

Tualatin River Watershed Council

Tualatin Basin Fisheries Enhancement Activities

2015 and Partial 2016 & 2017 Scope of Work

I. Introduction

In 1973 Reclamation agreed to mitigate for anticipated losses of anadromous fish associated with the development of the Tualatin River Project. This mitigation was originally accomplished through a Memorandum of Agreement between Reclamation and the Oregon Department of fish and Wildlife (ODFW), in which Reclamation provided funds for the construction, operation, and maintenance of a fish hatchery. In 1998 ODFW decided to stop releasing hatchery-reared anadromous fish in the Tualatin River Sub-basin due to potential impacts on wild fish. As a result, Reclamation determined that the annual mitigation funds for its original purpose, stocking hatchery fish, was no longer appropriate and through an Environmental Assessment recommended using the annual mitigation funds to fund habitat restoration projects. In 2002 the Tualatin River Watershed Council (TRWC or Council) was selected by a multi-agency committee to formulate a habitat restoration plan in the Lower Gales Creek Sub-basin. Reclamation contracted with the TRWC from 2005 to 2012 in order to implement restoration actions in Lower Gales Creek. In 2012, a Technical Oversight Committee recommended that the TRWC formulate a habitat restoration plan for the entire Gales Creek Sub-basin. Upon completion of the plan, work on instream habitat improvements can be implemented throughout this sub-basin. In 2013, Reclamation determined that financial assistance was the appropriate business instrument to fund habitat enhancement activities associated with the Tualatin Project. During 2013 through April 2015, TRWC submitted scopes of work through the financial assistance process that were approved by BOR.

Update and report on the TRWC 2013-15 scope of work activities:

- Implementation of a creek road decommissioning along main stem Gales Creek (III.A. in 2013-14 TRWC scope of work and 2013-14 TRWC modification).
Update: The road-decommissioning project has been completed and the decommissioned area has been planted with native plants.

- Commencement and completion of Gales Creek sub-basin restoration action planning, including review of current data and identification of data gaps; obtain additional data collection necessary for limiting factors analysis; a limiting factors analysis, reach scale identification of restoration action, and project prioritization and restoration plans. (III.B [i] in the 2013-14 TRWC scope of work and as III.B. [i] (a-d) in 2013-14 TRWC modification). *Update:* The Gales Creek sub-basin restoration action plan has been completed.

- Rapid Bio-Assay (RBA) used snorkel surveys to obtain baseline data for winter steelhead trout, cut-throat trout and Coho salmon in 138.52 stream miles; the BOR funded portion of this work included 84.71 stream miles of Gales Creek, McKay and Upper Tualatin sub-basins stream reaches; the landowner contact information for all of 138.52 stream miles; a database with the information and an analysis of the baseline data provided in a final report and public presentation.

The Clean Water Services portion of the work paid for 53.81 miles of surveying, and the associated database, final report and public presentation for those miles. (III.B [ii] in 2013-14 TRWC scope of work and modification) *Update:* Data and analysis from the 2013 Tualatin Basin RBA was used in the Gales Creek Restoration Action Plan to identify projects. The final report and presentation along with a map are located on the TRWC website for review by Tualatin Basin residents.

- Conducted baseline-monitoring for trends information through funding of Portland State University Student Watershed Research Project; (III.C. in 2013 TRWC scope of work and modification) *Update:* Baseline monitoring occurred during 2013-14; three onsite data collection visits occurred during October 2013, May and October 2014 with TRWC coordinator providing background information and assistance.
- Community involvement and education through planting, maintenance and monitoring activities at the Washington County owned property. (III.D. in 2013-14 TRWC scope of work and modification) *Update:* A site planting plan was completed and is being used to direct current and future activities. The site maintenance treatments for invasive plant species continued with two areas being prepared for planting. Community volunteers including Pacific University students participated in two planting work-days that installed approximately 260 plants and two invasive species English ivy removal work days.
- Continued building and developing community watershed awareness through community program activities and partnerships such as spawning survey training and results of the rapid bio-assessment surveys; (III.E. in 2013-14 TRWC scope of work and modification) *Update:* Community volunteers and landowners participated in the spawning survey training, performed surveys and shared results. Over 100 landowners attended the May 2014 presentation to learn the results of the 2013 Tualatin Basin Rapid Bio-assessment surveys.
- Presentation of a community update on Gales Creek projects and sub-basin restoration action planning that includes information on conditions, possible tours and future focuses; (III.E in TRWC 2013-14 scope of work and modification) *Update:* Gales Creek landowners invited to an April 7, 2015 meeting with TRWC and its Gales Creek Restoration Action Plan consultant to share data and analysis and to obtain input and ideas on practices and projects.
- Work with landowners and TRWC partners to identify locations that would improve in-stream habitat through projects such as large wood placement. (III.E. TRWC 2013-14 scope of work and modification) *Update:* Identified Gales Creek early action project landowners contacted about their interest in the concept of and participation in the restoration project; other landowners have contacted TRWC about potential restoration projects.

