Salmon and Trout Enhancement Program

2017-2018 Executive Summary

LEGISLATIVE REPORT

This annual legislative report summarizes the activities and accomplishments of The Salmon and Trout Enhancement Program (STEP) from October 1, 2017 to September 30, 2018. STEP activities are integral to accomplishing Oregon Department of Fish and Wildlife's (ODFW) fish management objectives. During the 2017-2018 period, statewide STEP volunteer efforts involved 2,250 young and 4,950 adult volunteers equaling 38 full-time equivalents (FTEs). STEP volunteer efforts are valued at $2,830,000.

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.

STEP volunteer efforts are valued at **$2,830,000** annually

EDUCATION AND PROGRAM DEVELOPMENT

66,350 people participated in STEP educational activities

These include trainings, classes, tours, presentations, workshops, and public events. Oregon ranks number 2 in the nation for number of classrooms using classroom incubators through STEP's Fish Eggs-to-Fry program.

INVENTORY AND MONITORING

Nearly **660 volunteers** contributed to fish monitoring and inventory efforts

Participants logged **8,150 hours** in **96 projects** statewide, assessing sport fisheries, conducting fish passage inspections and surveying habitat in streams and rivers

HABITAT IMPROVEMENT

STEP volunteers improved more than **500 miles** of waterways for fish

650 participants improved Oregon's fish habitat by fish passage, in-stream, riparian and fish carcass placement projects, and the Keep Oregon Rivers Clean (KORC) program.

FISH CULTURE

3.8 million Chinook salmon, Coho salmon, steelhead and trout were reared or released by STEP volunteers

These fish were used for enhancement or augmentation purposes. Of these, nearly **2.4 million fish** were fed and cared for by STEP volunteers before release and **5,000 fish** were collected for broodstock

Volunteers with Oregon Youth Conservation Corps assist with trout sampling in East Lake.

Since 1981, **380,000+ volunteers**
have contributed more than **3.8 million hours**
to approximately **43,700 STEP projects**

Volunteers assist ODFW with sampling of fish populations in urban streams.

STEP BACKGROUND

The Oregon Legislature established STEP in 1981 as a program within ODFW. Its mission is 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." Since then, more than 380,000 adult and youth volunteers have contributed more than 3.8 million hours to an estimated 43,700 STEP projects.

STEP is funded by a combination of the U.S. Fish and Wildlife Service (USFWS) Sport Fish Restoration (SFR) grant program and ODFW funds. The program consists of a coordinator and administrative assistant in the ODFW headquarters office in Salem and 11 STEP biologists located throughout the state. The coordinator and assistant divide their time between the STEP program and ODFW's Restoration and Enhancement Program.

ADVISORY COMMITTEE

The Governor appoints a 13-member STEP Advisory Committee (STAC), which is comprised of citizens representing all of Oregon. The committee meets quarterly around the state and advises ODFW on policy and the implementation of STEP. The committee administers the STAC Mini-Grant Program, funded through a $50,000 biennial grant from the ODFW Fish Restoration and Enhancement (R&E) Program Mini-Grants are available in amounts up to $2,000 for projects that further the goals of STEP.

From October 2017 to September 2018, meetings were held in Salem, Newport, and Reedsport. During this time period, three representatives were appointed, and one position was vacated.

The full version of this report is available online at www.dfw.state.or.us/fish/step/ under "Annual Progress Reports" heading.

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OREGON
Fish & Wildlife

SALMON AND TROUT

ENHANCEMENT PROGRAM (STEP)

2017-2018 Annual Progress Report

Prepared by the
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CONTENTS

BACKGROUND AND SUMMARY

This report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) from October 1, 2017 to September 30, 2018. 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, Fish Hatchery Management Policy, and the Fish Health Management Policy. 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 the STEP Program, Oregon's salmon and trout resources, and their habitats. 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 consists of a coordinator and administrative assistant, located in the ODFW headquarters office in Salem. Staff divides their time between the STEP program and the Restoration and Enhancement Program. STEP 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 two-day meetings. From October 2017 to September 2018, meetings were held in Newport, Reedsport, and Salem.

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

The following summarizes accomplishments of the program in 2017-2018:

- More than 66,000 people participated in STEP training, classes, tours, presentations or workshops, or visited STEP activities or displays at public events (Table 1). These activities involved over 2,400 youth and adult volunteers. This includes 821 individual Fish Eggs-to-Fry classroom projects that reached over 33,400 students.
- Over 650 volunteers contributed over 8,000 hours on 96 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).
- Over 530 miles of waterways were improved for fish use by 650 volunteers through fish passage, in-stream, riparian and fish carcass placement projects and the Keep Oregon River's Clean program (Table 3).

- STEP volunteers assisted with rearing and releasing of over 3.8 million Chinook salmon, Coho salmon, steelhead and trout for enhancement or augmentation purposes; 2.4 million of these fish were reared (fed and cared for) before release and over 5,000 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 volunteers to restore inland trout fisheries will continue. Over 200 volunteers improved fishing by providing over 1,500 hours on 23 projects.

As indicated by the amount of work accomplished, volunteers made a substantial contribution to STEP and ODFW. Because STEP activities are an integral part of accomplishing ODFW's fish management objectives, ODFW staff also contribute time and resources to the program beyond what is funded by the SFR grant.

Highlights of the 2017-2018 statewide volunteer efforts include:

- 2,250 youth and 4,950 adult volunteers participated in STEP activities
- Volunteers participated in an estimated 1,500 projects, totaling 79,695 hours. This is equivalent to over 38 full time employees.
- Using the estimated dollar value of $35.5 for volunteer time, the value of STEP volunteer hours was over $2,800,000

Since the program was established in 1981, more than 380,000 adult and youth volunteers (Figure 1) have contributed over 3.8 million hours (Figure 2) to over 43,700 STEP projects. In the 38 years since STEP was founded volunteers have donated the equivalent of over $135.7 million in time and energy. 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

Tables and Figures

Table 1. Education and development activities, participation and volunteer effort by STEP district, 2017-2018. 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

			Volunteers			
STEP District	Activities	Participants	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	26 (129)	6,587	42	28	276	171
Eastern Oregon	32 (75)	6,925	0	0	197	1,640
Lower Rogue	45 (9)	2,845	0	0	325	2,391
Mid-Coast	48 (67)	11,229	12	138	830	5,556
Mid-Willamette	75 (138)	10,463	0	0	126	736
North Coast	10 (19)	8,085	0	0	133	1,046
North Willamette	14 (193)	7,392	0	0	104	962
Umpqua	29 (33)	3,573	1	8	138	1,146
Upper Rogue	46 (53)	4,502	14	30	93	385
Upper Willamette	50 (104)	4,733	0	0	136	607
STAC	3 (0)	10	0	0	23	1,300
Total	378 (821)	66,344	69	204	2,381	15,940

Table 2. STEP inventory and monitoring activities, miles affected and surveyed and volunteer effort, 2017-2018. Activities were defined as those projects having at least one participant or volunteer.

INVENTORY AND MONITORING

				Volunteers			
STEP District	Activities	Miles Affected	Miles Surveyed	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	3	18	18	4	32	12	56
Eastern Oregon	13	9	20	8	32	70	880
Lower Rogue	11	283	19	4	27	80	1,637
Mid-Coast	10	0	0	16	85	134	2,250
Mid-Willamette	16	0	2	100	140	41	179
North Coast	1	0	12	0	0	18	269
North Willamette	2	82	17	0	0	18	480
Umpqua	4	7	30	0	0	23	664
Upper Rogue	17	39	35	10	60	85	1,263
Upper Willamette	19	60	60	2	23	33	37
Total	96	498	213	144	399	514	7,715

Table 3. Habitat restoration activities, miles affected and restored and volunteer effort by STEP district, 2017-2018. Activities were defined as those projects having at least one participant or volunteer.

HABITAT

				Volunteers			
STEP District	Activities	Miles Affected	Miles Restored	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	0	0	0	0	0	0	0
Eastern Oregon	2	0	0	25	75	35	171
Lower Rogue	8	49	3	111	343	15	98
Mid-Coast	6	108	94	1	10	111	679
Mid-Willamette	31	40	0	0	0	3	230
North Coast	8	94	0	10	20	14	75
North Willamette	37	42	6	40	100	120	724
Umpqua	2	2	0	26	156	16	110
Upper Rogue	8	86	1	66	208	39	580
Upper Willamette	8	10	0	2	9	18	71
Total	110	431	104	281	921	371	2,738

Table 4. Fish culture activities and volunteer effort by STEP district, 2017-2018. 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

	Number of Fish				
STEP District	Activities	Broodstock Collected	Incubated	Reared	Released
Coos-Coquille	18 (139)	3,545	1,490,203	1,446,265	2,029,488
Eastern Oregon	5 (75)	0	11,600	0	107,450
Lower Rogue	6 (11)	194	134,426	86,297	126,818
Mid-Coast	9 (69)	588	389,882	35,176	483,721
Mid-Willamette	0 (112)	0	21,250	0	21,250
North Coast	20 (26)	334	178,600	274,747	294,072
North Willamette	7 (193)	0	27,850	417,742	415,242
Umpqua	10 (35)	415	102,824	178,022	89,657
Upper Rogue	8 (76)	0	9,000	0	65,218
Upper Willamette	16 (85)	0	9,000	0	231,776
Total	99 (821)	5,076	2,374,635	2,438,249	3,864,692

	Volunteers				
STEP District	Youth	Youth Hours	Adults	Adult Hours	Total Hours
Coos-Coquille	1,336	11,502	248	3,577	15,079
Eastern Oregon			65	319	319
Lower Rogue	21	92	119	5,862	5,954
Mid-Coast	47	376	164	5,826	6,202
Mid-Willamette	0	0	0	0	0
North Coast	156	4,250	447	4,685	8,935
North Willamette	0	0	74	1,588	1,588
Umpqua	60	1,240	156	8,885	10,125
Upper Rogue	0	0	71	376	376
Upper Willamette	74	482	196	1,187	1,669
Total	1,694	17,942	1,540	32,305	50,247

Figure 1. Number of volunteers who participated in STEP activities, 1981-2018. Values for 1981-1990 and 1993 are estimates. (Note 1: 2016: Due to staff changes and vacancies the total available activities was reduced and some hours/volunteers were not reported.) (Note 2: 1986-1990 and 1993 were updated in 2011 based on discovery of a 1993 report.)

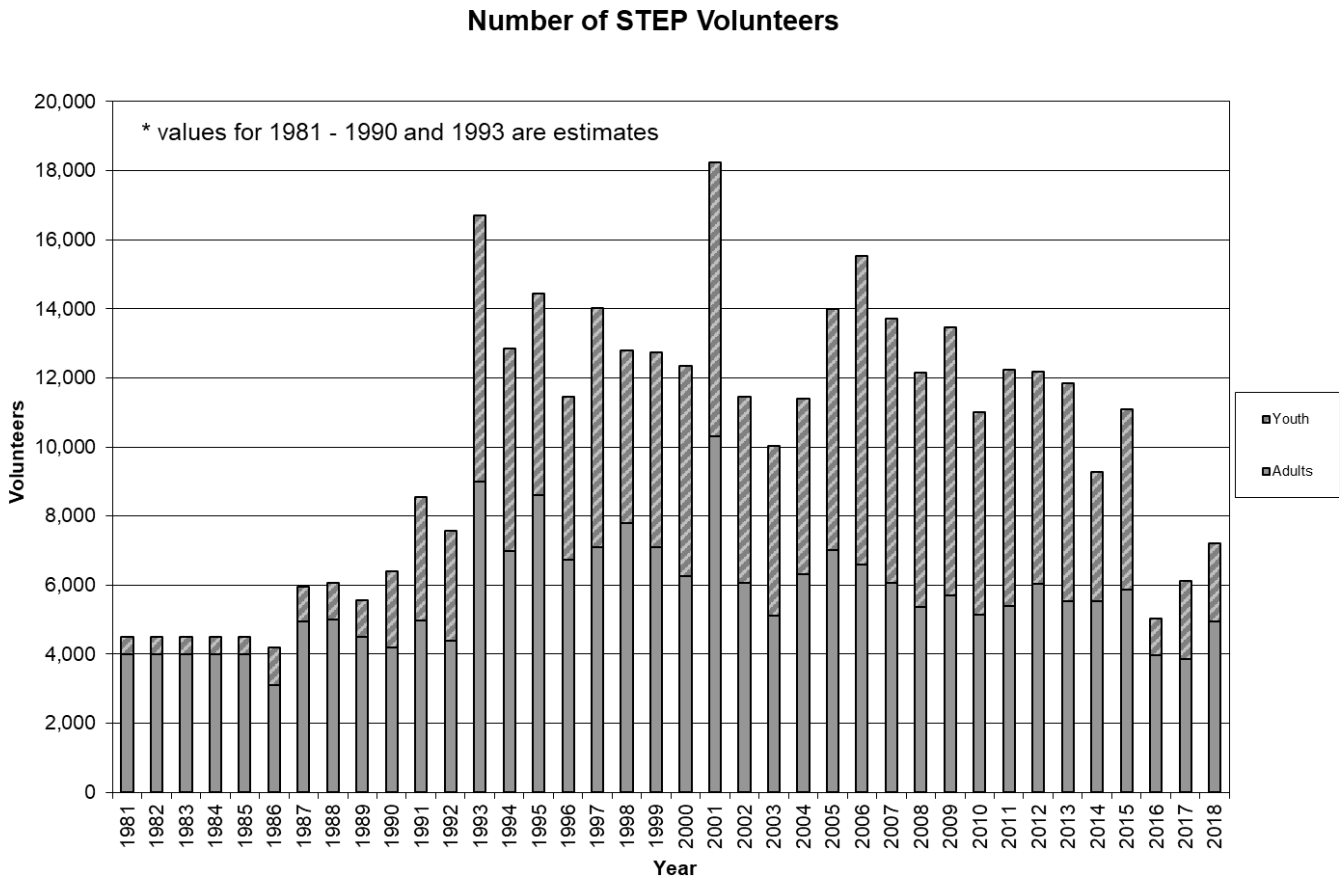
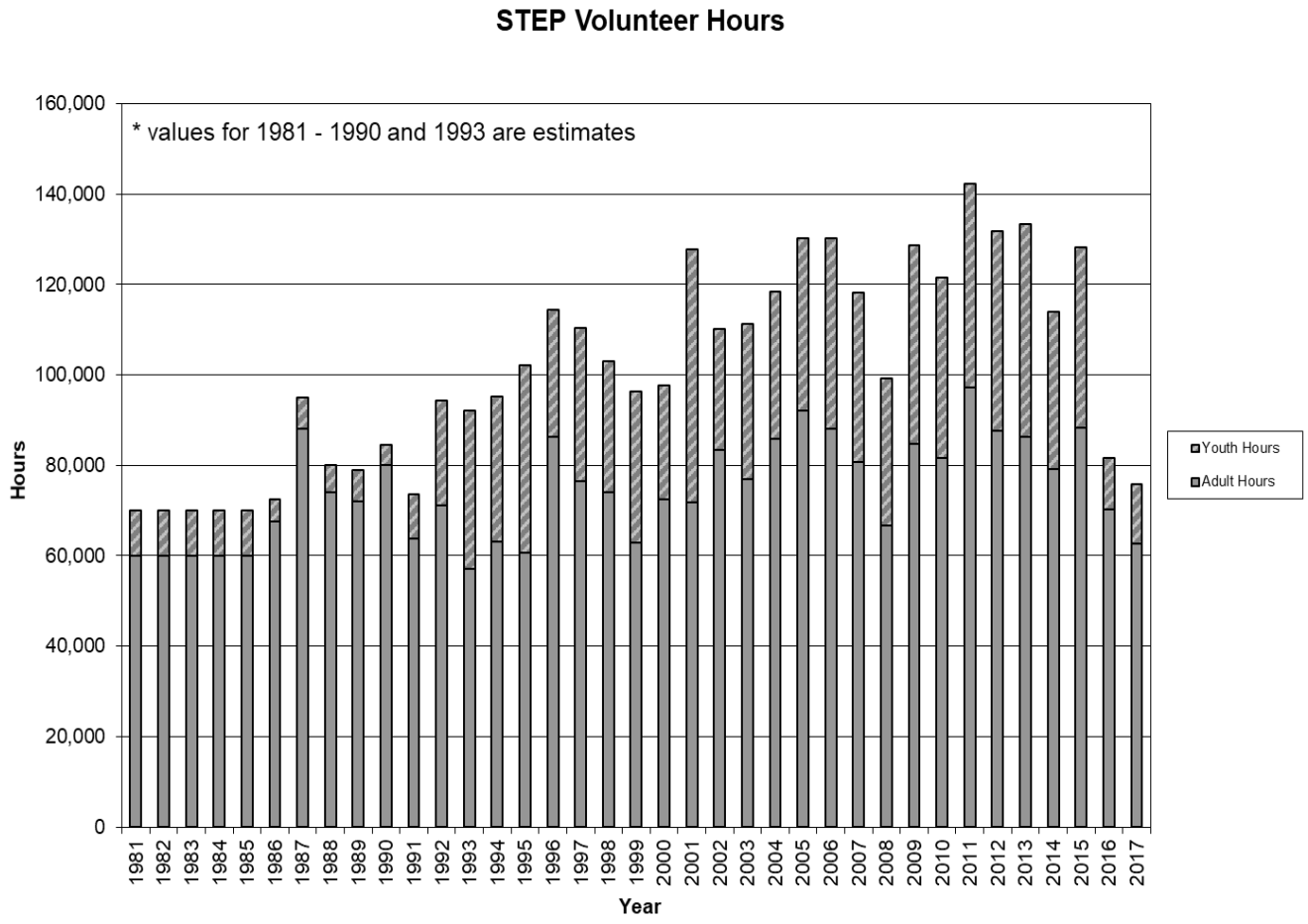


Figure 2. Hours contributed by volunteers towards STEP activities, 1981-2018. Values for 1981-1990 and 1993 are estimates. (Note 1: 2017: Due to staff changes and vacancies the total available activities was reduced and some hours/volunteers were not reported.) (Note 2: 1986-1990 and 1993 were updated 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, outreach, and access to funding.

