

Oneida SWCD's WIDE HOLLOW PROJECT tackles erosion in Daniels Reservoir

By Steve Stuebner

In the springtime, heavy snow-melt and rain can flow down the steep slopes around Daniels Reservoir – some of it tilled wheat fields – and carry sediment into the reservoir and Little Malad River.

Knowing this is a high-priority area, the Oneida Soil and Water Conservation District partnered with multiple landowners, a professional consultant, and Conservation Commission staff to install many erosion-control measures and best management practices around the reservoir to curtail erosion.

Most recently, the Wide Hollow conservation project has just been completed in September 2017, featuring a mix of water pipelines, cattle troughs, water and sediment basins and terracing to protect tributary streams above Daniels Reservoir, prevent sediment from flowing into the reservoir, and reduce sediment in the Little Malad River, which flows out of the reservoir and points downstream.

Another component of the Wide Hollow grant project installed BMPs at a winter animal feeding operation on private land nearby. The project fenced off Cherry Creek, created off-site water troughs for cattle, a waste-storage containment pond and waste-containment berms.

The Wide Hollow conservation project was funded by a \$418,000 Sect. §319 water quality grant from the Idaho DEQ and EPA. It was the second phase of the “Daniels Sediment Reduction Project,” which also was funded with §319 grant funds. The first phase started in 2013, and Wide Hollow followed in 2014.

Todd Daniels, owner of Daniels Herefords based in Malad, runs cattle in the Daniels Reservoir area for summer range. As part of the Wide Hollow project, he devel-



oped a well and a natural spring with solar power on his private land to pump water uphill to water tanks higher up on the mountain. Pipelines were installed to send gravity-flow water from the big tanks to a series of water troughs for cattle.

The new water system “keeps the cows spread out in my upland pastures,” Daniels says. “Now we’re keeping the cattle out of the creek. We used to have to push the cattle up the hill three to four times a week. Now they just go up there on their own. It’s been a huge improvement, and it saves a lot of time and manpower.”

The project on Daniels’ property involved the installation of more than 30,000 feet of water pipe and 11 cattle troughs on the north and east side of the reservoir, said Chris Banks, owner of Conservation Basics LLC, project consultant for Oneida SWCD.

“I think it’s been a really good project,” Banks said. “It’s been a fun one to work on. The landowners were all interested in doing their part. We wanted to make sure that everything was done with quality workmanship so it will last a long time.”

The biggest challenge associated with the project was to do it in phases so the landowners could afford to cover their cost-share expenses over a period of several years, Banks said. In the end, the project will have benefits not only for the environment, but it also will add value to the landowners’ property and operation, he said.

Overall, the sediment-control work is expected to yield a savings of 18 tons of sediment per year, according to the final §319 grant report.

“I always tell landowners that everything we do going into a project will protect the resource and improve the bottom line for the landowner at the same time,” Banks said. “But they’ve got to live with it after we walk away to work on the next project, so we want to make it as cost-effective as we possibly can, and make sure it’s beneficial to the landowner.”

The Wittman family, owners of Wittman Farms, is another cooperator on the project. John Wittman, the former chairman of Oneida SWCD, passed away while the project was under way.

DANIELS RES, cont. from Page 1

“The Wide Hollow Project has seen its share of challenges, none greater than the loss of John Wittman,” Banks said. “John committed his life to serving others and working to protect the natural resources of Oneida County. John led by example, as he signed up his own farm for participation in the Wide Hollow Project and the Daniels Sediment Reduction Project. When he passed away, his wife Susan and their farm manager, Cooper Daniels, worked hard to complete the project and continue the legacy John left behind.”

“It was a wonderful project,” adds Susan Wittman, the widow of John Wittman. “We love this because we have water for our cattle. The project has really benefited everybody who farms and ranches around the reservoir.”

Similar to Daniels, the new water system for the Wittman farm and ranch now runs automatically. “Before we had a well out there with a generator. The new system has been a great time-saver for us,” she said.

