

**BALANCED ROCK**  
**SOIL CONSERVATION DISTRICT**

**RESOURCE CONSERVATION**  
**BUSINESS PLAN**

**JULY 1, 2015 TO JUNE 30, 2020**

**APRIL 15, 2015**

# Foreword

Conservation districts are subdivisions of state government charged the conservation of soil, water and related natural resources. The Balanced Rock Soil Conservation District is one of three conservation districts in Twin Falls County. A total of 50 conservation districts, encompassing 99 percent of the state, are working to protect Idaho's soil and water resources.

It is the goal of the Balanced Rock Soil Conservation District elected supervisors to set high standards for the conservation of natural resources. This document identifies needs within the Balanced Rock SCD and presents a resource conservation action plan for meeting these needs.

The Balanced Rock SCD operates on a philosophy that conservation begins in the minds of farmers and ranchers who see a need for conservation on their land. Conservation can succeed only as landowners and users take responsibility for maintaining a conservation program on every acre.

The Balanced Rock SCD is the primary entity that provides assistance to private landowners and users in southern Twin Falls County. District supervisors coordinate non-regulatory conservation programs, provide science-based technical assistance, implement incentive-based financial programs, and offer informational and educational programs at the local level.

Through both legislation and agreement, the USDA-Natural Resources Conservation Service provides technical assistance to landowners and land users through conservation districts. Balanced Rock SCD, like every other conservation district in the state, has a signed mutual agreement with the Agriculture Secretary and the Governor of Idaho that establishes a framework for cooperation.

This plan was developed to not only guide the Balanced Rock SCD, but also to encourage cooperation among landowners, government agencies, private organizations and elected officials. Through knowledge and cooperation, all concerned can ensure a sustainable natural resource base for present and future generations in the Balanced Rock Soil Conservation District.

# Background and Policies

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 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.

The new SCD, led by Leo Senften, Castleford; Eugene Thomas, Filer; and J.F. Nipper, Devon Ruhter and Vernon Johnson, Buhl; made public education its primary goal. Using tours, meetings, personal contacts and local media, these supervisors set out to create the public will to plan, carry out and maintain a complete conservation plan on each acre of land. In the 1960s, most farmers came to the SCD for help in designing more efficient irrigation systems and improving crop rotations.

Through public referendum, the Balanced Rock SCD expanded its boundaries four times: adding the Three Creek area in 1964, the area between Filer and Buhl in 1966, the Roseworth tract in the fall of 1981 and the Bell Rapids tract in January 1987. Today the District encompasses 921,571 acres in northwestern Twin Falls County and southeastern Owyhee County.

Inefficient water management and soil erosion are still the major resource problems in the Balanced Rock SCD. Farmers now readily recognize these problems and are using a wide range of traditional and new conservation techniques to solve them. Vegetative filter strips, sediment basins, conservation cropping systems, rangeland seeding, brush management and animal waste control systems are some of the many conservation practices now commonly used in the District.

As the number of dairies in the Balanced Rock Soil Conservation District grew in the 1990s, decisions about how to utilize the manure generated are becoming more important—not just to the dairies but to the farmers who apply dairy manure to their farms. Changes in the Twin Falls County requirements for siting new dairies and low milk prices in the early 2000s have slowed dairy growth in the District.

## Balanced Rock SCD led the way in state water quality efforts

The District's program took a giant leap forward in August 1979 when the SCD began the Cedar Draw water quality project. 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 contracts were signed and 79 were completed. Those contracts treated 6,565 acres of the 9,541 critical acres. Tours of the Cedar Draw project were held in January 1980 and May 1981.

Water quality has improved in Cedar Draw Creek from the 1982 water year until today. A study done by the Idaho Division of Environmental Quality from 1982 to 1988 showed improvement in most pollutants monitored even though decreased flows were observed during the drought years in the late 1980s. Monitoring done by the University of Idaho over the last 19 years shows that total suspended sediment levels in Cedar Draw have fallen from an average of 120 mg/L in the 1990-91 season to 80 during the 2003 irrigation season. The 2003 number is quite good, given the fact that the District was in its third year of drought

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). 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.

The District works closely with the Twin Falls Canal Company on educational efforts, especially since TFCC shareholders adopted a by-law change in January 2004 that requires shareholders to meet the 52 mg/L of sediment in return water spelled out in the Upper Snake-Rock TMDL (pollution loading plan). The District and Canal Company are also collaborating on several constructed wetland projects on troublesome drains and utilizing the EPA's federal 319 grant program to the projects economically feasible. Construction will begin on the 39/39A Wetland Complex in the fall of 2015. Other projects have included both wetlands and conversion to sprinkler irrigation systems to reduce sediment loading to impaired stream segments. The E Coulee Phase I and II and also Mud Creek/Silo Creek projects are examples of these multi-pronged approaches.

Monitoring done by the University of Idaho for the Canal Company shows those efforts seem to be paying off, although there is still work to be done.

<b>Drain</b>	<b>Ave. TSS in 2014</b>	<b>Ave. TSS in 2009</b>	<b>Ave. TSS in 1990-91</b>
39/39-A	119 mg/L	101 mg/L	411 mg/L
I-Drain	76 mg/L	120 mg/L	112 mg/L
<b>Tributaries</b>	<b>Ave. TSS in 2009</b>	<b>Ave. TSS in 1990-91</b>	
Deep Creek	<52 mg/L	63 mg/L	
Cedar Draw	80	120	

An agricultural TMDL implementation plan for the Salmon Falls Creek Subbasin was completed in February 2009. The District began implementing a state water quality for agriculture project in the Salmon Falls watershed in 2007 to help cooperators change irrigation practices to improve water quality. Through the Salmon Falls WQPA, \$54,610 of cost-share was provided to two cooperators in FY 2008 who then treated 139 acres.

## **Other Efforts**

The District has initiated or supported various other conservation efforts since its earliest years. Some of these include their annual sponsorship of junior high students and/or teachers to the Natural Resource Workshop each summer; poster contest for fifth and sixth grade students in local schools; speech contest for high school students; Envirothon team from Castleford; sponsoring Soil and Water Stewardship Week in area churches; participating in conservation awards programs; hosting legislative lunches to keep local legislators apprised of resource concerns; and publishing a quarterly newsletter for cooperators.

## **Authority**

The Legislature of Idaho has placed certain responsibilities upon the supervisors of soil conservation districts. This Declaration of Policy is found in Paragraph D of Idaho Code 22-2716. It is hereby declared to be the policy of the Legislature to:

- a) provide for the conservation of the soil and soil resources of this state;
- b) provide for the control and prevention of soil erosion;
- c) and for the prevention of floodwater and sediment damages;
- d) and for furthering the conservation, development, utilization and disposal of water, and thereby to prevent impairment of dams and preserve wildlife;
- e) to protect the tax base and public land; and
- f) promote the health, safety and general welfare of the people of this state.

The Idaho Department of Environmental Quality gives responsibility to soil conservation districts for non-point source pollution control.

## **Who We Serve and Why**

The Balanced Rock Soil Conservation District recognizes its role in land use and takes an active role in determining land use policy by working with planning officials and county commissioners. The District has established guidelines in a written memo of understanding with city and county commissioners, to be reflected in their program and annual work plan.

The Balanced Rock Soil Conservation District provides assistance to all landowners and operators by:

- ▶ Assuring cooperators of needed technical assistance in preparing their conservation plans.
- ▶ Taking an active part in sponsoring group projects.
- ▶ Promoting better understanding between contractors and others.
- ▶ Providing SCD equipment as available and necessary.

- ▶ Providing follow-up with cooperators and/or training to individuals, where necessary.
- ▶ Prioritizing technical assistance to landowners, public and private organizations, and other district cooperators.
- ▶ Obtaining needed plant materials for wind breaks, critical area seedings and other conservation practices.

All owners and operators of agricultural lands within the District are eligible to become district cooperators, without restriction. Requests for assistance are prioritized according to resource problems and needs.

Public participation in Balanced Rock SCD meetings, tours, demonstrations, conferences and all other activities are strongly encouraged. Assistance is provided to all cooperators without regard to race, color, sex, age, handicap, marital status, religion or national origin.

## **Function**

The Balanced Rock Soil Conservation District is a legal subdivision of state government organized by local people, responsible by law for the conservation of soil, water and other natural resources. Each district coordinates conservation activities within the boundaries of that district.

District supervisors manage the SCD programs with guidance from the Idaho Soil Conservation Commission.

Supervisor elections are held every two years. Five supervisors are elected, with three vacancies filled one year and two filled two years later. Elections are held on the first Tuesday after the first Monday in November of even-numbered years.

Supervisors serve four years and hold office until a qualified successor is elected or appointed. Candidates receiving the most votes are elected to office.

The Balanced Rock SCD meets the third Wednesday of each month at area restaurants or conference rooms of local businesses. Meetings are held in the evenings during the summer months, and during the day during the winter months.

Each spring the Balanced Rock SCD reviews its work plan, reviews its accomplishments from the previous year and sets out goals for the coming year. These plans are sent to local county commissioners, legislative and congressional representatives and cooperating agencies. Locally led conservation planning meetings are called as needed.

## **Financing**

The District is funded through county appropriations, with state funds provided on a two-to-one match of county funds, up to a limit of \$5,000. The state has not met its share of the match for much of the last decade.

Special grant programs — such as the former State Agricultural Water Quality Program and 319 grants from the federal Environmental Protection Agency — are applied for whenever appropriate to provide additional cost-share assistance, and information and education programs for cooperators.

The Idaho Soil Conservation Districts Accounting Policies and Procedures Manual is followed with regards to maintaining the financial records of the District.

