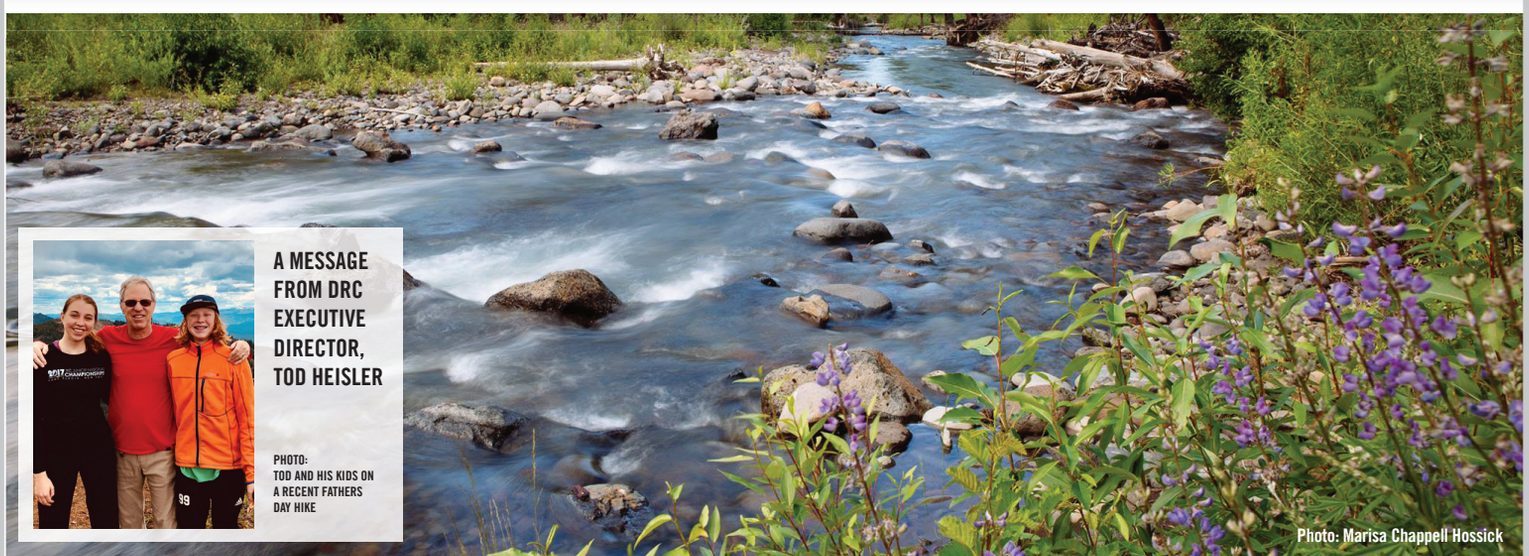
River Voice

SUMMER 2018 VOL. 12 NO. 2 NEWSLETTER OF THE DESCHUTES RIVER CONSERVANCY



A MESSAGE FROM DRC EXECUTIVE DIRECTOR, TOD HEISLER

PHOTO: TOD AND HIS KIDS ON A RECENT FATHERS DAY HIKE

Photo: Marisa Chappell Hossick

REFLECTIONS ON WATER IN CENTRAL OREGON

This year we are celebrating the completion of a 10 year water conservation project with Three Sisters Irrigation District (TSID) to pipe their main canal in Sisters, Oregon. Together with other water purchases over the past decade, this project largely completes our acquisition of permanent water rights on Whychus, although a few remaining senior water rights may offer future opportunities. The result of these acquisitions is more consistent summer streamflows of between 20-30 cubic feet per second (cfs).

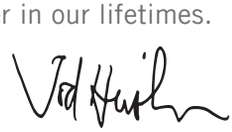
After decades of seasonal devastation including dry streambeds in 2 out of 3 years and degraded fish habitat, we are now seeing a revival of the creek. Restored meanders and floodplains have markedly improved conditions for native fish. The increased flows created opportunities for further rehabilitation over the years with our partners the Upper Deschutes Watershed Council and the Deschutes Land Trust. Restored riparian habitat and floodplain connection have resulted in an extraordinary transformation of Camp Polk Meadow - a great example of how a river system can be successfully revitalized.

