

# LAKE COUNTY UMBRELLA WATERSHED COUNCIL



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## ANNUAL REPORT



# 2021



## **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.

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**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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Project Manager, Stream & Riparian Coordinator

-Brandi Neider, 541-219-0493

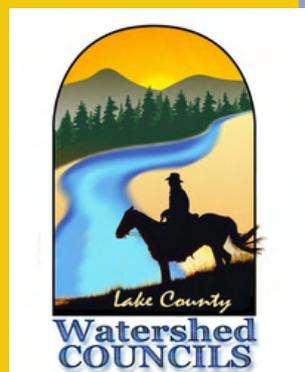
-bdneider23@gmail.com

LCUWC

PO Box 848

Lakeview, OR 97636

Visit us at [www.lakecountywsc.com](http://www.lakecountywsc.com)



Find us on Facebook  
& Instagram

Photo Credit: Jade Elhardt.

# TECHNICAL ASSISTANCE MEMBERS & FUNDING PARTNERS

## **Federal**

- Bureau of Land Management
- US Forest Service
- US Fish & Wildlife
- American Forestry Foundation
- Bureau of Reclamation

## **State**

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

## **Local**

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

## **Other/Private**

- Open Rivers Initiative
- Desert Fish Habitat Partnership
- Western Native Trout Initiative
- Ducks Unlimited

# 2021 VALUED CONTRACTORS

River Design Group, Inc.  
Cascade Stream Solutions LLC  
Anderson Engineering and Surveying  
Resource Specialists Inc.  
Dog Lake Construction, Inc.  
Pardue Construction LLC  
Thomas Creek Construction LLC  
Desert Springs Consulting Services  
DL Reforestation  
Horseshoe Meadow LLC  
Larkmuir LLC  
Mike Douglas  
Mountain View Reforestation  
Quicksilver Contracting Company  
Slide Mountain Solutions  
T.A. Lawson & Sons, INC  
Swift Water Design  
Coyote Moon Enterprises LLC



# Ridgetop to Ridgetop Watershed Management

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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.

## 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!



Federal Project \$ Spent:  
\$129,680.91



State Project \$ Spent:  
\$1,222,422.01



Private Project \$ Spent:  
\$179,469.98



Stream & Riparian \$  
Allocation:  
\$1,032,724.32



Upland & Forest Health  
\$ Allocation:  
\$249,692.55



Project Mngmt. \$ Spent:  
\$48,622.14  
(3.2% of total project \$)



Contracted Staff Wages  
& Travel:  
\$157,645.37



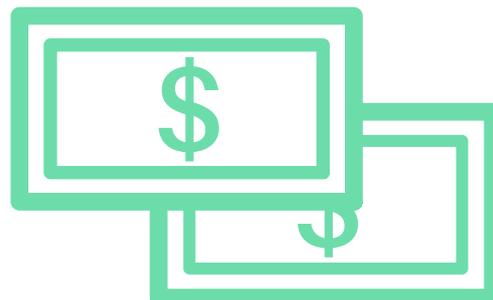
Total Operating \$:  
11,202.76 (taxes,  
insurance, dues/fees,  
supplies, rent)



Landowners Served:  
Approx. 277  
Landowners Contacted:  
Approx. 3,532



Contractors Hired:  
18



**2022 Secured  
Funding:  
\$3,343,988.58**

\*Figures are as of 12.31.2021

# 2021 PROJECTS

## Planning & Design

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- Lake County EQIP Flood Irrigation Engineering
- Cottonwood Creek Reconnaissance and Design Plan
- Drews Creek Fish Passage and Stream Restoration
- Lake County All Lands Restoration Initiative Prescribed Fire TA
- Muddy Creek Fish Passage Phase II
- Thomas Creek Mapping and Inventory TA (Completed)
- Bullard Canyon Mapping and Inventory TA
- South Warner Mapping and Inventory TA
- Chewaucan Watershed Assessment
- Chewaucan Streambank Stabilization
- Camas Creek Enhancement
- Campbell Mill Aspen and Wetland Restoration
- Deep Creek Middle Diversion Fish Passage