# Natural Resources

## Land

The Balanced Rock Soil Conservation District encompasses 921,571 acres in northwestern Twin Falls County and southeastern Owyhee County. It is bounded on the north side by the Bruneau River Soil Conservation District, the Elmore Soil Conservation District and the Snake River; on the east by the Snake River Soil and Water Conservation District; on the south by the Twin Falls Soil and Water Conservation District; and on the West by the Bruneau Soil Conservation District. Agriculture is the major industry in the District.

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 produce 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 SCD. 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.

## Geology and Topography

The geology of the Balanced Rock Soil Conservation District evolved during the Mesozoic and Cenozoic periods.

The bedrock consists of basalt lava flows underlain by rhyolite at shallow depths. These lava flows intermittently blocked the Snake River drainage, creating lakes which filled with sediments, glacial debris and wind-blown soil particles.

The silty soils that were formed in the lake deposits (lacustrine deposits) are generally described as thin, dark-colored, medium-textured surface soils with very strong calcareous silty subsoils. These soils vary in total depth from 10 inches to greater than 60 inches to bedrock, were formed under arid conditions, and are low in organic matter.

After irrigation water became available in the early 1900s, the hydrology of the area changed. During the 1920s it became necessary to construct drainage systems to drain groundwater away from localized areas. In today's watershed excess irrigation water can now percolate below the crop root zone, accumulate and flow along a cemented hardpan or bedrock. Hardpans develop from leaching calcium carbonate over long periods of time. Groundwater can either drain into the Snake River Canyon or surface in the midst of productive cropland.

In Owyhee County, the Balanced Rock SCD encompasses part of the east side of the Bruneau-Jarbidge volcano. It is an enormous resurgent caldera that saw its period of most intense activity 12 to 13 million years ago. These eruptions seem to have been the start of the Snake River Plain. The Bruneau-Jarbidge volcano probably began to form as

more or less intact continental crust that moved across the mantle site of the enormous crater that formed 17 million years ago. It was at least as large as the modern Yellowstone volcano, probably considerably larger.

The layers of rhyolite ash show that the Bruneau-Jarbridge volcano rapidly blew a series of at least 15 enormous ash flows, the Cougar Point tuffs, across much of southwestern Idaho and into nearby parts of Nevada and Oregon. Although the volume of all that rhyolite has not been estimated, it certainly amounts to at least dozens, probably hundreds, of cubic miles. The ground surface must have collapsed into a broad caldera basin as those enormous eruptions emptied the magma chamber below. Later basalt lava flows erupted from at least three dozen shield volcanoes more likely associated with Basin and Range faulting than with the hotspot. They filled any part of the caldera that the rhyolite flows may have left open. No hint of a basin survives in the modern landscape.

The topography varies from level to very steep. Elevations vary from about 2800 feet in the Snake River Canyon to 8,827 feet at the summit of Red Point. The landscape appears mostly flat, with scattered buttes which mark the locations of ancient shield volcanoes and volcanic tents.

## **Climate**

Climate within the Balanced Rock Soil Conservation District is semi-arid with moderately cold winters and warm summers. Temperature extremes can range from a maximum of 107 degrees F and a minimum of -30 degrees F.

The growing season varies from an average of 140 frost-free days north of Buhl to 70 frost-free days in the Three Creek area.

The majority of the District lies in the 8- to 12-inch precipitation zone. April and May are relatively moist and summers are hot and dry. Plant growth usually begins in mid-March. Most precipitation comes during the winter months in the form of snow. A 10-year, 24-hour storm within the area can generate 1.6 inches of precipitation. A record-setting rainy period in August 2014 dumped approximately 5 inches of rain on Twin Falls County over several days. This rain fell in the midst of grain harvest damaging barley, wheat and hay crops.

Prevailing winds are west-southwest, moderately strong winds are common especially in spring and early summer. There is a pattern of downslope winds from the higher valleys east of this area occurring in the mornings, and upslope winds coming from the west in the afternoon. March and April typically record the highest wind speeds, with an average wind speed of 8.7 mph in March and 9.3 mph in April.

## **Natural Resource Priorities**

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

# Population and Employment

Twin Falls County, located in southern Idaho, is the sixth-largest population center in the state and the thirteenth largest county in terms of size. About 52 percent of the county is federal land.

Twin Falls is the retail and service hub of south-central Idaho, boasting a market of nearly 200,000 people. Twin Falls County itself is home to an estimated 79,957 residents, up from 67,722 residents in 2009. Over two-thirds of the population is considered urban.

The City of Twin Falls has seen the greatest growth increasing from about 35,000 people in 2002 to 44,125 residents according to the 2010 census. Buhl also shows growth, but Castleford is reporting a declining trend. Buhl grew from a population of 3,985 in 2000 to 4,122 in 2010; while Castleford's population shrank from 277 in 2000 to 226 in 2010.

Twin Falls County has had a strong upsurge in retail and service jobs as big box retailers and the new regional medical center converged around the entrance to the city and on its main artery. Construction slowed following the Great Recession beginning in 2008, but is beginning to recover as the economy improves.

Despite strong employment growth, Twin Falls County wages remain relatively low and have not recovered to pre-Great Recession levels. Per capita income increased from \$20,800 in 1998 to \$28,642 in 2007, but has fallen to \$20,588 in 2012. This mirrors the state and national trends. Per capita income in Idaho was \$31,804 in 2007 but was just \$22,568 in 2012; nationally income fell from an average of \$38,615 to \$28,155.

Despite the housing slump beginning in late 2008, construction continues to grow. Nearly 350 building permits were issued in the county in 2012. The median home value was \$148,900 between 2009 and 2013, up \$93,800 in 2000 and three times that of 1990.

A tremendous amount of agricultural land has already been subdivided, but not yet developed. The City of Buhl, for example, is developing into sub-marginal farm ground rather than prime farm land.

Twin Falls County had a unemployment rate of 3.2 percent in December 2014, less than both the state (3.9 percent) and nation (5.6 percent). At the peak in 2009, unemployment reached 8.9 percent in Twin Falls County.

Top employing industries are: State and local government, manufacturing, farm, business and profession services, construction, transportation/communication/public utilities, leisure and hospitality and education and health.

## Agricultural Economy

Even though an ever-increasing urban area is sprawling into valuable irrigation land, agriculture is still an important industry and that industry has been suffering from low prices and tight water supplies for much of the last decade. According to the 2012 Agricultural Census, the total number of farms in Twin Falls County remains constant at 1,294 farms compared to 1,296 in 2007; after falling from 1,439 in 1997. While farm numbers are fairly stable, farm size has increased again from 339 acres in 2007 to 458 acres in 2012.

Despite moratoriums on new groundwater wells, the number of irrigated acres in Twin Falls County increased to 256,974 acres in 2012 on 1,142 farms. In comparison, 1,294 farms were irrigating 244,520 acres in the county in 2012 and 1,243 farms were irrigating a total of 231,351 acres in 1997.

A period of sharply higher land values has pushed the value of farmland and buildings up significantly. The average value of land and buildings per farm in 2012 was \$1,155,801 with an average of \$3,090 per acre compared to \$840,386 per farm in 2002 with an average of \$2,479 per acre. In comparison, those same values were \$614,239 and an average of \$1,946 per acre in 2002. The average value of products sold per farm was \$599,581 in 2012, up from \$364,090 in 2007, and \$225,021 in 2002.

Just over half of the farmers in Twin Falls County list farming as their primary occupation.

Crop rotations within the Twin Falls SWCD generally last about eight years and include: alfalfa hay two or three years, beans one or two years, small grains one year, beans one year and peas with new alfalfa seeding one year. Field corn, silage corn or potatoes may be included in the rotation instead of beans. A few farmers include sugar beets in the rotation, and most alfalfa is planted with a cover crop like peas or grain. Enough flexibility exists within the rotations to allow for market fluctuations and climate changes.

Crop sales accounted for 36 percent of the county's ag production at \$216,047,000. The following comparison of acres and farms growing selected row crops also shows the influence the dairy industry continues to have on crop rotations. As a general rule of thumb, 2 acres of corn are needed to feed every 3 new cows added to the state's herd.

<b>Crop</b>	<b>2012 farms 2012 acres</b>		<b>2007 farms 2007 acres</b>	
Haylage, green chop	739	72,812	645	74,863
Alfalfa hay	686	64,242	596	68,924
Barley	56	30,616	251	23,235
Dry edible beans	308	27,885	243	18,699
Corn for silage	200	33,885	238	34,690
Wheat (all)	243	26,415	218	24,464
Corn for grain	225	20,828	130	13,461
Sugar beets	42	8,755	47	10,045

Market value of livestock and product sales accounted for 64 percent of the county's ag value at \$383,533,000, with dairy products accounting for \$266,937,000 of that. Beef cow numbers were 26,762 in 2012, up slightly from 25,898 in 2007, but down from 29,664 in 1997. Sheep and lamb numbers are also down to 12,261 head after reaching 14,000 head in 2007. Sheep inventory fell to a low of 9,968 head in 1997.

The unprecedented slump in milk prices combined with extremely high feed costs between 2008 and 2010 continues to impact the dairy industry. Milk cow inventory was just 63,960 in 2012 on 73 dairies, down from 78 dairies with 70,256 head in 2007 but still ahead of the 51,315 cows in 2002. Although a slump in milk prices in early 2009 has slowed the growth of the dairy industry during the early 2000s, dairying continues to

be one of the Magic Valley's fastest growing industries. A 1 million-square-foot facility, making it the largest Greek yogurt plant in the U.S. was built between Twin Falls and Kimberly Idaho in 2012. Citizens of Hollister complained about the number of trucks and smell of whey products being land-applied to fields during the summer of 2013 and Chobani designed a waste treatment facility to reduce the amount of waste generated at the plant.

