

# SALMON AND TROUT ENHANCEMENT PROGRAM (STEP)

## 2012-2013 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, 2012 to September 30, 2013. 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, 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 2012 to September 2013, meetings were held at Salem, Roseburg, and Tillamook.

Four new members were appointed to STAC during the reporting period. The members appointed were Ken Range for Lower Rogue, Keith Miller for the Upper Rogue, Don Wenzel for the Mid-Willamette, and Richard Bertellotti for the North 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 2012-2013:

- More than 59,500 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 4,350 youth and adult volunteers. This includes 748 individual Fish Eggs-to-Fry classroom projects that reached over 26,800 students.
- More than 500 volunteers contributed 9,850 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 730 miles of waterways were improved for fish use by 700 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 4.7 million Chinook salmon, coho salmon, steelhead and trout for enhancement or augmentation purposes; 3,003,631 of these fish were reared (fed and cared for) before release and 12,878 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.
- 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 2012-2013 statewide volunteer efforts include:

- 6,327 youth and 5,531 adult volunteers in Oregon participated in STEP activities.
- Volunteers participated in an estimated 1,416 projects, totaling 133,319 hours. This is equivalent to 64.1 full time employees.
- Using the estimated dollar value of \$27.10 for volunteer time in Oregon for 2013, the value of STEP volunteer hours was \$3,612,944.90

Since the program was established in 1981, more than 341,380 adult and youth volunteers (Figure 1) have contributed over 3.3 million hours (Figure 2) to an estimated 36,937 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, 2012-2013. 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.

### EDUCATION AND DEVELOPMENT

| STEP District    | Activities       | Participants  | Volunteers   |               |              |               |
|------------------|------------------|---------------|--------------|---------------|--------------|---------------|
|                  |                  |               | Youth        | Youth Hours   | Adults       | Adult Hours   |
| Coos-Coquille    | 70 (174)         | 15,725        | 1,572        | 10,544        | 1,019        | 5,877         |
| Eastern Oregon   | 34 (69)          | 7,023         | 0            | 0             | 288          | 2,650         |
| Lower Rogue      | 55 (8)           | 3,288         | 36           | 117           | 311          | 1,866         |
| Mid-Coast        | 60 (61)          | 4,167         | 53           | 2,011         | 323          | 1,724         |
| Mid-Willamette   | 84 (55)          | 6,735         | 0            | 0             | 171          | 689           |
| North Coast      | 3 (22)           | 1,916         | 0            | 0             | 1            | 20            |
| North Willamette | 32 (208)         | 6,460         | 0            | 0             | 46           | 374           |
| Umpqua           | 42 (12)          | 6,023         | 254          | 1,888         | 330          | 3,197         |
| Upper Rogue      | 14 (20)          | 3,968         | 2            | 4             | 13           | 63            |
| Upper Willamette | 11 (119)         | 4,232         | 0            | 0             | 40           | 246           |
| STAC             | 3 (0)            | 160           | 0            | 0             | 13           | 1,150         |
| <b>Total</b>     | <b>408 (748)</b> | <b>59,697</b> | <b>1,917</b> | <b>14,564</b> | <b>2,555</b> | <b>17,856</b> |

Table 2. STEP inventory and monitoring activities, miles affected and surveyed and volunteer effort, 2012-2013. Activities were defined as those projects having at least one participant or volunteer.

**INVENTORY AND MONITORING**

| STEP District    | Activities | Miles<br>Affected | Miles<br>Surveyed | Volunteers     |                |            |                |
|------------------|------------|-------------------|-------------------|----------------|----------------|------------|----------------|
|                  |            |                   |                   | Youth<br>Hours | Youth<br>Hours | Adults     | Adult<br>Hours |
| Coos-Coquille    | 2          | 28                | 28                | 0              | 0              | 18         | 144            |
| Eastern Oregon   | 17         | 39                | 107               | 0              | 0              | 63         | 1,975          |
| Lower Rogue      | 9          | 232               | 17                | 98             | 270            | 54         | 983            |
| Mid-Coast        | 13         | 10                | 11                | 18             | 357            | 54         | 1,652          |
| Mid-Willamette   | 10         | 0                 | 23                | 0              | 0              | 48         | 862            |
| North Coast      | 1          | 0                 | 13                | 0              | 0              | 21         | 665            |
| North Willamette | 6          | 94                | 0                 | 1              | 8              | 10         | 200            |
| Umpqua           | 5          | 0                 | 0                 | 0              | 0              | 9          | 160            |
| Upper Rogue      | 8          | 20                | 0                 | 2              | 33             | 25         | 356            |
| Upper Willamette | 5          | 0                 | 24                | 7              | 92             | 74         | 2,094          |
| <b>Total</b>     | <b>76</b>  | <b>423</b>        | <b>223</b>        | <b>126</b>     | <b>760</b>     | <b>376</b> | <b>9,091</b>   |

Table 3. Habitat restoration activities, miles affected and restored and volunteer effort by STEP district, 2012-2013. Activities were defined as those projects having at least one participant or volunteer.

**HABITAT**

| STEP District    | Activities | Miles<br>Affected | Miles<br>Restored | Volunteers     |                |            |                |
|------------------|------------|-------------------|-------------------|----------------|----------------|------------|----------------|
|                  |            |                   |                   | Youth<br>Hours | Youth<br>Hours | Adults     | Adult<br>Hours |
| Coos-Coquille    | 5          | 10                | 10                | 45             | 257            | 42         | 410            |
| Eastern Oregon   | 0          | 0                 | 0                 | 0              | 0              | 0          | 0              |
| Lower Rogue      | 11         | 41                | 2                 | 108            | 222            | 30         | 154            |
| Mid-Coast        | 16         | 166               | 61                | 12             | 72             | 110        | 1,512          |
| Mid-Willamette   | 11         | 123               | 0                 | 0              | 0              | 25         | 328            |
| North Coast      | 5          | 149               | 0                 | 14             | 42             | 17         | 110            |
| North Willamette | 41         | 81                | 0                 | 233            | 1,135          | 59         | 345            |
| Umpqua           | 1          | 10                | 10                | 0              | 0              | 0          | 0              |
| Upper Rogue      | 3          | 0                 | 0                 | 0              | 0              | 5          | 56             |
| Upper Willamette | 2          | 66                | 0                 | 0              | 0              | 0          | 0              |
| <b>Total</b>     | <b>95</b>  | <b>646</b>        | <b>84</b>         | <b>412</b>     | <b>1,728</b>   | <b>288</b> | <b>2,915</b>   |

Table 4. Fish culture activities and volunteer effort by STEP district, 2012-2013. 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    | Activities      | Number of Fish |                  |                  |                  |
|------------------|-----------------|----------------|------------------|------------------|------------------|
|                  |                 | Broodstock     |                  |                  |                  |
|                  |                 | Collected      | Incubated        | Reared           | Released         |
| Coos-Coquille    | 19 (174)        | 10,994         | 1,834,209        | 1,519,476        | 2,674,269        |
| Eastern Oregon   | 0 (69)          | 0              | 13,800           | 0                | 10,750           |
| Lower Rogue      | 5 (8)           | 417            | 157,653          | 95,298           | 134,435          |
| Mid-Coast        | 10 (61)         | 572            | 442,406          | 211,193          | 445,330          |
| Mid-Willamette   | 0 (55)          | 0              | 18,200           | 0                | 18,200           |
| North Coast      | 12 (22)         | 340            | 182,100          | 251,262          | 229,289          |
| North Willamette | 12 (208)        | 0              | 91,000           | 564,470          | 643,557          |
| Umpqua           | 11 (12)         | 555            | 406,433          | 361,932          | 425,808          |
| Upper Rogue      | 2 (20)          | 0              | 5,300            | 0                | 4,310            |
| Upper Willamette | 1 (119)         | 0              | 12,600           | 0                | 107,083          |
| <b>Total</b>     | <b>72 (748)</b> | <b>12,878</b>  | <b>3,163,701</b> | <b>3,003,631</b> | <b>4,693,031</b> |

| STEP District    | Volunteers   |               |              |               |               |
|------------------|--------------|---------------|--------------|---------------|---------------|
|                  | Youth        | Youth         |              | Adult         |               |
|                  |              | Hours         | Adults       | Hours         | Total Hours   |
| Coos-Coquille    | 3,213        | 28,904        | 953          | 16,063        | 44,967        |
| Eastern Oregon   | 0            | 0             | 0            | 0             | 0             |
| Lower Rogue      | 59           | 441           | 143          | 7,925         | 8,366         |
| Mid-Coast        | 31           | 460           | 260          | 9,754         | 10,214        |
| Mid-Willamette   | 0            | 0             | 0            | 0             | 0             |
| North Coast      | 146          | 680           | 630          | 9,805         | 10,485        |
| North Willamette | 3            | 30            | 89           | 1,114         | 1,144         |
| Umpqua           | 530          | 1,720         | 188          | 11,291        | 13,011        |
| Upper Rogue      | 4            | 40            | 21           | 208           | 248           |
| Upper Willamette | 0            | 0             | 28           | 256           | 256           |
| <b>Total</b>     | <b>3,986</b> | <b>32,275</b> | <b>2,312</b> | <b>56,416</b> | <b>88,691</b> |

Figure 1. Number of volunteers who participated in STEP activities, 1981-2013. Values for 1981-1990 and 1993 are estimates. (Note: 1986-1990 and 1993 were updated in 2011 based on discovery of a 1993 report.)