## Implementation

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- Yocum Valley Upland Enhancement (Small Grant)
- Brattain Wildfire Response (OWEB Completed)
- Cougar Peak Wildfire Response (OWEB)
- North Warner Forest Health Phase II (OWEB Completed)
- Muddy Creek Fish Passage & Habitat Enhancement
- Thomas Creek-Amsbaugh Diversion
- Forest Health Engagement (OWEB)
- Lake County All Lands Restoration Initiative Mini FIP (OWEB)
- Deep Creek Givans Diversion Fish Passage Phase I
- Deep Creek O'Keeffe Diversion Fish Passage
- Hadley Creek Upland & Riparian Enhancement (Small Grant)
- Drews Gap Upland Enhancement (Small Grant)
- Summer Lake Wildfire Risk Reduction (BLM, ODFW MDI, USFS RAC)
- Thomas Creek Forest Resiliency (USFS RAC)
- Thomas Creek and Tributaries (Completed)

# GOOSE LAKE BASIN

## Stream and Riparian



The Goose Lake Watershed is a semi-arid region that occupies about 1,100 square miles. Goose Lake and its tributary streams support a unique group of native fishes that are adapted to waters relatively high in dissolved salts and alkalinity. Drought is not uncommon to the area and the lake has gone completely dry five times in the last century. The Goose Lake Working Fishes Group was formed 1991 in response to drought from 1987 to 1994. "A proposal was developed to list the entire Goose Lake fish fauna as Threatened under the Federal Endangered Species Act. In response, the Goose Lake Fishes Working Group was formed in 1991, made up of representatives from both California and Oregon including private landowners, state and federal agencies, nongovernmental organizations, and universities. In 1995, the Goose Lake Fishes Conservation Strategy was completed to help conserve and restore native fishes in the Goose Lake basin." [Goose Lake Redband Trout \(ca.gov\)](http://ca.gov) Past and present Watershed Council projects are the result of the 1991 response strategy.

## 2021 Projects

### Cottonwood Creek Reconnaissance and Design

- Goose Lake Basin Water Conservation Study
- Fish Habitat Restoration
- Process Based BDAs and PALs Enhancement

### Cogswell Creek Fish Passage and Stream Restoration

### Cox Creek Fish Passage and Screening

### Drews Creek Fish Passage and Stream Reconnaissance

### Thomas Creek Amsbaugh Fish Passage

### Three Creeks Process Based BDA Restoration

### Muddy Creek Habitat and Enhancement Phase I

### Muddy Creek Fish Passage Phase II



Willow Staking Muddy Creek



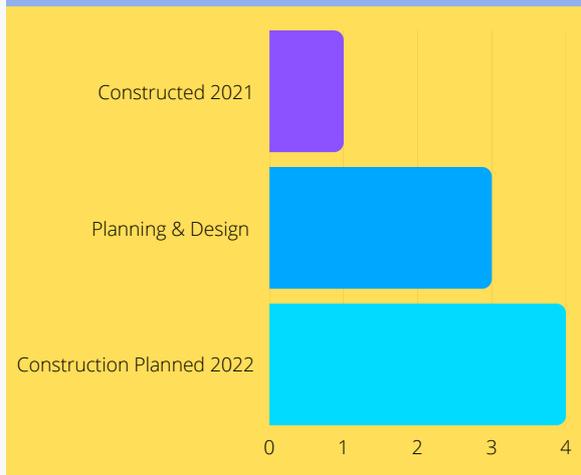
Beaver Work Cottonwood Creek



Diversion to be Reconstructed  
Drews Creek



Newly Constructed Fish Bypass Channel Muddy Creek



# WARNER BASIN

## Stream and Riparian



Deep Creek is a 280 sq mile watershed that flows from the Warner Mountains (elevation 8347 ft) to the Warner Valley (elevation 4547ft) – eventually feeding into Pelican and Crump Lake, two of the twelve chain of lakes that collectively make up the Warner Lakes. Deep Creek is the largest tributary to these lakes providing water from snowpack and precipitation which can fluctuate dramatically from year to year.

Native species in this closed basin watershed have evolved in this dynamic environment by using both stream and lake habitats. Fish species native to the Warner Valley include the Warner sucker and the Warner Lakes Redband trout - historically these natives were abundant and widely distributed throughout the Warner Basin.

Six diversions on Deep Creek have impeded fish migration and reduced stream flows for approximately a century. Under the Endangered Species Act the Warner sucker was listed as threatened in 1985. To address the recovery of the Warner sucker and other natives, the Warner Basin Aquatic Habitat Partnership, Adel Water Improvement District, and multiple funding organizations have been working together to improve fish passage and irrigation efficiency on Deep Creek. To date, three of six diversions on Deep Creek have confirmed fish passage, with three more in progress.