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

Fish Culture

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

The Lower Willamette STEP area 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

The Lower Willamette STEP coordinated and produced eight Family Fishing Events in the NWWD, continuing the efforts of getting local youth and adults actively involved and interested in fishing. STEP was also responsible for the District's popular Free Fishing Weekend fishing event at St Louis Ponds, attended by over 400 youth and adult anglers. 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 2017-2018 the events were held at Blue Lake in Fairview, Canby Pond in Canby, St. Louis Pond in Gervais, Trojan Pond in Rainier, Mt Hood Community College Pond, Shorty's Pond in Molalla, Timber Lake, and Sheridan Pond in Sheridan. Family Fishing Events attracted attendance in excess of 2,000 adult and youth participants, many of them first-time anglers. Several hundred trophy trout in addition to legal-sized trout were stocked for the events.

Under the guidance of the STEP Biologist, volunteer groups including the Association of Northwest Steelheaders (ANWS), ODFW Angler Education Instructors, and members of the angling community provided assistance in teaching kids about fishing, handling their catch and selecting the right equipment, as well as how to interact with the environment. Volunteers also assisted in setting up equipment and provided help at the registration areas. More than 70 volunteers donated nearly 500 hours of time helping to make these events successful.

Fish Eggs-to-Fry Program

The Lower Willamette 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 2017-2018. An expanding enthusiasm and desire to integrate the program into classroom curriculum again brought several new teachers to STEP, with the participation exceeding 200 classrooms. These incubation projects hatched eggs and released nearly 30,000 unfed salmon and trout fry into a dozen different STEP-approved lakes, ponds, and streams within the . Several local chapters of the Association of Northwest Steelheaders, the local OSU Extension Service (4-H), CREST, the Clackamas River Basin Council, OMSI, Oregon Zoo and Reed College sponsored classroom incubation projects in schools around the greater Portland Metro Area. With the tremendous growth of the program, its success would not be possible without the dedication of the many volunteers donating over 550 hours of time.

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 visited destinations on the site.

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 non-ODFW produced 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 District at the 2018 Oregon State Fair providing information and updates about ODFW activities and STEP opportunities in the North Willamette Watershed District and around Oregon.

INVENTORY AND MONITORING

Sandy River Broodstock Collection

STEP, along with the Sandy Chapter of the Association of Northwest Steelheaders and other volunteers, continued to provide valuable assistance to District 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, steelhead, and Coho Salmon.

HABITAT IMPROVEMENT

Stream Nutrient Enrichment Program

The 24th year of the district's stream nutrient enrichment program was completed with cooperation from the Clackamas Hatchery, Sandy Hatchery, the U. S. Forest Service, and the U.S. Fish & Wildlife Service Eagle Creek Hatchery. The carcasses are intended to mimic historic run densities of spawning Chinook Salmon, steelhead, and Coho Salmon in area streams and increase stream nutrient levels for aquatic organisms.

Over 50 youth volunteers and over 60 adult volunteers contributed to the project, placing nearly 42,000 pounds of steelhead, Coho Salmon, and Chinook Salmon carcasses in the Sandy River Basin, Clackamas River Basin, Lower Columbia River Basin, and Yamhill River Basin. The enthusiasm and demand to participate was high as usual and hatchery returns were sufficient to support the program. Volunteers from 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, the NW Flyfishers, 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 ten rivers and lakes. These line and tackle collection stations can be found on the Sandy River, Clackamas River, Blue Lake Park, Herman Creek, St Louis Ponds, Canby Pond, Salish Ponds, Benson Lake, Promontory Park at North Fork Reservoir, and the Columbia River at Rooster Rock State Park and Dalton Point Park, most maintained through volunteer efforts. NWWD STEP is also seeking new opportunities to place KORC stations in additional popular fishing spots within the district.

FISH CULTURE

Fish Acclimation Projects

Acclimation facilities have been a key component of fish release strategies in the District 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 700 hours they contributed to the projects this past year.

Since the spring of 2013 an acclimation pond has been operated on Trout Creek near its confluence with the Molalla River. Daily operation of this facility is performed entirely by volunteers from the Coastal Conservation Association (CCA) and the Association of Northwest Steelheaders. During March and April of 2018 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. As hoped, smolt releases in 2016 returned to the Molalla River as adults in the spring of 2018 with numbers increasing over 2017, providing another year of spring Chinook Salmon fishing on the river.

The Foster Creek Acclimation Facility continued to be a productive site for STEP. A change in manage at the Foster site. We released just over 25,000 summer steelhead smolts and approximately 50,000 winter steelhead smolts from the Foster acclimation pond during the spring of 2018. The 2017-18 winter steelhead fishery was excellent and summer steelhead are still being caught in the river from the 2018 return. With daily guidance of STEP, 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 2018 marked the ninth year of releases from this site. Feeding and daily maintenance was performed by volunteers from the McLoughlin Chapter of the Association of Northwest Steelheaders who donated 72 hours to this project. Approximately 120,000 spring Chinook Salmon smolts were acclimated and released to provide additional returns of adult spring Chinook Salmon to the extremely popular Willamette River and Clackamas River sport 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 through 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. For the 2018 acclimation season these Chinook Salmon smolts were once again moved upstream to be raised and released at Eagle Creek National Fish Hatchery in a cooperative effort with U.S. Fish and Wildlife Service. The smolts were maintained at the hatchery by ODFW employees. Future plans are being discussed, including increased winter steelhead releases to take place from the Eagle Creek Acclimation Facility.

The Bull Run River Acclimation Facility saw its seventh year of production in 2018 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 Salmon by giving the salmon a return destination away from the wild fish sensitive Upper Sandy Basin. The effort is proving to be successful as returns to the lower river have improved while stray rates have decreased. All spring Chinook Salmon 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 120,000 spring Chinook Salmon smolts released in the spring of 2018, with volunteers from the Sandy Chapter of the Association of Northwest Steelheaders contributing over 86 hours and over 200 miles of travel.

Broodstock Collection

The collection of broodstock winter steelhead on the Clackamas and Sandy rivers was completed with assistance from the Northwest Steelheaders, individual volunteers, and local fishing guides. This project is instrumental in District fish management goals and would not happen without the help of these volunteers contributing over 880 hours of their time in addition to significant financial contribution from operation of power boats to access the fishery.

Liberation

STEP provided regular back up support for District's trout stocking activities in 2017-2018, 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.

Schools and Groups that work with Lower Willamette STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Education**
Ainsworth Elementary School, Portland	Oak Creek Elementary School, Lake Oswego
Alberta Rider Elementary School, Tigard	Ockley Green Middle School, Portland
Alliance Charter Academy, Oregon City	Ogden Middle School, Oregon City
Alpha High School, Gresham	Oregon Episcopal School Opal Charter School, Portland
Archbishop Howard School, Portland	Oregon State University 4-H Extension Service
Archer Glenn Elementary School, Sherwood	Oregon Trail Academy, Boring
Arleta Elementary School, Portland	Orenco Elementary School, Hillsboro
Astor School, Portland	Otto Peterson Elementary School, Scappoose
Banks Elementary School, Banks	Paul L Patterson Elementary School, Hillsboro
Barnes Elementary School, Beaverton	Pioneer Special School, Portland
Beavercreek Elementary School, Beavercreek	Pleasant Valley School, Gresham
Beverly Cleary School, Portland	Portland Waldorf School, Milwaukie
Bilquist Elementary School, Milwaukie	Powell Valley Grade School, Gresham
Boeckman Creek Elementary School, Wilsonville	Poynter Middle School, Hillsboro
Bolton Primary School, West Linn	Quatama Elementary School, Hillsboro
Bonny Slope Elementary School, Portland	Rachel Carson Environmental Middle School
Boones Ferry Primary School, Wilsonville	Raleigh Hills Elementary School, Portland
Boring Middle School, Boring	Raleigh Park Elementary School, Portland
Bridlemile Elementary School, Portland	Reed College, Portland
Buckman Elementary School, Portland	Renaissance School of Science, Portland
Candy Lane Elementary School, Milwaukie	Rex Putnam High School, Milwaukie
Carden Cascade Academy, Hillsboro	Reynolds High School, Troutdale
Carus Elementary School, Oregon City	Ridgewood Elementary School, Portland
Catlin Gabel School, Portland	River Mill Elementary School, Estacada
Cedaroak Park Primary School, West Linn	Riverdale Grade School, Portland
Centennial High School, Gresham	Riverside Elementary School, Milwaukie
Chehalem Elementary School, Beaverton	Rosedale Elementary School, Hillsboro
Christ the King Catholic School, Milwaukie	Sabin-Schellenberg Center, Portland
City View Charter School, Hillsboro	Salish Ponds Elementary School, Fairview
Clackamas High School, Clackamas	Sam Barlow High School, Gresham
Clackamas River Elementary School, Estacada	Sandy Grade School, Sandy
Clarkes Elementary School, Mulino	Sauvie Island Academy, Portland
Colton Middle School, Colton	Scappoose High School, Scappoose
Cooper Mountain Elementary School, Beaverton	Scholls Heights Elementary School, Beaverton
Cornelius Elementary School, Cornelius	Sexton Mountain Elementary School, Beaverton
Creative Science School, Portland	Sitton Elementary School, Portland
CREST, Wilsonville	Skyline Elementary School, Portland
David Douglas High School, Portland	South Meadows Middle School, Hillsboro
De La Salle North Catholic High School, Portland	Southwest Charter School, Portland
Deep Creek Elementary School, Damascus	Spring Mountain Elementary School, Happy Valley
Deer Creek Elementary School, Tigard	Springwater Environmental Sciences School, Or. City
Earl Boyles Elementary School, Portland	St. John Fisher School, Portland
Early Learning Community School	St. Paul Elementary School, St. Paul
East Sylvan Middle School, Portland	St. Rose School, Portland
Echo Shaw Elementary School, Cornelius	St. Thomas Moore School, Portland

Emerson School, Portland	Stafford Primary School, West Linn
Estacada High School, Estacada	Stoller Middle School, Portland
Estacada Junior High School, Estacada	Sunnyside Elementary School, Clackamas
Ewing Young Elementary School, Newberg	Sunnyside Environmental School, Portland
Farmington View Elementary School, Hillsboro	Sunstone Montessori, Portland
Faubion Elementary School, Portland	North Plains Elementary School, North Plains
Fir Grove Elementary School, Beaverton	Sweetbriar Elementary School, Troutdale
Five Oaks Middle School, Beaverton	Terra Linda Elementary School, Portland
Floyd Light Middle School, Portland	Thomas R Fowler Middle School, Tigard
Forest Hills Lutheran Christian School, Cornelius	Tom McCall Upper Elementary School, Forest Grove
Forest Park Elementary School, Portland	Trillium Creek Primary School, West Linn
Franklin High School, Portland	Trost Elementary School, Canby
Free Orchards Elementary School, Cornelius	Tualatin Valley Academy, Hillsboro
Gaffney Lane Elementary School, Oregon City	Valley Catholic Elementary School, Beaverton
Gladstone High School, Gladstone	Verne Duncan Elementary School, Happy Valley
Gordon Russell Middle School, Gresham	View Acres School, Milwaukie
Greenway Elementary School, Beaverton	Walt Morey Middle School, Troutdale
Gresham High School, Gresham	West Linn High School, West Linn
Groner Elementary School, Hillsboro	West Sylvan Middle School, Portland
Grout Elementary School, Portland	West Tualatin Valley Elementary School, Portland
H.B. Lee Elementary School	West Union Elementary School, Hillsboro
H.B. Lee Middle School, Portland	Westgate Christian School, Portland
Happy Valley Elementary School, Happy Valley	Westridge Elementary School, Lake Oswego
Harvey Clarke Elementary School, Forest Grove	Whitford Middle School, Beaverton
Heritage Christian School, Hillsboro	Willamette Primary School, West Linn
Hogan Cedars Elementary School, Gresham	Winterhaven School, Portland
Holy Trinity Catholic School, Beaverton	Witch Hazel Elementary School, Hillsboro
Imlay Elementary School, Hillsboro	Witchhaven School, Portland
Indian Hills Elementary School, Aloha	Inza R Wood Middle School, Wilsonville
Inza R Wood Middle School, Wilsonville	Woodland Elementary School, Fairview
Jackson Middle School, Portland	**Organizations**
Jacob Wismer Elementary School, Portland	Coastal Conservation Alliance
Joseph Gale Elementary School, Forest Grove	Get Hooked, Inc
Kinnaman Elementary School, Aloha	McLoughlin Chapter Assoc. of NW Steelheaders
Kraxberger Middle School, Gladstone	Molalla Chapter Assoc. of NW Steelheaders
Ladd Acres Elementary School, Hillsboro	Newberg Chapter Assoc. of NW Steelheaders
LaSalle Catholic Preparatory School, Wilwaukie	NODR
Lee Elementary School, Portland	NW Flyfishers
Lenox Elementary School, Portland	Sandy Chapter Assoc. of NW Steelheaders
Lent Elementary School, Portland	SOLV
Lewis & Clark Montessori Charter School, Damascus	Tualatin Valley Chapter Assoc. of NW Steelheaders
Lewis Elementary School, Portland	**Government**
Life Christian School, Aloha	City of Fairview
Lillies Pad Learning	City of Portland Water Bureau
Lincoln High School, Portland	Clackamas County Parks
Lincoln Street Elementary School, Hillsboro	Clackamas River Basin Council
Linwood Elementary School, Milwaukie	Clean Water Services
Lowrie Primary School, Wilsonville	Johnson Creek Watershed Council
Mabel Rush Elementary School, Newberg	Metro Parks
MCA Public Charter School	Oregon State Parks
Meek Pro Tech High School	Oregon Zoo
Miller Education Center, Portland	Project YESS
Milwaukie High School, Milwaukie	Sandy River Basin Council
Minter Bridge Elementary School, Hillsboro	The Confederated Tribes of Grande Ronde
MITCH Charter School, Tualatin	Tualatin Hills Parks & Recreation
Molalla River Academy, Molalla	Tualatin River Basin Council

Molalla River Middle School, Molalla	U.S. Fish & Wildlife Service
Mt. Hood Community College, Gresham	U.S. Forest Service
Mt. Tabor Middle School, Portland	Weyerhaeuser Timber Company
Nancy Ryles Elementary School, Beaverton	W Verne McKinney Elementary School, Hillsboro
New Urban High School, Oak Grove	

Mid-Willamette STEP

Karen Hans, STEP Biologist
Alex Farrand, Assistant District Fish Biologist
Elise Kelley, District Fish Biologist

The Mid-Willamette STEP District is a geographically diverse area in the South Willamette Watershed District reaching across the Willamette Valley from the crest of the Coast Range east to the crest of the Cascades. The Willamette River travels the length as it flows from 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 Trout 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

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, Benton, and Polk Counties, Department of State Lands regulatory 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. During the contract period the STEP Biologist attended 16 meetings, offering technical advice and fishery perspectives on a variety of educational programs and 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. In 2017 – 2018 the STEP Biologist, or STEP volunteers, participated in 11 Outdoor Schools during the school year for students from schools in Peedee, Lebanon, Sweet Home, Philomath, Lyons, Scio, Alsea, Albany, and Salem. During the summer months, the STEP Biologist hosted learning stations at summer camps hosted by the City of Corvallis and Benton County Parks & Recreation.

In 2017–2018 the STEP Biologist, along with volunteers from the Albany Chapter of the Association of Northwest Steelheaders and ODFW Angler Education Instructors hosted 18 fishing events. These events included a fishing event for the Wounded Warriors Project and their families, for the Boy Scouts, Oregon State University Extension Service (4-H), as well as an event hosted by the Salem Police Department. Three Family Fishing Events were also held in the District, one sponsored by the City of Salem. The fishing event sponsored by the Salem Police Department also included angler education classes sponsored by ODFW’s Angler Education Instructors.

Photo 1: Participants in a Family Fishing Event

At summer camps with a fishing station, students catch trout and sunfish, and learn about catch and release techniques. At outdoor schools with fish biology stations, students learn about fish anatomy, physiology, environment adaptations, habitat needs, watershed process, and challenges posed by humans to fish and their habitat. 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.

Summer camps at the 4-H Center provide opportunities to reach children from underserved demographic and increase the diversity of anglers. In the summer of 2018, STEP partnered with ODFW's Angler Education Instructors and OSU Extension service to host the fishing station at summer camps for children from the Latino Community and inner city neighborhoods. Many of these children rarely, if ever, have the opportunity to experience the natural world.

One of the STEP Biologists most popular activities are fish dissection at District area elementary, middle, and high schools. Steelhead smolts and mini jack salmon 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, STEP, and the Mid Valley Chapter of Association of Northwest Steelheaders 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 osmoregulation 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. In 2017–2018 the STEP Biologist and volunteers hosted fish dissections at 12 elementary, middle school, high school classes in the District. One of the fish dissections hosted by the STEP Biologist was for children participating in the Keizer Police Department's Summer Blast Camp. With the assistance of volunteers from STEP, about 225 kids from Salem/Keizer dissected a fish.

The STEP Biologist sits on the Linn-Benton Salmon Watch Steering Committee. The Committee meets year round to plan for Salmon Watch field trips in September, October and November. Students from Fifth and Sixth grade travel to rivers where salmon are spawning to learn about water quality, macroinvertebrates, riparian areas, and salmon biology.

In addition to being on the steering committee, the STEP Biologist trains volunteers and teachers, as well as participating in several field trips each year. In 2017 and 2018, the STEP Biologist attended four Steering Committee meetings, hosted two Salmon Watch outreach events, assisted with three trainings, and hosted the Fish Biology station for three Salmon Watch field trips.