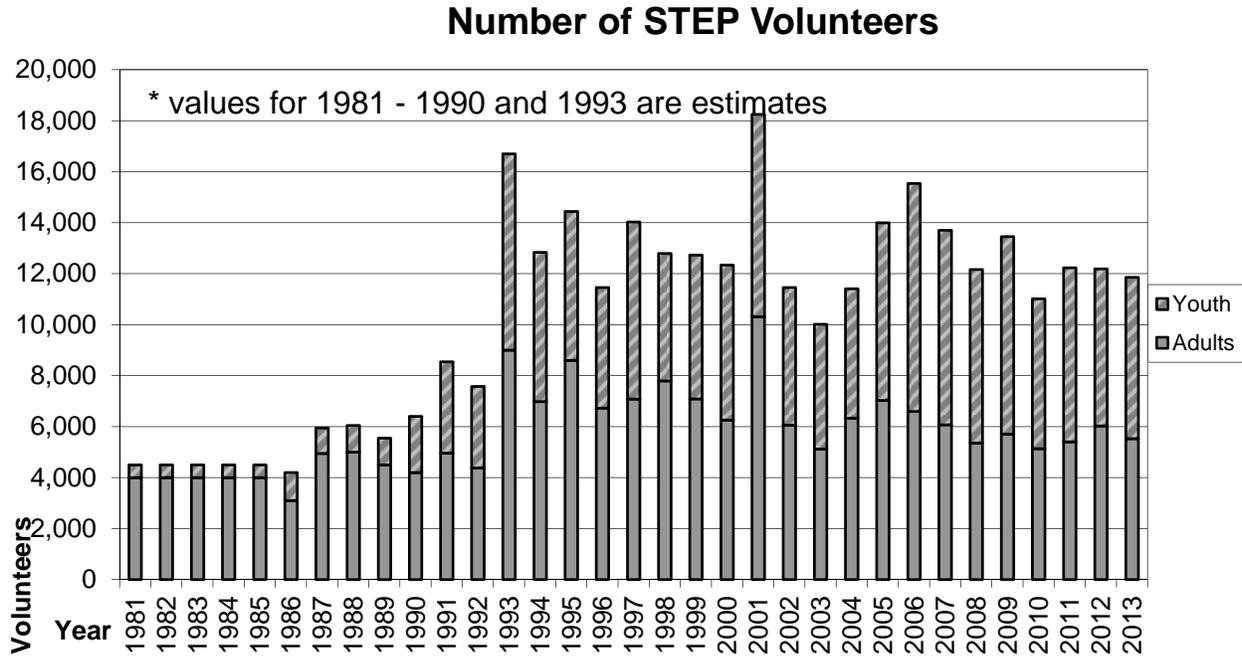
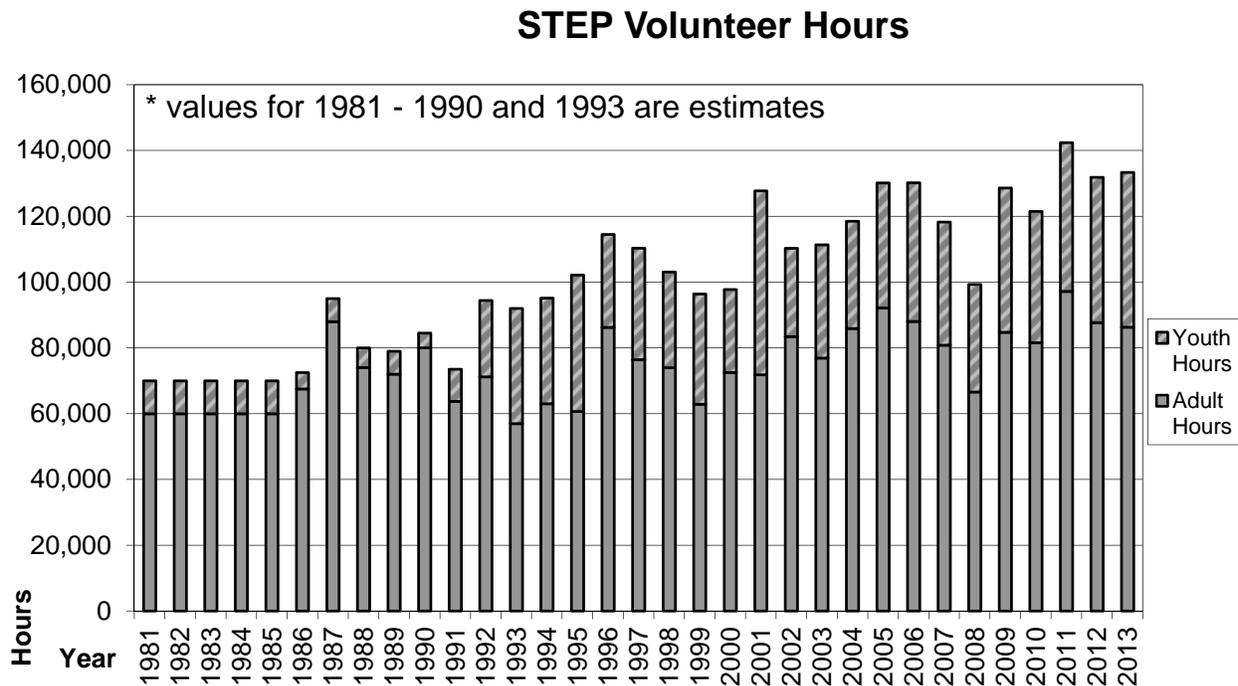


Figure 2. Hours contributed by volunteers towards STEP activities, 1981-2013. Values for 1981-1990 and 1993 are estimates. (Note: 1986-1990 and 1993 were updated in 2011 based on discovery of a 1993 report.)



## 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 2012-2013. 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  
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

### 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 2012-2013 the events were held at Canby Pond in Canby, St. Louis Pond in Gervais, Trojan Pond in Rainier, Mt Hood Community College Pond, Shorty's Pond in Molalla, and Sheridan Pond in Sheridan. The events attracted over 1,500 participants, many of them first-time anglers. Several hundred trophy trout in addition to legal-sized trout were stocked for the events.



*Successful Angler at St. Louis Ponds Youth Event*

Under the guidance of the STEP biologist, volunteer groups including the Association of Northwest Steelheaders (ANWST), 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 65 volunteers donated over 470 hours of time helping to make these events successful.

### Fish Eggs-to-Fry Program

NWWD STEP has been a leader in the Eggs to Fry program for several years and continued to see interest and growth in the classroom incubator program in 2012-2013. An expanding enthusiasm and desire to implement the program into classroom curriculum again brought several new schools to STEP, with the participation numbers annually exceeding 200 classrooms. These incubation projects hatched eggs and released over 82,000 unfed salmon and trout fry into a dozen different STEP-approved lakes, ponds, and streams within the NWWD. Several local chapters of the ANWST, the local OSU Extension Service (4-H), CREST, OMSI, and Reed College sponsored classroom incubation projects in schools around the Portland Metro Area. With the tremendous growth of the program, its success would not be possible without the dedication of the many volunteers donating dozens of hours.

### 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, assist at local fishing events, and visiting area classrooms to perform fish dissections or discuss STEP in the schools and career opportunities in the natural resource fields.

STEP staff represented the NWWD at the 2013 Oregon State Fair and the 2013 Sportsmen's Show providing information and updates about ODFW activities and STEP opportunities in the NWWD and around Oregon.

