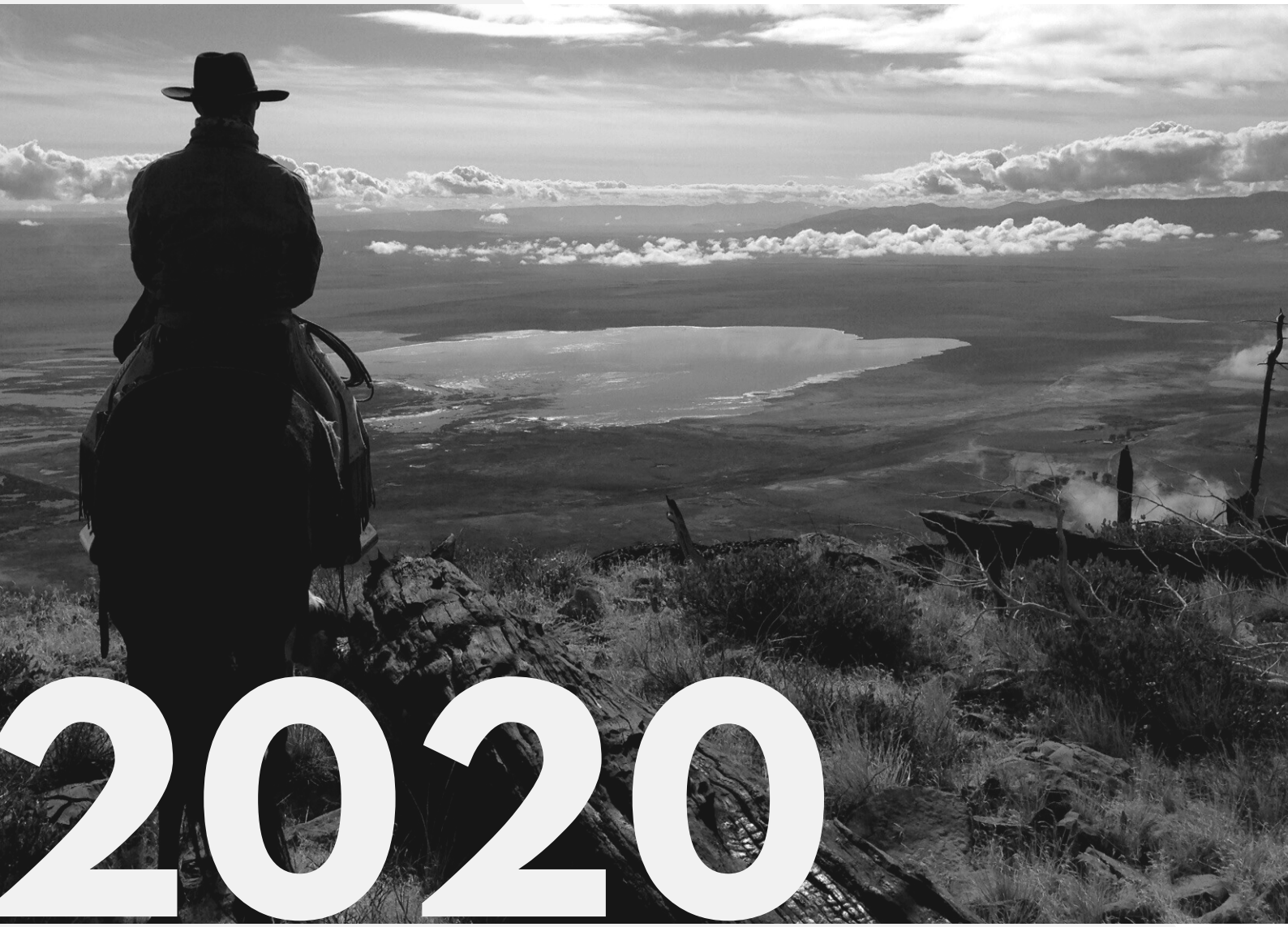
LAKE COUNTY UMBRELLA WATERSHED COUNCIL

ANNUAL REPORT



Our Story

Established in the mid 1990s, five independent Watershed Councils were formed to represent each distinct watershed in Lake County. The Councils (made up of local residents) assisted landowners with watershed projects to improve and promote watershed health. Over time, the Councils merged to become the Lake County Umbrella Watershed Council. With the aid of many partners, the Council plans, secures grant funding, implements, and monitors watershed restoration and enhancement projects.

Our Mission

The Lake County Umbrella Watershed Council strives to promote cooperative watershed restoration across jurisdictional boundaries, to enhance Lake County's watersheds for present and future generations.

Our Lake County Home

Lake County is made up of multiple, diverse watersheds, each of which have characteristics the State of Oregon recognizes as having priority significance. These characteristics provide the foundation for our restoration and enhancement efforts. Understanding and appreciating our working landscape in Lake County, we help design and implement projects that are beneficial to the land, water, and wildlife...but to the landowner as well. We focus on Ridgetop to Ridgetop Restoration.

COUNCIL & STAFF

Tom O'Leary- Chair, Silver Lake Community Watershed

Pete Talbott- Secretary/Treasurer, Goose Lake Watershed

John Taylor- Vice Chair, Warner Valley Watershed

Roger Linton- Crooked Creek Watershed

Matt Withers- Upper Sycan Watershed

Jack O'Leary- Chewaucan Watershed

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LCUWC
PO Box 848
Lakeview, OR 97636

Visit us at www.lakecountywsc.com

Lake County Watershed COUNCILS

You can now find us on Facebook, Instagram, and on our Website!

TECHNICAL ASSISTANCE MEMBERS & FUNDING PARTNERS

Federal

- Bureau of Land Management
- US Forest Service
- US Fish & Wildlife
- Desert Fish Habitat Partnership
- Western Native Trout Initiative

State

- Oregon Watershed Enhancement Board
- Oregon Department of Fish & Wildlife
- Oregon Department of Transportation
- Oregon Department of Forestry

Local

- Lakeview Natural Resource Conservation Service
- Lakeview Soil & Water Conservation District
- Oregon State University Extension
- Lake County Resource Initiative
- Klamath-Lake Forest Health Partnership

Other/Private

- Open Rivers Initiative

Ridgetop to Ridgetop Watershed Management

Ridgetop to Ridgetop planning starts in the upland timber stands through forest thinning and works its way through the landscape to meadows, streams, and lakes below where a variety of restoration techniques can improve watershed conditions, benefitting wildlife, aquatic species, and working landscapes.

Lake County is a unique high desert system that benefits multiple resources. Many of Lake County's restoration efforts are connected to resource priorities established by state organizations like the Oregon Watershed Enhancement Board (OWEB), who provide project funding to improve resource conditions on private land.

Forest Health & Juniper Thinning

Juniper expansion has shown a negative impact on forage production, wildlife habitat, fire cycles, and overall watershed functions. Treatment options are available to reverse this trend. Forest health projects are NOT just limited to juniper removal. Treatment can include pine and aspen stand enhancement as well.

Riparian Area Management

The Lake County Umbrella Watershed Council works with landowners to implement practical, but efficient riparian area restoration strategies. These strategies allow operators to sustain a productive forage community for livestock feed without compromising the riparian area.

Stream Restoration

The health of our streams is a direct reflection of the health of our land. The Lake County Umbrella Watershed Council is committed to helping landowners improve watershed function and stream channel health. Streams connect the mountains to the valleys, the headwaters to the lakes, and the people to the land.

Fish Passage & Screening

Maintaining water resources for our agriculture community and native fish populations is important to the Lake County Umbrella Watershed Council. Working cooperatively with landowners and agency partners can lead to a win-win scenario where efficient irrigation and watering systems are implemented, while providing fish passage and quality habitat for native fish species.

Continued...

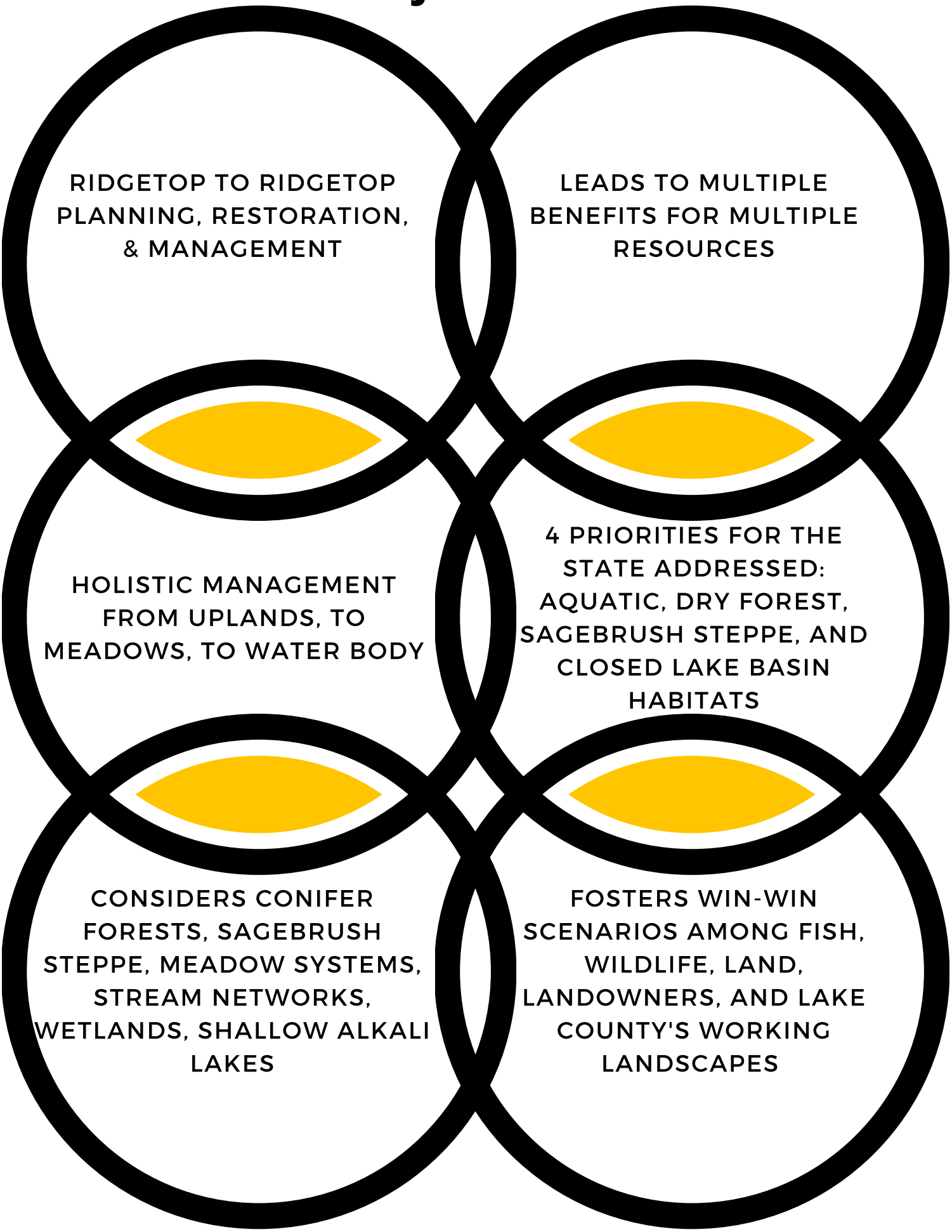
Education & Outreach

The Council provides education activities for youth and adults throughout Lake County. We connect youth and landowners to experts in the field to provide information about natural resources, watershed function, restoration techniques, and more.

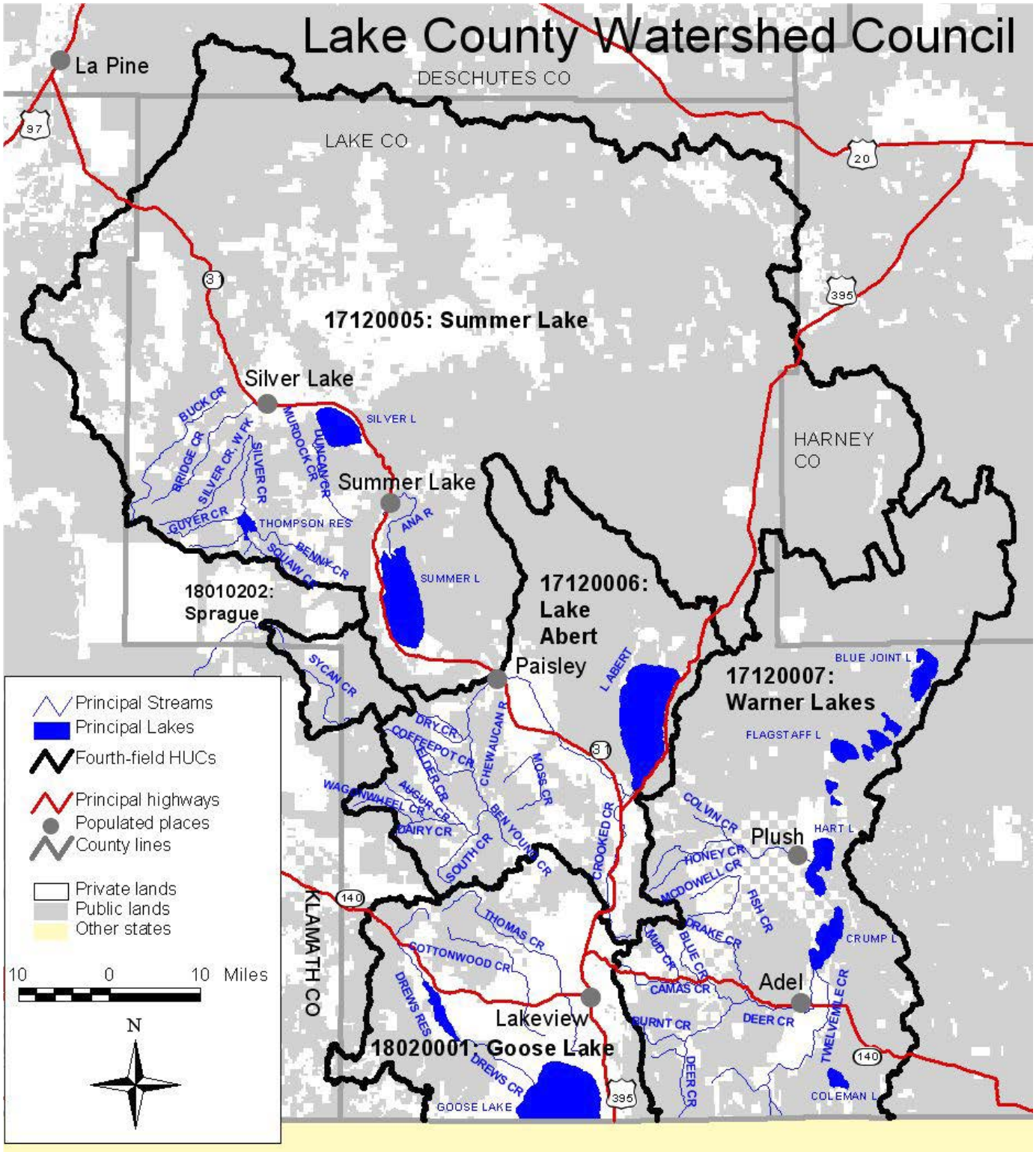
Consultation

Lake County Umbrella Watershed Council Project Managers can help landowners develop a project and connect them to valuable resources. Whether someone already has ideas about his or her land or not, the first step in any watershed restoration or enhancement project is consultation. We are happy to help!

