chinook salmon into Winchester Bay in the spring.

Umpqua Fishermen Association installed a new water line source to their rearing ponds that will increase winter survival during adverse water conditions as well as using the old water source as a backup.

### Marking

With the use of volunteers and school students the UFA was able to adipose fin clip 95% of their Chinook using volunteer labor.

The Gardiner-Reedsport-Winchester Bay (GRWB) STEP also utilized student volunteers to assist with fin clipping nearly 55,000 pre-smolts were marked during a one week period. This was a very educational experience for the students and plans have been made for the schools to be involved again next year. The school is also thinking about starting a Junior STEP Program in the future. The hatch house installed a new chiller and filtration system to help improve water quality. This should help decrease mortality rates that have increased over the past several years.

### Acclimation and Release

Winter steelhead acclimations and releases took place this past year at Eastwood Elementary, Canyon Creek acclimation site, and the Seven Feather acclimation site. These events not only contribute additional winter steelhead and therefore angling opportunities in the basin, but also provide a great educational experience for local students and adults. Over 108,000 winter steelhead were released in 2012.

## High Lakes Stocking



*High Lake Stocking Volunteers*

The STEP program also coordinated the district's High Lakes stocking using volunteers from Oregon Equestrian Trails. Volunteers stocked 11 lakes in the district with over 14,000 brook trout and 3,000 rainbows. Over 35 volunteers assisted with this year's stocking and again the project was very successful.

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

Gary Vonderohe, STEP Biologist  
Tom Rumreich, STEP Biologist  
Chris Claire, Assistant District Fish Biologist  
Mike Gray, District Fish Biologist

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

The area program emphasizes citizen involvement with efforts to protect and enhance salmon, steelhead, and trout.

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

## **EDUCATION AND PROGRAM DEVELOPMENT**

### Millicoma Interpretive Center

The Millicoma Interpretive Center (MIC) continues to be a popular place for student groups and others to come and learn more about the life histories of salmon and steelhead. This past year the facility received its largest number of visitors since the facility began. Visiting student groups and the general public get a unique "hands-on" learning experience. Groups are involved with the collection of broodstock, spawning, egg and fry care, and fin marking. Most of the student groups get an opportunity to incubate eggs in their classroom aquaria. This forges a great connection between their activities at MIC and the life cycle of salmon.

For the fifth year, campers staying at the former Western Rivers Girl Scout Camp near the MIC devoted an entire week to the continued construction of a forest interpretive trail. Trail

construction was initiated as an “Eagle Scout Project” in the mid 1990’s. The trail was constructed by dozens of school age children. The expansion of the trail system has been a goal for over a decade. This year the youths constructed a loop in the trail. The trail has already been used extensively by visiting school groups. The trail features a good example of a riparian corridor and a diverse forest. The camping organizations involved in the construction of the trail have adopted the project and plan to work on extending the trail every summer for the next several years. This year students from North Bend High School devoted a day to working on upgrading the trail system.

Funds from an R&E grant along with many other donations have been dedicated to the repair and upgrades at the Millicoma Interpretive Center. When the facility was constructed in the early 1990’s, volunteers had limited funding available to them to use in the construction of the facility. Many of the buildings have been degraded over time because of the very wet environment. The STEP biologist, along with students and volunteers, has been conducting the work for several months. The project is projected to be completed in 2013.

#### Family Fishing Events

ODFW hatcheries provided 1,900 legal rainbow trout for stocking in the vacant steelhead acclimation pond at Millicoma Interpretive Center. This has been a huge success with hundreds of children participating in the catching of these trout. Many children caught their very first fish this past year. Volunteers and hosts passed out many first fish certificates again this past spring.

A separate event was held at Empire Lake in the City of Coos Bay as part of the annual Child Advocacy Center’s Family Fun Day. For a second year, 3,000 rainbow trout were stocked into the lake for the event. This year over 525 trout were caught with a total of 339 children participating this year. Lunch was provided to all of the participants by Northwest Natural Gas. There were also many other family friendly activities available that day.

On Eel Lake, the STEP biologists and volunteers held a fishing clinic on Free Fishing Weekend for the twelfth straight year. This event features a course that children can learn everything from knot tying to fish identification. Once the children complete the course they are allowed to fish in the net pen. The trout are fed by the volunteers for approximately one month prior to the event. Volunteers with the Eel/Tenmile STEP Association rear 1,000 trout from a local hatchery in a net pen in Eel Lake specifically for the clinic. A total of 310 children again participated in this year’s event at Eel Lake.

The STEP biologist facilitated the stocking of legal rainbow trout into portable fire suppression ponds for children to catch as part of five events. The first event was part of the North Bend Jubilee and a trout pond was placed in the Pony Village Mall in North Bend. This year an extensive angling clinic was added to the event in the mall. Children were taught knot tying, how to fish local lakes, spinner making, casting, and other needed angling skills. A second trout pond, in partnership with Safeway, was set up in Pony Village as part of a prostate cancer awareness event. Mingus Park in Coos Bay was the location of the third trout fishing event. This pond was a partnership with the Coos Bay Fire Department and part of the city’s annual Fourth of July celebration. Ponds were also set up as part of the annual Charleston Seafood Festival.

Fishing poles and gear were provided to the children at these events. A total of 2,319 children participated in the angling in the trout ponds. Most children caught fish to take home. A total of

330 fishing rods and reels were given to some of the children that participated in these events. The hope is to continue the trout ponds for many years to come. Local fire departments from North Bend, Coos Bay, Charleston, and the Coos Forest Protection District were instrumental in the setup of these ponds. Nearly 450 first fish certificates were given out as part of these events.

For the third year, the STEP biologist and a small group of volunteers conducted a one day fly fishing workshop at LaVerne Park on the North Fork of the Coquille River. There were 20 adults that participated in the workshop. Participants learned many things like how to tie fishing knots, how to identify aquatic insects, and how to cast a fly rod.

#### Coquille High School Educational Hatchery

Volunteers and students continued to work on the Coquille High School Educational Hatchery during the year. New informational and educational displays were installed at the site. During the winter, the high school students continue to be teachers themselves in what is now known to be “Tour Tuesday.” Elementary school classes devote an afternoon learning salmon life histories and their struggle to survive. The high school students spawn and incubate salmon and steelhead eggs at the station which provides a wonderful “hands-on” experience for the younger students. This is a wonderful time to see the older students impart resource awareness and education to these younger students. For the adult volunteers and teachers, it is a time to sit back and enjoy.

At Coquille High School this past spring, for the fifth year in a row, hundreds of students were involved with the marking of the fall Chinook juveniles that are spawned and raised at the facility. This was a great “hands on” opportunity for students to take part in marking these fish so that they could be better monitored as they migrate to the ocean and back again to the facility. Many students said that marking the fish was the highlight of their entire school year.

#### Morgan Creek Hatchery

The reconstruction of the educational and fish cultural facilities continued at Morgan Creek Hatchery during the report period. Work continued on a second building. This new building will provide 2,800 square feet of a covered work area. The main components of the new building are a large spawning/fin-clipping area and a wader room for the participating students. Youths in the Upward Bound Program continue to be important contributors to the construction of this building. The building was designed around the coded-wire-tagging trailer that is at the facility for one week each spring. The new building is large enough to comfortably have up to three classes, or nearly 90 volunteers, marking fish at the same time. This new building has become an important educational and fish cultural tool at the facility.

#### Noble Creek Hatchery

Volunteers with Coos River STEP continued to use the four deep matrix hatchboxes that they purchased several years ago, to incubate salmon at the hatchery until they are ready to be fed. These deep matrix hatchboxes replaced most of the older style hatchboxes at Noble Creek Hatchery. Coos River STEP volunteers also purchased and installed automatic fish feeders. These feeders automatically dispense fish food once an hour throughout the day. These feeders made a great improvement in the way we feed juvenile Chinook at Noble Creek Hatchery.

