



STUDENTS STREAMS & STEWARDSHIP

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*Whychus Creek*  
Students, Streams & Stewardship

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PRODUCED BY  
UPPER DESCHUTES WATERSHED COUNCIL

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[www.UpperDeschutesWatershedCouncil.org](http://www.UpperDeschutesWatershedCouncil.org)

Trees sway in the breeze.  
 Their needles fall like pinecones.  
 They drift slowly down.

*Chloe* FOURTH GRADE STUDENT, CASCADES ACADEMY



*An Illustrated Map of*

## WHYCHUS CREEK

Whychus Creek flows out of ancient glaciers in the Three Sisters Wilderness to carve through steep boulder canyons. Downstream, Whychus sidles past pine forests and the community of Sisters to stretch through arid farmland and high desert rimrock. After a journey of 41 miles, Whychus winds around alders and sagebrush to converge with the Deschutes River.

UPPER DESCHUTES SUBBASIN



## The Upstream Project

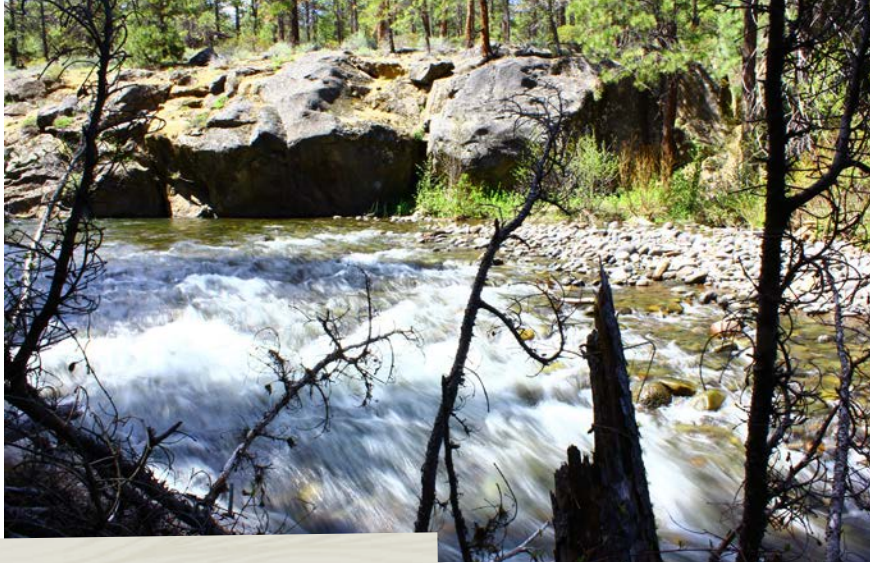
*Ridgeview High School students helped restore willows to the banks of Whychus Creek.*

**T**he Upper Deschutes Watershed Council seeks to protect and restore the rivers and streams throughout Central Oregon through collaborative projects in restoration, monitoring, and education. Our education program, The Upstream Project, works with thousands of students, teachers, and parents every year to guide community members to develop a long-term sense of watershed stewardship. When integrated effectively, restoration, monitoring, and education create valuable lasting benefits for an entire watershed community. Everyone who inhabits the watershed, including fish, wildlife, private landowners, public land managers, children, parents, teachers, and civic leaders benefits from collaborative watershed outreach and restoration.

Our watershed outreach goals are to connect community members to our watershed through hands-on stewardship projects. We have been coordinating on-the-ground restoration and outreach activities in the Whychus watershed since 2006 and, by engaging students, teachers, and community members in these activities, we have sought to foster a widespread sense of stewardship for Whychus Creek. The reintroduction of salmon and steelhead and renewed streamflows in Whychus are now joined by an invigorated community embrace for a creek that once ran completely dry.