Ridgetop to Ridgetop: One Major Connection

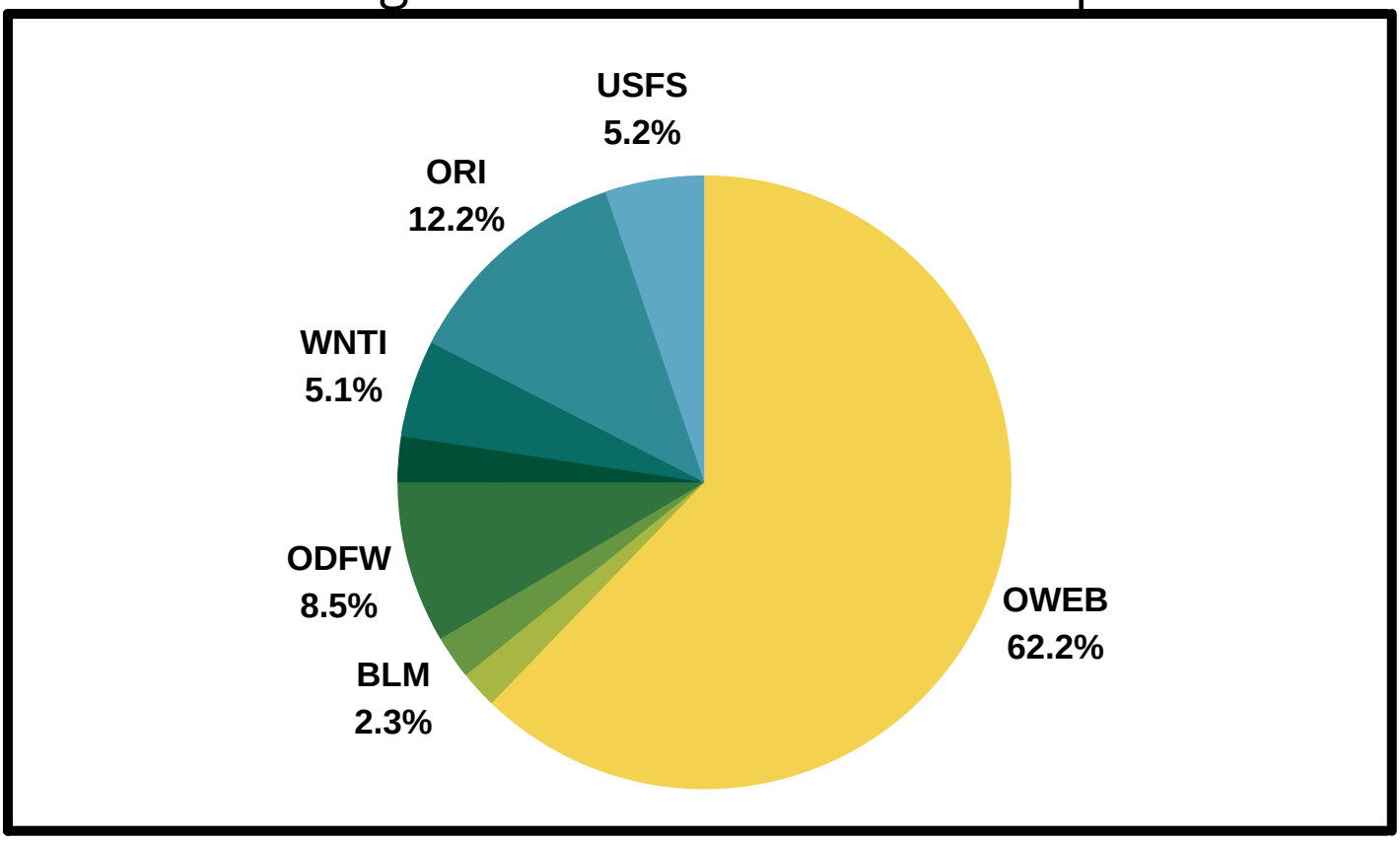


Lake County Watersheds

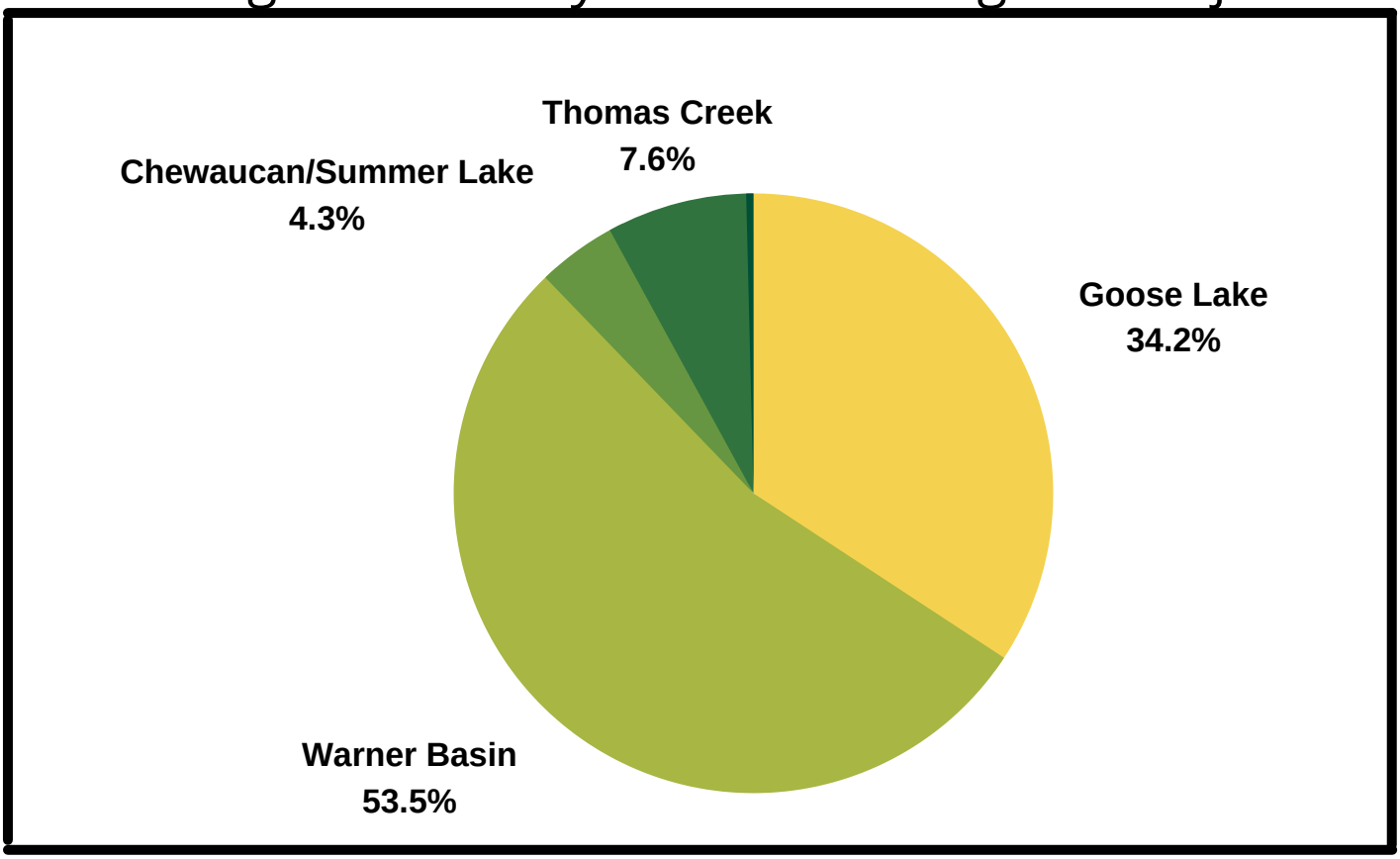


2020 FUNDING

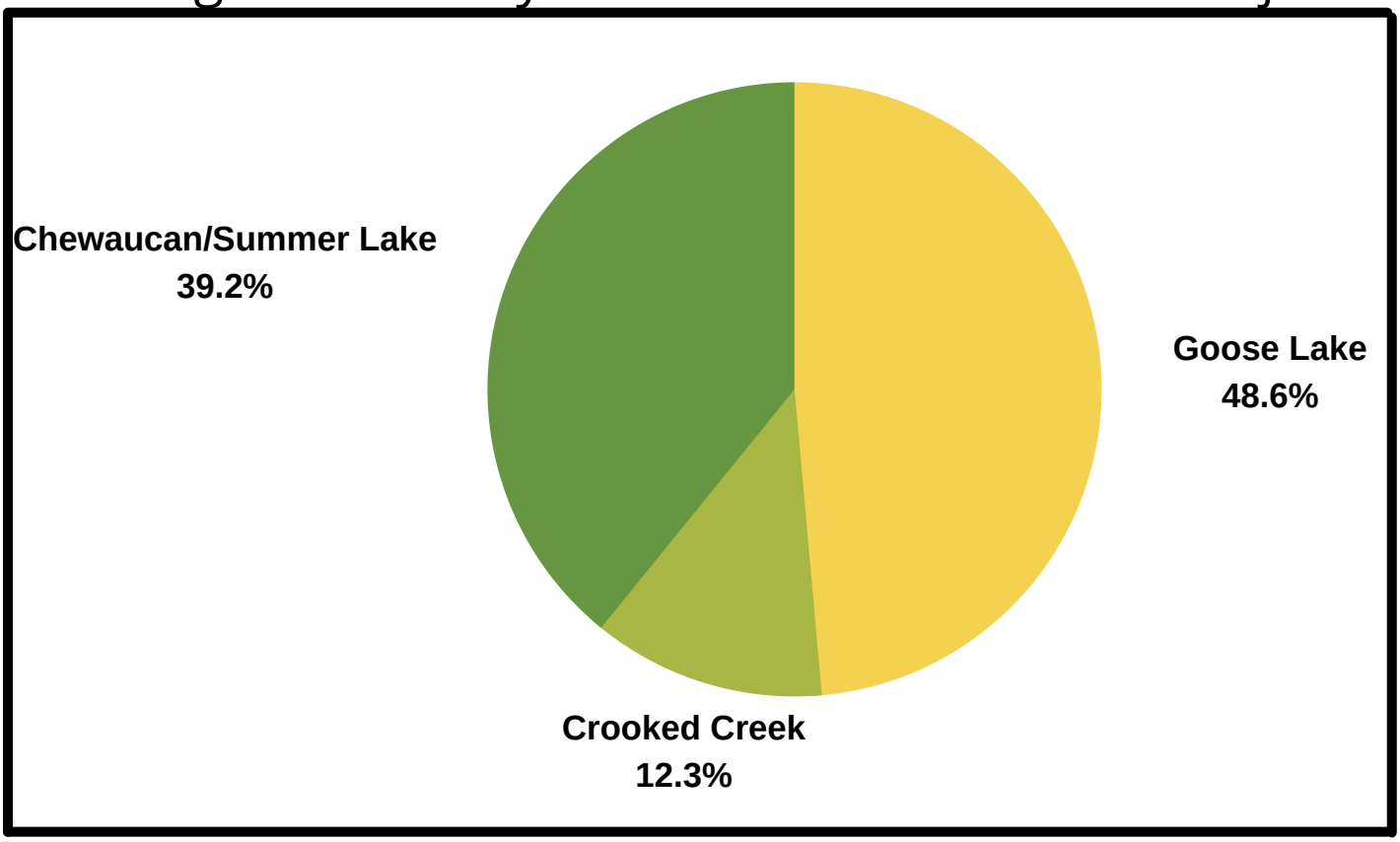
Funding Sources of 2020 Dollars Spent



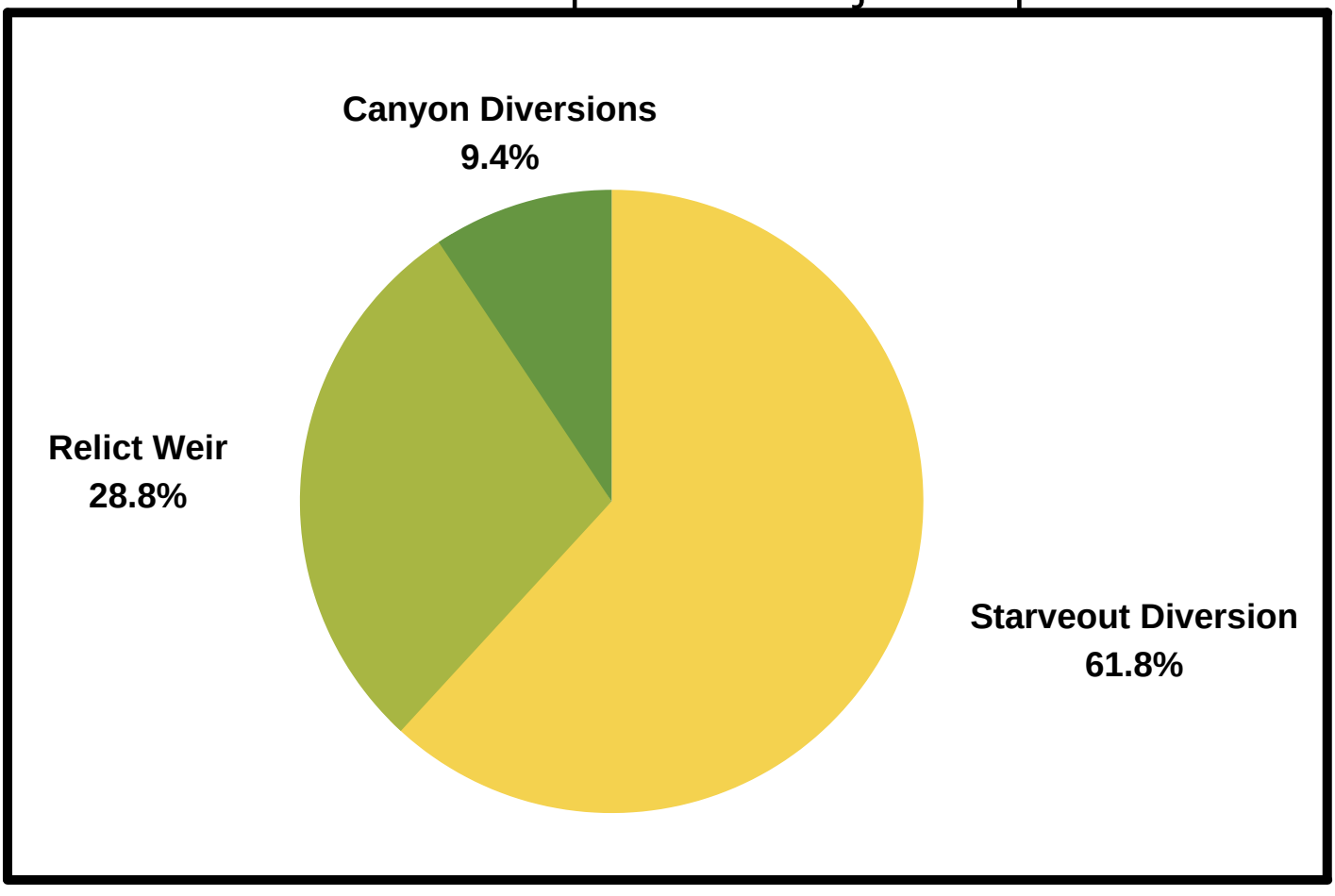
Funding Awarded by Watershed-Regular Projects



Funding Awarded by Watershed-Small Grant Projects



Warner Basin FIP Deep Creek Project Expense 2020



Federal Project $ Spent:
$305,407.61

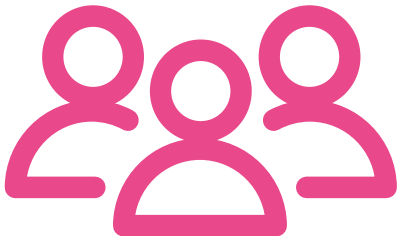
State Project $ Spent:
$1,009,439.12

Private Project $ Spent:
$159,526.76

Stream & Riparian $ Allocation:
$875,143.85

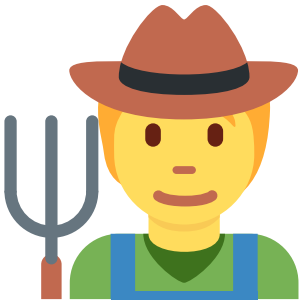
Upland & Forest Health $ Allocation:
$361,454.17

Project Mngmt. $ Spent:
$51,195.82
(3.2% of total project $)



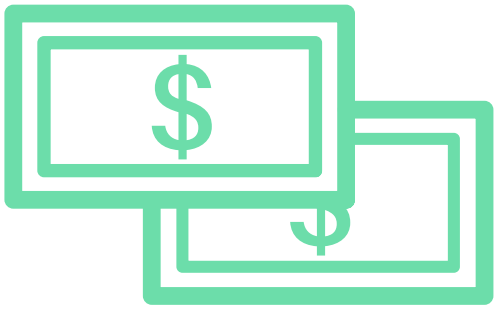
Contracted Staff Wages & Travel:
$97,188.75

Total Operating $:
11,395.67 (taxes, insurance, dues/fees, supplies, rent)



Landowners Served:
Approx. 236
Landowners Contacted:
Approx. 4,000

Contractors Hired:
13



2021 Secured Funding:
$1,351,231.51

*Due to the economic impact of the COVID-19 Pandemic, some statistics may not represent a typical year. Statistics are as of 12/27/2020.

