



*Pictured (left to right) are: Chairman Rick Rodgers, Kirk Loomis (supervisor), April Loomis (associate supervisor), Rick Pearson (vice chairman) and John Hurley (secretary/treasurer). Not pictured are Chris Voss (supervisor), Barry Duelke (associate) and Terry Kramer (associate).*

## Balanced Rock District: keeping soil in place (and more) to feed a hungry world

Farming in the Balanced Rock Soil Conservation District has always been tough. The soil is thin and rocky, and it's located at the end of an irrigation project. It was those challenges that led a group of farmers and ranchers to form the Balanced Rock SCD in 1961 and those challenges have informed district supervisors for the last 60 years.

When you don't have much soil and irrigation water supplies can be tight, re-

ducing irrigation-induced erosion is a high priority. That's why the District was eager to begin the Cedar Draw water quality project in August 1979. Funded by the Environmental Protection Agency (EPA), the two-year project developed a plan to reduce agricultural sources of water pollution in Cedar Draw, a tributary to the Snake River. The project identified 11,535 acres of environmentally sensitive land along Cedar Draw.

In late 1981, the Balanced Rock SCD received a \$1.3 million state grant — one of the first three signed in Idaho — to carry out the Cedar Draw pollution abatement plan. In 1983 the EPA presented a special award to the Balanced Rock SCD for excellence in developing and implementing a nationally recognized agricultural water pollution abatement program. Over the six-year life of the program, 81 contacts were signed and 79 were completed and





Balanced Rock SCD has partnered with the Twin Falls Canal Company and Idaho Department of Environmental Quality to build approximately 10 wetland complexes across the western end of Twin Falls County. These wetlands are strategically located on the ends of irrigation return drains that monitoring shows has been contributing large loads of sediment or phosphorus to the Mid-Snake River. Follow-up monitoring has proven these wetlands are successful.

treated 6,565 acres of the 9,541 critical acres.

Pleased with the success of its first water quality project, the District embarked on two more projects in the 1990s — East Upper Deep Creek (\$500,000 state grant in 1989) and West Upper Deep Creek (\$1,000,000 in the late 1990s). Both were State Agricultural Water Quality Projects (SAWQP) administered through the Idaho Soil and Water Conservation Commission. Water quality monitoring was completed on those projects in 1995. The West Upper Deep Creek project was completed in December 2003. During this project, 36 contracts were written to treat 4,375 acres at a total cost of \$2.1 million, with the cost divided about equally between cost-share and cooperator expense.

Building on that success, the Balanced Rock SCD partnered with the Idaho Department of Environmental Quality and the Twin Falls Canal Company to develop approximately 10 constructed wetlands on irrigation return drains that were delivering a large load of sediment to the Mid-Snake River. Some of these projects also helped cooperators convert gravity irrigation systems to sprinkler systems to reduce irrigation-induced erosion.

The District also worked with ISWCC in 2014 to collect water quality data for the proposed projects as well as several

existing wetlands to evaluate the effectiveness of those previous projects. Surprisingly, time does not seem to reduce a well-maintained wetland's effectiveness.

That monitoring showed that a wetland complex built 10 years ago was more effective at lowering the total suspended sediment concentration than one built just two years ago. The newer pond removed about half of the sediment compared to approximately 70 percent for the older wetland.

In recent years, Balanced Rock SCD has shifted its water quality focus from large wetlands to reducing soil erosion on a field-by-field. The District, along with the Snake River and Twin Falls SWCDs, purchased water moisture sensors and rain gauges to test the efficiency of newly installed pivot systems. The intention is to provide both the Twin Falls NRCS office and cooperators with better data about how these new systems are actually operating and thus improve irrigation water management by applying only what the crop needs. Over application of irrigation water can lead to soil erosion and leaching nutrients beyond the crop root zone.

All three sets of sensors and gauges will be installed within the Balanced Rock SCD in 2021. Two sets will be used on new pivots to help educate cooperators. The third set will be placed in an irrigated pasture

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that is the also the planned site for an irrigation water management/soil health tour in early June 2021.

