SALMON & TROUT ENHANCEMENT PROGRAM (STEP)

2021-2022 Annual Progress Report

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BACKGROUND AND SUMMARY

This report summarizes the activities and accomplishments of the Salmon and Trout Enhancement Program (STEP) from October 1, 2021, to September 30, 2022. 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.
- **Fishing Access and Opportunity** - 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, and 11 STEP biologists. Staff divides their time between the STEP program and the Restoration and Enhancement Program. STEP is implemented in the field by eleven staff located throughout the state who spend either all or part of their time serving as a STEP Biologist (SFR funds the equivalent of 10.17 full-time employees, eight staff are fully funded by SFR and five are partially funded).

In addition, program oversight is provided by the nine-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 meetings. From October 2021 to September 2022, two meetings were held virtually due to COVID-19 restrictions.

Within each watershed management district, the STEP biologist fills 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 some key accomplishments of the program during 2021-2022:

- Approximately 20,674 people participated in STEP training, classes, tours, presentations, or workshops, or visited STEP activities or displays at public events (Table 1). These activities involved nearly 625 youth and adult volunteers. This includes 656 individual Fish Eggs-to-Fry classroom projects that reached approximately 12,000 students. (~18 students per classroom)
- Over 381 volunteers contributed nearly 6,146 hours on 183 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).
- Nearly 351.61 miles of waterways were improved for fish use by 195 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 nearly 3.91 million Chinook salmon, coho salmon, steelhead and trout for enhancement or augmentation purposes;

1.77 million of these fish were reared (fed and cared for) before release and over 6,855 broodstock fish were collected (Table 5).

- 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 fishing events and trainings.

This reporting period still reflects continued reductions in activities due to COVID-19 related health and safety restrictions. Restrictions resulted in the cancellation of some events and non-essential projects. For essential projects, staff took a more involved role as the size of volunteer work parties were limited. This resulted in a significant decline in both volunteer involvement in projects and public participation in educational activities. Even with these reductions, volunteers continued to make substantial contributions to continue the core missions and projects of STEP and ODFW.

Highlights of the 2021-2022 statewide volunteer efforts include:

- 466 youth and 1580 adult volunteers participated in STEP activities
- Volunteers participated in 2464 projects across the state and their efforts totaled 40,176 hours of volunteer time. This is equivalent to approximately 19 full time employees.
- Using the estimated amount of $33.00 per hour for volunteer time, the value of STEP volunteer hours was over $1,325,808.00

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, 2021-2022. 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	4 (13)	648	0	0	16	14
Eastern Oregon	25 (51)	2,093	0	0	70	648
Lower Rogue	41 (6)	5,637	10	78	181	1,626
Mid-Coast	27 (25)	1,258	20	40	154	1,930
Mid-Willamette	28 (125)	526	0	0	36	180
North Coast	9 (7)	456	0	0	0	0
North Willamette	40 (196)	1,434	0	0	71	579
Umpqua	15 (31)	3,157	0	0	22	348
Upper Rogue	19 (92)	2,147	0	0	5	54
Upper Willamette	24(110)	3,310	1	10	31	180.5
STAC	2 (0)	8	0	0	8	256
Total	234 (656)	20,674	31	128	594	5815.5

Table 2. STEP inventory and monitoring activities, miles affected and surveyed and volunteer effort, 2021-2022.

INVENTORY AND MONITORING

				Volunteers			
STEP District	Activities	Miles Affected	Miles Surveyed	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	8	0	12	0	0	16	68
Eastern Oregon	13	0	2	0	0	38	563
Lower Rogue	14	0	102	0	0	81	1,623
Mid-Coast	22	0	6	0	0	73	1,563
Mid-Willamette	7	0	0.24	65	130	5	30
North Coast	6	0	14	0	0	25	220
North Willamette	4	0	2	0	0	17	220
Umpqua	75	0	10	0	0	15	198
Upper Rogue	29	0	109	0	0	40	1,453
Upper Willamette	5	0	0	0	0	6	78
Total	183	0	257.24	65	130	316	6016

Table 3. Habitat restoration activities, miles affected and restored and volunteer effort by STEP district, 2021-2022.

HABITAT

				Volunteers			
STEP District	Activities	Miles Affected	Miles Restored	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	15	29	0	4	8	8	14
Eastern Oregon	0	0	0	0	0	0	0
Lower Rogue	11	18.5	0	0	0	8	62
Mid-Coast	1	138	0	0	0	4	16
Mid-Willamette	1	0.1	0	0	0	1	10
North Coast	7	80.24	0	9	18	16	66
North Willamette	3	1	0	30	60	25	89
Umpqua	12	35	0	0	0	17	112
Upper Rogue	75	19.52	0	0	0	60	351
Upper Willamette	10	30.25	0	0	0	13	64.5
Total	135	351.61	0	43	86	152	784.5

Table 4. Fishing access and improvement effort by STEP district, 2021-2022.

FISHING IMPROVEMENTS

		Volunteers			
STEP District	Activities	Youth	Youth Hours	Adults	Adult Hours
Coos-Coquille	0	0	0	0	0
Eastern Oregon	1	0	0	1	400
Lower Rogue	4	0	0	9	76
Mid-Coast	37	0	0	1	8
Mid-Willamette	13	0	0	6	280
North Coast	19	0	0	0	0
North Willamette	15	0	0	4	98
Umpqua	0	0	0	0	0
Upper Rogue	80	0	0	3	300
Upper Willamette	18	0	0	21	132
Total	187	0	0	45	1294

Table 5. Fish culture activities and volunteer effort by STEP district, 2021-2022. 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	Reared	Released
Coos-Coquille	390 (13)	2,726	471,810	947,398
Eastern Oregon	5 (51)	0	0	8,000
Lower Rogue	5 (6)	298	112,061	97,341
Mid-Coast	10 (25)	534	431,919	110,336
Mid-Willamette	0 (125)	0	0	0
North Coast	2 (7)	579	252,513	234,513
North Willamette	182 (196)	2,180	475,000	475,000
Umpqua	27 (31)	213	5,500	113,409
Upper Rogue	64 (92)	325	30,555	51,340
Upper Willamette	17 (110)	0	0	94,972
Total	702 (656)	6,855	1,779,358	2,132,309

	Volunteers				
STEP District	Youth	Youth Hours	Adults	Adult Hours	Total Hours
Coos Coquille	57	142	121	3,893	4035
Eastern Oregon	96	472	83	1279	1751
Lower Rogue	5	34	298	7858	7892
Mid-Coast	11	44	335	8105	8149
Mid-Willamette	65	130	61	572	702
North Coast	53	2658	93	4841	7499
North Willamette	30	60	118	1481	1541
Umpqua	63	1,173	96	3271	4444
Upper Rogue	53	264	156	2476	2740
Upper Willamette	33	165	219	1259	1424
Total	466	5,142	1,580	35,034	40,176

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
- Providing digital content including livestreams and videos.

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 Keep Oregon's Rivers Clean (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 to ensure that projects are in compliance with other applicable goals, policies, rules, and plans, and 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

John Cox, STEP Biologist
Ben Walczak, District Fish Biologist
Mac Barr, 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, forestlands, mountains and wetlands. Fish species include salmon, steelhead, trout and sturgeon, among others. 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 for 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

This year Lower Willamette STEP returned to hosting Family Fishing Events, which had been canceled the last few years due to COVID-19. Only two events were held this year, at Sheridan Pond, in Sheridan, and at St. Louis Ponds in Gervais. Both events saw good attendance from youth and families, as well as high catch rates, and it was great to once again host events that were open to the public. These events continued previous efforts of getting local youth and adults actively involved and interested in fishing. With most of the people in the District residing in urban areas, holding these events primarily in close-in locations provides opportunities for participants of all ages to experience the outdoors while discovering that they can remain close to home.

For 2021-2022, additional fishing events were held at Camp Angelos in Corbett, Riverside Park on the Clackamas River, Blue Lake Park in Fairview, Horning's Hideout in North Plains, Highland Ponds in Beavercreek, and an additional school fishing event at Sheridan Pond. Many of these events were held in partnership with fishing other organizations, including The Get Hooked Foundation, I'm Hooked Inc., Fishers of Men, and the Association of Northwest Steelheaders. These fishing events attracted attendance of several hundred youth, as well as many adult participants, many of them first-time anglers.

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 aided in teaching youth 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.

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 2021-2022. There was a significant increase in participation this year, after declines in participation due to COVID-19. Participation was comparable to pre-pandemic levels, with almost 140 classrooms raising spring Chinook salmon in the fall, and 65 classrooms raising rainbow trout in the winter. These incubation projects hatched eggs and released thousands of unfed salmon and trout fry into a dozen different STEP-approved lakes, ponds, and streams within the district. Several local chapters of the Association of Northwest Steelheaders, the local OSU Extension Service (4-H), CREST, the National Wildlife Federation, Oregon Zoo and Reed College sponsored classroom incubation projects in schools around the greater Portland Metro Area. With the tremendous popularity of the program, its success

Fish Eggs to Fry Teacher Workshop

would not be possible without the dedication of the many volunteers donating many hours of time.

Other Outreach

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, and to address and record concerns from the angling community.

STEP staff participated in outreach activities including virtual and in-person presentations to schools, trainings with watershed councils, area community colleges and other groups, assisting at local non-ODFW produced fishing events.

Classroom Fish Dissection

INVENTORY AND MONITORING

Sandy River Broodstock Collection

STEP, along with Mt. Hood Community College students and other volunteers, continued to provide valuable assistance to District staff performing weir trap monitoring on the Sandy River. STEP volunteers assisted in broodstock collection at the traps, along with sorting and passing of wild spring chinook salmon, steelhead, and coho salmon.

Stream Surveys

Volunteers assisted with stream surveys in the District, collecting valuable data on winter steelhead and smallmouth bass in the Molalla River Basin, as a significant winter steelhead and Pacific Lamprey survey effort in the Yamhill and Tualatin Basins. Volunteers also assisted with PIT-tagging and out-planting of juvenile spring Chinook Salmon in the Molalla, part of a project to better understand the limiting factors to spring Chinook Salmon in the basin.

HABITAT IMPROVEMENT

Christmas Tree Placements

The district continued in collaboration with Trout Unlimited, the Clackamas River Basin Council, and other partners to place Christmas trees in the Clackamas River basin to provide habitat for juvenile salmon, trout and steelhead. Trout Unlimited resumed their donation and collection program to gather trees. these trees were dropped off in January near placement areas, and then placed into side channels of the Clackamas River with volunteers and partners in late spring and early summer, after high river flows in the spring subsided. Clackamas County Parks, Metro, and Oregon State Parks continue to great partners in helping facilitate access to areas for these tree placements.

KORC Line Collection Station

Line and Tackle Collection

North Willamette STEP continues to expand the numbers of Keep Oregon Rivers Clean (KORC) stations along rivers, lakes, and ponds in the district. These line and tackle collection stations can be found on the Sandy River, Clackamas River, Blue Lake Park, The Columbia Slough, Herman Creek, St Louis Ponds, Canby Pond, Salish Ponds, Benson Lake, Promontory Park at North Fork Reservoir, the Columbia River at Rooster Rock State Park and Dalton Point Park, and Henry Hagg Lake. Most are maintained through volunteer efforts and by staff at parks where they are located. This year, new collection stations were added, with three stations on the Columbia Slough, one station at Commonwealth Pond, and another station at Bethany Lake. 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 350 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 2022, 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.

The Foster Creek Acclimation Facility continued to be a productive site for STEP. We released

nearly 25,000 summer steelhead smolts and 50,000 winter steelhead smolts from the Foster acclimation pond during the spring of 2022. With daily guidance of STEP, volunteers assisted with maintenance and feeding at this facility. 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, and the McLoughlin Chapter of the Association of Northwest Steelheaders have provided essential support, performing daily feeding and maintenance duties. Unfortunately, due to low adult spring Chinook Salmon hatchery returns, no smolts were acclimated at this facility in 2022. We plan to continue acclimating spring Chinook Salmon smolts at this location in the future as the stock rebounds. These smolts 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 Program 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 2022 acclimation season, the facility was put back into service after being dormant a number of years, and 100,000 winter steelhead from Clackamas Hatchery were held here for 4 weeks prior to release. These releases will give a major boost to the future winter steelhead fishery in Eagle Creek, as ODFW winter steelhead are no longer being reared and released at Eagle Creek National Fish Hatchery (USFWS) further upstream on Eagle Creek.

The Bull Run River Acclimation Facility saw its eleventh year of production in 2022 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 in the 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 200,000 spring Chinook Salmon smolts released in the spring of 2022, with the help of volunteers from the Sandy Chapter of the Association of Northwest Steelheaders.

Winter Steelhead Broodstock Collection

The collection of wild winter steelhead broodstock on the Clackamas and Sandy rivers was completed with assistance from the Northwest Steelheaders, individual volunteers, and local fishing guides, as well as landowners who allowed access to the river through their property. This project is instrumental in District fish management goals to integrate wild steelhead into hatchery programs and would not happen without the help of these volunteers contributing over 300 hours of their time, in addition to significant financial contribution from operation of powerboats to access the fishery.

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, Milwaukie	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
Reed Fischer, 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.