As struggles with snowpack continue in the arid west, water is becoming more and more precious. We no longer have the luxury of taking all we want without considering the ecological consequences. The conservation work in Whychus Creek shows how a stream can be restored while delivering more reliable water to irrigators. We hope to replicate this success on the Upper Deschutes River in the coming years.

Snowpack was a mere 65% of average in Central Oregon this past winter. Even though reservoirs were full at the beginning of the irrigation season, now just a month into summer, Wickiup Reservoir is already more than half empty and will likely be nearly empty by the end of irrigation season. This does not bode well for next year if dry conditions persist and the current water demand continues unabated.

This is important because the key to solving the dramatic flow problems in the Upper Deschutes relies on the ability to manage water in Wickiup for multiple purposes – for irrigators and for fish and wildlife. And that only becomes possible if irrigation demands are reduced through water conservation. Climate change will make this challenge even greater.

We are wrapping up a three-year study this year that shows us a number of approaches to move forward as a community to ensure the water needs of the river, towns and farmers will all be met in the coming years and decades. Restoration in the Upper Deschutes will take a much larger lift than in Whychus Creek, but we are confident that with the cooperation of the irrigation districts, the river community, and local governments we will see a healthy Deschutes River in our lifetimes.



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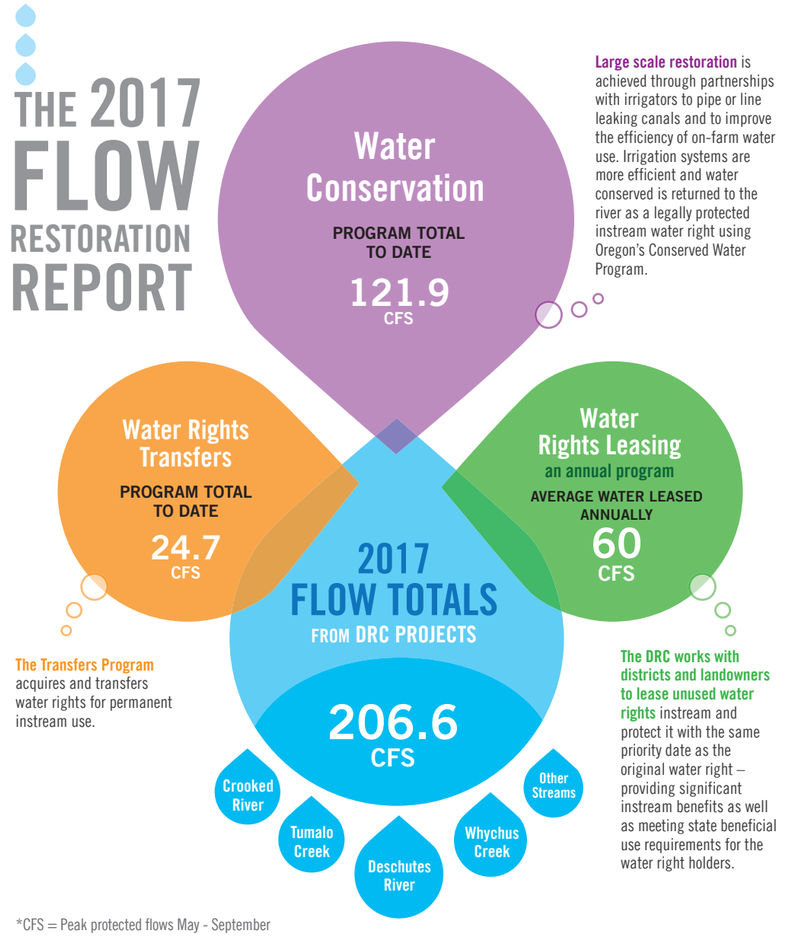
Don't miss the Upper Deschutes Watershed Council's Annual Deschutes River Clean up on July 28th!