## **INVENTORY AND MONITORING**

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### Sandy River Creel Surveys

STEP, along with the Sandy Chapter of ANWS and other volunteers, assisted NWWD staff performing weir trap monitoring on the Sandy River in an effort to avoid possible vandalism and accidental injury. STEP volunteers also assisted in broodstock collection at the traps along with sorting and passing of wild spring Chinook salmon.

## **HABITAT IMPROVEMENT**

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### Stream Nutrient Enrichment Program

The 19th year of the district's stream nutrient enrichment program was completed with cooperation from the Clackamas Hatchery, Sandy Hatchery, the United States Forest Service, and the USFWS Eagle Creek Hatchery. The carcasses are intended to mimic historic run densities of spawning Chinook, steelhead, and coho salmon in area streams and increase stream nutrient levels for aquatic organisms.



*Clackamas High School Carcass Placement at Metzger Park*

Over 230 youth volunteers and 60 adult volunteers contributed to the project, placing nearly 50,000 pounds of coho and Chinook salmon carcasses in the Sandy River Basin, the Clackamas River Basin, and the Yamhill Basin. Volunteers from the ANWST (the Association of Northwest Steelheaders), students from various local schools, SOLV (Stop Oregon Litter and Vandalism), members of the Sandy River Watershed Council and Clackamas River Watershed Council, and the Confederated Tribes of the Grande Ronde assisted with the carcass distribution effort.

### Line and Tackle Collection

North Willamette STEP now has Keep Oregon Rivers Clean (KORC) stations in place along six rivers and lakes. Stations at St Louis Ponds have been in place for a year now to go along with long-existing gear collection stations on the Sandy River, 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

### Fish Acclimation Projects

Acclimation facilities have been a key component of fish release strategies in the NWWD for several years 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, Sandy and Molalla rivers. Recent improvements in local fisheries can be credited to these acclimation projects and their success can be directly attributed to the efforts of volunteers and the over 900 hours they contributed to the projects this past year.

The spring of 2013 saw the completion of yet another acclimation pond in the NWWD, this one on Trout Creek near its confluence with the Molalla River. Funding secured through an R&E grant paved the way for completion along with many hours of hard work supplied by volunteers from the Coastal Conservation Association (CCA) and the NW Steelheaders. During March and April of 2013 over 100,000 Chinook salmon smolts were acclimated and released from the facility in an effort to improve runs that have been struggling in recent years.



*Acclimation Pond Construction*

The Foster Creek Acclimation Facility continued to be a productive site for STEP. From that site 50,000 spring Chinook salmon smolts, 25,000 winter steelhead smolts, and 25,000 summer steelhead smolts were acclimated and released into the Clackamas River in the early spring of 2013. This pond is located on Ris and Janet Bradshaw's property. Under the guidance of STEP the Bradshaws and additional volunteers maintained the facility, performed all fish culture activities, and assisted with release. Anglers have seen a very productive fishery develop in this section of the Clackamas River in recent years, likely due to these smolt releases.

The Clear Creek Acclimation Facility was completed and put into production in spring of 2009. Spring of 2013 marked the fifth year of releases from this site. Feeding and daily maintenance was provided by volunteers from the McLoughlin Chapter of the ANWS who donated over 60 hours to this project. Over 45,000 spring Chinook salmon smolts were acclimated and released to provide additional returns of adult spring Chinook to the extremely popular Willamette River and Clackamas River sport fisheries. This facility saw a decrease in release numbers due to some smolts being relocated into the Lower Columbia River as part of a restructuring of commercial fisheries.

The Eagle Creek Acclimation Facility, located at Eagle Fern Park on Eagle Creek, was completed and put into production in early 2010. With funding from an R&E grant provided by the Oregon Wildlife Heritage Foundation, this facility was built from the ground up 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 over 120 hours to this project, with instrumental support provided by the Clackamas County Parks Department.

This Eagle Creek Acclimation project provided for the acclimation and release of 180,000 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 of adult spring Chinook 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 third year of production in 2013 at the site of the decommissioned PGE Bull Run Powerhouse. Releases of spring Chinook salmon from this acclimation site are part of a district strategy to address problems involving stray rates of Sandy Hatchery spring Chinook by giving the salmon a return destination away from the wild fish sensitive Upper Sandy Basin. All spring Chinook smolts in the Sandy River are now released at this acclimation site instead of at Sandy Hatchery so management of this facility by volunteers is critical. The site at Bull Run saw over 132,000 spring Chinook smolts released in spring of 2013, with tremendous help from volunteers with the Sandy Chapter of ANWS.

### Broodstock Collection



*Bull Run River Weir*

The collection of broodstock winter steelhead on the Clackamas River and spring Chinook salmon on the Sandy River was completed with assistance from the NW Steelheaders, individual volunteers, and local fishing guides. This project is instrumental in NWWD fish management goals and would not happen without the help of these volunteers.

### Liberation

STEP provided regular back up support for NWWD trout stocking activities in 2012-2013, both by assisting Region fish liberation truck drivers at stocking sites and driving a portable liberation truck, delivering fish directly to local water bodies. The assistance of volunteers was often critical in completing successful stockings at difficult to access locations.

## **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.

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; 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 18 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 21 Outdoor Schools/Days and summer camp fishing clinics, and seven youth angling events. The STEP Biologist also taught fish biology at two Salmon Walks sponsored by the Sierra Club; as well as Forest Expo Day, Corvallis Parks and Recreation Summer Program, Corvallis/Philomath District Spring Field Day; and Kid's Day for Conservation. The STEP Biologist, along with volunteers from the Albany Chapter of ANWS and ODFW

Angler Education Instructors 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



*Kids investigate fish and bugs captured from a pond in their neighborhood at summer day camp.*

District, Camp Talouli, 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 14 elementary, middle school, high school classes, and to Family Science Nights in the district.

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## INVENTORY AND MONITORING



*Volunteers and STEP Biologist looking for coho salmon*

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 a restored section of Waln Creek in Salem. 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.

### 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, 34 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.

## HABITAT IMPROVEMENT

### 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.

### 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. After a two year hiatus due to the reconstruction of the Minto Trap Facility, salmon carcass distribution resumed in the North Santiam River Basin. Hundreds of spring Chinook salmon and summer steelhead carcasses were distributed to the North and South Santiam River and its tributaries.



*Volunteers distribute fish carcasses for the stream enrichment program.*

## **FISH CULTURE**

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 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, 56 classrooms raised 12,200 spring Chinook salmon and 36 classrooms raised 5,700 rainbow trout.



*Students release their Egg to Fry Program salmon fry.*

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 ODFW's Angler Education Instructors, and Mid Valley 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 ODFW's Angler Education Instructors have been particularly active in the Salem and Corvallis areas 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 evaluate native populations and habitats of salmon and trout within the headwaters of the Willamette River. The major river systems in the district are the Coast Fork Willamette, McKenzie, and Middle 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 fluvial populations of rainbow trout, cutthroat trout, and bull trout are also found within the district. Hatchery spring Chinook salmon, summer steelhead, and rainbow trout releases 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, often remote, fishery. Spring Chinook salmon and bull trout are federally listed as "Threatened" under the ESA.

Implementation of 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.

While the STEP volunteer base draws largely from local organizations, including the McKenzie Flyfishers, Cascade Family Flyfishers, Trout Unlimited, Coastal Conservation Association, McKenzie River Guides Association, Backcountry Horsemen, and the three local watershed councils, several of our most active STEP volunteers are unaffiliated with any group or organization. Additionally, STEP works with industrial timber companies on a variety of habitat evaluation and improvement projects within the district. ODFW staff regularly attends meetings and make presentations to organizations, schools and universities, and other agencies to facilitate the free flow of information, answer questions, solicit ideas for new STEP projects and recruit additional STEP volunteers.

The Upper Willamette STEP biologist would like to recognize the staff from Leaburg Hatchery, McKenzie Hatchery, Willamette Hatchery, and Dexter Hatchery for their dedication to working with STEP. Their support and assistance is vital for the success of many projects.

## **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. Additionally, the STEP biologist also serves on the Row Basin Technical Team, a subgroup charged with, among other duties, administering settlement funds resultant from a retrofit on Dorena Dam, allowing for hydroelectric generation.

The STEP biologist chaired the Eugene-Springfield Salmon Watch Steering Committee, which was formed in response to uncertainty surrounding the continuation of the Salmon Watch education program after the Freshwater Trust dissolved its education programs in late 2010. Committee members came together with the intention of establishing a local means of providing program stability and longevity. The committee consists of representatives from Bureau of Land Management, Forest Service, Eugene Water and Electric Board, the local school districts and others local organizations. In addition, the STEP biologist conducted volunteer training efforts on several events, resulting in nearly 30 newly-trained Salmon Watch volunteers.