Despite 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 the 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 demonstrates that communities are capable of assisting with the more technical needs of fish recovery and provides the "hands on" experience that fosters stewardship by providing increased awareness of these species. 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

In 2021 - 2022, 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, technical expertise to habitat, inventory and fish passage 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.

While most site visits were virtual in 2021 - 2022, the STEP Biologist attended in-person site visits, to assist Lane County Roads Department, the Mary's River Watershed Council, and the Natural Resources Conservation District with fish passage projects. The STEP Biologist also attended virtual site visits to review projects proposed for the Willamette Wildlife Mitigation Fund as well as for projects seeking OWEB funding, and the virtual Region 3 Review Team meeting.

Youth Education

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. While many restrictions were still place, the STEP Biologist and volunteers were able to host 5 fish dissections at Mid-Willamette District schools and two dissections at outdoor school.

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 2021 - 2022, due to COVID 19 restrictions, September Salmon Watch trips were canceled. However, staff from the Benton

County Soil & Water Conservation District did organize Salmon Watch Trips for Benton County schools. The STEP Biologist hosted the fish biology station at one regular Salmon Watch trips, as well as a Saturday Family Salmon Watch trip.

The STEP Biologist hosted or assisted with six youth fishing events including a Trout 101 Workshop, Fishing Assistance Booths, and a family fishing event for 4th grade students from Philomath Elementary School.

INVENTORY AND MONITORING

Fish Populations and Their Habitat in Streams

STEP again led the district's small stream sampling effort with fish population surveys in the Mid-Willamette District. These efforts involve STEP Volunteers, students from local schools, and District area landowners using stationary traps, seine nets, electrofishing, hook & line sampling methods as well as snorkel and spawning surveys to capture or observe fish. The primary intent of these projects is to document the presence of native fish in waters where little or no fish information exists and to get a sense of relative abundance and fish health. However, additional benefits 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 sampling and surveys will be used in the future to plan habitat restoration projects.

In 2021 - 2022, STEP coordinated volunteers to assist with fish sampling efforts in Mid-Willamette District locations. STEP volunteers assisted with surveys for larval lamprey in Salem and Corvallis area creeks. Students from McKay and College Hill High Schools assisted with these surveys.

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.

Throughout 2021 - 2022, the STEP Biologist attended site visits and meetings to offer technical and grant seeking advice to landowners throughout the district on fish habitat restoration and projects to improve fish passage. The STEP Biologist provided technical advice to the 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, and Mary's River Watershed Councils on fish passage and habitat restoration projects. The STEP Biologist attended five site visits to review and give technical advice on habitat restoration projects.

The STEP Biologist administers the Riparian Lands Tax Incentive Program (RLTIP) for the Mid-Willamette District.

Carcass Placement

Stream Enrichment

The placement of salmon and steelhead carcasses into area streams for nutrient enrichment is accomplished only through the efforts of volunteers and has surprisingly become one of the more popular STEP activities. To replicate historic abundance and distribution, carcasses are placed in rivers and streams in the district. In 2021-2022, salmon carcasses used as brood for programs at the Foster Fish Collection Facility were placed in the South Santiam Basins. Salmon Carcasses from the Minto Fish Collection Facility were distributed to the North Santiam River. The STEP Biologist and volunteers were unable to distribute salmon carcasses to the Breitenbush River due to poor air quality related to a wildland fire. Salmon carcasses from the Foster Fish Collection Facility were out planted to the South Santiam River as well as Soda Fork, Moose, and Canyon Creeks. Between the Minto and Foster Fish Collection Facility efforts, 10 STEP volunteers assisted with the carcass enrichment efforts. These volunteers included staff from the USFS Sweet Home Ranger District, and Detroit Ranger District who assisted with the salmon carcass distribution on 4 days. In all, approximately 2,900 spring Chinook Salmon (34,800 lbs.) carcasses were distributed to the 20 miles of the South Santiam River and its tributaries. Likewise, 1000 Chinook salmon carcasses (12,000) were distributed to 15 miles of the North Santiam River including the Little North Santiam.

Keep Oregon's Rivers Clean (KROC) 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 Walling and EE Wilson Ponds, as well as Crystal Lake Boat Ramp and Michaels Landing both in Corvallis.

During 2021 – 2022, the STEP Biologist continued to work with KORC volunteers to monitor and maintain the line tube collection stations. As a result, 3 boxed of fishing line were sent to Berkely to be recycled into fish habitat structures.

FISH CULTURE

Sac Fry

ODFW fish propagation programs in the Mid-Willamette basin have evolved greatly over the last two 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

Southshore Salmon Release

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.

After public schools throughout the Mid Valley STEP District were closed for the 2020 Chinook salmon Egg to Fry, the program returned to almost its pre-pandemic level of teacher participation. Between salmon and trout, 83 teachers at 64 schools participated in the Egg to Fry Program. For the first time, a memory care center sponsored hosted Egg to Fry Program trout eggs. Not only did the residents get to watch the trout hatch and develop, it also gave them the opportunity to share the fish with their families. The STEP Biologist then join the residents for a fish release at a nearby creek.

For the 2021 Chinook salmon and rainbow trout Egg to Fry, volunteers were once again able to assist the STEP Biologist with transporting salmon and trout eggs to District schools. 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" several 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 several 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**
Albiqua Academy, Salem	Oregon School for the Deaf, Salem
Ash Creek, Corvallis	Philomath High School, Philomath
Battle Creek Memory Care Center	Pratum Elementary School, Salem
Calapooia Middle School, Albany	Pringle Elementary School, Salem
Cascade Senior High School, Turner	Queen of Peace School, Salem
Cascade Junior High School, Turner	Stayton Middle School, Stayton
Centennial High School, Halsey	Santiam Christian School, Adair Village
Clear Lake Elementary, Keizer	Scio Elementary School, Scio
Cloverdale Elementary School, Turner	Seven Oak Middle School, Lebanon
Community Roots School, Silverton	Silver Crest Elementary School, Silverton
Crescent Valley High School, Corvallis	Stayton Middle School, Stayton
Crosshill Christian	Salem Heights Elementary School, Salem
College Hill High School, Corvallis	South Salem High School, Salem
Corvallis High School, Corvallis	South Shore Elementary School, Albany
CTEC High School, Corvallis	South Albany High School, Albany
Englewood Elementary, Salem	Sprague High School, Salem
Franklin School, Corvallis	St Josephs School, Salem
Garfield Elementary, Corvallis	Sunrise Elementary, Albany
Hallman Elementary, Salem	Talmage Middle School, Independence
Hoover Elementary School, Corvallis	Turner Elementary School, Turner
Jefferson Elementary School, Jefferson	Western Christian, Salem
Jefferson Elementary School, Corvallis	Whitworth Elementary School, Dallas
Kalapuya Elementary School, Salem	Wildcat Elementary School, Corvallis
Lamb Elementary, Salem	Willamina Elementary
Linn Benton Juvenile Detention Center, Albany	**Organizations**
Liberty Elementary School	Calapooia Watershed Council
Luckiamute Charter School, Dalles	Luckiamute Watershed Council
Mark Twain Elementary School	Mid Valley Chapter ANWS
McKay High School, Salem	Salem Chapter ANWS
Monmouth Elementary, Monmouth	Salmon Watch
Monroe Elementary School, Monroe	**Government**

Monroe High School, Monroe	Benton County Soil & Water Conservation District
Muddy Creek Charter School, Corvallis	
North Albany Elementary, Albany	
North Albany Middle School, Albany	
North Salem High School, Salem	
Oak Grove Elementary, Albany	
Oak Heights Elementary, Sweet Home	

Upper Willamette STEP

Martyne Reesman, STEP Biologist
Jeremy Romer, 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, Cutthroat, 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, Cutthroat, and Brook trout are released into several high lakes in the Cascade Mountain Range which provide unique, and 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 other native fish species. Native sculpins, dace, shiners, suckers, stickleback, and other non-game fish species have been incorporated into sampling projects and educational outreach. Projects that are designed to benefit salmon and trout also benefit, resident brook and anadromous Pacific Lamprey, which are a culturally and economically import species to indigenous peoples.

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. 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 Salmon Watch Steering Committee in-partnership with the Middle Fork Willamette 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, U.S. Forest Service, Eugene Water and Electric Board, local school districts, and other area organizations. In 2020 Salmon Watch field trips were paused due to Covid-19. Partners along with World Salmon Council produced a video for students to virtually attend Salmon Watch. In September of 2022, we were able to host field trips again.

STEP staff provided technical assistance to the Middle Fork Willamette Watershed Council by serving on their Youth 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.

STEP staff provided technical assistance to McKenzie River Discovery Center in their efforts to restore and repair the old McKenzie Hatchery rearing pond. STEP staff has been involved during the planning process, sediment removal, design, culvert replacement, placement of fishing platforms and gravity fed pipes. Once the pond is completed it will be used for community fishing events and it will be ADA accessible

STEP staff served on the Eugene Water and Electric Board (EWEB) Carmen-Smith Fish Working Group, along with other partners from USFWS and NOAA. The purpose of this group is to find temporary solutions to address the lack passage at Trail Bridge Dam for Bull Trout and Spring Chinook Salmon. In addition to providing technical assistance, staff provided radio telemetry equipment and personnel to assist EWEB with capture, radio tagging and transporting adult Spring Chinook salmon above Trail Bridge Dam. Staff and volunteers angled for Bull Trout below Trail Bridge Dam, caught Bull Trout were scanned for a PIT tag, if there was no tag present one was inserted into the dorsal sinus of the fish and biological data was collected. Bull Trout were then transported above Trail Bridge Dam and released into the reservoir.

Youth Fishing events

STEP staff and volunteers hosted 4 fishing events from the spring through summer. Events included: Family fishing events open to the public one in Cottage Grove and two at Alton Baker Park in Eugene. We also hosted the ARC of Lane County for a separate event at Leaburg Lake.

Salmon Watch

In September of 2022, we were able once again to participate in Salmon Watch field trips. STEP staff joined the Middle Fork Willamette Watershed Council and Eugene area schools for two weeks at the Carmen Smith Spawning Channel. STEP staff is looking forward to November 2022 when we will be returning to Whittaker Creek for a month of Salmon Watch field trips.

Mohawk High School Electroshocking

Outdoor School

STEP staff attended Grove Outdoor Summer Camp for Thurston Middle School. Students were taught, through experimentation with a stream table, how hydrology can affect different habitats, wildlife and fishes. The students then learned how to make improvements to protect and enhance the habitat and the benefits that it creates for fish and wildlife.

Program Outreach

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

- Middlefield Oaks Assisted Living and Memory Care
  - Eggs to Fry presentation
- The Damselflies
  - Volunteer opportunities and District updates presentation
- Backcountry Horsemen of Oregon
  - High lakes stocking and high lakes sampling volunteer opportunities
- McKenzie Fly Fishers
  - Update on the adult fish sorter and volunteer opportunities

Funds Awarded for Access and Education Improvements in the South Willamette Watershed District

- $1,890.00.00 STAC mini-grant to Middle Fork Willamette Watershed Council to purchase chest waders and boots for students within the Upper Willamette Watershed. By providing students with appropriately sized field gear, they can conduct habitat, macroinvertebrate, water quality and fish surveys and thus they can learn more by doing.

INVENTORY AND MONITORING

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

Leaburg Fish Sorter

Leaburg fish sorter

District staff designed and installed a fish sorter on the left-bank fish ladder above Leaburg Dam using an Alaskan steep-pass fish ladder and a watered "tilt table". The sorter was designed to provide the opportunity to capture and remove hatchery fish from the river and allow wild Chinook salmon to pass upstream with minimal exposure to handling stress. This project was funded under contract from U.S. Army Corps of Engineers; Additionally, we were able to hire four seasonal staff to operate the sorter seven days a week, with the assistance of many volunteers who were happy to see (but not touch) adult Chinook salmon.

Cutthroat Genetics

STEP staff collaborated with an OSU graduate student and other ODFW staff on collection of genetic samples from native Cutthroat Trout in the Winchuck and Clackamas rivers as part of a larger effort to characterize genetic variability of Cutthroat Trout in this region.

High Lakes Sampling

Back Country Horsemen Volunteers

District staff with the assistance of Backcountry Horsemen of Oregon (BCHO) and one other volunteer planned to sample two of Oregon's remote high lakes (Nash and Burnt Top) in search of native cutthroat trout and to investigate the survivability of helicopter stocked Brook Trout. We met up with BCHO at the trailhead, assisted them in loading panniers with our sampling gear and loading those onto horses. We utilized eight horses and four riders to carry in all our sampling gear. Our goal was to capture and collect genetic samples from the native population of cutthroat trout in Nash Lake. We employed several different methods of non-lethal capture including minnow traps, box traps, angling and experimental minnow traps. We had one volunteer with us for the weeklong, they assisted with data collection, collecting genetic samples, trap setting/checking and general morale boosting. If it wasn't for the partnership and generosity of our volunteers these trips would not be possible.

High Lakes Stocking Crew & Volunteers

Twin Rivers Charter School

STEP staff worked with Middle Fork Willamette Watershed Council and Twin Rivers Charter School to conduct fish surveys in an off-channel area of the Middle Fork Willamette River near Jasper, Oregon. Twin Rivers Charter is an alternative public school where the students participate in hands-on learning that is structured around the completion of conservation projects, field studies activities and outdoor recreation. The school has worked with Oregon State Parks to adopt a small unnamed park, the students have cataloged all species present in the park and additionally, they have mapped the entire park. STEP staff assists the students in fish community surveys by using minnow traps and other non-lethal sampling techniques. Students are taught fish identification, life history and habitat requirements of these fishes and other fishes that use the river.