The passage of Ballot Measure 99 provided the funding for outdoor schools and offered the opportunity for STEP to make contributions to the planning and implementation of the new program. The STEP Biologist offered to sit on one of the implementation committees and was selected for the Research and Evaluation Workgroup. The Committee's primary task is to devise

surveys for teachers and students to evaluate if the outdoor school learning objectives are being met. The STEP Biologist attended four Outdoor School Workgroup meetings and spent many hours reviewing documents for the committee.

INVENTORY AND MONITORING

Fish Populations and Their Habitat in Streams

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

Photo 2: Sampling in an urban stream.

In 2017–2018, the STEP Biologist coordinated with a teacher from Talmadge Middle School in Independence to work a fish trap in North Fork Ash Creek behind the school. The Sixth and Seventh grade students from David Beatley's science class assisted with deploying the trap and checking it for fish. The trapping project was part of a larger program sponsored by the Luckiamute Watershed Council, and funded by an Oregon Watershed Enhancement Board grant, to restore the riparian area of North Fork Ash Creek. Mr. Beatley's class also hatched salmon and trout in their classroom for the Egg-to-Fry Program. Due in part to Mr. Beatley's work with STEP, he secured a grant to purchase temperature monitoring equipment. This will be combined with fish trapping in 2018-2019 for a more comprehensive study of Ash Creek.

The STEP Biologist also gave a presentation to Salem's Natural History Lecture Series which included a field trip. The group met at Waln Creek in southeast Salem to seine for native fish. In addition to the 12 adults attending the lecture, 10 children also joined the seining event. Dozens of native fishes were captured, demonstrating the number and diversity of native fish in Salem area urban streams.

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.

During 2017-2018, the STEP Biologist attended 16 site visits to offer technical and grant seeking advice to landowners throughout the district. The STEP Biologist provided technical advice to the Pringle Community, U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, as well as the Calapooia, Luckiamute, North Santiam, South Santiam, Long Tom, Rickreal and Mary's River Watershed Councils on 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, carcasses are placed in rivers and streams in the district. In 2017 – 2018, salmon carcasses that were used as brood for programs at the Minto and Foster Fish Collection Facilities were placed in the North Santiam, South Santiam and Calapooia River Basins. However, due to disease concerns, no steelhead were out planted during 2017–2018.

Volunteers from STEP, the Mid Valley Chapter of the Northwest Steelheaders, Oregon State University, and staff from the U.S. Forest Service and U.S. Army Corps of Engineers contributed 107 hours toward carcass enrichment efforts in the Mid-Willamette District. In all, approximately 2,222 spring Chinook Salmon (44,440 lbs.) carcasses were distributed to the 27 miles of the North Santiam, South Santiam, and Calapooia Rivers and their tributaries. Distributing Chinook Salmon carcasses from the Foster Fish Collection facility was aided by staff from the U.S. Forest Service Sweet Home Ranger District. Of the total fish out planted to the South Santiam River Basin, the U.S. Forest Service staff distributed hundreds of fish to Canyon, Soda Fork, and Moose Creeks where instream habitat structures have been placed by the U.S. Forest Service and South Santiam Watershed Council.

Photo 3: Tossing carcasses from a bridge to add nutrients to a stream.

KORC Fishing Line Collection Stations

Since 2004, volunteers in the Mid-Willamette STEP District have maintained a series of fishing line collection stations. The stations are located on the North Santiam River at Stayton Boat Ramp, John Neal Park, North Santiam Park, Fishermen's Bend, and Mill City Boat Ramp. On the South Santiam River, collection stations are located at Waterloo Park (2), Wiley Park, Sunnyside Park, and Foster Reservoir. There is also a line collection station at EE Wilson Pond.

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 Endangered Species Act, the STEP District's fish culture

program looks much different from that of the 1980's. Concern surrounding the potential impacts of introduced fry upon native populations, and the primary need for habitat enhancement in those streams identified as deficient in natural production, have changed the focus of the program's efforts.

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. In 2017 – 2018, a total of 65 classrooms raised 16,250 spring Chinook Salmon and 22 classrooms raised 5,000 Rainbow Trout. Due in part to a grant program sponsored by STEP, most teachers in the Mid-Willamette District now have aquariums and chillers loaned out for the program. This has contributed to a significant increase in the number of teachers participating in the Egg-to-Fry Program in the Mid-Willamette District.

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 Association of Northwest Steelheaders 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 Willamette, North Santiam, South Santiam, and Calapooia River Basins wherever the fish were historically present. Rainbow Trout are released at a number of selected locations scattered throughout the Willamette 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.

Schools and Groups that work with Mid-Willamette STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Education**
Ashbrook Independent School, Corvallis	Philomath High School, Philomath
Albany Options High School, Albany	Pratum Elementary School, Salem
Albiqua Academy, Salem	Pringle Elementary School, Salem

Bethany Charter School, Silverton	Riverview Elementary School, Lebanon
Blodgett Elementary School, Blodgett	Riviera Christian School, Salem
Calapooia Middle School, Albany	Santiam Christian School, Adair Village
Cascade Senior High School, Turner	Schirle Elementary School, Salem
Cascade View Christian School, Sublimity	Seven Oak Middle School, Lebanon
Central High School, Independence	Silver Crest Elementary School, Silverton
Central Linn Elementary School, Halsey	Stayton Middle School, Stayton
Cloverdale Elementary School, Turner	Salem Heights Elementary School, Salem
Community Roots School, Silverton	South Salem High School, Salem
Crescent Valley High School, Corvallis	South Shore Elementary School, Albany
Corvallis High School, Corvallis	Turner Elementary School, Turner
Franklin School, Corvallis	Whitworth Elementary School, Dallas
Hallman Elementary, Salem	Wilson Elementary School, Corvallis
Hoover Elementary School, Corvallis	**Organizations**
Jefferson Elementary School, Jefferson	Calapooia Watershed Council
Jefferson Elementary School, Corvallis	Gilbert Children's Museum
Kalapuya Elementary School, Salem	Luckiamute Watershed Council
Kings Valley Charter School, Philomath	Mid Valley Chapter ANWS
Linn Benton Juvenile Detention Center, Albany	Salem Boys & Girls Club
Liberty Elementary School	Salem Chapter ANWS
Monroe Elementary School, Monroe	Salmon Watch
Monroe High School, Monroe	Straub Environmental Learning Center
Mt View Elementary School, Corvallis	**Government**
North Albany Elementary, Albany	Benton County Soil & Water Conservation District
North Albany Middle School, Albany	
North Salem High School, Salem	
Oak Grove Elementary, Albany	

Upper Willamette STEP

Katherine Nordholm, 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. Spanning the Willamette Valley from the Coast Range to the Cascade Mountains, the District encompasses the Eugene-Springfield metropolitan areas, the third largest population area in the state. The major watersheds in the District are the Coast Fork Willamette, McKenzie, and Middle Fork Willamette rivers.

Spring Chinook salmon are the only anadromous salmonid native to the area, although a small winter steelhead run has been established in the Middle Fork Willamette River. 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 are released in various streams and rivers within the District. In addition, Rainbow Trout, Cutthroat Trout, and Brook Trout are released into a number of lakes in the High Cascade Mountains to provide

unique, often remote, fisheries. Spring Chinook Salmon and Bull Trout are federally listed as "Threatened" under the Endangered Species Act.

In addition to salmon and trout, STEP activities regularly monitor and provide benefits to a multitude of other native fish species. Native Sculpins, Dace, Shiners, Suckers, Stickleback, and other species have been incorporated into sampling projects and educational outreach. Additionally, many projects designed to benefit salmon and trout also benefit resident brook and anadromous Pacific Lamprey, in addition to other native species. Pacific Lamprey are both economically and culturally important to the native peoples of the area.

ODFW staff in the Upper Willamette District take a collaborative approach to resource management. 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. In 2018 we worked with the Department of Administrative Services to create a finance plan that would shift funding to more accurately reflect the shared duties in the Upper Willamette District. Beginning October 1, 2018, 20% of the hours worked by the STEP Biologist will be charged to Fish District Operations and 20% of the hours worked by the Assistant District Biologist position each month will be charged to STEP. This change will result in a $0 change to the overall budget for both funding sources, but solidifies our commitment to the team approach for district fish management. Additionally, many STEP activities would not be possible without collective partnerships with other divisions in ODFW. We would like to recognize the staff at Leaburg Hatchery, McKenzie Hatchery, Willamette Hatchery, and Dexter Ponds for their dedication to working with STEP. Their support and assistance are vital to the success of many projects each year.

While the STEP volunteer base draws largely from local organizations, including the Cascade Family Flyfishers, McKenzie Flyfishers, Trout Unlimited, Coastal Conservation Association, McKenzie River Guides Association, Backcountry Horsemen, and the three local watershed councils, many of our active STEP volunteers are not affiliated with any group or organization. Additionally, STEP staff work with industrial timber companies on a variety of habitat evaluation and improvement projects within the district. ODFW staff regularly attend meetings and make presentations to organizations, schools, universities, and other agencies to facilitate the free flow of information, as well as answer questions, solicit ideas for new STEP projects, and recruit additional STEP volunteers.

EDUCATION AND PROGRAM DEVELOPMENT

Technical Assistance

The STEP Biologist served on the Lane County Salmon Stewards Steering Committee, which, in partnership with the McKenzie Watershed Council, provides experiential environmental education to over 1,000 local students each year through the Salmon Watch© program. The Committee consists of representatives from the Bureau of Land Management, Forest Service, Eugene Water and Electric Board, local school districts, and other area organizations.

STEP staff provided technical assistance to the Middle Fork Willamette Watershed Council by serving on their Education Committee. This Committee focuses on the development and

expansion of place-based environmental education programs. These programs are being implemented in many underserved rural schools.

The STEP Biologist employed local knowledge and networking to organize a drift-boat fishing excursion with the McKenzie River Guides for the Western Association of Fish and Wildlife Agencies Annual Conference which was held in Eugene. The conference included Fish and Wildlife Program Chiefs and Commissioners from twenty-four western states.

STEP and several volunteers participated in a slow drawdown Lamprey study in collaboration with U.S. Fish and Wildlife Service, Eugene Water and Electric Board (EWEB), ODFW, and the Confederated Tribes of the Grand Ronde at Leaburg Reservoir. The goal of the study was to determine whether Lamprey that are resident in the reservoir sediments could escape the dewatered zones using a slow drawdown method employed by EWEB. Researchers anticipate that this study will inform managers how future dewatering and salvage events might minimize Lamprey mortality. We also provided a memo with feedback about improvements on sampling design and proposed additional questions that might be answered by the experiment.

Youth Education

STEP staff and volunteers hosted three Family Fishing events located in Cottage Grove and Eugene. These events provided families with the chance to borrow a fishing rod, obtain instructions on casting, and catch one of the many trout that were stocked in each of the locations. These events continue to be popular, and repeat participants are seen each year. The third event, held at Eugene's Alton Baker Park, occurred on Free Fishing Weekend.

The Upper Willamette STEP continued our partnership with Cumulus Media to host a kid's fishing derby at Alton Baker Park in Eugene. The fishing derby, held over Father's Day weekend, was supported similarly to a family fishing day where we provided fishing equipment and volunteers to help kids learn to fish. Additionally, STEP tagged 200 fish which were worth prizes when caught. Cumulus Media provided sponsor booths, advertising, the tags, and prizes.

Photo 4: Volunteers and Angler Education Instructors preparing for an event.

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 learned about salmon ecology, including lessons on macroinvertebrates, riparian zones, water quality, and salmon biology. The STEP Biologist led Salmon Watch volunteer training for the salmon biology station at both training events held this year.

Fish Dissection and Cleaning Demonstrations

STEP organized and conducted several fish dissection presentations for local schools. Dissection includes age appropriate discussions about identification and physiological roles of different

organs inside of the fish. Information about fish biology included how fish hear, see, breathe, navigate, detect odors, and osmoregulate in fresh and saltwater, as well as similarities/differences between fish and human biology.

STEP provided Largemouth Bass and Rainbow Trout for the Scouts of America to demonstrate the different methods used to properly clean the different fish species. The Scouts then used the fish for cooking (and tasting) using different methods.

STEP staff and volunteers hosted two summer camp fishing days for Bridgeway House, a school for students with autism. During these summer camps, students worked with volunteers to learn safe fishing techniques, as well as how to catch and clean fish. Each student was able to receive one-on-one instruction to help them adjust to the new activity.

The STEP Biologist led the planning, coordination, and supervision of an intern this year. The summer intern from Oregon State University participated in fish stocking, educational activities, fish monitoring, and general district work. She has since returned to the program as a STEP volunteer.

Program Outreach

Staff and STEP volunteers gave several presentations to diverse audiences and participated in several community events including:

- McKenzie River Trust - Get Outdoors Day
- Middle Fork Willamette Watershed Council - Mill Race Bike Path Tour
- Willamalane - How to Fish For Trout in Oregon class
- Coast Fork Watershed Council - Fish Biology Lessons
- Travel Lane County – kids club
- Middle Fork Willamette Watershed Council Outdoor School – Macro and Fish Bio lessons

INVENTORY AND MONITORING

STEP staff and volunteers worked on multiple monitoring projects for ODFW and the STEP project throughout the year.

Spawning Surveys

Staff and a volunteer from Weyerhaeuser Company conducted spring Chinook Salmon spawning ground surveys on Gate Creek, a tributary to the McKenzie River. Additionally, STEP staff conducted Rainbow Trout redd surveys on Deer, Marten, and Gate Creeks, all tributaries to the McKenzie River. Staff surveyed Mosby Creek, a tributary to Row River (Coast Fork Willamette River basin) for evidence of spawning Lamprey and Chinook Salmon.

Photo 5: Albino Lamprey

Gold Lake Trapnet Sampling

STEP staff, volunteers, and the Oregon State University intern sampled Gold Lake (Middle Fork of the Willamette River basin) to evaluate the fish community in the lake. Data were entered into long-term records tracking Brook Trout and Rainbow Trout ratios, lengths and condition factors; a data set that goes back to 1988.

Fish Tagging

STEP staff and volunteers tagged 2,000 Coho Salmon smolts at Leaburg Hatchery for the Nez Perce Tribe and ODFW Wallowa District. Coho Salmon had been evacuated from Cascade Locks because of the Eagle Creek Fire in the Columbia River Gorge. Tagged fish were subsequently released into the Lostine River in northeast Oregon and downstream movement and survival was monitored as they passed through detection sites at Snake and Columbia River dams.

STEP staff participated in the ODFW Tag Rewards Program. Hatchery Rainbow Trout were tagged at the hatchery for release into Dorena and Dexter Reservoirs. When tagged fish were captured, they were reported online and the data were used to determine effort, capture and retention rates of hatchery fish. These metrics were then compared to other study sites from around the state.

Hills Creek Reservoir Sampling

The STEP Biologist, volunteers and ODFW employees sampled hatchery trout from Hills Creek Reservoir. The project is evaluating the relative survival and contribution to the fishery of two different stocks of hatchery trout; Cape Cod vs Crane Prairie Rainbow Trout.

High Cascade Lakes Sampling

During the summer of 2018, staff used gill nets and hook and line sampling to determine the comparative survival and condition of stocked fish from two release groups of different size in Notch, Happy, Whig and Wahanna Lakes in the Cascade Mountains.

STEP staff and volunteers from the Backcountry Horsemen and the McKenzie Watershed Council packed into the Mink Lake Basin to collect stomach samples from fish populations that could interact with Oregon Spotted Frogs. This was a collaborative project involving the U.S. Geological Survey, U.S. Fish and Wildlife Service and the U.S. Forest Service Willamette National Forest. A student volunteer from the University of Oregon also used this trip to fulfill college credits for his ENVS 404 Environmental Internship.

Other Inventories

STEP staff and volunteers helped collect genetic samples from native Cutthroat Trout in various locations around the Upper Willamette Watershed as part of a larger effort to characterize genetic variability of Cutthroat Trout in this region in collaboration with Oregon State University.

HABITAT IMPROVEMENT

Partnerships and Technical Assistance

STEP staff served on the Restoration and Enhancement Angler Access and Opportunity Committee to develop a rubric for evaluating and ranking proposed projects presented by ODFW

District offices across the state (many are STEP projects) to determine which of the projects will be funded in the next biennial funding cycle.

STEP staff provided technical aquatic habitat support and fish salvage expertise to the first phase of the Lower South Fork McKenzie Restoration Project. Approximately 1,000 fish including Rainbow Trout, Chinook Salmon, Sculpin, Dace, Mountain Whitefish and Lamprey were relocated in this collaborative project with the U.S. Forest Service and McKenzie Watershed Council. During phase one, 1,300 pieces of large wood were placed, and fill material from 12.5 acres of a historic berm and floodplain were redistributed to the incised South Fork McKenzie River channel. Upon completion, the Project will reconnect over 125 acres of floodplain and several miles of relic floodplain channels.

STEP staff provided technical input to partner agencies and non-governmental organizations on the benefits to fish of several additional proposed restoration projects and land acquisitions.

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.

Mill Race Habitat Improvement Project

The STEP Biologist conducted beaver dam surveys with volunteers to monitor changes and improvement provided by the volunteer habitat projects that were implemented last year in the Springfield Mill Race. Habitat projects were designed to be implemented incrementally by volunteers who hand-place materials in the stream to increase the habitat complexity available to fish and other wildlife species.

Fish Carcass Placement

STEP volunteers worked with Willamette and McKenzie Hatchery staff to place fish carcasses for stream enrichment. Over 4,038 adult carcasses totaling nearly 48,456 pounds were distributed into the main stem McKenzie River and spawning tributaries. Additionally, STEP volunteers from the Coastal Conservation Association and Weyerhaeuser Company placed approximately 85 carcasses in Mosby Creek, on a tributary to the Row River.