## 2021 Projects

Relict Diversion Fish Passage - Monitoring

Starveout Diversion Fish Passage - Monitoring

Adel Town Diversion Fish Passage - Monitoring

Givans Diversion Fish Passage Phase I - Constructing

Middle Diversion Fish Passage - Planning and Design

O'Keeffe Diversion Fish Passage - Constructing

Camas Creek BDA Enhancement - Planning and Design



Town Diversion



Starveout Diversion



Relict Diversion



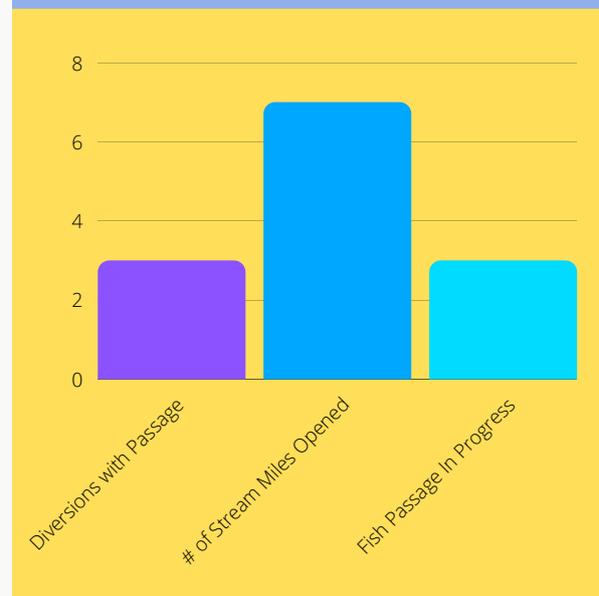
O'Keeffe Diversion Fish Ladder Construction



Middle Diversion



Givans Diversion Phase I Construction



# ABERT AND SUMMER LAKE BASIN

Stream and Riparian



In 2021, The Lake County Umbrella Watershed Council, in coordination with local, state, and federal partners secured nearly \$100,000 to update the 1999 Upper Chewaucan Watershed Assessment. The Upper Chewaucan Watershed, located in south-central Oregon, consists of a mainstem river and its several tributaries that provides habitat for native Chewaucan Redband trout, winter range for Mule deer, recreation, and thousands of acres of irrigated meadows and rangeland that economically support ranching families in the watershed. An up-to-date watershed assessment will provide area resource managers with information necessary to understand the current watershed conditions, document completed restoration projects, help identify source problems along with restoration opportunities, and prioritize areas of concern. The assessment would begin in early 2022 and conclude in December for 2023. The information will be compiled in a document that will guide action plans and restoration efforts for another 20 years.

## 2021 Projects

Campbell Mill Aspen and Wetland Restoration

Chewaucan Streambank Stabilization

Upper Chewaucan Watershed Assessment

Hadley Creek Riparian Enhancement



Brattain Fire Erosion



Beaver Work Elder Creek

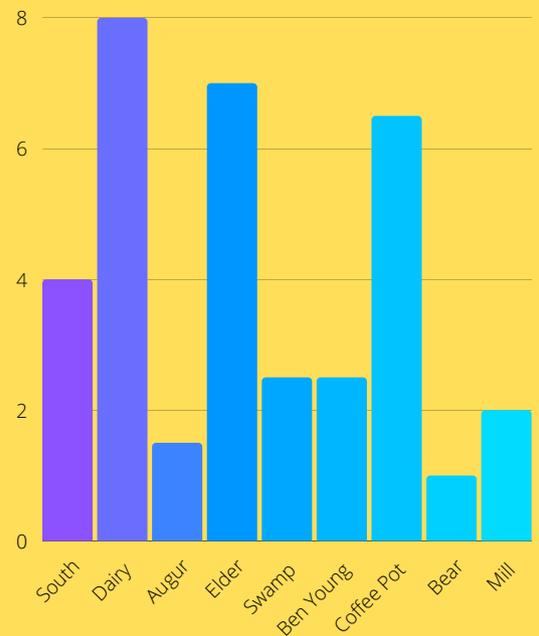


Campbell Mill Spring



Streambank Stabilization Results on Dairy Creek

NINE SUBWATERSHEDS OF THE UPPER CHEWAUCAN TO BE ASSESSED (APPROX. STREAM MILES)



# FOREST HEALTH IMPLEMENTATION PROJECTS

## Uplands



Photo credit: Jade Elhardt

The North Warner Forest Health Project (NWFHP) landscape covers 410,000 acres where private landowners and agencies are working together across ownership boundaries to promote forest health and fire resiliency. This project will create seamless healthy forest landscapes, resilient to natural disturbance.

