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Producers on a field tour sponsored by Butte SWCD look at irrigated pasture in the Big Lost Valley and in the inset, a high-tunnel (greenhouse) project which can extend the growing season for high-value crops. U of I Extension officials help with basic education about gardening in the greenhouses. (courtesy Butte SWCD)

BUTTE DISTRICT: HELPING INCREASE AG STEWARDSHIP IN THE BIG AND LITTLE LOST RIVER VALLEYS

By Steve Stuebner

The Butte Soil and Water Conservation District is staying busy with a broad diversity of ag stewardship programs in the Big and Little Lost River Valleys.

The District has been working on water-stewardship projects, enhancing sage grouse habitat and conserving water on the Triple

M Land and Cattle Ranch, working with students on multiple education outreach projects, creating an ag chemical recycling project, and winning a technical assistance grant from the National Association of Conservation Districts to provide funding for an extra employee in the Arco NRCS office.

“This TA grant funding allows us to provide an employee for the local NRCS office to help

with all things – from field work to contract writing,” said Stephanie Barnes, administrative assistance for the Butte District. “The goal of the grant is to train employees who will then become full-time NRCS employees. We have been successful in this – former interns Brett Erb is now the NRCS range conservationist in the Arco NRCS office and Jennie Weathered will be joining the NRCS

staff as a soil conservationist.”

The Arco NRCS office, as part of the latest NRCS reorganization, is now covering the Butte District and most of the Blaine SCD, Barnes said. With the 4th consecutive year of TA grant funding, the Blaine SCD will be sharing an employee with Butte, which will help us cover our match portion, she said.

“We are excited to work with Blaine SCD on this and be able to share an employee,” Barnes said.

Irrigation projects

The Butte SWCD recently helped pay for the engineering for two irrigation pipeline systems in the valley. Both projects also were funded through the NRCS EQIP program.

The Folkman pipeline is 2-mile-long conversion of open canal to pipeline, directly benefitting 400 acres of farmland, she said. The pipeline is located at the very end of the Big Lost River canal, approximately 2.5 miles south of Arco. The water is drawn from the Big Lost River.

“This canal had a 66 percent shrink, and it affected a major pipeline upstream, so indirectly, this pipeline benefits more than 4,000 acres in the Big Lost River Valley,” Barnes said.

Irrigated crop fields that draw water from the pipeline project were converted to Low Elevation Sprinkler Application (LESA) systems that deliver water directly over the top of crops, officials said. All landowners are doing irrigation water-management for the length of their NRCS contracts to stretch limited water supplies as much as possible.

The Big Lost River Irrigation District manages the Folkman pipeline. The District



The Folkman pipeline will conserve water in the southern end of an irrigation canal south of Arco, replacing an open canal that featured water seepage losses of 66%.

contributed in-kind labor toward the project by filling in the existing canal once the pipeline was operational, Barnes said.

The second project, the Inskeep Pipeline, will be installed this spring/summer, Barnes said. This project is a coordinated effort of 10 landowners in the Big Lost River Valley. The pipeline will be 2.5 miles



Rancher Monte MacConnell checks out the concrete check dams along Hammond Springs Creek on his private ground. The structures are slowing down runoff and spreading out the water table, benefitting sage grouse and a wide variety of other birds and wildlife. (courtesy Butte SWCD)

long; participating farmers will install LESA pivot nozzles in crop fields and practice water-saving conservation practices for the duration of their NRCS contracts.

Concrete check dams slow down runoff, expand water table: The Butte District won a \$14,000 grant from the Idaho Governor’s Office of Species Conservation to work with the Monte MacConnell family, owners of the Triple M Land and Cattle Company, on a number of conservation improvements on Hammond Springs Creek. The project also featured financial support from the NRCS Sage Grouse Initiative program.

The OSC grant helped fund livestock water quantity, sage-grouse habitat improvements, and riparian area rehabilitation, Barnes said. A new well and solar-powered water storage tank were installed along with pipelines and off-site cattle watering troughs,

to keep cows away from the creek.

Twenty-five wetland enhancement structures were placed along the creek in 2018. They are benefitting estimated 33 acres in the riparian area, Barnes said. The concrete structures act as check dams to slow down spring runoff, collect sediment, spread water over a larger area in the

creek-bottom and raise the water table.

Rancher Monte MacConnell says his goals for the project are to reduce the down-cutting action of the stream and reduce incisement, while raising and expanding the water table. He also noted that new clumps of willows are growing in the riparian area. Even over the last two years, MacConnell said he has noticed that the water is running in the creek longer than before. It ran until June in 2020.

