



Irrigation pipe in position to be buried from the Snake River to Hammett Valley farms via a \$5M project co-sponsored by the King Hill Irrigation District, NRCS, Idaho Water Resource Board, Elmore SWCD and SWC.

SWC FUNDS \$5 MILLION FOR 48 CONSERVATION PROJECTS STATEWIDE VIA WQPA GRANTS

By Steve Stuebner

When the Idaho Legislature revived the State Water Quality Program for Agriculture (WQPA) in the 2022 session, 33 of the state's conservation districts quickly went to work and put together grant applications to compete for \$5 million in water-conservation funds.

The monies were allocated to the Idaho Soil and Water Conservation Commission, whose board would quickly make decisions on grant awards between April and June.

"It's Go Time," says Delwyne Trefz, Administrator of the Conservation Commission. "I'm really excited to

see these funds turned into boots-on-the-ground, voluntary conservation projects as soon as possible!"

Who was eligible to apply? All of the State's Soil and Water Conservation Districts could apply for projects. A wide variety of partner entities, including landowners, canal companies, and irrigation districts were eligible and were encouraged to work with conservation districts and commission staff to put project proposals together.

What kind of projects were eligible for funding?

- Water quality projects.

- Water quantity projects such as water delivery and drainage-rehabilitation and improvement projects.

- Projects that install and implement best management practices on ag lands.

- Livestock and grazing improvements, which address water quality issues.

- Projects that enhance and restore soil and water resources in the state.

By June of 2022, the SWC Board of Commissioners had allocated all \$5 million in funding to 48 projects statewide. Construction work is under way now and through the winter until

spring 2023 to implement the projects in a timely manner.

Successful grant projects varied widely from basic to extensive irrigation efficiency projects, updating aging irrigation infrastructure, sediment ponds, irrigation headgates, livestock best management practices and more. Grant funds were awarded to nearly every conservation district in the state.

Matching funds of 25 percent or more were required with each project. Grant proposals ranging from \$1,160 to \$1.1 million were submitted to SWC, and commissioners approved funding for projects ranging from \$1,160 to \$335,177.

Many Districts bundled projects with multiple other sources of funding to cover costs. The \$5 million allocated by the Conservation Commission contributed to a combined total investment of \$18.4 million in conservation projects statewide.

"I was impressed with how the Districts worked together with a number of partnership agencies including the Natural Resources Conservation Service, the Idaho Water Resource Board, Idaho DEQ, Bonneville Power Administration, U.S. Fish and Wildlife Service, Bureau of Reclamation and NGOs including the Henrys Fork Foundation, Friends of the Teton River and Bear Lake Environmental Coordinating Committee to put together a successful grant package," Trefz said.

To give readers a sense of the value of the WQPA grant funds, we are profiling three projects in different corners of Idaho in this newsletter issue:

1. Sponsor: **Clearwater Soil and Water Conservation District** – Louse Creek culvert, \$9,061 WQPA grant and Heywood Creek culverts, \$19,250



Clearwater Road Department employees install new Louse Creek culvert. Below, the new culvert in place. (photo courtesy Clearwater SWCD)

WQPA grant.

2. Sponsor: **West Cassia Soil and Water Conservation District** – Irrigation efficiency project, \$60,500 WQPA grant.

3. Sponsor: **Elmore Soil and Water Conservation District** - Hammett Pipeline, \$275,000 WQPA grant.

Heywood Creek culvert

The purpose of the Heywood Creek culvert project was to reduce the risk of road and culvert failure and flooding at the Heywood Creek crossing on Larson Road near Weippe in Clearwater County.

The Clearwater SWCD worked with the Clearwater Highway District to replace a substandard, undersized, partly deteriorated multi-culvert array with a new modern arch-culvert structure, which is designed to withstand a 100-year flood, according to a final grant report by Annie Connor, project manager for the Clearwater SWCD.



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The new bottomless fish-friendly culvert was installed to enhance safe access on Larson Road for local residents and agricultural/timber producers, Conner said. In addition, road maintenance costs will be reduced and water quality improved as the site should no longer flood and wash sediment and gravel from roads and ditches into the creek, she said.

The new Heywood culvert will provide a net reduction of 23.6 tons of sediment per year, she said.

The total cost of the partnership project was \$97,209. Clearwater Highway District provided construction equipment and materials for a cash match of \$9,206. In addition, the Highway District planned and implemented the project using existing personnel and equipment at a cost of \$28,279. Grants from WQPA and the Idaho Water Resource Board's Flood Management grant program covered the cost of the arch culvert, footings and delivery of both.

The Water Board Flood grant was \$37,475. In addition, the Conservation Commission contributed to the project with engineering designs and construction oversight from SWC engineer Bill Lillibridge. Total project costs percentages came to 39% match from the Highway District, 39% from the flood grant, and 23% in non-match from the Conservation Commission, Connor said.