Photo: Marisa Chappell Hossick

The section of the Deschutes River flowing through the Old Mill District in Bend sees dramatically increased traffic during the summer months as boaters and floaters enjoy cool waters on hot days. When you float the river, please make sure to keep the Deschutes beautiful and clean!

THE 2017 FLOW RESTORATION REPORT



Large scale restoration is achieved through partnerships with irrigators to pipe or line leaking canals and to improve the efficiency of on-farm water use. Irrigation systems are more efficient and water conserved is returned to the river as a legally protected instream water right using Oregon's Conserved Water Program.

The Transfers Program acquires and transfers water rights for permanent instream use.

The DRC works with districts and landowners to lease unused water rights instream and protect it with the same priority date as the original water right – providing significant instream benefits as well as meeting state beneficial use requirements for the water right holders.

*CFS = Peak protected flows May - September

DESCHUTES BASIN UPDATES

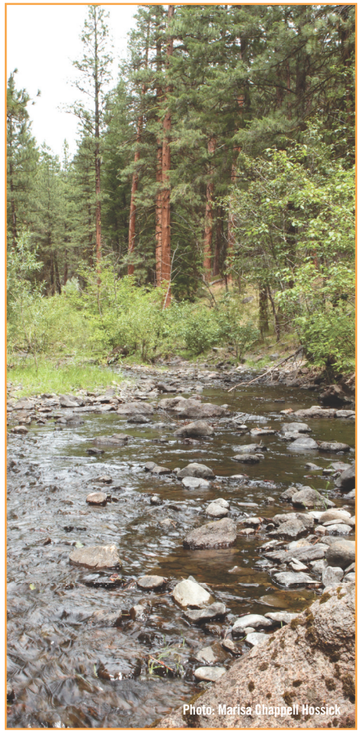


Photo: Marisa Chappell Hossick

McKay Creek

McKay Creek flows 37 miles from its headwaters in the Ochoco National Forest through private agricultural lands and joins the Crooked River just northwest of the City of Prineville in Crook County.

Due in part to irrigation diversions, streamflows are low or intermittent in the middle reach of the creek during the irrigation season. Low flows and high stream temperatures are detrimental for fish and other wildlife.

The McKay Creek Water Rights Switch will restore natural flows in the middle reach of McKay Creek by allowing landowners to trade their private McKay Creek water rights for Ochoco Irrigation District (OID) water rights.

In exchange for more reliable water, landowners will transfer 11.2 cfs of water rights permanently instream. Restoring the natural flow in this reach of the creek will address many limiting factors, including low flow, altered hydrology, high water temperature and impaired fish passage.

The DRC and OID are currently in the preliminary design phase of the project and are targeting 2020 for implementation.

Basin Study

The Upper Deschutes River Basin Study, a 3-year study focused on meeting water needs in our basin, will be complete in September 2018.

The study identifies water needs for rivers, agriculture and growing communities in Central Oregon, and evaluates tools available to meet those needs.

The study indicates that although there are significant shortages associated with meeting basin needs, we have the available tools to solve the problem. A major investment will be needed in water conservation and the development of water markets.

Over the course of the study, the multi-stakeholder Basin Study Work Group has invested significant time becoming highly-educated about water and coming to a deeper understanding of the different perspectives around water. We hope the strong partnerships fostered by this study will enable the community to coalesce around a sustainable water future.

Access the report and study documents on our website at deschutesriver.org

Photo: Marisa Chappell Hossick

FINANCIAL SUMMARY

The DRC is dedicated to restoring streamflow and improving water quality in the Deschutes Basin. To date, we have achieved unprecedented restoration results through the implementation of collaborative projects with our local partners.