FISH CULTURE

Fish Eggs-to-Fry Program

Approximately 8,800 spring Chinook Salmon eggs were incubated in 76 classroom aquariums in 47 different schools as part of the Eggs-to-Fry Program. The unfed fry were released in December, primarily at Alton Baker Canoe Canal in Eugene.

This year we continued the winter Eggs-to-Fry Program in rural school districts by providing Rainbow Trout eggs. Approximately 300 Rainbow Trout eggs were delivered to three classrooms at Pleasant Hill Elementary School. The unfed trout fry were released in March into various locations on the Middle Fork Willamette River basin.

Photo 6: Scouts releasing trout into Scott Lake

High Cascade Lakes Backpack Stocking

This popular program provides an opportunity for volunteers to stock fingerling trout into lakes of the Cascade Mountains using backpacks. This program heavily supports ODFW's mission statement and is in-step with the revived push for recruitment, retention and reactivation of constituents. Backpack stocking encourages engagement and involvement from the local community and connects or introduces the public to the land and natural resources. This year volunteers stocked 141,974 triploid Brook Trout and Rainbow Trout and diploid Cutthroat Trout into lakes in the Cascades with assistance from staff at Leaburg and Willamette Hatcheries.

Photo 7: Volunteer releasing trout into Notch Lake.

McKenzie River Raft Stocking

For the past 68 years, the Oregon Department of Fish & Wildlife has used volunteers to operate a stocking raft to distribute hatchery trout evenly along the stocked segments of the McKenzie River. STEP staff annually coordinate stocking with the McKenzie River Guides to stock trout from our customized fish stocking raft, the only stocking program of its kind as far as we know. This year we stocked 72,105 legal and 10,005 trophy-sized Rainbow Trout in the McKenzie River. In 2018, coordination also included extensive communication with Desert Springs Trout Hatchery as they took over the stocking contract in the McKenzie River from ODFW's Leaburg Hatchery.

Schools and Groups that work with Upper Willamette STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Education**
Adams Elementary School, Eugene	Unity School, Eugene
Agnes Stewart Middle School, Springfield	University of Oregon
Arts & Technology Academy at Jefferson, Eugene	Village School, Eugene
Awbrey Park Elementary School, Eugene	Walterville Elementary School, Springfield
Bailey Hill Instructional Center, Eugene	Willamette Christian School, Eugene
Buena Vista Elementary School, Eugene	Willamette High School, Eugene
Camas Ridge Elementary School, Eugene	Yujin Gakuen Elementary School, Eugene
Cascade Middle School, Eugene	**Organizations**
Centennial Elementary School, Springfield	American Fisheries Society
Cesar E. Chavez Elementary School, Eugene	Arc of Lane County
Charlemagne at Fox Hollow Elementary School, Eugene	Back Country Horsemen of Oregon
Churchill High School, Eugene	Bridgeway House, Springfield
Coburg Community Charter School, Eugene	Cascade Family Flyfishers
Corridor Elementary School, Eugene	Coast Fork Willamette Watershed Council
Cottage Grove High School, Cottage Grove	Coastal Conservation Association

Crow Middle/High School, Eugene	Cumulus Media Group
Early College & Career Options High School, Eugene	Desert Springs Trout Farm
Edison Elementary School, Eugene	Emerald Empire Chapter ANWS
Elizabeth Page Elementary School, Springfield	Eugene Gleaners
Family School, Eugene	Girl Scouts of Oregon & Southwest Washington
Gilham Elementary School, Eugene	H.J. Andrews Experimental Forest
Holt Elementary School, Eugene	McKenzie Flyfishers
Howard Elementary School, Eugene	McKenzie River Guides Association
Kalapuya High School, Eugene	McKenzie River Trust
Lane Community College	McKenzie Watershed Council
Laurel Elementary School, Junction City	Middle Fork Willamette Watershed Council
Lundy Elementary School, Lowell	Salmon Stewards of Lane County
Maple Elementary School, Springfield	Scouts of America
McCornack Elementary School, Eugene	The Nature Conservancy
McKenzie Middle School, Finn Rock	Travel Lane County
Meadow View Elementary School, Eugene	Trout Unlimited Redside Chapter
Mohawk High School, Marcola	Western Association of Fish & Wildlife Agencies
Mt. Vernon Elementary School, Springfield	Weyerhaeuser Company
Network Charter School, Eugene	World Salmon Council
North Eugene High School, Eugene	**Government**
Oaklea Middle School, Junction City	Bureau of Land Management
Oakridge Elementary School, Oakridge	City of Eugene
Oregon State University	City of Springfield
Pleasant Hill High School, Pleasant Hill	Confederated Tribes of Grande Ronde
Prairie Mountain School, Eugene	Eugene Water & Electric Board
Ridgeline Montessori, Eugene	Lane County
Ridgeview Elementary School, Springfield	Nez Perce Tribe
River Road El Camino Del Rio Elementary School, Eugene	Oregon State Parks Department
Riverbend Elementary School, Springfield	Oregon State Police
Shasta Middle School, Eugene	U.S. Army Corps of Engineers
Sheldon High School, Eugene	U.S. Fish & Wildlife Service
South Eugene High School, Eugene	U.S. Forest Service
Thurston Elementary School, Springfield	Willamalane Park & Recreation District
Twin Oaks Elementary School, Eugene	
Two Rivers-Dos Rios Elementary School, Springfield	

North Coast STEP

Ron Rehn, STEP Biologist
Mike Sinnott, Assistant District Fish Biologist
Robert Bradley, 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 Hunt 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 15 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, collect wild broodstock, and they provide key support to several ODFW hatcheries. The area also has 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, Vernonia Schools Salmon Watch, Tillamook Schools Salmon Watch, presentations to District schools, 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 events had 55 students that participated in these events. Two large group fish dissections were held at Lewis & Clark Elementary School and Broadway Middle School. Approximately 265 students participated in this event. For a second year a fishing clinic was held for Newport Middle School's Outdoor School. Staff and volunteers participated in an educational fishing clinic for 86 students participating in Outdoor School. This was a half-day event with instruction and hands-on angling.

Photo 8: STEP Biologist Ron Rehn running a booth at the clean water festival.

Fish Eggs-to-Fry Program

The North Coast STEP classroom incubator program this year involved delivering eggs and giving presentations to students in 15 classrooms representing 11 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 740 students were involved in the classroom program. The Tillamook Forest Center had 11,925 visitors view the Egg-to-Fry exhibit promoting clean watershed health.

Photo 9: Family enjoying the fishing at Hebo Lake during a Family Fishing Event.

Family Fishing Events

During this reporting period, 453 people participated in North Coast Watershed District (NCWD) Family Fishing Events and other organized fishing events. The Tualatin Chapter of

ANWS (Association of Northwest Steelheaders) provides many of the volunteers that assist the NCWD STEP program in providing guidance in basic fishing skills at these events.

The Tillamook Angler's Disabled Angler Fishing Day had approximately 230 people with disabilities participate in this year's event. Individuals with disabilities from across the state come to the Whiskey Creek STEP Hatchery to enjoy a day of fishing, fun, and a BBQ.

Improvements to Access & Facilities

The Tillamook Anglers with the assistance of North Coast Salmon Trout Enhancement Program (STEP) completed installation of a new fishing dock on Cape Meares Lake April of 2018. This project was funded through a Restoration and Enhancement (R&E) Grant of $91,855.00 in addition to a $40,000.00 cash donation by the Tillamook Anglers to reestablish a fishing dock on Cape Meares Lake, and create safe access for the community and users of the area. This dock will address potentially hazardous situations for anglers fishing on the southern bank along Bay Ocean Road which has limited area off the road shoulder to keep anglers away from traffic. Anglers started using the dock as soon as the contractors left.

Photo 10: Anglers enjoying the new fishing dock on Cape Mears Lake.

A STAC mini-grant of $1,755.19 was used to purchase new nets for the Wild Winter Steelhead Broodstock Program. Another mini-grant of $1,500.00 was awarded to the Tillamook Anglers to replace pumps at the Whiskey Creek Volunteer STEP Hatchery.

New jump screens were installed July of 2018 on the Hughey Creek Acclimation raceway to prevent smolts from jumping out during acclimation.

INVENTORY AND MONITORING

Spawning & 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. Fifteen volunteers from the Salmonberry STEP Monitoring Project donated 269 hours last year and surveyed 12.2 miles of stream.

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 83,006 pounds of fish carcasses into 84 miles of North Coast rivers and streams from the Little Nestucca to the lower Columbia River tributaries to benefit salmonids and other species.

FISH CULTURE

Volunteer Hatchery Programs

The Tillamook Anglers continue to operate Whiskey Creek STEP Volunteer Hatchery and released 86,349 spring Chinook Salmon smolts into the Trask River. During the 2017-18 return season the Tillamook Anglers processed 319 fish totaling 2,510 pounds of surplus salmon for the Oregon Food Bank. The Nestucca Anglers also continue to operate Rhoades Pond and released 116,875 fall Chinook Salmon smolts into Three Rivers and the Nestucca River.

Photo 11: Volunteers preparing for the annual Rhoades Pond fin Clipping Event.

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. Seventy volunteer anglers participated in these programs, collecting 342 wild fish to be used as broodstock by ODFW hatcheries.

High School Hatcheries

Astoria High School's hatchery program released 2,998 Coho Salmon and 29,750 fall Chinook Salmon as presmolts into Young's Bay. Warrenton High School's program released 1,958 Coho Salmon, 7,780 fall Chinook Salmon, and 4 winter steelhead presmolts into Skipanon River.

Schools and Groups that work with North Coast STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Organizations**
Astoria High School, Astoria	Nestucca Anglers
Broadway Middle School, Seaside	Nestucca Watershed Council
East Elementary School, Tillamook	Nicolai-Wickiup Watershed Council
Hilda Lahti Elementary School, Astoria	North Coast Chapter ANWS
Jewell Elementary School, Seaside	Rainland Fly Casters
Lewis & Clark Elementary School, Astoria	Rockaway Lions Club
Mist Elementary School, Mist	Skipanon Watershed Council
Neah-Kah-Nie Middle School, Rockaway Beach	Tillamook Anglers
Nehalem Elementary School, Nehalem	Tillamook Bay Watershed Council
Neskowin Valley School, Neskowin	Tillamook Estuaries Partnership
Seaside Heights Elementary School, Seaside	Tillamook Forest Center
Tillamook High School, Tillamook	Tualatin Valley Chapter ANWS
Vernonia Schools	Twin Rocks Friends Camp
Warrenton High School, Warrenton	WarHF, Inc
Washington Elementary	Youngs Bay Watershed Council
Organizations	**Government**
CREST	Bay City Library
Ecola Creek Watershed Council	Oregon Department of Forestry
Lower Nehalem Watershed Council	U.S. Fish & Wildlife Service
Necanicam Watershed Council	

Mid Coast STEP

Christine Clapp, STEP Biologist
Jitesh Pattni, Assistant District Fish Biologist
John Spangler, District Fish Biologist

The Mid Coast STEP 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 Salmon, Mid Coast waters support populations of spring and fall Chinook Salmon, summer and winter Steelhead, Chum Salmon, Cutthroat Trout, and other native non-game fishes. The Siletz River is home to the only native population of summer steelhead that originates in the Oregon coast range.

Christine Clapp has lead responsibility for STEP program activities on the Mid Coast. The Mid Coast program works with volunteer groups, landowners, local schools, non-profit organizations, private industry, watershed councils, and state and federal agencies on a variety of projects focused on education, fisheries management and watershed conservation. 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 and Girl Scouts of America, the Angell Job Corps, Community Services Consortium, Career Tech High School, and others.

Education and outreach are important features of the Mid Coast STEP and account for over 40 percent of volunteer time in the District. Mid Coast STEP also assists with fish population monitoring through the operation of six fish traps and helps with habitat restoration and access projects. The Mid Coast District also includes the Salmon Enhancement Commission's Coho STEP Program in Depoe Bay, one of the oldest STEP propagation programs in the state. Fish culture programs continue to attract many passionate volunteers who operate small community-driven Coho Salmon projects (Depoe Bay and Florence) as well as winter steelhead propagation programs (Whittaker Creek and Letz Creek) that are important for providing harvest opportunities in the District.

EDUCATION AND PROGRAM DEVELOPMENT

Fish Eggs-to-Fry Program

During the 2017-2018 school year, the Egg-to-Fry Program was active in 45 classrooms representing 16 schools (preschool-12), 1 state park visitor's center, 3 after-school programs, and 2 public libraries. Biologists and volunteers use the Egg-to-Fry Program to teach students about native salmonids and their life cycles, habitat requirements and conservation. Volunteers and staff train classroom and field assistants, deliver and maintain equipment, transport eggs, lead presentations and field trips, and coordinate with hatchery staff.

The Mid Coast Egg-to-Fry Program generally involves an introductory classroom presentation about Pacific Salmon and their life-cycles during egg delivery and a multi-station field trip

during fry release. In the Siuslaw School District, United States Forest Service and other partners provide field trips for participating classrooms at the Whittaker Creek Campground. In 2017-2018, volunteers also led and/or assisted the STEP Biologist with field trips to Big Creek, Jeffries Creek, and Crowley Creek for third grade students participating in the Lincoln County Egg-to-Fry Program. Most field trips include several education stations where students learn about macroinvertebrates and aquatic food webs, water quality, fish habitat, watershed functions, 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. In 2012, the Lincoln County School District adopted the Egg-to-Fry Program as part of their Ocean Literacy Initiative and designated it as core curriculum for all Lincoln County third graders.

The Mid Coast acquired two Egg-to-Fry libraries over the past year to share among schools participating in the program. Each library has 8-10 salmon focused kids' books for use in the classroom. Each school gets about 2 weeks with the library and shares books between participating teachers. Mid Coast STEP also purchased 50 salmon life-cycle books to pair with each aquarium set-up this coming spring to enrich students' learning experiences and interaction with the aquarium on a daily basis.

Family Fishing

Volunteers and staff led seven successful family fishing events on the Mid Coast at Devils Lake, Olalla Reservoir, Eckman Lake, Cleawox Lake, Thissell Pond, Salmon River Hatchery and the Lhuuke Illahee Fish Hatchery near Siletz. More than 900 youth participants and nearly 500 adults attended these seven events. Over 60 volunteers contributed more than 500 hours to make these events successful. Mid Coast volunteers also spent a substantial amount of time fixing fishing equipment and putting together new fishing poles for events and after-school programs. Mid Coast STEP also manages four youth angling libraries in Lincoln City, Newport (2) and Waldport where youth can check out fishing equipment for up to two weeks free of charge.

Photo 12: Volunteers assist with the family fishing event at Regatta Park (Devil's Lake) each April.

The Emerald Empire Chapter of the Association of Northwest Steelheaders also led annual fishing events for veterans and kids with cancer, and Florence STEP taught angler education programs to Boy and Girl Scouts at Cleawox Lake. Mid Coast STEP also provided fish and angling equipment for the annual Siletz Tribe Culture Camp, where youth spend a week each summer learning about their tribal heritage and fishing for trout in the afternoons.

Volunteers taught angler education and watershed activities to 350 Royal Rangers campers over three days at Camp Wildcat and led backyard bass and lure making activities during the National Night Out event in Newport.

Other Education Activities

The Mid Coast District hosted one ODFW intern this summer who assisted with adult fish trapping operations, broodstock collection, and a habitat restoration project while learning about

career opportunities in fisheries management. A district volunteer was also hired temporarily to run the Siletz Falls Fish Trap, expanding his professional experience and career goals.

Mid Coast STEP continues to teach Lincoln County sixth graders at Drift Creek Outdoor School. Topics include aquatic science (fish biology, food webs, macroinvertebrates, and water quality), angler education, orienteering and mapping. Volunteers and staff also led similar activities for 5th grade outdoor school at Drift Creek Falls this year. The Siuslaw Watershed Council and Florence STEP hosted a watershed camp for students in the Siuslaw School District, and many other fisheries and watershed based field trips in the Siuslaw Basin.

The Mid Coast STEP Biologist and two volunteers mentored fifth grade students who performed experiments on the effects of temperature on fall Chinook Salmon growth and respiration and presented at the Lincoln County Science Fair. Several volunteers also taught a fly-tying and fly-casting course at the Oregon Coast Community College in Lincoln City.

Mid Coast STEP was also involved with the Hatfield Marine Science Center. Volunteers served as judges for the Alternative Energy Design competition, assisted with oyster spawning, and represented STEP at Marine Science Day in April. STEP was also able to provide fish for dissection and waders for students enrolled in summer camps and career days at Hatfield Marine Science Center.

Outreach Activities

Volunteers represented STEP at several boat and sportsmen's shows throughout the year, fundraising for Mid Coast STEP projects and recruiting new volunteers. Volunteers planned and hosted two salmon derbies in Lincoln County, encouraging angler participation in our local fisheries and enhancing the local economy. STEP also hosted educational display tables for the Mid Coast Water Planning Partnership Summit and Hatfield Marine Science Center Day.

STEP also provided support and resources to teachers enrolled in the Oregon Coast STEM Hub's MWEE (Meaningful Watershed Educational Experiences) and Western Oregon University's Egg-to-Fry Teacher Training Workshops. Mid Coast staff also took a group from the Newport Senior Center to the Siletz trap to learn about trap operations and our district steelhead programs.

Mid Coast STEP continues to operate the aquatic science reference library containing books about fish biology and ecology, watershed function, stream hydrology and ecology, and fish and macroinvertebrate identification to use for ODFW and Lincoln County School District education programs. Resources are also available to volunteers who are interested in learning more about freshwater science and salmonids.

