

COLUMBIA BASIN WATER TRANSACTIONS PROGRAM 2018 ANNUAL REPORT



REPLENISHING FRESHWATER STREAMFLOWS
VITAL FOR FISH AND PEOPLE IN THE
COMMUNITIES OF THE COLUMBIA BASIN



2018 YEAR IN REVIEW

After 16 years and the implementation of more than 575 voluntary water transactions, the Columbia Basin Water Transactions Program (CBWTP) has established a remarkable record of using water transactions to protect and restore vital tributary streamflows for the benefit of Columbia River Basin fish habitat.

CBWTP has demonstrated that community-based market approaches to flow restoration can meet the needs of farmers and ranchers while satisfying unique, tributary-specific restoration priorities across the region. Water transactions are now firmly established as an important tool for restoring streamflows in the Northwest.

Through 2018, CBWTP has protected more than 1.8 million acre-feet of water — an acre foot is more than 325,000 gallons — and increased flow to thousands of miles of tributaries to the Columbia River, which is key for reconnecting streams critical for fish passage.

Year over year, the benefits of water purchased by CBWTP will continue to accumulate and protect water for fish, wildlife and the habitats they depend on. Cumulatively, the existing projects already secured through CBWTP today and into the future will restore more than 12 million acre-feet to the region's tributaries — enough to fill 160 million backyard swimming pools.

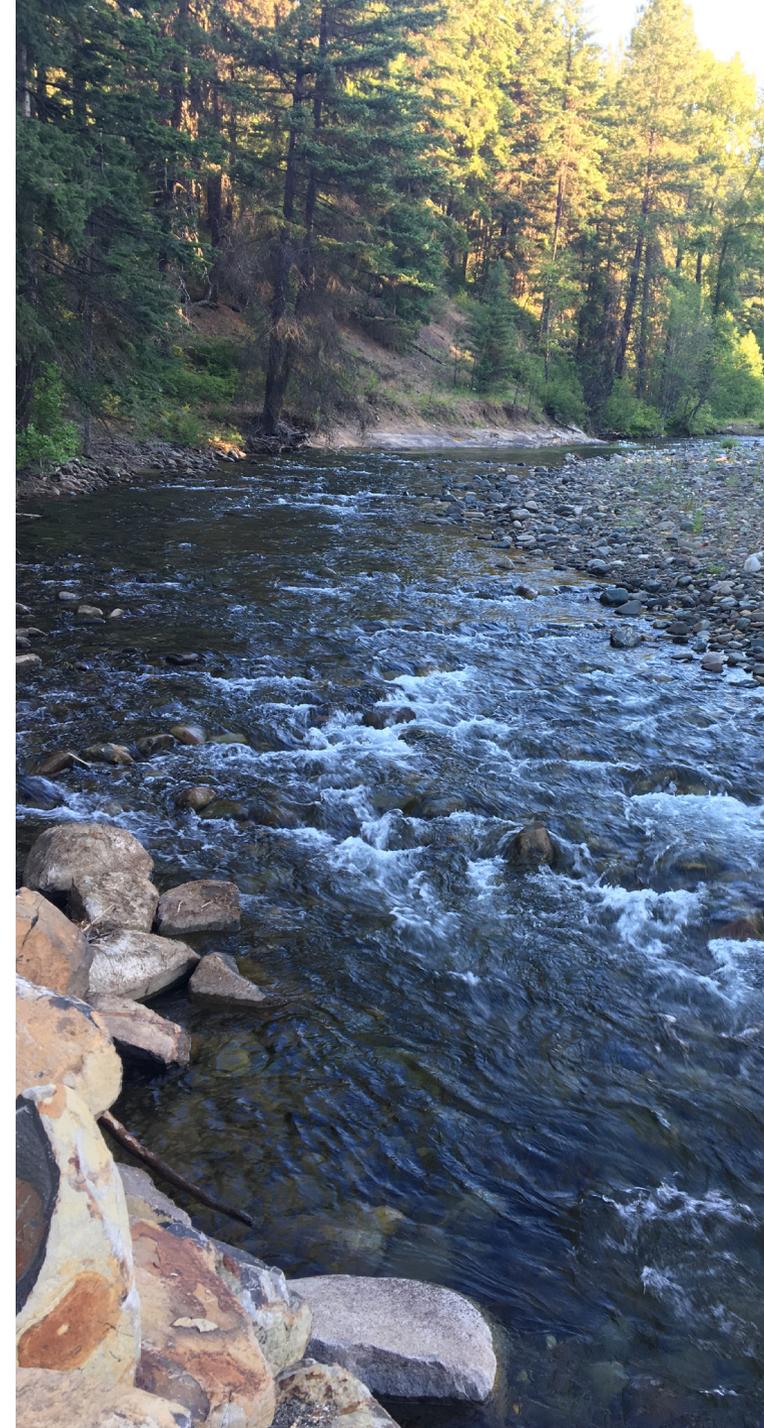
While these are big numbers, most water transactions begin with small, incremental steps toward a longer-term vision. It's in these small steps that critical relationships are established, shared learning takes place, and trust is built. It's also how National Fish and Wildlife Foundation (NFWF) staff and our program partners explore questions about the complex interplay of water policy, land use, hydrology, fish life-history, agricultural water management, and economics that ultimately shape a transaction that will provide meaningful outcomes for fish and landowners.