Idaho is now ranked third in the nation for milk production, behind California and Wisconsin. While cow numbers are down in Twin Falls County, the state's herd has continued to expand. Idaho had 576,761 milk cows in 2012, up from 536,463 milk cows in 2007 and 390,600 cows in 2002.

Even though the number of dairy cows in the county has stabilized, efficiently storing and using the manure produced remains a challenge. According to an analysis done by the Agricultural Research Service's laboratory in Kimberly, the eight counties that make up the Magic Valley are home to 475,000 dairy cows and approximately 1 million acres of cropland. Soil scientists have calculated a nitrogen balance for the Magic Valley that includes both the nitrogen coming in as feed to a dairy and the manure produced, along with commercial fertilizer applied to cropland and nitrogen uptake of those crops. That works out to an excess of 105 million pounds of nitrogen annually or enough to apply 100 pounds of nitrogen per acre.

Organic production is becoming more prevalent in the area and the Idaho Agricultural Statistics Service began reporting census data for organic production in 2007. Seventeen farms certified farms made their home in Twin Falls County including a fairly large organic, grass-based dairy near Hollister. The county reported organic sales of \$266,937,000, up from \$2,033,000 in 2007.

Aquaculture in the form of both trout farms and trout-processing plants are the largest employers in the Buhl area. A catfish farm and processing plant, and a small tropical fish farm are also located in the Buhl area. The abundance of thermal wells and underground springs have made fish production very productive. Two plants in Buhl produce fish feed, one of which ships its products overseas.

Continued disputes over water quantity and water quality in the Hagerman Valley, along with depressed prices, is hurting the aquaculture industry. Twin Falls is home to seven aquaculture facilities, down from nine in 2002. Statewide, there are 47 farms representing \$47.1 million in 2012, down from 52 farms and \$53.8 million in 2007. Declining spring flows are reducing both the number of farms and the number of fish stocked by farms, which is impacting the industry's profitability.

# Trends Impacting Conservation

## Natural Resources

### Soil

Approximately 95 percent of the cropland in the Balanced Rock SCD is highly erodible land (HEL) for wind and water erosion.

HEL determinations are made based on the soil characteristics without regard to crop history or tillage practices. To be considered highly erodible, more than one-third of a field must be composed of highly erodible soil or the highly erodible area must be greater than 50 acres.

The predominant erosion problems within the District are irrigation-induced. As water is applied to surface irrigated fields, the furrow erodes and the soil is carried away in runoff water. Irrigation erosion rates average about 12 tons per acre in row crops and can exceed 60 tons per acre on steeper fields. Through new technology, such as polyacrylamide, the amount of soil being washed off surface irrigated fields has been sharply reduced.

Polyacrylamide use has become common across the District, although some land owners still balk at buying the long-chained polymer for their tenants to use. The practice costs about \$2.50 an acre annually.

More acres are being treated with conservation tillage as more farmers convert furrow irrigated fields to sprinkler irrigation. Adoption of these practices has helped reduce sediment loads in the middle reach of the Snake River from 136 mg/L in 1991 to 99 mg/L in 1999.

The approximately 50 percent of the Twin Falls Canal Company tract that is under sprinkler irrigation is adequately treated. More sprinkler irrigation and pumpback systems are needed in order for the tract to meet the 52 mg/L standard for sediment set out in the Upper Snake-Rock TMDL. As the Twin Falls Canal Co. works to meet that goal, the Balanced Rock SCD expects to provide more assistance to those who may not have been managing to control soil erosion in the past.

Wind erosion is also a problem on the soils. The soils within the District have a wind erodibility index of 48 to 134. Wind erosion rates on unprotected fields can reach over 20 tons per acre. Under the 2014 Farm Bill, participation in farm programs is more closely tied to conservation and protecting vulnerable soils. The Balanced Rock SCD secured a Conservation Innovation Grant in 2014 to promote increased use of multi-species cover crops and no-till practices to help armor the soil surface.

### Water

Water is a valued resource within the Balanced Rock SCD. Water usage within the District includes domestic water supply, irrigation, aquaculture, livestock, recreation and hydroelectric production.

The major water use within the District is irrigation. Most of the farmland in the District is served by the Twin Falls Canal Company. It is a constant-flow, re-use system with an abundant water supply. However, a prolonged drought from 1999 to 2004 has sapped the reservoirs and dried up the springs that provide water to the TFCC. TFCC is

one of the senior surface water users that was part of a two-year stipulated agreement between surface and ground water users in the Snake River Plain to mitigate the effects of declining aquifer levels. The District will providing assistance as needed to implement the resulting Comprehensive Aquifer Management Plan. Funding to implement proposed projects in the plan is uncertain.

The Roseworth area receives irrigation water from Cedar Creek Reservoir. This system has a variable water supply based on snowpack and runoff into the reservoir.

Several areas west of Salmon Falls Creek rely on deep wells or high-lift pumps for irrigation water. Some of these areas occasionally are short of water either because of non-productive wells or low flows in Salmon Falls Creek. Much of this land was enrolled in the Conservation Reserve Program in the 1980s, but has been gradually brought back into production. Both aquifer supply and escalating power costs may limit future production in those areas.

Over nearly a century of furrow irrigation, several seep streams and drains have developed. Much of this water and water seeping out of the canyon walls from the Snake River aquifer have been used for rainbow trout production. The Buhl area accounts for over 70 percent of the rainbow trout production in the nation and is headquarters for most of the trout processing companies. A water call made by one of the major fish production companies in the area continues to threaten to turn off 157,000 acres irrigated by junior ground water pumpers from Minidoka to Gooding counties plus 14 cities, numerous dairies and 14 dairy processors.

Geothermal water along the Snake River has also been used to raise catfish, tilapia, tropical fish and even alligators.

Stretching limited water supplies will become ever more critical, especially as the region seems to be returning to a period of multi-year drought in the late 2010s. Balanced Rock SCD would like to sponsor a 5-acre drip irrigation pilot or demonstration project to explore the possibility of utilizing this technology in the Magic Valley. Onion growers in the Treasure Valley are already using drip irrigation on a limited basis.

### **Surface water quality**

Surface water quality is improving in the District, thanks to cost-share programs that allowed farmers to install gated pipe, sediment ponds, pump back systems and sprinkler irrigation systems. Farmers are not looking for a handout as evidenced by the willingness of many farmers to pay back loans through the state's low-interest RCRDP (Resource Conservation/Rangeland Development Program). Many of the drains within the northern portion of the District have stream water intermingled with irrigation return flow and are highly influenced by irrigation practices.

According to the Idaho Department of Environmental Quality Twin Falls Regional Office, Cedar Draw and Deep Creek are recognized as conveyances for the Twin Falls Canal Company. However, that recognition does not exempt these streams from having designated beneficial uses.

Balanced Rock SCD continues to work with the Twin Falls Canal Company on large constructed wetlands. Work on the latest, 39/39A, is expected to begin in the fall of 2015. Monitoring done by the Idaho Soil Conservation Commission during 2014 indicated that another series of wetlands within the Mud Creek watershed would be help-

ful. Those drains averaged between 108 and 110 mg/L of total suspended sediment and 0.045 mg/L of phosphorus during the height of the 2014 irrigation season, well above the standard of 52 mg/L for sediment. Balanced Rock and the Twin Falls Canal Co. applied for a 319 grant to address this critical area in 2014, but it was not ranked high enough to receive funding.

Another potential project involves converting four fields of surface irrigated farmland on the rim of Salmon Falls Creek to sprinkler irrigation. Monitoring in 2014 showed that the return drains were running at nearly 1,200 mg/L of TSS in the first half of the irrigation season and 675 mg/L in the second half of the season. This project was also not ranked highly enough to receive funding during the 2014 319 grant cycle.

Monitoring also showed that previously constructed wetlands are effective. The Shriver Pond, built in 2013, was 55 percent efficient at removing TSS; the sediment concentrating entering the wetland complex averaged 120 mg/L with the outflow at 55 mg/L. The Nunnes ponds, built in 2010 and 2012, showed similar effectiveness. The F Coulee complex, built in the early 2000s, achieved a nearly 70 percent efficiency in 2014.

The District needs to identify other riparian areas or stream corridors where grazing management could be improved. Livestock owners and irrigators should be encouraged to use pastures, settling ponds and wetlands to “finish” the water before it leaves the farm.

Rotational grazing and irrigation management for irrigated pastures is also critical.

In the rangeland that makes up the Three Creek area, ranchers need assistance for developing off-site livestock watering and piping.

## **Groundwater Quality**

Twin Falls County dropped from number one on the state’s 2008 nitrate priority list to number 21 on the 2014 list by the Idaho Department of Environmental Quality in the fall of 2008. The downgrade was largely due to a slight declining trend in nitrate levels among the 618 wells tested by the State of Idaho.

Well sampling shows nitrate is coming from commercial fertilizers as well as decaying organic material from green manure crops and livestock waste. Legumes that fix nitrogen can also lead to increased nitrate levels. Septic systems are another potential source.

According to the IDEQ data, the average nitrate level in Twin Falls County was 5.18 mg/L in 2014, down from an average of 5.2 mg/L in 2008 (when Twin Falls County was the number one nitrate high priority area) and 5.3 mg/L in 2002 (#2 on the list). The maximum nitrate reading in 2014 and 2008 was 41 mg/L compared to 30.5 mg/L in 2002. This indicates that while the overall trend is heading in the right direction, some wells are well over drinking water standards indicating that more work is needed. Just over 300 wells were tested in 2002, twice that many were tested in both 2008 and 2014.