INVENTORY AND MONITORING

Population Monitoring

Volunteers helped monitor fish populations at several fish traps including South Fork Schooner Creek, Salmon River Hatchery, Siletz Falls, Drift Creek and North Fork Alsea in the Alsea basin, Munsel, Letz, and Whittaker creeks in the Siuslaw Basin, and Little Woahink Creek trap in the Siltcoos basin. As needed, 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 led all trap operations on South Fork Schooner

Creek and Whittaker Creek and assisted with various trap maintenance projects throughout the season. Trap operations provide essential information on fish returns and stray rates for district management, and volunteers spawned fish at the Whittaker Creek trap for the Siuslaw winter steelhead hatchery program.

STEP volunteers also assisted the Marine Resources Program with hook and line surveys in the marine reserves, and Depoe Bay Salmon Enhancement Commission volunteers completed spawning surveys on North Depoe Bay Creek.

Salmon River Hatchery

Volunteers assisted ODFW staff with the adult fish trap at Salmon River Hatchery this fall. A total of 44 volunteers contributed over 300 hours to help ODFW donate 1,189 hatchery Chinook salmon to nine Oregon food share organizations.

HABITAT IMPROVEMENT

Habitat Improvement

The STEP Biologist continued to manage the Riparian Lands Tax Incentive Program for the Mid Coast, checking compliance of enrolled properties and enrolling new landowners in the program to protect their riparian habitat for the benefit of fish and wildlife. Volunteers from UDAMAN, Longview Hills Fishing Club, Angell Job Corps and other volunteers also placed donated Christmas trees collected by Dahl Disposal into tidal channels along the lower Yaquina River to enhance rearing and refuge habitat and increase aquatic insect production for juvenile fish.

Photo 13: One load from the 2018 Port to Port Clean-up on the Yaquina River.

In addition, 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 organized and/or assisted with river clean-up events on the Siletz, Yaquina and Alsea rivers, removing thousands of pounds of garbage from more than 70 river miles.

Nutrient Enrichment

A total of 7,938 pounds of steelhead, Chinook Salmon and a few hatchery Coho Salmon were placed in approximately 100 river miles of the Mid Coast District this year including the Salmon, Siletz, Yaquina, Alsea and Siuslaw river basins.

FISH CULTURE

Broodstock Collection

Volunteer anglers assisted with winter steelhead broodstock collection programs on the Siletz and Alsea rivers. Angler-caught wild fish contributed 46 (Siletz) and 47 (Alsea) percent of the total number of broodstock spawned this year. The rest of the fish were collected from adult fish traps at Siletz Falls and North Fork Alsea Hatchery by staff and volunteers between December

and May. Adult fish from both rivers were spawned at the Alsea Hatchery, and their offspring will be released as smolts next spring. Mid Coast staff with the help of an Oregon State University intern also collected hatchery summer steelhead from the Siletz Falls trap between June and October and transferred them to Cedar Creek Hatchery for spawning.

The Mid Coast STEP Biologist provided coordination, technical support, and assistance to about 50 volunteers from the Florence STEP Group and Emerald Empire Chapter of ANWS who operate the Siuslaw River winter steelhead hatchery program each year. Volunteers ran adult traps and spawned fish for the upper and lower basin releases. For the lower basin releases at Whittaker and Green creeks (85,000 smolts), ODFW staff and volunteers transported eggs and milt collected by volunteers at the Whittaker fish trap to the Alsea Hatchery for fertilization and incubation. Volunteers and hatchery staff then transported those eyed eggs to Roaring River Hatchery for rearing. For the upper basin release at Letz Creek (15,000 smolts), volunteers attempted to collect, spawn, fertilize, incubate, and rear fish to smolt stage all at the project site. However, the lack of adult fish returning to Letz Creek forced the program to collect the majority of their broodstock from the Whittaker Creek fish trap this year. In addition, the Florence STEP group usually spawns several pairs of Coho Salmon from the Munsel Creek fish trap each year for a small educational program at the Florence STEP hatchery, where they incubate eggs and rear fish prior to releasing them into Munsel Lake at parr stage. However, no adult Coho Salmon returned to the Munsel Creek trap in 2017 so four adult Coho Salmon were collected from the Whittaker Creek trap late in the season.

Photo 14: Volunteers inspect the adult trapping site at the Letz Creek STEP facility near Lorane.

Fish Acclimation Projects

Volunteers assisted with several winter steelhead smolt acclimation projects on the Mid Coast. Trapping and acclimation sites are located at Whittaker Creek, Green Creek, Munsel Creek, Letz Creek, and Palmer Creek. The Florence STEP group acclimated winter steelhead smolts at Green Creek (15,378) and Whittaker Creek (68,511) this past May. The Emerald Empire Chapter of the Association of Northwest Steelheaders also acclimated and released 14,730 winter steelhead smolts from the Letz Creek STEP facility in the spring.

The Angell Job Corps and other Mid Coast STEP volunteers operated a winter steelhead acclimation site (54,352 smolts) at Palmer Creek in the Siletz basin. Volunteers camped on-site for 10 days, cleaning screens and monitoring fish daily. Angell Job Corps students also learned about survival skills and outdoor living while camping at the Palmer Creek acclimation site.

Photo 15: Students with the Neighbors for Kids Program in Depoe Bay assist with Coho parr release.

North Depoe Bay Creek

The Depoe Bay Salmon Enhancement Commission continued to operate a Coho Salmon hatchbox program that receives 20,000 eyed eggs from the Trask Hatchery each year. Eggs incubate in two hatchboxes along North Depoe Bay Creek before volunteers transport the fry to a net pen in North Depoe Bay Reservoir and feed them until the fin-clipping event in July. After fin-clipping, volunteers release juvenile Coho Salmon into the reservoir at large where they rear over-winter and emigrate from the reservoir volitionally in the spring. The Depoe Bay community supports this program, and youth from the Neighbors for Kids after-School Program assist with feeding, monitoring and fin-clipping in July, along with many other adult and youth volunteers.

Munsel Creek STEP Hatchery

Florence STEP volunteers operate a small hatchery on Munsel Creek to provide eyed winter Steelhead eggs for the Siuslaw School District's Egg-to-Fry Program. All other eggs and milt collected from winter steelhead at Whittaker Creek are now transported to Alsea Hatchery for fertilization and incubation. No Coho Salmon entered the Munsel Creek fish trap again this year. However, volunteers collected four adult Coho Salmon at Whittaker Creek in January, producing 3,810 summer parr that were released into Munsel Lake this past June.

Schools and Groups that work with Mid Coast STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Organizations**
Career Tech High School	Boy Scouts of America
Crestview Heights Elementary, Waldport	Camp Florence
Eddyville Charter School, Eddyville	Central Coast Fly Fishers
Florence School District Stream Team	Community Services Consortium
Mt. Hood Community College	Depoe Bay Salmon Enhancement Commission
Neighbors for Kids, Depoe Bay	Driftwood Library
Newport High School, Newport	Emerald Empire Chapter ANWS
Nye Beach Montessori School, Newport	Florence STEP Group
Oceanspray After School Program, Newport	Longview Hills Fishing Club
Oregon Coast Community College	Mid Coast Watershed Council
Oregon State University	Newport Library
Salmon Run After School Program, Newport	Salmon Drift Creek Watershed Council
Sam Case Elementary, Newport	Salmon Watch
Siletz Valley School, Siletz	SOLVE
Siuslaw Elementary School, Florence	Trout Unlimited
Taft Elementary School, Lincoln City	U DA MAN
Taft High School, Lincoln City	**Government**
Toledo Elementary School, Toledo	Benton County
Waldport High School, Waldport	Bureau of Land Management
Western Oregon University	Confederated Tribes of Grand Ronde
Yaquina View Elementary School, Newport	Confederated Tribes of Siletz Indians
Organizations	Lane County
Albany Chapter ANWS	Lincoln County
Alsea Sportsman's Association	Lincoln Soil & Water Conservation District
Alsea Watershed Council	NOAA

Angell Job Corps	Oregon Department of Forestry
Baptist Church of Waldport	Oregon Parks & Recreation Department

Southwest Region

Umpqua STEP

Evan Leonetti, STEP Biologist
Jason Brandt, Assistant District Fish Biologist
Greg Huchko, 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.

Photo 16: Guides and students from Eastwood Elementary fishing during "kids day" during the Umpqua Fisheries Enhancement Derby.

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 and Brown 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, Coho Salmon and fall Chinook Salmon fisheries.

The Umpqua Watershed had another successful year with volunteers donating over 12,000 hours. The program completed and/or developed 50 projects this year and reached over 2,100 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 a number of different educational events that reached over 1,700 youth and 500 adults. This included three Free Fishing Day events that occurred in Douglas County, approximately 35 classroom incubators projects, as well as salmonid life-cycle classes and angler education programs.

Angler Education

Angler Education programs took place at Bowman's Pond, Free Fishing Day events, and Reedsport. 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.

Glide Forestry Tour

The Umpqua District STEP Biologist participated in the Glide Forestry Tour where around 500 students participated in a variety of presentations on invasive species, cold and warm water fish identification, habitat requirements and organism life cycles. Station participants included representatives from various agencies such as Douglas Forest Protection, the Cow Creek Tribe of the Umpqua Band of Indians, Douglas County, National Oceanic and Atmospheric Administration (NOAA) and Oregon State University.

Photo 17: Umpqua STEP biologist and students from Eastwood Elementary on delivery day for Winter Steelhead the Eastwood "hatchery"

Canyonville and Eastwood Education Events

The Canyonville and Eastwood Acclimation sites had over 300 students and 45 adults attend our releasing and life-cycle seminars. This included several different schools from southern Douglas County. There were over 75 volunteers with six 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, tribal culture, 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 fish biologist, volunteer groups, 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 80 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.

Efforts are being made to increase public outreach through increased angler education programs and working with Oregon State Parks to educate youth on fishing and fish found in Douglas County. In 2018 the program reached out to new groups such as Project Healing Waters and local Rotary Chapters. The STEP Biologist worked with the local Oregon Coast Anglers to put on an angling education course in Reedsport. Oregon State Parks and Recreation staff at Lake Marie requested the biologist attend an outdoor education series. STEP had a presence at the STEAM (Science, Technology, Engineering, Arts and Math) Extravaganza this year, reaching out to the local community about fishing and fisheries.

INVENTORY AND MONITORING

The STEP Biologist coordinated volunteers and ODFW staff in monitoring steelhead, Coho Salmon 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.

Cow Creek Coho Salmon
The Umpqua Fishermen's Association, Douglas County, and STEP monitored returns of adult Coho Salmon to the base of Galesville Dam. Information from the returns of differentially marked fish were used to inform management staff.

Adult Salmon Monitoring
The Umpqua Fisherman's Association assisted the Department in monitoring wild steelhead populations in Canyon Creek. Volunteers enumerated and passed wild winter steelhead and removed hatchery fish. This information is used by the ODFW to monitor the hatchery winter steelhead program in the South Umpqua.

Volunteers also conducted spawning surveys to evaluate returns of fall Chinook Salmon and monitor stray rates from the hatchery program in the lower Umpqua.

Creel
As part of the new South Umpqua Winter Steelhead Acclimation Timing Study, volunteers conducted informal catch surveys in the middle South Umpqua. The main goal of this effort was to inform members of the angling public about the upcoming returns of Coded-Wire-Tagged fish and the need for their assistance.

Gardiner Lake
Additionally the Gardiner Reedsport Winchester Bay 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 Oregon State University Research. After changing to a moist air incubation system, the concern over the use of the lake water to incubate eggs has dropped. The information is still important for the rearing of juveniles and the holding of adults.

HABITAT IMPROVEMENT

Carcass Placement
The Gardiner Reedsport Winchester Bay 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. Hatchery Coho Salmon were placed by the Umpqua Fishermen's Association into various areas of upper Cow Creek. The group also assisted with placing hatchery winter steelhead into various areas in the Canyon Creek drainage.

Photo 18: Umpqua STEP biologist and students from Phoenix School placing used Christmas trees to enhance salmonid habitat in Rice Creek (Douglas County)

Small Woody Debris Placement
The Gardiner Reedsport Winchester Bay STEP group and Oregon Coastal Anglers volunteers with the assistance of local students completed a small woody debris placement project. The materials for

this program were obtained for free from the local community. These materials were used Christmas Trees that would have otherwise likely ended up being used for chips or being placed in a landfill. This project was designed to enhance the habitat restoration project previously completed in Camp Creek by ODFW, Bureau of Land Management and the Partnership for the Umpqua Rivers.

Volunteers from the Phoenix School and Bureau of Land Management (BLM) conducted a similar project in Rice Creek. Rice Creek is located in the South Umpqua River basin within and below BLM lands.

FISH CULTURE

There are six salmon/steelhead/trout hatchery programs in the Umpqua and volunteers are involved in all of them. The program volunteers play the largest role in raising fall Chinook Salmon, Coho Salmon and winter steelhead. The Umpqua Fisherman's Association assisted with broodstock collection of Coho Salmon and winter steelhead as well as acclimating the steelhead. Gardiner Reedsport Winchester Bay STEP volunteers collected, incubated, reared, acclimated, and released fall Chinook Salmon and reared and released Rainbow Trout.

Photo 19: Guides collecting Wild Winter Steelhead broodstock in the South Umpqua.

Fin-Marking

Unfortunately with the loss of the majority of the fall Chinook Salmon pre-smolts in 2018, limited marking was conducted for fall Chinook Salmon by volunteers. However, the group did mark approximately 4,000 Rainbow Trout for release into Lake Marie.

Acclimation and Release

Winter steelhead acclimation and releases took place this past year at Canyon Creek and Seven Feather Acclimation sites. These events not only contribute to winter steelhead angling opportunities in the basin but also provide a great educational experience for local students and adults. Approximately 140,000 winter steelhead were released in 2018.

The Eastwood Elementary School "hatchery" was restarted in 2018. This was the first time this facility was used since 2013. Roughly 2,000 one-year-old steelhead were brought to the school and held for a month and a half before release. Students and adults fed the fish seven days a week and monitored the fish's growth and condition. The Gardiner Reedsport Winchester Bay STEP group (GRWB) acclimated and released approximately only 600 Chinook Salmon pre-smolts. A small brood number and egg take led to the GRWB opting to send most of the eggs to the Rock Creek Hatchery. This led to the group being able to acclimate and release 70,000 smolts. This year we attempted to acclimate 10,000 of these smolts at the GRWB facility to hopefully start a "swim-in" brood program.

Photo 20: Umpqua STEP biologist and volunteers loading horses for high lakes stocking at Skimmerhorn trailhead.

High Lakes Fish Stocking

The STEP program also coordinated the District's High Lakes stocking program using volunteers from Oregon Equestrian Trails. Volunteers stocked eight lakes in the District with over 8,000 Rainbow Trout. Over 20 volunteers assisted with this year's high lakes stocking.

Schools and Groups that work with Umpqua STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	U.S. Fish and Wildlife Service
Canyonville Elementary School, Canyonville	**Organizations**
Cobb Street School, Roseburg	Partnership for the Umpqua Rivers
Eastwood Elementary School, Roseburg	Smith River Watershed Council
Fremont Middle School, Roseburg	Cow Creek Band of Umpqua Tribe of Indians
Fullerton IV Elementary School, Roseburg	Gardiner-Reedsport-Winchester Bay STEP
Geneva Academy, Roseburg	Umpqua Fishermen's Association
Glendale Elementary School, Glendale	Oregon Equestrian Trails
Glide Elementary School, Glide	Umpqua Fisheries Enhancement Derby
Highland Elementary School, Reedsport	Umpqua Guides Association
Hucrest Elementary School, Roseburg	Umpqua Valley Flyfishers
McGovern Elementary School, Winston	Steamboaters
Melrose Elementary School, Roseburg	The Bowman Family
Oregon State University	Florence STEP
Riddle Elementary School, Riddle	Sportsman's Warehouse
St. Paul Lutheran School, Roseburg	Oregon Coast Anglers
Tri-City Elementary School, Myrtle Creek	STEAM
Umpqua Community College	Project Healing Waters
Winchester Elementary School, Winchester	
Government	
Bureau of Land Management	
City of Roseburg	
Douglas County	
Oregon Parks and Recreation Department	
Oregon State Police	
NOAA	

Tenmile, Coos, and Coquille STEP

Gary Vonderohe, STEP Biologist
Antonio Salgado, 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

Millicoma Interpretive Center

The Millicoma Interpretive Center continues to be a popular place for student groups and the general public to come and learn more about the life histories of salmon and steelhead and habitat through "hands-on" activities. Groups are involved with the collection of broodstock, spawning, egg and fry care, fin-marking, measuring riparian habitat, and identifying stream habitat. Through these activities students learn the importance of habitat conservation.

Coquille High School Educational Hatchery

The Coquille High School Hatchery is running at a full capacity once again. Ecology and biology students and teachers invested over 400 hours of the school year to ensure the survival and growth into pre-smolts of 20,000 fall Chinook Salmon eggs. The process helped students understand the basic needs for salmon to live and grow within the artificial environment through direct hands-on work at the hatchery. Work and lessons were also expanded to include discussions on the natural limiting factors affecting the wild and hatchery salmon stocks in the nearby creek, local watershed, and ocean environments.

Morgan Creek STEP Hatchery

At Morgan Creek STEP Hatchery over 1,500 students learn the role the local salmon hatcheries play to enhance the fishery while having the chance to participate in hands-on activities that help them understand the benefits of a healthy ecosystem, salmon life-cycle, and habitat conservation.

Photo 21: Students walking the nature trail at Morgan Creek.

In the spring, students are given the opportunity to learn salmon biology and stream habitat from participating as a fish biologist, forester, habitat illustrator, and/or creative writer perspective and present their findings, story and or illustration to the rest of the class and volunteers. Through these activities they learn the importance of collecting high quality data and understand the functions and connections of an ecosystem.

In the fall, fifth grade classes observe, learn, and participate in the entirety of the spawning process. In groups of five, students rotate through five stations where they learn each step of the spawning protocol from experienced volunteers, as well as leadership, teamwork, and engagement skills.