- Modification of the 2013-14 scope of work that included the funding of the final three steps for completion of the Gales Creek Restoration Action Plan. *Update:* Obtained approval of funding the completion of the Gales Creek Restoration Action Plan.

II. Scope of Work

The purpose of this proposal is to outline tasks and work to be performed with Bureau of Reclamation funding. The activities included in this proposal include:

- Design and permitting for a project at the Gales Creek and Clear Creek confluence that would reconnect a former channel, with intact gravels, to the floodplain. The project activities would include a) excavating a dike which would allow water to overtop and flow into the area; and b) installing wood to create deep scour. This project would address one of the limiting factors of providing temperature refugia for native fish. (Pricing proposal III.A)
- Riparian planting and maintenance at the Rippling Waters restoration site (the Washington County owned property); (Pricing proposal III.B.)
- TRWC oversight includes planning and conducting events, activities and doing community outreach and education. It also includes project oversight for the Gales Creek and Clear Creek confluence project and the Rippling Waters restoration project. It includes mileage, postage and supplies to support these activities. (Pricing proposal III.C)
- At a later date the TRWC will submit a scope of work for additional funding for implementation of the Gales Creek/Clear Creek confluence restoration (construction) project.

The TRWC Coordinator will coordinate and oversee the activities listed above and will be the link between streamside owners, community residents and the contractors performing the work. The TRWC Coordinator will also provide project oversight; inform and update TRWC and Bureau of Reclamation on the projects' progress; convene committee meetings as needed; review the contractors' products; and administer the Bureau of Reclamation grant.

Project Personnel

Bio-Surveys, LLC, is an aquatic consulting firm from Alsea, Oregon, that specializes in performing stream surveys and has also designed and implemented over 50 large wood placement and other instream projects. Steve Trask, Principal, has 23 years of experience as the senior fish biologist for his aquatic consulting firm. The firm has 23 years of experience on coastal and Willamette valley streams assessing complex habitats and their effect on salmonid and other native fish production. The firm utilizes the RBA method and has long term experienced surveyors performing the work.

Northwest Restoration Habitat, LLC, Michael Carlson, Principal, has performed work on watershed assessments and action plans and restoration planning, and project implementation. Michael will assist with invasive plant species treatment and planting activities at the Rippling Waters site.

Tualatin River Watershed Council (TRWC) will enter into an Assistance Agreement with the Bureau of Reclamation to implement projects outlined in this proposal.

Tualatin River Watershed Council Restoration Committee (the TRWC Restoration Committee) is composed of representatives from Oregon Dept. of Fish and Wildlife (stream restoration biologist and/or district biologist); Tualatin Soil and Water Conservation District; Natural Resources Conservation Service, Trout Unlimited; Tualatin Riverkeepers; Clean Water Services and other Council members and others with technical assistance serving on an “as needed” basis. These representatives provide the first level of technical review and act as a sounding board to the TRWC in implementing the TRWC Plan prior to presentations to the Project Oversight Committee.

The Project Oversight Committee is composed of representatives from Bureau of Reclamation; U.S. Fish and Wildlife Service; and the TRWC’s Restoration Committee. The Project Oversight Committee provides oversight and suggestions to TRWC as it implements the Gales Creek Restoration Action Plan.