HABITAT IMPROVEMENT

Partnerships and Technical Assistance

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 provided technical assistance to the Coast Fork Willamette (Perkins Creek Culver grant), Middle Fork Willamette and State Parks (Elijah Bristow), McKenzie River Trust (McKenzie Discovery Center) and McKenzie (Finn Rock, Gate Creek, South Fork McKenzie Phase II) Watershed Council's Technical Committees tasked with providing biological feedback on restoration and monitoring (post restoration) projects sponsored by the Councils.

Fish Salvage

District staff and student volunteers from University of Oregon assisted with electrofishing the Eugene Mill Race Outfall.

Fish Carcass Placement

Nine volunteers assisted staff with nutrient enrichment, the salmon were from Willamette and McKenzie hatcheries. Adult carcasses were placed in spawning tributaries of the McKenzie and

Middle Fork Willamette rivers including Finn Rock reach of the McKenzie River, Little Fall, Mosby, and Gate creeks. Additionally, ODFW placed carcasses in the South Fork McKenzie River below Cougar Dam.

Keep Oregon Rivers Clean (KORC) Fishing Line Collection Stations

Beginning in 2020, volunteers have installed and maintained 18 fishing line collection stations. We have stations on the McKenzie (Hendricks Wayside, Leaburg), Willamette (Armitage Park x2, Alton Baker Park x3, and Beltline Boat Landing), Middle Fork Willamette rivers (Clearwater Park, Greenwaters Park, Hemlock, Dexter Dam x3, Lowell Covered Bridge and Pengra Landing).

FISH CULTURE

Fish Eggs-to-Fry Program

Approximately 3,400 spring Chinook Salmon eggs were incubated in aquariums in 30 different classrooms as part of the Eggs-to-Fry Program. The Eugene 4J Climate, Energy and Conservation Teacher on Special Assignment hosted an aquarium to provide a live online experience for over 100 classrooms. The unfed fry were released in December, primarily in the Alton Baker Canoe Canal in Eugene.

Egg to fry release

McKenzie River Raft Stocking

For the past 71 years, the Oregon Department of Fish and Wildlife has used volunteers to distribute hatchery trout evenly along the stocked segments of the McKenzie River. STEP staff coordinate this program with the McKenzie River Guides Association (MRGA) who release trout from our customized fish stocking raft. As far as we know, this is the only stocking program of its kind in Oregon. This year we released 71,772 legal sized Rainbow Trout into the McKenzie River which is the same as 2021 stocking efforts. Stocking occurs for 16 weeks during April – mid-September, and the MRGA donate about 208 hours each year.

Trout stocking raft

High Cascade Lakes Backpack Stocking

This popular program provides an opportunity for volunteers to transport and release fingerling trout into lakes of the Cascade Mountains using buckets and backpacks. This program heavily supports ODFW's mission statement and strongly supports the agency's R3 Mission for recruiting, retaining, and reactivating volunteers.

High Lakes backpack stocking

In 2021, we coordinated with Wizard Falls and Fall River hatcheries to obtain triploid Rainbow and Brook trouts. With the help of 131 volunteers, we stocked 50 lakes with about 26,000 Rainbow Trout (RBT) and 5,200 Brook Trout (BKT). Of that, over 18,000 RBT and 3,000 BKT were carried in by backpackers aged four to over 70 of whom donated about 600 hours! Additionally, we had ten four-legged (horses) "volunteers" and eight riders from Back County Horsemen of Oregon that carried in over 7,600 RBT and 2,100 BKT, donating over 50 hours of their time.

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	University of Oregon
Agnes Stewart Middle School, Springfield	Willagillespie, Eugene
Arts & Technology Academy at Jefferson, Eugene	Willamette High School, Eugene
Awbrey Park Elementary School, Eugene	Yujin Gakuen Elementary School, Eugene
Bailey Hill Instructional Center, Eugene	**Organizations**
Buena Vista Elementary School, Eugene	American Fisheries Society
Bridgeway House- Camp Creek	Arc of Lane County
Bridgeway House- Eugene	Cascade Family Flyfishers
Camas Ridge Elementary School, Eugene	Coast Fork Willamette Watershed Council
Cascade Middle School, Eugene	Coastal Conservation Association
Centennial Elementary School, Springfield	Cumulus Media Group
Cesar E. Chavez Elementary School, Eugene	Desert Springs Trout Farm
Charlemagne at Fox Hollow Elementary School, Eugene	Twin Oaks Elementary School, Eugene
Chinese Immersion School, Eugene	Two Rivers-Dos Rios Elementary School, Springfield
Coburg Community Charter School, Eugene	Oregon Environmental Literacy Program
Corridor Elementary School, Eugene	Emerald Empire Chapter ANWS
Cottage Grove High School, Cottage Grove	Girl Scouts of Oregon & Southwest Washington
Early College & Career Options High School, Eugene	McKenzie Flyfishers
Edgewood Elementary, Eugene	McKenzie River Guides Association
Edison Elementary School, Eugene	McKenzie River Trust
Family School, Eugene	McKenzie Watershed Council
Gateway Elementary, Eugene	Middle Fork Willamette Watershed Council
Holt Elementary School, Eugene	Salmon Stewards of Lane County
Howard Elementary School, Eugene	Scouts of America
Kalapuya High School, Eugene	The Nature Conservancy
Lane Community College	Travel Lane County
Laurel Elementary School, Junction City	Weyerhaeuser Company
Lowell Elementary, Lowell	World Salmon Council

McCornack Elementary School, Eugene	**Government**
McKenzie Middle School, Finn Rock	Bureau of Land Management
Meadow View Elementary School, Eugene	City of Eugene
Monroe Middle School, Monroe	City of Springfield
Network Charter School, Eugene	Confederated Tribes of Grand Ronde
Oakhill School, Eugene	Eugene Water & Electric Board
Oakridge Elementary School, Oakridge	Lane County
Oregon State University	Nez Perce Tribe
Pleasant Hill Elementary, Pleasant Hill	Oregon State Parks Department
Pleasant Hill High School, Pleasant Hill	Oregon State Police
Prairie Mountain School, Eugene	U.S. Army Corps of Engineers
Ridgeline Montessori, Eugene	U.S. Fish & Wildlife Service
Ridgeview Elementary School, Springfield	U.S. Forest Service
River Road El Camino Del Rio Elementary School, Eugene	Willamalane Park & Recreation District
Shasta Middle School, Eugene	Lane County CTE
South Eugene High School, Eugene	Lane County ESD
Thurston 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. There are two high schools in the district with hatchery programs. Students in these programs also provide support assisting at ODFW hatcheries, the Stream Enrichment Program, and monitoring. The area also has a growing classroom egg incubation program involving students from seven school districts. Staff works closely with several watershed councils, educators, angling groups, and civic organizations throughout the district.

EDUCATION AND PROGRAM DEVELOPMENT

Education and Outreach

1. Salmon Watch (1 event) – The STEP Biologist position participated Vernonia Schools Salmon Watch field trip. Multiple resource agencies and environmental non-profits participate. STEP Biologist provides coho carcasses for dissection in addition to visual aids for instruction on salmon biology, life history, habitat requirements, and resource management. Following dissections carcasses are used in the Stream Enrichment Program as identified under Objective 8 in Habitat Section. SFR funding directly

supports the STEP Biologist personnel and S&S on this grant which provides technical assistance and direct involvement. SFR funds are used to purchase materials associated with this program.

2. Fish Dissections (1 event) - The STEP Biologist conducts classroom dissection events in district schools. The STEP biologist provides hatchery coho carcasses from either NF Nehalem or Trask Hatchery for use in dissections. Following dissections fish are disposed in streams of their respective basins as part of the Stream Enrichment Program as provided in the Trask Hatchery Coho Program HGMP and Nehalem Hatchery Coho Program HGMP. Students learn about the anatomy and physiology of fish, how they survive in their environments, habitat requirements, and relationships to human biology. The STEP Biologist supplies the fish, dissection equipment, and educational support material for the events. Volunteers may assist the STEP Biologist with this event. SFR funding directly supports the STEP biologist's time/vehicle usage, educational supplies for classes (dissections materials: scissors, gloves), refreshments for volunteers, and volunteer appreciation awards.

Fish Dissection at Seaside Middle School

3. Camp Rosenbaum Fish Event (1 event) - The STEP biologists position coordinates and stocks Slusher Lake with rainbow trout (from either Nehalem, Cedar Cr or Salmon River Hatchery) for Camp Fishing event. This is a week-long camp in July for low-income youth sponsored by Portland Police, Homeforward, and the Oregon National Guard. SFR funding directly supports the STEP biologists' time and S&S on this grant which provides technical assistance and direct involvement.

4. Fish Printing (1 event) – The STEP Biologist conducted Fish Printing activities in district schools. This is done at the elementary level to introduce young students to different types of fish and start basic aquatic education.

<u>Fish Eggs-to-Fry Program</u>

1. Fish-Eggs-To-Fry (4 classrooms, 2 public libraries, and 1interpretative center) – Annually, the STEP biologist position works with about 13 schools however the last couple years have been impacted by Covid 19. The STEP biologist administers the application process for teachers, write emails, meet with teachers, schedule associated meetings/trainings, and field trips or classroom presentations. The STEP biologist provides tank sets and Egg to Fry supplies to classrooms, may assist with assembling the incubator, provides educational materials to teachers, coordinates egg deliveries with volunteers, or delivers eggs. The STEP Biologist may spend time with the class instructing them in aquatic ecology, leading class activities using kits purchased

Bay City Library Fry Release

with SFR funds, leading a dissection, or assisting with the fry release. Students may be provided with educational materials (coloring books, stickers, and course materials) purchased with SFR Funds. Funds may be used to purchase aquariums, chillers or related hardware for the project.

- Winter Steelhead – Eggs were provided to1school and 1 interpretative center, from Big Creek and Trask Hatcheries. Resulting unfed fry were released into Big Creek and Jones in accordance with Hatchery HGMP's.
- Fall Chinook – Eggs from Trask and Cedar Hatcheries were provided to 3 schools. Resulting unfed fry were released into Necanicum and Nestucca Rivers in accordance with the Hatchery HGM's.
- Spring Chinook – Eggs from Trask Hatchery were provided to 2 schools. Resulting unfed fry were released into Patterson Creek in accordance with Hatchery HGMP.

Improvements to Access and Facilities

During this report period the following grants were awarded to improve access and facilities in the North Coast District:

- $1,250.00 grant from North Coast Salmon & Steelhead Enhancement Fund, Inc. to purchase tanks and pumps for wild broodstock program.
- $1,941.32 grant from the North Coast Salmon & Steelhead Enhancement Fund, Inc. to purchase scale and seine for Rhoades Pond
- $1,447.08 grant from the North Coast Salmon & Steelhead Enhancement Fund, Inc. to purchase batteries for Wild Broodstock program.
- $2,000.00 grant from the North Coast Salmon & Steelhead Enhancement Fund, Inc. to purchase pumps for Warrenton High School Hatchery water supply.

Routine maintenance continues annually on fish ladders, fishing access sites, docks, boat ramps, and boat slides. Access site and ramps maintenance included brush clearing and removal (mostly weed eating). The boat slide maintenance included replacement of broken or rotten wood supports or runners, and control of undermining on existing structures as needed. Fish ladders maintenance included removal of wood and logs. Dock maintenance included some weed eating and a transition ramp replacement. USFWS funds are used for staff time and travel or routine maintenance, not any new ground disturbance on these maintenance projects.

North Coast STEP program is continuing work on the development of the Astoria High School Fish Hatchery remodel, the STEP biologist is providing technical assistance as needed.

INVENTORY AND MONITORING

Spawning and Temperature Monitoring

The Salmonberry 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. Due to COVID-19 restrictions, the number of volunteers used in this project was reduced. 25 volunteers from the Salmonberry STEP Monitoring Project donated 219.5 hours

last year conducting spawning ground surveys and temperature monitoring on 12 miles of stream.

The North Coast STEP Biologist assisted with data collection for the following projects:

- Chinook DNA Sampling (ODFW).

Spring Chinook Spawning Grounds Surveys.

HABITAT IMPROVEMENT

Stream Nutrient Enrichment

As part of the ODFW stream nutrient enrichment program the STEP Biologist and other NCWD staff assisted in the distribution of 17,281 salmonid carcasses into 80 miles of North Coast rivers and streams from the Little Nestucca to the lower Columbia River tributaries to benefit salmonids and other species. Nine students from the Astoria High School Fisheries Class along with volunteers from Association of Northwest Steelheaders Tualatin Chapter assisted with some of these placements donating a total of 85 hours.

Fish Rescue Salvage

The North Coast STEP Biologist assisted in fish salvage for the Whitney Creek Culvert Replacement and Klaskanine Hatchery Passage Improvement Projects.