The National Fish and Wildlife Foundation (NFWF) manages the Columbia Basin Water Transactions with support from Bonneville Power Administration (BPA) and the Northwest Power and Conservation Council (NPCC), as well as nonprofit organizations, tribes, state and federal agencies, and rural landowners.

By exploring and resolving the unique challenges posed by each water transaction — whether it be a landowner agreement, lease, conservation project, or permanent transfer instream — CBWTP reveals new information about flow restoration and its critical importance in creating tributary habitat that sustains salmon, steelhead, bull trout and other important freshwater species.

As it enters its 17th year, CBWTP continues to protect and enhance the region's watersheds, streams, and rural landscapes, one transaction — and one gallon — at a time.

COVER PHOTO: Chinook salmon in Oregon
PREVIOUS PAGE: New pivot irrigation system
RIGHT: Teanaway River in Washington



ABOUT THE BASIN

The Pacific Northwest is abundant with streams feeding the region's major rivers, which ultimately join to create the great **Columbia River**.

Waterways arc across the Columbia Basin's 250,000 square miles, from the west slope of the Rocky Mountains to the eastern slopes of the Cascades, through wilderness, forests and mountain valleys to arid agricultural landscapes predominately found in Idaho, Montana, Oregon and Washington. Most of the Columbia's tributaries are typically fed by mountain snowpack, now on a diminishing trajectory.

Legal water rights dating to the 19th century provide that landowners may divert the waters of these streams for agricultural production. A long list of commodities are supported by irrigation, from cattle to carrot seed, alfalfa to apples. However, water demand from farms and fish often exceeds what nature can supply during the growing season, especially in dry years.

Under these conditions, flows are greatly diminished in sections of many streams. Water temperatures increase, compromising habitats and aquatic life. Some tributaries run dry. As a result, salmon, trout and other fish may be unable to complete their lifecycles, impacting tribes and other fishing interests that count on fish for their cultures and economies.



ABOUT THE PROGRAM

In 2002, the **Bonneville Power Administration (BPA)** established a partnership with the National Fish and Wildlife Foundation, in cooperation with the Northwest Power and Conservation Council, to launch the **Columbia Basin Water Transactions Program**.

BPA supports CBWTP as an important part of its Fish and Wildlife program — the largest environmental program of its kind in the world — helping the agency meet commitments under both the Endangered Species Act and the Northwest Power Act. Dam operations and fish ladders are at the core of BPA's strategy to protect endangered salmon. But because the federal dams still have impacts on individual salmonid populations even after passage improvements, BPA and other federal agencies implement habitat and hatchery enhancements. The instream flow augmentation delivered by CBWTP on tributary streams is a core component of the habitat restoration program.

CBWTP focuses on enhancing streamflows to benefit the fish, wildlife and communities that depend on them. Tributary streams are targeted where flow is a "limiting factor" for the health of fish populations and where small streams are sometimes disconnected from larger tributaries. This competitive grant program provides financial and technical support for local nonprofit organizations, state water agencies and tribes to develop water transactions across the basin.

CBWTP works with ranchers, farmers, municipalities and irrigation districts on voluntary, market-based approaches to bring more water use into balance, so streams have sufficient water and working landscapes remain productive.