III. Pricing Proposal

III. A. Gales Creek/Clear Creek Confluence – Floodplain Reconnection Project Phase 1: Project Development, Design and Permitting

Background: Clear Creek joints the Gales Creek main stem at river mile 10.6. The 2013 and 2014 rapid bio-assessments (RBA) surveys indicated that Clear Creek is one of the top three producers of salmonids within the Gales Creek watershed. The 2013 RBA final report states:

The confluence of Clear Creek exists within the temperature-limited reach of the Gales Creek main stem. The spatial location of Clear Creek identifies it as an important source of thermal refugia for juvenile salmonids during the summer temperature pinch period. The protection, conservation and enhancement of water quality parameters in Clear Creek are critical for maintaining system function for salmonids. The maintenance of its current contribution of cold water and high complexity stream habitat should be ranked highly on basin scale reviews of goals and objectives.

Very high fish densities in the first pool above the confluence of Gales Creek indicate the presence of a definitive upstream migration out of the main stem of Gales Creek. As Clear Creek climbs out of the influence of the Gales floodplain, a canyon pinch and a bedrock intrusion/cascade present a potential summer barrier to juvenile migration.

The 2013 and 2014 Gales Creek rapid bio-assessment surveys revealed a very cold and deep pool where many juvenile fish were found near the Clear Creek/Gales Creek confluence. In a more extensive look at this area, it was discovered that the deep depositions of gravel in the alluvial fan delivered to the floodplain of Gales Creek main

stem is also playing a critical role in the provision of cool hyporheic flows at this site. The cool water recharge available at the confluence site is functioning as critical thermal refugia for all salmonids during the summer pinch period flow regimes that exceed threshold limits for salmonid survival. A man-made dike just above the alluvial fan has kept the large terrace at the mouth of Clear Creek from flooding during winter storm events resulting in the loss of the historic channel matrix that formerly existed to on the floodplain.

The project objective is to develop and reconnect cold-water refugia on this broad floodplain terrace that has been isolated from its natural stream function by the existing manmade dike. The project would address the primary limiting factors for salmonids in Gales Creek (the abundance of functional summer rearing habitat as a function of elevated temperatures. In addition, the project removes a legacy structure located in the floodplain that reduces natural floodplain inundation and channel scour.

The proposed project activities would partially breach the existing dike to let high water events access over the floodplain terrace and create scour and pool development in the historic channel matrix. A culvert installation is required under an existing floodplain access road used by the landowner, which would be flooded when the dike is removed. In addition, the project would accelerate the process of scour by piloting new channel braids using an excavator and installing wood structures that will provide the scour element during peak flows. The results from these activities will be a connected series of channel braids on this large terrace that will have occasional deep scour pockets that tap in sub-surface hyporheic flows. Juvenile fish will sense this cold-water braid and seek it out for summer refugia similar to how juvenile fish are currently use the first pool above the confluence of Gales Creek and Clear Creek. The objective is to exponentially magnify the abundance of cold-water pool surface area on this terrace to increase summer rearing capacity.

The three landowners on whose property the project would be located have expressed interested in the project. TRWC has select pre-determined contractors and consultants for this design/build project.

Project Activities covered by this request would include

- Project outreach to project landowners, including developing landowner agreements
- Develop project concept design
- Obtain topographic survey needed to develop final design
- Final design development including construction plans and drawings
- Grant writing, submittal and award for additional funds to implement project
- Identification, preparation and submittal of required county, state and federal project permits
- Obtaining required project permits
- Obtain a portion of wood to be used for the project

Project outreach and preliminary concept design work will begin as soon as funding is available; all design work will be completed during 2016. Project permitting work will be completed in or before the summer of project implementation.

The following project activities are not included in the current scope of work but will be submitted for funding in a future proposal

- Fish salvage/channel dewatering
- Dike and channel excavation
- Load and haul disposal of fill from man-made dike
- Purchase and deliver culvert
- Culvert installation for landowner whose road was previously protected by the man-made dike
- Obtain and deliver large wood for wood structures that will create scour
- Large wood structure placement
- Spoils shaping and final grading
- Obtain, prepare site for and plant large western red cedar on floodplain with tree protection materials to provide future large wood recruitment for site
- Follow up on post project permitting and grant requirements
- Ongoing monitoring

The remaining cost to implement this project is estimated to about \$75,000.