Several small projects continue at Morgan Creek STEP Hatchery. These projects help maintain the hatchery and keep the operation running smoothly. Most of the signs and interpretive kiosks have been completed. These signs will help educate the 'drop-in" visitor.

A total of 567,769 Chinook Salmon were fin-marked at Morgan Creek during the report period. A total of 259,534 Chinook Salmon were marked by student groups and an additional 308,235 Chinook Salmon were marked by the auto-mark trailer.

Noble Creek STEP Hatchery

Over 300 fifth-graders from North Bend, Coos Bay, and Myrtle Point schools came to Noble Creek STEP Hatchery to help and learn the protocols, safety, and responsibilities involved in spawning hatchery Chinook Salmon. The STEP Biologist also taught these students about the salmon life-cycles and the importance of quality fish habitat. 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. 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. For the fifth year in a row the auto-fin marking trailer was at Noble Creek STEP Hatchery for two weeks to adipose fin-clip 100% of the hatchery Chinook Salmon releases. Several members of the public came to see the trailer in operation. This was a great opportunity to talk to the public about the importance of monitoring our hatchery releases.

Family Fishing Events

Oregon Department of Fish and Wildlife hatcheries provided 500 legal sized Rainbow Trout for stocking in the vacant steelhead acclimation pond at the Millicoma Interpretive Center. This has been a huge success with several of the local children participating in the catching of these trout during late spring/summer.

Photo 22: Fishing event at Eel Lake.

The annual Empire Lake Family Fun Day was held at the end of April in the city of Coos Bay. As part of the event over 4,000 Rainbow Trout were stocked into the lake and participating children learn fishing skills, spinner making, and are given a free fishing pole equipped to catch the recently stocked trout. Lunch was provided to all participants by a local business. There were also many other family friendly activities available that day.

On Eel Lake, the STEP Biologists and volunteers held a fishing clinic during the June Free Fishing Weekend for the seventeenth 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 for a month in a net pen located in Eel Lake specifically for the clinic. About 300 children participated in this year's event at Eel Lake.

The STEP Biologist worked with the Coos Bay and North Bend Fire Departments to facilitate the stocking of legal sized Rainbow Trout into portable fire suppression ponds for children to catch as part of two events. The first event was part of the Coos Bay Fourth of July celebration at Mingus Park. The second event was part of the North Bend July Jubilee held in downtown North Bend. Ponds were also set up and operated by ODFW staff and volunteers as part of the annual Charleston Seafood Festival in early August. The Coos Bay Fire Fighters Association purchased a custom-made fire pond for exclusive use at these fishing events.

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 River 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 STEP Biologist has been estimating the total number of juvenile Chinook Salmon 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.

The STEP Biologist and volunteers assisted District staff with monitoring fish populations in the streams and channels of the ODFW Coquille Valley Wildlife Area. Hoop traps were set in the streams/drainage ditches overnight to capture salmon juveniles and warmwater fish species. This sampling is part of pre-restoration monitoring for a large tidal wetland restoration project which was completed in 2018.

HABITAT IMPROVEMENT

Fish Carcass Placement

Salmon carcasses were again placed in numerous district streams during the report period. ODFW staff and volunteers placed over 3,000 salmonid carcasses into 4 different streams. These carcasses were from fish returning to Coos Basin STEP facilities.

FISH CULTURE

Large numbers of volunteers continue to be involved in the extensive fish cultural programs in the District. There are five spawning, six egg-incubation, four rearing, and fourteen acclimation projects in the District.

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.

Photo 23: Spawning event at Morgan Creek with local school students.

Fry Releases

The District STEP Biologist coordinated the collection and distribution of salmon eggs from ODFW hatcheries or STEP incubation facilities to volunteers. As a result, 50,615 fry were released from two hatchboxes in the Coquille Basin. 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.

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 River began to be compromised in 1887 when the practice of splash-damming rivers started.

Photo 24: Fin marking event.

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 1,742,134 Chinook Salmon pre-smolts were released into the Coos Basin in the spring of 2018. Almost all of the Chinook Salmon that were released in the Coos River Basin in the spring of 2018 were fin-clipped. The addition of the auto-mark trailer was a significant help in achieving the near 100% fin-marking rate. The auto-mark trailer marked all the Chinook Salmon at Noble Creek STEP Hatchery and 54% of the Chinook Salmon marked at Morgan Creek STEP Hatchery. Student groups at Morgan Creek marked the balance of the Chinook Salmon reared at that facility.

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 the 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. Again this past year, no salmon were trapped last fall.

Fish Eggs-to-Fry Program

Eighteen classroom incubators were operated at twelve different schools. Students at twelve schools observed and learned the development stages from egg to fry. At the time the eggs are distributed, the students are presented with a lesson by the STEP Biologist on the biology of salmon. Students also released the salmon fry into nearby streams and learned about the habitat needed for fry to grow, migrate to the bays and ocean, as well as the perils that salmon encounter throughout their lifecycle and the returning journey to the spawning grounds. These lessons further impart resource ownership to the children.

Rearing and Acclimation

In 2018, 20,599 Chinook Salmon presmolts were released from the Coquille High School. These fish were reared at the high school by the students and teacher.

Approximately 144,442 fall Chinook Salmon smolts were released from two locations in the Coquille River basin. The two acclimation sites are Sevenmile Creek and Ferry Creek. Due to wildland fire danger at Cole River Hatchery, these acclimations occurred several weeks early this fall. Because of warmer water temperatures, the smolts moved into the main river quicker than previous years. The acclimation of a larger number of Chinook Salmon smolts at Ferry Creek should provide a good source of broodstock when they are trapped at Bandon Hatchery which is located just upstream from the acclimation site.

STEP volunteers operated a total of nineteen 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.

Schools and Groups that work with Tenmile Coos Coquille STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Education**
Bandon High School, Bandon	Oregon Institute of Marine Biology
Blossom Gulch Elementary School, Coos Bay	Oregon State University
Central Oregon Community College	Portland State University
Coos Bay School District	Powers Elementary School, Powers
Coquille High School, Coquille	Southwestern Oregon Community College
Coquille Valley Elementary School, Coquille	Sunset Middle School, Coos Bay
Harbor Middle School, Bandon	**Organizations**
Hillcrest Elementary School, North Bend	Bay Area Sportsman Association, Coos Bay
Lighthouse School, North Bend	Boy Scouts of America
Lincoln Elementary School, Coquille	Coos River STEP, Charleston
Madison Elementary School, Coos Bay	Coos County STEP Commission, Coos Bay
Marshfield Senior High School, Coos Bay	Coquille River STEP, Coquille
Millicoma Intermediate School, Coos Bay	Eel-Tenmile STEP, Lakeside
Myrtlecrest Elementary School, Myrtle Point	South Coast Anglers STEP, Coos Bay
North Bay Elementary School, North Bend	
North Bend Middle School, North Bend	
North Bend Senior High School, North Bend	

Lower Rogue STEP

John Weber, STEP Biologist
Steve Mazur, Assistant District Fish Biologist
Vacant, 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. In 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 (within the Lower Rogue Watershed District) are defined management strategies embedded in the 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

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 32 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 27 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.

<u>Port of Brookings Fish Cleaning Station</u>
The Oregon South Coast Fisherman received a Restoration and Enhancement grant to rebuild the fish cleaning station at the Port of Brookings. The entire station was modernized with new plumbing, electrical, cutting boards and roofing. In addition, a sign with a weigh scale and hooks to hang fish on was constructed. This was a much needed improvement for both salt and freshwater anglers that use the Port of Brookings.

Photo 25: Volunteers hanging new sign at recently refurbished fish cleaning station.

<u>Azalea Festival</u>

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 75 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 2, 2018 the annual free fishing day event was held at Libby Pond. A total of 90 kids registered for the event organized by ODFW. Volunteers from the Curry Anadromous Fishermen and Oregon South Coast Fishermen sponsored the activity and were on hand to register children. Participants caught over 100 Rainbow Trout during the day.

Photo 26: Casting lessons at fishing event.

On June 3, 2018 the 2nd annual free fishing day at Arizona Pond was a success. Volunteers from the Port Orford Rotary Club sponsored the event.

Throughout both events kids were assisted with fishing tips, instruction, registration and measurement of their trout. Hot dogs and beverages for both the events were provided by volunteers. In addition, fishing rods and equipment were donated to be given away in a raffle.

Improved South Coast Angler Access

Oregon South Coast Fisherman (OSCF) 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. In addition to the access agreement, OSCF purchased rock and equipment to make the much needed repairs to the access road this summer.

Curry Citizen for Public Land Access (CCPLA) and Lower Rogue STEP maintained fishing access at Arizona Pond. Local STEP volunteers cleared vegetation in and around the pond. The CCPLA volunteers provided equipment and an operator to place gravel to improve access. Arizona Pond is for youth only and provides the best quality bank angling access in Curry County.

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 2018, all of the third grade classes in the Lower Rogue STEP district attended the event. Volunteers taught casting, line tying, and hook baiting.

An aquatic education curriculum was presented once the core skills of angling were taught. Youth fished with assistance from Angler Education instructors in the pond, which was stocked with trout prior to the event. Participants were given the option to keep or release their fish.

Those that chose to retain their catch were taught the responsibility of packaging and cleaning their fish for a meal. With the success of Reel Fish Day the Brookings, Port Orford, and Gold Beach School Districts will continue to send their third grade classes to this event.

INVENTORY AND MONITORING

Chetco River Scale Sampling

The STEP Biologist and Oregon South Coast Fishermen volunteers assisted in a 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 staff sampled in the tributaries. During the 2017 brood year volunteers and staff collected 338 samples.

Photo 27: Volunteers searching the Chetco for carcasses to collect scale samples from.

Chetco River Estuary Seining

The STEP Biologist and OSCF volunteers completed their 27th 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 smolts. In addition, the data is used to indicate when hatchery Chinook Salmon smolt should be released to have the least impact on native fish utilizing the estuary.

Winchuck River Screw Trap

The STEP Biologist and OSCF volunteers operated a downstream migrant trap just upstream of the Winchuck River estuary. Operation of the trap represents the continuation of a 29-year database. The OSCF have operated the trap for the past 15 years, doing work that would otherwise be unaccomplished under current district staffing levels. The data obtained from this project is used by ODFW staff to assist in managing fall Chinook Salmon.

Photo 28: Volunteers installing screw trap on Winchuck.

The 2018 Winchuck River trapping season concluded with 69 days of trap operation and an estimated total of 134,676 fall Chinook Salmon migrated past the smolt trap site.

Huntley Park Seining

The Huntley Park Seining Project represents a continuation of a 43-year adult salmonid monitoring database. This project is conducted annually from July through October at Huntley Park on the lower Rogue River. The Huntley Park 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.

Chetco Fish 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 available 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 2018 season.

Ferry Creek Acclimation Adult Monitoring
The STEP Biologist and OSCF volunteers sampled adult fall Chinook Salmon off the mouth of Ferry Creek. Ferry Creek has is a smolt acclimation site with limited access for adult salmon. A handful of salmon were sampled using tangle nets. The data collected from this project will be used to determine the effectiveness of the Ferry Creek Acclimation Project and increase the sample size of coded wire tags collected in the basin.

Indian Creek STEP Hatchery Monitoring
In an effort to better evaluate the Indian Creek STEP Hatchery program, volunteers walked spawning ground surveys on Indian Creek. The data from this effort will be used to determine the effectiveness of the adult fish trap and to estimate the number of fish returning using Indian Creek.

HABITAT IMPROVEMENT

Stream Enrichment
Volunteers with the Curry Anadromous Fishermen and the Oregon South Coast Fishermen assisted ODFW with placement of fall Chinook Salmon carcasses. 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, steelhead carcasses of Chetco River origin were redistributed into the south fork of the Chetco River.

River Fish Salvage
Oregon South Coast Fishermen volunteers 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.

Port of Brookings Aerators
Historic water samples of the Chetco River Boat basin identified areas of low dissolved oxygen. At the time OSCF obtained funding from various sources to purchase and maintain the aerators. Last summer the Port of Brookings and OSCF purchased equipment required for maintenance. With the funding the OSCF assisted the Port in getting the equipment back online.

FISH CULTURE

Chetco River Broodstock Collection

Volunteers and fishing guides assisted ODFW staff in collecting broodstock for the Chetco River hatchery programs. Chinook and 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 groups of 13,500 fall Chinook salmon smolts. 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.

Photo 29: Volunteers at Indian Creek Hatchery.

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 40,256 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. Below average adult returns during BY 2016 resulted in a reduction of smolt reared/released from the facility. The reduction in smolt reared in turn reduced the number of hours volunteered at the facility. In addition, 28,180 of the smolt production were marked and coded wire tagged.

Euchre Creek Hatchbox

Reduced production at the Indian Creek Hatchery resulted in no excess eggs to operate the Euchre Creek hatchbox.

Schools and Groups that work with Lower Rogue STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Organizations**
Azalea Middle School, Brookings	Lower Rogue Watershed Council, Gold Beach
Brookings Harbor Christian School, Brookings	Oregon South Coast Fishermen, Brookings
Brookings-Harbor High School, Brookings	Oregon Stewardship, Medford
Driftwood School, Port Orford	Port Orford Ocean Resource Team, Port Orford
Gold Beach High School, Gold Beach	South Coast Watershed Council, Gold Beach
Kalmiopsis Elementary School, Brookings	**Government**
Klamath Outdoor Science School, Klamath Falls	City of Brookings
Pacific High School, Port Orford	Curry County
Riley Creek School, Gold Beach	Port of Brookings
Organizations	Port of Gold Beach

Curry Anadromous Fishermen, Gold Beach	
Curry Citizens for Public Lane Access, Gold Beach	
Curry Sportfishing Association, Gold Beach	
I'm Hooked, Inc	
KCIW Curry Coast Community Radio, Brookings	
KURY Radio, Brookings	

Upper Rogue STEP

Ryan Battleson, 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. Primary tributaries include Big Butte Creek, Little Butte Creek, Elk Creek, Bear Creek, Evans Creek, Grave Creek, the Applegate River and the Illinois River. 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. One species, the Coho Salmon, is listed as "Threatened" under the Federal Endangered Species Act.

This year 466 District STEP volunteers put in over 3,260 hours and donated over 5,229 miles to complete the various projects described in this report to help meet district management objectives. Monitoring projects, outreach and habitat work make up the bulk of the volunteer projects on the Rogue. An emphasis on small streams, urban streams and intermittent streams outreach, small scale restoration tailored around High School biology curriculum, and juvenile migrant salmonid monitoring activities make up the majority of STEP activities. This focus is intended to highlight fish use in streams that are often overlooked by municipalities and the general public and encourage good stewardship among streamside landowners and cost-effective restoration projects.

The STEP Biologist attended a number of new public speaking outreach opportunities and festivals. This diverse range of folks included events attended by traditional angler groups, to local landowners and agriculture producers, and a few evening speaker series events open to the general public. Fishing groups and guides again helped Upper Rogue STEP successfully acclimate winter steelhead in two urbanized streams within the city limits of Grants Pass. This project's goal is to maximize harvest of hatchery fish from an existing propagation program by improving a popular bank and boat-based angling reach of the Rogue River.

EDUCATION AND PROGRAM DEVELOPMENT

Fish Eggs-to-Fry Program: Classroom Incubators

In the Upper Rogue District, the Fish Eggs-to-Fry Program focuses on raising spring Chinook Salmon from the eyed-eggs stage to button-up fry. STEP Volunteers from the local angling groups and public deliver the eggs to the classrooms. A total of 56 teachers participated in the

program during the fall of 2017. Fifteen of these were at new schools, nearly doubling the program from recent years. In most cases a curriculum developed by STEP Biologists was used to promote learning about egg development, salmonid life-cycles and fish habitat requirements.

A popular nature center in Ashland participated this year, and served as an additional outreach opportunity to introduce the public to salmon life history. The Grants Pass area Bureau of Land Management Office, a high traffic office also operated a Fish Eggs-to-Fry aquarium with spring Chinook Salmon. Both of these latter two locations purchased all of their equipment so that state purchased equipment could be used for classrooms.

The District STEP Biologist received $3,851.94 from three local angling groups to purchase additional aquariums/chiller units to help double the program. Being one of the flagship educational programs offered through ODFW, an increase in school site participation is a top priority to the Upper Rogue District. It will act as a spring board for so many other programs such as Salmon Watch, Stream Scene, the Small Stream, Urban Stream, and Intermittent Stream Program, and Angler Education in the Rogue Valley.

Small Stream, Urban Stream, Intermittent Stream Projects

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. The small stream, intermittent stream, and intermittent stream awareness theme is present in nearly every outreach event, monitoring activity, and habitat restoration undertaking that the Upper Rogue STEP coordinates and participates in.

Key to the project, volunteers operate upstream migrant “hoop” traps to survey for fish use during winter. A total of 40 streams have been sampled with “hoop” traps since the start of the project in 2005. This year upstream migrant hoop traps were operated on an unnamed tributary to Larson Creek (Medford), Gore Creek (Medford), Lathrop Creek (Grants Pass), and Caris and Miller Creek (Tributaries to Applegate near town of Murphy). The trap data and restoration opportunities are communicated to the public through a variety of techniques including presentations, newspaper articles, and landowner mailings. 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.