### 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.



*Photo courtesy of Chris Pietsch/Register-Guard*

*EWB Fish Biologist, Andy Talabere, uses science to wow Agnes Stewart Middle School students during a Salmon Watch trip.*

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 in the Siuslaw River basin.

During these field trips, local students learn about salmon ecology, including lessons on macroinvertebrates, riparian zones, water quality, and salmon biology.

The STEP biologist participated in Thurston Middle School's Outdoor School program this year, and taught 120 Grade 6 students about macroinvertebrates and their ecology. Additionally, the STEP biologist helped coordinate the first McKenzie Hatchery Field Day for Thurston Middle School 7<sup>th</sup> grade students and taught 90 students about the importance of riparian health and ecology.

### Program Outreach

STEP Biologist gave several presentations to diverse audiences, including:

- Cascade Family Flyfishers—use of rock in habitat enhancement projects
- Oregon State University—presentation to undergraduate capstone class on Citizen Science initiatives
- Research Advances in Fisheries, Wildlife and Ecology—the ins and outs of working for a state agency
- Territorial School—salmon and trout ecology
- Northwest Fly Tyers Expo—general agency and STEP program information

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.

In conjunction with the R&E Coordinator, the STEP biologist coordinated and facilitated a session at the Oregon Chapter American Fisheries Society (ORAFS) in February to showcase the outstanding work of community science practitioners. The response was very encouraging, with 12 presenters and robust audience participation. The STEP biologist began co-chairing the ORAFS Education and Outreach Committee with the STEP biologist from the Mid-Willamette.

## **INVENTORY AND MONITORING**

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### Fish Surveys

STEP volunteers participated in the fourth year of an angler mark-recapture population estimate for rainbow trout on a five mile reach of the McKenzie River. The 5-year 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



*Radio-tagged fish in the McKenzie study.*

volunteers regarding how to floy tag fish and record data.

STEP staff assisted the Mid-Willamette STEP district with a cutthroat study in the Long Tom basin. While this project is outside of our management area, it is geographically close to the Springfield office and makes sense for Upper Willamette staff to provide support. Staff helped check hoop traps with volunteers in several tributaries to the Long Tom River.

STEP staff also assisted the Mid-Coast STEP district perform a release estimate from the Letz Creek facility.

While this project is out of the Upper Willamette STEP district, many of the volunteers reside within our district and have a long relationship with district staff. The population estimate incorporated approximately 16 volunteers from the NW Steelheaders, Emerald Empire Chapter and consisted of a mark/re-sight sample using seine net.

As an offshoot of the aforementioned population estimate, STEP staff assisted volunteers with a radio tag project on the same five-mile reach of the McKenzie to examine movement in native rainbow trout. STEP staff installed radio tags into 20 angler-caught rainbow trout and volunteers tracked the tagged fish weekly. Data derived from movement studies are often challenging to work with, but volunteers have done an excellent job of managing and displaying data graphically to show some interesting results. In the next year, we will do additional analysis and consider future iterations of this project.

### 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.

### 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. A later trapping effort in June resulted in length and weight data for approximately 60 fish. Over the next five years, ODFW will curtail brook trout removal in the fall, while maintaining the spring/early summer evaluation. This will enable us to evaluate the response in Gold Lake to a less rigorous management schedule.



*A beautiful Fall net set on Gold Lake.*

## **HABITAT IMPROVEMENT**

### Carcass Placement

STEP staff worked with staff from the McKenzie Hatchery to out plant carcasses. Over 2,200 adult carcasses totaling nearly 27,000 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, due to the efforts of Coastal Conservation Association and Weyerhaeuser volunteers.

### Little Fall Creek Fish Habitat Enhancement

ODFW staff partnered with the Forest Service, the Middle Fork Willamette Watershed Council and Weyerhaeuser to complete the first phase of in-stream habitat enhancement on Weyerhaeuser property in summer 2013. The watershed council is pursuing funding for a second phase of structures and STEP staff has contributed extensively to the site and project selection in this basin.

## 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; that work occurred in the spring of 2013 and we have seen interesting preliminary results. Funds to implement another phase of in-stream habitat work are in place, but due to a prolonged permitting process, the project will be installed in summer 2014.

## **FISH CULTURE**

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### Classroom Egg Incubator

Approximately 12,500 spring Chinook salmon eggs were incubated in 119 classrooms in 57 different schools as part of the Classroom Incubator Program. The unfed fry were released in December primarily 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. Nearly 98,000 legal and larger rainbow trout were released during boat stocking.

## **North Coast STEP**

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Ron Rehn, STEP Biologist

Robert Bradley, Assistant District Fish Biologist

Dave Plawman, 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. The Salmon Watch and Clean Water Festival event had 492 students that participated in these events.

### Fish Eggs-to-Fry Program

The North Coast STEP classroom incubator program this year involved delivering eggs and giving presentations to students in eleven 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. Approximately 576 students were involved in this program.

### Improvements to Fishing Access

The Loren's Pond Enhancement Project was completed in June of 2013. Funded through a Fish Restoration and Enhancement Program and donation from Loren Parks, 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 with approximately 1,200 feet of new trails along the Trask River. Other project partners included, Tillamook Bay Watershed Council, Tillamook County PUD, Tillamook County Schools, and the Tillamook Estuaries Partnership.



*Loren's Pond ADA fishing platform*



*Local schools conduct restoration planting at Loren's Pond*

### Family Fishing Events

During this reporting period, 857 people participated in North Coast Watershed District (NCWD) Family Fishing Events and other organized fishing events. The Tualatin Chapter of ANWS are among the many volunteers assisting the NCWD STEP program in providing guidance in basic fishing skills at these events.

The Tillamook Angler's Disabled Angler Fishing Day had over 335 people with disabilities participated in this year's event. Individuals with disabilities from across the state come to the Whiskey Creek Hatchery to enjoy a day of fishing, fun, and a BBQ.

Camp Rosenbaum, where disadvantaged youths from Portland spend a week on the coast to experience fishing as one of the many activities had approximately 300 youths take part.

## 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. Volunteers from the Salmonberry STEP Monitoring Project donated 665 hours last year.



*Volunteers with the Salmonberry Monitoring Project ready for survey.*

### Nehalem River Radio Telemetry Study

Since December 2011 a radio telemetry project to determine baseline migration characteristics of adult hatchery and wild steelhead returning to the North Fork Nehalem River has been conducted. 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 consists 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. To date 74 fish have been tagged.

## HABITAT IMPROVEMENT

### 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 119,626 pounds of fish carcasses into 145 miles of north coast rivers and streams from the Little Nestucca to the lower Columbia River tributaries to benefit salmonids and other species.

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## FISH CULTURE

### Volunteer Hatchery Programs

The Tillamook Anglers continue to operate Whiskey Creek Volunteer Hatchery, releasing approximately 100,000 spring Chinook salmon smolts and an additional 96,950 fall Chinook salmon fry into the Wilson and Trask rivers. The Nestucca Anglers also continue to operate Rhoades Pond, rearing 100,000 fall Chinook salmon smolts for release into Three Rivers and the Nestucca River.



*Volunteers clipping fins at Whiskey Creek Hatchery.*

This year, the Wild Winter Steelhead Broodstock Collection Programs continued on the Nestucca and Wilson Rivers, and wild fall Chinook salmon on the Nestucca River. Over 60 volunteer anglers participated in these programs, collecting over 340 wild fish to be used as broodstock by ODFW hatcheries.

### High School Hatcheries

Astoria High School's hatchery program released 2,105 coho salmon and 15,805 Chinook salmon presmolts into Young's Bay. Warrenton High School's program released 2,903 coho salmon, 1,899 Chinook salmon, and 60 winter steelhead presmolts into Skipanon River.

### Rhoades Pond Upgrades

Nestucca Anglers completed major upgrades to their rearing facility. Funds obtained funding through an R&E grant in August of 2011 in addition to other partners which included Oregon Wildlife Heritage Foundation, ODFW Salmon Trout Enhancement Program, Cascade Steel, Mid-Willamette Angling Club, North Coast Salmon & Steelhead Enhancement Fund, Dorymen's Association, and the ODFW Salmon & Trout Advisory Committee to make much-needed repairs to the facility. These included replacing the pond liner that was damaged during a flood event several years ago, the outlet structure that was in overall poor shape (this structure is from the original 1976 construction), and replacing the intake at the river and supply. The project was completed in spring of 2013 at a total cost of \$91,632.