With NWFHP Phase 1 and 2 complete, the next project awarded was The Lake County All Lands Restoration Initiative Mini Focused Investment Partnership (LCALRI Mini FIP). Which focuses on the North Warner and Thomas Creek areas located adjacent to each other. In lieu of submitting a full FIP due to decreases in budgets from COVID-19 impacts to our economy, we are decreased our original geographic range while still hoping to maintain the forward momentum of forest health improvements through a mini FIP which will echo all the same goals and objectives as the FIP but at a much smaller scale.

Additional implementation grants recently awarded include the Summer Lake Wildfire Risk Reduction Project with grants from the BLM, USFS RAC, and ODFW MDI, and the Thomas Creek Resiliency Project with grants from USFS RAC and NRCS/USFS Joint Chiefs grant.



Juniper Piles



Mixed Conifer Piles



Invasives ID



Pile Burning



Machine cutting and piling

## 2021 Accomplishments

### NWFHP

Final 238.2 acres cut and piled

Remaining 643.1 acres of pile burning completed

Photo monitoring ongoing

Completion report submitted

### LCALRI Mini FIP

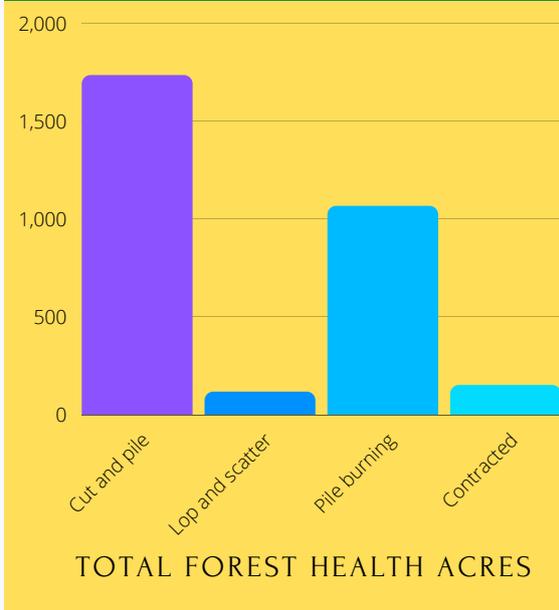
600 acres cut and piled

151 acres contracted

Produced LCALRI Noxious Weed Management Plan

Photo monitoring ongoing

Worked on Lake County All Lands Restoration Focused Investment Partnership grant application



# FOREST HEALTH MAPPING AND PLANNING PROJECTS

## Uplands



Technical assistance (TA) grants provide an opportunity to prepare and plan for a more in depth restoration or implementation grants. For example, The Thomas Creek Forest Health Mapping and Inventory allowed partners to engage 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 of private lands (175 landowners). Much effort 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.

The accomplishments of that TA grant allowed for the successful award of the LCALRI Mini FIP (described previously). With this in depth level of research and documentation of prioritization areas, we were prepared to move forward with implementation of restoration efforts.

This TA design will be duplicated in a new landscape thanks to the South Warner Forest Health Mapping and Inventory TA grant. GIS mapping will begin this spring and field crews will be hired through our partners at LCRI.

Another TA grant that we are working on is the LCALRI Prescribed Fire Planning. We hope to navigate some of the complexities related to planning and conducting prescribed burning for private landowners, including unit layout, identification of control lines, necessary agreements, burn plans, opportunities to burn with adjacent federal agencies, and other protocols associated with the analysis implementation of prescribed fire. Assist landowners with understanding permitting and liability constraints.

## 2021 Accomplishments

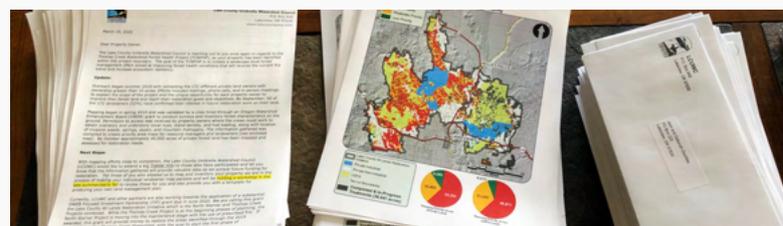
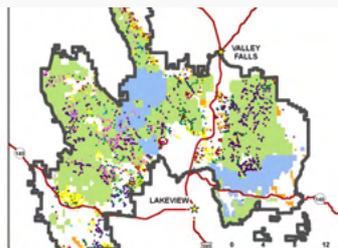
Continued landowner outreach

Continued mailings, phone calls, one on one meetings

Several new landowners interested in conducting treatments on their land

Successful implementation grant awarded due to TA results

Two more successful TA grants awarded for new landscapes due to previous TA results



# FOREST HEALTH ENGAGEMENT IN LAKE AND KLAMATH COUNTIES

## Uplands



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.