Due to inflation and supply issues, the cost of the culvert project went up 70 percent from the original grant application in 2021 to the time of implementation in 2022. The Clearwater District would have lost \$10,000 on the project without the Commission's WQPA funds, she said.

"It really, really helped to get the WQPA dollars," Connor said.

Louse Creek culvert replacement

The Louse Creek culvert on Newman Road has flooded frequently, reportedly "nearly every year," causing



New Heywood Creek culvert installed (above). Old undersized culverts are shown below. (photos courtesy Clearwater SWCD)

unsafe access to and from homes/property in the area, Conner says. The culvert and road were overtopped by floodwaters in 2011, 2014, 2017, and 2019. The old 54-inch culvert could not pass spring runoff from even a five-year flood event, she said.

The undersized culvert has been a costly headache for the Clearwater Road Department as they had to repair the road almost annually. Flood flows overtopping the road also caused erosion on the road and sediment to flow into Louse Creek.

The new Louse Creek culvert will provide a net reduction of 36 tons of sediment per year, she said.

Installing a new fish-friendly arch culvert will protect safe access for local residents and agricultural producers on Newman Road, Connor says in the WQPA recap report. In addition, road maintenance costs will be reduced and water quality improved as the site should no longer flood and wash sediment and gravel



from roads and ditches into the creek. The new culvert was installed in September 2022.

The Louse Creek culvert project was a partnership effort by the Clearwater District, the Clearwater Road Department, the Idaho Water Resource Board Flood Management grant program, the SWC WQPA grant program and other contributors. The total project cost was \$101,000. The original estimated cost was \$66,698. The cost went up by 60% in one year due to supply chain issues and inflation, causing a one-year delay in implementation, Connor said.

The Clearwater Road Department provided construction equipment and materials for the project for a cash match of \$15,995. In addition,



New pivot sprinklers are ready for final assembly on Craig Searle's farm south of Burley. (photo by Steve Stuebner)

the road department planned and implemented the project using County personnel and equipment at a cost of \$50,458. The two grants from the Water Board and SWC covered the cost of the culvert and delivery, and most of the Clearwater District costs for grant administration and implementation, Connor said.

The Water Board grant was \$24,687 and the WQPA grant was \$9,061. In addition, the Conservation Commission contributed engineering and design from Bill Lillibridge. Total project percentages came to 63% match from Clearwater County and the Clearwater District, 24% from the Water Board Flood Grant, and 9% in non-match (SWC/WQPA).

West Cassia irrigation efficiency project

The overall goal of the West Cassia project was to conserve irrigation water by changing the conveyance system from a leaky, gravelly ditch to a buried pipeline, and convert from inefficient wheel-lines to pivots. Burley farmer Craig Searle was the cooperating landowner involved in the project. Construction got underway in the late fall, and the project was

completed in several weeks, using local contractors in cooperation with the Burley Irrigation District.

The total project cost was \$320,000, utilizing both private and federal dollars. The WQPA grant portion was \$55,000.

Searle raises sugar beets, potatoes, corn, and grain on farm ground he leases in Cassia County.

"It's going to use about half of the water as we used before," Searle said. "To come directly out of the canal will save a lot of labor. Any water we can save and conserve, is water that can be used across the valley."

Using less irrigation water also will mean a reduction of water-seepage into the ground, and a reduction of farm chemicals leaching into ground water, officials said. That's positive because the farm land is located in the Marsh Creek Nitrate Priority Area, meaning it has high levels of nitrates in ground water.

"It's definitely a high priority area for ground water quality as far as nitrates go," said Carolyn Firth, water quality specialist with the Conservation Commission in Burley.

The Marsh Creek Nitrate Area used to rank as the No. 1 priority area in the state. Now it ranks No. 5, Firth said.

New pivots being installed by Searle also are outfitted with low-elevation spray application (LESA) hoses, which are positioned just above the level of farm crops for more efficient water use.

Because of high inflation, the costs of the irrigation efficiency project went up in the last year, Searle said. The WQPA grant helped cover the inflation costs to keep the project in the black.

"Because of the inflation, pipe prices, pivot prices, this kind of cushioned the blow on that," he said.

Hammett Irrigation Pipeline

The King Hill Irrigation District has been working for the last 4-5 years to put together a major irrigation-efficiency pipeline project to benefit local irrigators and farmers in the Hammett area. The King Hill District put together a \$5 million funding package that includes a NRCS EQIP grant, an Aging Infrastructure Grant from the Idaho Water Resource



Contractors bury irrigation pipe just uphill from the Snake River near Hammett. (photo by Steve Stuebner)

Board, a low-interest loan from the Water Board, and a \$275,000 WQPA grant from the Conservation Commission.