*Completed project at Rhoades Pond.*

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## 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 including 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 Oregon coast coho salmon. In addition to coho, 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 schools, non-profit organizations, and volunteer groups on a variety of projects focused on fisheries management and watershed conservation through monitoring, education, restoration and propagation. Mid Coast volunteer groups include Florence STEP, the Longview Hills Fishing Club, Central Coast Fly Fishers, Depoe Bay Salmon Enhancement Commission, Alsea Sportsman's Association, Association of Northwest Steelheaders (Emerald Empire and Albany chapters), Oregon State University's Fish and Wildlife Department, Boy Scouts of America, the Community Services Consortium and Career Tech High School.

Mid Coast volunteers work constructively with district staff on a variety of projects throughout the basin. Education and outreach are important features of the Mid Coast STEP, and these programs continue to grow each year. Collaborative watershed education will become more essential as the Oregon Coast population – and pressure on the region's natural resources – increases. Mid Coast STEP also assists with fish population monitoring through the operation of eight fish traps and volunteer assistance with spawning surveys and estuary seining. Habitat restoration and angler access improvement projects are also important components of the Mid Coast STEP, fostering partnerships with private industry, state and federal agencies, watershed councils, local interest groups, fishing clubs, landowners and volunteers. The Mid Coast District also includes one of the oldest STEP propagation programs in the state, and fish culture programs are led at several different locations by a large group of passionate volunteers assisting with district harvest objectives.

## EDUCATION AND PROGRAM DEVELOPMENT

### Fish Eggs-to-Fry Program

During the 2012-2013 school year, the Egg to Fry program was active at the Beverly Beach Visitor's Center and in 41 classrooms (preschool-12), representing twelve 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 natural resource stewardship. Volunteers and staff train classroom and field assistants, deliver and maintain equipment, transport eggs, lead presentations and field trips, and coordinate with hatchery staff.



*Steelhead dissection*

The program includes an introductory classroom presentation with egg delivery, a habitat requirements and watershed presentation after incubation, and a fry release field trip. Field trips usually involve several education stations where students learn about aquatic food webs, water quality, fish habitat and stream complexity and salmon biology through adult steelhead dissections. Dissections provide a comparative, hands-on approach to understanding salmonids and their habitat and life cycle requirements by learning about

their anatomy and physiology.

Two high school interns mentored 13 classrooms and assisted with classroom presentations and field trips. In 2012, the Lincoln County School District also adopted the Egg to Fry Program as core curriculum for 3<sup>rd</sup> graders as part of their Ocean Literacy Initiative.

### Family Fishing Events

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.



*Olalla Reservoir Family Fishing Event*

## **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.

## HABITAT IMPROVEMENT

### Habitat Restoration

Mid Coast STEP volunteers operated 45 SOLV and 15 monofilament line recycling stations throughout the year and organized litter patrols at popular beaches and fishing sites. Volunteers also assisted with River Cleanup events on the Siletz and Alsea Rivers, removing over 4,000 pounds of garbage from approximately 50 river miles. Volunteers continue to assist with



*Mid Coast volunteers with Siletz River Clean-Up haul.*

maintenance of the restored 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 Big Elk Creek to assist the Mid Coast Habitat Restoration Biologist. The Florence STEP group assisted the Bureau of Land Management by cabling large diameter logs to existing large boulders in the mainstem Siuslaw River to provide slow water habitat and cover. During the winter riparian planting season, the Florence STEP Group also planted 200

trees on 6 acres of ODFW owned property on the North

Fork Siuslaw River. They have maintained trees through the summer and will continue maintenance activities until the trees are free to grow.

### Nutrient Enrichment

As part of the ODFW stream nutrient enrichment program, biologists directed and assisted volunteers in the distribution of about 700 pounds of fish carcasses into 100 miles of Mid Coast streams.

### Angler Access

Mid Coast volunteers and staff helped with the installation of a new ADA accessible fishing dock at Cleowox Lake through an ODFW Restoration and Enhancement (R&E) grant. The Central Coast Fly Fishers also received an R&E grant to replace the rotten fishing dock at Eckman Lake with a new aluminum ADA accessible dock. In addition, the Alsea Sportsman's Association and Association of Northwest Steelheaders maintained and improved boat ramp facilities on the Alsea River. Volunteers are also working with Mid Coast staff and Georgia Pacific to make improvements to Olalla Reservoir in the near future.

## FISH CULTURE



*Students shoveling gravel out of the Schooner Creek adult fish trap.*

### Broodstock Collection

Wild winter steelhead broodstock collection programs on the Alsea and Siletz Rivers were supported by over 30 volunteer anglers. Angler caught winter steelhead were spawned at the Alsea Hatchery, and their offspring were released as smolts for continued hatchery angling opportunities in these rivers. The hatchery winter steelhead program on the Siuslaw River was also supported by over 100 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 stage. 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 (15,000) and Whittaker Creek (70,000). The Emerald Empire Chapter of ANWS reared an estimated 11,000 winter steelhead smolts for release from the Letz Creek facility on the upper Siuslaw River. Longview Hills Fishing Club, Central Coast Fly Fishers, Boy Scouts of America and the Community Services Consortium's (CSC) natural resource crew students also helped operate an acclimation site at Palmer Creek in the Siletz basin for 37,000 winter steelhead smolts. Volunteers camped on-site for 10 days, cleaning screens and feeding fish daily. Community Services Consortium students also learned about survival skills, outdoor living and fish management and monitoring at the Palmer Creek acclimation site.

#### 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 197,000 eggs to provide enough eyed eggs for 85,000 smolts, 20 classroom incubators and, if needed eggs for the Letz Creek facility. 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 18,236 hours. The program completed and/or developed 54 projects this year and reached over 5,500 people with its public outreach efforts alone. Below are highlights for the four main STEP categories.

#### EDUCATION AND PROGRAM DEVELOPMENT

The Umpqua STEP biologist helped coordinate 33 different educational events that reached 4,626 youth and 1,038 adults. This included four Free Fishing Day events that occurred in Douglas County, approximately 12 classroom incubators projects, as well as salmonid life-cycle classes and angler education programs.

##### Angler Education

The STEP biologist also worked with U.S. Forest Service and other state, federal and private organizations during the TSALILA Festival in Reedsport, OR. This year's event featured the 300 gallon "live" display tank. The species on display included spring Chinook salmon, coho salmon, and rainbow trout. Students were able to view these fish while the STEP biologist explained the life history and identification features of each species. A stuffed rendition of a salmon was used to explain the anatomy of fish. Students were able to do a dissection of this fish without the "yuck factor". 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, Free Fishing Day events, 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. Many local volunteers participated in these events.

### Canyonville Education Events

The Canyonville acclimation site had over 770 students and 75 adults attend our releasing, life-cycle, and fin-clipping seminars. This included several different schools from southern Douglas County. There were over 75 volunteers with 6 stations for the three days of winter steelhead releasing. These different stations included the following subjects: anatomy, health condition (k-factor), 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.

### Additional developments

The Umpqua STEP biologist worked with the local Tribal biologist, volunteer group, and food banks in an effort to reduce the number of hatchery fish on the spawning grounds and to supply the local community with fresh salmon for consumption. Both our winter steelhead program and coho salmon programs have produced surplus hatchery salmon and approximately 150 fish were given to the local food banks. This program has not only been a benefit for those in need in the community but it has also proved to be a great cooperation between various organizations and agencies.

Another project being developed is a cooperative research effort between local ODFW staff, the Oregon Hatchery Research Center, OSU staff and the Cow Creek Tribe. The project will start in the winter/spring of 2013 as a pilot effort to test feasibility. Starting in 2014 the research will begin, the early acclimation of eyed winter steelhead eggs will be tested. The information gained from this study will hopefully help STEP biologists and hatchery managers better understand the homing behavior of migratory salmonids. Management applications of the study could include lessening the likelihood of straying of hatchery fish and in turn benefiting fisheries by having more fish return to the targeted areas in which they are intended.

The first steps have been taken to repair the existing Cooper Creek rearing facility. This facility will be used for the rearing of approximately 150,000 pre-smolt fall Chinook salmon bound for the Calapooya River. This site has not been in operation for several years and is in need of major repair work. The first step of this project has taken place by Umpqua Fishermen's Association (UFA) volunteers this summer. The UFA has completed clean-up of the site in preparation for repairs to take place.