This booklet is a celebration of the stewardship and restoration efforts of hundreds of local students, teachers, parents, partners, and community members. While participating in meaningful hands-on activities up and down Whychus Creek, students have also created incredible artwork, poetry, and even songs to express their newfound sense of stewardship. It is our hope that this publication will inspire many more students, community members, decision makers, and landowners to adopt and apply a long-term commitment toward making decisions and taking actions that affect the health of their watershed in positive ways.





## A Watershed View

PHOTO BY *Sam*  
ELEVENTH GRADE STUDENT  
SISTERS HIGH SCHOOL

The landscape surrounding the headwaters of Whychus Creek has been created by a series of diverse glacial and volcanic events in the Three Sisters Wilderness. Resting above Whychus Creek, seven glaciers quietly sit as reminders of the last ice age 18,000 years ago. At the present day confluence of Whychus Creek and the north fork of Whychus Creek, a magnificently thick glacier once stretched two miles wide to reach within six miles of present-day Sisters. Meandering downstream from the headwaters, flows from the melting glacier carved intricate webs of stream channels and ridges. When the glacier receded, the present-day Whychus Creek channel emerged as the deepest, longest, and most complex of them all.

From the peaks of the Three Sisters Mountains to the high desert of Central Oregon, Whychus Creek flows 41 miles to meet the Deschutes River. The waters of Whychus move through a diverse landscape. From icy glaciers to deep canyons, over waterfalls and through the small town of Sisters, Whychus Creek transforms as it makes its way through its 162,000 acre watershed. Known for its old-growth ponderosa pine stands, ancient archaeological sites, and quiet corners of beauty, the uppermost 15 miles of Whychus Creek have been designated as Wild and Scenic under the Oregon Wild and Scenic Rivers Act of 1988.

Just below the wild and most certainly scenic 15 miles of upper Whychus Creek, the health of the creek was impacted for almost 100 years. During the hot summer months, sections of the creek were completely diverted for irrigation and the creekbed

The best thing about the field work for my daughter was spending the time outdoors with her peers helping with reconstruction of the creek. She couldn't stop talking about coming back to see how the work helped.

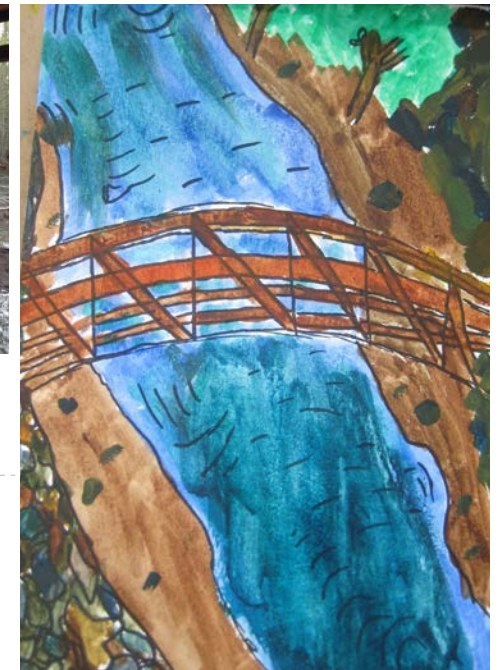
*Nicole Stock* HOMESCHOOLING PARENT

was dry. Additionally, almost 20 miles of the stream were channelized and straightened in an attempt to prevent flooding. The Upper Deschutes Watershed Council has been working with local partners to restore stream conditions for native fish and has successfully screened irrigation diversions and removed multiple fish passage barriers from Whychus Creek. More than a decade of partnership-building among local conservation organizations, private landowners, Deschutes National Forest, and the Three Sisters Irrigation District has created a collaborative climate in which restoration efforts in Whychus have been made possible.



*Lily*

SEVENTH GRADE STUDENT  
CENTRAL OREGON OPEN LEARNERS





## Reintroduction and Restoration



Sisters High School worked with the Watershed Council, Deschutes National Forest, and Sisters Trail Alliance to restore native plants at the a Whychus Creek overlook.