## Other Outreach

For the third year, STEP has partnered with the Coquille Indian Tribe to operate a booth at the annual Salmon Celebration. The booth had a live adult Chinook salmon in a large aquarium, juvenile Chinook salmon, demonstrations on reading scales, extracting coded-wire-tags, decoding the tags, games and contests, as well as many informational displays. This booth was a huge success as over 700 visitors took time to learn more about salmon. Over 25 volunteers staffed the booth for the weekend. Many of the visitors to the booth left with a greater appreciation about salmon and salmon management.

## INVENTORY AND MONITORING

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### Habitat Surveys

Throughout the district, habitat for salmonids has been compromised by culverts that block passage for adult and juvenile fish. Volunteers have expended a considerable amount of time and effort to correct these passage problems. More work is needed in the form of habitat surveys that identify problem culverts and subsequent follow-up corrections. Each stream within the three major basins has specific habitat limitations. Only detailed surveys can identify the problems so that they can be corrected.

### Monitoring

The most important monitoring operation that volunteers are involved with each year is the fall Chinook salmon recruitment surveys that are conducted in the Coos and Coquille estuaries. In the Coos River Basin volunteers release in excess of two million Chinook salmon juveniles annually. With the large numbers of fish released, an evaluation of the impacts on wild Chinook salmon is needed. One way to measure the impacts is to monitor the growth and abundance of Chinook salmon in the estuary.



*Coquille High students seine for juvenile salmon.*

With the number of juvenile Chinook salmon collected in the Coos Basin, the District STEP Biologist has been estimating the total number of juvenile Chinook in the basin using a mark/recapture estimate. This monitoring begins in the spring and continues through the fall of the year. Volunteers in the STEP program play a key role with assistance conducting surveys for this long-term monitoring project.

This past summer the District STEP Biologists continued to monitor the hatchery winter steelhead juveniles in the Coos and Coquille basins with the help of volunteers. The sampling occurred near the winter steelhead acclimation sites looking for hatchery steelhead that have residualized and are not migrating to the ocean this year. This monitoring will help district staff manage the hatchery steelhead program in both basins by documenting the number of hatchery steelhead found during surveys each year. This information may be used to help decide if changes are necessary to the hatchery steelhead program to reduce impacts to native fish.

## HABITAT IMPROVEMENT

### Habitat Restoration

Habitat restoration projects are an important component of the volunteer projects in the district. The largest habitat improvement project conducted by volunteers, mostly hosts at the facility, involved the planting of hundreds of trees along Morgan Creek and a newly restored wetland area nearby. Douglas Fir and Western Red Cedar were the only trees planted this year at the location. Prior to planting, about one-half acre of blackberries were removed.



*Planting trees on stream bank.*

This year a local nursery donated many large potted trees that are valued at over \$3,000. Many of the trees donated and planted at Morgan Creek were over fourteen feet high.

District STEP biologist designed and secured funding for a spawning gravel augmentation project for Winter Arm Creek, a tributary of Eel Lake. This project will put approximately 140 cubic yards of spawning gravel into the stream for coho salmon and winter steelhead. The project will be completed in 2012-2013.

### Carcass Placement

Salmon carcasses were again placed in numerous district streams during the report period. ODFW staff and volunteers placed over 8,000 salmonid carcasses into ten different streams. Most of these carcasses were fish returning to Coos Basin STEP facilities.

## FISH CULTURE

Large numbers of volunteers continue to be involved in the extensive fish cultural programs in the District. There are eight broodstock development, eight spawning, nine egg incubation, five rearing, and fifteen acclimation projects in the District. The fish cultural operations in the District involve the largest number of volunteers in recent years.

### Broodstock Collection



*Youth of all ages help gather and spawn broodstock.*

Broodstock collection and development programs in the District continue to be a success overall. Volunteers involved in the collection of naturally produced salmon and steelhead for incorporation into hatchery programs donated a significant amount of time. The collection of naturally produced salmonids is always very labor intensive. For more than twenty years, a significant proportion of the steelhead has been acquired through angler donations. In the Coos River basin, about forty percent of the steelhead broodstock were again donated by anglers.

Angler donations are a slow, time-consuming process that involves many volunteers. The steelhead collections in the Coos and Tenmile were back on track the past two seasons. Returns to both Eel Lake and to Millicoma Interpretive Center were back to normal return levels.

### Fry Releases

The District STEP biologist coordinated the collection and distribution of salmon and steelhead eggs from ODFW hatcheries or STEP incubation facilities to volunteers. As a result, 164,317 fry were released from a variety of hatchboxes in the Coos and Coquille basins. Most of the unfed fry releases are conducted as a rehabilitation project. The fry are released above human-made barriers to upstream migration of salmonids. The barrier, such as a culvert, has been or is scheduled to be corrected. Coho salmon are released for one life-cycle of three years. The Chinook salmon fry releases in the Coquille River basin are conducted for the purpose of a payback program. These fry are a replacement for the loss of production of wild Chinook salmon that are taken and used in the lower river smolt program.



*Volunteers operating the Dellwood fish trap.*

The newest program for releasing fry was the Fourth Creek project in lower Coos Bay. Fourth Creek is a stream that historically had a good population of coho salmon until a reservoir was constructed on the stream. The reservoir had only a spillway and no fishway. Subsequently, coho salmon have not been able to access the stream for many decades. Five years ago the Coquille Indian Tribe reconstructed the reservoir and added a “state-of-the-art” fishway. Releasing fry into the stream and reservoir will hopefully reestablish a coho population in this stream. This is a true rehabilitation project.

### Pre-Smolt Releases

Large numbers of Chinook salmon pre-smolts are released in the Coos River Basin. The premise behind the releases is the recognized limitation of spawning habitat in the Coos watershed that is available for Chinook salmon. Spawning habitat in the Coos began to be compromised in 1887 when the practice of splash-damming rivers started. Splash-damming was a process by which logging companies ran logs down the rivers during freshet events with the use of a large dam that was removed at a designated time. Prior to running logs down the river, logs and rocks that provided critical stream habitat were removed. This activity removed the river gravel that Chinook salmon needed for spawning. The Chinook salmon pre-smolts program in the Coos addresses the limited spawning habitat by producing large numbers of juveniles to utilize the Coos estuary. Coastal fall Chinook salmon rear almost extensively in coastal estuaries and the Coos estuary is the largest in Oregon. A total of 1,923,910 Chinook salmon pre-smolts were released into the Coos Basin in the spring of 2011. A total of 1,202,167 Chinook were marked in the spring of 2012 in the Coos basin. Most of the Chinook were marked by students.



*Kids helping fin clip (mark) fall Chinook.*

For the fifth year in a row, Chinook salmon were released into the Fourth Creek reservoir as part of a cooperative partnership with the Coquille Indian Tribe. The fish were reared at Bandon Hatchery and acclimated in an alcove of the reservoir. A blocking weir was constructed to prevent the juvenile Chinook salmon from entering the reservoir proper.

The acclimation this year was a success. The fish held and fed well in this new rearing area then left the reservoir in a timely manner.

### Fish Eggs-to-Fry Program

Again this year the number of classroom egg incubation projects also increased in the district. A total of sixteen classroom incubators were operated at fifteen different schools, reaching a total of 167 classrooms. More classroom aquaria are planned in the near future. This past year over 4,928 students at fifteen schools observed eggs hatch and develop. At the time the eggs are distributed, the students are presented with a lesson by the STEP biologist on the biology of salmon eggs and salmon in general. This lesson further imparts resource ownership to the children.