## **INVENTORY AND MONITORING**

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

### High Lakes Surveys

Two high lakes in the district were surveyed this year. These lakes are being evaluated to determine the success of our rainbow trout that are being used in various Cascade lakes. This data is also 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.

## Galesville Reservoir

The UFA continued to monitor the success of coho salmon stocked into Galesville Reservoir. Anglers have been collecting data on the number of coho caught and whether or not they are fin-clipped. This information is used to help assess whether or not adult coho stocked into the lake are successfully spawning as well as giving us an idea of how many fish are being harvested annually.

## Creel Log Books

Creel log books were again distributed to fishing guides on the Umpqua River to help collect fall Chinook salmon catch rates and effort of anglers. This is the second year of this project and we plan to continue to partner with fishing guides to help us collect data on this hatchery program.

## Gardner Lake

Additionally the Gardiner Reedsport Winchester Bay (GRWB) STEP group has been monitoring water quality on Gardiner Reservoir 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 OSU Research. The information collected is being evaluated and will hopefully help solve hatchery related issues that affect egg survival in the hatch house.

## **HABITAT IMPROVEMENT**

### Carcass Placement

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

### Camp Creek

The instream work for two major tributaries was completed this year. This work was the idea of GRWB volunteers and the preliminary assessments and designs were done by volunteers. The instream work was done by ODFW and Partnership for the Umpqua Rivers (PUR) biologists. Subsequent monitoring will be done by GRWB volunteers. This habitat project will benefit fall Chinook salmon, coho salmon, winter steelhead, and cutthroat trout. Camp Creek is a tributary to Mill Creek which is a location where broodstock fall Chinook salmon is collected for the Lower Umpqua hatchery program.

## **FISH CULTURE**

Due to an abnormally high water event in early September the Umpqua Fishermen's Association (UFA) was unable to collect fall Chinook salmon brood for the Calapooya Creek program. Therefore, no smolts will be released in the spring. The UFA did however assist with broodstock collection of coho salmon and the release of 60,000 coho smolts. Gardiner Reedsport Winchester Bay STEP volunteers will release approximately 125,000 pre-smolt fall Chinook salmon into Winchester Bay in the spring.



*Volunteers installing net pen for  
Coho smolt acclimation*

### Marking

The UFA conducted its own marking, with the use of volunteers and school students, and was able to adipose fin-clip fall Chinook salmon using volunteer labor. Approximately 300 students volunteered to clip 100,000 fish.

Gardiner Reedsport Winchester Bay STEP also utilized student volunteers to assist with fin-clipping and nearly 50,000 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.

### Acclimation and Release

Winter steelhead acclimation 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 angling opportunities in the basin but also provide a great educational experience for local students and adults. Over 70,000 winter steelhead were released in 2013.

### High Lakes Stocking

The STEP program also coordinated the district's High Lakes stocking using volunteers from Oregon Equestrian Trails. Volunteers stocked 13 lakes in the district with over 17,000 brook trout and 4,000 rainbow trout. Over 30 volunteers assisted with this year's high lakes 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 of 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 before the program was formally established. Large numbers of volunteers 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

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### 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.

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. The trail is 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 Program 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 scheduled to be completed in 2014.

### Family Fishing Events

Oregon Department of Fish and Wildlife hatcheries provided 1,700 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 625 trout were caught with a total of 370 children participating this year. Lunch was provided to all 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 volunteers for approximately one-month prior to the event. Volunteers with the Eel/Tenmile STEP Association rear 1,000 rainbow trout in a netpen located in Eel Lake specifically for the clinic. A total of 310 children participated in this year’s event at Eel Lake.

The STEP biologist facilitated the stocking of legal sized 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. The Coos Bay Fire Fighters Association purchased a custom made fire pond for exclusive use at these fishing events.

Fishing poles and gear were provided to the children at these events. A total of 3,015 family members participated in the angling in the trout ponds. Most children caught fish to take home. A total of 292 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.

The Coos Bay Fire Fighters Association raised over \$2,000 to donate a custom made 2,000 gallon portable fire pond to be used exclusively for family fishing events

#### 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.



*Students sorting and collecting fall Chinook*

Hundreds of students were involved with the marking of the fall Chinook salmon juveniles at Coquille High School this past spring. The Chinook are spawned, incubated and reared at the facility. This is 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.

This year students from the high school set up and helped operate a classroom aquarium at neighboring Lincoln Elementary School. The high school students presented a puppet show to several of the classes to involve them in the aquarium and the salmon that were in the incubator.

### Morgan Creek Hatchery

The reconstruction of the educational and fish cultural facilities continued at Morgan Creek Hatchery during the report period. Work was completed on a second building. This new building provides 2,800 square feet of 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. A total of 902,166 Chinook salmon were marked at Morgan Creek during the report period. This new building has become an important educational and fish cultural tool at the facility.



*Students collecting and spawning Chinook at Noble Ck.*

### Noble Creek Hatchery

Volunteers with Coos River STEP continued to use the deep matrix hatchboxes to incubate salmon at the hatchery until they are ready to be fed. In addition to the original four deep matrix hatchboxes, volunteers have purchased and installed two additional deep matrix hatchboxes with funds coming from STAC mini-grants. These deep matrix hatchboxes replaced all of the older style hatchboxes at Noble Creek Hatchery. Coos River STEP volunteers have continued to use the 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 salmon at Noble Creek Hatchery. This past year, Coos River STEP volunteers have replaced the roof on the hatchery and repainted the hatchery buildings.

### Other Outreach

Since 2009, 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

### 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.

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.

## 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 invasive blackberries were removed.

This year a local nursery again 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. Most of the trees had steel mesh protection placed around them to protect them from beavers.

The District STEP biologist and a small group of high school students planted willows along Wilson Creek which is a small salmon stream in the lower Coos Basin.

District STEP biologist with the help of other ODFW staff and a contractor completed a spawning gravel augmentation project for Winter Arm Creek, a tributary of Eel Lake this past summer. This project placed approximately 140 cubic yards of spawning gravel between four locations into the stream for coho salmon and winter steelhead.

### 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.



*Bucket hauling gravel to Winter Arm Creek on Eel Lake.*

## FISH CULTURE

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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

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.

### 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, 86,438 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.

This was the last year to release fry for 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. Several 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.

This past year, the District STEP biologist and volunteers were involved in a six year project to inject otolith marked coho salmon eggs into unused spawning gravels in the upper Catching Creek tributaries in the Coos Basin. This is a research project to test if injecting eyed eggs into streams with lower abundance of spawning adult coho will produce more adult coho three years later. There will be three years of egg injection and then three additional years of spawning surveys and reading otoliths to evaluate the 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-smolt 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 2,262,730 Chinook salmon pre-smolts were released into the Coos Basin in the spring of 2013. A total of 1,276,566 Chinook were marked in the spring of 2013 in the Coos basin. Most of the fish were marked by students.

Since 2007, Chinook salmon have been released into the Fourth Creek reservoir as part of a cooperative partnership with the Coquille Indian Tribe. The fish are 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.

In the fall of 2012, a trap was constructed and installed into the fishway at the tribal reservoir. A total of 245 Chinook salmon were trapped returning to the site. In addition to Chinook, 20 coho jacks were trapped in the fishway. These jacks were the first returning coho salmon from hatchbox fry releases in the tributary streams of the reservoir.

#### 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, 8,156 fall Chinook salmon returned to the Morgan Creek and Noble Creek STEP facilities in the Coos River basin. A total of 4,166 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 1,276,566 fall Chinook salmon 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 salmon released from Morgan Creek were marked.

The increased number of marked Chinook salmon 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.

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 757 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 5,505 adults and 337 jacks.

### Rearing and Acclimation

In 2013, Chinook salmon presmolts were reared and released from the Coquille High School. A total of 4,992 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.” An additional 10,885 Chinook salmon smolts were acclimated at the school.

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.

Again this year, releases of Chinook salmon presmolts were conducted from Bandon Hatchery into Ferry Creek in the lower Coquille River. A total of 10,809 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 9,990 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 second year that all Chinook salmon 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.