The Buehler Ranch. In the northwest portion of the reservoir, the Buehler family runs cattle on 2,400 acres of land and raises wheat on lands adjacent to their ranch. They participated in the project by installing a well, 7,000 feet of water pipe and seven cattle troughs.

“It’s turned out to be a real good project,” said Don Buehler. “I don’t think I would have been able to afford to make those improvements without the cost-share with the district.”



Cherry Creek stockwater line.

The Buehlers enjoy seeing wildlife in the area, and they’ve noticed that all kinds of different critters are using the water

developments. “It’s as good of a wildlife area as you’ll find on private ground,” Buehler said. “We got quite a few deer here, and a nice elk herd. They like to calve and fawn in the creek-bottoms.”

They also see moose, sharp-tail grouse, sage grouse, chukar partridge, Hungarian partridge, blue grouse and ruffed grouse. “We really like to see the wildlife,” he said.

The Buehlers are taking a year off to serve a mission in Mexico City, so they are leasing their cattle pastures and put their wheat fields into the Conservation Reserve Program.

One of the unique aspects of the water and sediment basins is that they were designed to accommodate farming as well. On the front cover of the Wide Hollow report, a robust wheat field is seen in the foreground, with Daniels Reservoir and the mountains in the background.

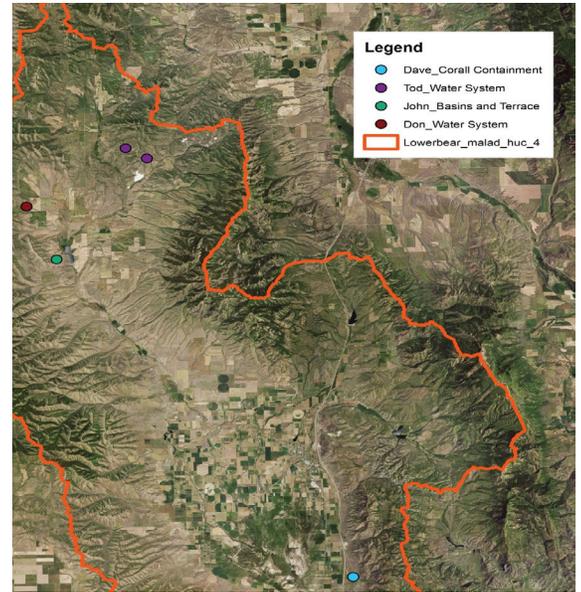
“You can barely see it, but there’s a water and sediment basin incorporated into that wheat field,” Banks explained.

Steven Smith, a former Conservation Commission staffer who now works for Idaho DEQ in Pocatello, came up with the concept, Banks said.

“We make them so they can farm over them,” he said. “Steve Smith is the guru on that concept. We make the basins larger, and we find areas that are flatter so they can be farmed. Having plant growth inside them helps hold them together.”

Allan Johnson, an engineer for the Conservation Commission, also contributed to the Wide Hollow project. He went into the field to engineer the soil and water sediment basins to ensure they were designed correctly at the ground level. A total of 26 sediment basins were built for the project.

“We call them gully plugs,” Johnson says. “You design them to slow down the water to flow into the basins, and the water slowly percolates into the ground. It’s nice when you can incorporate them into an existing field because the farmers don’t want to lose any farm ground.”



If installed correctly, the basins are dry when the farmer is ready to plant or harvest the crop, he said.

Daniels Reservoir has been a conservation priority for decades. When Smith still worked for the Conservation Commission, he was involved in putting together the initial Daniels Sediment Reduction Project in coordination with Oneida SWCD. Both of the recent conservation projects complement some earlier conservation work completed under the State Agriculture Water Quality Program (not currently funded) in the 1980s and 1990s, he said.