2020 PROJECTS

Planning & Design

- Thomas Creek Fish Passage
- Thomas Creek & Tributaries Stream Restoration & Fish Passage
- Muddy Creek Fish Passage & Habitat Enhancement
- Cottonwood Creek Reconnaissaince & Design
- Deep Creek Diversions Engineering & Design
- Brattain Fire Response (Awarded)
- Yocum Valley Upland Enhancement Project (Small Grant)

Implementation

- Crooked Creek Riparian Fence (Completed)
- Deep Creek Starveout Diversion Fish Passage (Completed)
- Deep Creek Relict Weir Fish Passage (Completed)
- Thomas Creek Mapping & Inventory (CompleteEarly 2021)
- North Warner Forest Health Phase II
- Forest Health Engagement
- Parker Creek Upland & Aspen Enhancement (Small Grant, Completed)
- Goose Lake Basin Wildlife & Upland Enhancement (Small Grant, Completed)
- Hadley Creek Upland & Riparian Enhancement (Small Grant)
- Ecotrust Upland Enhancement (Small Grant)
- Drews Gap Upland Enhancement (Small Grant)

Monitoring

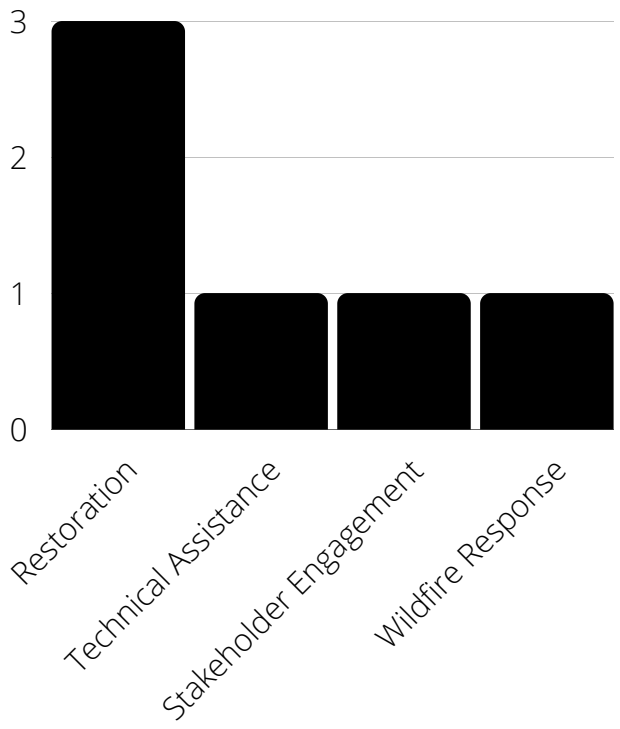
- Warner Sucker Fish Passage Monitoring (Spring 2021)
- Silver Creek Riparian
- Upper Thomas Creek Restoration Phase III
- Paisley Town Weir Fish Screen
- Houret Ranch Fish Passage
- Chewaucan River Streambank Stabilization
- Elder Creek Fish Passage

UPLANDS

Today our forests in Lake County are in jeopardy. Insect infestations, overstocked Western juniper, and an altered fire regime have all led to heavy fuel loads. A single lightning strike today has a greater probability of creating a catastrophic wildfire that will burn hotter and more intensely than historical natural fire.

Private landowners, along with LCUWC, state, and federal entities must work together across jurisdictional boundaries to effect change on a landscape level.

In 2020 the LCUWC and their partners have worked to inventory and map current conditions and potential fire risk. Implement forest thinning, juniper removal, and brush clearing to improve forest health and assisted landowners with developing land management plans to continue the maintenance of treated areas into the future.



2020 Upland Projects

1442

Number of Lake County Upland acres treated in 2020

THOMAS CREEK FOREST HEALTH MAPPING AND INVENTORY

Thomas Creek Watershed
Technical Assistance Grant
Projected Status: Wrap up and close by September 2021

Description

The Thomas Creek Forest Health efforts were initiated in the spring and summer of 2019. Project partners included USFS, ODF, OSU Extension, OWEB, KLFHP, LCRI, Private Landowners and LCUWC. These partners worked to engage Thomas Creek landowners in the forestry survey /data collection phase of the project. Through funding from OWEB and the USFS in 2019, the partners completed mapping and assessment of 48,565 acres if private lands (175 landowners). The majority of 2020 was spent designing and producing the individual map packets that were combined into binders with additional educational information and resources for each landowner within the Thomas Creek project area. Workshops and one on one meetings are still in progress with a goal to inform priorities and land management planning for each landowner.

Partners:

Oregon Watershed Enhancement Board

Oregon Department of Forestry

Forest Service U.S. Department of Agriculture

Klamath-Lake Forest Health Partnership

Mike Douglas
GIS Specialist

Oregon State University Extension Service

LCRI
Lake County Resources Initiative

Private Landowners

Funding

Oregon Watershed Enhancement Board	$ 51,150
US Forest Service/NRCS Joint Chief Funds	$ 57,000
Total	$ 101,150

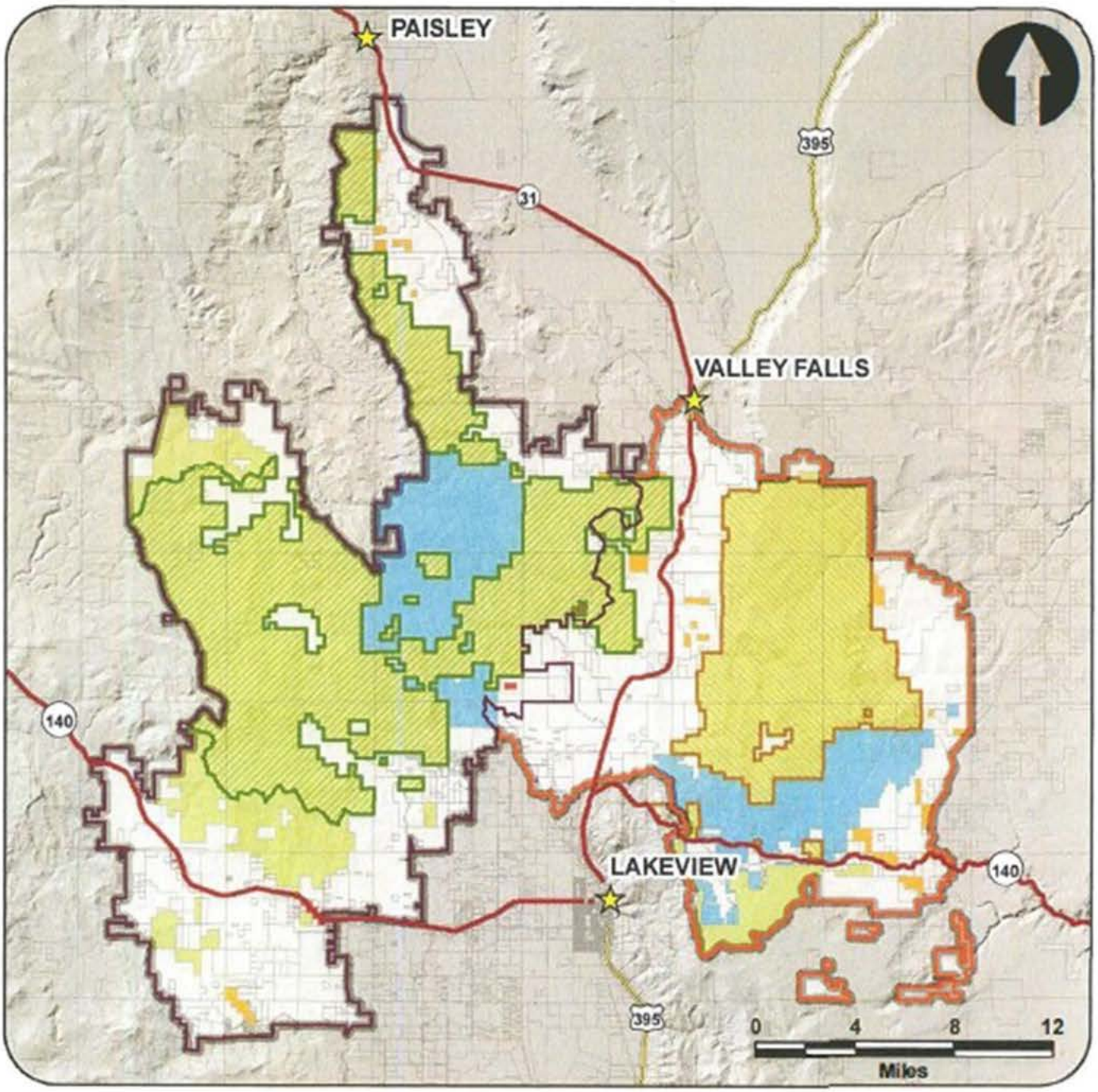
2020 Accomplishments

- ✓ 196 individual landowner maps produced (with 11 detailed maps per packet)
- ✓ 150 educational and resource template binders created
- ✓ 450 newsletters (updates and announcements) mailed
- ✓ One Landowner Workshop held in October 2020
- ✓ 11 one on one landowner meetings and site visits

Remaining Tasks

- Pile Burning Workshop
- More one on one landowner meetings
- Prioritize acreage to be treated and treatment type
- Transition into implementation pending grant awards

Understanding the risks, Treating the forests, Maintaining the effort



Fire knows no boundaries, neither should our restoration efforts!

NORTH WARNERS FOREST HEALTH PHASE II

Crooked, Mud and Honey Creek Watersheds
Restoration Grant
Projected Status: Cutting and Piling Completed by December 2021
Pile Burning Completed by March 2022

Description

The North Warner landscape covers 410,000 acres where private landowners and agencies are working together across ownership boundaries to promote forest health and fire resiliency. The LCUWC and NRCS were both awarded funding for a second phase of forest health thinning for 2019-2021. Ten new property owners are participating in these efforts, with a goal of thinning another 5,000 acres. The US Forest Service plans to treat another 12,800 acres within this unit. This Project is unique due to the extensive stands of old legacy pine intermixed with aspen and meadows, with greater sage-grouse focal habitat immediately adjacent to the north and east. This project will create seamless healthy forest landscapes, resilient to natural disturbance.

Partners:

Oregon Watershed Enhancement Board

Oregon Department of Forestry

Oregon Fish & Wildlife

Forest Service U.S. Department of Agriculture

Klamath-Lake Forest Health Partnership

United States Department of Agriculture NRCS Natural Resources Conservation Service

Cooperative Weed Management Area Lake County Pull a weed Plant a seed

Collins Timber Company LLC

MTVIEW Reforestation 541-879-0098

North Ridge LLC

Mike Douglas
GIS Specialist

Private Landowners

Funding

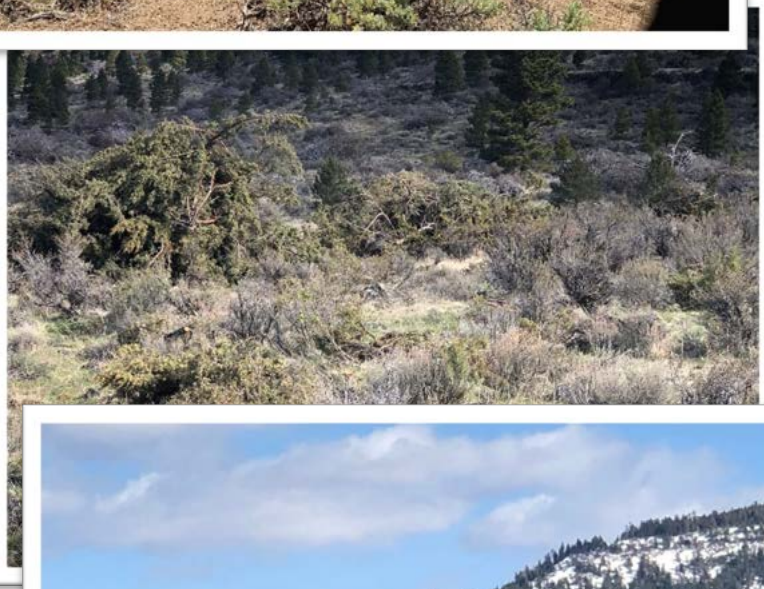
Oregon Watershed Enhancement Board	$ 543,714
US Forest Service/NRCS Joint Chief Funds	$ 211,328
Oregon Department of Fish and Wildlife	$ 135,000
Oregon Department of Forestry	$ 50,000
Landowner in-kind funds	$ 22,000
Total	$ 962,042

2020 Accomplishments

✓ 902.2 acres of cutting and piling
✓ 80.86 acres of piling previously cut trees
✓ 36.5 acres of lop and scatter juniper whips
✓ 422.8 acres of pile burning
✓ Shapefiles categorized and multiple maps produced

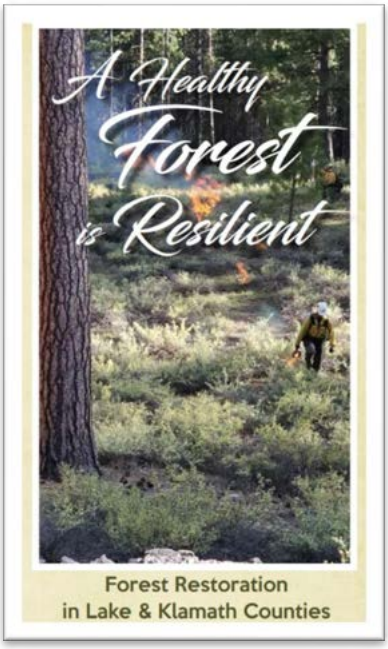
Remaining Tasks

- 238.2 acres to cut and pile
- 643.1 acres to burn
- Monitoring



FOREST HEALTH ENGAGEMENT IN LAKE AND KLAMATH COUNTIES

Multiple Watersheds
Stakeholder Engagement Grant
Projected Status: Continued Outreach through November 2022



Description

LCUWC and the Klamath-Lake Forest Health Partnership was awarded a Forest Health Engagement in Lake and Klamath Counties OWEB grant in 2019. The project goal is to promote understanding and awareness of forest health conditions and engage landowners in Klamath and Lake counties in a proactive forest management strategy. We will describe and utilize the KLFHP's eight step process to address priority acres and incorporate the future use of prescribe fire on private and public landscapes. This grant will strive to reach out and engage the over 3,850 private landowners with the perimeter of the four identified project areas (North Warner Forest Health Project, Thomas Creek Forest Health Project, Chiloquin Community Forest and Fire Project and the Gerber area) with Lake and Klamath counties.