**W**hat is reintroduction? In the spring of 2007, the historic reintroduction of steelhead trout in Whychus Creek began with the release of 250,000 fry into the creek. These small fish, barely two inches in length, were the first steelhead to swim in Whychus for more than 50 years since dams on the Deschutes River blocked their migration to and from the ocean. Two years later, in 2009, annual steelhead releases were complemented by the first reintroduction of Chinook salmon fry and smolts. Hundreds of thousands of young fish from both species have been released each year since and will continue to be returned to Whychus Creek for years to come.

What is restoration? When referring to watersheds, streams, and rivers, restoration refers to a whole host of different activities. To restore a stream means to nurture it back to health. Just as a medical practitioner would assess the whole patient when attempting to diagnose an illness before prescribing medication, restoration specialists examine and evaluate the watershed conditions surrounding a particular stream prior to proposing a solution.

Ranging from one-day riparian planting projects to multi-year restoration programs, restoration efforts in Whychus Creek have collectively resulted in im-

Thanks so much for your work on the Whychus overlook! We really appreciate your hard work and passion. I hope the students enjoyed it and remember the days with satisfaction when they visit the trail again. This was a great new combination of working relationships.

*Maret Pajutee* SISTERS RANGER DISTRICT ECOLOGIST

proved water quality, improved fish habitat and overall enhanced watershed health. Some examples of restoration activities that we have coordinated with our partners include instream habitat restoration for fish, channel reconstruction, the removal of fish passage barriers, and irrigation diversion screening to prevent fish from ending up on farms.

With The Upstream Project, hundreds of local students have planted thousands of riparian plants and trees along Whychus Creek to stabilize the banks, create shade to minimize stream temperature warming, and provide important habitat for fish and wildlife. Students have also released steelhead into the creek, collected data along the stream, helped with road obliteration, and conducted aerial photography to document changes in the landscape.



Mike Riehle, Fish Biologist with Sisters Ranger District, introduced students to the importance of riparian plants.





*Haley*

THIRD GRADE STUDENT  
CENTRAL OREGON  
OPEN LEARNERS

Much like the water  
This place continues to change  
Bringing me forward

This place tells stories  
I shall spread them through the land  
Teaching it's lessons  
*Alena Nore*

*Alena*

ELEVENTH GRADE STUDENT  
SISTERS HIGH SCHOOL



Sisters Elementary School fourth graders restored hundreds of plants to Whychus Creek.



The river is like liquid skies.  
Blue or green, shiny and beautiful.  
The river roars like a bear in places and  
sleeps in others.  
The river can be soft and kind  
or strong and angry.  
The river smells like fresh rain on the grassy  
dirt and the forgotten tears of a crying sky.  
The river feels like cold, shocking love,  
though it looks like a warm caring hug.  
The river looks so loving, so caring and it is.  
The river cares about its banks and it loves  
its fish.  
It cries mournful tears when those things are  
taken away.  
So don't hurt the river because the river  
won't hurt you!"

*Inanna*

SEVENTH GRADE STUDENT  
BLACK BUTTE SCHOOL

PHOTO BY *Sam*

ELEVENTH GRADE STUDENT  
SISTERS HIGH SCHOOL

*Patrick*

ELEVENTH GRADE STUDENT  
SISTERS HIGH SCHOOL







Kindergarten students from Highland Magnet School released steelhead fry into Whychus Creek.

## Returning to the Creek

Throughout the entire upper Deschutes basin, Whychus Creek provided 42% of prime steelhead spawning habitat historically. Cool temperatures, shaded pools, and side channels provided an excellent home for cold water red-band trout and wild steelhead. However, after channelization and water diversions occurred in the 1900's, Whychus became much less hospitable to fish. With the construction of Round Butte Dam in 1964, fish passage from Whychus into the Deschutes and out to the ocean was not successful, and the steelhead population collapsed.

