

## Water

# HOOD RIVER IRRIGATORS

## ‘We have to take whatever the mountain throws at us’

By GAIL OBERST  
For the Capital Press

HOOD RIVER, Ore. — Ask any visitor to Hood River’s wineries and orchards: The lush land between Mount Hood and the Columbia River is a slice of heaven. Irrigating those lush valleys, however, appears to be a devil of a job.

“It’s accurate to say this is a hostile environment in which to work,” said Craig DeHart, manager of the Middle Fork Hood River Irrigation District, one of three irrigation districts that have pulled from the 339-square-mile watershed — fed mostly by runoff from Mount Hood — for more than 100 years. “We have to take whatever the mountain throws at us — debris flows, dirt, car-sized boulders, trees, but mostly, sand.”

The three districts draw from the upper, middle and lower reaches of Hood River’s tributaries and main stem. Last year, Mount Hood’s melting glaciers delivered ton after ton of sand that clogged the districts’ pipes and canals. Digging debris out of pipes, an added expense, is necessary to growers at the delivery end, said Les Perkins, manager of the Farmers Irrigation District.

As growers adopt low-volume drip systems, micro-sprinklers and other micro-irrigation methods, water quality requirements increase. Abrasive glacial sand and silt can clog or ruin irrigation systems.

Historical records — available on



Gail Oberst/For the Capital Press

**Les Perkins of the Farmers Irrigation District stands above a canal that provides irrigation water from Hood River.**

district websites — suggest that providing irrigation water to the thousands of agricultural water users in the watershed has never been easy.

Today, there are added complexities. In addition to pipes glutted with Mount Hood silt, demands for

water are rising with the burgeoning population, and evaporation from open canals and leaky conveyances threaten to dissipate the water before it reaches its destination.

In addition, Hood River’s historic chinook, steelhead and coho runs,

among other fish, are disappearing as their habitat shrinks, according to local conservation groups.

Still, Hood River irrigation districts persist, thanks to a mix of adaptation, cooperation and innovation.

Formerly privately owned, the districts are now public, with elected boards for oversight and grant or public funds available for stability. In addition to user charges, two of the districts, Farmers and Middle Fork, bolster stability by building reservoirs and dams that supply power to their own pumps and to neighboring farms and homes, and water to users during the area’s driest months.

East Fork, the largest of the three, depends almost entirely on grants and user fees and draws from a single source on the East Fork, fed by snow and glacier runoff.

Steve Pappas, East Fork’s new district manager, said that his district is “aggressively” modernizing, with long-term plans to close the rest of its open delivery systems. That would conserve water and improve reliable delivery, he said.

Of more than 100 miles of pipes and canals, 18 miles of East Fork’s are still open, allowing rapid evaporation during hot weather. Perkins estimated that a third to a half of the water in open channels is lost in the summer, when it is needed most.

Farmers and Middle Fork districts have enclosed all but 3.6 miles of their pipes.

The districts are not alone in their quest to create a healthier water system. The Hood River Watershed Group, formed at the turn of the millennium to protect salmon, and the Hood River Soil and Water Conservation District, have worked to collaborate with area groups connected to the river, bringing in experts and funding to improve flows and habitat, and working with growers to reduce water use, runoff and pollution.

Salmon conservation efforts have prompted innovations to fish passages around the districts’ dams. In some cases, dams have been removed, including Powerdale, a hydro facility removed in 2010 in the Farmers district, and Odell Creek Dam, removed in 2016 in East Fork’s district.

Innovations to Hood River’s dams have included new fish screens at irrigation diversions, some of which have set the standard for other irrigation and power districts in the West.

In the future, irrigators expect droughts to continue, so the Farmers and Middle Fork districts are working on expanding reservoirs and dams. The improvements address environmental and other concerns, but irrigating agricultural land continues to top the list.

“Clean, dependable water supply. That’s what we want to maintain. Rehabilitating will hopefully keep producers in our district profitable,” said DeHart.

## Two Hood River reservoirs upgraded for irrigators, wildlife, recreation

By GAIL OBERST  
For the Capital Press

HOOD RIVER, Ore. — At a time when reservoir expansions in Oregon are rare, the Kingsley Reservoir, in the northern foothills of Mount Hood, is an exception.

The reservoir, which currently holds nearly 715 acre-feet, provides water to Farmers Irrigation District members, including ranchers and orchard owners. It is also a popular place to hike, boat, swim, picnic and camp, and it provides water downstream to salmon and other species of fish and wildlife.

The expansion will nearly double the reservoir’s storage while improving dam safety.

Reservoir expansion is rarely supported unless the project provides multi-purpose benefits, improving in-stream flows for fish and downstream water users, as well as recreation and irrigation, according to Les Perkins, manager of the district. The project was funded by a grant from the state Water Resources Department, loan funds from the Clean Water State Revolving Loan Fund and Farmers Irrigation District user fees.

Years of study by regional planning groups, with expert help from the Water Resources Department and the Bureau of Reclamation and local tribes, culminated in a plan that included reservoir expansion along with conservation improvements.

The district has constructed a wetland to replace one impacted by the expansion. Hood River County and the district are building campsites, a boat ramp, a day use area, toilets and other improvements, some of which will reopen this summer.