Later, the TMDL agricultural water quality plan for the Lower Bear-Malad area identified the Little Malad River and Daniels Reservoirs as Tier 1 high-priority areas for treatment due to sediment issues.

The driving force behind the soil conservation projects was to prevent the 375-acre reservoir from filling up with sediment. The slopes above the reservoir are 8 to 12 percent slopes – steep enough to cause gully erosion, Smith says. The soil is a silty loam.

DANIELS RES, cont. from Page 2

"The Daniels Reservoir area has been a priority for the Oneida SWCD for some time," Smith said. "When they put that reservoir in, there was concern that it'd fill up with sediment in 10-15 years, so they focused on erosion control. These projects also should solve some of the TMDL issues for the Little Malad River, too."

At one time, a series of terraces were built in the hillsides to catch sediment. The new 319 projects addressed any repairs needed to the existing terraces, and another series of terraces were installed to provide erosion control.

Eleven terraces were placed on the open hillsides above the reservoir under the project. Each one is about a quarter-mile in length. On a 1,000-foot slope, the terraces were placed about every 300 feet as you proceed down the slope. It's easy to see the terraces from an aerial Google Earth image of Daniels Reservoir. They slow down the water as it flows off the hillsides, and trap sediment inside the terrace berms, Smith said.

On the Cherry Creek portion of the Wide Hollow project, there was an animal feeding operation that had been built on top of the creek. The landowner wintered about 225 cattle on the property. Banks and Allan Johnson worked with the landowner to relocate the feeding operation away from the creek, and they fenced off about four miles of the creek to keep cattle and waste out of the stream.

The landowner had developed some off-site water troughs for livestock previously, Johnson said, so he was able to tie into an existing water line and add four additional water troughs for livestock watering. "We got the entire creek fenced-off, and some of the feed yard was moved," he said. "This situation was like many we've seen historically where guys built barns and corrals by a live water source because they had to water their livestock."

Johnson also recommended containment berms around the edges of the feed yard to keep sediment and waste from flowing toward live water, and he worked with the landowner to install a waste-storage containment pond.

The Wide Hollow project benefited from a contractor who specializes in digging trenches for underground water pipelines

and installing pipe, Banks said. The contractor's business name is "Thirsty Cows," run by Jed Heaton, and he saves landowners and agencies lots of money because he works fast and efficiently, he said.

"This guy drags in the pipe with a big cat, and he climbs up and down mountains that would scare other people to death," Banks said. "He did all of the stockwater lines for Daniels and Buehler. He saved us a lot of money."

Multiple project tours The Oneida SWCD sponsored several tours of the Wide Hollow project. The first was a horseback tour to showcase the largest of the off-stream watering systems and two solar-powered pumps. Held in October 2014, the tour included general public, Idaho DEQ and the Conservation Commission. The tour was held to increase awareness of the DEQ §319 program and to showcase the water quality work that could be accomplished with 319 funding, Banks said.

A second tour, held in the fall of 2015, was a driving tour with members of the Oneida SWCD board, Idaho DEQ and Conservation Commission staff, while various parts of the Wide Hollow project work was still under way.

In August 2017, Leigh Love, administrative assistant for the Oneida SWCD, led a tour involving the Farm Service Agency (FSA) County Committee, employees from Oneida County FSA, and Oneida County NRCS to view the project. "This was an effort to show our partnering agencies what the district has been up to and to discuss the §319 program in general," Banks said. Eighteen people attended that tour.

"That was kind of fun to do the horseback tour," Banks said. "Going out on horseback was really the only way to access some of the stockwater improvements we had made on the Daniels property. Some of it is up on Forest Service ground."

Ron Blaisdell, owner of the Flying R Ranch who also participated in the project, said he appreciates all of the conservation



Johnson inspects a Buehler trough

work that has been done as part of the Wide Hollow and Daniels Sediment Reduction Project.