In the spring of 2007, 250,000 steelhead fry were released into Whychus Creek and many more steelhead and spring Chinook were released between 2008 and 2016. Thanks to renovated fish passage at Round Butte Dam, the anadromous fish were given a way to complete their migration from their natal stream out to the ocean

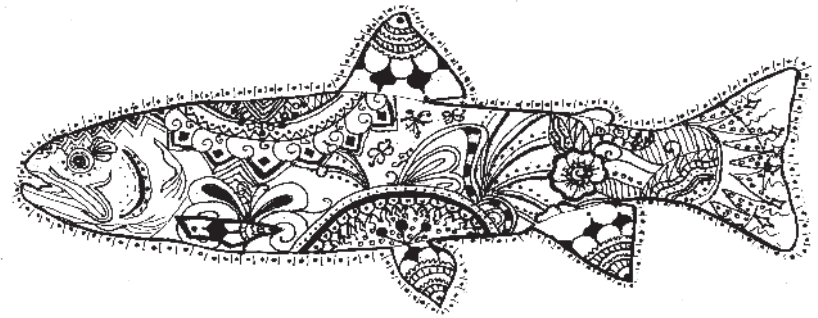
I have come all this way to give life  
to the fish, who give life to me.

*Devry* ELEVENTH GRADE STUDENT, SISTERS HIGH SCHOOL

and back to spawn. Each year, thousands of steelhead and salmon fry are released into Whychus Creek to bring these iconic fish back to their native home.

Listed as Threatened under the Endangered Species Act, steelhead are particularly affected by human-induced changes to stream habitat. Steelhead require specific stream conditions in order to survive through their long journey downstream, out to the ocean, and back upstream hundreds of miles to spawn in their home waters. Throughout their lifecycle, steelhead need downed trees, deep pools, abundant gravel, and good sources of food. The habitat restoration projects of the Watershed Council and our partners are designed to improve the rearing habitat for young trout and salmon in these same streams.

In the spring of 2016, two pairs of steelhead were found spawning in Whychus Creek. Several spring Chinook salmon were also found swimming into Whychus Creek during the spawning season. With recent improvements to the fish passage system, we hope this is just the beginning of the return of the salmon runs to Whychus Creek.