In addition to nitrate, sampling has also detected low levels of pesticides, pharmaceuticals and even caffeine. That indicates all human activities — from farming to flushing toilets — can impact drinking water quality.

While nitrates can come from many sources, better irrigation and nutrient management can help stem the increase. Overall nitrogen efficiency in the U.S. is 40 percent

meaning that 60 percent of the nitrogen applied as commercial fertilizer or manure is not necessarily utilized for its intended purpose. Utilizing conservation practices such as applying only the amount of fertilizer needed to reach a yield goal and managing irrigation water to keep those nutrients within the crop root zone have been proven to be beneficial. Well sampling shows nitrate is coming from commercial fertilizers as well as decaying organic material from green manure crops and livestock waste. Legumes that fix nitrogen can also lead to increased nitrate levels. Septic systems are another potential source.

Balanced Rock SCD has participated, intermittently, with the Twin Falls Groundwater Committee and its public outreach efforts. The District has also jointly administered the Twin Falls Nitrate Priority Area CCPI (Cooperative Conservation Priority Initiative) beginning in 2011. Through this project, seven cooperators across the county have enrolled nearly 1,800 acres in three-year contracts. Cooperators receive cost-share to use enhanced nutrient management and irrigation water managed practices on these acres. One cooperator says the soil mapping and testing components have saved him \$20 to \$25 per acre in fertilizer costs. Using the system of soil meters and irrigation scheduling has allowed him to reduce water application while maintaining — and even improving — crop yields. While he has seen benefits from the project, he is concerned about the cost of maintaining the system once the cost-share has been exhausted.

Domestic wells in the District range from 15 feet at Lucerne to 100 feet near Clover and 750 feet at Roseworth. With more dairies in the District, some old wells that were historically used for supplemental irrigation are now being pumped year-round.

Regular, systematic monitoring is needed to identify and track trends in both groundwater quantity and quality. Evidence appears to be supporting an old concern that changes in irrigation systems will adversely affect the artificial water table created after nearly a hundred years of furrow irrigating. Recharge efforts in wellhead protection areas may be needed in the future.

### **Critical Geographic Areas**

- ▶ Nitrate priority area
- ▶ Salmon Falls Creek irrigated cropland areas
- ▶ City of Buhl wellhead protection area
- ▶ Cooperative Weed Management Area

## Strategies to Address Trends

- ▶ Develop an education program to help landowners and operators adopt conservation practices that reduce the trend of increasing nitrate levels in ground water.
- ▶ Develop an education program to help landowners and operators use more reduced tillage practices and also plant more multi-species cover crops to improve soil health and reduce wind erosion potential.
- ▶ Sponsor a 5-acre drip irrigation demonstration/pilot project.
- ▶ Secure funding to convert four fields on the rim of Salmon Falls Creek from surface irrigation to sprinkler.
- ▶ Continue efforts to reach out to urban/small acreage landowners and involve them in conservation efforts.
- ▶ Become more involved with county planning and zoning issues impacting natural resources
- ▶ Continue to sponsor project proposals with other with other districts.
- ▶ Be aware of trends in shallow, declining aquifers and the effect on nitrate concentrations.
- ▶ Promote conservation practices within the 1-mile corridor along major drains and tributaries. In particular, target enhanced nutrient and irrigation management practices in those priority areas.
- ▶ Encourage more vegetative diversity on rangeland to help reduce the threat of major wildfires.

## Staffing Needs

- ▶ Full-time (with benefits) tri-district program manager — \$75,000
- ▶ Full-time (with benefits) tri-district soil health specialist — \$50,000

## Projected Budget Needs

- ▶ N Coulee Sprinkler Conversion Project — \$450,000
- ▶ Cover Crop/No Till Demonstration — \$250,000
- ▶ Drip Irrigation Demonstration Project — \$5,000 to \$15,000

# Cooperating Agencies and Organizations

District supervisors believe that effective natural resource conservation is a job they cannot do alone, but one that requires the joint efforts of many. Memorandums of understanding are maintained between the District and the Farm Services Agency, Farm Credit Association, Agricultural Resources Service, Cooperative Extension Service and the Natural Resources Conservation Service. The NRCS is the principal source of federal assistance to the District. The District may have working arrangements with other federal agencies outside USDA, with state agencies, with municipal or county governments or with private organizations and groups.

The Balanced Rock Soil Conservation District will cooperate with the following agencies and private groups to accomplish this five-year plan:

**City of Buhl** — wellhead protection and recharge programs

**City of Castleford** — wellhead protection and recharge programs

**City of Filer** — projects within the urban/rural interface

**College of Southern Idaho** — meeting room facilities, cooperation in agricultural seminars and tours

**Idaho Association of Soil Conservation Districts** — provide District with administrative assistance and meeting planning

**Idaho Cattle Association** — help sponsor grazing field days and tours, work on special water quality projects

**Idaho Soil Conservation Commission** — provide assistance to state water quality projects, writing contracts for projects, evaluating effectiveness of projects; provide assistance for state cost-share programs

**Idaho Department of Agriculture** — monitoring for dairies, providing technical assistance for implementing nutrient management plans and siting lagoons, and pesticide recertification

**Idaho Department of Environmental Quality** — monitor mouth of Cedar Draw and Deep Creek (tributaries to the Snake River), oversee implementation of TMDLs

**Idaho Department of Fish and Game** — aquatic life and fish population surveys, habitat improvement programs, and participation in coordinated resource management plans.

**Idaho Department of Lands** — developing grazing plans for state grazing land, potential cooperation and participation in coordinated resource management plans

**Idaho Department of Water Resources** — assistance with permitted water use and aquifer monitoring

**Jarbridge Sage Grouse Local Working Group** — assistance for sage brush habitat improvement projects

**Mid-Snake Resource Conservation Development** — potential cooperation and participation in coordinated resource management plans

**News Media** — publicizing tours, demonstrations, public service announcements, supporting District outreach programs

**Owyhee County Commission** — funding approval, support and approval of conservation programs

**Public Schools** — poster and speech contests, conservation teachers, Envirothon

**71 Livestock Association** — develop resource-based grazing plans that benefit both livestock and sage grouse habitat, implement TMDL for the Bruneau River

**Twin Falls Canal Company** — partner in constructed wetland projects, provide support for water quality tours and field days, Water Quality award program

**Twin Falls County Commission** — funding approval, support and approval of conservation programs

**Twin Falls County Parks and Recreation Department** — maintaining Balanced Rock and Salmon Falls parks

**Twin Falls Planning and Zoning Commission** — dairy and feedlot siting ordinances, zoning to promote proper use of soil resources

**Twin Falls County Weed Bureau** — identifying problem weed areas, assisting with Conservation Reserve Program recommendations, developing coordinated weed management areas

**University of Idaho Cooperative Extension Service** — provide leadership and support for conservation tours and field days, help develop irrigation management and scheduling plans, help develop grazing plans, help develop site plans for dairies

**USDA-Agricultural Research Service** — research to reduce irrigation-induced soil erosion, research for more efficient irrigation scheduling, provide technical assistance for water quality field days and tours

**USDA-Farm Services Agency** — funds administration, cropping and acreage data, cooperation on all agricultural conservation programs