“I think it’s working out real well – I’m excited about it,” MacConnell said.

The off-site cattle troughs are keeping cows out of the creek and allowing the riparian vegetation to thrive for songbirds, sage grouse and wildlife, he said.

Some of the concrete structures blew out with spring runoff in spring 2020, MacConnell said, so they will be replacing some of them with beaver dam analogs -- willow branches spread out horizon-

tally against vertical posts pounded in the stream. "We'll see how that works," he said.

No-till drill purchased. In 2020, the Butte District purchased a 12-foot no-till drill with the capability to plant small grains, grasses, native flower seeds and forb seeds.

"Our old drill was only capable of planting small grains, so folks wanting to re-seed areas with grasses and flowers had a hard time finding a drill," Barnes said. "We are also teaming up with our local extension agent this year to establish some trial



Butte SWCD Board members Randy Purser and Hayden Isham stand by the newly built recycling bin for empty plastic ag chemical containers. A \$2,500 Friends of the NACD grant was used to create the recycling bin at Valley Ag in Arco.

plots of different stages of minimal-till and no-till performance in our District. We received funding from the Office of Species Conservation, Idaho Department of Fish and Game, and Northwest Farm Credit Services to help purchase the drill."

Recycling bin for ag chemical containers: In 2020, the Butte District received a Friends of the NACD grant for \$2,500 to install a recycling bin for empty farm chemical containers. "We teamed up with Valley Ag in Arco and installed the bin at their location," Barnes said. "A company called Agri-Plas, Inc. stops by on their route through the big desert, chips the containers on site and hauls them away for recycling."

Education projects

The 2021 Envirothon team sponsored by the Butte District assisted the BLM and U.S. Forest Service on Bald Mountain Ski Area (Sun Valley Resort) in Blaine County by installing replacement pheromone packets that protect trees from the Douglas-fir beetle. The kids also got to ski Sun Valley, a big thrill.

Their Envirothon team coach is Lara Fondow, NRCS resource conservationist, based

in Arco. "She does a great job with the team and gets them involved in a fun stewardship project each year," Barnes said.

6th grade natural resources tour. For over 30 years, the District has hosted a natural resources tour at Mackay Reservoir for 6th graders from Arco and Mackay. At the event, the kids are divided up into groups and make the rounds to several booths where they learn about natural resources topics and participate in hands-on activities.

NRCS brings their Soil Health trailer, the District has a booth that rotates topics to align with the NACD educational topic for the year, the BLM talks about archaeology, Trout Unlimited officials teach the kids about fish, and the Forest Service does a tree project, Barnes said.

In addition, the Idaho Rangeland Resources Commission brings their education trailer to teach kids about rangelands, the Butte County Weed Department talks about invasive weeds, and the Custer County Fire Department brings a fire truck to talk about fire safety and let the kids spray the water hose.

"Then our District caps off the day with hot dogs and ice cream!" Barnes said.

The Butte District hosted a conservation tour last year in the Little Lost River Valley.

"We visited several locations near Howe to highlight work producers are doing with the NRCS, including a High-Tunnel Initiative stop and an irrigated pasture/rotational grazing stop," Barnes said. "We also visited a pollinator plot and a LESA nozzle pivot/irrigation water management location."

The High Tunnel Initiative relates to farmers working with NRCS to create a greenhouse structure on farm property to extend the growing season for high-value crops.

"It's been very popular in our District, and we have quite a few high tunnels in operation now," Barnes said. "We conducted a seasonal high tunnel workshop and brought in UI Extension personnel to provide basic education on gardening in a high tunnel."

Working with Blaine SCD on two-district-wide conservation project: NRCS officials



The Arco Envirothon team, sponsored by Butte SWCD, gets to ski Bald Mountain in Sun Valley as a perk after putting out pheromone traps in the summer to prevent an outbreak of Douglas-fir bark beetles

chose the Butte SWCD and Blaine SCD to be a pilot project for a special pool of funding to create a two-district-wide conservation project. The project will be above and beyond our normal local working group meetings, Barnes said.

"We had our first meeting in April where both Districts agreed to focus on converting open irrigation ditches to pipelines (or lining ditches) and installing water-saving practices on the associated crop fields (LESA pivot practices, variable speed drives, irrigation water management),"

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About Butte Conservation District

The Butte SWCD as established in 1953 included all of Butte County except for incorporated towns and land owned by the Atomic Energy Commission. In 1967, the Butte SWCD expanded to its current boundaries containing all of Butte County and a large part of Custer County, including the entire Big Lost River and Little Lost River drainages.