## Soil Health a High Priority

While much of the early efforts were focused on water quality, much of the District's cropland is considered highly erodible. Over the years, supervisors have emphasized the need to reduce wind erosion potential by encouraging growers to use conservation tillage, leave crop residue and plant cover crops. Those efforts have evolved into a soil health focus.

Balanced Rock SCD completed a \$75,000 three-year Conservation Innovation Project to provide cost share assistance to cooperators to experiment with cover crops and/or no-till planting techniques. This project was budgeted to plant 980 acres of multi-species cover crops and 2,020 acres of no-till crops (winter grain, spring grain or alfalfa) over a three-year period. Participation was slow the first year, but steadily grew and by project completion, 2,875 acres of farmland were direct seeded and 1,709 acres were planted to cover crops.

Rick Pearson, Balanced Rock SCD vice chair, has been using no-till practices and cover crops for several years. He feels so strongly about the benefits these practices bring to his cropland — improved soil



*Soil Health Champion Tim Cornie (right) talks to participants on a soil health tour in 2015. As an organic farmer, Cornie relies on cover crops to help build soil health as he must use tillage to control difficult weed populations.*

structure, improved moisture retention and capacity, and better overall fertility — that he spearheaded the District's efforts to purchase the no-till drill in 2020. The drill is available for cooperators to rent for direct seeding cover crops, grain and alfalfa.

During the summer months, the no-till drill is housed on Pearson's farm and he helps coordinate rentals. Cooperators pay \$10 per acre plus \$50 per day to rent the drill to cover insurance and repairs. It was used on about 500 acres in 2020. One producer used the drill to seed alfalfa into standing stubble and was quite happy with stand establishment. Supervisors plan to monitor the field in the spring of 2021.

In 2019 a multi-year project was begun to collect soil samples from across the Magic Valley to evaluate how soil health practices impact soil health and track trends in soil health. Three cooperators from Balanced Rock SCD are part of this five-year project. Every other year, soil health tests are used to evaluate microbial activity. NRCS, the University of ISWCC are partnering with conservation districts on this effort.

As the interest in soil health has grown, Balanced Rock SCD has recognized pioneers in this movement including nominating Tim Cornie and Barry Duelke to the NACD Soil Health Champion network.

Tim Cornie is an organic farmer who uses cover crops and reduced tillage as much as possible to build soil health while also experimenting with other practices, such as compost teas, to boost microbial populations. He has served on the

Balanced Rock SCD as both a supervisor and associate supervisor; and has been a speaker at soil health forums.



*Barry Duelke, NACD Soil Health Champion from the Balanced Rock SCD, stands in a pasture planted to a cover crop mix.*

Barry Duelke uses multi-species cover crop mixes and reduced tillage practices to feed both his soil and his sheep.

Duelke has spent decades using cover crops both build soil health and feed his sheep. He utilizes intensive grazing

management with the target of leaving a 4-inch leaf blade. He plants a 10-way cover crop mix and also raises an alfalfa/orchardgrass mix to bale for winter feed. Several years ago he installed a center pivot to improve irrigation management.

His seed list is well over a page long. "I've tried a hundred things and failed at ninety-five of them," Duelke said. Orchardgrass remains one of his staple species. "Orchardgrass is what built this farm," he said.

## Looking Forward

The Balanced Rock SCD continues to evaluate natural resource concerns and to identify practices that will protect both soil and water while helping cooperators remain economically and environmentally sustainable.