III. A. Budget

Entity	Action	Cost 2015 (labor & materials)	Cost 2015 (fees)	Cost 2016 (labor & materials)	Total
Bio-Surveys, LLC	Project outreach and concept design (60 hours x \$85/hr.)	\$5,100			\$5,100
Grummel Engineering Topo Surveys	Develop topographical survey of project areas need for project design	\$1,500			\$1,500
Grummel Engineering Final Design & Drafting	Develop final design, construction drawings, HEC-RAS calculations, assist with permitting	\$8,000			\$8,000
Washington County Planning	Pre-app conference (\$264); Type II floodplain alteration application submittal fees (\$2799)		\$3,063		\$3,063
Washington County Building	Grading Plan permit fee		\$1,853		\$1,853
Oregon Dept. of Env. Quality	NPDES 1200-c permit (disturbance one acre or more)		\$1,725		\$1,725
Clean Water Services	Obtain fish logs for project			\$8,325	\$8,325
Total		\$14,600	\$6,641	\$8,325	\$29,566

III. B. Contracted Invasive Species Treatment at Rippling Waters (Maintenance for Invasive Plant Species Removal and Planting Project Plan)

The Washington County owned property, Rippling Waters (RW) site needs continuing maintenance activities in order for the native shrubs and trees to continue to thrive and provide fish and wildlife habitat and stream canopy. Maintenance activities include Himalayan blackberry retreatment, mowing canary reed grass and continuing English ivy removal.

Proposed use of BOR funds during 2015, 2016 and 2017 will be for continuing maintenance and mowing and for assistance in plant selection and placement. Because the money will only be available for one treatment in 2015, additional treatments will be necessary in following years to get back on track with the desired level of maintenance.

Planting management and obtaining native shrubs and trees will be through other sources. Plantings will be with community volunteers through volunteer workdays.

III. B. Budget

Activity	Service Provider	Measure	Rate	Units 2015	Cost 2015	Units 2016	Cost 2016	Units 2017	Cost 2017	Total
RW maintenance – reed canary grass and plantings	Habitat Restoration NW	Treatment	\$540	1	\$540	6	\$3,240	5	\$2,700	\$6,480
RW maintenance – Himalayan blackberry	Habitat Restoration NW / Treecology	Treatment	\$475	1	\$475	3	\$1,425	2	\$950	\$2,850
Planting selection and placement	Habitat Restoration NW	Hours	\$65	12	\$780	0	\$0	12	\$780	\$1,560
Total					\$1,795		\$4,665		\$4,430	\$10,890

III. C. Project Oversight, Education and Outreach

This includes time that the TRWC coordinator spends in project oversight such as event and volunteer management and project oversight. It is anticipated that in 2015, 2016, and 2017 30 hours of project management will be involved with the Rippling Waters riparian restoration associated with Activity III B. Project management activities for the Rippling Waters riparian restoration work includes monitoring site conditions in order to determine what volunteer activities are needed, coordinating with the Pacific University work study student and other community volunteers to do the work; educating other organizations and groups about the benefits Rippling Waters provides and encouraging them to form new partnerships with TRWC. It is anticipated that in 2015, 2016 and 2017 55 hours will be involved with the Clear Creek/Gales Creek confluence project (Activity IIIA) including permitting, grant writing, preparation of landowner agreements, coordination with consultants, contractors, and landowners regarding project implementation.

III. C. Budget

Entity	Measure	Rate	Units	Cost 2015	Cost 2016	Cost 2017	Total
TRWC Coordinator Salary	Hours	\$27.82	93 year 1 and 85 years 2 &3	\$2,587	\$2,365	\$2,365	\$7,317
Coordinator Fringe Benefits	Hours	\$4.18	93 year 1 and 85 years 2 &3	\$389	\$355	\$355	1,099
Outreach	Miles	\$0.575	1139 year 1 and 1150 years 2 & 3	\$655	\$661	\$661	\$1,977
Supplies and Services	Each	\$297	1/year	\$297	\$297	\$297	\$891
Total				\$3,928	\$3,678	\$3,678	\$11,284

The TRWC coordinator salary and fringe benefits (medical insurance) are calculated by taking the annual rate and dividing by 2080 to get the hourly rate. The remainder of the salary and benefits is paid through other funding sources.

TRWC uses the mileage rate provided to it by the Oregon Watershed Enhancement Board. The mileage is used for project oversight, community outreach and education.

The cost of materials, copying, and postage is for community based watershed activities such as classes, programs and tours and site visits with landowners in order to develop types of projects identified in the Gales Creek sub-basin restoration action plan. Outreach may also include tours of in process or implemented Gales Creek restoration projects.