### Coos Fall Chinook Salmon Monitoring and Evaluation Plan

During this report period, 9,271 fall Chinook salmon returned to the three STEP facilities in the Coos River basin. In 1983 only four Chinook returned to STEP facilities in the Coos River basin.

A total of 4,213 volunteers were involved in the fish cultural programs in the District. Fin marking of the reared fish, which is part of the Coos Fall Chinook Monitoring and Evaluation Plan, demands a larger number of participants than any other volunteer project. A main objective of the Monitoring and Evaluation Plan is to increase the number of marked fish released in the Coos River Basin. A total of 1,220,556 fall Chinook were marked this past spring at five different facilities. The percentage of fall Chinook released from Morgan Creek continues to increase as the number of students and volunteers also increases. During the report period over 72% of the Chinook released from Morgan Creek were marked.

The increased number of marked Chinook will also provide better monitoring and evaluation of the interactions of juvenile hatchery Chinook salmon with their naturally produced counterparts in the Coos Bay estuary. Juvenile interactions are an important component of the new monitoring and evaluation plan.

During the report period, volunteers, staff, and students operated the South Coos River Trap as part of the monitoring and evaluation project. A total of 2,323 Chinook salmon were captured, marked, and released into Coos River. The trap was also used to conduct a Peterson Mark Recapture Population Estimate of Chinook in the South Coos River. The ODFW staff estimate of Chinook salmon in the South Coos River basin based on the information gathered was 9,404 adults and 1,174 jacks.



*Students observing and handling fry being reared at Millicoma Interpretive Center.*

### Rearing and Acclimation

In 2012 Chinook salmon presmolts were reared and released from the Coquille High School. A total of 7,852 presmolts were released from the facility. Students at the school participate in the entire process which includes trapping, holding and spawning the fish for the program. The eggs are fertilized and incubated through the “eyed stage.” Coquille High School is the only facility other than Bandon Hatchery where eggs are incubated to the “eyed stage.”

Approximately 126,266 fall Chinook salmon smolts were released from three locations in the Coquille River basin. Two of the groups were placed into acclimation sites in the lower portion of the river. The two acclimation sites are Sevenmile Creek and Ferry Creek.

For the third year, releases of Chinook salmon presmolts were conducted from Bandon Hatchery into Ferry Creek in the lower Coquille River. A total of 10,533 presmolts were marked by volunteers and released into Ferry Creek. The purpose of the program is to develop a Chinook salmon broodstock that returns to Bandon Hatchery. This is a paired program with 10,064 Chinook smolts that are acclimated in lower Ferry Creek. All hatchery presmolt and smolt Chinook salmon released into the Coquille Basin this year were fin clipped. This is the first year that all Chinook have been marked since the program began in 1983. STEP volunteers operated a total of twenty rearing or acclimation projects during the report period. Acclimation sites continue to be improved with each passing year. These projects take a considerable amount of volunteer and staff time along with financial resources to operate.

### **Lower Rogue STEP**

John Weber, STEP Biologist

Steve Mazur, Assistant District Fish Biologist

Todd Confer, District Fish Biologist

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

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

The Rogue Watershed is in the third year of developing a conservation plan for fall Chinook salmon in the Rogue Species Management Unit. The public advisory committee and ODFW have completed a final draft and several management strategies which will be proposed to the Oregon Fish and Wildlife Commission in January 2013 for adoption. The two district STEP groups have a member on the advisory committee.

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

## EDUCATION AND PROGRAM DEVELOPMENT

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

Lower Rogue STEP biologist made thirty presentations at organized fishing group meetings. Primary topics discussed were fish management policy, habitat problems and solutions, angling regulations, STEP guidelines, district management objectives, and volunteer recruitment.

A total of 51 presentations were made to students at local schools. Topics included: Salmonid life history, fish anatomy, fish culture, angling, habitat protection, and restoration. Some of the presentations involved a field trip relative to the topics discussed.

### Azalea Festival

The Oregon South Coast Fisherman and STEP biologist conducted the annual portable fishing ponds at the Brookings Azalea Festival. OSCF has hosted the fishing event since 1989. Approximately 90 children participated in the event this year. The event includes displays of various ongoing STEP projects which creates a great atmosphere to recruit young anglers and volunteers.

### Free Fishing Day

On June 9, 2012 the annual free fishing day event was held at Libby Pond. Over 72 kids registered for the event organized by ODFW. Volunteers from CAF and OSCF sponsored the derby and were on hand to register children.

Kids were assisted with fishing tips, instruction, registration and measurement of trout. Hot dogs and beverages for the event were provided by CAF. Participants caught over 220 rainbow trout during the derby. In addition fishing rods and equipment were donated to be given away in a raffle.

### Ice Box Access

Oregon South Coast Fisherman maintained an access agreement with a Chetco River front landowner. The area has been a popular access point for local area anglers for many years. Beginning in 2001 OSCF has been involved with the cleaning and maintenance of the area. This opportunity may not have been possible without the OSCF's positive history working with the landowner. The gate will be opened during fishing season for access.

### Slam'n Salmon Derby

In an effort to develop the STEP program and encourage volunteer involvement, the Lower Rogue STEP biologist and OSCF operated a booth during the annual Labor Day Slam'n Salmon derby at the Port of Brookings.

Volunteers maintained a tent that housed a mobile aquarium with live adult salmon and displays demonstrating district STEP activities. Staff used this opportunity to discuss related projects and issues. An estimated 240 people visited the booth throughout the weekend and a number of people joined the STEP groups.

### Port Orford Water Festival

The STEP biologist and volunteers with CAF hosted two exhibits at the second annual Port Orford Water Festival. An indoor display included a 50-gallon aquarium with various local anadromous species and fact cards with information on each fish. Also displayed was information on various district STEP projects. Outdoors CAF volunteers taught Angler Education and in the afternoon hosted a fishing outing at Arizona Pond State Park.

### Cherish the Chetco

Cherish the Chetco was sponsored by U.S. Forest Service and the Southcoast Watershed Council at Redwood Bar. The effort was organized to bring attention to the conservation and recreation activities on the Chetco River.

Lower Rogue STEP and volunteers with OSCF hosted an exhibit and provided multiple activities to individuals visiting Redwood Bar on the Chetco River. The exhibit displayed STEP opportunities in the Chetco basin while the activities included angler education, salmonid angling techniques, and driftboat outfitting and rowing techniques.

### Reel Fish Day

The Lower Rogue STEP, Oregon Parks and Recreation Department, and the South Coast Watershed Council office sponsored Reel Fish Day, an angler education day for Brookings and Gold Beach elementary school third grade classes. This event was held at Arizona Beach State Park and is designed to complement the STEP Fish Eggs-to-Fry program that has been offered over the last two decades. In 2012 all of the third grade classes in the Lower Rogue STEP district attended the event.

Volunteers taught casting, line tying, and hook baiting. An aquatic education curriculum was presented once the core skills of angling were taught. Youth fished with assistance from Angler Education instructors in the pond which was stocked with trout prior to the event. Participants were given the option to keep or release their fish. Those that chose to retain their catch were taught the responsibility of packaging and cleaning their fish for a meal. With the success of Reel Fish Day the Brookings, Port Orford, and Gold Beach school districts will continue to send their third grade classes to this event.

### Pikeminnow Derby/ Dissection

The fish caught from the second annual Rogue River Pikeminnow Derby was preserved through the summer to be dissected in the biology classes at Gold Beach High School.

The STEP biologist provided a presentation to discuss topics about local student STEP opportunity, invasive species and what is known currently about the non-native Umpqua Pikeminnow (*Ptchocheilus umpquae*) in the Rogue River. Students dissected the pikeminnow to determine anatomy and food habits based on the size and weight of each individual specimen. The results were compiled for the fishing guides and participants of the Derby.