2014 NPA Delineation and Ranking Process

NITRATE PRIORITY AREA	DEQ_REG	ACRES	ISQ	MILES	POPULATION	SITES	MAX_N03	AVG_N03	MEDIAN	PWS_SWA	# >= 2 mg/L	% >= 2 mg/L	# >= 5 mg/L	% >= 5 mg/L	# >= 10 mg/L	% >= 10 mg/L	TREND	SCORE	RANK
MARSH CREEK	TFRO	98788	154	17977	396	40.00	13.21	12.00	6.43	48	354	89	256	64	91	23	Incr. Trend	27.28	1
WESER	BRO	25370	40	7501	131	43.50	11.16	8.9	116	23	116	89	107	82	77	59	No Trend	24.78	2
LINDSAY CREEK	LRO	28160	44	2769	67	21.00	5.64	4.12	63	17	42	63	29	43	17	25	Incr. Trend	26.91	3
ADA CANYON	BRO	257038	402	198458	1092	49.80	5.29	4.07	813	303	813	74	445	41	138	13	No Trend	19.83	4
FORT HALL	PRO	23981	37	1780	8	23.60	12.76	12.35	8	5	8	100	6	75	4	50	No Trend	19.75	5
BLAUFROOT	PRO	41540	65	3218	30	16.00	4.68	4.03	29	25	25	83	13	43	2	7	Incr. Trend	19.51	6
GRAND VIEW	BRO	5994	9	549	35	100.00	12.19	9.00	2	2	35	100	30	86	13	37	No Trend	19.00	7
BRUNEAU	BRO	13818	22	39	5	110.00	33.12	21.80	0	0	4	80	4	80	3	60	No Trend	18.60	8
NESTAR	BRO	3250	5	297	88	54.00	11.35	7.49	6	6	61	69	51	58	38	43	No Trend	18.58	9
BLACK CLIFFS	PRO	1030	2	493	26	28.68	10.61	9.75	18	18	62	69	16	62	13	50	No Trend	18.48	10
MOUNTAIN HOME	BRO	1663	3	406	45	40.00	11.17	8.07	5	5	38	84	26	58	16	36	No Trend	17.18	11
MOUNTAIN HOME AFB	BRO	9242	14	3250	37	29.20	7.20	5.60	9	9	33	89	22	59	8	22	No Trend	16.93	12
PRESTON	PRO	124409	194	11120	72	23.80	4.74	4.01	24	24	47	65	29	40	9	13	No Trend	16.60	13
CLEARWATER PLATEAU	LRO	359306	561	4347	216	77.10	7.24	4.30	27	27	155	72	93	43	50	23	Decr. Trend	16.39	14
MILD LAKE	IFRO	129404	202	1916	80	15.20	3.92	3.87	13	13	57	71	21	26	6	7	Incr. Trend	16.02	15
N. POCATELLO	PRO	7239	11	24542	32	12.30	4.19	4.08	44	44	25	78	10	31	2	6	No Trend	15.71	16
ASHTON/DRUMMOND	IFRO	162473	254	2564	191	47.00	7.25	6.62	20	20	168	88	135	71	168	17	Decr. Trend	15.51	17
WARFING	BRO	6692	10	600	47	60.00	9.74	2.43	12	12	26	55	20	43	15	32	No Trend	15.45	18
GLENNS FERRY	BRO	16781	26	1496	17	73.30	11.62	5.13	3	3	10	59	9	53	4	24	No Trend	15.23	19
MINK CREEK	PRO	1976	3	715	40	21.00	4.84	3.00	32	32	26	65	14	35	8	20	No Trend	15.05	20
TWIN FALLS	TFRO	359150	551	76284	618	41.00	5.18	4.80	88	88	540	87	288	47	35	6	Decr. Trend	14.69	21
PARMA	BRO	7057	11	1093	19	14.50	4.58	2.10	4	4	10	53	8	42	4	21	No Trend	14.76	22
NOTUS	BRO	2674	4	168	7	16.00	5.79	6.70	1	1	5	71	4	57	1	14	No Trend	13.67	23
MAIAD	PRO	22379	35	2803	13	17.00	4.86	3.77	3	3	8	62	5	38	2	15	No Trend	13.64	24
MINIDOKA	TFRO	147501	230	18612	337	83.00	5.45	4.76	69	69	230	68	140	42	30	9	Decr. Trend	13.36	25
SOUTH FREMONT CO.	IFRO	7693	12	979	15	35.00	8.47	3.50	6	6	8	53	5	33	3	20	No Trend	12.71	26
LAPWAI CREEK	LRO	34214	53	982	15	10.30	4.74	4.80	10	10	12	80	7	47	1	7	No Trend	12.65	27
HOMEDALE	BRO	5585	9	478	24	16.00	4.16	2.05	1	1	13	54	10	42	3	12	No Trend	12.48	28
GEORGETOWN/BENNINGTON	PRO	17764	28	795	22	13.30	4.72	4.89	4	4	15	68	11	50	2	9	No Trend	12.46	29
GRACE	PRO	152954	239	2977	69	37.20	4.54	3.20	16	16	46	67	18	26	5	7	No Trend	12.34	30
LOWER PAYETTE	BRO	28587	45	8755	246	61.00	5.91	4.11	39	39	169	68	103	42	38	15	Decr. Trend	11.96	31
BLISS	TFRO	6791	11	67	29	45.00	5.25	3.17	0	0	19	66	10	34	5	17	No Trend	11.72	32
EMMETT NORTH BENCH	BRO	11928	19	865	53	22.80	3.87	2.80	3	3	33	62	13	25	5	9	No Trend	11.39	33
PURPLE SAGE	BRO	16399	26	4032	120	27.00	5.28	4.55	24	24	92	77	55	46	11	9	Decr. Trend	10.74	34
<b>TOTAL</b>		<b>2138930</b>	<b>3342</b>	<b>402397</b>	<b>4244</b>				<b>903</b>	<b>3261</b>	<b>2013</b>	<b>691</b>							
Increasing Trend																			
Increasing Trend																			
No Trend																			
Decreasing Trend																			
Decreasing Trend																			

Table 1. 2014 ranked nitrate priority areas with score components.

2014 NPA Delineation and Ranking Process

Rank Year	AREA NAME	DEQ Region	Acres	Square Miles	Population	Total Sites	MAX. NO3	Ave. NO3	MEDIAN	#=-2.00	%>=2.00	#=-5.00	%>=5.00	#=-10.00	%>=10.00	#PWS/BWA	TREND	SCORE	RANK
2002	Burley/Marsh Crk	TFRO	169563	265	11,787	234	20.00	6.36	5.8	205	88	140	60	40	17	33	Increase	26.50	3
2008	Cassia	TFRO	193280	302	17,525	384	40.00	6.34	5.74	331	86	224	58	65	17	48	No Trend	20.32	9
2014	Marsh Creek	TFRO	98788	154	17,977	402	40.00	7.16	6.43	358	89	258	64	91	23	43	Incr. Trend	27.28	1
2002 Lindsay Creek																			
2008	Lindsay Creek	LRO	28160	44	1,273	45	18.6	4.74	3.8	25	56	18	40	9	20	16	No Trend	14.12	22
2014	Lindsay Creek	LRO	28360	44	2,269	67	21	5.64	4.12	42	63	29	43	17	25	17	Incr. Trend	20.91	3
2002 Blackfoot																			
2008	Blackfoot	PRO	15360	24	1100	15	16	6.98	5.64	15	100	9	60	3	20	13	No Trend	15.00	20
2014	Blackfoot	PRO	41540	65	3218	30	16	4.68	4.03	25	83	13	43	2	7	29	Incr. Trend	19.51	6
2002	Rupert	TFRO	116780	182	25,132	236	100.00	5.60	4.4	183	78	104	44	18	8	29	No Trend	19.60	9
2008	Minidoka	TFRO	147200	230	18,395	319	83.00	5.35	4.32	224	70	131	41	27	8	56	No Trend	17.25	12
2014	Minidoka	TFRO	147501	230	18,612	337	83.00	5.45	4.26	230	68	140	41	30	9	69	Decr. Trend	13.36	25
2002	Payette	BRO	30509	48	2725	74	23.4	6.5	5.6	52	70	39	53	15	20	15	No Trend	18.10	10
2008	Lower Payette	BRO	26880	42	6718	119	28	6.05	4.74	83	70	57	48	22	19	25	No Trend	17.70	11
2014	Lower Payette	BRO	28587	45	8755	246	61	5.91	4.11	169	68	103	42	38	15	39	Decr. Trend	11.96	31
2002 Purple Sage																			
2008	Purple Sage	BRO	14080	22	2835	87	22.7	5.26	4.61	66	76	38	44	9	10	25	No Trend	15.00	20
2014	Purple Sage	BRO	16399	26	4032	120	27	5.28	4.55	92	77	55	46	11	9	24	Decr. Trend	10.74	34
2002	Twin Falls	TFRO	244229	382	47,687	303	30.50	5.30	4.90	281	93	132	44	17	6	59	Incr. Trend	26.70	2
2008	Twin Falls	TFRO	378520	593	63354	605	41.00	6.20	4.90	536	89	288	48	34	6	88	Incr. Trend	24.78	1
2014	Twin Falls	TFRO	359150	561	76284	618	41.00	5.18	4.80	540	87	288	47	35	6	88	Decr. Trend	14.69	21

Table 2. Selected comparisons between ranking periods.