The WQPA grant helped make the project balance financially after high inflation drove the cost of irrigation pipe to a point where the project was in the red, officials said.

"We were over budget and in a deficit, and then we got the WQPA grant, and that was huge to put everything back in the black," said John Hafen, manager of the King Hill Irrigation District.

"When we started this process several years ago, we figured it'd have a \$3 to \$3.5 million price tag. As it is today, it's going to be in excess of \$6 million," adds Jeff Blanksma, Chairman of the King Hill Irrigation District.

"We're extremely grateful to all of the different agencies that have been helpful in this process," Blanksma says. "The Elmore Soil Conservation District and the Commission for their grant, Idaho Water Resource Board for their grant and loan, and especially NRCS which has been our partner since the beginning. They helped us design and engineer the project.

"And then of course, our water users and producers. Without them stepping up to the plate, helping with the cost-share in the loan, it'd only be a dream if it weren't for them."

Connie Tharp, Conservation Team Leader for NRCS, said the project has multiple benefits in reducing water use, improving water quality and reduced pumping costs of an estimated 4 million kilowatt-hours per year.

"It's a win-win project all the way around," Tharp says. "It's a win from a resource standpoint, it's a win for the shareholders, the landowners who are the water users, it's a win for the irrigation district, and it's going to have positive impact for our community."

Construction was under way in November and completion is expected before the irrigation season begins



Connie Tharp of NRCS, left, discusses the Hammett Pipeline project with Jeff Blanksma, chairman of the King Hill Irrigation District, right, and Jordan Shenk with the King Hill District. (photo by Steve Stuebner)

next spring. About five miles of irrigation pipeline will be buried from a new point of diversion by the Snake River to reach about 120 different farms and water users spread over 2,000 acres of land that will benefit from the project. A bank of five large irrigation pumps with variable speed drives will push the water flows to the farmers served by the pipelines.

The new irrigation system replaces an old open ditch system that diverted

water from the Snake River near Glenns Ferry and slowly conveyed the water toward the Hammett Valley. The old open ditch system could take 20-24 hours to deliver water to the Hammett Valley, and if there were any power outages or issues in water conveyance, that could disrupt farmers locally, Blanksma said.

"Our infrastructure was over 100 years old, conservative estimates we were losing 30 percent of our water before it reached the Hammett Valley," he said.

"From a farmer's perspective, we were trying to reduce the cost and therefore gain efficiency in what we were pumping," he continued. "Another big factor is we were trying to increase the reliability of water here in the valley. We're eight miles from the pumping plant, and so if there was an interruption in the pumping plant, it was sometimes two, even three days before we'd receive water down here."

Blanksma's family runs Legacy Farms, a large operation that produces dairy-quality hay, potatoes, dry beans, and winter wheat. Other crops raised in the Hammett Valley area include onions, sugar beets, corn for grain and silage.

Legacy Farms typically gets five cuttings of high-quality hay each year, he said. The hay is marketed to dairy farms located near the Oregon border and in the Magic Valley.

The Hammett Pipeline project has both water quality benefits and water-quantity savings.

"I believe there will be a lot of water



The Snake River near the new point of diversion for the Hammett Pipeline project. (photo by Steve Stuebner)

quality benefits," Blanksma says. "Putting it in a pipe, we're not going to be reintroducing any water to the Snake River (no return flows). That'll eliminate a lot of sediment and foreign debris in the canal system. I think that'll be of great benefit to the environmental quality of the water in the river.

"And we'll be pumping far less water out of the river. Right now, we're pumping 5 acre feet per acre of water. Hopefully by the time we put in the pipe, we can reduce that to 3 to 3.5 acre feet to deliver what our growers need."

The existing irrigation efficiency project is just the first phase of six planned in the future.

"Hopefully this is just the first of many projects that will improve the delivery efficiency of water to our customers," Blanksma says. "The producers are really excited about this. When you start talking about high-value crops where even a day's delay in water can be critical, I think this will be extremely beneficial to producers in this area."

Trefz hopes that the Idaho Legislature can continue to allocate funds to the WQPA program in the future. The program had been actively managed by the Commission for many years until it was deactivated during the Recession in 2010.

"It's great to have the program restored," Trefz said. "It's a user-friendly conservation program that not only benefits local conservation districts, landowners and others seeking financial assistance to implement conservation projects, but also provides widespread public benefits to our natural resources, something that benefits every Idahoan."

Trefz said he truly appreciated the efforts by ag lobbyists Roger Batt and Benjamin Kelly, NRCS State Conservationist Curtis Elke, and attorney Dan Steenson in working with the 2022 Legislature to restore funding for the WQPA program. Paul Arrington of the Idaho Water Users Association also played a key role.

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

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