Balanced Rock Soil Conservation District
Resource Conservation Business Plan
2025-2030

March 19, 2025

Balanced Rock SCD

Rick Rodgers	Chair
Rick Pearson	Vice-chair
John Hurley	Sec/Treas.
Kirk Loomis	Member
Rylee Reynolds	Member
Tim Cornie	Associate
Barry Duelke	Associate
Terry Kramer	Associate
April Loomis	Associate

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 51 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.

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 contacts 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 irrigtion 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 first by the University of Idaho and now by the USDA Ag Research Service for TFCC shows those efforts seem to be paying off, although there is still work to be done. Fluctuations are observed annually depending on crop rotation and weather. The 39/39A drain, for example, had an average TSS of 101mg/L in 2021 but averaged 119 mg/L in 2022.

Drain	Ave. TSS in 2023	Ave. TSS in 2009	Ave. TSS in 1990-91
39/39-A	119 mg/L	110 mg/L	411 mg/L
I-Drain	116	120	112

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 nonpoint 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

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 Tuesday 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 $8,000.

Special grant programs — such as the NRCS Conservation Innovation Grant 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-Jarbidge 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 thee 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 most 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.

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) Soil Health
2) Soil Erosion (wind and water)
3) Water Quality
4) Education

Critical Geographic Areas (maps attached)

- Nitrate priority area
- City of Buhl wellhead protection area
- Water quality impaired water bodies
- Highly Erodible Land in Twin Falls County

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 25 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, particpation in farm programs is more closely tied to conservation and protecting vulnerable soils.

Balanced Rock SCD has held several workshops to help landowners address HEL issues. The District also used a Conservation Innovation Grant from the USDA Natural Resources Conservation Service to provide a cost-share incentive to cooperators to try no-till planting practices and cover crops. Over a three-year period, 2,020 acres were seeded using no-till and 2,875 acres were seeded to cover crops.

Balanced Rock SCD purchased a no-till drill in the spring of 2020 for use by cooperators to seed cover crops, alfalfa and small grain. The board is charging $10 per acre plus $50 per day to rent the drill. It has been used on approximately 500 acres annualy since it's purchase.

The drill was advertised as part of the Twin Falls County Fair booth and also at the USDA Service Center. The drill was also part of a Twin Falls SWCD-sponsored field day on the Clover Pump Co. Project tour in June 2023.

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 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. That agreement led to a comprehensive plan that includes state recharge, a curtailment of 11 percent by junior groundwater pumpers and better monitoring.

Balanced Rock SCD partnered with NRCS to study sprinkler irrigation system efficiency beginning in 2019. Using rain gauages and soil moisture sensors, NRCS personnel followed a new system throughout the growing year to help cooperators fine-tune irrigation water management.

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 conintes to threaten to turn off 110,000 acres irrigated by junior ground water pumpers from Minidoka to Gooding counties.

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

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.

The District took advantage of the State's new Water Quality Program for Agriculture (WQPA) to help a cooperator install a pivot on highly erodible ground adjacent to a listed stream.

The District received another $75,000 WQPA in 2024 to help the Clover Tract with a pipe project to improve irrigation efficiency and water quality.

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.

Soil Health

Balanced Rock SCD completed a three-year 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. Over 1,700 acres of cover crop were planted and 2,875 acres were direct seeded.

Balanced Rock SCD nominated Barry Duelke to the NACD National Soil Health Champion network in recognition of his efforts to use multi-species cover crop mixes and reduced tillage practices to feed both his soil and his sheep. Tim Cornie, an organic farmer who also uses cover crops and reduced tillage as much as possible, was also named a National Soil Health Champion.

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 tilth and track trends. 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 Idaho and Idaho Soil and Water Conservation District are partnering with conservation districts.

Balanced Rock SCD encourages growers who rent the no-till drill to plant cover crops with it. The District is exploring options for cover crop cost-share programs to encourage more growers to incorporate cover crops in their crop rotations.

Groundwater Quality

Twin Falls County was ranked 9th in the state according to the 2020 nitrate priority list with an average nitrate reading of 4.9 mg/L with a maximum of 41mg/L. DEQ monitored 719 wells; and listed Twin Falls County as moderate high but with no trend in nitrate levels. In comparison, 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. That 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 4.19 mg/L in 2020 down from 5.18 mg/L in 2014 and 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 remained at 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.

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 82,248 residents in 2017, up from 67,722 residents in 2009. Over two-thirds of the population is considered urban.

The U.S. Census Bureau population estimates Idaho's population at 1,964,726 in July 2023, up 1.3 percent over 2022 and ranking it fourth nationally in percentage growth. Despite ranking 17th in numerical growth and falling from its top-10 status of the last two years, Idaho still outpaces the national population growth rate.

Twin Falls County had a population of 92,243 in 2021. The City of Twin Falls has seen the greatest growth increasing from about 35,000 people in 2002 to 55,906 residents in January 2024. The population has grown by 7.35 percent since the 2020 census showed 52,079 residents. It is now the eighth largest city in Idaho. Buhl had a population of 4,654 in 2021, up from 4,184 in 2010. Castleford's population remains fairly stable at at 219 in 2021 compared to 226 in 2010.

A tremendous amount of agricultual land has already been developed and the continued population boom is gobbling up more land. According to Twin Falls County Commissioner Brent Reinke in March 2022, Filer is slated for an additional 240 homes with Twin Falls planning for another 1,400 to 1,600 homes.

The Twin Falls City Building Department issued 218 residential home permits in 2023 and 138 commercial permits. The median home value was $365,000 in January 2024, up from $199,300 in 2018 and $93,800 in 2000.