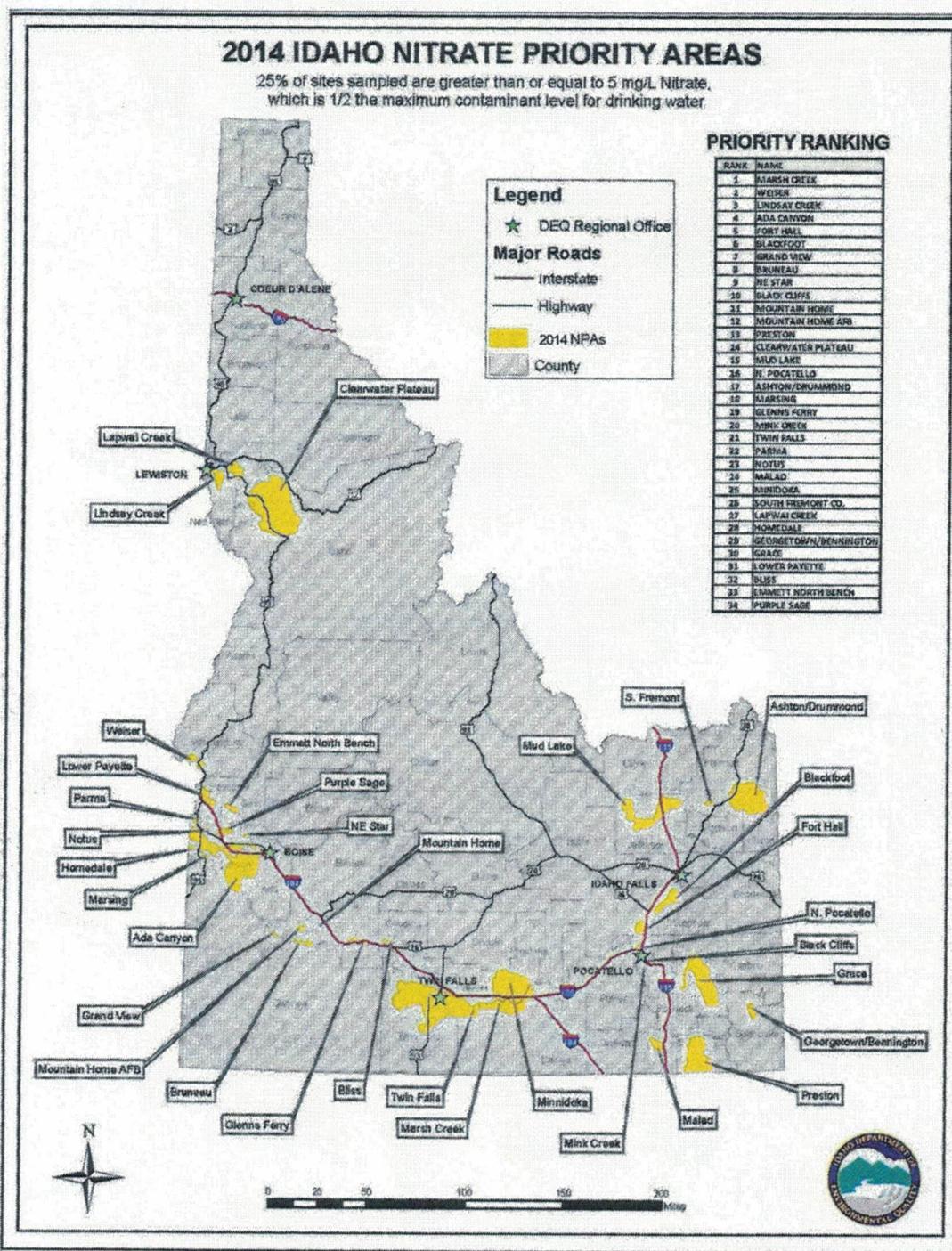
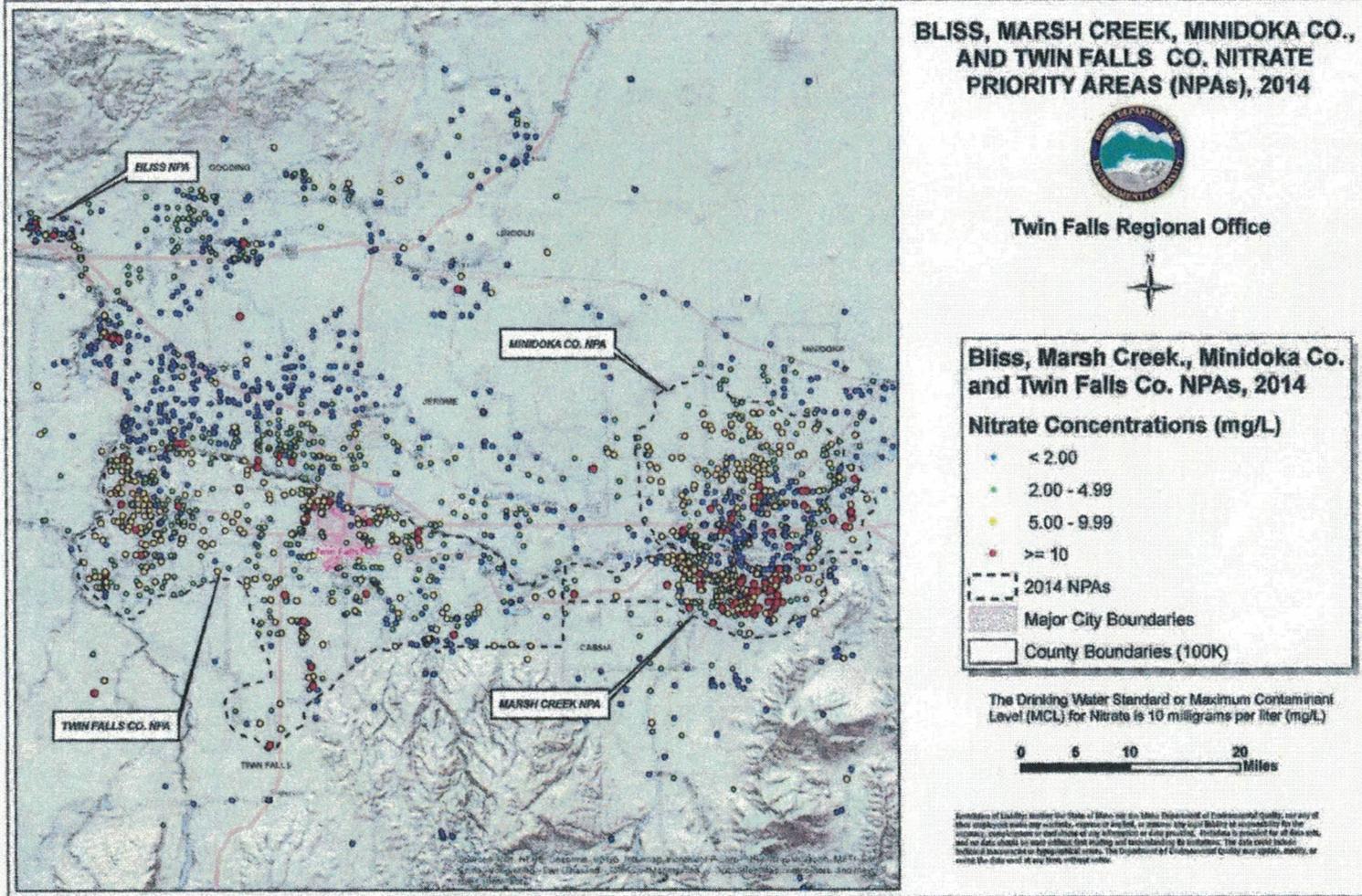
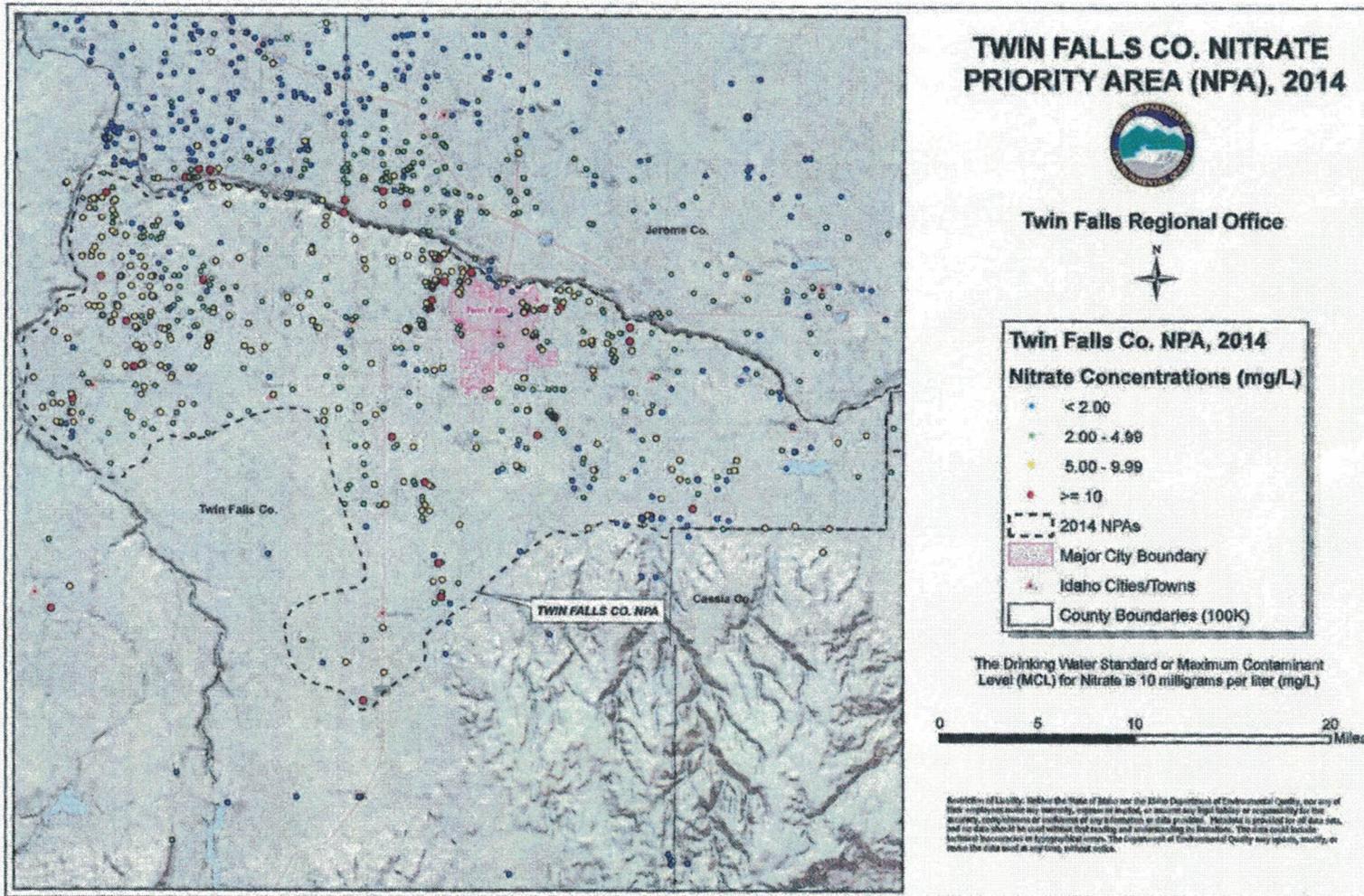


Figure 3. 2014 ranked nitrate priority areas.

