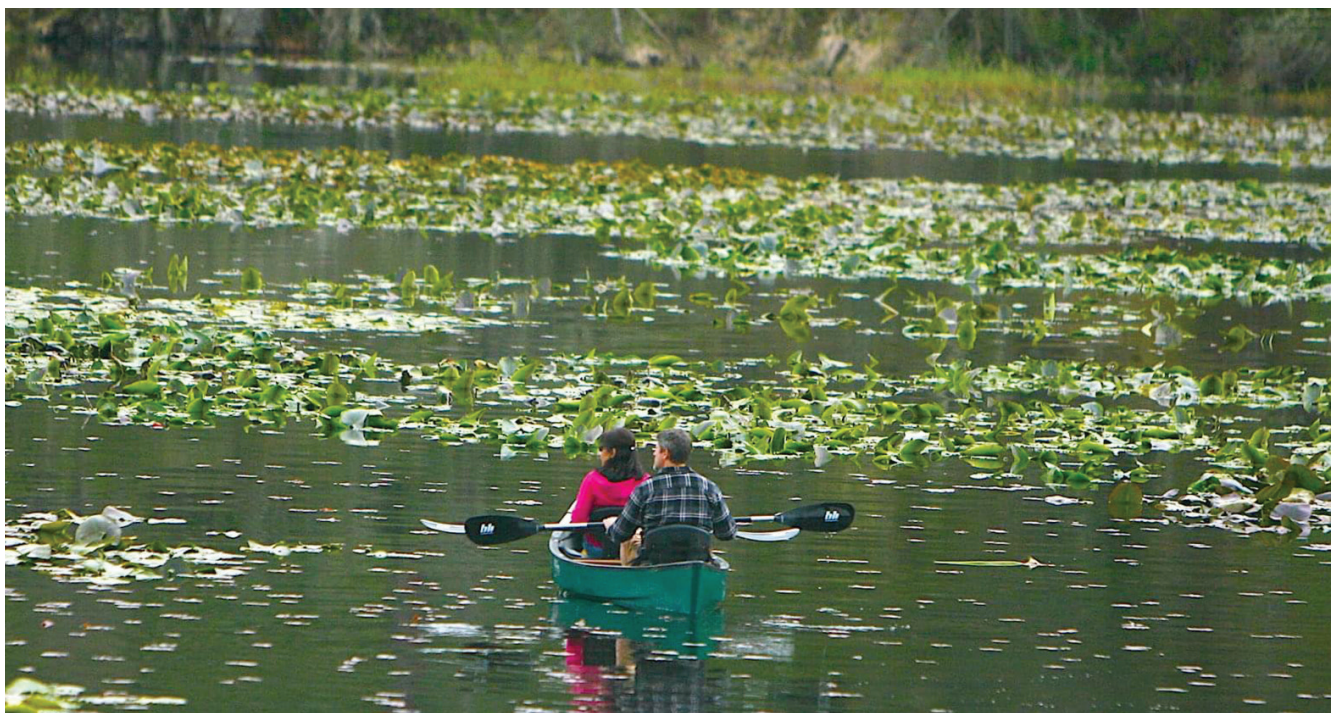
WATER



Brian Walker/For the Capital Press

Wolf Lodge Bay on Coeur d'Alene Lake is a popular recreation area. The Kootenai-Shoshone Soil and Water Conservation District improved Wolf Lodge Creek, which empties into the bay, after a timber harvest, overgrazing, dredging and riparian vegetation removal resulted in degradation of water quality and fish habitat in the area.

Projects help clean up Coeur d'Alene Lake

By BRIAN WALKER
For the Capital Press

COEUR d'ALENE, Idaho — Wolf Lodge Creek is flowing the way it should once again.

The Coeur d'Alene-based Kootenai-Shoshone Soil and Water Conservation District recently completed a restoration project for the stream that drains a 40-square-mile watershed into Wolf Lodge Bay on the northeast side of Coeur d'Alene Lake.

"The project re-established proper channel dimensions and streambank conditions that reduce rates of lateral channel migration and sedimentation," said Karla Freeman, district administrator. "It also re-established important habitat for westslope cutthroat trout and aquatic organisms."

More than 80% of the land in the watershed is managed by the U.S. Forest Service. Most of the remaining land is privately owned.

The creek is an important tributary to Coeur d'Alene Lake.

A past timber harvest, overgrazing, dredging and riparian vegetation removal resulted in degradation of water quality and fish habitat.

The project incorporated streambank stabilization techniques on 2,000 square feet that provides stability and supports development of mature riparian vegetation.

Complex aquatic habitat components such as depth, velocity, substrate, cover and pools that support populations of wild trout and other wildlife were created.

The project cost about $400,000 and was funded mostly with an Idaho Department of Environmental Quality grant.