This project has stimulated students to think about how this invasive species impacts the Rogue River. Questions like: How does this species interact with all sizes of salmonids and other native fishes? Do pikeminnow feed on and impact other non-native species in the river? What size of juvenile salmon do pikeminnow prey on in the Rogue River? With these questions being asked, there is no doubt this project will continue in future years.

### Chetco Scale Sampling

Oregon South Coast Fishermen volunteers assisted in an intensified fall Chinook salmon scale sampling effort conducted on the Chetco River. The sampling effort is planned to improve data on age and hatchery/wild composition estimates for the Chetco River. The volunteers used drift boats and covered the mainstem reaches while ODFW sampled in the tributaries. During the 2011 brood year volunteers and staff collected 660 samples.



*Chetco River Scale Collection*

### Estuary Seining

The STEP biologist and OSCF volunteers completed their 21<sup>st</sup> year seining Chinook salmon smolts in the Chetco River estuary. The project consists of volunteers setting a juvenile beach seine at select stations bi-weekly from June through September. These index surveys characterize abundance and development of native fall Chinook salmon smolt. In addition, the data is used to indicate when hatchery Chinook salmon smolt should be released to have the least impact on native fish utilizing the estuary.

### Winchuck River Screw Trap

Volunteers operated a downstream migrant trap just upstream of the Winchuck River estuary. Operation of the trap represents the continuation of a 23-year database. The OSCF have operated the trap for the past thirteen years, doing work that would otherwise be unaccomplished under current district staffing levels. The data obtained from the trap is used by ODFW to assist in managing fall Chinook salmon.

The 2012 Winchuck trapping season concluded with 66 days of trap operation and 6,269 fall Chinook salmon smolt sampled.

### Huntley Park Seining

The Huntley Park Seining Project represents a continuation of a 37-year adult salmonid monitoring database. This project is conducted annually from July throughout October at Huntley Park on the lower Rogue River. The Huntley project is a high priority to the district and harvest managers.

The Huntley Park data is used to monitor stock abundance, age composition and hatchery/wild ratio of summer Steelhead, coho salmon, and fall Chinook salmon.

Later in the season, wild fall Chinook salmon broodstock are collected for the Indian Creek Hatchery STEP facility.

A number of STEP and local volunteers participate every year, rain or shine. The 2012 sixteen-week study included 44-days of data collection with approximately 516 hours of volunteer service.

### Chetco Coded Wire Tag Recovery

The STEP biologist and OSCF volunteers developed a sampling plan to recover tags from returning Chetco River fall Chinook salmon. The OSCF have received Fish Restoration and Enhancement grant funding to tag 35,000 from each Ferry Creek acclimation and mainstem releases through brood years 2010-2012.

### Snout Recovery Stations

During the summer two snout recovery stations were built to be located at several boat ramps. Volunteers solicited prizes to raffle to anglers that donated tagged snouts. Each of the newly built stations will have cards for anglers to fill out to include with the snout. If the card is filled out correctly and the snout has a tag the angler will be entered into drawings that will be conducted throughout the 2012 season.



*Snout Collection Station*

## HABITAT IMPROVEMENT

### Stream Enrichment

Volunteers with the Curry Anadromous Fishermen and the Oregon South Coast Fishermen assisted ODFW with placement of fall Chinook salmon carcasses. A total of 1,447 fall Chinook salmon carcasses from Elk River Hatchery and Indian Creek STEP Hatchery were distributed in the Chetco River, Euchre and Brush Creeks and lower Rogue River tributaries.

### Estuary Riparian Enhancement

District staff with help from Oregon Stewardship and local students improved estuary riparian habitat along Euchre, Hunter Creek, Pistol, and Winchuck rivers to improve Chinook salmon production. Oregon Stewardship contacted the landowners of the estuaries for access and planting on their property. Students from Brookings and Gold Beach schools planted willow and spruce trees in early spring of 2012 and followed up with watering and weeding. Reports indicate good growth and excellent survival of last year's plantings. This is an annual project that is difficult to achieve without the leadership of Oregon Stewardship.

### Chetco River Fish Salvage

Oregon South Coast Fishermen volunteers spent six days salvaging stranded Chetco River fall Chinook salmon juveniles from off channel pools. Volunteers located pools that were no longer connected to the river and that had a high risk of dewatering over the summer months. The majority of the fish salvaged were Chinook, some juvenile winter steelhead was observed in the catch.

## FISH CULTURE

### Chetco River Broodstock Collection

Volunteers and fishing guides assisted ODFW staff in collecting broodstock for the Chetco River hatchery programs. A total of 129 fall Chinook salmon and 112 winter steelhead were collected and transported to Elk River Hatchery.



*Chetco Brood Collection*

## Ferry Creek Acclimation

ODFW and OSCF acclimated fall Chinook in Ferry Creek Reservoir. Fall Chinook salmon were acclimated at the Ferry Creek Reservoir is an unused water source for the City of Brookings that flows into Ferry Creek. Volunteers reared two 16,500 fish groups of fall Chinook salmon smolt.

The goals of the acclimation project: 1) Increase harvest opportunity by increasing the length of time the returning adults hold in the Chetco estuary, and 2) reduce the proportion of naturally spawning hatchery fish in the wild population.

## Indian Creek STEP Hatchery (Lower Rogue)



*Indian Creek Fish Release*

Wild Lower Rogue fall Chinook salmon broodstock are collected, transported, and spawned at the Indian Creek Hatchery STEP facility. The resulting offspring are incorporated into a smolt program for supplementation of Lower Rogue Chinook salmon stock. A total of 83,325 fall Chinook salmon were marked and reared to smolts by volunteers. The full sized smolts were released into the Rogue River estuary in the late summer of 2012.

## **Upper Rogue STEP**

Charles A. Fustish, STEP Biologist  
Dan Van Dyke, District Fish Biologist

The Upper Rogue STEP district includes most of the Rogue watershed extending from the headwaters near Crater Lake downstream to Mule Creek near the community of Agness. Cole Rivers, an early Rogue District Fish Biologist, estimated there were about 2,400 miles of stream in the basin. The Rogue watershed has the largest human population of any coastal watershed in Oregon. Approximately 400,000 people live in the district, posing challenges for fish and wildlife resources but also providing a large number of schools, service clubs, sportsman's clubs, and volunteers to assist in various STEP projects that educate citizens and improve fish habitat throughout the basin.



*Display of the water in Little Butte vs. the Rogue*

The diversity of fish species native to the Rogue is narrow, but the river has and continues to produce large numbers of salmon and steelhead. The Rogue River is reported to possess the strongest runs of salmon and steelhead of all the coastal streams in Oregon. One species, the coho salmon, is listed as "Threatened" under the Federal ESA.

This year over 158 district STEP volunteers put in over 1,833 hours and drove 4,377 miles to complete the various projects described in this report to help meet District management objectives. The focal point for volunteer activities continues to be the Small Stream, Urban Stream, Intermittent Stream Project of monitoring and outreach. The work is intended to highlight fish use in streams that are often overlooked by agencies and the general public and encourage good stewardship among streamside landowners and cost-effective restoration projects.

### Public Outreach

The Upper Rogue STEP biologist continued to work with schools during the report period, with the primary activity being the Classroom Incubator Program, maintaining contact with schools throughout the activity, coordinating volunteers, and arranging for egg delivery. A total of 22 teachers participated in the program. In most cases a curriculum developed by STEP biologists was used to promote learning about egg development, salmonid life cycles and fish habitat requirements. Presentations were made on the native fish of the Rogue River basin, their life cycles, physiology, and habitat to campers at Stewart State Park, and to students at Madrone Trail Charter School and Sams Valley Elementary.