In May 2021, the first cross-boundary prescribed fire was completed between USFS property and private land. LCUWC and KLFHP utilized this opportunity to hold a prescribed burning workshop. More burning workshops are planned for the future.

## 2021 Accomplishments

- Continued landowner outreach
- Continued mailings, phone calls, one on one meetings
- Educate about implementation process
- Conduct Prescribed Burning Workshop for landowners



Safety Briefing



Certified fire crew



Protocol Education



Prescribed Smoke



Prescribed Burn



Landowner considerations

# WILDFIRE RESPONSE

## Uplands



Between September 2020 and September 2021, three large wildfires (Brattain, Patton Meadow, and Cougar Peak Fires) burned approximately 104,964 acres or 26% of the Lake County All Lands Restoration Initiative landscape. Although this has been a tremendous loss to the partnership and community, this emphasizes the true reality of how quickly and negatively wildfires can impact our forested landscapes. It is imperative that the remaining unburned portion of the landscape be restored in a timely manner for long-term resilience.

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, Bootleg, Patton Meadow, and Cougar Peak wildfires 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 fires that occurred in Lake County. We proposed to utilize this additional OWEB funding source to assist private landowners with the immediate habitat concerns within the wildfire boundaries.

## 2021 Accomplishments

Completed Brattain Wildfire Emergency Response: seeding effort

Submitted Cougar Peak Wildfire Emergency Response Application: seeding effort

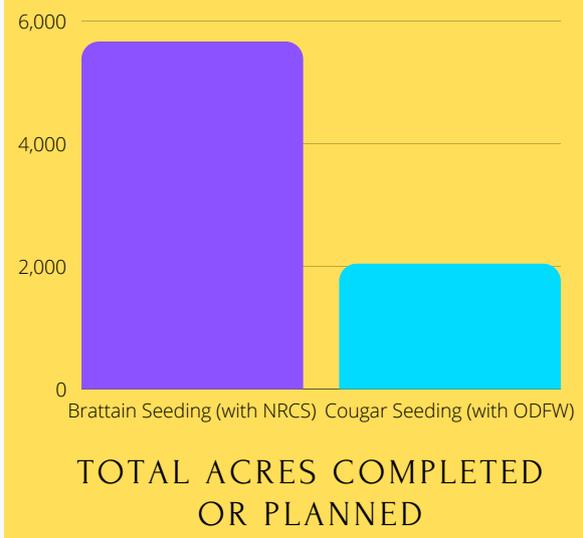
Apply for other landowner assistance grants

Work with SWCD to plan and apply for additional 2020 post-fire grant opportunities (Brattain Wildfire)

Photo monitoring ongoing



### BRATTAIN & COUGAR PEAK



# SMALL GRANTS

## Stream and Riparian/Uplands



Photo credit: Jade Elhardt

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



Juniper Encroachment on Creek



Hadley Creek Riparian Fence



Overstocked Juniper



Degraded Riparian Area

## 2021 Projects

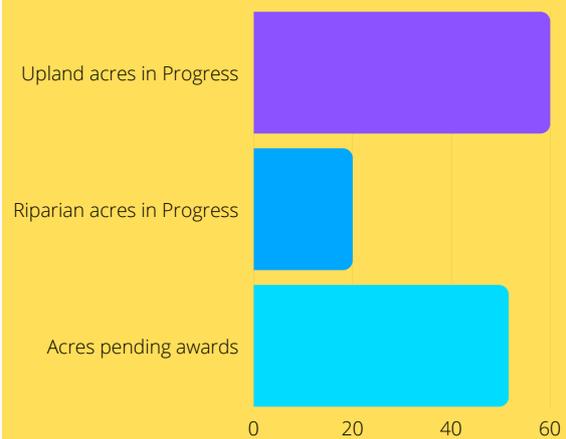
Yocum Valley Upland Enhancement Project

Drews Gap Upland Enhancement Project

Hadley Creek Upland and Riparian Enhancement Project

Approved by Small Grants Team, submitted to OWEB, awaiting award

- LeGaux Upland Enhancement
- Poirier Upland Enhancement
- Doolittle Upland Enhancement



# 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 is an effective way to determine if the project continues to meet initial goals. Post monitoring also allows Restoration Practitioners to learn from successful and unsuccessful projects, providing valued knowledge as new projects are developed.