Two grants were secured totaling \$85,000 to install alarms and back-up systems at most rearing and acclimation sites in the district. These alarms and back-up systems will reduce fish losses due to water failure. #

### **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. January 11, 2013 the Oregon Fish and Wildlife Commission adopted the Rogue Fall Chinook Species Management Unit (SMU) Conservation Plan. The plan sets conservation criteria and desired status goals for wild fall Chinook salmon in the Rogue River and five coastal watersheds south of Elk River. The plan was developed by ODFW in collaboration with multiple government agencies and a public advisory committee. The two district STEP groups provided representatives for the advisory committee. In addition, the majority of the monitoring projects that STEP volunteers participate in (in the Lower Rogue Watershed District) are defined management strategies embedded in plan. The culmination of the plan has focused the STEP groups on fishery management in the District.

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.

The Lower Rogue STEP biologist made 38 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 49 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.

### Indian Creek Hatchery Tours

Annually, Curry Anadromous Fishermen conduct tours of the Indian Creek STEP hatchery throughout the summer. The visitors to the lower Rogue River sign up for the tours at the Indian Creek RV Parks. The tours give the volunteers the opportunity to teach about salmonid life history, STEP volunteer opportunity, angling opportunities and the long history of the facility. The tours of the hatchery are a highlight for tourists that visit the lower Rogue River.

### Azalea Festival

The Oregon South Coast Fisherman and STEP biologist conducted the annual portable fishing ponds at the Brookings Azalea Festival. The group has hosted the fishing event since 1989. Approximately 100 children participated 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 1, 2013 the annual free fishing day event was held at Libby Pond. Over 113 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 250 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 285 people visited the booth throughout the weekend and a number of people joined the STEP groups.

### Port Orford Water Festival

Volunteers with CAF hosted an exhibit at the third annual Port Orford Water Festival. CAF volunteers taught Angler Education and in the afternoon hosted a fishing outing at Arizona Pond State Park.

### Discover Elk River Natural Resource Day

Discover the Elk Day was sponsored by the U.S. Forest Service and Southcoast Watershed Council on Elk River at Steel Blue Chameleon Lodge. The day was organized to bring attention to the watersheds conservation and recreation activities. Over 100 adult and youth participated in the event. CAF volunteers provided activities for adult and youth anglers.

### 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 2013 all of the third grade classes in the Lower Rogue STEP district attended the event.



*Reel Fish days at Arizona Beach.*

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 Dissection

Pikeminnow caught during the Rogue River seine projects were preserved for dissection 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.

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.

## INVENTORY AND MONITORING



*OSCF Chetco fall Chinook scale collection*

volunteers and staff collected 148 samples.

### Estuary Seining

The STEP biologist and OSCF volunteers completed their 22nd 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.

### 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 2012 brood year



*Chetco estuary seining*

### 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 24-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 2013 Winchuck trapping season concluded with 57 days of trap operation and 13,604 fall Chinook salmon smolt sampled.

### Huntley Park Seining

The Huntley Park Seining Project represents a continuation of a 38-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 2013 sixteen-week study included 45-days of data collection with approximately 445 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 hatchery 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 fall two snout recovery stations were deployed to several Chetco River boat ramps. Volunteers solicited prizes for raffle to anglers that donated tagged snouts. Each station has 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 2013 season.

### Rogue Species Management Unit Fall Chinook Plan

January 11, 2013 the Oregon Fish and Wildlife Commission adopted the Rogue Fall Chinook Species Management Unit (SMU) Conservation Plan. The plan sets conservation criteria and desired status goals for wild fall Chinook salmon in the Rogue River and five coastal watersheds south of Elk River.

The plan was developed by ODFW in collaboration with multiple government agencies, and a public advisory committee. The two district STEP groups provided representatives for the advisory committee. In addition, the majority of the monitoring projects that STEP volunteers participate in (in the Lower Rogue Watershed District) are defined management strategies embedded in plan. The culmination of the plan has focused the STEP groups on fishery management in the District.

## **HABITAT IMPROVEMENT**

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### 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 2,705 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. In addition, 101 steelhead carcasses of Chetco River origin were redistributed into the north and south forks of the Chetco River.

### 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 2013 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 salmon, some juvenile winter steelhead was observed in the catch.

## **FISH CULTURE**

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### Chetco River Broodstock Collection

Volunteers and fishing guides assisted ODFW staff in collecting broodstock for the Chetco River hatchery programs. A total of 107 fall Chinook salmon and 101 winter steelhead were collected and transported to Elk River Hatchery.

### Ferry Creek Acclimation

ODFW and OSCF acclimated fall Chinook in Ferry Creek Reservoir. Fall Chinook salmon were acclimated at the Ferry Creek Reservoir which 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 smolts.



*Ferry Creek net pen acclimation.*

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)

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 89,142 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 2013.



*Spawning at Indian Creek Hatchery.*

#### Euchre Creek Hatchbox Repair

Curry Anadromous Fishermen volunteers and Boy Scouts repaired a hatchbox site that has been used to educate Curry County youth for the past 3 decades. The site on private Euchre Creek frontage was seriously damaged by flooding in November 2012. Volunteers and Boy Scouts replaced decking, water supply line and the hatchboxes. By early spring 11,844 fall Chinook salmon fry were released into Cedar Creek (a tributary of Euchre Creek). This release would not have occurred without the dedication of local volunteers to this long standing STEP salmonid life cycle education project. #

### **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.

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 105 district STEP volunteers put in over 1,190 hours and drove 1,655 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.

## EDUCATION AND PROGRAM DEVELOPMENT

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### 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 19 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 Valley of the Rogue State Park.

### 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.

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 Coleman Creek (Bear Creek), George Creek (Illinois River), Ashland Creek (Bear 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 collected was presented at the Bear Creek Salmon Festival, Bear Creek Watershed Symposium, 2 talks at Stuart State Park, 2 talks at Valley of the Rogue State Park and talks at the Outdoor Resources Fair. Information was also provided to the Medford Mail Tribune for an article on our increased nutrient enrichment program using carcasses from Cole Rivers Hatchery. Adult salmonids were displayed in a large tank on a trailer at the Bear Creek Salmon Festival and the SPAM Festival at Shady Cove. The STEP Biologist discussed District STEP programs with interested members of the public at each event.

Training sessions were conducted to help volunteers successfully participate in district monitoring efforts. The STEP biologist provided training in fish identification, trap operation and safety practices in support of several projects—hoop trap surveys, smolt trap surveys, and fish salvage. Three fish identification workshops were conducted to help identify fish captured in traps and while salvaging fish from isolated pools in drying streams.

The District Biologist and the STEP Biologist participated in a live broadcast on the Jefferson Exchange, a program with a short presentation followed by a public question and answer session. The program is hosted by Jefferson Public Radio (call letters: KSJK, AM 1230). The subject of the program was a recent front page article by the Medford Mail Tribune on the recently expanded nutrient enrichment program of ODFW.

## 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 eight adult steelhead from Cole Rivers Hatchery. Discussion centered on salmon life histories and a variety of stewardship topics.
- 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.
- 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 Bear creek Salmon Festival*

## **INVENTORY AND MONITORING**

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### 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 2012-2013 report period, 30 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 2012-2013, 12 volunteers spent 193 hours and drove 414 miles to sample hoop traps placed in Coleman Creek, George Creek (tributary to the Illinois River), Ashland Creek, and Lazy Creek in the Rogue River Basin.

Coleman Creek was the only stream sampled for the first time during the 2012-2013 sample period. Low flows and obstructions to migration may have resulted in our low catch of only 2 juvenile steelhead at this trap. The trap in Ashland Creek caught 2 coho salmon jacks that were headed upstream to spawn. All together, the traps in Ashland Creek, Lazy Creek and George Creek caught juvenile coho and Chinook salmon, juvenile steelhead, and cutthroat trout. Sculpins and 1 Klamath smallscale sucker completed the list of native species captured in the traps in 2013. Non-native species captured in the Lazy Creek trap included reidside shiners, yellow perch, green sunfish, bluegill, fathead minnows and banded crayfish. An outreach project with an underwater camera showed juvenile coho salmon rearing in Ashland Creek during the month of August. We never captured anything in Dryer Creek.

We plan to have volunteers construct temporary fish ladders at the barriers in Lazy and George Creeks during the winter of 2013-2014.



*Juvenile Steelhead and Juvenile coho captured in Ashland Creek 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 2013 of 73 juvenile steelhead was probably due to limited steelhead spawning in upper Jones during the winter of 2012-2013 and by low rainfall. Catches during the last seven 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 2013-2014 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. The trap at the Murphy Creek irrigation bypass trap caught 1,118 salmonids, compared to a previous high in the last 8 years of 329. We believe that the high numbers of salmonids captured in the Murphy Creek trap is due to low flows and a habitat project completed during the summer of 2012.