III. D. Indirect Costs

The Council currently has a provisional indirect cost rate of 7.87% for the period 7-2014 to 6-2015 and a provision indirect cost rate of 11.26% for the time period 7-2015 to 6-2016. The Council has a final indirect cost rate of 11.26% for 7-2013 to 6-2014 and expects further indirect cost rates to be similar to the 11.26% rate. Since the funds will not be available until after July 2015, the 11.26% rate was used for all three years.

III D. Budget

Rate	2015 Basis	2015 Cost	2016 Basis	2016 Cost	2017 Basis	2017 Cost	Total
11.26%	\$26,964	\$3,036	\$16,668	\$1,877	\$8,108	\$913	\$5,826

III. E. Overall Proposal Budget

Project	Contracted Services & Materials	Other: Permit Fees; Mileage; Etc.		2015	2016	2017	Total
III A. Gales Creek/Clear Creek Confluence Floodplain Reconnection Project - Design and Permitting	\$22,925	\$6,641		\$21,241	\$8,325	\$0	\$29,566
III B. Contracted Invasive Species Treatments & Planting Plan	\$10,890	\$0		\$1,795	\$4,665	\$4,430	\$10,890
III C. TRWC Project oversight, outreach, education, materials, postage, and mileage	\$9,307	\$1,977		\$3,928	\$3,678	\$3,678	\$11,284
Sub Total	\$43,122	\$8,618		\$26,964	\$16,668	\$8,108	\$51,740
III D. Indirect Cost Rate	\$4,856	\$970		\$3,036	\$1,877	\$913	\$5,826
Totals	\$47,978	\$9,588		\$30,000	\$18,545	\$9,021	\$57,566

IV. Representations and Certifications

The Council's taxpayer ID number is 93-1286280.

The Council is a corporate entity (tax-exempt) 501c3.

The Council represents, as part of its offer, that it is not a small business concern.

V. Council's background and experience.

The Council received Oregon Watershed Enhancement Board watershed council support funds beginning in 1997 and continuing through the present. The Council has been working with the Bureau of Reclamation since 2002. Listed below are Council projects and contracts.

Projects

Project Name: Tualatin River Watershed Analyses

Work description: Prepare watershed analyses for watersheds containing BLM lands. These included the Dairy-McKay and Upper Tualatin-Scoggins watersheds, as well as the McFee Creek sub-watershed area. With subsequent OWEB funding, the McFee Creek effort was incorporated into the Middle Tualatin-Rock Creek watershed analysis (mentioned below).

Contract number, date, and type: 1422H952-A98-3003, May 14, 1998, cooperative agreement.

Acquiring Government Agency: USDI Bureau of Land Management, Tillamook Resource Area, P.O. Box 404, Tillamook OR 97141

Initial and Final Contract Amount: \$25,000 was originally allotted for production of the Dairy-McKay Watershed Analysis. Upon approval of the watershed analysis report, the amount was increased to \$42,700 to complete the remaining reports.

Problems encountered: None

Contact Person: Katrina Symons (503) 815-1100

Project Name: [None beyond the contract number]

Work description: Provide supplementary funding for production of the Upper Tualatin-Scoggins Watershed Analysis. (Additionally, this project provided for material to improve the data resources of the Tualatin River Watershed Council and the Tualatin Valley Irrigation District.)

Contract number, date, and type: 1425-8-FC-10-04380, August 7, 1998, cooperative agreement.

Acquiring Government Agency: USDI Bureau of Reclamation, 1150 N. Curtis Rd., Suite 100, Boise ID 83706-1234

Initial and Final Contract Amount: \$24,000, of which \$10,000 was allocated to the watershed analysis. This was both the initial and final amount.

Problems encountered: None

Contact Person: Mike Beaty (208) 378-5172 or J. Eric Glover (503) 872-2795

Project Name: Assessment of Middle Tualatin-Rock Creek and Lower Tualatin Watersheds

Work description: Produce watershed analyses for the Middle Tualatin-Rock Creek and Lower Tualatin watersheds.