"We're trying to keep the erosion from going into the reservoir," he said. "In the last 10-15 years, it's worked really well. It's really helped to store as much irrigation water as we can in the reservoir. It's helped the water quality, and it's been great for us. Those guys did a great job." □

Steve Stuebner is a regular contributor to *Conservation the Idaho Way*.

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COMMISSION MONTHLY DISTRICT REPORT & UPDATE

Commissioners and staff have just finished attending all six division meetings. The meetings were enjoyable, well attended, and we learned a lot from the presenters and our conservation partners.

This year, we were joined by a number of legislators, as well. Among them: Representatives Randy Armstrong, Dustin Manwaring, Elaine Smith, Kelley Packer, Sage Dixon, Ron Mendive, and Don Cheatham.

Thanks to all districts and IASCD division leadership for the kind hospitality.

Final District Allocations Coming This Month

The Commission meets in Boise later this week to consider the recommendation of the District Allocation Work Group for this year's Local Match Allocations.

Every year the District Allocation Work Group (the DAWG) spends time combing through local match reports submitted by districts and makes a recommendation for distribution to districts by the Commission Board.

Thanks to all who participated. This final allocation for FY 2018 should be distributed by the annual IASCD Conference.

Commission Listening Session at Conference

Please plan to join the Commission Board for their annual **Listening Session** during the IASCD annual conference in Boise. It will be held Thursday, June 16th at 7:00 am at the Riverside Hotel.

The Commissioners set aside time each year at the conference to hear from district supervisors and others. Of interest to Commissioners are all opinions about what is being done well and what could use improvement.

FY 2019 Budget Request Revised

You've probably heard that the Commission's FY 2019 Budget Request included re-funding the Water Quality for Agriculture Program (WQPA). A recent review of statute and rule led us to revise the original request.

Included in the original request were \$1M in ongoing trustee and benefit funds to allow districts statewide to accomplish water quality best management practices, and another \$1M in one-time funding to address flood and other disaster mitigation in 2017 (and, if necessary, in 2018).

Legal research conducted after the original Budget Request was issued revealed that flood mitigation funding can't be distributed through WQPA, so the Request was revised, removing the one-time \$1M. Should legislators desire to pursue such funding, the Commission has in the past offered grants under the Conservation Innovation Grant program.

Idahoans face significant financial challenges to achieve voluntary agricultural water quality goals established by Total Maximum Daily Loads (TMDLs) approved by the Environmental Protection Agency (EPA). The economic burden for farmers and ranchers in the Treasure Valley alone was recently calculated at \$100,000,000.

In addition to existing municipal and industry regulatory water quality permitting requirements, voluntary implementation of agricultural best management practices (BMPs) is essential to meet Idaho's TMDL objectives, yet funding for these voluntary water quality BMP efforts through ISWCC has decreased or been eliminated over time.

Operating from 2000 through 2012, WQPA was instrumental in addressing agriculturally-generated nonpoint source pollutants in Idaho waterways.

Over the life of the program, the focus was primarily cropland, but there were also riparian, livestock, and forest components addressed. In sediment load reductions alone, WQPA diverted (and is still diverting) almost 29M tons (over the life of the practices) for a state investment of \$13.5M. (WQPA also diverted other pollutants including phosphorus).

The Idaho Association of Soil Conservation Districts, in supporting the Commission's request said:

"WQPA would provide a logical conduit for funding distribution given that both Statute and Rule are already in place. In addition, conservation districts would all agree that a program that is accountable to the Executive and Legislative branches of state government is crucial to the success of water quality projects by private landowners. The program would also provide equitable and dependable funding for water quality implementation projects statewide with little overhead and start up expenses."

The original Budget Request was submitted in September and the revised request, in October. The Legislature and Governor's Office will review it and the Governor will recommend a budget to the Legislature in January.

After thorough review by the Legislature, the Commission's budget for the next fiscal year is advanced via an appropriations bill that is passed by both the Senate and the House, and is signed into law by the Governor, usually by April. □

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