A fyke trap installed in Griffin Creek during the summer months captured a redbside shiner, bluegills, banded (non-native) crayfish and juvenile and adult fathead minnows. A fall die-off of juvenile salmonids in the same area of the stream in 2012 indicates that Griffin Creek may support salmonids during the fall, winter, and spring before summer temperatures become too warm for salmonids. A heavy mat of foam that greeted us each morning at the fyke was tested and found to have 5 times the maximum allowable DEQ count of coliform bacteria. Volunteers wore gloves and washed their hands after sampling Griffin Creek.

## **HABITAT IMPROVEMENT**

### 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.



*Installing shade for riparian plantings.*

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.

### Stream Nutrient Enrichment

This was the first year volunteers participated in a program aimed at returning as many carcasses as possible from fish returning to Cole Rivers Hatchery to streams to provide nutrient enrichment for juvenile salmonids. All carcasses were held for a period of two weeks at -10 degrees Fahrenheit to reduce the possibility of peoples' dogs from becoming infected with Salmon Poisoning Disease. A total of 4,516 carcasses from coho, Chinook, and steelhead, weighing approximately 19,740 pounds were placed by 42 volunteers in stream reaches totaling 14 miles where each species is found and which met DEQ water quality criteria.

## **FISH CULTURE**

### Fish Salvage



*Preparing live cages for the "Bass Roundup".*

To improve angling opportunities in local reservoirs, 24 volunteers fished for 10 hours each to capture 391 largemouth bass from Hyatt Reservoir where they have been overpopulated for the last few years. Of the total caught, 82 went to a reservoir near Bend, 186 went to Lost Creek Reservoir, and 123 went to Fern Ridge Reservoir.

### Egg to Fry Program

A total of 5,300 eyed spring Chinook salmon eggs from Cole Rivers Hatchery were delivered by three volunteers to 19 classrooms from Prospect to Cave Junction in the Rogue River Basin during the fall of 2012. A total of 3,909 survived to swim-up stage and were released into the Rogue River.

## ***High Desert Region***

### **Eastern Oregon STEP**

Jennifer Luke, STEP Biologist  
Shannon Hurn, Mike Harrington, 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**

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### Kokanee Karnival

Kokanee Karnival Youth Education Program continues to be a popular education program for Deschutes, Jefferson, and Crook County elementary students. In 2012-2013, 360 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 2012-2013, 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, Amity Creek, and High Lake's Elementary "Science Camps," Madras 4-H Pond Tour, Ochoco Creek field days, Central Oregon Flyfisher's Youth Flyfishing Event and Prineville's "Fin, Feather and Fire 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 fourth annual Fort Klamath Angling Clinic. Students participated in a fishing clinic where they learned about fishing regulations, fish identification, and conservation. Students from Chiloquin Elementary and Conger Elementary 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.

## 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.

## **INVENTORY AND MONITORING**

### 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 2013, STEP volunteers, along with ODFW staff, removed 14,000 pounds of chub from these lakes.



*Joey Capria with barrels of chub.*



*Volunteer works up fish.*

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

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.

### Upper Deschutes Redband Trout – Radio Telemetry/Fish Movement Study

Oregon Department of Fish and Wildlife has begun a study on the middle Deschutes River investigating baseline fish assemblages, response of trout to both restored stream flows and water management. A critical aspect of the project was to identify refugia of redband trout and seasonal movement patterns. Redband movement in the middle Deschutes River had never been documented and the use of radio telemetry will identify movement during irrigation and non-irrigation seasons. Ryan Carrusco (NRS1) tagged thirty redband trout and volunteers assisted with tracking by using the radio telemetry equipment.

### Spawning Surveys- Redband and Bulltrout

Volunteers are paired with local biologists and trained to identify and count redds. Redband spawning surveys are conducted from December through May in the Metolius River. Upper Deschutes redband surveys are conducted in May and bull char surveys in September and October. Volunteers are essential for completing these redd counts. Survey results are used by ODFW district staff to monitor fish populations.



*Redd surveys on the Metolius.*

## **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  
Mike Gauvin, Recreational Fisheries Program Manager

## **EDUCATION AND PROGRAM DEVELOPMENT**

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### Salmon Trout Advisory Committee

STAC held three meetings across the state:

- January 2013, Salem
- April 2013, Roseburg
- June 2013, Canceled
- September 2013, Tillamook

Three vacancies were filled during this time period and one vacancy was recruited for. 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 educational materials related to the Egg-To-Fry Program were developed through a partnership with the Association of Northwest Steelheaders and funding provided through an R&E grant. These materials include a volunteer guide, several aquarium set up videos, and informational PowerPoint presentations.



### 2013 STEP Conference

The biennial STEP Conference held in April at the Seven Feathers Conference Center in Canyonville had 128 participants. The theme was “STEPing up to Restore Oregon’s Salmon and Trout” and focused on incorporating restoration into all aspects of STEP.

## **FISH CULTURE**

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### Propagation Reviews

Two of the fifteen approved STEP propagation projects were reviewed during this time period bringing the total renewed projects to 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 salmon, fall Chinook salmon, winter steelhead, and rainbow trout.

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## 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     | 1 <sup>st</sup>         | January 2016   |
| Lower Willamette                     | Lin Howell          | 1 <sup>st</sup>         | July 2014      |
| Mid-Willamette                       | Don Wenzel          | 1 <sup>st</sup>         | January 2017   |
| Upper Willamette                     | Leslie Wade         | 1 <sup>st</sup>         | October 2013   |
| North Coast (Seaside-Astoria)        | Richard Bertellotti | 1 <sup>st</sup>         | January 2017   |
| North Coast (Tillamook-Pacific City) | Patrick Gefre       | 1 <sup>st</sup>         | October 2013   |
| Mid-Coast                            | Brian Hudson        | 1 <sup>st</sup>         | January 2016   |
| Umpqua                               | Vacant              |                         |                |
| Tenmile, Coos and Coquille           | Reese Bender        | 1 <sup>st</sup>         | January 2016   |
| Lower Rogue                          | Ken Range           | 1 <sup>st</sup>         | March 2017     |
| Upper Rogue                          | Keith Miller        | 1 <sup>st</sup>         | January 2017   |
| 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, 2013

<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:**

Kevin Herkamp, STEP Coordinator  
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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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### **Eastern Oregon STEP:**

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\*List current as of September 30, 2013

### 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**

|                              |                                      |
|------------------------------|--------------------------------------|
| Seven Oaks Middle Schools    | Coquille High School                 |
| Abiqua School                | Corridor Elementary                  |
| Adams Elementary             | Corvallis High School                |
| Altamont Elementary          | Cottage Grove High School            |
| Alternative Youth Activities | CREST/West Linn-Wilsonville Schools  |
| Arts and Technology K-8      | Creswell High School                 |
| 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 Middle School      | Elkton School                        |
| Cal Young Middle School      | 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      | Gervais Middle School                |
| 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 Middle School  
Jewell Elementary  
John Tuck Elementary  
Juniper Elementary  
Kalmiopsis Elementary School  
Kelly Middle School  
Kennedy Middle School  
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 Middle School  
Madras Elementary School  
Marcola Elementary  
Marshfield High  
McCornack Elementary  
McKay High School  
Meadowview Elementary  
Middle School  
Millicoma Mid. School  
Moffitt Elementary

Monroe Middle School  
Montesorri School  
Mowhawk High School  
Mrytlecrest School  
Neahkahnie Jr. High School  
North Bay School  
North Bend Middle School  
North Eugene High School  
North Sherman Elementary School  
Oakland School District  
Parkdale Elementary  
Parker Elementary  
Patterson Elementary  
Pendleton High  
Peterson Elementary  
Philomath Sixth Grade  
Phoenix Elementary School  
Pilot Butte Middle School  
Pine Eagle High School  
Pine Ridge Elementary  
Pleasant Hill Middle School  
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 Middle School  
Roosevelt MS  
Roseburg School District  
Shasta MS  
Sheldon High School  
Sherman High School  
Siletz School  
Sisters Middle School  
South Eugene High School  
South Sherman Elementary School  
Spencer Butte Middle School  
Spring Creek Elementary  
Springfield Middle School  
St Francis School  
St Joseph's School

Stanfield High School  
Sutherlin School District  
Taft Elementary  
Tallent Middle School  
Terrebonne Community School  
Territorial Elementary  
Three Rivers School  
Thurston Middle School  
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 High School  
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