One of the highlights this year included an increase in distribution for juvenile steelhead on an unnamed tributary of Larson Creek in downtown Medford. The STEP Biologist hosted the local newspaper columnist and a local TV news station which both covered this exciting finding. The article “Unnamed Sources”, by Mark Freeman of the Mail Tribune received a front page publication, and was picked up by The Oregonian and The Associated Press where it was circulated as far away as Washington newspapers highlighting that young Steelhead Trout were using a tributary that was too small to even have a name in the middle of Southern Oregon’s most populated metropolis. It can be found at the link below:
http://www.mailtribune.com/news/20170809/where-do-eel-like-lamprey-lurk

Inaugural World Fish Migration Day – Gilbert Creek Park, Grants Pass

This year STEP participated in the inaugural World Fish Migration Day event in Grants Pass. The event was hosted by the Rogue River Watershed Council and Grants Pass School District 7, both groups that STEP has worked with on restoring a portion of Gilbert Creek that runs through Grants Pass's Gilbert Creek Park. The large 400 gallon display tank brought adult Chinook Salmon and steelhead to life for students and the public that attended this event. A 5k Run helped to draw additional participants to the event. Stewardship groups attended the event as well as casting and fly tying demonstrations by the Middle Rogue Steelheaders and Southern Oregon Flyfishers.

Bear Creek Salmon Festival at North Mountain Park, Ashland

A booth at the annual Bear Creek Salmon Festival was staffed by the STEP Biologist again this year. On display in a 400-gallon aquarium were adult Chinook Salmon and summer steelhead. Additionally, Angler Education instructors from the Middle Rogue Steelheaders participated in casting, knot-tying, and angler ethics demonstrations.

Bear Creek Fall Festival

Originally Creeks and Kids, this event has changed its name to Bear Creek Fall Festival. The ODFW portion of the event was planned around show casing juvenile salmonids, Sculpin, and Speckled Dace which call Bear Creek and the adjacent numerous small streams home in a small aquarium for display. Additional non-profit groups showcase stewardship opportunities and ethos at the event. This event is a great opportunity to emphasis the importance of Bear Creek to native salmonids, despite being the Rogue River's most urbanized stream.

Salmon Watch

In the Rogue Valley, Salmon Watch is a total volunteer run program and organized locally by non-government organizations. This year, the STEP Biologist assisted in training of volunteers for this program, as well as led three events with local K-12 schools. Each event has four stations consisting of Salmon Biology, Water Quality, Macroinvertebrates, and a Riparian Walk.

August Institute Educators Resource Fair

A workshop for teachers organized by The August Institute, was held at the Oregon State University Extension Service grounds in Central Point. Approximately 50 local educators attended the event. STEP highlighted the educational resources available to teachers and students including the Fish Eggs-to-Fry Program and Stream Scene. Additionally, live juvenile steelhead, Sculpin, and Shiner were on display. This event again resulted in several new teachers signing up for the Fish Eggs-to-Fry Program.

Family Fishing Day at Reinhart Park Pond

Consistent with the 25 year Angling Enhancement Plan, STEP organized one family fishing event during the reporting period. Members of the Crater Bass Angling Group paired with STEP to provide fishing rods and assist in baiting hooks at Reinhardt Volunteer Community Park and Pond in Grants Pass. This coincided with a recent legal and trophy trout stocking. This year's event was very well attended with approximately 75 youth and 30 adults in attendance!

Free Fishing Weekend at Lake Selmac

STEP Volunteers from the Middle Rogue Steelheaders organized the annual free fishing weekend event at Lake Selmac in Selma, Oregon. In addition to rods, bait, and instruction being provided to participants, a barbeque and raffle topped off the event. A good ratio of volunteers to participants, and the STEP Biologist on hand provided for a hands on "guided" experience.

Young Oregon Hunters Day at Denman Wildlife Area

This year the STEP Biologist and a handful of STEP volunteers assisted the Oregon Hunters Association Rogue Valley Chapter with its annual Young Oregon Hunters Day at Denman Wildlife Area. STEP advertised the event via numerous outlets including social media. This event was well attended with over 120 youth participating in shooting sports, outdoor skills, and fishing.

Large Group Presentations

Part of regular duties, the STEP Biologist attended monthly meetings of local angling groups including the Rogue Flyfishers, Southern Oregon Flyfishers, and Middle Rogue Steelheaders. Attendance at these meetings also included run downs of current District and STEP happenings, as well as an opportunity for public comment and questions.

In 2017-2018 the STEP Biologist gave one featured presentation to the Middle Rogue Steelheaders, a local angling and conservation/restoration group. One presentation was a brief overview of Rogue River history and its fisheries, and historical and ongoing STEP highlights in monitoring, outreach, restoration and propagation. The presentation was about an hour when combined with questions and discussion.

Upper Rogue STEP also hosted or attended approximately 20 technical advising sessions or special club committee meetings for ongoing restoration, monitoring, and fisheries enhancement projects, and fish identification workshops. Additionally, STEP also represented the ODFW at the annual OSU Extension Land Stewards Day where Department policies and an emphasis on streamside stewardship related to native salmonids were the key components discussed.

INVENTORY AND MONITORING

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 using hoop traps. 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. To date 40 streams have been sampled. Since its inception, the project has been a useful tool in finding out where fish go during high water flow periods, 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.

For spring of 2018, STEP began a large undertaking by increasing the monitoring effort for out-migrating juvenile salmonid fry (namely Steelhead/Trout fry) in a number of small streams

classically thought of as the summer steelhead breadbasket of the Rogue River. In the 1970's, Fred Everest, an ODFW Biologist, identified major spawning tributaries for summer steelhead in the Rogue Basin, most of these occurring near the Gold Hill and Rogue River areas of the Rogue River. Summer steelhead are a species that have been most impacted by habitat loss and water withdrawals with increasing urbanization of the Rogue Valley. The Upper Rogue District has been interested in increased monitoring of these summer steelhead tributaries of the Rogue and these data generated will likely be utilized in the near future as the Rogue Multi-Species Conservation Plan is developed.

Hoop Traps

This year four streams were trapped using hoop traps. These streams were 1) an unnamed tributary to Larson Creek and 2) Gore Creek, both tributaries to Bear Creek in Medford, 3) Lathrop Creek in Grants Pass, and 4) Caris Creek near the town of Murphy on the Applegate River. Traps were operated from November through March. The small unnamed tributary to Larson Creek garnered some press when a local article was picked up by the Associated Press which highlighted the presence of juvenile steelhead using a "stream so small it didn't even have a name" in downtown Medford. The Trap on Caris Creek helped to confirm that a road box culvert was indeed hindering juvenile salmonid passage. After volunteers constructed a temporary fish ladder consisting of sand bags, the trap began to capture more fish.

Out-Migrant Fry and Irrigation Ditch Bypass Trapping

Jones Creek Downstream Traps: The Jones Creek fry trapping project began as a way to keep steelhead fry from entering an irrigation canal in Grants Pass through an unscreened diversion. STEP volunteers were trained to operate the traps and move fish safely downstream. Following the completion of several fish passage projects and the removal of the unscreened diversion (work completed by the Stream Restoration Alliance), the traps have been used since 2014 for partial evaluation of the projects.

During the spring of 2018, a total of 14 STEP volunteers contributed over 300 hours to trap mostly juvenile summer steelhead fry in both the West and East Fork of Jones Creek. A total of 17 fry were counted in the East Fork in 63 trap nights. On the West Fork, 157 fry were collected in 54 trap nights. The lack of fry this year was certainly a concern with the volunteers but presence of 21 larger (100mm-200mm) Cutthroat Trout and steelhead parr was considered good news and anecdotal evidence that recent passage improvements have been benefitting yearling salmonids. In the past, low flows would surely have blocked yearling steelhead, Coho Salmon, and Cutthroat Trout from reaching the habitat available in the west and east forks of the creek when winter rains re-wet the channels. STEP volunteers continue to play a role in this important project.

Caris and Miller Creek Trap and Haul: Caris and Miller Creeks are both creeks that are bisected by an irrigation canal during peak outmigration timing for summer steelhead. Both creeks have passage issues at their mouths and entrainment potential for fish should they enter irrigation canals. This year marked the second effort to monitor and quantify impacts that these canal crossings pose. Data from the 1970's indicate that both of these streams should be producing hundreds or thousands of fry. This year, as well as last, not even 100 fry were captured. The winter was a very dry year and the passage problems are thought to have hindered any successful spawning. In years past, Pacific Lamprey have even been captured at both of these streams. Additional information on proposed restoration actions on both of these streams are discussed later in this report.

Birdseye Creek and Galls Creek Out-migrant Monitoring: Birdseye Creek is located near Gold Hill. Most years it is a perennial stream, but reports are that it goes interstitial in some reaches, especially during the past drought years of 2013-2015. Galls Creek is likely one of the top six producers of summer steelhead, as identified by Fred Everest in the 1970's. Despite the challenges of passage under the Interstate-5 culvert at its mouth, the constant outmigration of fry kept volunteers busy on this Creek. It does go interstitial typically by mid-summer. These two creeks are very near one another and provide a good paired watershed monitoring opportunity for STEP.

Some positive story lines are developing by STEP volunteers monitoring these two watersheds are in part due for the volunteers monitoring and advocating for both Birdseye and Galls Creeks. First, fish distribution was extended on one of Birdseye Creeks tributaries in 2016, when Cutthroat Trout were found in Russian Gulch. Second, on Birdseye Creek, a local winery has given verbal agreement to not pump from one of its historic irrigation points of diversion, instead, it now receives it's irrigation via a POD on the Rogue River. Third, Galls Creek is the recipient of a large landowner (working with JSWCD) convert to a pressurized irrigation system and removed a historic push-up dam. Fourth, pre-project monitoring on Galls Creek is in place before a scheduled Interstate-5 culvert replacement and passage improvement project is completed in the next decade by the Oregon Department of Transportation.

Ewe Creek out-migrant monitoring: Volunteers operated an out-migrant fry trap on Ewe Creek, a tributary to Jump Off Joe Creek, near the town of Merlin. This was the first year monitoring Ewe Creek. District staff was concerned that the amount of decomposed granite found covering gravel in the creek, along with a number of poorly designed box culvert crossings may be limiting juvenile fish production and usage in this creek. Fortunately, this creek appears to be perennial through the summer, but unfortunately, 1.5 month spent monitoring the trap yielded zero fish. This site and stream will continue to be looked at in the coming year.

HABITAT IMPROVEMENT

Riparian Restoration

Whetstone Creek: Work continued on a multi-year project to restore riparian vegetation along Whetstone Creek where it flows through the Denman Wildlife Area (roughly 4,500 feet of stream). Volunteers from the Middle Rogue Steelheaders, Rogue Flyfishers and Crater High School continued to plant willow cuttings, fence established hardwoods to limit beaver damage, and manage encroachment of Himalayan Blackberry. Volunteers assisted with the watering of plants twice per week from April through October.

Unnamed tributary to Bear Creek in Phoenix: A small unnamed tributary at Blue Heron Park began its third year of restoration and outreach during the 2017-2018 reporting year. This project serves as a very public outreach site along the Bear Creek Greenway, showcasing the importance of small streams within the Rogue Basin. High School classes have made it an annual part of their spring curriculum to assist in riparian habitat restoration and a spring field day of fish sampling and creek ecology lessons. Additional Blue Elderberry, Ponderosa Pines, Cotton Wood, Incense Cedar, and willow cuttings were planted at this site. Follow-up hand removal of Himalayan Blackberry, Poison Hemlock, and Star Thistle were also removed. Volunteers, including Phoenix High School Students participated in restoration at this site throughout the

spring of 2017. The project area is about 200 feet long by 100 feet wide, or about 0.45 acres of the riparian area.

Gilbert Creek: In an effort to expand restoration opportunities to other streams and communities within the Rogue Basin, the STEP Biologist continued the process of advising the local Grants Pass High School and Rogue Watershed Council in a multi-year, multi-partner restoration project on Gilbert Creek. This project is led and implemented by the Rogue River Watershed Council, who received a nearly $10,000 grant over 2 years from the Oregon Watershed Enhancement Board. The STEP Biologist helped with the technical advising of the project as in-kind matching funds, and has coordinated local STEP volunteers from the Middle Rogue Steelheaders, Southern Oregon Flyfishers, and Grants Pass High School to assist in implementing the project. This project pairs a number of partners together, most importantly the local Grants Pass High School, North Middle School, and Highland Elementary School classes and grounds which have Creekside frontage property to Gilbert Creek. The site located in the heart of Grants Pass will serve as a focal point for what a healthy urban stream can look like. Riparian maintenance consisting of continual management of the Himalayan Blackberry encroachment, replanting of dead trees, and watering were the main volunteer tasks for the 2017/2018 reporting year.

Thompson Creek: Thompson Creek is a tributary stream to Deer Creek within the Illinois River Basin, near Selma, Oregon. This year, a local non-profit restoration organization called Oregon Stewardship continued working on a stretch of Thompson Creek owned by Josephine County. Oregon Stewardship works with local high school students throughout Curry, Jackson, and Josephine counties of Southwestern Oregon. This reach of Thompson Creek goes completely interstitial/subsurface beginning in late April to Early May. The Upper Rogue STEP Biologist helped in identifying land ownership and putting Oregon Stewardship in contact with land owners for gaining access to the property. At this point, Oregon Ash, Ponderosa Pine, Red Osier Dogwood were planted on the banks of this creek reach. Willow stakes were propagated by Oregon Stewardship and planted on many of the sluffing banks of Thompson Creek within this reach. The goal is to get a riparian canopy established where there currently is very little to none. STEP's role has been that of technical advising, but this past summer, it organized and led the watering effort. Going forward, STEP will increase the planting effort for 2018-2019 and continue to improve the watering delivery system through an automated gravity fed system.

Lost Creek Reservoir Bank Habitat Enhancement: Members of Crater Bass helped to propagate, plant, and water willow stakes in the drawdown zone of Lost Creek Reservoir. These areas are typically void of vegetation. These improvements are expected to improve lake water quality and provide refuge for game fish including trout and bass. Volunteers also built spider block habitat structures and placed them in shoaling areas for warm water fishery improvements. David Haight, Assistant District Biologist in the Upper Rogue District led these activities and all structures were purchased by Crater Bass.

Stream Nutrient Enrichment

A total of 52 volunteers contributed 235 hours to carcass placement in streams for nutrient enrichment in 2017-2018. Members from the Coastal Conservation Alliance, Southern Oregon Flyfishers, Southern Oregon University Biology Club, and Rogue River Watershed Council, again paired with the STEP program to distribute carcasses generated from returns to Cole Rivers Hatchery of Spring Chinook Salmon, Coho Salmon, summer and winter steelhead in the

upper Rogue Basin. These 52 volunteers, during 7 events, contributed 235 hours of labor for this activities. A total of 19,964 pounds of spring Chinook Salmon were distributed in the main stem Rogue River between Cole Rivers Hatchery and Shady Cove by drift boat. A total of 4,186 pounds of Coho Salmon were distributed in tributaries of Elk Creek, including Alco, W. Fork, and Bitter Lick Creeks. A total of 4,116 pounds of summer and winter steelhead were distributed in Sugarpine Creek, Flat Creek, and North Fork of Butte Creek. All tributary streams are streams designated as high density Coho Salmon and steelhead bearing streams. All carcasses were frozen for a period of 21 days at minus 10 degrees Fahrenheit to kill the pathogen that causes canine salmon poisoning in order to reduce any potential conflict with streamside landowners and their pets.

Temporary Fish Passage Improvement at Sand Creek Irrigation Diversion

A concrete irrigation diversion on Sand Creek in Grants Pass was found to block migration of juvenile steelhead during hoop trapping surveys conducted by STEP volunteers in recent years. In 2015, Volunteers installed metal trusses and dam boards, under guidance of the Southwestern Fish Screening and Passage Office, and the local STEP biologist, to create a jump pool to improve conditions for passage of juvenile and adult steelhead. With the hoop trapping records and New Year's fish count, and even electro-shocking surveys yielding few salmonids, this structure still appears to be inadequate for providing upstream passage to smaller juvenile steelhead, but adult passage was most certainly improved. Downstream passage also most likely benefitted, as any out-migrating fry and smolt now have a pool to land in once passing over the irrigation dam. The structure was still in for the 2017 winter.

Temporary Fish Passage Improvement at Caris Creek – Applegate Tributary

Both Caris Creek and Miller Creek are two small tributaries that have caught the attention of STEP in the Applegate basin near the town of Murphy. These two streams are bisected by an irrigation canal which diverts all streamflow during irrigation season (mid-April through October). Additionally, a road crossing culvert severely limits juvenile fish passage upstream, particularly during low water years like the fall and winter of 2017/2018. Volunteers were not capturing any juvenile fish in a hoop trap operated upstream. They fashioned a fish ladder and baffles within a concrete box culvert using sandbags. Shortly after this short term fix, they started catching juvenile Steelhead in the hoop trap, indicating that the sand bag ladder and baffles likely helped in upstream passage. A fix that would include an improved culvert crossing and a fluming of the irrigation canal is being researched and hopefully a fix will be implemented in the next few years.

Temporary Fish Passage Improvement at Eroded Sewer Line in Downtown Medford – Bear Creek

For the second year in a row, an abandoned sewer line that has been exposed due to erosion in downtown Medford has hindered juvenile and adult salmonid migration. This year, the problem became exacerbated with low September and October river flows, and a cascading drop onto hardpan conglomerate river bottom that left no jump pool for fish to use to navigate this 4-foot partial barrier. A fish ladder comprised of sand bags was fashioned and maintained throughout September and early October as fall Chinook Salmon in Bear Creek were migrating upstream to spawn. A permanent fix to the problem is in the works, with ODFW, City of Medford and Oregon Department of Transportation.

This predicament caught the attention of numerous local news articles and STEP helped play a role in the creation of the fish ladder:
http://mailtribune.com/news/top-stories/fish-passage-headache-awaits-bear-creek-chinook
http://mailtribune.com/news/environment/salmon-face-surprise-barrier
http://mailtribune.com/news/top-stories/fixing-for-a-fish

FISH CULTURE

Acclimation at Greens Creek and Skunk Creek – Grants Pass

The spring of 2018 marked the second year for acclimating winter steelhead two-year old smolts in two Grants Pass tributaries with the objective of maximizing contribution of hatchery fish to this urban fishery on the Rogue River. A total of 10,000 steelhead smolts were acclimated in Greens Creek and Skunk Creek within the city limits of Grants Pass. These sites were chosen as new locations because their access is via public property right-away, existence of anadromous barriers, and proximity to a popular boat fishing reach and bank angler access.