ABOUT NFWF

The **National Fish and Wildlife Foundation (NFWF)** works with the public and private sectors to sustain, restore and enhance the nation's fish, wildlife, plants and habitats for current and future generations. Chartered by Congress in 1984, NFWF has grown to become the nation's largest private conservation grant-maker, supporting more than 17,250 projects and generating a total conservation impact of more than \$5.3 billion.



COLUMBIA RIVER BASIN

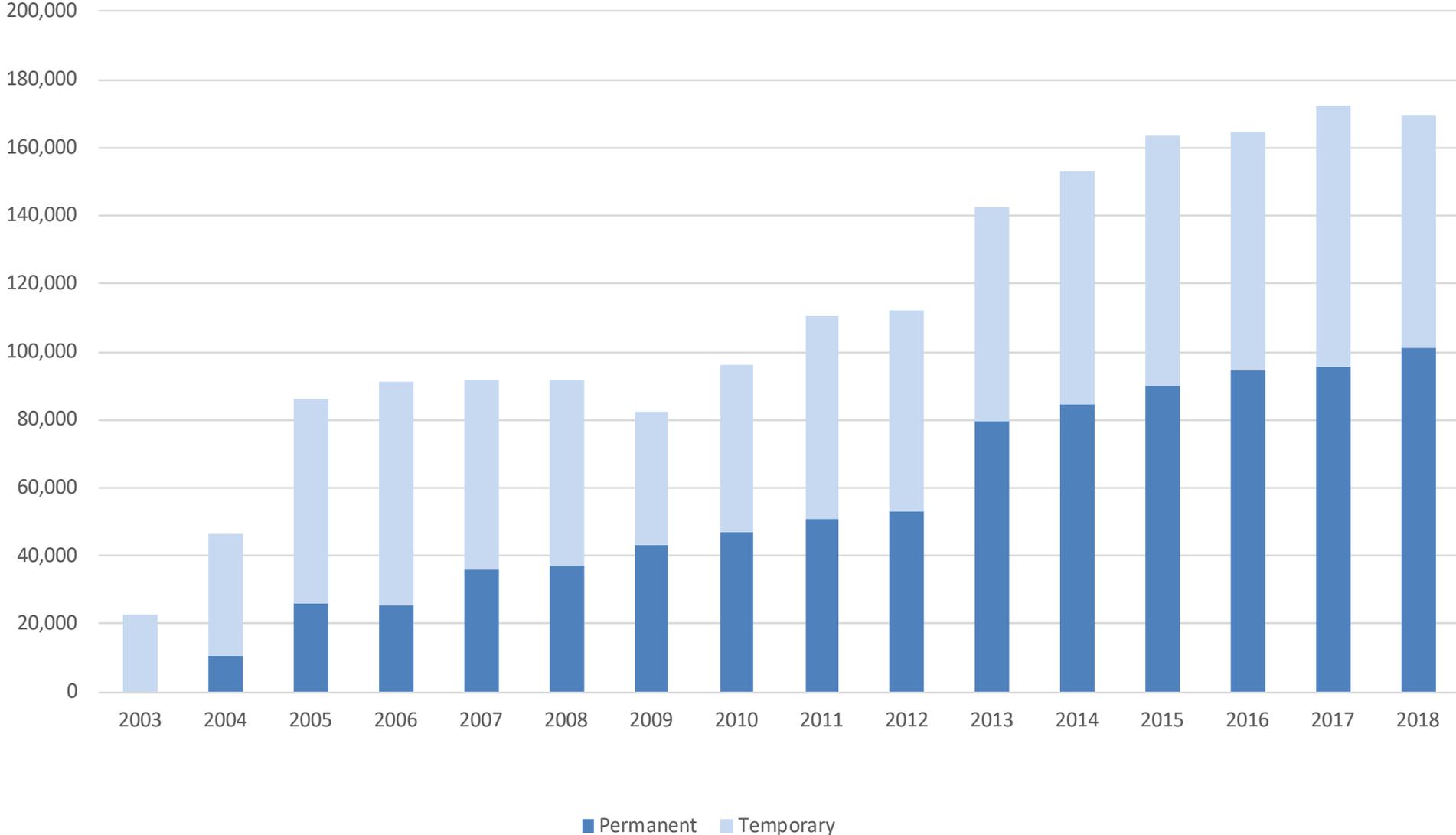
The Columbia Basin spans portions of seven U.S. states and one Canadian province. The Columbia Basin Water Transactions Program works across portions of Oregon, Washington, Montana and Idaho, implementing water transactions in strategic tributary locations to increase streamflows to enhance fish habitat.