In 2021 the LCUWC reported on nine past restoration projects across the County. Pre and post photos are captured at selected points of reference to demonstrate change over time.



Crooked Creek 2016



Upland Before



Crooked Creek 2021



Upland After

## Monitoring Status

- Upper Sycan Juniper Removal
- North Warner Forest Health I & II
- Twentymile Creek-MC  
Diversion Fish Passage
- Deep Creek Town Diversion  
Fish Passage
- Crooked Creek Restoration  
Phase IV
- KV Bar Ranch Aspen Stand  
Enhancement
- Feldkamp Upland Enhancement  
Phase II and Phase III
- Barry Upland Enhancement
- Brattain Wildfire Response

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Monitoring Reports  
in 2021

# DEVELOPED IN 2021 PENDING AWARDS



The Lake County Umbrella Watershed Council project managers are constantly developing and planning for future projects. Often times these opportunities arise from landowners interactions and request for assistance. Other times funding opportunities become available unexpectedly from legislative decisions. The LCUWC staff are committed to capitalizing on as many grant applications and funding opportunities that we have capacity for.

Our ever increasing projects help to ensure that Lake County landowners are getting the financial assistance and technical support that they need. Like many other small rural communities in Eastern Oregon, Lake County is heavily reliant on natural resources and the relationships between the timber and ranching industry, government and state agencies, non-governmental partners, and private landowners for economic stability.

Stream and Riparian and Upland restoration activities can create considerable economic activity and jobs, which is significant for our small, rural communities.



Photo credit: Jade Elhardt

## Pending Applications

Goose Lake Basin Water Conservation Study

Cox Creek Fish Passage and Screening

Cottonwood Creek Fish Habitat Restoration

Three Creeks Processed Based BDA Restoration

Lake County All Lands Restoration Initiative Focused Investment Partnership

Senate Bill 762 Landscape Resiliency Program

BLM Fuels Management and Community Fire Assistance; Summer Lake Wildfire Risk Reduction

ODFW Mule Deer Initiative; North Warners Habitat Improvement Project

LeGaux Upland Enhancement Small Grant

Poirier Upland Enhancement Small Grant

Doolittle Upland Enhancement Small Grant

**11**

**Pending Applications  
for 2022**

# EDUCATION & OUTREACH

Education and outreach efforts could almost be considered "back to normal" in 2021. The Council continued "Watershed Wednesdays" on Social Media, and frequently updated the website.

Through grants, projects, and partnerships, the Council hosted the following events:

4-H Hiking Club Presentation

North Lake Outdoor School

Paisley Outdoor School

Adel School Project Tour

Horticulture Willow Planting

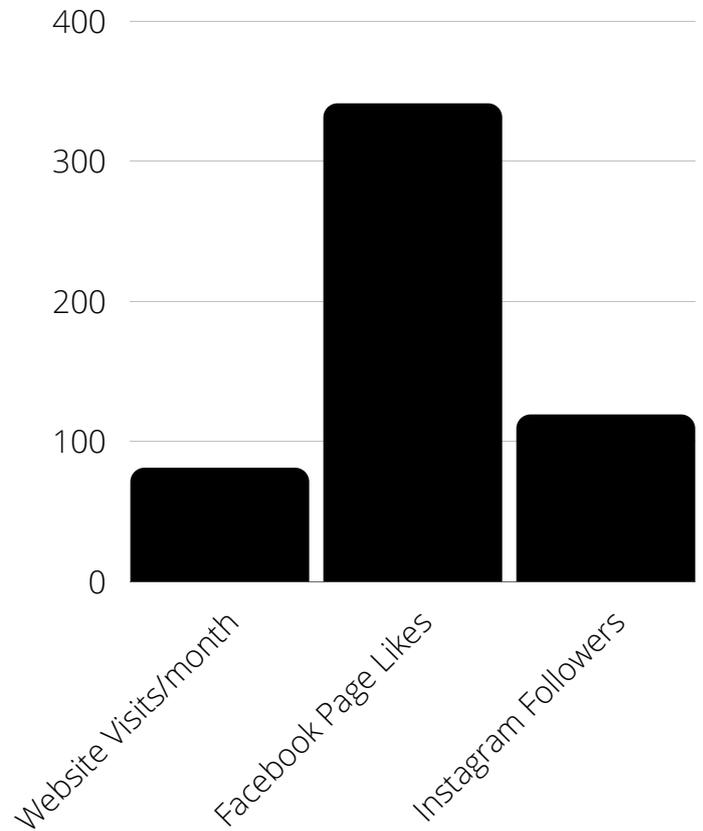
Paisley Leadership Class Presentation

Prescribed Burning Workshop

Lake County Commissioners Presentation

Muddy Creek Fish Passage & Habitat Enhancement Project Tour

Participation in the Lake County Natural Resources Summit



Brandi Neider, Stream & Riparian Coordinator, teaches a lesson to Paisley Elementary students.