Assets 2017

Current Assets	$1,353,813
Other Assets	$8,251
Total Assets	**$1,362,064**

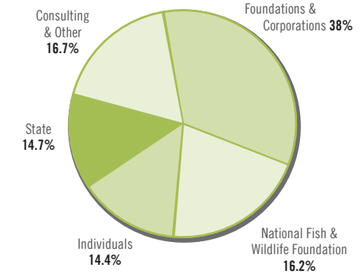
Liabilities and Net Assets

Current Liabilities	$471,977
Long-term Liabilities	$597
Net Assets	$889,490
Total Liabilities & Net Assets	**$1,362,064**

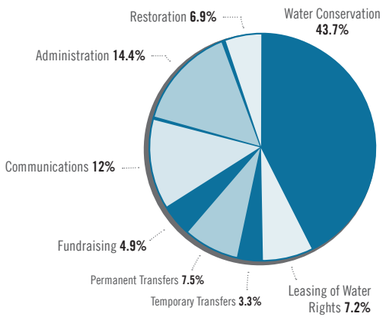
Revenue and Support

Grants and Contributions	$1,135,736
Contributions and Events	$236,456
Other	$275,708
Total Revenue & Support	**$1,647,900**

REVENUE BY SOURCE



PROGRAM EXPENSES

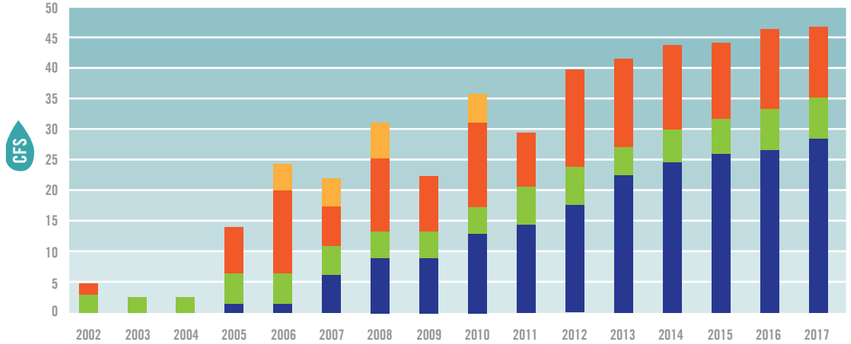


Restoring Whychus

Restoring Flows

Since the early 1900s, Whychus Creek ran dry in two out of every three years due to irrigation diversions. Through a combination of water conservation (i.e. piping) and both permanent and temporary water transfers, the creek is now well on its way to achieving the flows necessary for reintroduced steelhead and salmon. Continued investments in streamflow projects will also have a direct effect on other indicators of river health, such as improved habitat availability and lower water temperatures.

Increasing Flows in Whychus Creek (2002-2017)



TOTAL STREAMFLOW PROTECTED IN WHYCHUS CREEK

20% High Reliability
Water rights almost always served

55% Mid-Reliability
Water rights are reduced in early to mid-July when natural flows drop

25% Low Reliability
Water rights only served during periods of higher flow early in the season

Reintroduction

In 2007, Portland General Electric and the Confederated Tribes of Warm Springs began an historic program to reintroduce anadromous fish in the Deschutes Basin. The reintroduction program, supported by more than 20 partners, is the largest anadromous fish reintroduction program on the West Coast. Whychus Creek plays a critical role in this effort given its historic importance as a steelhead-producing stream however, at the time of reintroduction, much of the historic habitat on Whychus Creek could not support successful spawning, rearing, or migration. DRC and its partners have since focused on collaborative efforts to restore the entire structure and function of the creek through streamflow restoration, habitat restoration and land conservation projects.

Whychus Restoration Highlights

Camp Polk Meadow Preserve & Whychus Canyon

A newly transformed reach of Whychus Creek now meanders through Camp Polk Meadow and Whychus Canyon. Restored habitat, floodplain and streamflows bring back an important spawning grounds for steelhead. These restoration projects are examples of the power of the collabo-rative process engaged in by organizations such as the Deschutes River Conservancy, Upper Deschutes Watershed Council and the Deschutes Land Trust.

Gaging Flows

The Oregon Water Resources Department (OWRD) operates streamflow gages at four locations on Whychus Creek and publishes the data on its website via satellite. The gages relay important information on the volume of water flowing in the creek which is useful to DRC and its partners in managing instream and agricultural water rights on the creek. The gage at the City of Sisters is DRC's measurement point for our Whychus Creek flow target of 33 cfs.