Partners:

Oregon Watershed Enhancement Board

Klamath-Lake Forest Health Partnership

Klamath Watershed Partnership

Oregon Department of Forestry

Forest Service U.S. Department of Agriculture

Oregon State University Extension Service

Private Landowners

Wahoo Films

Funding

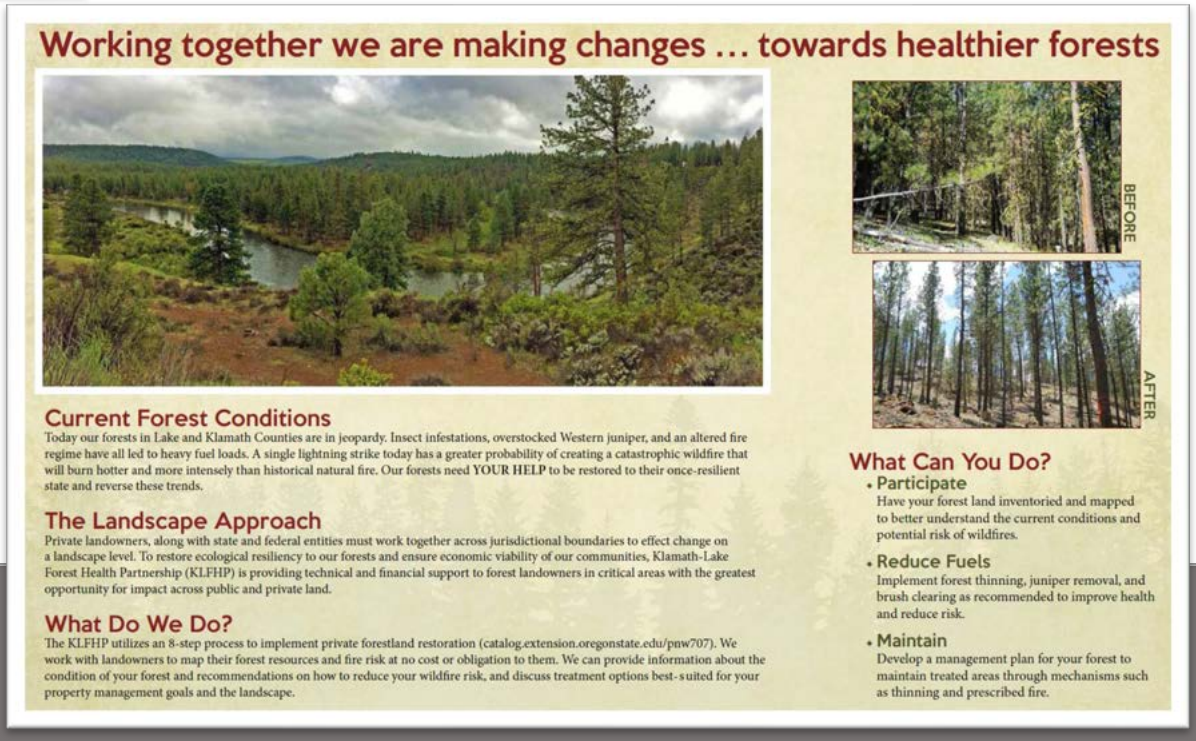
Oregon Watershed Enhancement Board	$ 31,733
Total	$ 31,733

2020 Accomplishments

- ✓ Produce Healthy Forest Brochure
- ✓ 3,850+ mailings of the Healthy Forest Brochure
- ✓ Production of a short film, release date at end of 2020
- ✓ Landowner outreach

Remaining Tasks

- Continued landowner outreach
  - Mailings, phone calls and one on one meetings
  - Discuss implementation process
  - Once engaged landowners, acres and funding have aligned hire contractors to complete work on priority acres
- Newsletter production to update and show progress
  - Prescribed Burning Workshop



BRATTAIN FIRE RESPONSE

Multiple Watersheds
Emergency Response Grant
Projected Status: Awarded December 2020, Closes June 2021

Description

The Brattain fire started on September 7, 2020, on the Paisley Ranger District of the Fremont-Winema National Forest in Lake County Oregon. It impacted the Lower, Middle and Upper Chewaucan Watersheds as well as portions of the Anna River-Summer Lake Watershed. It burned 50,952 acres of public and private lands. Private land comprised thirty-four percent of total area burned.

On October 30, 2020, the OWEB board approved a Wildfire Response Grant Offering and began accepting applications at a maximum of $75,000 per grant, with funds required to be spent by June 30, 2021 for eligible activities. OWEB-funded work will address short-term fire recovery needs generally related to soil stabilization and weed management Many efforts are ongoing on private lands impacted by the Brattain Fire but landowners need more help. There are several opportunities in Lake County to assist our private landowners (NRCS and FSA emergency fire response funds being the main funding sources) but those funds are also being used to assist landowners affected by other smaller fires that occurred in Lake County this year (Crane and Ben Young). We proposed to utilize this additional OWEB funding source to assist private landowners with the immediate habitat concerns within the Brattain Fire boundary.

Partners:

OREGON WATERSHED ENHANCEMENT BOARD

United States Department of Agriculture NRCS Natural Resources Conservation Service

Lakeview SWCD

Private Landowners

Funding

Oregon Watershed Enhancement Board	$ 74,721
Natural Resources Conservation Service	$294,172
Lakeview Soil and Water Conservation District	$ 1,600
Lake County Umbrella Watershed Council	$ 2,400
Private Landowners match	$ 25,949
Total	$ 398,842

2020 Accomplishments

- ✓ Collaborate with other partners to leverage funding and best assist landowners
- ✓ Landowner outreach
- ✓ Act as lead partner and submit application
- ✓ Secured grant funding

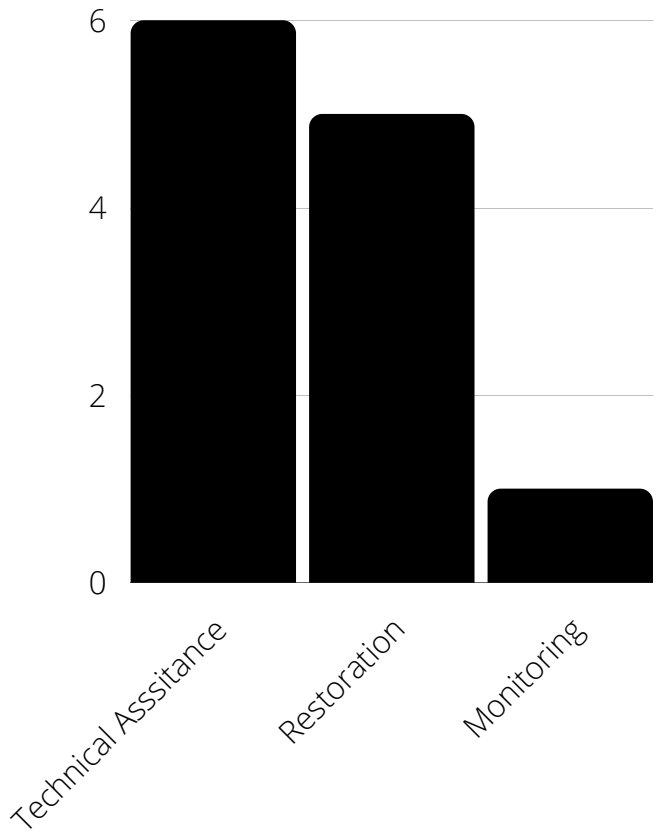
Remaining Tasks

- Purchase bulk seed order in combination with NRCS contribution
- Distribute seed via aerial and/or ground application contract in combination with NRCS and landowner contribution
- Monitor seeding results

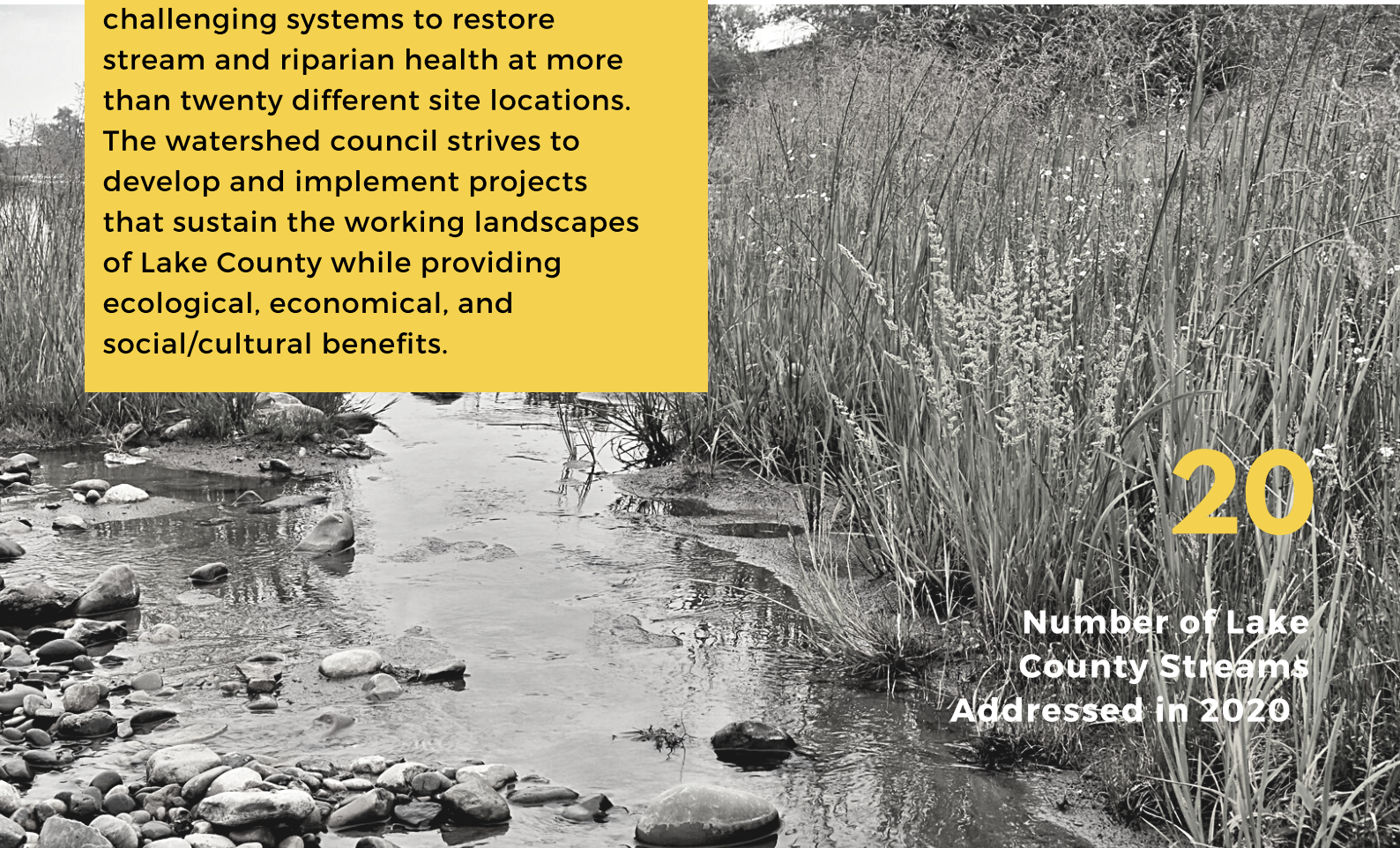
STREAM & RIPARIAN

The health of our Lake County streams and riparian is a direct reflection of the health of the land. As stream channels continue to evolve with varying flow and velocity it will cut deeper and wider - striving for a state of equilibrium. This natural channel process along with historical land management practices can result in problem areas along the system. Erosional areas can lead to channel cutting, streambank instability, loss of vegetation, de-watered meadows, and loss of habitat for aquatic species. Managing this dynamic system can be a huge challenge.

In 2020 the LCUWC and their partners have worked within these challenging systems to restore stream and riparian health at more than twenty different site locations. The watershed council strives to develop and implement projects that sustain the working landscapes of Lake County while providing ecological, economical, and social/cultural benefits.



2020 Stream and Riparian Projects



20

Number of Lake County Streams Addressed in 2020

COTTONWOOD CREEK RECONNAISSANCE AND DESIGN PROJECT

Goose Lake Basin
Technical Assistance
Projected Status: Survey and Design

Description

The project focuses on improving fish passage, screening, and irrigation efficiency along an eight-mile segment of Cottonwood Creek, one of Goose Lake's largest tributaries. Cottonwood Creek is located seven miles west of the town of Lakeview in Lake County. The watershed issue extends to stream flows on Cottonwood Creek that serve the irrigation needs of the agriculture community in the Goose Lake Basin as well. The Lakeview Water Users and landowners who hold water rights on this area of Cottonwood Creek would like to address irrigation efficiency concerns and gain insight to improvement options. This proposed Technical Assistance grant will address stream reconnaissance, data collection, passage alternative analysis and irrigation screening and efficiency alternative analysis on this segment of Cottonwood Creek. Alternative design analysis will result in a 30- 60% design plan for passage, screening, and irrigation improvement. Design plans will further be assessed, modified, and approved by partners – leading into an implementation agenda.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowners

OREGON Fish & Wildlife

Lakeview Water Users Inc.

RDG RIVER DESIGN GROUP

U.S. FISH & WILDLIFE SERVICE

Funding

Oregon Watershed Enhancement Board	$69,355
In-Kind Match	$17,355
Total	$86,710

2020 Accomplishments

- ✓ OWEB Grant Agreement
- ✓ Landowner Engagement
- ✓ Initial Stream Reconnaissance, Survey and Data Collection

Remaining Tasks

- Stream Reconnaissance Plan
- Survey and Date Collection
- 30% Design Concepts
- Alternatives Review
- 60% Design Concepts
- Restoration Grant Proposals

CROOKED CREEK RIPARIAN FENCE PROJECT

Crooked Creek Watershed
Restoration
Projected Status: Completed November 2020

Description

The Crooked Creek Riparian Fence Project is located near Chandler State Park between Lakeview and Valley Falls. Over the last five years a number of restoration projects have been accomplished on Crooked Creek, riparian fence is an extension of the work that will compliment other efforts. The location of the project lies at the boundary between two private landowners. The streambanks lack stabilizing vegetation and have continued to erode and cut away. Working with both private landowners and ODOT, a 2600 ft fence and livestock watering gap was constructed. The fence will relieve the streambanks from livestock pressure allowing vegetation to establish and stabilize over time.

Partners

Private Landowners

U.S. FISH & WILDLIFE SERVICE

Oregon Department of Transportation

/F Livestock & Fencing LLC

Funding

US Fish and Wildlife Service	$6,808
Total	$6,808

2020 Accomplishments

- ✓ Landowner Engagement
- ✓ Cultural Clearance
- ✓ ODOT Permit
- ✓ ODF PDM Permit
- ✓ Layout and Implementation
- ✓ Project Close Out

Remaining Tasks

- Photo Point Monitoring 3 – 5 yrs

MUDDY CREEK FISH PASSAGE AND HABITAT ENHANCEMENT PROJECT

(PHASE I AND PHASE II)

Goose Lake Watershed
Restoration Grant
Project Status: Phase I Implementation 2021

Description

The Muddy Creek Fish Passage and Habitat Enhancement project is located in the Goose Lake Watershed, ten miles west of Lakeview. This project focuses on restoring fish passage for Goose Lake redband trout in the lower Muddy Creek system where an existing reservoir, constructed in 1965 prevents fish from utilizing the lower five miles of the stream, and ultimately reaching Cottonwood Creek and Goose Lake. Concurrently, several other small barriers (2 culverts, 2 earthen dams) will be addressed to provide passage as well. The second part of this project will improve habitat conditions throughout the stream reach by improving stream flow conveyance by adding sinuosity to the stream and defining the creek bed, stabilizing head cuts, and installing woody material for shade, stability, and complexity. Finally, this project will install riparian fencing and willow stakes/clumps in key locations where grazing impacts have degraded the stream system. This project will greatly improve current stream conditions and enhance a fishery that has not functioned since the mid-sixties.