Greens Creek has cold water running throughout the spring and summer, but has 4 barriers on it in a quarter-mile stretch beginning at its confluence with the Rogue. It is a naturally steep drainage and addressing fish passage would not be economically feasible nor realistic in the foreseeable future. The bisection of Greens Creek by two irrigation ditches served as a convenient conveyance flume to make smolt delivery easier. Two pools below these ditch crossings were screened and smolts reared for 14 days until volitional release.

Skunk Creek is a fishless creek in downtown Grants Pass where a 30-foot high natural waterfall prevents anadromous fish passage. It is also used to convey storm and irrigation water, and its basin is one of the most impacted basins in Grants Pass to do urban and industrial development. Smolts reared in Skunk Creek for approximately 8-10 days until a spring thunderstorm brought the creek up and smolts were volitionally released.

This project was a collaboration between Grants Pass Irrigation District, the Middle Rogue Steelheaders, a private landowner, local guides, and STEP.

Holy Water Fin-Marking, Tagging and Stocking

The Holy Water Trout fishery is a 0.75 mile stretch of the Rogue River above the Cole Rivers Fish Hatchery blocker dam and William L. Jess Dam (Lost Creek Lake). This piece of water is stocked with triploid Rainbow Trout and also has small natural production of Rainbow Trout. The stretch of water has received the moniker of the "Holy Water" for the famed larger Rainbow Trout that it has produced. It is Oregon's only catch and release, fly fishing only stretch of water, year-round. Local fly-fishing groups have contributed to monitoring, creel and propagation activities with STEP on this popular fishery.

The Rogue Flyfishers (RFF) continued to operate eight voluntary angler reporting creel stations to evaluate catch per unit effort, angler demographics, and recovery of tagged fish information. Furthermore, volunteers from the RFF and Southern Oregon Flyfishers initiated a twice-monthly creel day. During these days, effort and success was measured, as well as angler-caught fish were tagged with floy tags.

The Rogue Flyfishers also assisted in boat based electro-shocking of the Holy Water in September, where additional adult Rainbow Trout were tagged as part of an ongoing mark-recapture population estimate and growth study.

Holy Water Creel and Life Cycle Monitoring

This year, volunteers helped to monitor a small inlet of the Holy Water to document the presence of naturally produced Rainbow Trout using a hoop trap. Natural production was indeed confirmed, including the monitoring of Rainbow Trout redds, young of year trout fry and fingerling presence, and multi-age class fish present both that have been stocked (indicative of fin-markings), and naturally reproduced. This was an exciting finding for the fishery, club, and STEP biologist.

In late April, volunteers with the Rogue Flyfishers (RFF) adipose fin-clipped and floy tagged approximately 200 12-16 inch Rainbow Trout averaging 3 pounds each for release into the Holy Water in May. This release was just before the annual Salmon Fly hatch and was intended to enhance the popular spring Salmon Fly hatch fishery. The tagged fish helped to identify what percentage of natural production versus stocking production was present in the catch and whether stocking would continue and at what rate. Additionally, RFF volunteers helped with the annual stocking of 2,000 adipose fin-clipped Rainbow Trout fingerlings in September. This stocking is all covered in the Cole Rivers Hatchery Management Plan.

Rogue Spring Chinook Broodstock Collection at Cole Rivers Hatchery

For the second year, STEP volunteers operated a weir trap at an outlet flume of Cole Rivers Hatchery that creates a side-channel that attracts hatchery adult salmonids. Volunteers from the Middle Rogue Steelheaders, Rogue Flyfishers and Southern Oregon University participated in the collection of adult spring Chinook Salmon through July and August. STEP volunteers will be integral in this project that assists in one of the management goals of the Rogue Spring Chinook Salmon Conservation Plan aimed at reducing potential impacts of straying hatchery fish with naturally produced spring Chinook Salmon.

Egg-to-Fry Program

Approximately 9,000 eyed spring Chinook Salmon eggs from Cole Rivers Hatchery were delivered by volunteers to 32 schools from Prospect to Wolf Creek to Ashland and Cave Junction in the Upper Rogue's District during the fall of 2017. Over 2,000 students were directly exposed to the program, aided by the help of 56 teachers participating directly. Students raised these fish in classroom incubators consisting of aquariums and water chiller units from October through December and then released them into the Rogue River. Students learned about salmonid life-cycle, habitat requirements and impacts, and social and environmental contributions of Pacific salmonids to the State of Oregon.

Schools and Groups that work with Upper Rogue STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	**Education**
Allendale Elementary School, Grants Pass	Sams Valley Elementary School, Central Point

Applegate Elementary School, Applegate	South Medford High School, Medford
Brighton Academy, Grants Pass	Southern Oregon University
Butte Falls Charter School, Butte Falls	St. Mary's of Medford, Medford
Crater High School, Central Point	Sunny Wolf Charter School, Wolf Creek
Fruitdale Elementary School, Grants Pass	Talent Middle School, Talent
Grants Pass High School, Grants Pass	The Valley School of Southern Oregon, Medford
Griffin Creek Elementary School, Medford	Western Oregon University
Helman Elementary School, Ashland	**Organizations**
Hidden Valley High School, Grants Pass	Crater Bass
Hoover Elementary School, Medford	Coastal Conservation Association
Howard Elementary School, Medford	Family Solutions of Ashland
Jacksonville Elementary School, Jacksonville	Kids Unlimited, Medford
Jewett Elementary School, Central Point	Middle Rogue Steelheaders
Lake Creek Learning Center, Eagle Point	Rogue Flyfishers
Lincoln Elementary School, Grants Pass	Southern Oregon Flyfishers
Logos Public Charter School, Medford	**Government**
Lorna Byrne Middle School, Cave Junction	Ashland Parks & Recreation Department
Madrona Elementary School, Grants Pass	Bureau of Land Management – Grants Pass
Madrone Trail Charter School, Medford	BLM/Forest Service Medford Interagency Office
Manzanita Elementary School, Grants Pass	City of Ashland
Oak Grove Elementary School, Medford	City of Cave Junction
Orchard Hill Elementary School, Medford	City of Central Point
Oregon State University	
Phoenix Elementary School, Phoenix	
Prospect Charter School, Prospect	
Richardson Elementary School, Central Point	
Rogue Community College	
Rogue River Elementary School, Rogue River	
Ruch Elementary School, Jacksonville	

East Region

Eastern Oregon STEP

Jennifer Luke, STEP Biologist
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, stocking trout and salmon, and restoring fish habitat.

Volunteers assist with a variety of surveys including electro-fishing, trap netting, spawning surveys, snorkel surveys, hook and line surveys and zooplankton sampling. 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 share their knowledge of both fishing and conservation and their involvement fosters the next generation of conscientious anglers and conservationists.

EDUCATION AND PROGRAM DEVELOPMENT

Kokanee Karnival

Kokanee Karnival Youth Education Program continues to be a popular education program for Deschutes and Crook County elementary students. It is an annual program and began in 1998, this year a total of 360-400 students participated in the Kokanee Karnival Comprehensive Education Program. This program includes classroom activities as well as field trips to learn about salmon, trout and their habitat. The students also tour a hatchery and attend a spring fishing clinic.

Approximately 2,000 students participated in the Kokanee Karnival Electives Program in which teachers sign up for classroom activities such as raising trout, basic trout biology class (dissection), 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, U.S. Fish and Wildlife Services 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 2017-2018, 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.

Metolius Pond: Acclimation and Youth Angling Pond

The Metolius Pond, a new STEP Youth Angling Education Site was under development in 2017-2018. The site is currently used by Kokanee Karnival program volunteers. The shallow creek, the springs and the meadow provide an excellent location for students to perform stream studies. It is also an excellent site for a small fishing pond to provide an easy angling opportunity for families and disabled anglers. The small half-acre pond opened to the public in July 2018.

Photo 30: Fishing at the Metolious Youth Pond.

On site, there is an ADA accessible path, volunteer host site, gravel parking area, ADA parking available, picnic tables and restroom. The pond was a great success and it provided fishing opportunity for children and of all ages. Many children caught their first fish at the pond. Disabled adult anglers also took advantage of this fishing opportunity. The goal of this project is to provide access to a safe and easy place for families to fish, and provide safe access to a unique

area where Salmon and Trout Enhancement Program volunteers can continue to conduct field trips and expand fisheries and watershed education programs.

Metolius Pond is also used to acclimate Chinook Salmon smolts as part of the Salmon Reintroduction Program in the Metolius River. As part of a trial, 2,000 Chinook Salmon smolts were acclimated in net pens. The 2018 trial acclimation was successful and many of the acclimated smolts were later detected at the Round Butte Dam.

Outreach Events

The STEP Biologist participated in salmon and trout related outreach activities for students of all ages. The STEP Biologist and District Biologists presented information or provided materials for events sponsored by the following events: Ponderosa Third Grade Shevlin Pond field trips, Prineville's "Fin, Feather and Fire Festival" Chiloquin fifth grade fishing and science field trip. During the summer, the STEP Biologist hosted two "learn to fish" fishing events at Shevlin Pond. The STEP Biologist also attended the Central Oregon Flyfisher and Sunriver Angler group meetings for volunteer recognition and outreach purposes.

INVENTORY AND MONITORING

Crooked River Redband Trout Population Estimate

Biologists and volunteers sampled Redband Trout and Whitefish below Bowman Dam on the Crooked River. This seven-mile stretch of river is a very productive trout fishery, and angling is popular year round. The survey is conducted annually because the population has been cyclical and the exact reason is unclear, although biologists believe it has to do with water flows and gas bubble disease. The sampling effort takes 5 days, and each day at least 6 people, 3 biologists and 3 volunteers are necessary to complete the survey. During sampling, fish are stunned and netted so biologists can mark and record size, condition and abundance. Volunteers assist with all aspects of the survey, but primary duties are to release marked fish above the sampling area. The population assessment estimates the number of Redband Trout and Mountain Whitefish greater than 8-inches long per river mile. The information gathered is provided to the public.

East Lake Trout Sampling – Oregon Youth Conservation Corps

Trout in East Lake are annually sampled to monitor condition and survival. This is part of a larger "Invasive Tui Chub Removal" project. This year, the Harney County Oregon Youth Conservation Corps (OYCC) crew assisted biologists with September trout sampling. Rainbow Trout, Brown Trout and Kokanee Salmon were trapped with nets and species lengths and weights were recorded by OYCC participants. Data collected will be used to evaluate condition of game fish in response to Tui Chub removal in East Lake.

Photo 31: Trout sampling in East Lake

PIT Tagging Chinook Salmon and Steelhead Smolts for Reintroduction Evaluation

Volunteers were instrumental with tagging thousands of Chinook Salmon and steelhead smolts. A total of 25 volunteers spent multiple days at the Wizard Falls Hatchery sorting, tagging and

recording data on smolts. Smolts were tagged with PIT (passive integrated transponder) tags before being released in the Crooked, Metolius and Whychus Rivers. The tagged fish can be detected at the Round Butte Dam and other dams with tag readers installed. Monitoring Chinook Salmon and steelhead smolts with PIT tags is part of the reintroduction of salmon and steelhead above the Round Butte Dam.

Spawning Surveys- Redband and Bull Trout
Volunteers are paired with local biologists and trained to identify and count fish redds. Redband Trout spawning surveys are conducted from December through May in the Metolius River. Upper Deschutes River Redband Trout surveys are conducted in May and Metolius River Bull Trout surveys are in September and October. In the Klamath District, volunteers also conduct spawning surveys on the Wood and Williamson Rivers. Volunteers are essential for completing these spawning surveys and it provides valuable information for monitoring native trout populations.

FISH CULTURE

Fish Stocking Steelhead and Chinook Salmon in Deschutes River Reintroduction Areas
Volunteers backpacked in thousands of steelhead and Chinook Salmon fry in remote canyon areas, or places not accessible by a stocking truck, in order to disperse fry in suitable rearing habitat. Stocking steelhead and Chinook Salmon fry and smolts is part of the Reintroduction and Conservation Plan of Anadromous Salmon and Steelhead in the Upper Deschutes Basin, above Round Butte Dam. Volunteers also assisted in PIT tagging Chinook Salmon and steelhead smolts in order to evaluate survival and/or migration to the dam facility

High Lakes Fish Stocking - Doris, Blow and Lucky Lakes
Twenty volunteers backpacked trout into three high Cascade lakes; Doris Lake, Blow Lake and Lucky Lake are popular fishing lakes off Century Drive in Central Oregon. Altogether, these lakes received 15,000 trout fingerlings. Each volunteer carried 25-40 pounds of water and trout to each lake. This supplemental trout stocking will provide a fishery for anglers willing to hike in to these lake destinations. Fish samples collected from Lucky Lake in 2018 showed good to excellent trout growth, with sampled fish ranging in length from 8 to 14 inches.

Fish Eggs-to-Fry
Twenty-six classrooms (excluding 39 Kokanee Karnival schools) from all over Eastern Oregon, including Klamath Falls, Heppner, Hines, John Day, Umatilla, Baker, and Condon 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 Rainbow Trout were released in local ponds or reservoirs. Steelhead trout were released in the upper Crooked River basin.

Schools and Groups that work with Eastern Oregon STEP

The following is a partial list of schools, school districts, 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 (503) 947-6211 if your program has been left off this list.

Education	Education
Baker Technical Institute, Baker City	Riverside Junior/Senior High School, Boardman
Barnes Butte Elementary, Prineville	Sage Community School, Chiloquin
Bend LaPine Schools Online, Bend	Saint Francis of Assisi School, Bend
Black Butte School, Camp Sherman	Sherman Elementary School, Grass Valley
Central Christian School, Redmond	Sisters Elementary School, Sisters
Chiloquin Junior & Senior High School, Chiloquin	Terrebonne Community School, Terrebonne
Condon Elementary School, Condon	Three Rivers School, Sunriver
Crook County Middle School, Prineville	Triad School, Klamath Falls
Culver High School, Culver	Umatilla High School, Umatilla
Dayville School, Dayville	Vern Patrick Elementary School, Redmond
Eagle Ridge High School, Klamath Falls	**Organizations**
Eastmont Community School, Bend	Central Oregon Flyfishers, Bend
Henley Elementary School, Klamath Falls	Klamath County Fly Casters, Klamath Falls
Heppner Junior/Senior High School, Heppner	Sunriver Anglers, Sunriver
High Lakes Elementary School, Bend	Sunriver Resort, Sunriver
Humbolt Elementary School, Canyon City	YMCA of Klamath Falls
Jewell Elementary School, Bend	**Government**
John Tuck Elementary School, Redmond	Burns Paiute Tribe
La Pine Elementary School, La Pine	Harney County Library
Lava Ridge Elementary School, Bend	U.S. Forest Services
Pelican Elementary School, Klamath Falls	U.S. Fish and Wildlife Services
Peterson Elementary School, Klamath Falls	
Pine Ridge Elementary School, Bend	
Ponderosa Elementary School, Bend	
Ponderosa Middle School, Klamath Falls	
Powell Butte Community Charter School, Powell Butte	

STEP Administration

Kevin Herkamp, STEP/RE Program Coordinator
Debbi Farrell & Jeff Davis, STEP/RE Program Assistant
Mike Gauvin, Recreational Fisheries Program Manager

This reporting period saw a slight change in program administration. The Program Assistant position was back filled for the first 10 months while Debbi was on job rotation and extended leave, she returned to the position in August.

EDUCATION AND PROGRAM DEVELOPMENT

Salmon Trout Advisory Committee

STAC held three meetings across the state:

- December 2017, Salem
- April 2018, Newport
- September 2018, Reedsport

During this time period, we had three new appointments; Brent Collier (North Coast), Carl Cole (Upper Rogue) and Dave Grosjacques (Umpqua). The North Willamette position remained vacant much of the time. STAC boundaries were also adjusted to better align with geopolitical boundaries. The thirteen STAC members are appointed by the Governor to represent the volunteer community in specific geographic areas of Oregon.

Education Program Updates

In partnership with Western Oregon University, staff continue to update 3rd grade STEP related education materials to meet new education standards and connect Oregonians to salmon, trout and their habitats. In June 2018 a training was held at WOU and beta versions of materials were handed out.

A volunteer decided to assist the program through her Girl Scout Gold Award project by redesigning a cloth dissection fish and coordinating the assembly and sewing of 25 of these fish. The fish will be distribute to STEP biologists by early 2019.

More information about STEP and the STAC board and meetings can be found on the STEP webpage located at http://www.dfw.state.or.us/fish/step/

APPENDICES

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

Member	Region	Term	Term Expires
Brent Collier	North Coast	First Term	June 3, 2022
Brian Hudson	Mid-Coast (North)	Second Term	January 9, 2020
Deborah Yates	Mid-Coast (South) and Lower Umpqua	First Term	December 31, 2017
Dave Grosjacques	Umpqua	First Term	June 3, 2022
Curtis Bennett	Tenmile, Coos, Coquille	First Term	January 9, 2020
Ken Range	Lower Rogue	Second Term	March 31, 2021
Carl Cole	Upper Rogue	First Term	June 3, 2022
Vacant	Lower Willamette		
Tom VanderPlaat	Lower Willamette	Second Term	Jan 9, 2020
Don Wenzel	Mid-Willamette	First Term	January 14, 2021
Jeff DeVore	Upper Willamette	Second Term	December 31, 2021
James Phelps	Northeastern Oregon	Second Term	March 31, 2020
Steve Janego	Eastern Oregon	First Term	March 31, 2020

*List current as of December 11, 2018

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

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

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Appendix 2 (continued)

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*List current as of December 12, 2018