Contract number, date, and type: 99-381, January 21, 2000, Grant

Acquiring Government Agency: Oregon Watershed Enhancement Board, 775 Summer Street NE, Suite 360, Salem OR 97301-1290

Initial and Final Contract Amount: Initial: \$78,274; Final: \$76,459

2015 and partial 2016 and 2017 TRWC proposal

Problems encountered: NRCS altered our rent structure, requiring us to request a financial restructuring of the grant. We encountered delays with the typesetter and the printer, which caused us to request a 1.5-month extension on the delivery date for the Lower Tualatin Watershed Analysis Report. Both requests were granted without difficulty.

Contact Person: Vivienne Torgeson, (503) 986-0185

Project Name: Tualatin River Watershed Action Plan

Work Description: Prepare a plan to identify actions to maintain, improve, and restore watershed health. This was part of a grant to maintain annual operations of the TRWC.

Contract number, date, and type: 97-189, August 19, 1997, grant

Acquiring Government Agency: Governor's Watershed Enhancement Board (now Oregon Watershed Enhancement Board), 775 Summer Street NE, Suite 360, Salem OR 97301-1290

Initial and final contract amount: Initial \$68,132, Final \$68,132

Contact Person: Vivienne Torgeson, (503) 986-0185

Project Name: Tualatin Fish Mitigation

Work Description: Conduct a limiting factors analysis and a five year restoration plan for a priority stream reach and associated area in the Tualatin sub-basin.

Contract number, date and type: Request #02SQ100080, 1/28/2002 (date); solicitation: Request for Quotation dated 01/08/2002

Acquiring Government Agency: USDI Bureau of Reclamation, 1150 N. Curtis Rd., Suite 100, Boise ID 83706-1234

Initial and Final Contract Amount: Initial: \$22,000.00; Final: \$17,280.68

Problems encountered:

Contact Person: Dave Nelson, 503-872-2801

Project Name: Lower Gales Creek Habitat Enhancement

Work Description: Implement Lower Gales Creek Habitat Enhancement Plan. Proposal includes geomorphic assessment study, large wood debris survey, knotweed and English ivy mapping survey, community outreach activities and events.

Contract number, date and type: Contract No. 05CS101574, 7/01/2005 (date);

Modifications under 05CS101574/000, 2006, 2009;

Solicitation No. 04SP107570, 3/09/2005 (date).

Acquiring Government Agency: USDI Bureau of Reclamation, 1150 N. Curtis Rd., Suite 100, Boise ID 83706-1234

Initial and Final Contract and Modification Amounts: Initial: \$90,000; Final: \$180,000

Contact Person: Dave Nelson, 503-872-2801

Project name: West Fork Dairy Creek Culvert Removal and Stream Enhancement Design

Work Description: Design for removal of two culverts and for replacement of a culvert, stream survey inventory resulting in recommendations for placement of large wood debris. Outcomes will provide fish passage and enhancement stream habitat for federally listed winter steelhead trout and cutthroat trout; improvement in water quality in West

Fork Dairy Creek headwater streams; and an educational resource for park visitors and watershed residents highlighting a project that improves watershed health.

Grant: Oregon Watershed Enhancement Board Technical Assistance Grant, 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$42,288. Grant total: \$28,196.

Status: Design and Stream Survey and Reports complete.

Project Name: West Fork Dairy Creek Restoration Project.

Work Description: Remove two obsolete road fills and culverts on tributary to and main stem of West Fork Dairy Creek. Place 208 logs in 1.1 mile stream reach of West Fork Dairy Creek using heavy equipment and helicopter to increase pool structures for use by native fish. Re-vegetate riparian areas adjacent to two streams and fill areas.

Grant: Oregon Watershed Enhancement Board Restoration Grant (207-306), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$147,638. Grant total: \$78,489.

Status: Completed Fall 2007-Winter 2008. Ongoing monitoring and maintenance.

Project name: Murtaugh Creek Fish Passage

Work description: Obtain design for fish passage/roughened chute, secure necessary permits, and construct five boulder weirs for a natural stream profile. Re-vegetate adjacent riparian area with native plants to control erosion, provide future shade for stream. Outcome will provide approximately two additional miles for spawning and rearing for juvenile and adult winter steelhead trout and cutthroat trout.