Partners

Oregon Watershed Enhancement Board

Ducks Unlimited

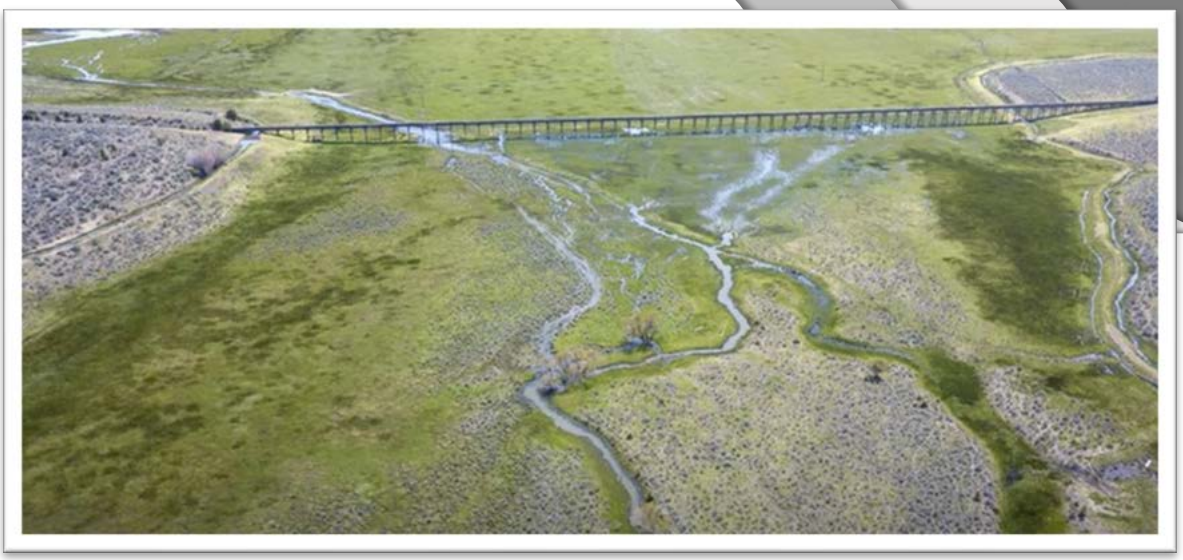
Cascade Stream Solutions

Thomas Creek Construction LLC

Private Landowner

Oregon Fish & Wildlife

U.S. Fish & Wildlife Service



Funding

Oregon Watershed Enhancement Board	$238,341
Ducks Unlimited	$65,000
US Fish and Wildlife Service	$49,900
Total	$313,241

2020 Accomplishments

- ✓ 100% Design
- ✓ Thomas Creek Construction Contracted for Implementation
- ✓ Cultural Clearance
- ✓ ODFW Fish Passage Approval
- ✓ Permitting

Remaining Tasks

- Implementation Phase I
  - Site 3. Fish Passage Bypass/Hardened Water Crossing
  - Site 4. Re-establish streambanks/channel conveyance
  - Site 5. Re-establish streambanks/channel conveyance
  - Site 6. Hardened Water Crossing
  - Site 7. Fish Passage Bypass
  - Site 8. Grade Control Structures/Hardened Low Water Crossings
- Secure Funding Phase II
  - Site 1. Spillway Rock Ramp/Roughened Channel Fishway
  - Site 2. Inverted Syphon
- Implement Riparian Fence

THOMAS CREEK AND TRIBUTARY STREAMS – MEADOW RESTORATION AND FISH PASSAGE PROJECT

Goose Lake Basin
Technical Assistance
Projected Status: Survey and Design

Description

This stream reconnaissance & design project, located northwest of Lakeview, seeks to improve stream channel function and fish passage on 4 priority streams in the Goose Lake Basin. In addition to Thomas Creek, the project area includes Bauers Creek, Cox Creek, and Camp Creek. This project involved site survey, project alternatives plan, and conceptual designs for 5 diversion structures located on four adjoining private properties. The irrigation diversion structures currently affect stream corridor connectivity and fish passage. Additionally, historical channel straightening, livestock grazing, and resulting channel incision have impacted stream corridor and wetland function. One new property owner and three existing generational ranching families have come together to address these issues.

Partners

Oregon Watershed Enhancement Board

Private Landowners

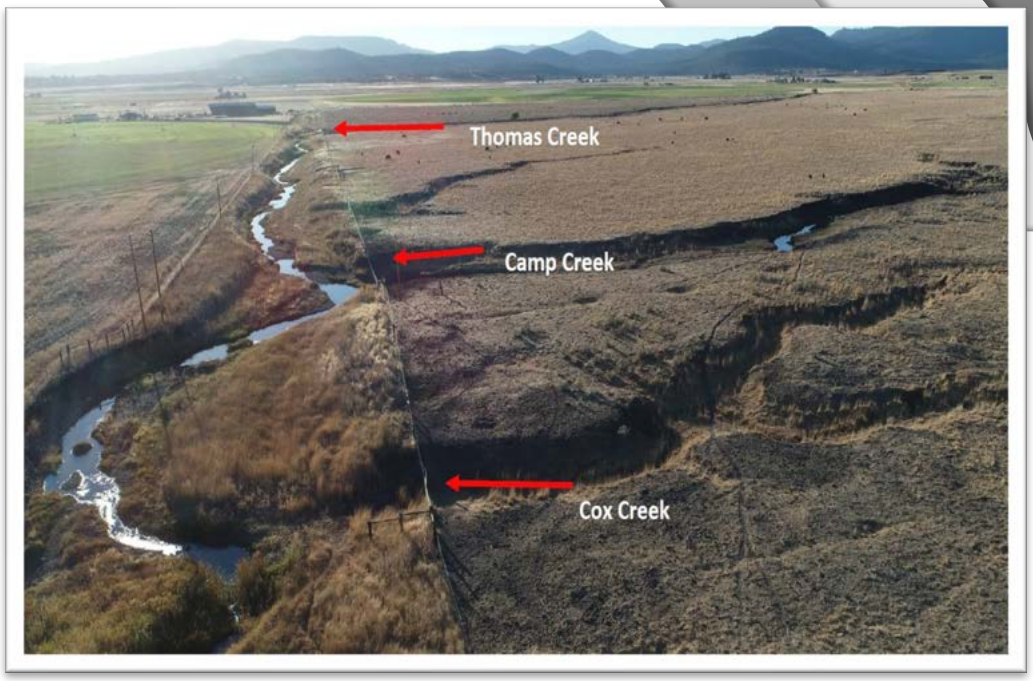
Ducks Unlimited

RDG River Design Group

Oregon Fish & Wildlife

U.S. Fish & Wildlife Service

SWIFTWATERDESIGN



Funding

Oregon Watershed Enhancement Board	$56,934
In-kind Match	$14,400
Total	$71,334

2020 Accomplishments

- ✓ 60% Design
- ✓ Planning

Remaining Tasks

- Restoration Grant Proposal
- Cultural Clearance
- Department of State Lands Fill and Removal Permit
- US Army Corps
- ODFW Fish Passage Approval
- Implementation
- Final Reports
- Photo point monitoring status reports 3 – 5 years post project

THOMAS CREEK AMSBAUGH DIVERSION FISH PASSAGE PROJECT

Goose Lake Watershed
Restoration Grant
Project Status: Implementation 2021

Description

The focus of this project is restoring fish passage connectivity in Thomas Creek, the largest tributary to Goose Lake in the Basin. The Thomas Creek – Amsbaugh Diversion is located 10 miles southwest of the town of Lakeview in Lake County. The Diversion was established approximately fifty years ago to provide stock water and irrigation for 1500 acres of pasture and hay ground. Today, the ranch is managed much the same. The structure is located 5 miles upstream from Goose Lake and is the first and last artificial barrier within the forty-mile stream tributary. The concrete weir is a complete upstream barrier due to the structure's vertical height, preventing aquatic species from reaching quality habitat and cooler water temperatures during the warm summer months. Approximately 20 years ago a concrete fish ladder was installed to accommodate fish passage, but the design implemented no longer meets fish passage criteria. It is now considered ineffective and obsolete. An alternatives analysis and 60% fish passage design have been completed for the Thomas Creek-Amsbaugh Diversion. The proposed fish passage solution includes installing a bypass channel and improving the 50 ft. irrigation diversion by installing a rail car bridge for operational safety and maintenance.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowner

OREGON Fish & Wildlife

RDG RIVER DESIGN GROUP

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Funding

Oregon Watershed Enhancement Board	$136,036
Oregon Department of Fish and Wildlife/ODOT	$25,595
In-Kind Match	$9,000
Total	$170,631

2020 Accomplishments

- ✓ Final Designs
- ✓ OWEB Grant Agreement

Remaining Tasks

- ODFW Fish Passage Approval
- Permitting
- Implementation
- Flow Measuring Device Installed
- Final Reports
- Photo point monitoring status reports 3 – 5 years post project

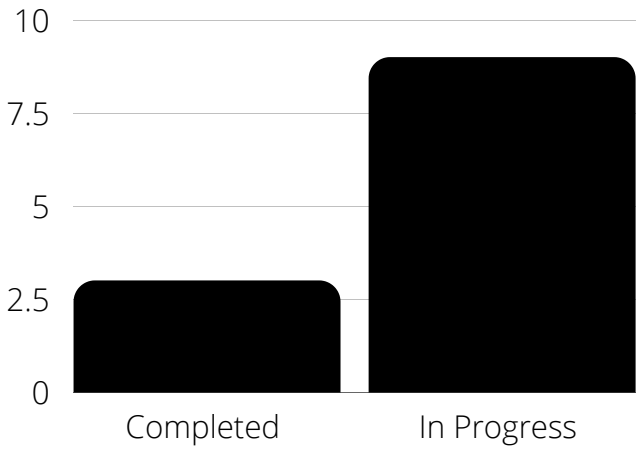
FOCUSED INVESTMENT PARTNERSHIP (WBAHP)

The Warner Basin Aquatic Habitat Partnership (WBAHP) is made up of local, state, and federal entities working together to recover the Warner sucker (state and federally threatened species) and increase populations for the Warner Lakes redband trout (state sensitive species, federal species of concern).

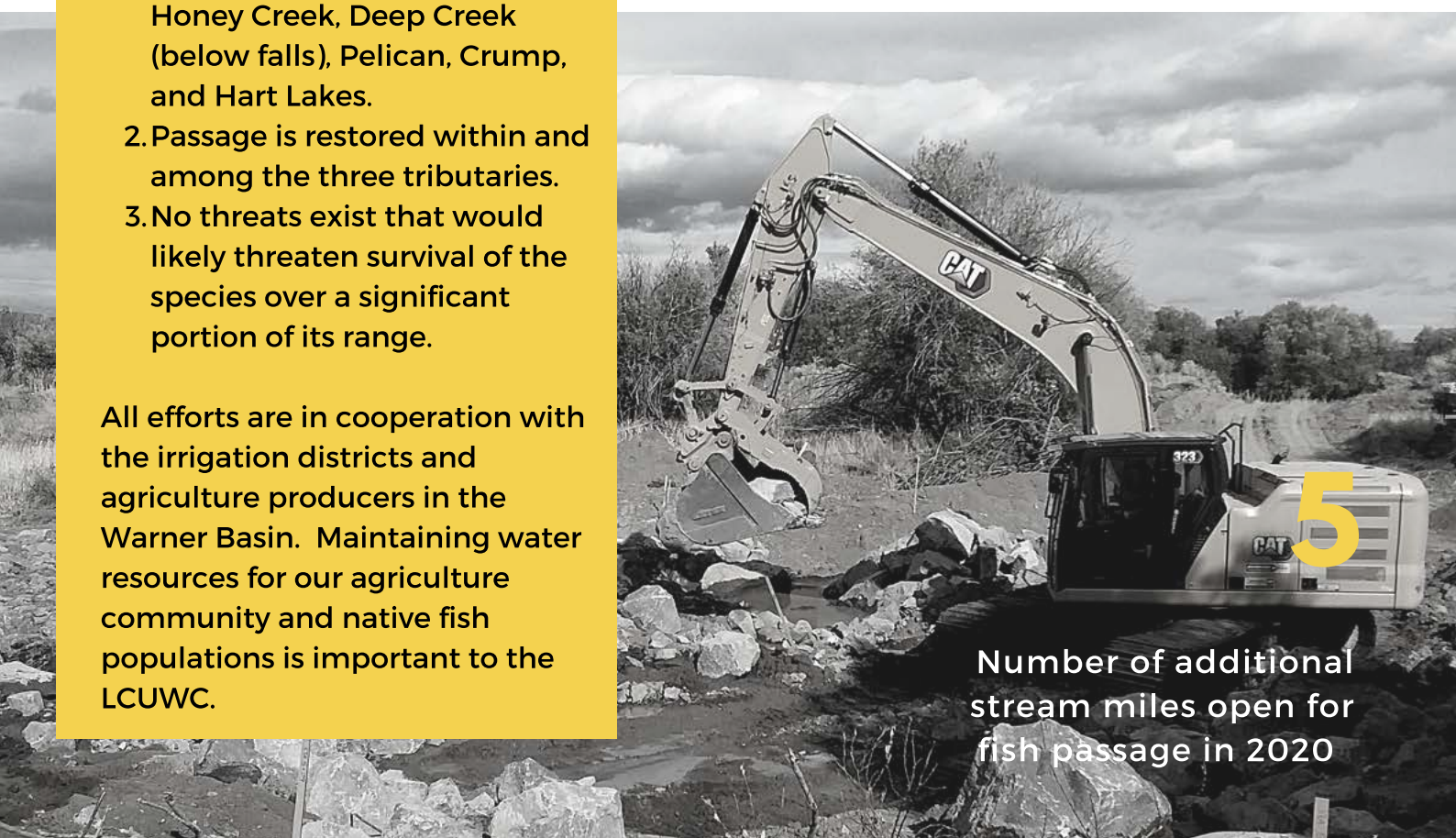
Recovery critieria for delisting the Warner sucker require:

1. Self-sustaining metapopulation distributed throughout Twentymile Creek, Honey Creek, Deep Creek (below falls), Pelican, Crump, and Hart Lakes.
2. Passage is restored within and among the three tributaries.
3. No threats exist that would likely threaten survival of the species over a significant portion of its range.

All efforts are in cooperation with the irrigation districts and agriculture producers in the Warner Basin. Maintaining water resources for our agriculture community and native fish populations is important to the LCUWC.



Fish Passage Projects in the Warner Basin



5

Number of additional stream miles open for fish passage in 2020

DEEP CREEK GIVANS DIVERSION FISH PASSAGE PROJECT

Warner Basin Watershed
Focused Investment Partnership
Projected Status: Implementation 2021 - 2023

Description

The Givan's Diversion is located 435 ft downstream from the Middle Diversion. Like the upstream diversions, the Givan's Diversion has been operational for at least 100 years. The diversion includes an instream concrete weir with a fixed crest. In the past, the weir's functional elevation could be increased by adding weir boards to the weir crest. RDG prepared several concepts for WBAHP and water user consideration. Alternatives included rebuilding the instream weir, consolidating the water rights with the O'Keeffe Diversion and building an inverted siphon to pass water from the northern O'Keeffe Diversion ditch back to Givan's Diversion ditch on the south side of Deep Creek, and installing an electric powered pump station. The electric powered pump station was determined to be the preferred alternative as it is the lowest cost alternative, it would provide water delivery certainty, and it would require less operational maintenance than other alternatives. The pump station will allow the removal of the concrete weir and headworks and restore fish passage through the reach.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

OREGON Fish & Wildlife

RDG RIVER DESIGN GROUP

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Adel Water Improvement District

U.S. FISH & WILDLIFE SERVICE

OPENRIVERS FUND

WESTERN NATIVE TROUT INITIATIVE

Funding Estimates

Oregon Watershed Enhancement Board	$380,000
Open Rivers Legacy Fund/WNTI	$42,096
Bureau of Land Management	$102,000
Total	$TBD

2020 Accomplishments

- ✓ 100% Design
- ✓ Planning

Remaining Tasks

- Restoration Grant Proposal
- Technical Review
- Cultural Clearance
- Department of State Lands Fill and Removal Permit
- Implementation
- Final Reports
- Photo point monitoring status reports 3 – 5 years post project

DEEP CREEK MIDDLE DIVERSION FISH PASSAGE PROJECT

Warner Basin Watershed
Focused Investment Partnership
Projected Status: Anticipated Implementation Fall 2021

Description

The Middle Diversion is located 660ft downstream from the O'Keeffe Diversion. Like the O'Keeffe Diversion, the Middle Diversion has been operational for at least 100 years. The diversion includes an instream concrete weir with a fixed crest, and an intake on the river-left side of the weir. The existing headgate does not fully close, which results in leakage and loss of flow from the stream. Water rights associated with the Middle Diversion date to 1892. A proposed solution is to consolidate the Middle Diversion water rights with the O'Keeffe Diversion. Consolidating the water rights at the O'Keeffe Diversion would also allow for the removal of the Middle Diversion weir which would restore fish passage at the site.