FISH CULTURE

Volunteer Hatchery Programs

The Tillamook Anglers continue to operate Whiskey Creek STEP Hatchery and reared 106,828 spring Chinook Salmon smolts for release into the Trask River. During the 2021-22 return season the Tillamook Anglers processed 118 surplus hatchery salmon totaling 851pounds of surplus salmon for the Oregon Food Bank. The Nestucca Anglers also continue to operate Rhoades Pond and released 106,175fall Chinook Salmon smolts into Three Rivers and the Nestucca River. Rhoades Pond went back to pre-COVID-19 operations however did not utilize volunteers for fin marking. restrictions for this report period drastically reducing their ability to utilize volunteers. Whiskey Creek Hatchery, when fish were ready for marking they were transferred to Trask River Hatchery for marking with the Auto-Fish Trailer. Following marking Production Schedule transfers to Cedar Creek and Trask River Hatcheries took place, and the remaining fish to transferred back to Whiskey Creek to complete rearing.

Astoria High School Stream Enrichment

Wild Winter Steelhead Broodstock Collection Programs continued on the Nestucca, North Fork Nehalem, and Wilson Rivers. These programs collected 379 fish for use as broodstock by ODFW hatcheries. For the wild fall Chinook Salmon on the Nestucca River 18 fish were collected by anglers with remaining fish coming from Cedar Cr. Hatchery trap. The Tillamook Basin wild coho program collected 84 fish by means of angling, trap, or tangle net for use as

broodstock. 98fish were collected on the North Fork Nehalem via angling or trap. STEP provides management oversight, technical assistance, and direct involvement to these programs.

High School Hatcheries

Astoria High School's hatchery program released 3,450 coho salmon as pre-smolts into Young's Bay, and 18,000 fall chinook pre-smolts into Cullaby Lake. Warrenton High School's program released 3,312 coho salmon, 340 winter steelhead pre-smolts into Skipanon River, and 14,408 fall chinook pre-smolts into Cullaby Lake.

Warrenton High School Fisheries Class Fundraiser

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	Lower Nehalem Watershed Council
Broadway Middle School, Seaside	Necanicum Watershed Council
East Elementary School, Tillamook	Nestucca Anglers
Garibaldi Grade School, Garibaldi	Nestucca Watershed Council
Hilda Lahti Elementary School, Astoria	Nicolai-Wickiup Watershed Council
Jewell Elementary School, Seaside	North Coast Chapter ANWS
Lewis & Clark Elementary School, Astoria	Rainland Fly Casters
Mist Elementary School, Mist	Rockaway Lions Club
Neah-Kah-Nie Middle School, Rockaway Beach	Skipanon Watershed Council
Nehalem Elementary School, Nehalem	Tillamook Anglers
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, Vernonia	Twin Rocks Friends Camp
Warrenton High School, Warrenton	WarHF, Inc
Wilson River School	Youngs Bay Watershed Council
Organizations	**Government**
CREST	Oregon Department of Forestry
Ecola Creek Watershed Council	U.S. Fish & Wildlife Service

Mid Coast STEP

Christine Clapp, STEP Biologist
Paul Olmsted, Assistant District Fish Biologist
John Spangler, District Fish Biologist

The Mid Coast STEP District covers coastal watersheds from the Salmon River and Cascade Head to Tahkenitch Lake, extending from headwater streams on the western slope of the Coast Range to their estuaries. This includes the Salmon, Siletz, Yaquina, Alsea, and Siuslaw rivers. 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.

Exploring below the surface

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, Mount Hood Community College, Boy and Girl Scouts of America, the Angell Job Corps, and others.

Education and outreach are the core of the Mid Coast Salmon and Trout Enhancement Program. 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 provide harvest opportunities in the district.

EDUCATION AND PROGRAM DEVELOPMENT

Fish Eggs-to-Fry Program

During the spring of 2022, twenty-five locations participated in the Egg to Fry Program. There were limited field trips this year, but the Mid Coast 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 that covers fish biology, macroinvertebrates, water quality and habitat. Volunteers and staff train classroom and field assistants, deliver and maintain equipment, transport eggs, lead presentations and field trips, and coordinate with hatchery staff.

Young biologist in training

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. Mid Coast STEP also loans two Egg-to-Fry libraries to teachers throughout the year, rotating between schools during Egg-to-Fry season. Each library has 8-10 salmon focused kids' books to enrich the program's classroom experience and prepare students for field trips

Family Fishing

Volunteers and staff led 3 family fishing events on the Mid Coast at Olalla Reservoir, Eckman Lake, and Cleawox Lake. Mid Coast STEP also managed three youth angling libraries in Lincoln City, Newport, and Waldport where youth can check out fishing equipment for up to two weeks free of charge. ODFW also provided rainbow trout 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. In addition, volunteers led backyard bass and lure making activities at family fishing, National Night Out, and Back to School events.

Dispersed fishing

Outreach Activities

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 that are available for community education programs. Resources are also available to volunteers who are interested in learning more about freshwater science and salmonids. This year Mid Coast STEP volunteers hosted educational booths for Waldport's Beachcomber Days and the National Night Out in Newport. STEP volunteers also gave presentations to the Central Coast Fly Fishers and Ladies Club of Waldport.

Waldport Beachcomber Days

INVENTORY AND MONITORING

Population Monitoring

Volunteers helped monitor fish populations at several fish traps including South Fork Schooner Creek, Munsel, Letz, and Whittaker creeks in the Siuslaw Basin, and Little Woahink Creek trap in the Siltcoos basin. As needed, staff coordinate, train and assist volunteers in fish trap operations including correct fish handling, species and gender identification, accurate data recording, and safety procedures. Volunteers led trap operations on South Fork Schooner Creek before the access bridge was taken out by debris from a landslide and the trap was closed for the remainder of the season. Florence STEP volunteers operated the Whittaker Creek adult trap 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 spawn fish at the Whittaker Creek trap for the Siuslaw winter steelhead hatchery program.

Installing a hanging weir

Salmon River Hatchery

Volunteers once again assisted ODFW staff with the adult fish trap at Salmon River Hatchery this fall. Volunteers helped process hatchery fish for donation to food share organizations and assist with spawning operations.

HABITAT IMPROVEMENT

Habitat Improvement

The STEP Biologist continued to manage the Riparian Lands Tax Incentive Program for the Mid Coast, checking compliance of properties and enrolling new landowners in the program to protect their riparian habitat for the benefit of fish and wildlife. The STEP biologist also completed site visits and monitoring reports for restoration projects funded by the Oregon Watershed Enhancement Board.

Monitoring of Siletz R. restoration sites

Mid Coast STEP volunteers operated 45 SOLV and 15 monofilament line recycling stations throughout the year and organized litter patrols at popular beaches and fishing sites. Volunteers also assisted the Northwest Oregon Restoration Partnership by collecting seeds for their native plant propagation program.

Nutrient Enrichment

Winter and summer 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 angler-caught broodstock collection programs on the Siletz and Alsea rivers. Trap caught fish were also 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 ODFW staff also collected hatchery summer steelhead from the Siletz Falls trap between June and October and transferred them to Cedar Creek Hatchery for spawning.

ODFW staff 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. 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 collect, spawn, fertilize, incubate, and rear fish to smolt stage all at the project site. The Florence STEP group also spawned several coho salmon 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.

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 84,381 winter steelhead smolts at Green Creek and Whittaker Creek this past May. The Emerald Empire Chapter of the Association of Northwest Steelheaders also acclimated and released approximately 10,000 winter steelhead smolts from the Letz Creek STEP facility in the spring.

Several ODFW volunteers also assisted staff with a winter steelhead acclimation project on the Siletz River at Palmer Creek. Volunteers helped feed fish and clean screens prior to smolt release into the mainstem Siletz River.

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 who attend the annual fin clipping event.

Coho rearing pen at North Depoe Bay Reservoir.

Munsel Creek STEP Hatchery

Florence STEP volunteers operate a hatchery on Munsel Creek for a small educational coho Salmon program and 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.

Siletz Tribe Winter Steelhead Program

The Siletz Tribe released approximately 5000 winter steelhead into Little Rock Creek this year. Returning adults will be captured in their adult trap for the first time in winter 22-23 for food share distribution to tribal members. The program will help the Siletz Tribe encourage cultural food practices and provide a volunteer opportunity for their members as well as the public.

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	Starker Forests
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

Levi Simmons, STEP Biologist
Evan Leonetti, 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. 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 110,000 people with Roseburg having the largest population of more than 20,000.

The Umpqua Basin supports runs of coho Salmon, spring and fall chinook salmon, and winter and summer steelhead. Other angling opportunities include rainbow trout, tiger trout, and brown

trout at Diamond Lake, brook trout and brown trout at various Cascade lakes, and several reservoirs that are stocked with trout and support warm water fish. STEP volunteer efforts range from educational projects and 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 3,000 hours. The program completed and/or developed 25 projects this year and reached over 3,500 people with its public outreach efforts alone. Below are highlights for the four main STEP categories.

EDUCATION AND PROGRAM DEVELOPMENT

The Umpqua STEP Biologist was able to resume in-person participation in educational events with the lifting of COVID-19 restrictions in the spring. This year 17 educational events were held, primarily focused on youth. Approximately 100 adults and 1,000 youth were reached during in-person educational activities.

Glide Forestry Tour

The Glide Forestry Tour returned to normal operation this year. Around 500 students participated in presentations over three days on invasive species, the effects of fire on aquatic systems, habitat requirements, and organism life cycles. Station instructors included representatives from various agencies such as Douglas Forest Protection, U.S. Forest Service, Douglas County, National Oceanic and Atmospheric Administration (NOAA) and Oregon State University.

Eastwood Education Events

Eastwood Elementary resumed operation of their smolt acclimation facility where students reared and released 500 winter steelhead smolts. This was accompanied in lessons on aquatic ecology, life cycles, and habitat requirements for anadromous salmon. Additionally, Eastwood Elementary hosted two full days of educational opportunities for local students at their “Camp Eastwood” event. The STEP biologist participated in the event by presenting integrated lessons on salmon life cycles, marine derived nutrients and food webs to around 200 students. This lesson was designed to synergize with the lessons learned during the smolt rearing exercise.

Tsalila Festival

The STEP biologist participated in the Tsalila Festival events over three days and taught around 300 students about angling principles. Students were taught how to tie basic knots used for angling and participated in a game designed to teach casting techniques. Partnering organizations include the City of Reedsport, the Umpqua Discovery Center, and U.S. Forest Service.

Fish Eggs to Fry Classroom Incubators

The Partnership for Umpqua Rivers and Umpqua STEP biologist hosted the Egg-to-Fry Program to teach students about native salmonids and their life cycles, habitat requirements and conservation. This year the program was able to resume in schools that were not able to participate due to COVID-19 restrictions. A total of 31 classrooms reared 3,300 eggs with most receiving in-class lessons and participating in field trips to liberate unfed fry.

Foodbank subsistence

The Umpqua STEP Biologist worked with the Cow Creek Tribal fish biologist, volunteer groups, and foodbanks to reduce the number of hatchery fish on the spawning grounds while supplying the local community with food-grade salmon. Both our winter steelhead program and coho

salmon programs produced surplus hatchery-origin fish, and 198 fish were given to the local foodbanks. This program has not only been a benefit for those in need in the community, but also served to facilitate cooperation between agencies.

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 fish help inform management of the fishery. Over 500 coho adults and jacks were processed this year.

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.

South Umpqua Winter Steelhead Acclimation Timing Study
The South Umpqua Winter Steelhead Acclimation Timing Study released the final cohort of coded-wire tagged fish this year. Volunteers assisted with collecting snouts from stations and anglers. This year we collected around 500 winter steelhead snouts that will be used to better inform management strategies for optimal return to anglers while maintaining a healthy fishery.

HABITAT IMPROVEMENT

Carcass Placement
Lack of sufficient broodstock being caught precluded the Gardiner Reedsport Winchester Bay STEP group continuing its participation in the nutrient enrichment program, which is typically done by placing chinook salmon carcasses from fall chinook spawning events into the North Fork of the Smith River. As a part of the South Umpqua coho program, hatchery coho salmon were placed by volunteers into various areas of upper Cow Creek. Volunteers also assisted with placing hatchery winter steelhead into various areas in the Canyon Creek drainage.

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 ended up 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.

Christmas tree placement in Camp Ck.

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 winter steelhead. Additional volunteers hosted the Canyonville acclimation site where steelhead were acclimated for around two weeks. Gardiner Reedsport Winchester Bay STEP volunteers collected, acclimated, and released fall chinook Salmon, as well as rearing and releasing excess production winter steelhead into Lake Marie.

Acclimation and Release

Winter steelhead acclimation and releases took place this year at Canyon Creek and Seven Feather Acclimation sites. These events contribute to winter steelhead angling opportunities in the basin and also provide a great educational experience for local students and adults. Unfortunately, no educational events at Canyonville were held this year. Over 140,000 winter steelhead were acclimated and released in 2022.

Seining for broodstock

The Eastwood Elementary School "hatchery" resumed operations this year. In 2022, 200 winter steelhead smolts were brought to the school. 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 14,000 fall chinook smolts. This low number was due to insufficient adult broodstock captured in 2021.

High Lakes Fish Stocking

With the help of the Oregon Equestrian Trails group and local Boy Scouts, high elevation lakes were stocked with rainbow trout from the Wizard Falls hatchery. Late season snow prevented stocking five of the planned lakes and the Wendigo fire prevented later trips. However,

volunteers successfully stocked eight lakes with around 9,500 trout this year by backpack and horseback.