"Our most important goal," explains Rick Rodgers, Balanced Rock SCD chairman, "is to help farmers keep soil on their fields where it can help them grow better crops to feed a hungry world. When we do that, our soil and water are cleaner and healthier also." ♦

*This article is one in a series about voluntary conservation activities being accomplished by Idaho's locally led Conservation Districts. Every day District Boards and staff from Boundary County to Bear Lake promote and accomplish great agricultural stewardship projects to help landowners and the state meet water quality and other natural resource goals.*

*Established by statute in 1939, Soil Conservation Districts, as governmental subdivisions, and the [Commission], as a state agency, are the primary entities to provide assistance to private landowners and land users in the conservation, sustenance, improvement and enhancement of Idaho's natural resources. (IC, Title 22, Chapter 27)*

*Our mission is to facilitate coordinated non-regulatory, voluntary, and locally led conservation by federal, state, and local governments and other partners to conserve, sustain, improve, and enhance soil, water, air, plant, and animal resources.*

*We are proud of Idaho's Conservation Districts and support all of them financially and most of them with technical assistance, as well.*



# About Balanced Rock Conservation District

Not everyone thought it was a good idea when, in 1953, some of the local farmers suggested forming a conservation district in northwestern Twin Falls County. While some people believed the organization could help them conserve soil and redesign their farms for better efficiency, others feared government interference in their farming practices. The proposal surfaced again eight years later and this time the idea took hold. Of 85 people voting at the polls in March 1961, 76 favored forming the Balanced Rock Soil Conservation District.

Officially organized May 22, 1961, the Balanced Rock SCD has remained faithful to its founders' intentions. Working with federal, state and local agencies, sometimes through formal agreements, the District has brought a wide range of technical and

and southeastern Owyhee County.

Then as now, inefficient water management and soil erosion are the major resource problems in the District. An influx of dairies in the 1990s prioritized decision making about utilizing the manure generated.

Most of the land in the District, more than 615,000 acres, is public owned; primarily rangeland in Owyhee County. On the 125,319 acres of private irrigated land in the District, farmers reduce alfalfa, sugar beets, barley, beans, potatoes, corn and orchard crops.

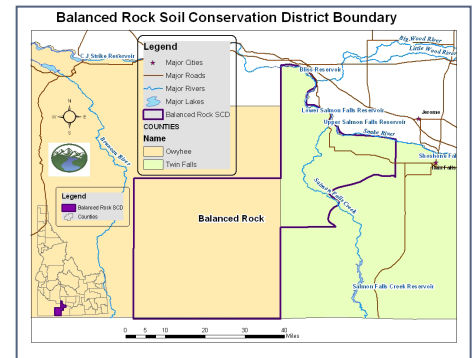
Pasture and hayland, cropland enrolled in the Conservation Reserve Program, rangeland and wildlife habitat make up most of the remaining private land in the District.

Fourteen major soil associations are found within the Balanced Rock District. In general, most of the irrigated soil, located in the northern part of the District, are well drained, very deep to shallow over a hardpan, silt loams that occur in level to moderately sloping uplands. These soils are highly erosive. The remaining 90 percent of

the District is rangeland, having soils that are well drained, very deep to shallow to a hard pan or bedrock, loams or silt loams that occur on level to very deep uplands.

## Natural Resource Priorities

- 1) Soil Health/Cropland
- 2) Water Quality
- 3) Animal Waste Management
- 4) Groundwater Quality
- 5) Rangeland
- 6) Fish and Wildlife



Approximately 95 percent of the cropland in the Balanced Rock SCD is highly erodible land (HEL) for wind and water erosion. For more information about the valuable work of the Balanced Rock Conservation District, [click here](#).

## Balanced Rock District

### Board

Rick Rodgers, Rick Pearson, John Hurley, Kirk Loomis, Chris Voss\*

### Associates

Tim Cornie, Barry Duelke, Terry Kramer, April Loomis

### Staff

Chris Simons, District Administrator; Cindy Snyder, Public Outreach

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*\*The Commission just learned that Chris Voss, Supervisor for the District, has passed away. We send our condolences and comfort to the family and Board. Chris was a great friend of voluntary conservation and will be sorely missed. - Ed*

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financial assistance to farmers, ranchers, homeowners, towns and organizations it represents. Conservation through voluntary participation, initiated by a strong education program, has always been a basic tenet of the Balanced Rock SCD.

In the 1960s, most farmers came to the District for help to design efficient irrigation systems and improve their crop rotations. The District has four times expanded its boundaries and today, encompasses 921,571 acres in northwestern Twin Falls

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