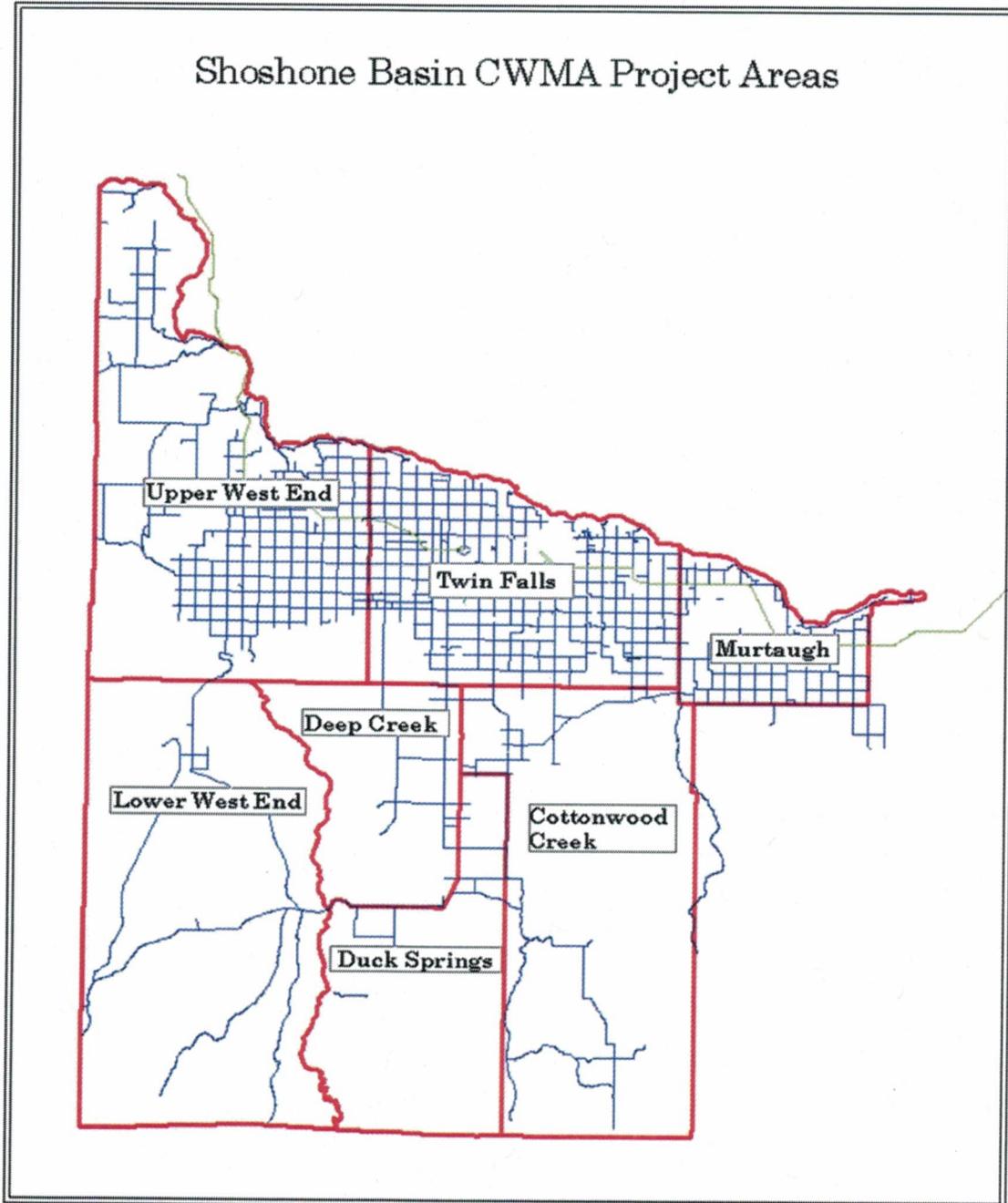




<b>2014 Twin Falls NPA Summary</b>		<b>Dairies*</b>	<b>SWA + PWS**</b>
Number of Sampled Sites	618		
Minimum Nitrate Value (mg/L)	0.01		
Maximum Nitrate Value (mg/L)	41.00		
Middle Nitrate Value (mg/L)	4.80		
Average Nitrate Value (mg/L)	5.18		
Number of Sites less than 2 mg/L	78		
Percent of Sites less than 2 mg/L	12.62		
Number of Sites greater than or equal to 2 mg/L	540		
Percent of Sites greater than or equal to 2 mg/L	87.38		
Number of Sites greater than equal to 2 mg/L but less than 5 mg/L	252		
Percent of Sites greater than equal to 2 mg/L but less than 5 mg/L	40.78		
Number of Sites greater than or equal to 5 mg/L	288		
Percent of Sites greater than or equal to 5 mg/L	46.60		
Number of Sites greater than equal to 5 mg/L but less than 10 mg/L	253		
Percent of Sites greater than equal to 5 mg/L but less than 10 mg/L	40.94		
Number of Sites greater than or equal to 10 mg/L	35		
Percent of Sites greater than or equal to 10 mg/L	5.66		
Number of Public Water Systems	48		
Number of Source Water Delineated Areas Intersecting NPA	40		88
Sites sampled by DEQ	152		
Sites sampled by IDWR	100		
Sites sampled by the U.S.G.S.	45		
Sites sampled by ISDA	273	99	
Population within NPA, based on 2010 Census	76,284		
*Included with ISDA sampled sites			
**Sum of Source Water Delineations intersecting a NPA and the number of Public Water System Sources within a NPA			

Priority Area Number: 21		Priority Area Name: Twin Falls		
Ranking Criteria			Score	Comments
<b>1) POPULATION</b>				
	Points	Select One		
<b>a) Within Degraded Area</b>				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	76,284
Subtotal			3	
<b>b) Source Water Protection Areas or Public Water System wells in Priority Area</b>				
0	0			
1 to 20	1			
21 to 40	2			
>40	3	x	3	88
Subtotal			3	
<b>c) Number of Wells with NO<sub>3</sub> ≥ 10 mg/L</b>				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	35
>40	4			
Subtotal			3	
Population Score Total			9	
Max Possible Score = 10				
<b>2) WATER QUALITY</b>				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO <sub>3</sub> ≥ 2 mg/L	0.87	2	1.74	
Percent of wells with NO <sub>3</sub> ≥ 5 mg/L	0.47	5	2.35	
Percent of wells with NO <sub>3</sub> ≥ 10 mg/L	0.06	10	0.60	
Water Quality Total			4.69	
<b>3) WATER QUALITY TRENDS</b>				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0	x	0	
Trend Score			0	
<b>4) OTHER BENEFICIAL USES</b>				
Other beneficial uses are impaired	1	Yes=1 No = 0	0	
Beneficial use score			1	Aquaculture
Max Possible Score = 1				
Total Score			14.69	

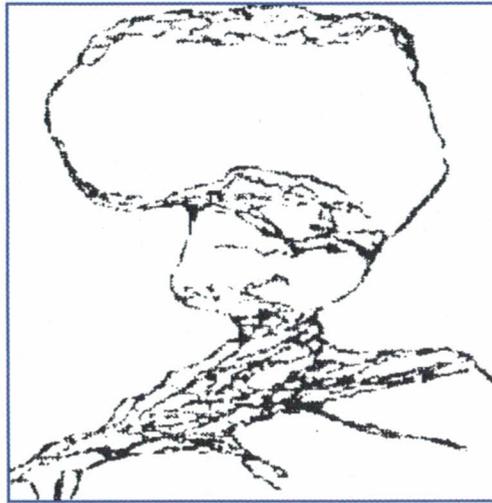
## Shoshone Basin CWMA Project Areas



The boundaries of the Shoshone Basin CWMA includes the entire County. The County is then divided up into project areas that are within watersheds or geological land divisions.

**Twin Falls** – West boundary is 1800 East road, North boundary is the Snake River Canyon, East boundary 3800 East road, and the South boundary line is 3000 North road.

**Murtaugh** – The boundaries are the Snake River Canyon on the North to the Cassia County line on the East to 2900 North on the South and 3800 East on the West.



**Balanced Rock Soil Conservation District  
Annual Resource Work Plan  
March 18, 2015**

# Balanced Rock Soil Conservation District

The Balanced Rock Soil Conservation District includes western Twin Falls County and part of Owyhee county. Although cropland provides the majority of income for the District's cooperators, the bulk of the District's resource base is considered rangeland or grazing land. As more dairies have moved into the District, nutrient management plans have been added to inefficient water management and soil erosion as the District's primary priorities. Education remains a top priority for the District and several on-going efforts continue including sponsoring an Envirothon and holding District poster and speech contests.

## Our top accomplishments in FY 2015

1. Received funding for the 39/39A constructed wetland project. Construction will begin in fall 2015.
2. Received a Conservation Innovation Grant to provide cost-share for cooperators to use a no-till drill and/or plant cover crops.
3. Applied for two new water quality projects: Mud Creek Phase II and N Coulee.
4. Administered the Twin Falls Nitrate Cooperative Conservation Partnership Initiative.
5. Participated in the Twin Falls County Fair through the Ag Pavillion (September 2012) in an effort to reach urban and rural small acreage owners.

## Our top priorities for FY 2016

1. Administer the 39/39A Constructed Wetland Project.
2. Administer the No-Till/Cover Crop Conservation Innovation Grant.
3. Administer the Twin Falls Nitrate Cooperative Conservation Partnership Initiative.
4. Identify potential water quality improvement project locations in western Twin Falls County.
5. Focus on specific water quality problems in one-mile corridors along water quality limited streams such as livestock fencing or waste water management.
6. Continue urban initiative efforts by approaching cities within the district about joining the district. Also recruit small acreage or urban landowners to serve on the Balanced Rock SCD.

## If additional funding were available, Balanced Rock SCD would:

1. Promote water conservation through water measuring and conservation education.
2. Expand our urban outreach efforts.
3. Develop incentive program to help cooperators implement best management practices in sensitive areas.

**Balanced Rock Soil Conservation District**  
**Serving Twin Falls and Owyhee counties and Legislative Districts 23 and 24**  
**For more information contact Rick Rodgers, chairman, at 733-5380 ext. 3**

**Mission**

Helping people help the land.