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

Coos, Coquille and Tenmile STEP

Gary Vonderohe, STEP Biologist
Morgan Davies, STEP Biologist
Chris Claire, Assistant District Fish Biologist
Mike Gray, District Fish Biologist

The Coos, Coquille and Tenmile STEP area is located on the southern Oregon coast and is recognized as having been the birth place of STEP over forty 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

Coquille High School Educational Hatchery

The Coquille High School Hatchery is up and running again after a year of down time due to Covid-19. Typically, biology students and teachers invest over 400 hours of the school year to ensure the survival and growth into pre-smolts of 5,000 fall chinook Salmon eggs. Unfortunately, due to a low returns of chinook salmon to the basin, rainbow trout eggs were needed to substitute for salmon eggs, otherwise it was business as usual. The process helps students understand the basic needs for salmonids to live and grow within the artificial environment through direct hands-on work at the hatchery. Work and lessons are 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

Due to Covid 19 restrictions there were no school field trips during the 2021-22 school year. Because of this Morgan Creek STEP Hatchery only had a handful of students that volunteered on their own with family members.

Noble Creek STEP Hatchery

Due to Covid 19 restrictions most school field trips were cancelled during the 2021-22 school year. Although high school classes from Coquille and Bandon did participate in a few spawning events.

Seining at Morgan Creek Hatchery

Family Fishing Events

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 and are loaned a 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.

Coos Bay Public Library's summer reading program hosted, along with ODFW, a learn how to fish event at Empire Lake. Children and their parents learned fishing skills and were loaned a fishing pole and equipment to practice catching fish.

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 have a target release 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.

Measuring a Chinook during summer estuary seining

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.

HABITAT IMPROVEMENT

Fish Carcass Placement

Salmon carcasses were again placed in numerous district streams during the report period. ODFW staff and volunteers placed over 2,300 salmonid carcasses into 5 different streams. These carcasses were from fish returning to Coos Basin STEP facilities.

FISH CULTURE

Large numbers of volunteer hours continue to come from the extensive fish cultural programs in the District. There are five spawning, four egg-incubation, four rearing, and fourteen acclimation projects in the District.

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Interns with starry flounder during seining

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.

Fry Releases

The District STEP Biologist coordinated the collection and distribution of salmon eggs from ODFW hatcheries or STEP incubation facilities to volunteers. Because of the extremely low numbers of returning adult chinook salmon, there were no fry releases this past year.

Pre-Smolt Releases

Noble Creek Hatchery

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.

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 721,746 chinook salmon pre-smolts were released into the Coos Basin in the spring of 2022. Most of the chinook salmon that were released in the Coos River Basin in the spring of 2021 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 Morgan Creek STEP Hatchery.

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.

Fish Eggs-to-Fry Program

Fourteen classroom incubators were operated at twelve different schools. During delivery of the eggs STEP Biologists give a brief introduction to salmon ecology and life history. Teachers talked to the students about the release of 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

STEP volunteers operated a total of ten 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 during 2021-22. 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**
	Oregon Institute of Marine Biology
Blossom Gulch Elementary School, Coos Bay	
Coos Bay School District	Powers Elementary School, Powers
Coquille Valley Elementary School, Coquille	Sunset Middle School, Coos Bay
Harbor Middle School, Bandon	**Organizations**
Hillcrest Elementary School, North Bend	
Lighthouse School, Coos Bay	
Lincoln Elementary School, Coquille	Coos River STEP, Coos Bay
Madison Elementary School, Coos Bay	Coos County STEP Commission, 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	

Lower Rogue STEP

John Weber, STEP Biologist
Laura Green, Assistant District Fish Biologist
Steve Mazur, District Fish Biologist

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

The focus of the STEP program within the District is to utilize volunteer resources to accomplish management objectives. The STEP Biologist works primarily with local clubs, landowners, timber companies, watershed councils, educators, and school groups. The majority of volunteers that engage in STEP activities in this watershed district belong to one of two local STEP groups: Oregon South Coast Fisherman (OSCF) or Curry Anadromous Fishermen (CAF).

The groups consist primarily of retired individuals interested in performing meaningful work that will help restore and maintain fish populations within local watersheds.

The CAF's primary focus is aquaculture and education while the OSCF's focus is on population monitoring, broodstock collection, and habitat restoration. All groups consider fishery education a high priority and often cooperate with other local entities to accomplish common objectives. The Oregon Fish and Wildlife Commission adopted the Rogue Fall Chinook Species Management Unit (SMU) Conservation Plan and Rogue-South Coast Multi-Species Conservation and Management Plan *(RSP).* The Plans set conservation criteria and desired status goals for salmonid population in the Rogue Watershed These Plans were developed by ODFW in

collaboration with multiple government agencies and a public advisory committee. The majority of the monitoring projects that STEP volunteers participate in (within the Lower Rogue Watershed District) are defined management strategies embedded in the Plans. The culmination of the Plans has focused the STEP groups on fishery management in the District.

Volunteers participated in projects associated with fish culture, 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 attended numerous meetings with the public and STEP group volunteers in small groups by appointment only. These meetings were scheduled to maintain the basic fish culture, monitoring and safety requirements of essential Lower Rogue STEP activities.

The board members of the Curry Anadromous Fisherman and Oregon South Coast Fisherman made numerous commitments to promote their club and the STEP program. Multiple press releases, website/social media enhancements, bi-monthly radio broadcasts and informational newsletters were made to support the projects and program. This was a planned strategy discussed at monthly meetings.

Curry County Fair

Members of the Curry Anadromous Fisherman recruited new volunteers while raising awareness and funds for the Indian Creek Hatchery program. $ 3000 was raised while recruiting a handful of volunteers to the STEP program.

Curry County Student Scholarships

Curry County high school students received $3000 in scholarships from a local STEP group. CAF awards $ 1000 to each of the three Curry County high schools annually. Students provide essays that detail their future interests. Priority is given to students interested in fisheries or a related natural resource field and community involvement.

Reel Fish Day

The Lower Rogue STEP and Oregon Parks and Recreation Department sponsored Reel Fish Days. The angler education day is for Curry County schools that participate in the egg to fry program. In April, five 3rd grade classes participated in the event at Arizona Beach State Park.

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 volunteer instructors in Arizona Pond which was stocked with trout prior to the event. Participants were given the option to keep or release their fish. Students that chose to retain their catch were taught the responsibility of packaging and cleaning their fish for a meal.

Nature's Coastal Holiday

Oregon Southcoast Fisherman (OSCF) sponsor a light display for Nature's Coastal Holiday in Brookings. The Christmas lights are displayed on a 45-minute walk around Azalea Park that consists of over 2,000,000 lights. The OSCF donate volunteer hours within a 5 to 9 pm schedule that runs from Nov 25th – Dec27th. Volunteers man a booth and provide tour information. In addition, the group uses this effort to recruit volunteers for future STEP projects.

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. Since 2001, OSCF have 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 is opened during fishing season for access. Annually, OSCF spend funds to improve and maintain multiple access locations on the Chetco River.

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 2021 brood year volunteers and staff collected 56 samples.

Chetco River Estuary Seining

The STEP Biologist and OSCF volunteers completed their 31st 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.

OSCF Seining on the Chetco River

Winchuck River Screw Trap

The STEP Biologist and OSCF volunteers operated a downstream migrant trap just upstream of the Winchuck River estuary. The OSCF have operated the trap for the past 19 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.

The 2022 Winchuck trapping season concluded with 68 days of trap operation and an estimated 155,789 fall chinook salmon migrated past the smolt trap site.

Huntley Park Seining

The Huntley Park Seining Project represents a continuation of a 47-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.

Collecting broodstock

Later in the season, wild fall chinook salmon broodstock are collected for the Indian Creek Hatchery STEP facility. Several 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 at the end of the season. Volunteers collected 145 snouts in 2021.

Rogue Fish Snout Recovery Station

The STEP Biologist and CAF volunteers monitored snout collection stations at various access points on the Lower Rogue. These stations were deployed throughout the Spring and fall chinook salmon season. The stations received over 185 snouts and were well received by anglers as an effort to collect valuable harvest data on Indian Creek Hatchery and the Rogue spring chinook hatchery program.

South Coast Spawning Ground Surveys

Spawning ground surveys are vital forecasting tools for estimating fall chinook salmon runs in coastal streams. The Lower Rogue District is responsible for regularly surveying 27 separate surveys every 7-10 days throughout the spawning season. In certain conditions, consistently completing this on time every week can be a real challenge with district staff. Some of the more remote surveys that require greater travel time are especially hard to keep up with. For the 2021-2022 fall chinook salmon spawning season, several members of the Lower Rogue Watershed Council volunteered their time to assist with surveying some of these more remote surveys. ODFW held several training sessions tailored to each survey to be sure the volunteers felt comfortable with the standardized sampling protocol. The volunteers were supplied with gear and were set loose to survey their assigned streams. Upon completion, the survey data was reported to the Assistant District Fish Biologist weekly where it was then reviewed and entered into the master database.

HABITAT IMPROVEMENT

Culvert Surveys

Curry County Road Department (CCRD) staff reached out to CAF and the STEP biologist to identify fish passage issues under County roads. The request was mentioned for the potential future grant funds for passage that may be available to the County. The primary goal was to find low priority culverts that may be velocity or juvenile barriers that have not been identified as problems in the past. The STEP Biologist and CAF volunteers identified numerous culverts that may pose a passage issue to salmonids.

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.

Dave Kuehn, Chetco River Trib. Enrichment

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 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 salmon and steelhead were collected and transported to Elk River Hatchery.

Chetco Chromer Challenge

Members of the OSCF held the 4th annual Chetco Chromer Challenge. The Challenge was sponsored to increase participation in the annual angler steelhead broodstock effort. The group held a kickoff party at Chetco River Brewery to sign anglers up for the -week derby event. Throughout the derby anglers submitted pictures of the broodstock being deposited into the holding pens along the river. The pictures were used as raffle tickets for various prizes. The Chromer Challenge ended with 35 fish being donated for broodstock and an awards party at the brewery.

Ferry Creek Acclimation

ODFW and OSCF acclimated fall chinook salmon 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.

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 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. In addition, coded wire tagging was canceled for the brood-year over concerns that taggers could not maintain adequate social distancing.

Releasing Chinook smolts

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	I'm Hooked, Inc
Brookings Harbor Christian School, Brookings	KCIW Curry Coast Community Radio, Brookings
Brookings-Harbor High School, Brookings	KURY Radio, Brookings
Driftwood School, Port Orford	Lower Rogue Watershed Council, Gold Beach
Gold Beach High School, Gold Beach	Oregon South Coast Fishermen, Brookings
Kalmiopsis Elementary School, Brookings	Oregon Stewardship, Medford
Klamath Outdoor Science School, Klamath Falls	Port Orford Ocean Resource Team, Port Orford
Pacific High School, Port Orford	South Coast Watershed Council, Gold Beach
Riley Creek School, Gold Beach	**Government**
Organizations	City of Brookings
Curry Anadromous Fishermen, Gold Beach	Curry County
Curry Citizens for Public Lane Access, Gold Beach	Port of Brookings
Curry Sportfishing Association, Gold Beach	Port of Gold Beach

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 Marial. 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.

The 2021/2022 reporting year was still impacted by, COVID restrictions. As the Fish Eggs to Fry program fell in the fall of 2021, most schools were returning to a semblance of normal, but some teachers that had previously participated were not quite ready to bring the program back in their classrooms. Large community events in the fall of 2021 were still mostly cancelled, but by spring of 2022 fishing and community groups were starting to meet again. Large highlights still included acclimation of winter steelhead smolts in the Middle Rogue, with the successful net pen implementation on Jump off Joe Creek being the biggest new project implemented. Monitoring efforts with winter upstream migrant hoop traps and spring/early summer outmigrant fry traps accounted for a substantial amount of volunteer hours of direct monitoring. A number of projects in the winter and summer of 2022 were undertaken to support the recently adopted Rogue South Coast Multi-species conservation plan, including angler pressure and creel interviews, steelhead spawning surveys, and self reporting angler log book. The volunteer operation of an adult weir near Cole Rivers Hatchery supported reductions in pHOS of spring Chinook, and a month-long pikeminnow angling contest, both addressed management actions called for in the Rogue Spring Chinook Conservation Plan. Carcass tosses, school habitat projects, and the fish eggs to fry program are all avenues where the STEP biologist is making efforts to incorporate diversity, equity, and inclusion into the Upper Rogue STEP.

EDUCATION AND PROGRAM DEVELOPMENT

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, urban 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. STEP also functions as a community advisor, with examples this year including meeting with the City of Central Point for restoration work planned on Elk Creek, and

sitting on the City of Medford's Climate Action Resiliency Planning steering committee which included a public presentation and a number of meetings with community stakeholders.

Key to the project, volunteers operate upstream migrant "hoop" traps to survey for fish use during winter. A total of 45 streams have been sampled with "hoop" traps since the start of the project in 2005. Many streams have been resampled following improvements to fish passage downstream such as Lazy Creek, Larson Creek, Anderson Creek, Jones Creek and others. 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. This past year, data from Hoop Trapping was conveyed to the City of Phoenix, asking for additional protections on 2 unnamed streams along City property. The STEP biologist gave a presentation to a citizen group in Phoenix who were spearheading this effort to increase riparian protections on these streams.