# EDUCATION & OUTREACH

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The Lakeview High School Horticulture class helps plant willows along a streambank, near Lakeview, OR

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Autumn Muir, Uplands Coordinator, explains project details to Council Member, John Taylor

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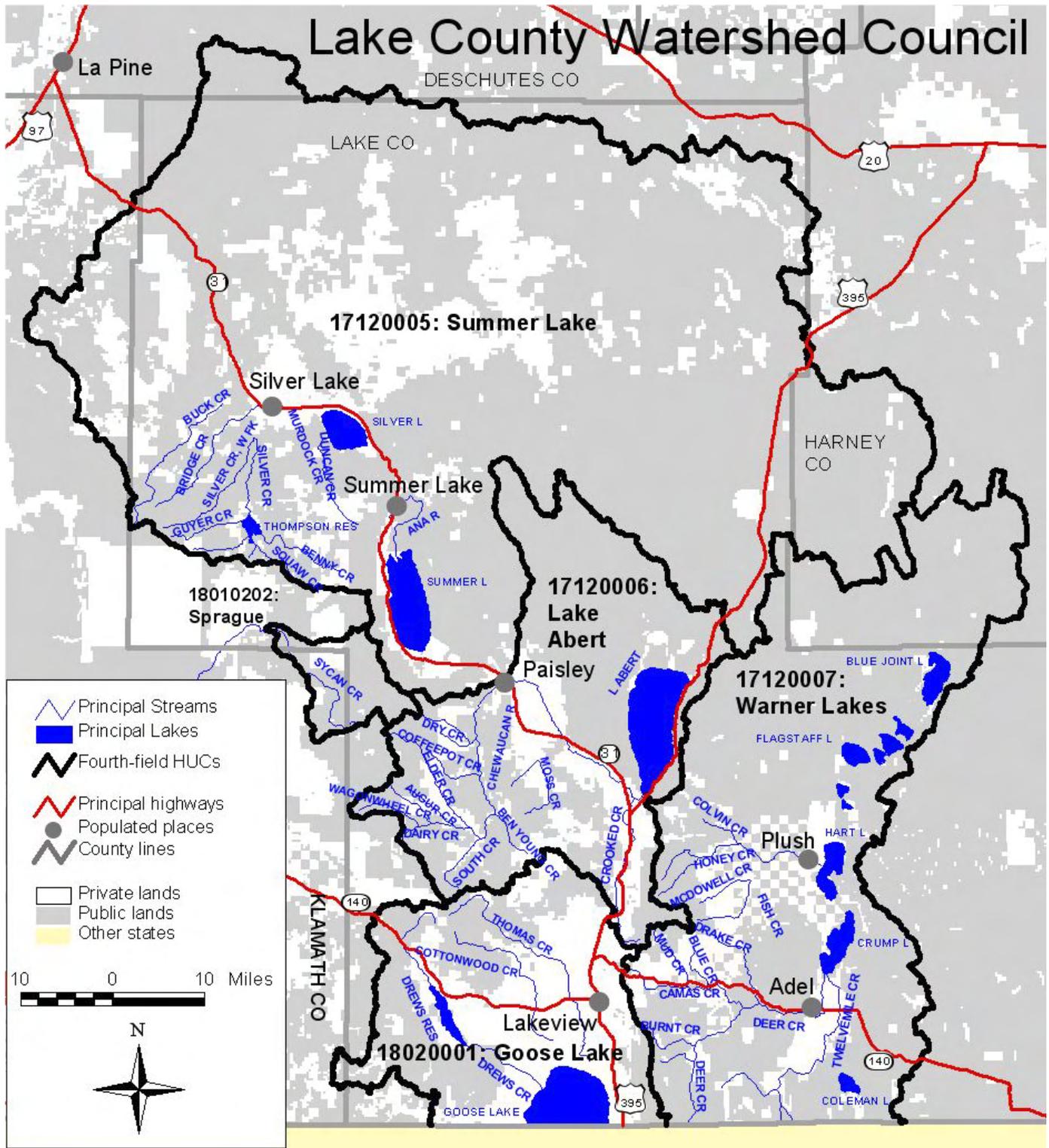
Photo Credit: Jade Elhardt