Floodplain Restoration

In 2015, the Deschutes National Forest in partnership with the Upper Deschutes Watershed Council finished a large scale project on 280 acres to connect Whychus Creek to relic stream channels across a mile-wide historic alluvial floodplain. This restoration creates aquatic habitat for reintroduced salmon and steel-head as well as diverse riparian habitat for pollinators, birds and wildlife.

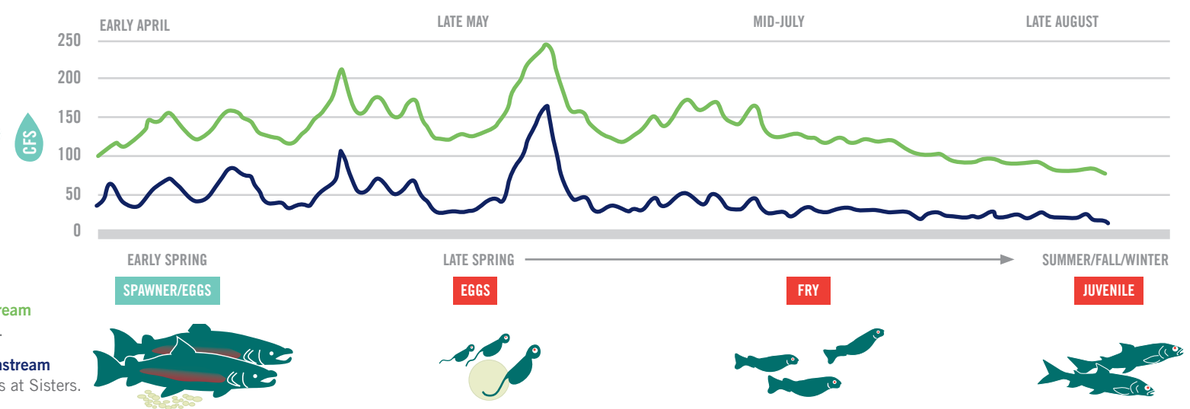
Fish Passage Barriers

Between 2010 and 2013, three major fish barriers were removed on Whychus Creek between the town of Sisters and the TSID diversion. The first and largest barrier addressed was the TSID diversion. One low barrier remains just a few miles above the TSID diversion. Once the final barrier is removed, fish will have the ability to easily move up the length of Whychus Creek, and take refuge in springs and pools when temperatures dictate.

Three Sisters Irrigation District (TSID)

TSID is the DRC's leading partner in flow restoration. This year, TSID completed a 9 phase, multi-year conserved water project protecting 15 cfs in Whychus Creek. Combined with other conservation projects, TSID has permanently protected 33.1 cfs of water instream plus an additional 4.5 cfs through annual temporary water rights leasing. The district also increased efficiencies in water use on farms and reconstructed their diversion by adding a state of the art fish screen. DRC and TSID continue to discuss implementation of a streamflow management agreement to address daily flow fluctuations and low flow in the late summer.

WHYCHUS Summer Flows & Fish* Cycles



Flows in Whychus Creek **upstream** from TSID irrigation diversion.

Flows in Whychus Creek **downstream** from TSID irrigation diversions at Sisters.

* Redband and Steelhead Trout

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Explore the Deschutes!

We are very excited to announce a new blog series called Exploring the Deschutes with Jake Sahl. Jake is a hydrogeologist who has recently relocated to Central Oregon. He will take you on fun and informative journeys as he learns about his new home in the Deschutes Basin.

"It's hard to imagine life in Central Oregon without the Deschutes River, which provides water for drinking, fishing, paddling, swimming, and sitting by, all while supporting a vibrant community of plants and animals," said Jake Sahl.

"Decisions about how to balance competing demands on our river aren't getting easier, and I'm proud to be able to assist the Deschutes River Conservancy in their challenging and important work to protect the Deschutes for future generations."

Photo: Jake Sahl

More information at www.deschutesriver.org or 541.382.4077

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