### The Small Stream, Urban Stream, Intermittent Stream Project

The Small Stream, Urban Stream, Intermittent Stream Project of monitoring and outreach continued to be a focal point of the STEP program in the Rogue Valley. This effort is aimed at the following: creating awareness of the fish resources using these streams, in order to promote stewardship and protect habitat; gaining additional fish distribution information; and developing interest and support for restoration actions on individual streams.



*Hoop Trap on Bitterlick Ck.*

Key to the project, volunteers operate upstream migrant “hoop” traps to survey for fish use during winter. This year upstream migrant hoop traps were operated on Bitterlick Creek (Little Butte Creek), Dry Creek (Rogue River), George Creek (Illinois River), Ashland Creek (Bear Creek), Swanson Creek (Whetstone Creek), and Lazy Creek (Bear Creek). The trap data and restoration opportunities are communicated to the public through a variety of techniques. The Upper Rogue District STEP Biologist coordinates all aspects of the project: identifying sites; maintaining hoop traps; recruiting and training volunteers; writing brief summaries of survey results; and working to publicize the results within the community. Information was provided to the Medford Mail Tribune for an article on salmonids and other species living in Ashland Creek during the hoop trap project, and for the Ashland Daily Tidings later in the year. Additional information was provided to the Mail Tribune for a larger article on improving conditions in Bear Creek, in time for the Bear Creek Festival (see below).

Training sessions were conducted to help volunteers successfully participate in district monitoring efforts. The STEP biologists provided training in fish identification, trap operation and safety practices in support of several projects—hoop trap surveys, smolt trap surveys, and fish salvage. Five fish identification workshops were conducted to help identify fish captured in traps and while salvaging fish from isolated pools in drying streams. The Upper Rogue STEP Biologist reviewed an interactive fish identification course developed by an Upper Rogue Watershed Council volunteer.

## Other Outreach

Other specific outreach activities conducted by the Upper Rogue STEP Biologist:

- Staffed a display at the annual Bear Creek Festival at North Mountain Park in Ashland. On display were juvenile steelhead, sculpin and native and exotic crayfish captured from Bear Creek. Discussion centered on salmon life histories and a variety of stewardship topics.
- Participated in the “See Our Salmon” viewing at Touvelle State Park, sponsored by the Seven Basins Watershed Council and the Stream Restoration Alliance of the Middle Rogue.
- Operated an underwater camera on Ashland Creek in Lithia Park to provide live fish viewing to the public and promote the concept that Ashland area residents live in the “headwaters” of Bear Creek.
- Participated in two Stream Scene and Project WILD workshops provided to 22 local educators and organized by the Upper Rogue and Bear Creek watershed councils and other partners. The presentation focused on the importance of riparian habitat and the native fishes of the Rogue River. Each teacher was provided a Rogue native fish poster.
- Staffed a display at the inaugural Little Butte Creek Watershed Festival held at the interpretative center at the Harnish Wayside in Eagle Point. Earlier the district developed a display on summer steelhead and the importance of Little Butte Creek for the interpretative center. The festival display highlighted water quality challenges in Little Butte Creek.
- A mobile display tank with adult spring Chinook and steelhead was a big hit at the annual Shady Cove Spam Festival. Salmon life history, habitat needs, and the importance of riparian habitat were discussed. Homeowners with property on the Rogue River were encouraged to sign up for a consultation on how to improve riparian habitat on their property.



*Display at Harnish Wayside*

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## INVENTORY AND MONITORING

### Surveys

In 2005, ODFW implemented a program of increased monitoring and outreach on small streams, urban streams, and intermittent streams of the Rogue Watershed. A key component is surveying for the relative abundance of salmon and trout using these streams during winter high flow periods. The information is collected to inform the public about the importance of these small streams as refuge for salmonids during winter storms. Volunteers were recruited through ODFW’s STEP and trained to monitor and identify fish species captured in the traps throughout the winter. Through the 2011-2012 report period, 28 streams have been sampled. Since its inception, the project has been a useful tool in finding out where fish go during high flow periods and has increased our knowledge of the distribution of threatened coho salmon. Also, many fish passage barriers and habitat improvement projects have been identified throughout the Rogue District.

## Fish Traps

In 2011-2012, 28 volunteers spent 326 hours and drove 2,183 miles to sample hoop traps placed in Bitterlick Creek, Dryer Creek, George Creek (tributary to the Illinois River), Ashland Creek, Swanson Creek, and Lazy Creek in the Rogue River Basin.

Bitterlick, Dryer, Ashland, and Swanson Creeks were sampled for the first time during the 2011-2012 sample period. Native species we captured included Chinook salmon fry, juvenile and adult steelhead, juvenile cutthroat trout, sculpins dace and signal crayfish. Non-native species included redbside shiners, banded crayfish, and juvenile brown bullheads. Most of the fish were captured in the Lazy and Ashland Creek traps. Flows were too low during most of the winter in Bitterlick, Dryer, and Swanson Creeks to allow fish passage to trap locations. Three foot high jumps near the mouths of Bitterlick and George Creeks were identified as fish passage barriers. Only salmonids including adult and juvenile steelhead, juvenile coho salmon, and cutthroat trout were captured in Ashland Creek. An outreach project with an underwater camera showed juvenile coho salmon and steelhead rearing in Ashland Creek during the month of August. We never captured anything in Dryer Creek. We plan to survey it during a period of high flows to see if fish can make it up to the trap site. We plan to have volunteers construct and test a temporary fish ladder during the winter of 2012-2013 at the barrier in George Creek.

The hoop trap in Lazy Creek was placed to allow us to sample and study Klamath small scale suckers. Volunteers from St. Mary's School captured and measured 26 Chinook salmon fry, eight juvenile steelhead, one sculpin, and exotic species including twenty redbside shiners, 57 banded crayfish, and two juvenile brown bullheads. Based on past years' data, we believe that the suckers are using Lazy Creek for spawning. Because of the late installation date of May 8<sup>th</sup> in 2012, we were unable to capture Klamath smallscale suckers during the 2011-2012 sample season. In the 2012-2013 sample year, we plan to place the trap above a barrier in Lazy Creek with a temporary fish ladder to test its effectiveness early in the fall. We then plan to move the trap below the barrier by March 1, 2013 to gain more information on the life history and spawning habits of Klamath smallscale suckers in small, urban, and intermittent streams.



*Griffin Creek fish trap.*

Traps were placed in the East and West Forks of Jones Creek by volunteers to move down stream migrating juvenile steelhead past a barrier when an irrigation canal is filled capturing the stream. The low catch in 2012 of two juvenile steelhead was probably due to limited steelhead spawning in upper Jones during the winter of 2011-2012 and by low rainfall. Catches during the last six years of study ranged from 0-8,770 steelhead fry. The Stream Restoration Alliance of the Middle Rogue has obtained funds to study the problem and develop a solution. We plan on working with volunteers during the winter of 2012-2013 to survey the stream to look for potential barriers in both forks. A trap was also placed in Murphy Creek to trap and haul salmonids past known fish barriers.

A fyke trap installed in Griffin Creek during the summer months captured juvenile brown bullhead and juvenile and adult fathead minnows. A recent fall die-off of juvenile salmonids in the same area of the stream indicates that Griffin Creek may support salmonids during the fall, winter, and spring before summer temperatures become too warm for salmonids.