Projects in fiscal year 2018 benefited 24 streams and more than 660 stream miles of habitat.

● 2018 Projects



Protected Flow in Acre Feet (2003-2018)



2018 KEY ACCOMPLISHMENTS*



35 *New*
transactions

237 *Total* active
transactions



30,488

Acre-feet of *new*
protected water
instream



912,418

Acre-feet of cumulatively
protected streamflows
for *life of transactions*
funded in 2018



660

Stream miles of habitat
benefited by *new* streamflows

166

Cubic feet per second
new protected water
instream

958

Cubic feet per second,
all protected streamflows
since 2003

**CBWTP and its partners develop and review water transactions carried out as part of the Columbia Basin Fish Accords with Idaho, the Confederated Tribes of the Colville Reservation and the Confederated Tribes of the Umatilla Indian Reservation. Outcome information is included here, and additional details can be found in the appendix at nfwf.org/cbwtp.*

Converting solutions from short-term to permanent in Idaho

Recovery efforts for Chinook salmon, steelhead and bull trout in Idaho's Lemhi River basin depend in large part on the successful reconnection of tributaries that sometimes run low or completely dry.

These "reconnect" projects, in turn, depend on long-term efforts by entities such as the Idaho Water Resource Board to build trust with landowners and secure permanent deals to keep water instream and increase habitat for fish.

Bohannon Creek, which historically has held ideal spawning and rearing habitats for Chinook salmon and steelhead, now regularly runs dry due to irrigation withdrawals. Partner agencies in Idaho have been working on a project with two water users to voluntarily relocate their point of diversion to benefit fish populations.

Steelhead currently use Bohannon Creek for all life stages. Adult fish move into the system during the spring and spawn in late April and May. Juvenile fish emerge and rear mid-to-late summer.

Beginning in 2014, water users on this diversion have voluntarily entered into early-season minimum-flow agreements to spill water into the lowest reach to protect steelhead eggs (redds) from drying up during the critical incubation period in June.



This approach, however, has always been considered a short-term solution.

In fiscal year 2018, CBWTP awarded a grant to the Idaho Water Resource Board to help secure a long-term solution that included a new pumping station at the new point of diversion and improved irrigation infrastructure.

"We've been working with these landowners for years, and they really did want to find a long-term solution for Bohannon Creek," said Amy Cassel of the Idaho Water Resource Board. "The familiarity, trust and record of success we've built over time helped get us to the point where larger, long-term investments make sense."

ABOVE: Bohannon Creek, Idaho
RIGHT: Chinook salmon





Helping landowners achieve conservation goals in Oregon

Balancing the needs of farmers and fish represents a tough challenge in many parts of the West.

Such is the case along the Lostine River in Oregon, where the water needs of grain, alfalfa and grass hay can compete with the needs of Chinook salmon and steelhead.

Now, thanks to a 2018 grant awarded by CBWTP to The Freshwater Trust, both farmer and fish are getting more of what they need.

A CBWTP grant of \$468,000 to The Freshwater Trust enabled the organization and its partners to complete a \$2.1-million project to convert 877 acres of predominantly flood-irrigated land to a pressurized pivot-sprinkler system. This increase in efficiency has improved agricultural production and enhanced instream flows for federally listed fish species in the Lostine River.

Additionally, more than 100 acres of formerly irrigated land will be converted to wildlife habitat.

All told, the project's components generated a minimum of 2,280 acre-feet of water (12.8 cfs) from May through July, and 220 acre-feet of water (1.8 cfs) from August through September.



“The landowner involved in this project is a 6th-generation Wallowa County rancher and the largest single water right holder on the lower Lostine River,” said Jessica Humphreys of The Freshwater Trust.

“He is widely known as an early adopter of agricultural and conservation practices in Wallowa Valley, and has been a proactive partner with the Nez Perce Tribe, Wallowa Land Trust and The Freshwater Trust.”