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. The fall of 2021 saw a return to teacher interest in classroom incubators. Some teachers opted out due to some of the difficulties with the transitions back to in-person learning.

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. Especially with a number of title 1 schools in Jackson and Josephine County, priority is being made to get more of these public schools involved through offering volunteer and equipment support. A surprising number of rural Jackson County Schools participate in the program, but more effort is needed in Josephine County to bring these schools (particularly those in the Three Rivers District) into the program. Medford School District is also a top priority with a number of title 1 schools on the docket for the coming year. Volunteer onboarding with Medford School District is one of the challenges the STEP biologist does with STEP volunteers to get them cleared to enter these schools, which requires an additional background check and sign up with the District.

The Fish Eggs to Fry program continues to act as a springboard for so many other programs such as Salmon Watch, salmon dissections, Stream Scene, the Small Stream, Urban Stream, and Intermittent Stream Program, and Angler Education in the Rogue Valley. The STEP biologist routinely shares opportunities, videos, anecdotes, and partner organization resources to teachers through this program. Additionally, all teachers have been outfitted with native species of the Rogue posters, river restoration continuum posters, and egg stage displays. The Upper Rogue STEP Biologist continued to bring volunteers up to speed to help deliver better presentations to schools upon delivery day (of eggs), as well as offering teacher trainings before the program starts for the year.

Bear Creek Salmon Festival at North Mountain Park, Ashland

This program was again cancelled in October of 2021 due to covid concerns. 300 to 400 people typically attend this event, being the largest outreach event STEP participates in. Normally a 400-gallon aquarium is stocked with chinook salmon and summer steelhead. Stream stewardship materials are also on display and given out.

Bear Creek Fall Festival

This program was cancelled in October of 2021 due to ongoing covid concerns. 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

The fall 2021 Salmon Watch classes returned. The STEP Biologist coordinated fish carcasses for dissections with volunteer instructors and Cole Rivers Hatchery in October, 2021, and taught 2 spring classes in 2022 and 2 fall classes in September 2022. He also helped lead 2 days of instructor training in September of 2022 for the Fall 2022 sessions and taught 3 classes in September 2022.

Family Fishing Day at Reinhart Park Pond and Expo Pond

The Reinhardt Pond family fishing event was cancelled again this year due to COVID-19 restrictions. It is normally an event where the STEP biologist works with Crater Bass, a local warm water fishing group, to host a family fishing day at Reinhardt Volunteer Community Park located in Grants Pass. STEP did not participate in any other family fishing events or school fishing events.

Rogue Pikeminnow Roundup

Encouragement of angler caused mortality of Pikeminnow was called for as Management Action 9.4 in the Rogue Spring Chinook Salmon Conservation Plan of 2007 and Comprehensive Review of 2018. This was the 4th year of the Rogue Pikeminnow Roundup- a month long derby where participants catch non-local Pikeminnow and enter their catch via online submissions or weigh their catch in-person at 2 check stations operated by volunteers on five Sundays during the contest with the help of 8 volunteers. Online submissions were also a major portion of the contest.

Volunteer run pikeminnow check station

Blackbird Shopping Center of Medford donated $200 worth of gift cards, Sportsman's Warehouse of Medford donated $450 worth of gift cards, Bradbury's Gun & Tackle donated $30 in gift cards and additional fishing tackle, U-Save Gas & Tackle donated over $200 of tackle and a landing net, Rogue Fly Shop donated $60 in gift cards, Sawyer Station in Gold Hill donated shirts and hats, and Josephine County Parks Department donated five season passes as prizes. Fish were donated to Wildlife Images Rehabilitation Center, who also generously allowed their facility to store equipment. City of Rogue River also provided storage space for check station equipment.

Pikeminnow anglers

Flyers and posters were distributed by volunteers to local businesses and boat ramps throughout Jackson and Josephine Counties. Care was taken to craft public talking points that also emphasized the need to conserve Klamath Small-Scale Suckers (a look alike species), to only harvest Pikeminnow in the Rogue, and tips on locating and catching fish. One participant brought in nearly 160 pounds of

pikeminnow and had the largest fish at 21.5 inches! The big fish for youth came in at 16 inches from an 8-year-old girl!

Large Group Presentations

The STEP biologist gave a talk on the Small Streams of Phoenix to a group of concerned citizens called "Save the Phoenix Wetlands." This group was concerned about develop on a small stream and wetland in Phoenix along Bear Creek. The presentation detailed the fish observations through hoop traps in the region under the small stream, urban stream, and intermittent stream monitoring project. This area of Bear Creek has numerous natural springs and small unnamed streams that flow into Bear Creek that provide cold water refugia in the summer months. Upon learning this, the group brought a proposal to the Phoenix City Council for expanding the City of Phoenix's riparian protection ordinance to include these waterbodies, but thus far has been unsuccessful in getting these changes. The group also undertook a temperature monitoring project in this region of Bear Creek. The STEP hoop trapping and fish presence surveys resulted in a proposal to the Department of State Lands for consideration as Essential Salmonid Habitat during the next review.

Fishing Group Outreach

In December 2021, the STEP Biologists gave 2 presentations to the Southern Oregon Flyfishers and Rogue Flyfishers on an overview of Upper Rogue STEP and the importance of the small streams of the Rogue Valley.

In February 2022, prior to the Middle Rogue Steelheaders inaugural winter Steelhead fishing derby, the STEP Biologist was asked to give a presentation to the group on best practices for limiting handling stress on fish. As catch and release was encouraged by the group for participants in the derby, the presentation helped members learn signs of stress in fish, and how to limit potential for catch and release mortality. The proceeds of the derby and online auction also helped to raise $18,000 dollars for conservation and restoration projects in the Rogue Valley. STEP also attended a number of club meetings to give updates of current fish management topics that would be of interest to anglers.

Project Technical Advising

The STEP biologist was asked to sit on the City of Medford's Climate Action Resiliency Planning Team. A total of 6 meetings were attended with recommendations and insight into stream stewardship that the City of Medford could incorporate were shared. A presentation was given during a public meeting where much of the climate change projections that were included in the Rogue South Coast Multi-species Conservation Plan was shared.

The STEP biologist assisted a number of private landowners with mitigation recommendations for non-native vegetation clearing within protected riparian setbacks. The STEP Biologist also assisted several private landowners in site inspections for private pond stocking, advice and fish passage requirements on culvert replacements and put in contact with the proper channels for their projects. This year the STEP biologist also participated in several local Zoom meetings organized in response to urban wildfires and monitoring and restoration needs for riparian habitat, toxics abatement, and fish monitoring. One high school student was also met with and taken on a ride along with the STEP biologist to check fish traps. Ideas for the student's senior project and plans for after graduation were also 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. As stated earlier, to date 44 streams have been sampled. In spring of 2018, STEP began expanding its monitoring efforts to also include more outmigrant fry trapping on mostly summer steelhead streams. Traditionally, outmigrant fry-trapping had occurred on streams impacted by irrigation withdrawals or unscreened diversions such as Jones Creek. These trap and haul efforts still occur on some streams and the Upper Rogue STEP biologist and volunteers are always on the lookout for another opportunity.

Monitoring fisheries and collecting creel data on local fisheries is also a great way to utilize volunteer resources. Continued use of voluntary creel boxes on the upper Rogue's Holy Water Trout fishery and the development of an early run summer steelhead logbook program in the upper Rogue has been a focus of the Upper Rogue STEP's fishery monitoring program this past year. Additionally, STEP did angler creel and effort surveys.

Hoop Traps

This year three streams were trapped using three hoop traps. These sites were 1) Lazy Creek in Medford, 2) Lone Pine Creek in Medford, and 3) Elk Creek near Central Point.

Hoop trap at Elk Ck double culvert

Lazy Creek has been trapped 9 times in 15 years. Hoop traps have documented a small population of spawning Klamath Small Scale Suckers in past years, as well as a partial barrier near its mouth, and a feral dam that was removed over a decade ago. Winter 2021/2022 trapping again was positioned above a long-standing partial barrier located approximately 0.75 miles downstream, and just downstream of the current artificial end of fish usage. The hoop trap was operated to evaluate fish usage upstream of this partial barrier as passage was improved in 2017. The trap also served to transport juvenile fish upstream of the current end of fish distribution, into another 0.75 miles of inaccessible habitat. The trap operated 150 nights from mid-October 2021 through March 2022.

Elk Creek in Central Point is one of Bear Creek's most impacted streams and was also burned over during the 2020 wildfires. There are National Pollution Discharge permits on this waterway, significant impervious surface, and a partial passage barrier of 2 perched culverts exists at its confluence with Bear Creek. The hoop trap on Elk Creek operated 68 nights from Mid-October 2021 through early January 2022. Unfortunately, due to repeated vandalism, the trap was removed in January. Only 1 juvenile Steelhead was captured right after a storm event, indicating the continued need to replace the culverts below. Fortunately, by the writing of the next annual report in 2023, this culvert may be replaced by the City of Central Point. The importance of this small stream cannot be overstated. Summer surveys in lower Bear Creek always find juvenile chinook and steelhead congregating below these 2 culverts attempting to escape the warm water of lower Bear Creek as there are few cold water refugia in this area of Bear Creek. 1-2 STEP volunteers have assisted the District in these annual August surveys

looking for native fish presence in an area termed the "dewatered" reach of Bear Creek (due to irrigation withdrawals upstream)...

Lone Pine Creek was the third creek to be monitored with a hoop trap in the winter of 2021/2022. A perched box culvert exists near its confluence with Bear Creek. The creek spills onto a cascade of riprap and passage has been nearly impossible for juvenile salmonids for decades except in the highest winter flows, however, adult summer Steelhead do make it upstream when conditions are just right. STEP was alerted that this cascading falls had been modified by an unknown purportedly concerned citizen or many concerned citizens. Surprisingly passage appears to have been greatly improved. The hoop trap did not catch many juvenile Steelhead as there are daily flow fluctuation in Lone Pine that often blows out the trap. However, hand seining and observations at the top end of the culvert confirmed that juvenile Steelhead are now pouring into this creek.

Out-Migrant Fry Trapping

Trapping efforts on Jones Creek, which started in 2006, have helped gather data and support for removal of numerous fish passage barriers that affected summer steelhead. STEP has continued to run fry traps every spring to help monitor the recovery of steelhead in Jones Creek with 2022 being the 16th consecutive year of monitoring. There are several barriers expected to be removed near the mouths of other streams including Fruitdale and Galls Creeks in the coming years from the Oregon Department of Transportation. STEP's trapping efforts encompassed these watersheds this year, along with Birdseye Creek, Sardine Creek, and Sam's Creek to look at fish production amid the ongoing drought conditions. The data collected will help to illustrate what the general trend of outmigration is on each respective creek before and after restoration projects may be implemented.

Trapping steelhead on Jones Ck.

During the spring of 2022, 9 STEP volunteers contributed approximately 386 hours to outmigrant fry trapping on 6 streams, from April through June. Southern Oregon again experienced drought conditions for most of the winter and early spring but did have a wet May and early June. Trapping observations in 2020-2022 on these small streams indicated the need for continued fish passage improvements on streams of the Middle Rogue. In spring 2022 Jones Creek was able to be trapped for 49 nights with trapping operations ceasing due to low water on June 24th, but this was the first year since the Tokey Canal was improved at the forks, where there appeared to have been zero successful spawning in the West Fork, likely due to low water. There were also only 294 fry that were trapped out of the East Fork. In spring of 2021, the drought conditions only

Fruitdale Creek Culvert at Highway 99

allowed the Jones Creek traps to operate 29 nights, drying the stream by June 2. Despite drought conditions of the winter of 2020/2021 Jones Creek still saw 967 fry. The issue with this year appears to have been timing of high water in winter of 2021/2022 not coinciding with peak summer Steelhead spawn timing. This was evidence especially on streams with partial passage barriers. For instance, Fruitdale Creek did not catch any fry in its outmigrant trap, and when STEP led its annual autumn fish salvage in September (once the local irrigation district shut down operations), again zero salmonids were found in Fruitdale Creek, upstream of highway 99. A large perched and undersized culvert exists under highway 99 near its confluence with the Rogue (photo 42) and appears that this prevented adults from entering Fruitdale Creek to spawn this year. It is slated for a replacement from ODOT in the coming years. Prior to restoration efforts on Jones Creek, low water and drought years would've seen hardly any fish produced in the upper expanses of this watershed. Fish production was still down this year on Jones, but they were still there. Hopefully with the passage improvements on Fruitdale Creek, this will allow fish passage during periods of low water that may become more frequent with climate change.

Birdseye Creek and Galls Creek are part of a paired watershed monitoring project. 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 with 16,498 fry captured during 56 trap nights. This was the highest trap count since STEP started monitoring Galls Creek in 2018. Irrigation improvements have occurred recently and improvements to passage are planned for Galls Creek in the coming years.

Birdseye creek trap captured 3824 fry during 60 trap nights of operation. Fish were still being caught when trapping was suspended as the creek continued to flow. with 31 fish still caught on July 2nd when trapping was suspended. The creek did continue to flow, and likely would have continued to pass fish downstream, but it's due to it's value for summer cold water refugia, trapping ends by July to allow juveniles to re-enter the creek if they choose..

Trapping on Sams Creek was fair this year, with mostly Steelhead fry, but also some chinook being caught. 1163 trout fry were captured over 50 nights.