Partners

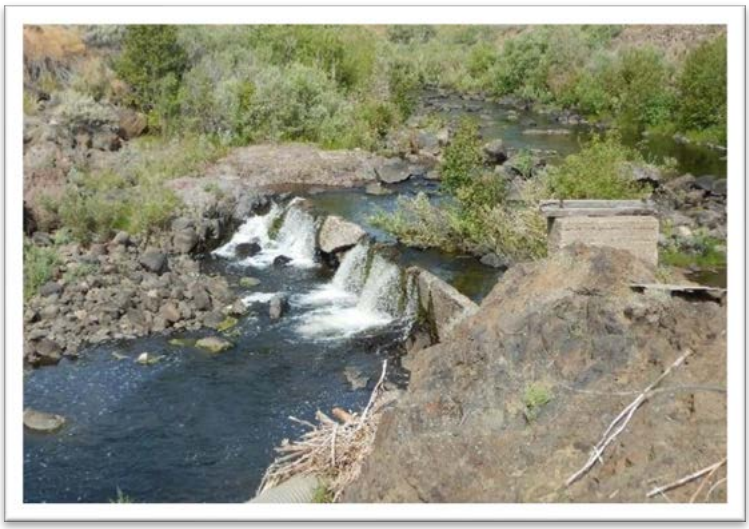
Oregon Watershed Enhancement Board
U.S. Department of the Interior Bureau of Land Management
RDG River Design Group
U.S. Fish & Wildlife Service
Western Native Trout Initiative
Adel Water Improvement District
OpenRivers Fund
Oregon Fish & Wildlife

Funding Estimates

Oregon Watershed Enhancement Board	$250,000
Open Rivers Legacy Fund/WNTI	$18,250
Bureau of Land Management	$98,000
Total	$TBD

2020 Accomplishments

- ✓ 100% Design
- ✓ Planning



Remaining Tasks

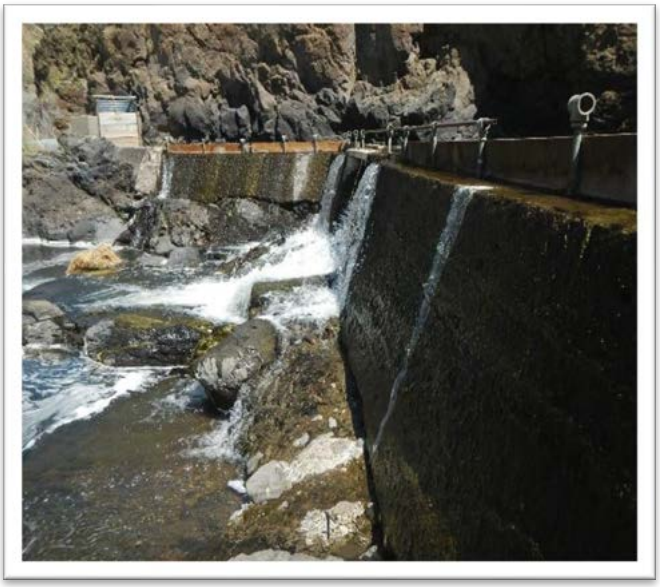
- Restoration Grant Proposal
- Technical Review
- Cultural Clearance
- Department of State Lands Fill and Removal Permit
- Implementation
- Final Reports
- Photo point monitoring status reports 3 – 5 years post project

DEEP CREEK O'KEEFFE DIVERSION FISH PASSAGE PROJECT

Warner Basin Watershed
Focused Investment Partnership
Projected Status: Implementation Fall 2021

Description

Several major passage projects along Deep Creek have been completed while planning and design work continues. The O'Keeffe Diversion is the upper most passage barrier along 9.5-mile stream stretch between Crump Lake and Deep Creek Falls. This diversion is a complete upstream fish passage barrier due to the vertical height of the irrigation weir relative to the channel elevation downstream from the weir. The Deep Creek O'Keeffe Diversion Fish Passage Project is viewed by our partners as critical to the long-term viability of Warner Lakes redband trout and Warner sucker in this priority watershed, and the overall Deep Creek system.



Partners

Oregon Watershed Enhancement Board
U.S. Department of the Interior Bureau of Land Management
RDG River Design Group
U.S. Fish & Wildlife Service
Western Native Trout Initiative
Open Rivers Fund
Adel Water Improvement District
Oregon Fish & Wildlife

Funding

Oregon Watershed Enhancement Board	$430,000
Desert Fish Habitat Partnership/NFHP	$ Pending
Open Rivers Legacy Fund/WNTI	$ 41,596
Bureau of Land Management	$ 110,000
Total	$TBD

2020 Accomplishments

- ✓ 100% Design
- ✓ Planning

Remaining Tasks

- Restoration Grant Proposal
- Technical Review
- Cultural Clearance
- ODFW Fish Passage Approval
- Department of State Lands Fill and Removal Permit
- Implementation
- Flow Measuring Device Installed
- Final Reports
- Effectiveness Monitoring of Fish Passage conducted by ODFW
- Photo point monitoring status reports 3 – 5 years post project

DEEP CREEK RELICT WEIR FISH PASSAGE PROJECT

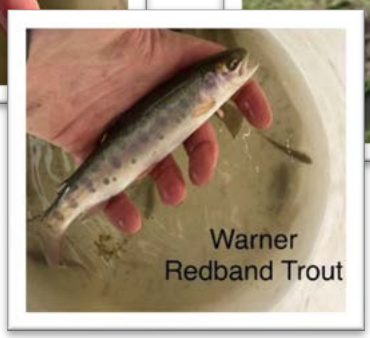
Warner Basin Watershed
Focused Investment Partnership
Projected Status: Completed December 2020

Description

The Relict Wier Fish Passage Project is located on Deep Creek near the town of Adel in Lake County, Oregon. Deep Creek provides spawning and rearing habitat for Warner Sucker, Warner Lakes Redband Trout, tui chub, and speckled dace. Surface water diversions provide irrigation water for basin water users. The Relict Weir, located at river mile 3.9, is the first irrigation diversion on Deep Creek. Oregon Department of Fish and Wildlife (ODFW) monitoring results suggest Warner Sucker are partially blocked by the Relict Weir as the species has not been sampled upstream of the diversion.. WBAHP and AWID began evaluating fish passage alternatives in 2017. Recently, stakeholders selected a preferred alternative which includes a rock ramp downstream of the weir. The rock ramps will be constructed to emulate steeper gradient channel segments in the Deep Creek canyon, and the ramps will meet sucker and trout fish passage criteria. The preferred alternative is anticipated to have a lower implementation cost and lower long-term operation and maintenance costs compared to other alternatives reviewed by WBAHP and AWID.

Partners

Oregon Watershed Enhancement Board
U.S. Fish & Wildlife Service
U.S. Department of the Interior Bureau of Land Management
RDG River Design Group
Oregon Fish & Wildlife
Western Native Trout Initiative
OpenRivers Fund
Pardue Construction CCB#194727
Adel Water Improvement District
Desert Fish Habitat Partnership



Funding

Oregon Watershed Enhancement Board	$267,598
Desert Fish Habitat Partnership/NFHP	$43,480
Open Rivers Legacy Fund/WNTI	$105,500
Bureau of Land Management	$10,000
Total	$426,578

2020 Accomplishments

- ✓ 100% Design
- ✓ Cultural Clearance
- ✓ ODFW Fish Passage Approval
- ✓ Department of State Lands Fill and Removal Permit
- ✓ Construction of a rock ramp/roughened channel
- ✓ Construction of a sediment clean out ramp
- ✓ Willow staking and dispersal of riparian seed mix

Remaining Tasks

- Flow Measuring Device Installed
- Final Reports
- Effectiveness Monitoring of Fish Passage conducted by ODFW
- Photo point monitoring status reports 3 – 5 years post project

DEEP CREEK STARVEOUT DIVERSION FISH PASSAGE PROJECT

Warner Basin Watershed
Focused Investment Partnership
Projected Status: Completed November 2020

Description

The Starveout Diversion Fish Passage Project is located on Deep Creek near the town of Adel in Lake County, Oregon. The Starveout Diversion, located at river mile 4.9, is the second irrigation diversion on Deep Creek. Oregon Department of Fish and Wildlife (ODFW) monitoring results suggest Warner Sucker are blocked by the Starveout Diversion as the species has not been sampled upstream of the diversion. The Warner Basin Aquatic Habitat Partnership (WBAHP) and the Adel Water Improvement District (AWID) have coordinated a design to address fish passage and irrigation withdrawal at the Starveout Diversion. WBAHP and AWID began evaluating fish passage alternatives in 2017. Recently, stakeholders selected a preferred alternative which includes a rock ramp downstream of each of the two diversion weirs that comprise the Starveout Diversion. The rock ramps will be constructed to emulate steeper gradient channel segments in the Deep Creek canyon, and the ramps will meet sucker and trout fish passage criteria. An equipment access and sediment sluiceway will also be built to facilitate irrigation water withdrawal. The preferred alternative is anticipated to have a lower implementation cost and lower long-term operation and maintenance costs compared to other alternatives reviewed by WBAHP and AWID.

Partners:

Oregon Watershed Enhancement Board
Oregon Fish & Wildlife
U.S. Department of the Interior Bureau of Land Management
RDG River Design Group
U.S. Fish & Wildlife Service
Western Native Trout Initiative
OpenRivers Fund
Pardue Construction CCB#194727
Adel Water Improvement District
Desert Fish Habitat Partnership

Funding

Oregon Watershed Enhancement Board	$429,165
Oregon Department of Fish and Wildlife/ODOT	$50,000
US Fish and Wildlife Service	$25,000
Desert Fish Habitat Partnership/NFHP	$40,000
Western Native Trout Initiative/NFHP	$50,000
Open Rivers Legacy Fund/WNTI	$85,307
Bureau of Land Management	$33,400
Total	$712,872

2020 Accomplishments

- ✓ 100% Design
- ✓ Cultural Clearance
- ✓ ODFW Fish Passage Approval
- ✓ Department of State Lands Fill and Removal Permit
- ✓ Construction of a rock ramp/roughened channel on the east and west channel.
- ✓ Installation of a sediment sluiceway
- ✓ Construction of a sediment clean out ramp mix
- ✓ Willow staking and riparian seed mix dispersal

Remaining Tasks

- Flow Measuring Device Installation
- Final Reports
- Effectiveness Monitoring of Fish Passage conducted by ODFW
- Photo point monitoring status reports 3 – 5 years post project

WARNER SUCKER PASSAGE EFFECTIVENESS MONITORING

Warner Basin Watershed
Focused Investment Partnership
Projected Status: Monitoring Spring 2021

Description

Warner suckers (Catostomus warnerensis) are endemic to the lakes and low-gradient streams of the Warner Basin in south central Oregon. The species was listed as threatened in 1985 (U.S. Fish and Wildlife Service 1985) due in part to numerous irrigation diversion dams in the basin that fragment the population and block upstream passage. The Recovery Plan for Warner suckers (U.S. Fish and Wildlife Service 1998) includes the requirement that passage be restored within and among the Twentymile, Honey, and Deep Creek drainages. This project will be located on Deep Creek near the town of Adel in Lake County. Two diversion dams on Deep Creek (Starveout and Relic diversions) are impassible to Warner suckers due to a steep concrete spillway, prohibiting lake-resident suckers from ascending the creek to spawn. The diversions are being reconstructed with a fish-friendly fishway (rock ramp), with completion expected by the end of 2020. The effectiveness of a rock ramp fishways for Warner sucker passage has not been verified. This project proposes to assess passage effectiveness at the Starveout and Relict diversions fishways through the use of Passive Integrated Transponder (PIT) tagged fish released below the diversion. Successful passage will be evaluated with the detection of tagged fish on antennas located upstream and downstream of each fishway. A report describing the study results will be provided by Oregon Department of Fish and Wildlife (ODFW) to the Warner Basin Aquatic Habitat Partnership (WBAHP), a collaboration of local, state, and federal partners committed to the recovery of Warner sucker and Warner Lakes Redband Trout (Oncorhynchus mykiss newberrii).

Partners

OREGON WATERSHED ENHANCEMENT BOARD

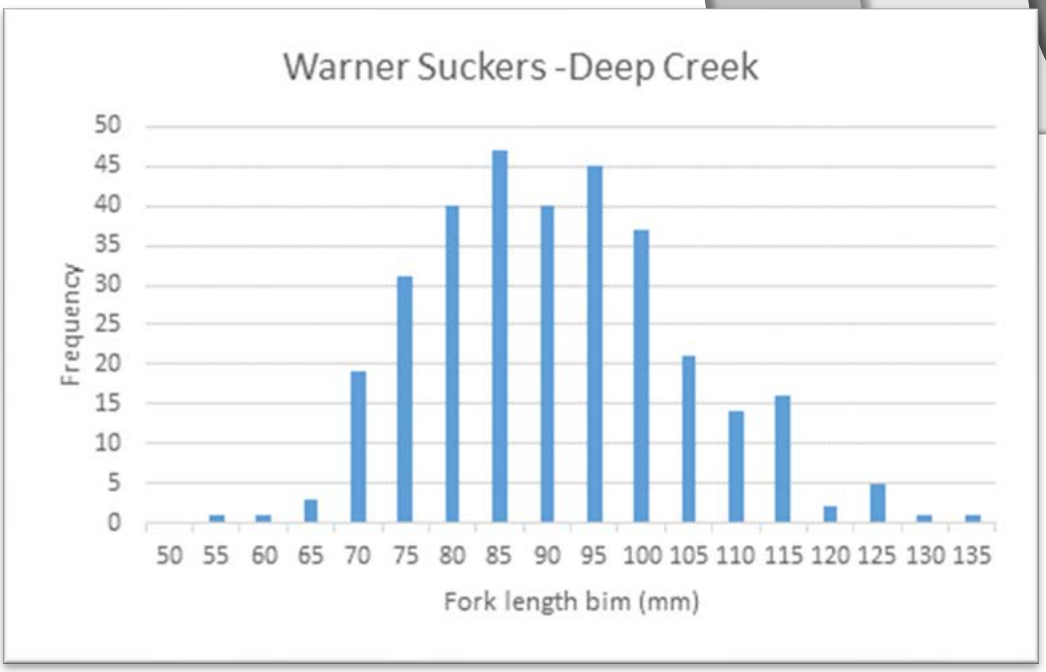
Adel Water Improvement District

OREGON Fish & Wildlife

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

RDG RIVER DESIGN GROUP

U.S. FISH & WILDLIFE SERVICE



Funding

Oregon Watershed Enhancement Board	$24,293
Bureau of Land Management	$11,430
Total	$35,723

2020 Accomplishments

- ✓ OWEB Grant Agreement

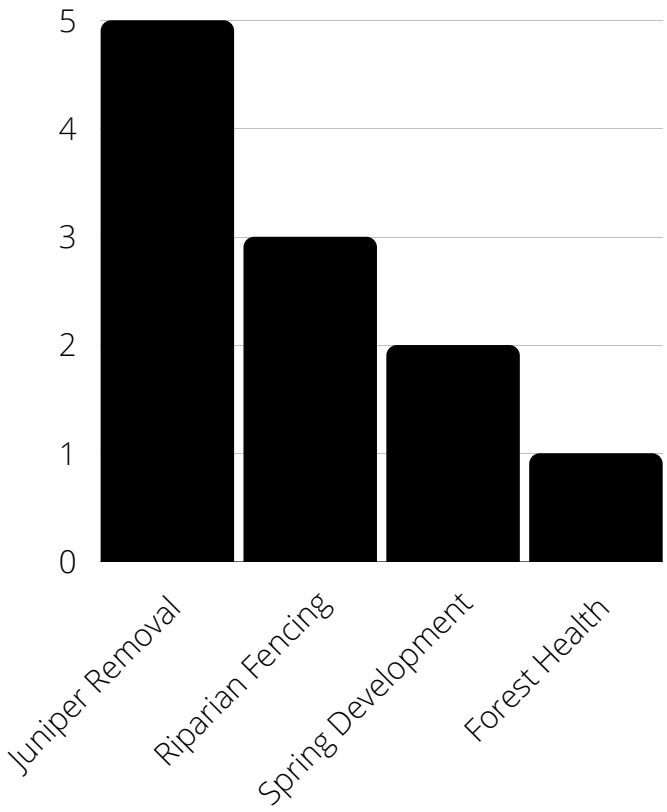
Remaining Tasks

- Antenna and Beacon Installation at Relict and Starveout Diversion
- PIT tag adult suckers and release downstream of diversions
- Upload detection data at least once/month
- Assess passage metrics
- Compile Report

SMALL GRANT PROGRAM

The Small Grant Program is a competitive program funded by the Oregon Watershed Enhancement Board that awards $15,000 for on the ground restoration - primarily on private lands. The program allows landowners to become familiar with the granting and restoration process while focusing on specific watershed improvements on their property. These projects must meet the criteria for priority watershed concerns such as:

- Instream Process and Function
- Riparian Process and Function
- Wetland Process and Function
- Upland Process and Function
- Water Quality/Irrigation Efficiency
- Road Impact Reduction
- Urban Impact Reduction



Types of Projects in 2020

9

Number of Landowners Involved in 2020

DREWS GAP UPLAND ENHANCEMENT PROJECT

Goose Lake Basin
Small Grant
Projected Status: In Progress / Completion Spring 2022

Description

This project is located in the Goose Lake Basin approximately 15 miles west of the town of Lakeview. The property has a diversity of overstory trees - including ponderosa pine, white fir, cedar, and Western juniper. Understory is made up of these same tree species along with a mixture of mountain mahogany, bitter brush, and sage brush. The landowner desires to improve the current forest health conditions on the property which serves as a wildlife haven and refuge overlooking Goose Lake Valley.