Conservation partners have been working with this landowner for 11 years, and this CBWTP grant supported a highly sought-after, long-term deal to conserve a large amount of water in a key tributary within the Columbia Basin.

ABOVE: This pressurized pivot-sprinkler system replaced flood-irrigation along the Lostine River in Oregon
LEFT: Chinook salmon

Building conservation momentum along Montana's Clark Fork

The Clark Fork River in Montana is one hard-working stretch of water.

Once relied upon by Native Americans for its bountiful population of large bull trout, Montana's largest river by volume now bears the scars of modern use and misuse. Mining pollution, logging, smelting, agricultural production, and development have all taken a toll on the Clark Fork Basin and its fish populations.

But thanks to decades of hard work and focused conservation efforts, the Clark Fork and its fisheries are on the mend.

For nearly 35 years, the Clark Fork Coalition has worked to restore and sustain the river and its tributaries, ensuring it can flow with clean, cold and abundant waters for generations to come. CBWTP has long supported the conservation nonprofit's efforts in the basin, with a particular focus on transforming short-term victories into long-term solutions.

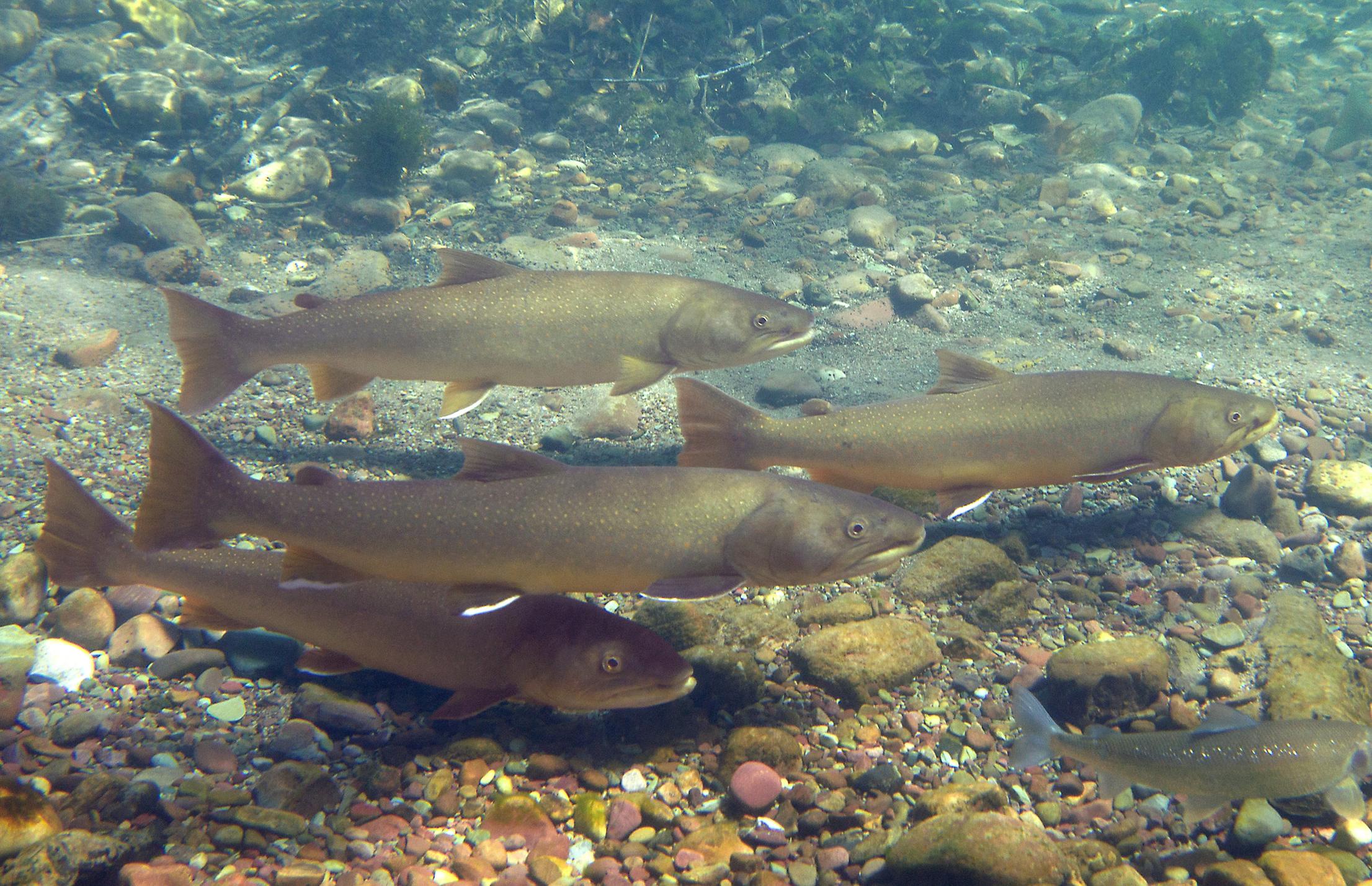
This support continued in 2018, and included a grant award of \$37,000 to the Clark Fork Coalition to continue a long-term lease to secure water for the next 10 years in Ninemile Creek, a periodically dewatered tributary to the Clark Fork River.