Jackson Creek was again trapped above Ross Lane. Ross Lane is above Hanley Road which for years had zero passage of adult Steelhead due to box culvert that was a complete barrier. In recent years, an unknown member(s) of the public, not affiliated with ODFW, constructed a cinder block fish ladder below the culvert. This structure has appeared to work, resulting in fish being produced upstream. Work is still needed to replace this box culvert to meet current fish passage standards, but these trapping efforts are the first glimpse that Jackson Creek can and does support habitat to produce more Steelhead. A total of 46 fry and 3 larger 7 inch 1-2 year old smolts were captured over 20 trap nights. The trap operated intermittently from mid-May through early July.

Holy Water Volunteer Creel:

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 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.

The STEP Biologist continues to maintain a database of ongoing creel information and recaptured tagged fish at the Holy Water. This is an ongoing monitoring and fishery enhancement project.

Development of Summer Steelhead Guide Logbook:

In the development of the Rogue-South Coast Multi-Species Conservation Plan (RSP) a concern for monitoring the early run component of the Rogue's summer Steelhead population was identified. Historical Gold Ray Dam records correlated well with returning numbers of hatchery and wild fish to Cole Rivers Hatchery. A log-book was given to anglers where they were asked to log their hatchery and wild steelhead caught through September 15. Considerable time was spent in Zone 228 of the Rogue to explain the project to private anglers and guides. A total of 34 anglers were given log-books, with 10 books being returned by the end of September 2022. A total of 83 angling trips were logged. Efforts to track down any additional logbooks are still underway. This project is still in development stages, but the hopes are that relationships are starting to grow to help meet management needs. The STEP biologist also maintained a database with the creel data.

Applegate and Illinois River Creel and Logbooks:

With the adoption of the Rogue South Coast Multi-Species Plan, a number of winter Steelhead fishery monitoring projects were called for. On the Applegate River, the STEP biologist spent 14 days creeling the lower Applegate River from January through March, interviewing winter Steelhead anglers. The objective here was to use lower river hatchery and wild steelhead ratios to estimate the wild winter Steelhead population using the Applegate River. More information on this can be found in the Annual RSP Report. STEP developed a log book and spent considerable time outreaching with anglers in order for them to fill out their catch records. This data was combined with the data from creels to estimate the hatchery to wild ratios of Steelhead that were caught in the lower Applegate Fishery. 15 log books were given out to anglers, with 7 being returned. A total of 53 days of angling were recorded by these volunteers.

The STEP biologist recruited a volunteer to assist with a pressure count of winter Steelhead anglers on the Illinois River. This is a relatively remote fishery, and these workdays consisted of long drives down the Illinois River near the town of Selma. The volunteer assisted in 3 days of pressure counts. Additionally, the STEP biologist completed another 12 survey days on the Illinois, also interviewing anglers. More information on this can be found in the Annual RSP Report. Both of these projects will continue to be developed, and hopefully more volunteer effort incorporated into this management plan.

Steelhead spawning ground surveys

To assist with the implementation of the Rogue South Coast Multi-Species Plan, STEP was asked to set up winter Steelhead spawning surveys. STEP continued to walk Ashland Creek survey and recruited 1 additional volunteer to help survey this stream for evidence of summer and winter Steelhead spawning. This survey is more tailored as an outreach tool to the community of Ashland, and to give an opportunity for students to gain valuable experience that can be included on their work resume. In Jump off Joe Creek and Quartz Creek, these 2 spawning surveys will help monitor for pHOS (percent hatchery origin on spawning grounds) needed for the winter Steelhead acclimation project expansions in Grants Pass. Additional surveys and protocols are being explored to help meet the pHOS monitoring requirements of the RSP.

HABITAT IMPROVEMENT

Riparian Restoration

Whetstone Creek: One work party day helped to plant willow stakes along a section of lower Whetstone Creek. This section of Creek is owned by the Mace Watchable Wildlife Foundation. Willows from the prior year's planting were still alive which was encouraging for all to see. This was the 3rd year of willow planting on this stretch of Whetstone Creek. STEP also continued to work with the Denman Wildlife Area host and Denman Wildlife Area manager to irrigate plantings and keep blackberry at bay. No other planting days were coordinated by the STEP Biologist for Whetstone Creek in 2021-2022 reporting period.

Unnamed tributary to Bear Creek in Phoenix: The small unnamed tributary at Blue Heron Park was severely burned during the September 2020 Almeda Drive fire. The STEP Biologist spent 2 mornings weed-whacking blackberries and planted about a dozen native trees. The restoration sign was also re-installed along the Bear Creek Greenway. No volunteer work party occurred here in 2021/2022 reporting period. The project area is about 200 feet long by 100 feet wide, or about 0.45 acres of the riparian area.

Thompson Creek: Thompson Creek is a tributary stream to Deer Creek within the Illinois River Basin, near Selma, Oregon. This reach of Thompson Creek goes completely interstitial/subsurface beginning in late April to Early May. The Upper Rogue STEP Biologist continues development of relationships with adjacent landowners along this stream reach to gain support for additional riparian planting. Willows have been heavily propagated in this reach along the banks and flood plain. Oregon Ash, Ponderosa Pine, Jeffry Pine, Blue Elderberry, and Red Osier Dogwood were planted on the banks and upland habitat of this creek reach. For 2022, no additional plantings occurred, instead they were just lightly irrigated compared with prior years with an above ground irrigation system. Unfortunately, in November of 2022 (during the writing of this report), two 1,100 gallon water tanks were stolen, as someone cut the private landowners fence where the equipment was on-site and drove across their pasture. ON the positive side, the pine trees are nearing 4 feet tall and over 85 percent of the upland and bank plantings are still alive after the summer of 2022. The willows planted along banks and the gravel bar survived at about a 20% rate. Plans to continue planting willows will likely occur, but the STEP biologist is unsure if the tanks will be replaced as the upland plantings appear to be established.

Elk Creek (Central Point): Two workdays with Crater High School occurred in the late winter of 2022. Students and teachers joined with the STEP biologist to hand remove blackberry from the stream banks. Willows stakes were also planted. Students were treated to a hand seining

demonstration as well. Plans are for a more substantial planting and irrigation system to be set up in the winter of 2022/2023. The City of Central Point is developing plans with STEP to replant this small urban stream. The site will also be incorporated into the City's park plans.

Stream Nutrient Enrichment

Four carcass tosses occurred during the 2021/2022 winter. 713 winter Steelhead carcasses were distributed into Big Butte Creek and West Fork Evans Creek. 399 spring chinook carcasses were distributed in Elk Creek (upper Rogue), and it's larger tributary, Sugar Pine Creek. On Taylor Creek, 456 coho carcasses were distributed. Approximately 43 volunteers assisted in these events, contributing approximately 172 volunteer hours.

Temporary Fish Passage Improvements

Anderson Creek: A temporary wooden fish ladder was constructed by a member of the Southern Oregon Flyfishers in 2019 with technical assistance from the Upper Rogue STEP Biologist. This site has been continually maintained by repairing plywood boards, removing debris, and directing sandbags to keep water flowing through the ladder. Hoop traps operated upstream in the 2020 and 2021 season have documented passage improvements into Anderson Creek, all due to the wooden fish ladder.

Sand Creek: 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. This structure still appears to be inadequate for providing upstream passage to smaller juvenile steelhead in low water conditions, but adult passage has most certainly improved. Downstream passage also has benefitted, as any out-migrating fry and smolt now have a pool to land in once passing over the seasonal irrigation dam. Recent land-owner turn-over has also impacted the continual operation of this site. It is believed that the structure was not installed during the 2020/2021 and 2021/2022 reporting year. The STEP biologist has attempted to develop a relationship with the new landowner, but efforts haven't gone much further than emails. The STEP biologist plans to continue efforts for the 2022/2023 report year.

Wagner Creek: A tributary to Bear Creek, Wagner Creek is heavily used by juvenile steelhead in the winter and even in the summer, has perennial cold water. Wagner Creek has also been the recipient of numerous passage and riparian projects in recent years from local restoration practitioners. As Wagner creek flows under Highway 99 in Talent, it flows over a concrete apron that protects a sewer line and bridge abutment. This concrete lip often clogs with wood and garbage, making the jump more difficult, or sheeting water and having no defined passage channel. 1 volunteer helped to maintain temporary sandbag channels to improve juvenile fish passage during low water conditions. This site was checked approximately 6 times in winter of 2021/2022.

Bear Creek: Although irrigation conveyance in Bear Creek was not as severely curtailed as in 2021 when irrigation all but stopped in August, irrigation withdrawals greatly reduce flows in lower Bear creek in about an 8-mile reach from Medford's Hawthorne Park, downstream to Jackson Creek where irrigation return flows re-enter Bear Creek (below Central Point). This

causes a number of challenges to native fish in lower Bear Creek. The goal in this reach is to enable juvenile salmonids to more easily migrate upstream, out of this "dewatered" reach. Both District Staff, the STEP Biologist and a volunteer made numerous visits to this section of Bear Creek. 1 volunteer assisted the STEP biologist to place sand-bags at the base of the RRVID Hawthorne Diversion to improve the initial jump height into the fish ladder, while garbage and debris were cleared to enable juvenile fish with an easier pathway to the attraction flow to the ladder. A sandbag fish ladder was also constructed on the abandoned sewer line under Jackson Creek to help juveniles pass the structure. A volunteer helped the STEP Biologist fill and move sandbags to the site. Sandbags were also used during September to help upstream migrating adult Chinook get a "tail-hold" while they were jumping at the structure. Sandbags were also placed on the abandoned sewer line under Jackson Street. Oregon Stewardship, a local non-profit that works on restoration with local area youth, continued to provide sightings of chinook salmon up and downstream of Jackson Street Bridge area, alerting District staff on fish passage and needs to revisit the site.

FISH CULTURE

Emergency Fish Salvage

Several emergency fish salvage opportunities come up in the Rogue District every year. Many of the tributaries of the Rogue, Applegate, and Illinois Rivers are seasonal and go dry in late spring to summer. Some of these are due to irrigation withdrawals or some naturally dry up. STEP intervenes on locations where anthropogenic influences cause fish stranding such as a pool below large culverts that becomes isolated, or streams used as irrigation conveyance ceasing in the end of summer and a stream quickly going dry. Three such streams are Fruitdale Creek, Jones Creek, and Savage Creek.

Sardine Ck fish salvage trap

STEP has been working with the Grants Pass Irrigation District to coordinate an emergency salvage operation at the end of irrigation season in late September for the past few years. In September of 2022 , 3 volunteers assisted in an attempted fish rescue on drying pools in Fruitdale Creek. Unfortunately, no juveniles were rescued this year due to inaccessibility of Fruitdale Creek from a culvert barrier (previously described under "Fry Trapping", above). It became apparent to the volunteers that this culvert was the reasoning for no salmonid presence above the culvert, as 1 pass through the pool below with a hand seine resulted in coho, chinook, and steelhead in one net in about 1 minute! These volunteers also assisted in a new site on Savage Creek, where both coho and steelhead were rescued from drying pools. Jones Creek was also salvaged for salmonids on 2 separate occasions resulting in 60 steelhead and 20 coho.

Salvaging steelhead and coho

With the drought of 2021, 1 volunteer also salvaged trout fry and Steelhead parr from Sardine and Foots Creek, two summer Steelhead streams that were running intermittent and dry by early June. This individual was given a permit to salvage fish in drying pools. At least 1,158 Steelhead and 3,515 steelhead were salvaged in Foots and Sardine Creek (photo 44). This volunteer put in over 100 hours of fish salvage. Fry were captured via a downstream migrant trap consisting of a bucket serving as a live well and an oxygen bubbler, and a 4-inch irrigation pipe spanning 20-40 feet at times. This volunteer literally was following the creek upstream as it dried up, deploying the trap in the last riffle before the creek dried up daily in a pool below the drying riffle. The diurnal pattern of drying allowed fish to move over the last flowing riffle through the evening and into the morning hours. By 10 am to noon on most days the flow would drop, and fish would be isolated in the lower most pool. Without this trapping effort, those fish that swam into the lower most pool would be stranded and dry up by mid-day. This was the second year of this approach to fish salvage was again successful and will be employed in another drought.

Moving salvaged salmonids

Also, hand seines were used to net fry in isolated pools. All fish were transported either to large perennial pools further up in the watershed or into the Rogue River.

Winter Steelhead Smolt Acclimation-Middle Rogue

The spring of 2021 marked the 6th year for acclimating winter steelhead smolts in the Grants Pass area. Acclimation of winter steelhead smolt in the middle Rogue River is aimed at maximizing the contribution of existing hatchery programs in the Rogue basin to the local fishery. These hatchery releases are an integral component of the Rogue-South Coast Multi-Species Conservation Plan (RSP). This Department management plan calls for three locations where fish will be acclimated within mixed-management HUCs/Basins (wild and hatchery program) as well as completion of spawning ground surveys to monitor straying of hatchery fish. This program is also consistent with the Cole Rivers Hatchery Genetic Management Plan for Winter Steelhead and the Oregon Native Fish Conservation Policy. This project is a collaboration between Grants Pass Irrigation District, the Middle Rogue Steelheaders, private landowners through which signed access agreements have been made, local guides, and STEP.