## Heather Fulmer Memorial Cancer Derby

The first annual Heather Fulmer Memorial Cancer Derby was held at Fish Lake on August 4, 2012. Forty-nine anglers entered the tournament and caught one brook trout, nineteen rainbow trout, and two spring Chinook salmon. Of the 49 entrants, 23 had fish for the 4 pm weigh in. The brook trout was the longest fish at 12.5 inches and won the top prize in the tournament. At the request of the organizer, ODFW STEP provided 100 salmon ID cards, 100 trout ID cards, 100 warmwater fish ID cards, and 100 fishing starter kits for giveaway bags for each entrant. The catch statistics for tournament entrants were 0.09 fish/hr, 0.45 fish/angler, and 10.7 hours per fish. However, if fish released and creel samples from non-tournament anglers are included, catch statistics increased to 0.43 fish/hr, 1.1 fish/angler, and 2.3 hours/fish.

## Spawning and Distribution Surveys

Volunteers conducted a spawner survey of heavily mined Pickett Creek during the winter of 2011-2012. Only one adult coho salmon and two redds were found during the sample period. The paucity of spawners is probably due to the low winter flows in Pickett Creek, and the disturbance of gravel in the stream during the summertime mining season.

Volunteers and STEP personnel sampled Mingus Creek upstream from Highway 99 to determine fish distribution in areas upstream from previous presence absence surveys with one person seines and electrofishing gear. Two juvenile steelhead 5.5 and 6.5 inches long were captured just downstream from where the stream comes out of a one foot diameter culvert that goes underneath a plywood mill. The pipe appears to capture the stream about 0.75 miles upstream. The headwater of Mingus Creek is a spring pond about a mile upstream from the start of the culvert. Both fish were very fat and in good condition probably due to the vast numbers of scuds and aquatic insects available. We plan to discuss the possibility of re-routing the stream around the culvert with the owners of the mill to improve fish passage to the upper reaches of this highly productive stream.

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## HABITAT IMPROVEMENT

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### Habitat Restoration

There are many culverts, particularly on the urban streams, and passage in and out of them is not always easy for salmonids. Oregon Department of Fish and Wildlife personnel and volunteers plan to develop wooden passage structures for passage barriers where feasible and allowed by the permit process, while funds are being sought for permanent repairs. Irrigation ditch crossings can block the movements of adult salmonids on their way upstream to spawn. When the same irrigation ditches are installed in the spring, they can capture the streams and downstream migrant salmonids and keep them from making it to the ocean. The small, urban, and intermittent stream project has located many structures that are blocking fish movements. Department personnel and volunteers are already working with irrigation districts and other water users to fix these problems.

A student intern from the Geography Department of Southern Oregon University spent forty hours photographing and measuring fish barriers at bridges and culverts on Anderson Creek.

Ed Haynes, twelve other Boy Scouts from Troup 7 and David Haight spent 44 hours building and placing 50 spider blocks as habitat for warmwater fish in Whetstone Pond at the Denman Wildlife Area.

### Stream Nutrient Enrichment



*Carcass Placement Crew*

A total of 42 volunteers from eight different groups placed 2,048 (6,874 pounds) of salmon and steelhead carcasses in four stream reaches totaling 12.2 miles. There were 1,536 coho salmon carcasses placed in Taylor, Sugarpine and the West Branch of Elk Creeks, and 512 steelhead carcasses placed in the South Fork of Little Butte Creek.

### Keep Oregon's Rivers Clean Program

Volunteers have collected over 200 pounds of monofilament in the Rogue Basin in the seven years since the Monofilament Recycling Program started in 2004. Not only does the project improve the looks of the riparian habitat, it also saves birds and small wildlife from becoming entangled. This year's total, 8.2 pounds is the lowest amount collected. Previous year's weights of monofilament recycled ranged from thirteen to 46 pounds. The low amount of monofilament recovered this year warrants further study during 2012-2013 to determine whether or not increased volunteer efforts and outreach is needed in areas of high angler use.

### Fish Passage

Fish passage checks were performed in the early fall and after each major freshet by volunteers at 30 culverts and fish passage structures in Josephine and Jackson Counties. Department personnel were called in when culverts or fish ladders became plugged after freshets. Six volunteers drove 839 miles and worked 150 hours to check fish passage at the structures in 2011-2012.



*Fish Passage Barrier on Lazy Ck.*

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## FISH CULTURE

### Fish Salvage

To improve angling opportunities in local reservoirs, 47 volunteers fished for eight hours each to capture 1,065 largemouth bass from Hyatt Reservoir where they have been overpopulated for the last few years. Of the total caught, 100 went to a reservoir near Bend, 350 went to Lost Creek Reservoir, 200 went to Fern Ridge Reservoir, and 415 went to Applegate Reservoir. The catch rate was 23 fish per angler and it took an average of 0.35 hours to catch each fish.

Two volunteers salvaged 24 juvenile steelhead, 68 juvenile coho salmon, 52 redbreasted sunfish and 140 sculpin from isolated pools of the lower four miles of Trail Creek and transported them to the Rogue River at the mouth of Trail Creek.

### Egg to Fry Program

A total of 7,050 eyed spring Chinook salmon eggs from Cole Rivers Hatchery were delivered by three volunteers to 22 classrooms from Prospect to Cave Junction in the Rogue River Basin during the fall of 2011. A total of 4,261 survived to swim-up stage and were released into the Rogue River.

## High Desert Region

### Eastern Oregon STEP

Jennifer Luke, STEP Biologist  
Shannon Hurn, Roger Smith, Brett Hodgson, Rod French, Jeff Yanke,  
Bill Duke, Jeff Neal, Tim Bailey, Eastern Oregon District Biologists

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

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

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

#### EDUCATION AND PROGRAM DEVELOPMENT



*Students at Kokanee Karnival.*

#### Kokanee Karnival

Kokanee Karnival Youth Education Program continues to be a popular education program for Deschutes, Jefferson, and Crook County elementary students. In 2011-2012, 390 students participated in the Kokanee Karnival Comprehensive Education Program. This program includes classroom activities as well as field trips to learn about salmon and their habitat. The students also tour a hatchery and attend a spring fishing clinic.

Approximately 1,500 students participated in the Kokanee Karnival Electives Program in which teachers sign up for classroom activities such as raising trout, basic trout biology class, and (or) angler education. Kokanee Karnival receives exceptional support from both the volunteer community and our financial sponsors. Partners for the Kokanee Karnival include STEP,

Central Oregon Flyfishers, Sunriver Anglers, USFWS, and the Deschutes National Forest. The STEP biologist serves on the Kokanee Karnival steering committee, coordinates portions of the program, and provides training, technical assistance and volunteer recruitment.

In 2011-2012, the STEP biologist recruited and scheduled volunteers to serve as instructors at Kokanee Karnival's seven-day angling clinic. The STEP biologist prepared activities and

materials for the Trout Dissections, Angling Clinic, Fall Streamside field trip, Fish Eggs-to-Fry, and Kokanee Karnival classroom presentations.

### Outreach Events

The STEP biologist participated in salmon and trout related outreach activities for students of all ages. The STEP biologist presented information or provided materials for events sponsored by the following events: Ponderosa and High Lake’s Elementary “Science Camp,” Klamath Falls P.L.A.Y. event, Madras 4-H Pond Tour, Wolftree, Powell Butte School Ochoco Creek field days, Central Oregon Flyfisher Youth Flyfishing Event, and Prineville’s “Fish Festival.”

The STEP biologist attended several Central Oregon Flyfisher and Sunriver Angler group meetings for volunteer recognition and outreach purposes.

### Fort Klamath Fishing Clinic

The STEP biologist and Klamath Hatchery coordinated the third annual Fort Klamath Angling Clinic. Students participated in a fishing clinic where they learned about fishing regulations, fish identification, and conservation. Students were able to try fly-fishing and spin casting in a stocked pond. The STEP biologist was responsible for developing content, funding, training volunteers, contacting teachers and providing equipment.