"Long-term leases are particularly important to stream restoration in western Montana," said Jed Whiteley, project manager with the Clark Fork Coalition. "The sustained provision of sufficient instream flow in Ninemile Creek over the past 10 years has helped reduce water temperatures, maintain healthy aquatic habitat, and ensure good water quality in this key Clark Fork tributary – even as it's faced drought and other stressors."

The lease supported by the CBWTP grant is a continuation of an irrigation efficiency project that the landowner implemented in 2006. That project involved moving the point of diversion, upgrading an irrigation system from flood to sprinkler, and retiring some acreage from irrigation.

ABOVE: Clark Fork River, Montana
RIGHT: Bull trout





Securing more water, at the right time, in Washington

To survive and thrive in the headwaters of the Yakima River in Washington, salmon don't need just any old water – they need different *kinds* of water, at the right times.

Slow-moving and still waters give freshly hatched fish a place to linger, eat and grow. Pockets of deep, cold water provide refuge to adult salmon stressed by droughts and hot summers. Steady flows of good, clean water throughout the year carry food to all fish throughout the Columbia Basin; these same flows serve as highways the fish use to complete annual spawning migrations.

Throughout 2018, CBWTP supported efforts throughout the Columbia Basin to preserve, enhance and in some cases re-create these various types of water required by the region's iconic fish populations.

One such grant, which awarded nearly \$88,000 to the Washington Water Trust, supported a variety of salmonids by boosting the amount of water in the Teanaway River, a tributary to the Yakima River, which in turn feeds the mighty Columbia River.

The Teanaway River was once known as one of the top producers of spring Chinook, steelhead and coho in the Yakima basin. Today, with decreasing snowpack and



increasing irrigation demands, the Teanaway struggles to supply enough water to overcome the low-flow barriers that limit migration, spawning and rearing of native anadromous fish. Thus, this project builds on years of negotiations converting a long-term water rights lease into a permanent acquisition, ensuring that water will permanently be kept instream giving fish access to essential habitat instead of diverted for out-of-stream uses.

“WWT’s flow restoration efforts in the Teanaway is a

story of solidarity between fish and farms,” said Greg McLaughlin, senior program manager of Washington Water Trust. “For 21 years, we have partnered with local irrigators on projects like this to put water in the right place at the right time, so that both agriculture and fish populations can thrive.”

ABOVE: The Teanaway River in Washington
LEFT: Chinook salmon



FY18 PROGRAM EXPENSES

CLARK FORK COALITION	\$159,438
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION.....	\$126,760
MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION.....	\$40,652
DESCHUTES RIVER CONSERVANCY	\$249,259
IDAHO DEPARTMENT OF WATER RESOURCES.....	\$356,717
OREGON WATER RESOURCES DEPARTMENT.....	\$86,454
NATIONAL FISH AND WILDLIFE FOUNDATION	\$633,445
THE FRESHWATER TRUST	\$269,957
TROUT UNLIMITED - WASHINGTON WATER PROJECT	\$276,565
TROUT UNLIMITED - MONTANA WATER PROJECT	\$109,523
WASHINGTON DEPARTMENT OF ECOLOGY.....	\$69,442
WASHINGTON WATER TRUST.....	\$227,928
WATER TRANSACTIONS.....	\$3,536,452
TOTAL	\$6,142,592

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LEFT: Teanaway River in Washington

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