To improve the current conditions of this forest property treatment includes hand felling all age classes of juniper except for specific old growth juniper - which would be left for wildlife habitat. Juniper would be lopped and piled so a clean pile burn could occur within 12-18 months following. Ponderosa pine and mixed conifer will also be hand treated through cutting and thinning overstocked pockets along with less desired genetics, removing degraded and diseased trees that show signs of stress. These trees will also be lopped and piled for a clean pile burn.

Once treatment is complete the property will be allowed to retain biodiversity among the plant community, hold more ground water and soil moisture for vegetation and recharge, secure a thriving habitat, and reduce the risk to severe high intensity fire.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowner

OREGON DEPARTMENT OF FORESTRY

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Funding

Oregon Watershed Enhancement Board	$13,530
In-Kind Match	$3,386
Total	$16,916

2020 Accomplishments

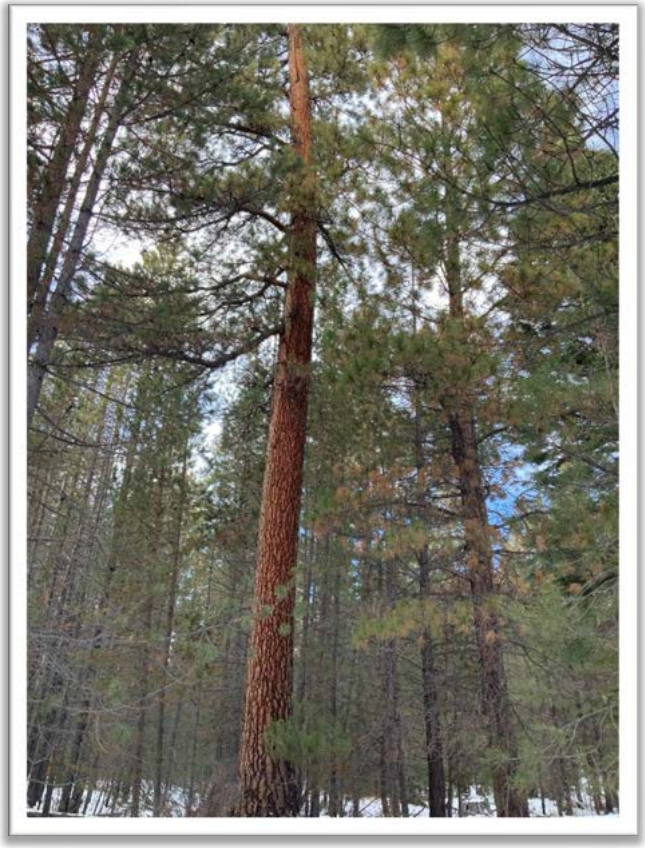
- ✓ OWEB Grant Agreement
- ✓ ODF PDM Permit
- ✓ Project map and layout
- ✓ Implementation is in progress (cut and pile)

Remaining Tasks

- Complete treatment
- Project Completion Report 2022
- Pile Burning (landowner in-kind)
- Photo Point Monitoring

ECOTRUST FOREST MANAGEMENT UPLAND ENHANCEMENT PROJECT

Summer Lake Basin
Small Grant
Projected Status: In progress



Description

The project, located in the Summer Lake Basin, north of Silver Lake, will reduce canopy cover of mature conifers to stimulate riparian vegetation and increase shrub diversity along Smoke Creek by thinning along both sides of the water course, about 10 acres total. In a simultaneous separate effort, a mile of buck and pole fencing will then be constructed to prevent cattle from entering the riparian area. It is necessary to restore the riparian vegetation along Smoke Creek to help reduce erosion, protect water quality and to enhance habitat for wildlife.

Originally the cut trees were supposed to be hand piled and later burned (as landowner in-kind), however the cut trees were lopped and scattered to thwart potential ungulate browse and allow for the riparian vegetation to recover. LCUWC has filed a scope of work modification to the Small Grants coordinator at OWEB and are awaiting approval before invoices can be processed.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

EFM

OREGON Fish & Wildlife

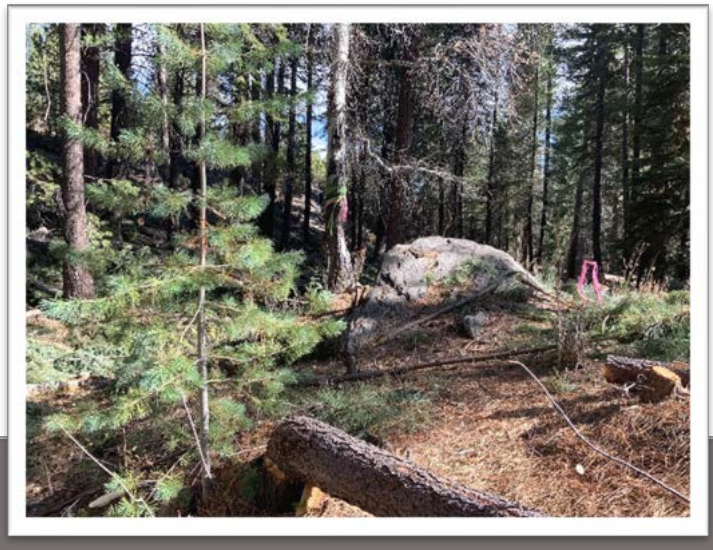
OHA OREGON HUNTERS ASSOCIATION

Funding

Oregon Watershed Enhancement Board	$14,410
Landowner In-Kind Match	$3,450
LCUWC In- Kind Match	$348
ODFW Mule Deer Initiative (fencing supplies)	$19,978
Oregon Hunter's Association (in-kind fence building labor)	$9,900
Total	$47,496

2020 Accomplishments

- ✓ OWEB Grant Agreement
- ✓ ODF PDM Permit
- ✓ Project planning, map, and layout
- ✓ Contractor hired
- ✓ Mature conifer thinned
- ✓ Submitted scope of work modification



Remaining Tasks

- OWEB approves scope of work change
- Submit invoice
- Submit Completion Report
- Photo Point Monitoring

HADLEY CREEK UPLAND AND RIPARIAN ENHANCEMENT PROJECT

Summer Lake Basin
Small Grant
Projected Status: In Progress

Description

Hadley Creek is a year-round non-fish bearing creek that begins up high on winter rim and runs the canyon through the Withers Ranch where it dissipates into the meadow just above Summer Lake. As the creek extrudes out of the canyon drainage it has carved its way along the foothills where grasses, willow, and other shrubs line its edge.

To restore the stretch of the creek that runs through the property there are several site specific solution that have and will be implemented.

- A series of rock check dams will be built along the straightened creek to slow water velocities during spring runoff and catch sediment. This will add siniousity to the stream and support willow establishment.
- Two harden water crossing will be established for farm and livestock use.
- Riparian fence along the creek through the livestock pasture will help vegetation take hold and stabilize banks.
- Phase I juniper cut was initially planned prior to the Brattain Fire, the treatment area was burned. LCUWC and landower will work together to determine scope of work change.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowner

FOREST SERVICE US DEPARTMENT OF AGRICULTURE

Funding

Oregon Watershed Enhancement Board	$13,530
In-Kind Match	$3,710
Total	$18,334

2020 Accomplishments

- ✓ OWEB Grant Agreement
- ✓ ODF PDM Permit
- ✓ Project planning, map, and layout
- ✓ Riparian Fence Complete

Remaining Tasks

- Complete Implementation
- Project Completion Report 2022
- Pile Burning (landowner in-kind)
- Photo Point Monitoring

MAXWELL RANCH WILDLIFE-UPLAND ENHANCEMENT PROJECT

Goose Lake Basin
Small Grant
Projected Status: Completed November 2020

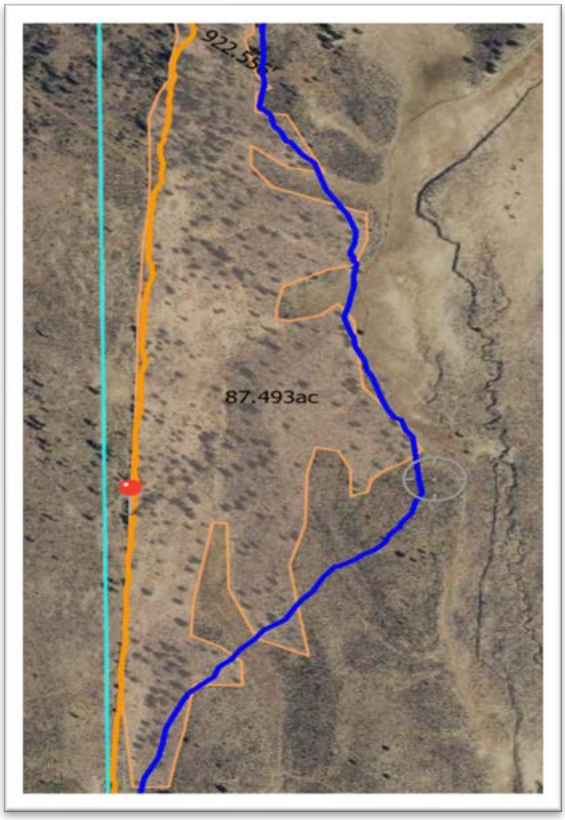
Description

This project is located in the Goose Lake Watershed on the Maxwell Ranch where there is a transition zone from ponderosa pine forest, shrub/steppe slopes, to open meadows. Water runoff leads into Bauer's Creek which flows through the meadow adjacent to the identified project area. Western juniper trees in this transition zone are a combination of phase I and phase II post settlement juniper stands, where western juniper is co-dominant with mahogany, bitter brush, sage brush, and perennial grasses.

Project objectives include:

- Enhancing habitat for mule deer populations
- Enhancing habitat for upland birds (California quail, Blue Grouse)
- Increase availability of water for stream flow
- Maintain the shrub/steppe component through healthy ponderosa pine stands
- Preventing Juniper encroachment into the meadow

To meet objectives - 87 acres of juniper were cut by the landowner. Slash treatment will continue throughout the winter with pile burn will conclude in 2021.



Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowners

Funding

Oregon Watershed Enhancement Board	$14,890
In-Kind Match	$13,180
Total	$27,070

2020 Accomplishments

- ✓ ODF PDM Permit Continued
- ✓ Implementation (Cut and Pile)
- ✓ Completion Report

Remaining Tasks

- Pile Burning 2021 (landowner)
- Photo Point Monitoring

PARKER CREEK UPLAND AND ASPEN ENHANCEMENT PROJECT

Crooked Creek
Watershed
Small Grant
Projected Status: Completed

Description

This project located in the Lake Abert Basin, north of Lakeview removed 20 acres of invasive western juniper within an aspen stand and along the riparian area of Parker Creek, which is a tributary to Crooked Creek. We anticipate that vegetation will respond on its own as water and other nutrients will be more readily available to on-site plant communities. Future desired condition is to have healthy aspen stands with multiple age classes, to reduce impacts to meadow area and to enhance wildlife habitat. Additionally, to reduce the continued expansion of noxious weeds the Lake County CWMA has treated medusahead and yellowstar thistle accordingly.

This landowner is responsible for burning the piles 12-18 months after the cut and is responsible for maintaining the juniper re-growth by cutting and pruning new trees or sprouting on cut trees for frequency and duration of once/year for the next ten years.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

COOPERATIVE WEED MANAGEMENT AREA
LAKE COUNTY
Pull a weed
Plant a seed

OREGON DEPARTMENT OF FORESTRY

Private Landowner

Funding

Oregon Watershed Enhancement Board	$14,960
Landowner In-Kind Match	$2,000
LCUWC In- Kind Match	$402
Lake County Cooperative Weed Management Area In-Kind Match	$898
Oregon Department of Forestry In-Kind Match	$562
Total	$18,722

2020 Accomplishments

- ✓ OWEB Grant Agreement
- ✓ ODF PDM Permit
- ✓ Project planning, map, and layout
- ✓ Contractor hired
- ✓ Juniper cut and piled
- ✓ Invoice paid
- ✓ Submitted Project Completion Report

Remaining Tasks

- Pile Burning (landowner in-kind)
- Photo Point Monitoring

YOCUM VALLEY UPLAND ENHANCEMENT PROJECT

Goose Lake Basin
Small Grant
Projected Status: Application submitted

Description

This Project, located in the Goose Lake Basin, southwest of Lakeview, will initiate an effort to reduce 40 acres of invasive Western Juniper from encroaching across the property. To improve the current conditions of this forest property the landowner wishes to hand treat the entire 40 acres. Treatment would include hand felling all age classes of juniper except for specific old growth juniper - which would be left for wildlife habitat. Juniper would be lopped and piled so a clean pile burn could occur within 12-18 months following.
Ponderosa pine and mixed conifer will also be hand treated through cutting and thinning overstocked pockets along with less desired genetics. removing degraded and diseased trees that show signs of stress. These trees will also be lopped and piled for a clean pile burn.

Once treatment is complete the property will be allowed to retain biodiversity among the plant community, hold more ground water and soil moisture for vegetation and recharge, secure a thriving habitat. and reduce the risk to severe high intensity fire.