Butte SWCD acts as the catalyst for coordinating and implementing conservation programs and works to channel expertise from all levels of government into action at the local level. Programs are offered on a voluntary basis with both technical and financial assistance available. A copy of Butte's 5-Year Plan identifying the resource needs and an action plan to address them can be reviewed [here](#).

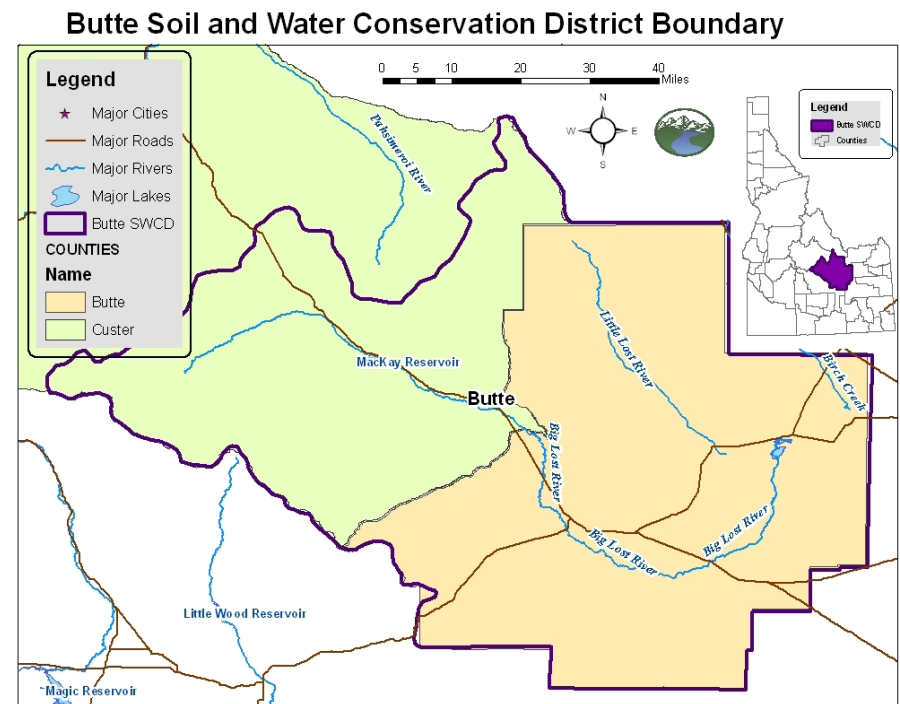
Employment in both counties is dominated by agriculture and related industries. Elevations of irrigated farmland range from 4,820' to 6,260' for a 9-day growing season difference within the District. Rainfall varies from <8" to >20" in the mountains. The 2010 census estimated the population in the District at ~3,400. The top commodity in Butte County is *other crops and hay* while Custer's top commodity is *cattle and calves*.

The District's 5-Year Plan identifies the following as top resource concerns:

- Insufficient water supply
- Soil quality degradation
- Degraded plant condition
- Livestock production limitation
- Inadequate habitat for fish and wildlife

The District's primary priorities include:

1. Increase water quantity and improve water quality through education and outreach, supporting recharge pro-



grams, facilitating public meetings on irrigation conservation, purchasing monitoring devices, and promoting proper disposal of ag-related waste

2. Improve soil health and reduce erosion through the adoption of best management practices on cropland, pasture, and rangeland, promote control of invasive weeds, grazing plans, and related activities

3. Improve animal waste management and promote riparian area protection by promoting participation in EQIP, development of nutrient management plans, promote protection and preservation of riparian areas

4. Conduct natural resources information and education activities like Envirothon, poster contests, Natural Resources Camp, participate in fairs and events, utilize social media, newsletters, etc.

5. Effectively carry out District operations through development of operating policies, direct supervisor oversight,

networking with other Districts, etc.

6. Promote wildlife conservation via promotion of shelterbelt usage, tree sales, properly-timed haying, encouraging pollinator plantings, and participation in the Sage-Grouse Initiative.

7. Improve natural resources conservation in urban settings through education/info meetings, participating in the NRCS High Tunnel Initiative.

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Frances Perkes, District Administrator; Mindy Hawley, Public Outreach Coordinator, Stephanie Barnes, Administrative Assistant

Contact

PO Box 819, Arco, ID 83213; 208-587-8557 (x101); butteswcd@outlook.com; www.butteswcd.org

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322 East Front Street, Suite 560 Boise Idaho 83702
P: 208-332-1790 • F: 208-332-1799
info@swc.idaho.gov • www.swc.idaho.gov