Grants: 1) Salmon Habitat Fund, administered by the Nature Conservancy, 821 SE 14th Avenue, Portland, OR; (TNC contact Leslie Bach, 503-802-8146) 2) Oregon Department of Fish and Wildlife Landowner Incentive Program, 3406 NE Cherry Avenue NE, Salem, OR 97303 (ODFW contact Karen Buell, 503 947-6306) Agreement Nos. 010-60575-759051-00 and 010-8263-S-Wildlife. 3) Oregon Department of Fish and Wildlife, Fish Screening and Passage Program, 3406 NE Cherry Avenue NE, Salem, OR 97303 (ODFW contact, Bob Hair, 541-296-8026), Grant No. P-02-0046.

Project Cost: \$88,960. Grants total: \$73,050

Status: Project implemented in fall 2008; now in monitoring/maintenance phase.

Project Name: Gales Creek Sahnaw Property Enhancement Project.

Work Description: The project which will improve in-stream habitat, provide additional floodplain capacity and improve the riparian areas. The work includes removing a farm road from the floodplain, increasing floodplain capacity including creation of four ponds for native amphibians, construction and anchoring six habitat structures on the floodplain that increase pools and scour for native fish; and through Tualatin SWCD's participation, treatment of invasive weeds and planting of native plants and monitoring and maintaining a 2.5 acre riparian area.

Grant: Oregon Watershed Enhancement Board Restoration Grant (208-3079), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$108,845. Grant total: \$73,986.

Status: Permits obtained fall 2008 and project implemented in summer 2009, planted in 2010 with maintenance and monitoring continuing.

Project Name: North Fork Gales Large Wood Placement Project

Work Description: A one mile stream reach on the North Fork Gales Creek lacked channel complexity for spawning and rearing habitat for native winter steelhead trout, non-native Coho salmon, Pacific lamprey and other native fish. The project placed up to 100 logs in the stream to create pools and scour. The logs and trees were contributed to the project by the landowner partners. Community volunteers planted approximately three acres with native shrubs and trees. Pre- and post-project habitat surveys were performed evaluating the project outcomes.

Grant: Oregon Watershed Enhancement Board Restoration Grant (209-3062), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$56,605. Grant total: \$39,875.

Status: Project implemented in September 2009 with planting during February 2010 with maintenance and monitoring continuing.

Project Name: Upper Gales Large Wood Placement Project

Work Description: Two stream reaches on upper main stem Gales Creek lacks channel complexity for spawning and rearing habitat for native winter steelhead trout, non-native Coho salmon, Pacific lamprey and other native fish. The project placed a) up to 105 whole trees and/or logs in 10 sites in a lower one mile stream reach (below the campground); and b) up to 67 whole trees and/or logs in seven sites in a 0.3 mile upper stream reach (above the campground). A contracted crew planted several acres disturbed by heavy equipment to place the trees with native shrubs and trees. Pre- and post-project habitat surveys were performed evaluating the project outcomes.

Grant: Oregon Watershed Enhancement Board Restoration Grant (210-3059), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$112,535.13. Grant total: \$60,175.13

Status: Project was implemented in September 2010 (lower reach) with planting during winter 2011 and September 2011 (upper reach) with planting during winter 2012 with maintenance and monitoring beginning in 2013.

Project Name: Design for Bateman Creek Culverts Replacement Project

Work Description: Three existing culverted road crossings on Bateman Creek, a tributary to Gales Creek, are barriers to fish passage for key salmonid species such as steelhead and coho. In addition, the crossing are undersized to effectively pass a 50-year design flow resulting in aggradation upstream and risks for failure of the entire crossing. The technical assistance activity designed three new crossings to replace the existing undersized, perched culverts to provide fish passage for all life stages and species.

Grant: Oregon Watershed Enhancement Board Technical Assistance Grant (211-3021), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$38,525.70. Grant total: \$30,225.70

Status: Project was completed in June 2012, with prepared design and plans for three stream crossings.

Project Name: Clear Creek Large Wood Placement Project

Work Description: The project is located in a one mile stream reach of Clear Creek in the City of Forest Grover ownership portion of the watershed, a tributary of Gales Creek. Watershed problems include 1) lack of channel complexity for spawning and rearing habitat for native winter steelhead trout, non-native Coho salmon, Pacific lamprey and other native fish; 2) passage barrier for juvenile fish due to an obsolete concrete stream structure; and 3) passage difficulty due to lack of in stream structure for migratory adult fish to more easily access Clear Creek fish ladder at intake structure. The project work placed 86 logs at 14 stream locations to create pools and scour; 2) removed the obsolete concrete structure from the stream; and 3) developed a small graded riffle at the Clear Creek intake structure to provide easier access for migratory adults. Prior to project commencement, a rapid bio-assessment was performed in the one mile stream reach; a follow up survey will occur in late 2014.