Partners

OREGON WATERSHED ENHANCEMENT BOARD

Private Landowner

Funding

Oregon Watershed Enhancement Board	$14,612
Landowner In-Kind Match	$16,200
LCUWC In- Kind Match	$405
Total	$31,217

2020 Accomplishments

- ✓ Approved by Small Grants Review Team
- ✓ Project planning, map, and layout
- ✓ Photo Monitoring Points established

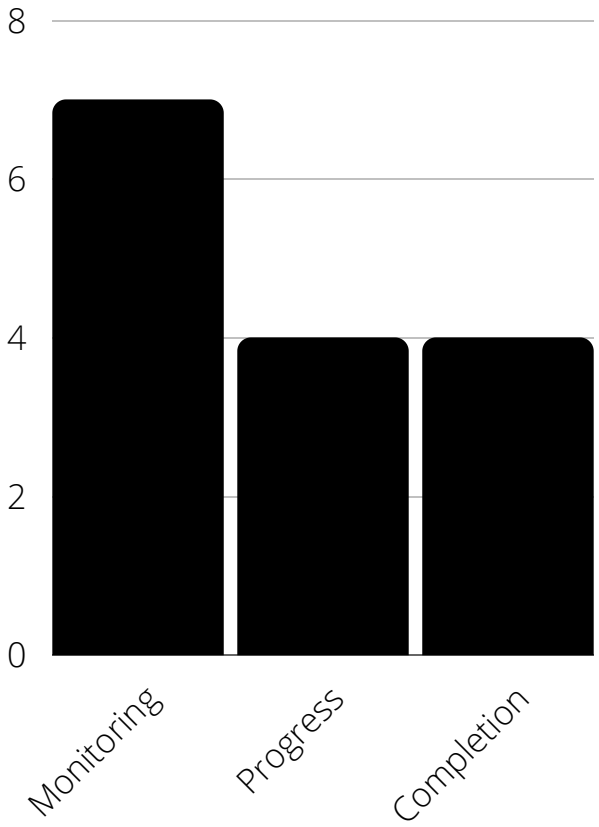
Remaining Tasks

- OWEB approves grant
- Cutting and piling commence
- Invoice submitted
- Submit Completion Report
- Photo Point Monitoring
- Pile burning by landowner

MONITORING OUR WORK

Post implementation monitoring and reporting is required for all Oregon Watershed Enhancement Board restoration grants. Post monitoring provides insight and impact of the project over a 3 – 5-year period and allows restoration practitioners to learn from success and failure.

In 2020 the LCUWC reported on seven past restoration projects across the County. Pre and post photos are captured at selected points of reference. In addition, the LCUWC produced 4 progress reports and two completion reports over the past year.



2020 Reporting

13

Number of Lake County reports produced in 2020

2020 MONITORING

Multiple Watersheds
Projects in Monitoring Status for 2020

Description

Post implementation monitoring and reporting is required for all Oregon Watershed Enhancement Board restoration grants. Post monitoring provides insight and impact of the project over a 3 – 5-year period and allows restoration practitioners to learn from success and failure.

A monitoring report includes the following:

- A brief description of whether the project continues to meet goals and any maintenance or modifications
- Accounting of costs associated with project maintenance and reporting
- Summary of public awareness activities since last report
- Lessons learned from the project
- Pre- and post-project photographs

In 2020 the Lake County Watershed Council (LCUWC) reported on seven past restoration projects across the County. Pre and post photos are captured at selected points of reference. In addition, the LCUWC produced 4 progress reports and two completion reports over the past year.

Projects in Monitoring Status 2020

Silver Creek Riparian Enhancement	2-13-20
Upper Thomas Creek Restoration Phase III	7-01-20
Hay Creek Upland Enhancement	7-02-20
Paisley Town Weir Fish Screen	7-31-20
Houret Ranch Fish Screen	9-30-20
Chewaucan River Streambank Stabilization	10-16-20
Elder Creek Fish Passage	12-26-20

Uplands Monitoring 2020 Example

Upland restoration projects will capture overstory and understory vegetation density and type, water, and spring development, along with habitat characteristics. The below photos were taken before, immediately after and two years post implementation on the Hay Creek Upland Enhancement Project.

Stream and Riparian Monitoring 2020 Example

Stream and Riparian restoration projects will capture channel width, bank erosion conditions, stream bed particle size, change in deposition, vegetation biodiversity, habitat characteristics and soundness of construction. The below photos were taken pre- and post-implementation along the Chewaucan River Streambank Stabilization Project.

2020 Accomplishments

- ✓ Completed seven monitoring reports
- ✓ Submitted four progress reports
- ✓ Finalized two competition reports

2021 Tasks

- Submit seven new monitoring reports
- Submit one new progress report
- Finalize nine completion reports

Projects in Monitoring Status 2021

Upper Sycan Juniper Removal	1-24-21
Twentymile Creek – MC Diversion Fish Passage	3-26-21
Crooked Creek Restoration Phase IV	6-30-21
KV Bar Ranch Aspen Stand Enhancement	8-12-21
Feldkamp Upland Enhancement Phase II	9-25-21
Feldkamp Upland Enhancement Phase III	9-25-21
Barry Ranch Upland Enhancement	12-30-21

EDUCATION & OUTREACH

Most 2020 LCUWC Education & Outreach events were cancelled due to COVID-19 Restrictions.

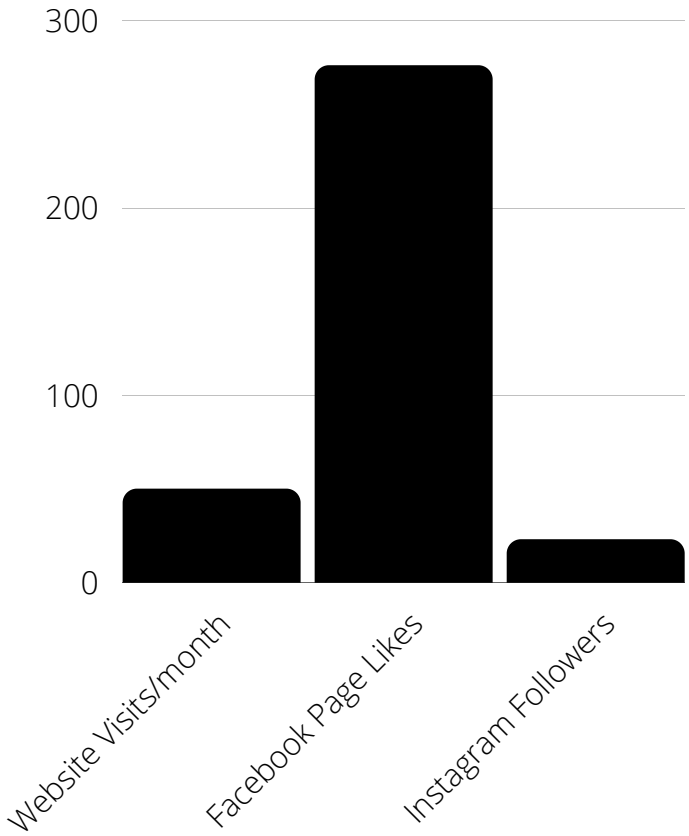
Despite these challenges, the LCUWC was able to provide a short presentation to a Paisley School science class, host two landowner workshops, perform website updates, and connect with followers via Facebook and Instagram pages.

As of November 2020, an average of 50 people per month visit the LCUWC website, 276 people have liked the LCUWC Facebook page, and despite its recent creation, 23 people have followed the LCUWC Instagram page.

The Uplands Project Manager coordinated two forest health workshops for landowners:

Thomas Creek Forest Health (photo below)

Prescribed Fire Worskhop *(Cancelled due to weather)*



Online Statistics as of 11/11/2020.
Instagram page was created in Nov. 2020

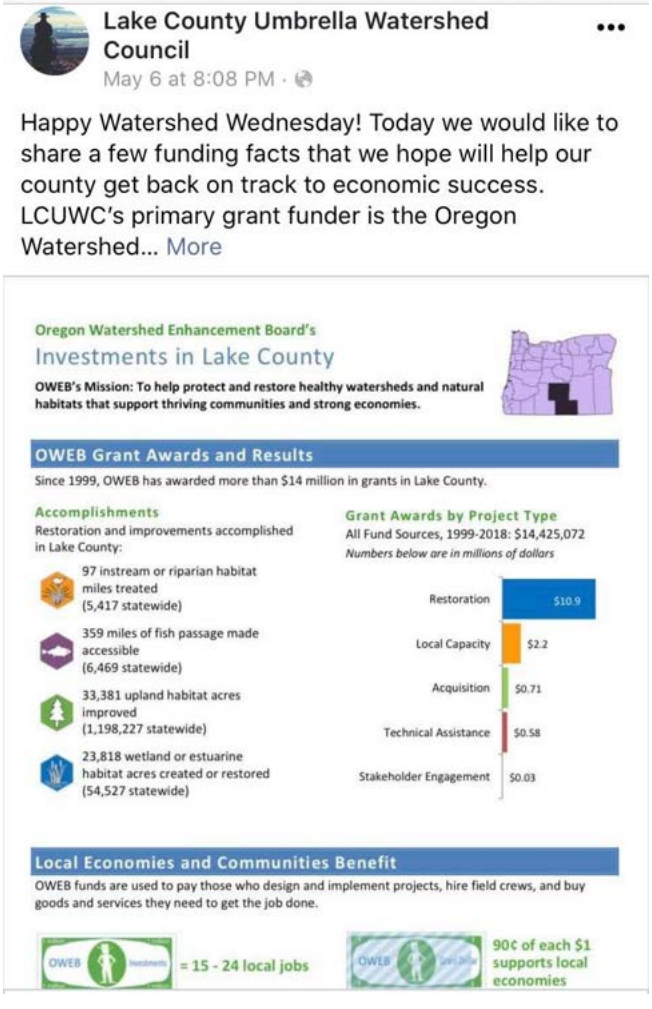
50

An average of 50 people visit lakecountywsc.com each month!

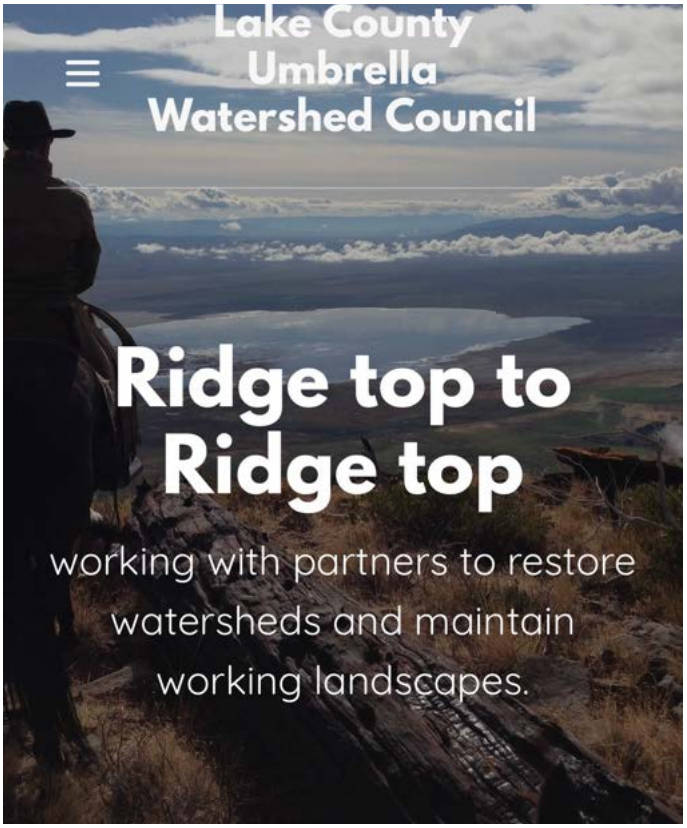
EDUCATION & OUTREACH

Brandi Neider, Stream & Riparian Coordinator, discusses watershed health with a Paisley School science class.

The LCUWC launched "Watershed Wednesdays" to continually engage with social media followers.



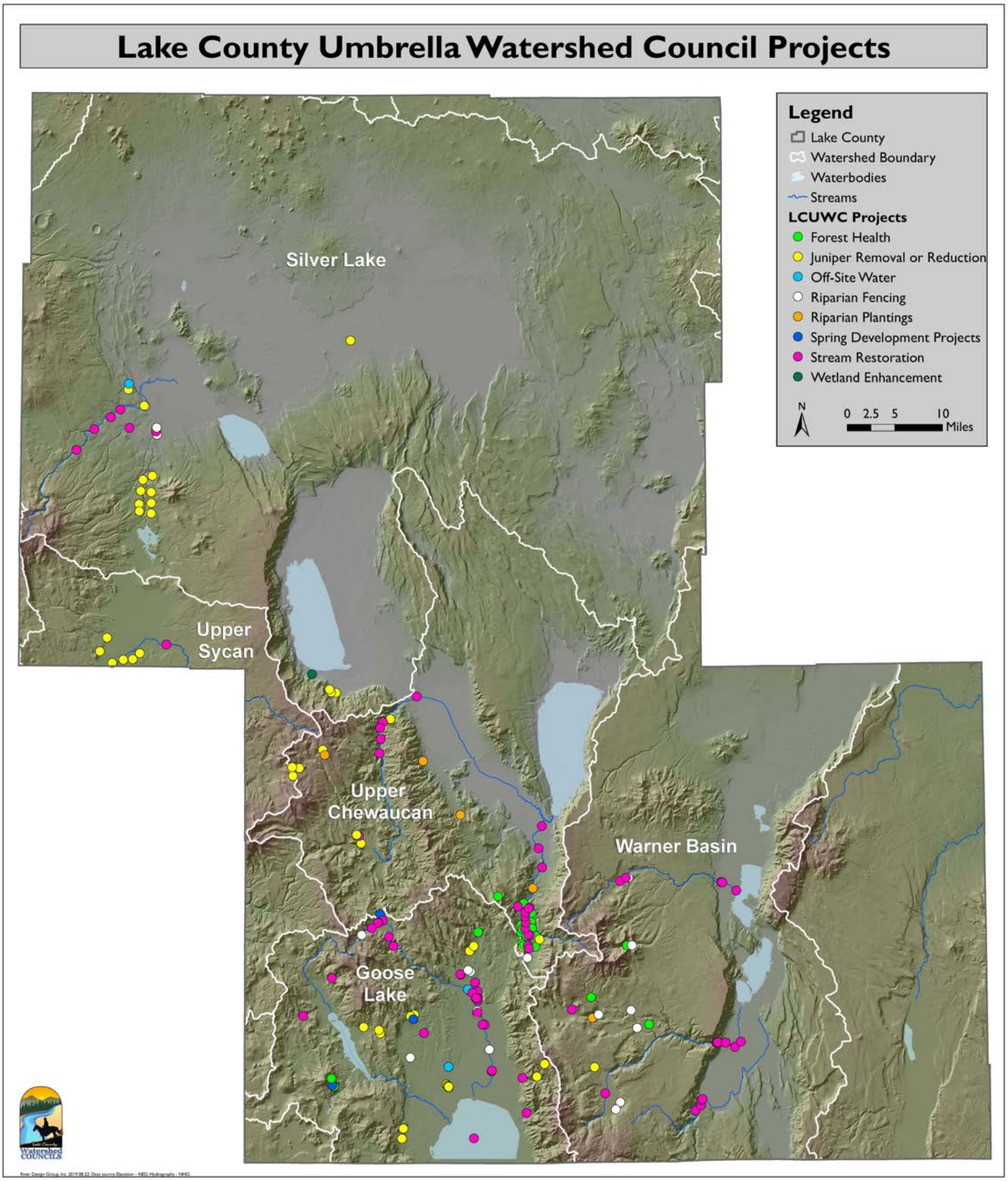
EDUCATION & OUTREACH



A glance at the mobile version of the LCUWC website.

Above: Photos from the Thomas Creek Forest Health Landowner Workshop

Right: A look at the 2019 Annnual Gathering-pre-COVID times...



Since 2004, the Lake County Umbrella Watershed Council has completed over 150 restoration projects county-wide. Map courtesy of River Design Group. Created in 2019

ACRONYM KEY

OWEB: Oregon Watershed Enhancement Board
WNTI: Western Native Trout Initiative
DFHP: Desert Fish Habitat Partnership
ORI: Open Rivers Initiative
BLM: Bureau of Land Management
ODFW: Oregon Department of Fish and Wildlife
USFS: United States Forest Service
ODF: Oregon Department of Forestry
SWCD: Soil and Water Conservation District
USFWS: United States Fish and Wildlife Service
LCWUC: Lake County Umbrella Watershed Council
OSU: Oregon State University
ODOT: Oregon Department of Transportation
WBAHP: Warner Basin Aquatic Habitat Parnership