Construction is complete on the Kingsley Reservoir dam, but irrigators and other water users may have to wait up to two years for it to fill.

New storage water rights allow the district to take water from creek sources — Cabin, Rainy, and Gate creeks, for example — only when the water flow reaches a certain level. New water rights also require upgraded fish screens and improvements to diversions, some of which include sophisticated electronic monitoring systems.

When it is filled, the reservoir should provide irrigators with water throughout the growing season, even during a drought, Perkins said. With added conservation measures, there will be enough added in-stream flow for fish and wildlife.

In past summers, irrigators have used every drop allocated from the reservoir, Per-



Farmers Irrigation District

**Before the project started, the reservoir held 715 acre-feet of water. The expansion nearly doubles the volume.**

kins said. During drought years, irrigation has been restricted to meet district demands.

Farmers Irrigation is not the only district in the Hood River watershed with reservoir construction plans.

Upstream, Craig DeHart, the Middle Fork Irrigation District’s manager, said his district is working to upgrade the 50-year-old earthen Clear Branch dam, which holds back Laurance Lake — Hood River county’s largest water storage facility.

The proposed project, which is expected to be completed in five years, will reduce water lost through seepage. The improvements also aim to increase water flow below the reservoir, provide fish passage and improve water quality while decreasing the risk of flood damage and maintaining a reliable and dependable water supply to district users.

Laurance Lake is about 12 miles south of Kingsley Reservoir as the crow flies, and at the foot of Mount Hood. Clear Branch Creek is one of several waterways at the headwaters of Hood River, which flows into the Columbia River about 25 miles north of Laurance Lake.

Both district managers say reservoirs, and careful conservation, will support agriculture’s future water resources.

“It’s both a hopeful and cautionary tale regarding developing projects like this and our lack of preparation from a regulatory perspective to meet the adaptive demands of climate change,” said Perkins.

## CREP: A popular strategy for saving water

By HEATHER SMITH THOMAS  
For the Capital Press

Irrigation is challenging in some regions, especially during dry years and areas where decades of pumping water has lowered the aquifers that serve as water sources.

In recent years, several programs have been instituted to conserve water. A government program called CREP — Conservation Reserve Enhancement Program — is part of the largest private land conservation program in the U.S.

Administered by the Farm Service Agency, CREP utilizes federal and non-federal funds to conserve land.

In exchange for removing acres from production and establishing permanent resource-conserving plant species, farmers and ranchers are paid an annual fee, specified in each CREP agreement. Participation is voluntary, and the contract typically lasts 10-15 years.

In Idaho, CREP is focused on addressing water shortages in the Eastern Snake River Plain — where drought, increased use of groundwater and changing irrigation practices have led to decreased flows in tributaries of the Snake River.

The goal of Idaho CREP is to retire up to 100,000 acres of ground-water-irrigated land and save approximately 200,000 acre-feet of water per year.

In exchange for removing irrigated cropland from production, farmers are paid a modest annual rental fee. Participation is voluntary. According to Rob Sharpnack, water quality resource conservationist at the Idaho Soil

and Water Conservation Commission, the first contract period is 15 years with the option to re-activate the water right and return to irrigated farming or possibly re-enroll at the end of the contract.

CREP is a partnership between the conservation commission, USDA Farm Service Agency, Natural Resources Conservation Service, state Department of Water Resources, state Department of Fish and Game, state Ground Water Appropriators, local irrigation districts and Pheasants Forever, said Sharpnack.

The first 15-year contracts are ending, and some farmers are signing up again.

“The program is completing the first round of contracts and will be doing more next summer. It helps that the federal government has significantly increased payment rates for the new contract period, and the state is also contributing monies,” he said. “CREP is more competitive now with rental rates across southern Idaho. One farmer was happy to re-enroll since he is now semi-retired and the program payments are enough to enable him to hold onto the land he loves — without selling it yet — to support him and his wife in retirement.”

A Cassia County farmer, Todd Harris, has been successful in meeting the ground water conservation goal of CREP and recently re-enrolled some of his farm in the program. He participated in the first contract period for 15 years, enrolling more than 1,400 acres.

Harris’ farm is a family operation that had earlier irrigated 2,400 acres.

“The water table was

starting to drop and we were having a hard time getting over all that ground, especially during dry years,” Harris said.

“When that program became available, we put more than half the farm into the CREP and were able to shut off half our wells,” he said, adding that to be eligible to enroll, the ground had to have been irrigated for the previous 10 years.

“We had to plant native grass on the acres that were no longer irrigated — to protect the soil and benefit wildlife,” he said. “It worked for us because we were no longer short on water for our remaining crops, but after we signed up for this program the price of hay and grain went up, and we might have been better off financially to keep those acres in crops,” said Harris.

“Another downside is that we can’t graze it. We always ran our cattle in the fall and winter on crop aftermath — which helped soil fertility — but with this program they won’t let us put cattle on it or graze it,” he said.

“Some fields had to be planted several times to get grass established, because it was so dry and we couldn’t irrigate it. Then we had to clip it every few years to try to control weeds, whereas grazing would have helped.”

However, he said, the program probably helped the water table.

“One of the other benefits was a guaranteed income from that land, without much risk. We didn’t have to worry about crop failure,” he said.

The farm has now re-enrolled in the program. This second contract is for 10 years, starting this year.

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