Grant: Oregon Watershed Enhancement Board Restoration Grant (211-3050), 775 Summer Street NE, #360, Salem, OR 97301-1290 (OWEB Contact, Wendy Hudson, 503-986-0061)

Project Cost: \$81,439. Grant total: \$55,269

Status: Project was implemented in September 2012 with post project monitoring to occur in fall 2015 with additional monitoring through 2019.

Project Name: Dairy-McKay Watershed Private Lands Fish Passage Barrier Assessment and Prioritization Project

Work Description: The project uses the methodology developed by Washington County Department of Land Use and Transportation (WCDLUT) (and previously funded by BLM Title II monies) to identify, assess, and prioritize privately owned fish passage barriers in the Dairy-McKay watershed. This assessment and prioritization builds on work completed by BLM and WCDLUT in this watershed and will identify high priority private barriers for replacement and/or modification, resulting in future partnerships with landowners and funders to restore and improve fish passage.

The project is divided into three phases. The Council, using LIDAR and GIS, first identified likely barriers on private lands and made contact with land owners. After obtaining permission for access, trained staff assessed and evaluated private barriers using the established WCDLUT forms and methodology that was previously developed using BLM Title II funds. The identified barriers will then be prioritized based on the collected data including habitat quantity and quality, the barrier's proximity to Essential Salmonid Habitat (ESH) streams, and the severity of the barrier. The assessment and prioritization will be shared with BLM, Washington County, and ODFW. The identified

barriers will be included in ODFW's Fish Passage Barriers dataset. Assessment and prioritization efforts will be divided into the sub-watersheds of McKay Creek, East Fork Dairy Creek, and West Fork Dairy Creek, depending on available funding

Grant: L12AC20485, BLM OR-State Office Procurement Management Branch, 333 SW First Avenue, Portland, OR 97204 (Contact Matt Walker, PO, 503-815-1145)

Project Cost: \$13,950

Grant Total: \$10,973

Status: Identified 1623 potential crossings using Lidar and GIS, but narrowed list to approximately 167 crossings. Contacted 70 private landowners by mail, phone or email. Council member provided culvert survey training. Interns and others surveyed 9 culverts; beginning review of surveyed culvert information with plan to continue additional survey work in summer 2014.

Grant: R13AP13008, Bureau of Reclamation, Columbia-Cascades Area Office, 1917 Marsh Rd., Yakima, WA 98901 (Contact Arden Thomas, PO, 509.575.5848 x298)

Project Cost: \$110,823

Grant Total: \$110,823

Status: Grant activities included a .04 acre private road decommissioning and planting of area in native plants; landowner outreach and rapid bio-assessment of 84.71 miles of stream reaches located in the upper Tualatin River, Gales Creek and McKay Creek watersheds, (products include landowner contact database, rapid bio-assessment database, final analysis and report, and public presentation); Gales Creek Restoration Action Planning (product includes Gales Creek Restoration Action Plan); ongoing restoration, monitoring and maintenance of a Washington County owned natural area located on Gales Creek; long term trends monitoring and education through the Portland State University Student Watershed Research Project; ongoing Gales Creek landowner outreach and communication and TRWC indirect cost rate.

Project Name: 2013-14 and 2014-15 Tualatin Basin Rapid Bio-Assessments

Grant: Clean Water Services, 2550 SW Hillsboro Highway, Hillsboro, OR 97123.
(Contact Rich Hunter, 503-681-3600)

Project Cost: \$49,775

Grant Total: \$49,775

Status: 2013 RBA work included rapid bio-assessment of 53.47 miles in the East Fork and West Fork Dairy Creek watersheds (product included rapid bio-assessment database, final analysis and report and public presentation). 2014 RBA work include rapid bio-assessment of 91.8 miles in Gales Creek, East Fork Dairy Creek, McFee Creek, Chicken Creek and upper Rock Creek watersheds. (Products include landowner contact database, rapid bio-assessment database, final analysis and report, and public presentation.)