### Creeks and Kids Teacher Workshop



*Teachers learn about fish sampling*

The Eastern Oregon STEP biologist and Malheur District Biologist instructed and helped coordinate a week-long teacher workshop, “Creeks and Kids,” also coordinated by Western Oregon University and funded through ODFW’s Fish Restoration and Enhancement Program. Teachers were taught stream and fisheries related activities to enhance their school curriculum. The majority of their activities are drawn from the STEP publication, *The Stream Scene*. The STEP biologist was responsible for field and classroom instruction of trout sampling methods

and procedures, fish identification, basic trout biology, and trout habitat. Twenty-eight teachers participated in this workshop.

### Klamath Falls Steelhead Dissection and Fish Eggs to Fry

The STEP biologist along with staff from U.S. Fish and Wildlife Service offered a Fish Eggs to Fry and Salmonid Dissection in Klamath Falls. Teachers were provided lesson plans for related activities. Rainbow trout eggs were delivered to teachers and steelhead trout from Cole River Hatchery were provided for fish dissection classes.

### Youth Angling

In addition to seven days of youth angling clinics during Kokanee Karnival, the STEP biologist coordinated three youth angling events at Pine Nursery and Shevlin Pond in Bend.



*Volunteer at fishing event in Bend.*

## INVENTORY AND MONITORING

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### East, Paulina, Lava Lake Invasive Tui and Blue Chub Control

Three popular trout fishing lakes (East, Paulina, and Lava) have deteriorated due to an overpopulation of invasive chub. As part of a five year chub control plan, OSU Cascade interns and volunteers are mechanically removing chub with trap and fyke nets. The STEP biologist and district staff directed the efforts of the interns. Trap nets are set on the shoreline during chub spawning season, and nets are emptied daily. The interns and volunteers are trained to set the nets, remove fish from the nets, haul fish to the disposal site, and collect biological data. In conjunction with mechanical control, ODFW will implement a modified fish stocking program to enhance biological chub control through the use of piscivorous rainbow trout. In 2012, STEP volunteers, along with ODFW staff, removed 20,000 pounds of chub from these lakes.



*Volunteer collecting data on trout during East Lake Chub removal project.*

### North Fork and South Fork Crooked River Trout Population Survey



*Hook and line sampling on N. Fk. Crooked River.*

The district biologist and STEP biologist coordinated and supervised volunteers who assisted with electrofishing and hook & line population surveys on the North Fork and South Fork Crooked Rivers. Volunteers assisted biologists by hiking into remote areas, carrying sampling gear, netting fish, and collecting biological data. The North Fork and South Fork Crooked River often provide excellent angling opportunities to anglers willing to hike into remote areas and get away from the crowds.

### Deep Creek Basin Redband Trout Sampling

ODFW organized an effort to document trout distribution and densities in several Deep Creek tributaries. Volunteers from Central Oregon Flyfishers and Trout Unlimited assisted with this fish sampling effort. ODFW's Prineville Assistant District Fish Biologist coordinated most aspects of the project. Although the STEP biologist was not present, STEP provided sampling equipment and meals for this campout project.

## FISH CULTURE

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### Fish Eggs to Fry: Program

Seventy-seven classrooms from all over Eastern Oregon, including Klamath Falls, Milton-Freewater, Elgin, Drewsey, and Vale raised trout in classroom incubators and used STEP publications, Fish Eggs To Fry and The Educator's Resource Guide for Hatching Salmon in the Classroom. The STEP biologist coordinated the classroom trout incubator projects and trained volunteers to assist teachers and give presentations. All trout were released in ponds or reservoirs.

## Headquarters

### STEP Administration

Kevin Herkamp, STEP Coordinator  
Debbi Farrell, Program Assistant  
Rhine Messmer, Recreational Fisheries Program Manager

### EDUCATION AND PROGRAM DEVELOPMENT

#### Salmon Trout Advisory Committee

STAC held four meetings across the state:

- January 2012, Salem
- April 2012, Reedsport
- June 2012, Brookings
- September 2012, Newport



*STAC members at the Siletz Falls*

Three vacancies occurred during this time period and work was done to recruit and appoint replacements.

The thirteen STAC members are appointed by the Governor to represent the volunteer community in specific geographic areas of Oregon. Recommendations have been made for the three vacancies and are awaiting final review and appointment by the Governor's Office.

#### Program materials and updates

Several new STEP outreach and promotional items were developed and printed, including handouts that outline the STEP and mini-grant programs. The development of several new educational materials related to the Egg-To-Fry Program began in late 2011 with funding provided through an R&E grant to the Association of Northwest Steelheaders.

### FISH CULTURE

#### Propagation Reviews

Three of the fifteen approved STEP propagation projects were reviewed during this time period bringing the total renewed projects to twelve of fifteen. STEP projects that rear fish for release (including incubation) require a STEP Fish Propagation approval. Approvals are good for three to five years after which time they have to be renewed. The review is used to ensure the project is consistent with state law, the Oregon Plan for Salmon and Watersheds, and ODFW fish management policies (e.g. the Native Fish Conservation Policy) and includes review by ODFW District, Region, and Fish Division staff. Individual projects range in size from 15,000 fish to over 2.2 million and include the production of Coho, Fall Chinook, Winter Steelhead, and Rainbow Trout.

## **APPENDICES**

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



<b>STAC Position</b>	<b>Member</b>	<b>Term<sup>1</sup></b>	<b>Expires</b>
Lower Willamette	Tom VanderPlaat	1st	January 2016
Lower Willamette	Lin Howell	1 <sup>st</sup>	July 2014
Mid-Willamette	Vacant		
Upper Willamette	Leslie Wade	1 <sup>st</sup>	October 2013
North Coast (Seaside-Astoria)	Vacant		
North Coast (Tillamook-Pacific City)	Patrick Gefre	1 <sup>st</sup>	October 2013
Mid-Coast	Brian Hudson	1st	January 2016
Umpqua	Mike Brochu	2 <sup>nd</sup>	June 2013
Tenmile, Coos and Coquille	Reese Bender	1 <sup>st</sup>	January 2016
Lower Rogue	Richard Heap	2 <sup>nd</sup>	March 2013
Upper Rogue	Vacant		
Eastern Oregon (Central-Southeast)	Dave Dunahay	2 <sup>nd</sup>	September 2014
Eastern Oregon (Northeast)	Jim Phelps	1 <sup>st</sup>	March 2016

\*List current as of September 30, 2012

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

## Appendix 2: Salmon and Trout Enhancement Program (STEP) Staff



### **Statewide:**

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Debbi Farrell, R&E / STEP Program Assistant  
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### **North Coast STEP:**

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### **Umpqua STEP:**

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Fax: (541) 673-0372

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

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## Appendix 2 (continued)

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### **Lower Rogue STEP:**

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### **Upper Rogue STEP:**

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### **Lower Willamette STEP:**

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### **Upper Willamette STEP:**

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### **Eastern Oregon STEP:**

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\*List current as of September 30, 2012

### Appendix 3: Schools that work with STEP

The following is a partial list of schools and school districts that work with STEP. This includes schools conducting volunteer projects and those participating in the Classroom Incubator Program. Also included are the universities and community colleges whose student interns with or volunteer for the program. Please contact the STEP Program Assistant at (503)-947-6211 if your school has been left off this list.

