



L-R: Elmore SWCD Supervisors Stephanie Bergh and Steve Nemeth admire a new stock tank installed this fall by Rancher Neil Helmick. Four off-stream cattle troughs will improve water quality and provide a cleaner and more sustainable source of water for Helmick's livestock. (Photo courtesy Elmore SWCD)

2023 WQPA FUNDING SAVES WATER, ENHANCES RIPARIAN HABITAT AND IMPROVES WATER QUALITY

By Steve Stuebner

Farmers and ranchers across Idaho are modernizing irrigation infrastructure, improving water quality by installing cattle best management practices, and enhancing streambank stability and habitat via the second consecutive year of \$5 million in funding for Water Quality for Agriculture grant projects in Idaho.

A total of 50 WQPA grant projects were approved by the Idaho Soil and Water Conservation Commission

in the spring of 2023. In this issue, we'll spotlight three projects around the state to show how those WQPA funds are being put to productive use in voluntary, boots-on-the-ground conservation projects.

New livestock water project – Elmore SWCD

Neil Helmick is a life-long cattle rancher who likes to do things right.

He purchased some new grazing land for 180 head of cattle in 2014, and then acquired a grazing permit in the Boise National Forest nearby for

pasturing the cattle on summer range.

The only issue was the area didn't really have enough water for his livestock on Lester Creek, which drains into Anderson Ranch Reservoir on the South Fork of the Boise River. Helmick wanted to drill a well for a more sustainable water supply and develop some off-stream cattle troughs for the cattle.

If the project could get funded, it would also improve water quality on Lester Creek by removing cattle from the creek-bottom with the off-stream



Left: Big-picture map of the Elmore District WQPA project. With the new well and 4 cattle troughs in place, the water quality in Lester Creek will improve. Right, Neil Helmick rides the range with his dog. (Courtesy SGI)

cattle troughs. Lester Creek has water quality issues with high sediment levels; it's listed on the state 303(d) roster of impaired waters.

Helmick approached the Natural Resources Conservation Service about applying for an EQIP grant for the well and cattle troughs project. But it didn't quite fit the NRCS grant program, so he approached the Elmore SWCD about applying for a WQPA grant to assist with funding the project.

Elmore applied for and received about \$67,000 in WQPA grant funds in the spring of 2023 to allow Helmick to move forward with the project. The application was submitted by May 31, and it was approved by the SWC Board of Commissioners in June. The total project costs are about \$95,000, leaving \$22,425 in cost-share funds for Helmick to cover with in-kind contributions to the project.

"Without the WQPA funding, I probably wouldn't have been able to do the project," Helmick says. "All of the help we got from the Elmore District and the Conservation Commission is greatly appreciated."

Bill Lillibridge, an engineer for the Conservation Commission, designed the well and livestock watering

system. Helmick hired a well-driller to dig the new well, and he dug a trench with an excavator to install 9,000 feet of water pipeline to distribute water to four cattle troughs.

The only glitch was the well-driller went too deep on the first try, and the well collapsed in an area with sandy soil. "He hit water pretty close to the top, but he kept going and the well caved in on him," Helmick said. "On the second try, he went down about 80 feet, hit water, and we called it good."

Elmore officials are pleased with the project as well.

"We're all really excited about it," said Stephanie Bergh, an Elmore SWCD supervisor. "Lester Creek was a tough area for his cattle to get water. Neil was really grateful that we were able to create this option above the creek and the reservoir. It turned out wonderful, I thought. Without WQPA, this project would never have happened."

The cattle troughs will help spread out the livestock during the summer grazing season. The troughs are equipped with a triangular wooden structure on top of the tanks that prevents too many cows from trying to drink at one time. They also have

safety ramps for birds and small mammals that might drink from the troughs, so the critters can climb out of the water if they fall in.

The 590-acre project area was burned by the Elk and Pony complex wildfires in 2013. Since he acquired the property, Helmick has taken a proactive role in managing the resources, implementing BMP's, planting trees, developing springs, seeding grasses, re-constructing and maintaining fences, and utilizing a grazing management strategy that ensures adequate forage remains after grazing for the resource, Elmore District officials said. In addition, the property provides valuable habitat for sage grouse, deer, elk, antelope, and other small game species.

The conservation improvements

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represent Phase 1 of the project. Helmick and Elmore District officials hope to do a second phase with NRCS and the Boise National Forest on Forest Service land located adjacent to Helmick's property.

Connie Tharp, leader of the NRCS Elmore and Bruneau River Conservation Team, said the negotiations with the Boise National Forest are looking positive to develop more off-stream water troughs on Forest Service land.

She is working on a potential EQIP project with Helmick via a new NRCS program that allows the use of federal grant funds to benefit big game and livestock. About \$5 million in funds for the NRCS Big Game Initiative have been approved for the state of Idaho, Tharp said.

"I'm very excited to be developing the partnership with the Forest Service," she said.

Other partners such as the U.S. Fish and Wildlife Service and Idaho Fish and Game are interested in the project as well, she said.

"This is an important wildlife corridor for big game that migrate from the Sawtooth Mountains to their winter and spring range at lower elevations north of Interstate 84," she said.

"There will be benefits for wildlife and livestock but also for water quality and the environment."

Cow Creek riparian improvements - Boundary SCD

The Cow Creek Bank Stabilization Project is a \$26,000 WQPA grant project with a total cost of about \$35,000 and \$8,700 landowner cost-share.

Historically, Cow Creek used to



Above, Cow Creek setting near the Kootenai River. Below, a contractor applies herbicide around planting locations to eliminate competition from surrounding vegetation. (Courtesy Boundary SCD)

connect to the Kootenai River through a slough, supporting bull trout and white sturgeon. Today, the inlet of the slough is blocked from connecting to the river by a railroad embankment, and the creek itself is separated from the slough by a perched road culvert.