Other partners in the project included: the Idaho Soil and Water Conservation Commission, Natural Resource Conservation Service, Avista Utilities, North Idaho Flycasters, Flycasters International, TransCanada and landowners.

Another district improvement project is Mica Creek south of Coeur d'Alene.

Mica Bay on Coeur d'Alene Lake has a history of excess nutrients due to runoff, which causes dense plant life and death of animal life due to the lack of oxygen.

"The project is 80% complete and will be finished in the spring," said Freeman, adding that sediment and nutrient reduction is the goal.

Most of the eutrophication has occurred during the past 20 years due to eroding streambanks and nearby farming practices.

Large timber harvests occurred in the upper watershed in the late 1990s and, for the next several years, the lower watershed strained under the increased sudden spring runoffs.

In addition, severe freeze-ups gouged large amounts of banks during spring ice breakup, Freeman said. The ice flows scoured the banks and undermined the alder trees.

The stabilization work will allow the streambank to stand up to high water and freezing conditions, and the rocks will prevent erosion. Without the effects of high water and freezing, sediment will not impact the stream from runoff where it would go into Mica Bay, effecting the look and quality of the water in the bay and for nearby residents.

The Mica project is mostly funded by an $80,000 grant through IDEQ. The landowner is also contributing.

The district is also responsible for four boat inspection stations in North Idaho, including on Highway 53, two on Interstate 90 and at Rose Lake. All watercraft are inspected for quagga and zebra mussels.

The operations are funded with a grant from the Idaho State Department of Agriculture. The grant is generally from $400,000 to $490,000, depending if the time of operations are extended.

The stations operate from March to September.

If mussels are detected, the ISDA and local law enforcement are contacted and the watercraft are impounded.

Kittitas Reclamation District

The Kittitas Reclamation District in Central Washington is installing hundreds of miles of piping to help conserve water from the Yakima River and deliver it more efficiently to irrigation canals across the region.

Innovative effort saves water, helps fish

By DAVE LEDER
For the Capital Press

Scientists with the Kittitas Reclamation District (KRD) in Central Washington have discovered an innovative way to help farmers, fish and the environment all at once, using existing infrastructure to deliver excess water to streams, irrigation canals and storage reservoirs.

Launched in 2015, the Tributary Supplementation Program is the initial project under the 2009 Yakima Basin Integrated Plan, a 30-year legislatively funded package that combines the interests of federal, state, local, environmental and tribal stakeholders to establish long-term water conservation strategies for the region.

KRD Manager Urban Eberhart said the program has already improved water delivery methods and storage capacity between Easton — northwest of Ellensburg — and the Yakima Valley, while giving new life to fish habitats that had been dried up for years. He believes KRD's work has, at the very least, helped forestall the impacts of climate change.

"We have struggled with snowpack in the upper Yakima Basin over the past decade, so we are finding ways that we can hold the water that would have traditionally been held in the snowpack," Eberhart said. "We are looking to spread out the water in streams, groundwater infiltration and large surface-water reservoirs so it can act like the snowpack used to. Then, we can send the water back to the river later in the season when it's needed most."

The goal, Eberhart explained, is to "re-time" the water's release into the main stem of the Yakima River so it will be available throughout the growing season, without the threat of service interruptions or rations. All the while, the staggered river flows have contributed to the return of many healthy tributary ecosystems, providing more hospitable conditions — plus shade and food resources — for migrating fish.

"Rather than just conserving the water and not doing anything with it, we're getting it out into the streams and building up our groundwater storage while providing much-needed ecosystem services along the way," he said.

Late last year, KRD began installing a network of 7-foot diameter pipes in the district's southern branch that will increase water capacity and savings by connecting a series of Yakima River tributaries. Eberhart said when the project is completed this spring, the pipes will connect with irrigation canals to deliver more water to farmers through the spring and summer.

KRD also installed geo-membrane liners in the canals and covered portions of them with concrete, which will help the district conserve water supply and become more drought-tolerant in future years.

"We can get the water delivered more easily through the canal system, but we're also creating capacity so we can move even more water through," Eberhart said, adding that KRD is hoping to drill a 4.5-mile tunnel under Manastash Ridge that would fill a proposed storage reservoir in the Yakima River Canyon. "We're hoping the work we do now will help us prepare for a rapidly changing environment."

The Tributary Supplementation Program has been so successful that KRD's ability to simultaneously improve water delivery and conservation methods, and restore fish habitats, has convinced other states to make similar investments.

"We're on the cutting edge of what is going to become common practice in the 17 Western reclamation states," Eberhart said. "We've shown that what we are doing is better for farms, better for fish, and better for the environment."

With climate change accelerating faster than scientists predicted just 10 years ago, KRD and other regional water districts have no choice but to act.

"Things are changing right before our eyes, and that has added to our sense of urgency," he said.