#### Elementary, Middle, and High Schools

7 Oak MS	Coquille High School
Abiqua School	Corridor Elementary
Adams Elementary	Corvallis High School
Altamont Elementary	Cottage Grove HS
Alternative Youth Activities	CREST/West Linn-Wilsonville Schools
Arts and Technology K-8	Creswell HS
Ash Creek Elementary	Crow School
Astoria High School	Crook County Middle School
Azalea Middle School	Culver High School
Bandon High School	Dalles Middle School
Barlow High School	Dorena School
Bear Creek Elementary	Douglas Gardens Elementary
Blossom Gulch School	Driftwood Elementary School
Bob Belloni Ranch	East Elementary School
Bohemia Elementary	Eastside Elementary
Bonanza Elementary	Eastwood Elementary School
Broadway Middle School	Eddyville School
Brookings Harbor High School	Edgewood Elementary
Buena Vista Elementary	Edison Elementary
Buckingham Elementary	Elizabeth Page Elementary
Bunker Hill School	Elk Meadow Elementary
Calapooia MS	Elkton School
Cal Young MS	Elton Gregory Middle School
Camas Ridge Elementary	Estacada High School
Cascade Middle School	Evergreen Elementary
Cave Junction High School	Family School
Centennial Elementary	Ferguson Elementary
Central Christian School	Florence School District Stream Team
Cesar E Chavez Elementary	Florence Schools
Charlemagne Elementary	Forest Ridge Elementary
Cheldilin Middle School	Gervis MS
Chiloquin Elementary	Gervis Outdoor School
Churchill High School	Gilham Elementary
Clackamas High School	Gladstone High School
Condon Grade School	Glide High School
Conger Elementary	Gold Beach High School
Coos Bay school district	Guy Lee Elementary

Harding Learning Center  
Harrisburg Elementary  
Hartman School  
Hawthorne Elementary  
Heppner High School  
Hidden Valley High School  
High Lakes Elementary  
Hillcrest School  
Hillcrest School  
Hines School  
Holt Elementary  
Hoover Elementary  
Howard Elementary  
Jefferson School  
Jefferson MS  
Jewell Elementary  
John Tuck Elementary  
Juniper Elementary  
Kalmiopsis Elementary School  
Kelly MS  
Kennedy MS  
Kids Zone After-School/Summer  
Knappa High School  
Lane Community College  
Latham Elementary  
LaPine Elementary  
LaPine Middle School  
Laurel Elementary  
Lava Ridge Elementary  
Lewis and Clark  
Liberty Elementary School  
Lighthouse School  
Lincoln School  
Lincoln School  
M.A. Lynch Elementary  
Madison School  
Madison MS  
Madras Elementary School  
Marcola Elementary  
Marshfield High  
McCornack Elementary  
McKay HS  
Meadowview Elementary  
Middle School  
Millicoma Mid. School  
Moffitt Elementary

Monroe MS  
Montesorri School  
Mowhawk HS  
Mrytlecrest School  
Neahkahnie Jr. High  
North Bay School  
North Bend Middle School  
North Eugene HS  
North Sherman Elementary School  
Oakland School District  
Parkdale Elementary  
Parker Elementary  
Patterson Elementary  
Pendleton High  
Peterson Elementary  
Philomath 6th grade  
Phoenix Elementary School  
Pilot Butte Middle School  
Pine Eagle High School  
Pine Ridge Elementary  
Pleasant Hill MS  
Prairie Mountain School  
Powers School  
Redmond High School  
Reedsport High School  
Reedsport Middle School  
Reynolds High School  
Ridgeview Elementary  
Riley Creek Elementary School  
River Road Elementary  
Riverbend Elementary  
Robert Frost MS  
Roosevelt MS  
Roseburg School District  
Shasta MS  
Sheldon HS  
Sherman High School  
Siletz School  
Sisters Middle School  
South Eugene HS  
South Sherman Elementary School  
Spencer Butte MS  
Spring Creek Elementary  
Springfield MS  
St Francis School  
St Josephs School

Stanfield High School  
Sutherlin School District  
Taft Elementary  
Tallent Middle School  
Terrebonne Community School  
Territorial Elementary  
Three Rivers School  
Thurston MS  
Tillamook High School  
Tom McCall Elementary  
Tumalo Elementary  
Twin Oaks Elementary  
Vale Elementary  
Village School  
Walterville Elementary  
Warrenton High School  
West Linn High School  
Westmoreland Elementary  
Westside Elementary

Westside Magnet School  
Willagillespie Elementary  
Willakenzie Elementary  
Willamette HS  
Willow Creek Elementary  
Winston School District  
Yolanda Elementary  
Yoncalla School District  
Yujin Gakuen Elementary

**Colleges and Universities**

Oregon State University  
Willamette University  
Southern Oregon University  
Umpqua Community College  
Reed College

## Appendix 4: Groups that work with STEP

The following is a partial list of volunteer organizations, agencies, and other groups that work with STEP. Due to the large number of participants, it is possible that some groups were inadvertently left off this list. Please contact the STEP Program Assistant at 503-947-6211 if your group has been overlooked. We also appreciate the efforts of the thousands of affiliated and unaffiliated individuals that volunteer with STEP.

### Organizations

American Fisheries Society	Klamath Country Flycasters
American Rivers	Kokanee Power
ANWS - Association of Northwest Steelheaders	Long View Hills Fishing Club
ANWS - Albany Chapter	Lower Umpqua Fly Casters
ANWS – Emerald Empire Chapter	Mckenzie Flyfishers
ANWS – McLoughlin Chapter	McKenzie River Guides Association
ANWS – Molalla Chapter	Middle Rogue Steelhead Chapter of Trout Unlimited
ANWS – Newberg Chapter	MRWCS/FT
ANWS - Mid-Coast Chapter	Native Fish Society
ANWS - Sandy Chapter	Natural Resources in Polk Co.
ANWS - Tualatin Valley Chapter	Nestucca Anglers
ASE interns	Oregon Equestrian Trails Volunteers
Backcountry Horsemen	Oregon Public Broadcasting
Baptist Church of Waldport	Oregon South Coast Fisherman
Bi-Mart	Oregon Stewardship
Boy Scouts	Oregon Wildlife Heritage Foundation
Boys and Girls Club	OSU Extension Summer Camp
Camp Lutherwood	Rainland Flycasters
Cascade Family Flyfishers	Salmon Watch
Central Coast Flyfishers	Santiam Flycasters
Central Oregon Bass Anglers	Senior Fishing Buddies
Central Oregon Flyfishers	Sierra Club
Coastal Conservation Association	SOLV
Coos River STEP	South Coast Anglers STEP
Coquille River STEP	Southern Oregon Flyfishers
Cow Creek Band of Umpqua Indians	Starker Forest
Curry Anadromous Fishermen	Sunriver Anglers
Depoe Bay Salmon Enhancement Commission	Sunriver Resort
Eel Tenmile STEP	Tillamook Anglers
Florence STEP Group	Trout Unlimited
Flycasters	Twin Rocks Friends Camp
Freshwater Trust	Umpqua Fishermen Association
Gardiner-Reedsport-Winchester Bay STEP	Youth Employability Support Services
Grande Ronde Tribe	YMCA
KBSC	4-H
KDC volunteers	

**Government**

Bureau of Land Management  
City of Canyonville  
City of Cave Junction  
Forest Service  
Lane County  
Natural Resource Conservation Service  
Tualatin Hills Parks & Recreation  
US Fish and Wildlife Service

**Watershed Councils**

Alsea Watershed Council  
Ashland Watershed Council  
Bear Creek Watershed Council  
Calapooia Watershed Council  
Clackamas River Basin Council  
Coast Fork Willamette Watershed Council  
Illinois Valley Watershed Council  
Long Tom Watershed  
Lower Nehalem Watershed Council  
Luckiamute Watershed  
McKenzie Watershed Council  
Marys River Watershed  
Mid Coast Watershed Council  
Middle Fork Willamette Watershed Council  
Middle Rogue Watershed Council  
Polk Co. Soil and Water  
Port Orford Ocean Resource Team  
(POORT)  
Sandy River Basin Council  
Seven Basins Watershed Council  
South Coast Watershed Council  
Upper Rogue Watershed Association