A private landowner currently owns a 40-acre island where Cow Creek meets the Kootenai River. The Cow Creek slough is about 1.2 miles long on the south side of the island and the Kootenai River runs about 1 mile along the northern edge of the island. Under the WQPA grant project, about 1.6 acres of riparian habitat is being restored along a portion of the Cow Creek slough.

It's a partnership project with the Boundary Soil Conservation District, NRCS, the U.S. Fish and Wildlife Service and the private landowner.

"The project location is only on one person's property, but the benefits



are for the whole ecosystem," said Cassie Olson, administrator of the Boundary District. "The Kootenai River Valley was once a complex network of braided channels and ephemeral pools, covered with wetlands."

To begin, Olson said, they identified planting locations and prepped areas by trimming reed canary grass and spraying herbicide. Then they planted alder, water birch, and dogwood along the floodplain bench and cedar, Rocky Mountain maple, chokecherry, elderberry, and oceanspray along the terrace slope to create a screen for wildlife. Riparian plants are clustered



*Riparian plantings in the Cow Creek slough are protected by woven wire to prevent damage by beaver and big game.
(courtesy Boundary SCD)*

in wire fence exclosures to prevent beaver and large ungulates from causing severe, she said. A crew of three people did the work in late fall, finishing in the first week of November.

“As the plantings mature, they will provide shade, nesting/roosting habitat, allochthonous inputs, filter out sediments and nutrients, and provide woody material to the slough, which basically has no woody material right now,” Olson said. “The large woody debris incorporated into the slough will further provide refugia and habitat complexity.”

The Kootenai Tribe of Idaho has expressed interest in engaging in future phases of restoring Cow Creek, including adding large wood and replacing fish passage barriers, officials said.

“Before Cow Creek was modified through channelization, it would have provided spawning grounds for Bull Trout and potentially still does,” Olson said. “The historical confluence of Cow Creek and the Kootenai River would have created a complex multi-braided river channel with a mosaic of floodplain habitats that sturgeon

would use. Some of this mosaic of floodplain habitats is still present, albeit in a degraded state.”

Project partners are currently assessing the feasibility of fixing the connection between Cow Creek and the slough to once again allow trout to migrate upstream in Cow Creek. Project partners are considering applying for a 319 grant from Idaho DEQ to assist with design and construction.

“The landowner’s strong tie to his land and eagerness to improve habitat was key in bringing project partners together,” says Brittany Morlin, a wildlife biologist for the U.S. Fish and Wildlife Service in Coeur d’Alene. “The landowner has a deep understanding of what’s working and what’s not based on his 50 plus years living on the property. Working together allows us to leverage his knowledge with other partner resources to multiply outcomes for fish and wildlife.”

The landowner has preserved the property’s ecological value through a conservation easement with The Nature Conservancy. “I want to stress how important this property is for sturgeon and native trout based on its location, providing off-channel habitat

at the confluence of a tributary to the mainstem Kootenai River,” Morlin said. “The WQPA phase is the first of what could be more and has helped to strengthen relationships between the partners and the landowners. Lots of opportunities to do more!”

Twin Lakes Canal Improvements - Camas SWCD

The Twin Lakes Canal Project is enhancing two sections of an aged and deteriorated canal in Southern Idaho’s Camas Prairie. The WQPA grant proposal was approved for \$123,750 in state funds for the project, which benefits five producers in the local area. The project was just completed this fall for a total projected cost of \$161,250, with the local irrigation company providing \$37,500 in cost-share funds.

The first phase involved repairing an elevated flume where the Twin Lakes canal flows over the top of Soldier Creek.

“This flume was in terrible shape with holes eroding the steel siding and the concrete crumbling in most sections,” said Jake Connelley, a water quality specialist for the



The Camas WQPA grant covered the costs of repairing the flume over Soldier Creek. (courtesy Jake Connelley/SWC)

Conservation Commission. “We contracted with Bridges Construction to replace the steel and some of the wood components.”

Phase two was to put a new shotcrete lining in the inlet and outlet of the flume, and to reline several hundred yards of the Twin Lakes canal from the Mormon Reservoir dam.

The water savings from the flume improvements are estimated to be roughly 178 acre-feet of water over the 45-day irrigation season. The water savings from the canal lining are harder to estimate, but it should be “considerable,” Connelley said.

Large pools of water built up around the canal within a week of the water being turned on, he said. These projects affect 5 twin lakes canal shareholders, two of which use

surface and groundwater irrigation.

“The water savings from these projects will be especially useful for these two shareholders,” Connelley said. “The shareholders will have more surface water that will be accessible to them, and as a result, they shouldn’t have to do as much groundwater pumping, benefitting the aquifer.”

Steve Miller, one of the producers involved in the project, said he’s happy with the improvements. “It’s a real good project for us. We’ve had a lot of water losses with the leaks in that old flume and the old concrete canal. We estimated we were losing nearly half of our water to the leaks and seepage through the cracks in the canal.”

The Camas SWCD typically does not

have the funds or manpower to do such projects, but with the assistance of the WQPA grant, they were able to complete this project that is so vitally important for their water quality and conservation needs, officials said.

Miller, who serves in the House of Representatives in the Idaho Legislature, said he hopes that state funding for the WQPA program will continue because of all the benefits it provides statewide. “I think we’ll continue to fund the program as long as there are funds available,” he said.

For more information about the WQPA grant program, contact Loretta Strickland, Deputy Director of the Commission, 208-810-0769, or loretta.strickland@swc.idaho.gov.

Steve Stuebner writes for Conservation the Idaho Way on a regular basis.

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