**Trends Impacting Conservation**

Twin Falls County has fallen to number 21 on the state's 2014 nitrate high priority list (after being ranked number one on the 2008 list) thanks largely to a slight declining trend in nitrate levels. According to the state's ranking criteria, nitrate averaged 5.18 mg/L in 618 wells that were tested, down from an average of 5.20 mg/L nitrate in 605 wells included in the 2008 ranking. Handling both dairy manure and commercial fertilizer correctly to avoid potential problems is the best way to limit further degradation of groundwater sources.

Balanced Rock SCD is experiencing the same loss of smaller farms and dairies that other conservation districts across Idaho are seeing. In many cases, the landlords of agricultural ground no longer live in the county let alone the state. The district is also experiencing some population growth around Buhl and Filer. Population growth throughout Twin Falls County and the corresponding resource concerns in the urban/rural interface led Balanced Rock SCD along with the Snake River and Twin Falls districts to form an urban initiative in the winter of 2007 and will impact how Balanced Rock SCD conducts its business in the future.

**Projects Planned, Coordinated or Managed**

- 39/39A Constructed Wetland Project — \$150,000 from federal 319 grant program
- Urban Initiative

**Funding Sources for District Operations and Projects Planned**

- Anticipated funds — \$8,000 from Twin Falls County, \$600 from Owyhee County and \$18,000 from the State of Idaho.
- Anticipated funds — \$800 Capacity Building Grant from ISWC



**Balanced Rock Soil Conservation District  
Annual Work Plan  
July 1, 2015 to June 30, 2016**

**Priority #2— Groundwater Quality**

**Objective:** Preserve quality drinking/potable water within District.

**Goal:**

Maintain groundwater quantity.

**Actions:**

- Encourage the use of BMPs that increase percolation to maintain aquifer recharge.
- Work with existing wellhead protection groups to set up projects, for example wetlands, that encourage percolation.
- Work with existing wellhead protecting groups on educational efforts within defined areas.

**Target Date:**

Annually  
Annually  
Annually

**Leader:**

R. Rodgers  
R. Rodgers  
C. Snyder

**Objective:**

Minimize nutrient and pesticide levels in groundwater.

**Action:**

- Promote intensive nutrient management practices through the Twin Falls Nitrate Priority Area CCPI.
- Inform landowners about implement strategies to protect ground water quality in sensitive areas.
- Alert cooperators to rising nitrate and phosphate levels in the area through articles in local papers and newsletters.
- Encourage producers to adopt BMPs that improve groundwater quality.
- Continue work to delineate sensitive areas for enhance management practices.
- Participate in Twin Falls Groundwater Committee
- Explore options for developing a drip irrigation demonstration project.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually  
Annually  
Fall 2015

**Leader:**

S. Haye  
C. Snyder  
C. Snyder  
T. Kramer  
R. Rodgers  
T. Kramer/C. Snyder  
T. Cornie

**Balanced Rock Soil Conservation District  
Annual Work Plan  
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**Priority #3 – Cropland**

**Objective:** Reduce both irrigation-induced and wind-induced soil erosion to meet HEL standards.

**Goal:**

Reduce irrigation-induced soil erosion to help farmers meet sediment load of 52 mg/L.

**Actions:**

- Provide education on sprinkler and polyacrylamide use through District newsletter & website.
- Make use of applicable grant and loan programs.
- Work with 3rd party recipients about BMPs for animal waste application.
- Inform cooperators of the opportunity to participate in the Conservation Stewardship Program.
- Promote high intensity irrigation management practices through the Twin Falls Nitrate Priority Area CCPI.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually

**Leader:**

C. Snyder  
J. Hurley  
T. Kramer  
S. Schuyler  
M. Cothorn

**Goal:**

Encourage conservation practices to improve soil health and reduce wind erosion.

**Action:**

- Promote residue management through newsletter and articles.
- Promote conservation tillage, particularly strip till for sugar beets and corn.
- Encourage planting more windbreaks through programs such as HIP and CCRP.
- Share results of Multi-Species Cover Crop Demonstration Project to encourage more plantings of multi-species cover crops.
- Administer no-till drill/cover crop Conservation Innovation Grant.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually

**Leader:**

C. Snyder  
J. Hurley  
M. Cothorn  
C. Snyder  
C. Snyder/R. Pearson

**Goal:**

Use enhanced nutrient and irrigation water management practices to preserve nitrate in soil.

**Actions:**

- Explore options for developing a drip irrigation demonstration project.
- Encourage cooperators to do more pre-plant soil sampling.

**Target Date:**

Annually  
Annually  
Annually

**Leader:**

C. Snyder  
M. Cothorn  
M. Cothorn

**Balanced Rock Soil Conservation District  
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July 1, 2015 to June 30, 2016**

**Priority #4 – Animal Waste Management**

**Objective:** Promote nutrient management plans, and proper siting and diking of lagoons.

**Goal:**

Provide education on nutrient management plans.

**Actions:**

- Administer the Twin Falls Nitrate Priority Area CCPI.
- Provide information on proper waste application through District newsletter.
- Provide information on crop rotation and utilization through District newsletter.
- Promote Idaho OnePlan.
- Work with 3rd party recipients about BMPs for animal waste.
- Promote expanded uses of compost.
- Encourage ISDA to look more closely at soil sample results.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually  
Annually  
Annually

**Leader:**

S. Haye  
C. Snyder  
C. Snyder  
R. Pearson  
R. Pearson  
J. Hurley  
J. Hurley

**Goal:**

Improved third party management of animal waste to preserve nitrate in soil.

**Actions:**

- Educate cooperators about strategies for maximizing the use of manure.

**Target Date:**

Annually

**Leader:**

R. Pearson

**Goal:**

Protect groundwater quality.

**Actions:**

- Provide information to landowners about ground water protection.
- Provide input to county planning and zoning commission to ensure dairies and CAFOs are properly sited.
- Become involved with the local siting committee for the West End of Twin Falls County.
- Provide input to local groundwater protection work groups.
- Provide assistance to producers considering using off-site manure storage.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually

**Leader:**

C. Snyder  
T. Kramer  
T. Kramer  
T. Kramer  
R. Pearson

**Balanced Rock Soil Conservation District  
Annual Work Plan  
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**Priority #5 – Rangeland**

**Objective:** Maintain and improve soil and plant communities on rangeland.

**Goal:**

Improve riparian areas on rangeland.

**Action:**

- Educate grazers about rotational grazing through newsletter and articles.
- Provide technical assistance for installing livestock watering systems.
- Identify applicable assistance programs.
- Update grazing plans.
- Promote Conservation Stewardship Program.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
Annually

**Leader:**

C. Snyder  
S. Schuyler  
R. Rodgers  
S. Schuyler  
S. Schuyler

**Goal**

Improve vegetative management.

**Action:**

- Help facilitate a multi-jurisdictional approach to the control of noxious weeds.
- Inform cooperators about fire rehabilitation opportunities.
- Inform landowners about use of integrated firebreaks to reduce threat of wildfire.
- Work with state and federal agencies to promote vegetative diversity to reduce the threat of wild-fire.
- Work with Owyhee County and Mid-Snake RCD to develop a CWMA.
- Support landowners who are working to improve sage grouse habitat.

**Target Date:**

Annually  
Annually  
Annually  
Annually  
  
Annually  
Annually

**Leader:**

T. Kramer  
R. Rodgers  
T. Kramer  
T. Kramer  
  
T. Kramer  
M. Cothorn

**Balanced Rock Soil Conservation District  
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**Priority #6 — Fish and Wildlife**

**Objective:** Improve and increase wildlife land in the District.

**Goal:**

Improve wildlife habitat.

**Actions:**

- Evaluate how Conservation Reserve Program land can be retained for wildlife benefits.
- Work with ranchers to improve sage grouse habitat.
- Encourage food plots in irrigated cropland.

**Target Date:**

Annually  
Annually  
Annually

**Leader:**

M. Cothern  
S. Schuyler  
M. Cothern

**Goal:**

Target sage grouse habitat efforts to areas involved in the 2007 Murphy Complex fire in which 73 leks were burned.

**Actions:**

- Inform landowners of applicable cost-share programs including the Sage Grouse Initiative.
- Work with Local Sage Grouse Working Committee to address rehabilitation efforts.
- Work with grazing associations to improve sage grouse habitat.

**Target Date:**

Annually  
Annually  
Annually

**Leader:**

M. Cothern  
M. Cothern  
M. Cothern

**Goal:**

Improve fish habitat in Bruneau River system and Salmon Falls Creek.

**Actions:**

- Inform landowners of applicable programs.
- Help land operators reduce sediment loading to fishable streams.

**Target Date:**

Annually  
Annually

**Leader:**

M. Cothern  
M. Cothern



**IDAHO SOIL & WATER  
CONSERVATION COMMISSION**

**FIVE-YEAR (5) PLAN and  
ANNUAL WORK PLAN  
CERTIFICATION**

DISTRICT: Balanced Rock SCD

FOR FISCAL YEAR:

2015

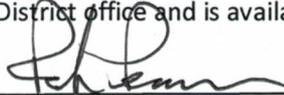
DUE :

March 31, 2015

**CERTIFICATION**

On behalf of my local Board of Supervisors, I hereby certify that the attached Five-Year (5) Plan and Annual Work Plan is true and accurate, and further submit said Plan for the above named District and fiscal year.

A copy of this Five-Year (5) Plan and Annual Work Plan shall be kept at the District office and is available for public inspection.



Board Supervisor Signature

Rick Pearson

Printed Name

2/19/15

Date

208-733-5380 ext 101

Telephone

chsimons@cableone.net

District Email Address

**FOR SWC USE ONLY:**

**DATE OF CONFIRMATION:**