Winter steelhead acclimation in net pen

This year, 11,627 winter steelhead smolts were acclimated in Skunk Creek, 3,920 smolts in Greens Creek, and 15,008 smolts in Jump off Joe Creek. Acclimation took place in the month of April with each site receiving 2 separate "batches" of fish when fish were held between 6-11 days for each period. The Jump Off Joe Creek site was truly a success with a large net pen being deployed for holding fish on Brockman Gulch (the lowest tributary on Jump Off Joe Creek). Fish were transported out of the net pen which was deployed within a legal on-channel reservoir, and then released into Jump Off Joe Creek.

Going forward as part of the implementation of the RSP and an expansion of acclimation sties and numbers of fish, spawning surveys of the reaches of the Rogue in nearby vicinity of these acclimation sites will occur. This year Jump Off Joe Creek and a tributary upstream of it, Quartz Creek, were surveyed 8 and 5 times, respectively, during March to early June. A local recent college graduate was recruited to help with these walking surveys and was trained in proper protocols. The volunteer plans to use the experience to develop his resume in hopes of obtaining employment in the fisheries field.

Upper Applegate Steelhead Reintroduction Investigations

For the fifth year, volunteers helped release winter Steelhead pre-smolts, upstream of Applegate Dam into Carberry Creek. This project continues to investigate survival rates that would be expected if anadromous fish production were to be restored above the dam. The fish are differentially fin marked at Cole Rivers Hatchery with hatchery staff. The goal is to hopefully recapture half-pounders at the Lower Rogue District's Huntley Park seining site, or as adults should they swim into the fish trap at the base of Applegate Dam. Prior years of above-dam releases of larger smolt sized winter Steelhead, documented fish recaptures in both monitoring locations indicating that reintroduction above Applegate Dam may be possible. 20,785 pre-smolts were released in Carberry Creek from river mile 5 through 8.

Rogue Spring Chinook Broodstock Collection and pHOS reduction at Cole Rivers Hatchery

Consistent with Management Strategy 9.5 of the Rogue Spring Chinook Salmon Conservation Plan, this volunteer project's main goal is to minimize risk from hatchery fish on naturally produced spring chinook salmon. This program also helps to collect additional wild broodstock. Upper Rogue STEP volunteers continue to be integral in meeting these management objectives.

Netting spring Chinook at Cole Rivers Hatchery

This was the sixth year STEP volunteers operated a weir trap at an outlet flume at the downstream portion of Cole Rivers Hatchery. 21 individual volunteers helped construct, deconstruct, and empty the weir on 7 collection days from July through early September 2022. Volunteers wore waders PFD's while in the trap with the STEP Biologist, as they crowded and hand netted adult fish to the waiting hatchery truck. A total of 252 hatchery spring chinook, 21 wild spring chinook, 73 hatchery summer steelhead, and 11 wild summer steelhead were handled.

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 worked with STEP in 2021. Due to the large number of participants, it is possible that some groups were inadvertently left off this list. Please contact 541-826-8774 if your program has been left off this list.

Education	Organizations
Allen Dale Elementary School, Grants Pass	Applegate Partnership
Butte Falls Charter School, Butte Falls	Crater Bass
Central Point Elementary School, Central Point	Coastal Conservation Association
Crater High School, Central Point	Oregon State Extension Service
Crater Lake Academy, Eagle Point	Rogue River Watershed Council
Fort Vannoy Elementary, Grants Pass	Middle Rogue Steelheaders
Grants Pass High School, Grants Pass	Rogue Flyfishers
Griffin Creek Elementary School, Medford	Southern Oregon Flyfishers
Helman Elementary School, Ashland	Grants Pass Irrigation District
Hoover Elementary School, Medford	Medford Irrigation District
Jewett Elementary School, Central Point	Rogue River Valley Irrigation District
Lake Creek Learning Center, Eagle Point	Talent Irrigation District
Logos Public Charter School, Medford	Save the Phoenix Wetlands
Madrone Trail Charter School, Medford	North Mountain Park Nature Center
Manzanita Elementary School, Grants Pass	
Mae Richardson Elem. School, Central Point	
Oak Grove Elementary School, Medford	
Orchard Hill Elementary School, Medford	**Government**
Oregon State University	Ashland Parks & Recreation Department
Phoenix Elementary School, Phoenix	Bureau of Land Management – Grants Pass
Prospect Charter School, Prospect	BLM/Forest Service - Medford Interagency Office
Rogue Community College	City of Ashland
Rogue River Elementary School, Rogue River	City of Central Point
Ruch Outdoor Community School, Jacksonville	City of Medford
Sams Valley Elementary School, Central Point	Medford Water Commission
South Medford High School, Medford	Jackson County Parks
Southern Oregon University	Josephine County Parks
St. Mary's School, Medford	City of Gold Hill
Sunny Wolf Charter School, Wolf Creek	City of Grants Pass
Talent Elementary School, Talent	City of Phoenix
The Valley School of Southern Oregon, Medford	City of Talent
Wilson Elementary School, Medford	Rogue Valley Council of Governments
	Rogue Valley Sewer Services

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.

Lily Rice, OSU Student netting chub at East Lake

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 Youth Education Program

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. Unfortunately, due to COVID, participation was reduced substantially. 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.

Collecting macroinvertebrates at Kokanee Karnival

During the 2021-2022 school year 850 students participated in the Kokanee Karnival Program in which teachers signed up for classroom activities such as raising trout (Fish Eggs To Fry), basic trout biology class (dissection). However, due to COVID-19 restrictions, bus driver and volunteer shortages many field trips and Angler Education classes were cancelled. We hosted Kokanee Karnival Angling Clinics for six classes. Volunteers from Central Oregon Flyfishers and Sunriver Anglers contributed 300 hours hosting these clinics.

Partners for the Kokanee Karnival Youth Education Program include STEP, Central Oregon Flyfishers, Sunriver Anglers, 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. The partners hope to grow the program to include more classes and increase volunteer participation that waned because of the pandemic.

In 2021-2022, the STEP Biologist prepared activities and materials for the Trout Dissections, Fish Eggs-to-Fry, and Kokanee Karnival classroom presentations, although classroom visits were limited

Metolius Pond: Youth Angling Pond and Chinook Salmon Acclimation

The ODFW owned Metolius Pond, a STEP Youth Angling Education Site was open to the public in 2021-2022. The site is used for stream study and fishing field trips. The shallow creek, the springs and the meadow provide an excellent location for students to perform stream studies. Local school students from Black Butte School can walk to the site, where they conduct water

quality sampling, stream studies, and fly-fishing lessons. The Metolius Pond is open to youth angling from May 1 to October 1.

The pond provides an easy angling opportunity for youth and disabled anglers. The small half-acre Metolius Pond opened to the public for its fifth season in 2022. On site, there is an ADA accessible path, volunteer host site, gravel parking area, ADA parking available, picnic tables and restroom. The pond has been great success and this year it provided fishing opportunity for children and families. Disabled adult anglers also took advantage of this fishing opportunity.

Fly fishing at Metolius Youth Pond

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. For example, the Central Oregon Flyfishers Club, with the support of STEP, hosted a 3-day fly-fishing clinic for youth at the Metolius Pond.

Metolius Pond is also used to acclimate chinook salmon smolts as part of the Salmon Reintroduction Program in the Metolius River. In 2018, 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. Chinook smolts have been acclimated in Metolius annually, except for 2022 due to a concern of drought and subsequent low water in the pond during the acclimation period.

The STEP Biologist oversees operations at Metolius pond, including supervision of the volunteer host who resides at the site from May through October.

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 field trips, and Seven Peaks Metolius Pond Fishing Field Trip, Seven Peaks Stream Ecology Field trip.

Seventy eighth graders helped clip rainbow trout fins at Wizard Falls Hatchery. This effort assisted Malheur district fish biologists with a trout survival study for Krumbo Reservoir.

INVENTORY AND MONITORING

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

Trout populations in three popular fishing destinations will deteriorate if invasive chub go unchecked. Unfortunately, these lakes cannot be treated with rotenone due to thermal springs and/or sheer size of these waterbodies. As part of a partnership between ODFW-STEP, fishing clubs and resort owners, a chub control plan was developed in 2010. The Restoration and Enhancement program awarded grant funds to Oregon State University Cascades to support the chub removal project and high lakes. The STEP Biologist, OSU Fish & Wildlife students, and volunteers remove chub with large fyke nets. In 2022, chub were removed from East Lake,

Paulina and Lava Lakes during spring and summer when chub spawn in shoal areas. The STEP Biologist primarily oversees the chub removal and monitoring operation in East and Paulina Lake.

In 2022, the Lava Lake resort owner oversaw the chub removal operation at Lava Lake with assistance from STEP Biologist. Eleven thousand pounds of chub were removed from Lava Lake in 2022.

Sampling of trout from these lakes determine condition factors and relative weights. Trout sampling results in 2022 show trout continue to remain fair to good condition compared to very poor conditions observed prior to removal in 2010. East and Paulina Lakes continue to be very popular with anglers in 2022. Unfortunately, Lava Lake continues to have poor water quality, namely algae blooms and warm temperatures due to low water. We hope to continue our chub removal work on Lava Lake and restore the trout fishery.

Crooked River Redband Trout Annual 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.

South Fork Crooked River Sampling

Deep Creek Basin Redband Trout Sampling

ODFW organized an effort to document distribution and densities in Deep Creek Basin tributaries in the Ochoco Mountains. Volunteers assisted with this fish sampling effort. Every three years ODFW biologist return to designated stream reaches to monitor redband trout populations in the Deep Creek basin. Multiples stream reaches were sampled each day, for three days. Fish were sampled using a two-pass depletion removal method with backpack electrofisher. Volunteers worked with ODFW district biologists and STEP

biologist to help with setting up sample sites, netting fish and data collection. Volunteers were essential to the completion of this monitoring project. Tributaries sampled included Deep Creek, Sugar Creek, Wolf Creek, and Porter Creek.

Klamath Smolt Antenna Tagging for Migration Study

Prior to Klamath River dam removal, chinook smolts were sutured with antenna and radio tags to determine migration time and survival rates from tributaries of Klamath Lake to the mainstem Klamath river. The STEP biologist and volunteers assisted the Klamath District with this effort to tag chinook and release thousands of chinook smolts.

FISH CULTURE

High Lakes Fish Stocking

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 8,000 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 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

Classrooms from all over Eastern Oregon, including Bend, Klamath Falls, Madras, Culver, Hines, John Day, Umatilla, Halfway, Ontario 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. 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**
May Roberts Elementary, Ontario	Three Rivers School, Sunriver
Seven Peaks School, Bend	Silver Rail Elementary School, Bend
Hines Elementary, Hines	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	Triad School, Klamath Falls
Crook County Middle School, Prineville	Vern Patrick Elementary School, Redmond
Culver High School, Culver	Grande Ronde Academy -LaGrande
Dayville School, Dayville	Enterprise Elementary - Enterprise
Brixner Elementary, Klamath	Union High School - Union
Pinehurst Library, Klamath	
Henley Elementary School, Klamath Falls	
Pine Eagle School, Halfway	**Organizations**
High Lakes Elementary School, Bend	Central Oregon Flyfishers, Bend
Trinity Lutheran School, Bend	Klamath County Fly Casters, Klamath Falls
Cascade Academy, Bend	Sunriver Anglers, Sunriver
John Tuck Elementary School, Redmond	Sunriver Resort, Sunriver
Lava Ridge Elementary School, Bend	YMCA of Klamath Falls
Pelican Elementary School, Klamath Falls	**Government**
Pine Ridge Elementary School, Bend	Sherman County
Ponderosa Elementary School, Bend	U.S. Forest Services
Ponderosa Middle School, Klamath Falls	U.S. Fish and Wildlife Services

STEP Administration

Marty Olson, STEP/RE Program Coordinator
Steve Emerson, STEP/RE Program Assistant
Mike Gauvin, Recreational Fisheries Program Manager

This reporting period saw two changes in program administration. The Program Coordinator Kevin Herkamp took a promotion at the Oregon Parks and Recreation Department and Marty Olson was hired as his replacement. The Program Assistant position was back filled by Jeff Davis for approximately six months before Steve Emerson was hired permanently.

EDUCATION AND PROGRAM DEVELOPMENT

Salmon Trout Advisory Committee (STAC)

STAC held three meetings:

- February 2022, virtual meeting
- May 2022, virtual meeting
- October 2022, Gold Beach

During this report period, two new members were appointed to fill vacant seats. Additionally, two members were appointed to their second terms and one member's term ended leaving a vacancy. The nine STAC members are appointed by the Governor to represent the volunteer community in specific geographic areas of Oregon.

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
Vacant	North Coast		
Jessica Eubank	Mid-Coast	First Term	May 20, 2026
Dave Grosjacques	Umpqua	First Term	June 3, 2026
Curtis Bennett	Tenmile, Coos, Coquille	Second Term	January 9, 2024
Roger Lindquist	Lower Rogue	First Term	June 30, 2025
Carl Cole	Upper Rogue	First Term	June 3, 2026
Morgan Parks	Lower Willamette	First Term	April 24, 2023
Rachel Ellison	South Willamette	First Term	May 26, 2026
Steve Janego	Eastern Oregon	Second Term	June 30, 2025

*List current as of November 10, 2022

[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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*List current as of November 10, 2022