*Laynie* ELEVENTH GRADE STUDENT, SISTERS HIGH SCHOOL

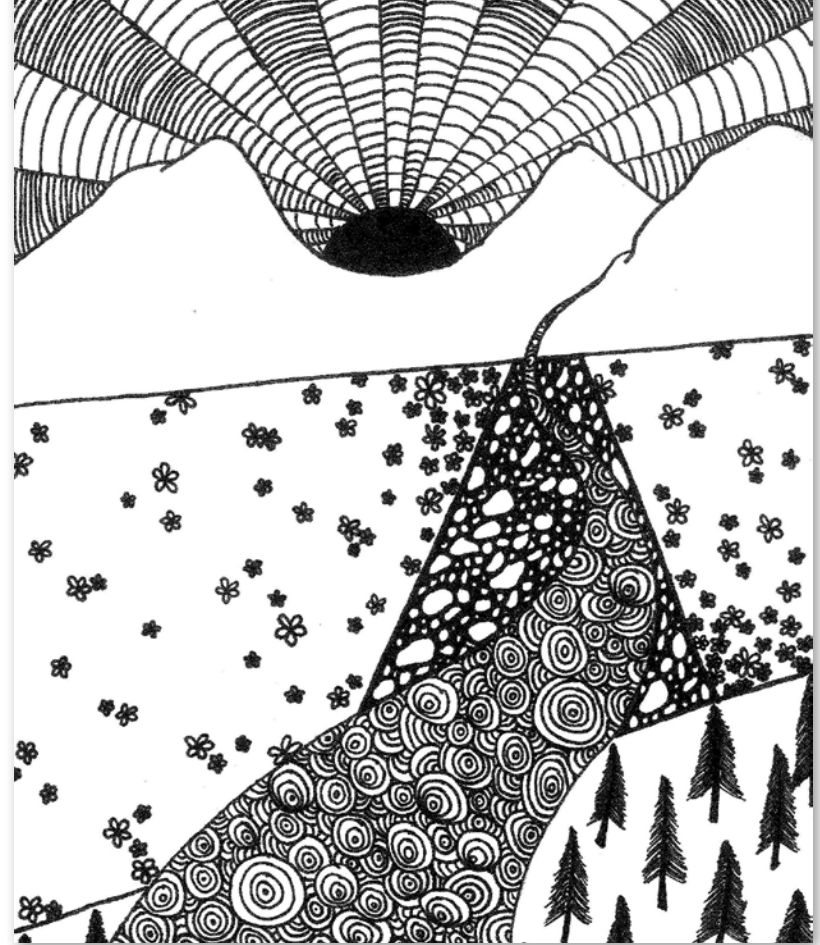


My story is one of patient observation of the Whychus. From mountain top to the Deschutes, my brothers and sisters form the skeleton of this creek. My change is gradual; my sides are slowly shaped by the waters which dance around me, creating changes to never be reversed. Each day that I've watched has been different from the one that follows, and that's part of the beauty of the Whychus. For innumerable years I've rested here, and I'll remain for many to come. You may not think too much of me, but I am a riverside stone.

-Lauren Wattenburg

*Lauren*

ELEVENTH GRADE  
STUDENT,  
SISTERS HIGH SCHOOL



This experience of creating art along Whychus Creek has helped me grow as an artist, and has taught me a lot about restoration and service projects in my community. I hope that others can feel connected to the creek when they look at my artwork, and that it will inspire them to try to connect to their area. This project has helped me to feel more of a sense of attachment to this area, and has helped to develop my sense of place. My hope is that my art will motivate others to connect with their community and their environment and learn about what makes their area special to them personally.

*Johanna* ELEVENTH GRADE STUDENT, SISTERS HIGH SCHOOL





Cascades Academy students learned about restoration at Camp Polk.

## Looking Downstream

Over the next ten years, the Watershed Council is excited to work with partners and community members to build on the restoration and stewardship momentum that we have created. In close partnership with the Deschutes Land Trust, the Deschutes River Conservancy, Deschutes National Forest, and private landowners, we will focus on removing the last remaining fish barriers, monitoring and maintaining existing restoration projects, and developing new restoration projects along ten miles of Whychus Creek downstream from the City of Sisters. Successful reintroduction of salmon and steelhead in Whychus Creek requires that many local, state, and federal partners and funders continue to work together in restoration and outreach efforts.



It was absolutely life changing being able to be outside on Whychus Creek. I truly learned more about myself and who I am as a person. Not only about myself, but about the world surrounding me and our beautiful creek.

*Megan*

ELEVENTH GRADE STUDENT  
SISTERS HIGH SCHOOL

Our watershed outreach efforts have not only cultivated widespread community support for watershed restoration and conservation as a concept but have also successfully helped to create the critical relationships with landowners that have been necessary to implement on-the-ground restoration projects. Our outreach success has been made possible due to our valuable partnership with the Children's Forest of Central Oregon and the overwhelming support from parents, teachers, and local school districts. In order to keep community members engaged in watershed protection and inspired to be active stewards for Whychus Creek, we plan to continue to coordinate watershed outreach activities with local schools and community groups throughout the Whychus watershed for many years to come.



Fifth graders from Culver Elementary School planted hundreds of willows on instream islands.



The trees are swaying.  
Everything is peaceful here.  
The creek is flowing.

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*Stella* FOURTH GRADE STUDENT, CASCADES ACADEMY



*Tessa* SIXTH GRADE STUDENT, CENTRAL OREGON OPEN LEARNERS



**UPPER DESCHUTES**  
WATERSHED COUNCIL

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