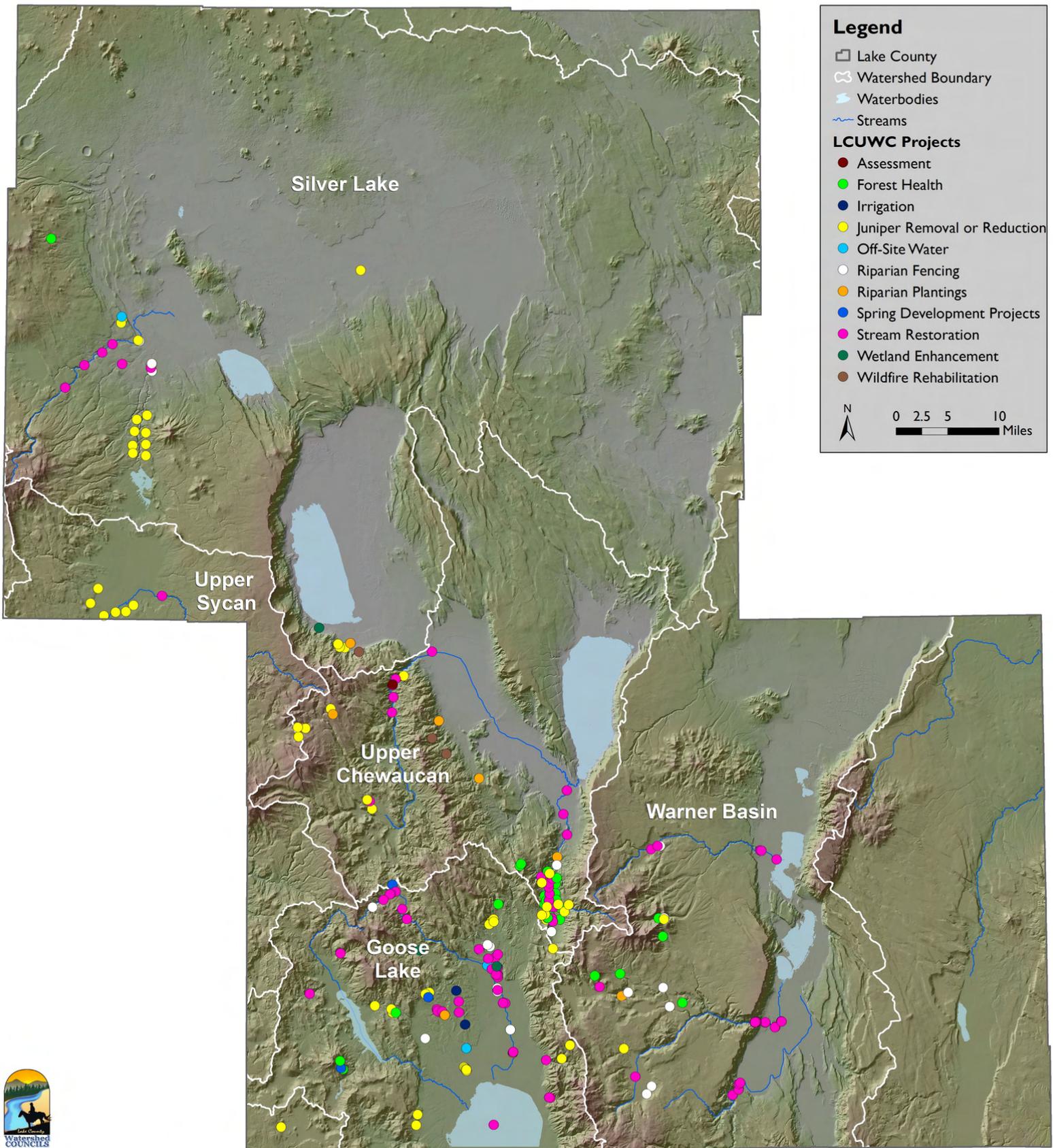
Adel Elementary students learn about the O'Keefe Diversion Project

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# Lake County Watersheds



# Lake County Umbrella Watershed Council Projects



River Design Group, Inc. 2019/08/22 Data source: Elevation - NED; Hydrography - NHD

Since 2004, the Lake County Umbrella Watershed Council has completed over 150 restoration projects county-wide. Map courtesy of River Design Group. Created in early 2021