Twin Falls County had a unemployment rate of 3.2 percent in February 2024, up from the previous year at 2.4 percent and the long-term average of 4.63 percent. Idaho's unemployment rate was 3.3 percent in December 2023, which was 0.5 percent higher than 2.8 percent the previous year. The national unemployment rate was 3.7 percent in January 2024, down from the COVID peak of 14.8 percent in April 2020.

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.

Despite strong employment growth, Twin Falls County wages remain relatively low. The average income of a Twin Falls resident is $26,803 a year compared to the U.S. average is $31,133 a year. The median household income of a Twin Falls resident was $53,936 annually in 2021. The average salary for jobs in Twin Falls is $58,763 annually or $28 per hour.

Ag 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 2022 Agricultural Census, the total number of farms in Twin Falls County fell slightly to 1,169 farms compared to 1,211 in 2017; but down significantly from 1,439 in 1997. Farm size is down from 458 acres in 2012 to 383 in 2022.

The largest number of farms in the county are those that range in size from 1 to 9 acres (352 operations) followed by 10 to 49 acres (323 farms). The bulk of farms are in the middle group with 351 farms between 50 and 179 acres and another 200 between 500 and 499 acres. Of the largest farm classification, 63 are between 500 and 999 acres with another 80 greater than 1,000. The large number of tiny farms accounts for why the average farm size is 393 acres but the median farm is just 34 acres.

Large farms and small farms are equally represented on a percentage basis. About 30 percent (356) of the farms reported sales above $100,000 with 28 percent reporting sales below $2,500. Crops accounted for 25 percent of sales with livestock accounting for 75 percent.

The number of irrigated acres in Twin Falls County fell to 236,196 acres on 965 farms in 2022 from 256,974 acres in 2012 on 1,142 farms. In comparison, 1,294 farms were irrigating 244,520 acres in the county in 2007.

A period of sharply higher land values has pushed the value of farmland and buildings up significantly. The average value of land and buildings in in 2022 was $2,304,916 with an average of $5,512 per acre, up from $1,718,569 in 2017 with an average of $4,439 per farm. In comparison, the total value of $1,155,801 with an average of $3,090 per acre un 2012 and $614,239 and an average of $1,946 per acre in 2002.

Supply chain issues and the war in Ukraine helped push commodity prices higher. The average value of products sold per farm was $971,714 in 2022, up from $561,716 in 2017 and $599,581 in 2012. In comparison, the value was $364,090 in 2007 and $225,021 in 2002. Net cash farm income averaged $181,550 in 2022 compared to $119,676 in 2017. Government payments were received by 156 farms for a total of $4,192,000 compared to 360 farms for a total of $4,456,000 in 2017.

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.

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.

Crop	2022 farms	2022 acres	2012 farms	2012 acres
Forage	600	81,871	739	72,812
Barley	151	35,228	56	30,616
Dry edible beans	82	20,794	308	27,885
Corn for silage	138	6,559	200	33,885
Wheat (all)	166	19,625	243	26,415
Corn for grain	103	15,650	225	20,828
Sugar beets	39	8,343	42	8,755

Livestock continues to be an important part of the Twin Falls agricultural economy. Beef cow numbers are down slightly at 24,246 head on 440 farms compared to 27,319 head on 452 farms in 2017 and 26,762 in 2012. Sheep and lamb numbers continued to fall to just 6,717 head on 58 farms compared to 8,473 head were on 62 farms in 2017 after reaching 14,000 head in 2007. Rotational or management-intensive grazing was practiced on 205 farms, compared to 200 reported in the 2017 Ag Census.Milk cow inventory has increased to 108,379 head on 58 farms after falling to just 89,876. In comparison, there were 63,960 milk cows on 73 dairies in 2012.

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 the at 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 seems to have leveled off. Twin Falls County was home to 26 organic farms in 2017, up from 14 in 2012; but the number has fallen back 14 in 2022. The value of sales was $30,310,000 in 2022, down from $35,072,000 in 2017 but still signicantly above the $2,044,00 in 2012. The Twin Falls SWCD continues to be concerned about weed control on organic farms and the spread of weeds from untreated border areas.

The 2022 Ag Census confirms that farmers across Twin Falls County are experimenting with soil health practices such as conservation tillage and cover crop usage. The table below shows the 10-year trend. Comparing the 2017 and 2022 census data shows that the number of farms using no-till was stable (63 to 64) but the average acres per farm fell from 62 acres in 2017 to 49 acres in 2022. The number of farms using reduced tillage fell by 10 between 2017 and 2022, but the number of acres covered increased by about 12,000 acres (44,815 to 56,268 acres). Average acres treated per farm also increased from 227 to 301 acres. Cover crops were also planted on 12 fewer farms but the number of acres was fairly stable (up 188 acres between 2017 and 2022) with the average acres per farm also increasing from 111 to 130 acres.

Soil health practice	2022 farms	2022 acres	2012 farms	2012 acres
No-till	64	3,886	62	7,765
Reduce tillage	187	56,268	138	26,382
Cover crops	81	10,524	80	6,669

Strategies to Address Trends

• Continue to promote use of soil health practices such as cover crops and reduced tillage through use of a district-owned no-till drill.

• Develop an education program to help landowners and operators adopt conservation practices that reduce the trend of increasing nitrate levels in ground water.

• 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.

• Help improve wildlife habitat.

Projected Budget Needs

• Sage Grouse Habitat Restoration — $250,000

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 monitoring data for implementing future TMDLs (total maximum daily loads) on listed stream segments

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

Idaho Conservation League — provide sponsorship/cost-share for soil health practices

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; work with the Groundwater Committee on educational efforts to protect drinking water

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

Jarbidge 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

Nature Conservancy — help sponsor soil health practice workshops and initiatives

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 —participate in Outstanding Water Quality awards program, provide support for water quality tours and field days,

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

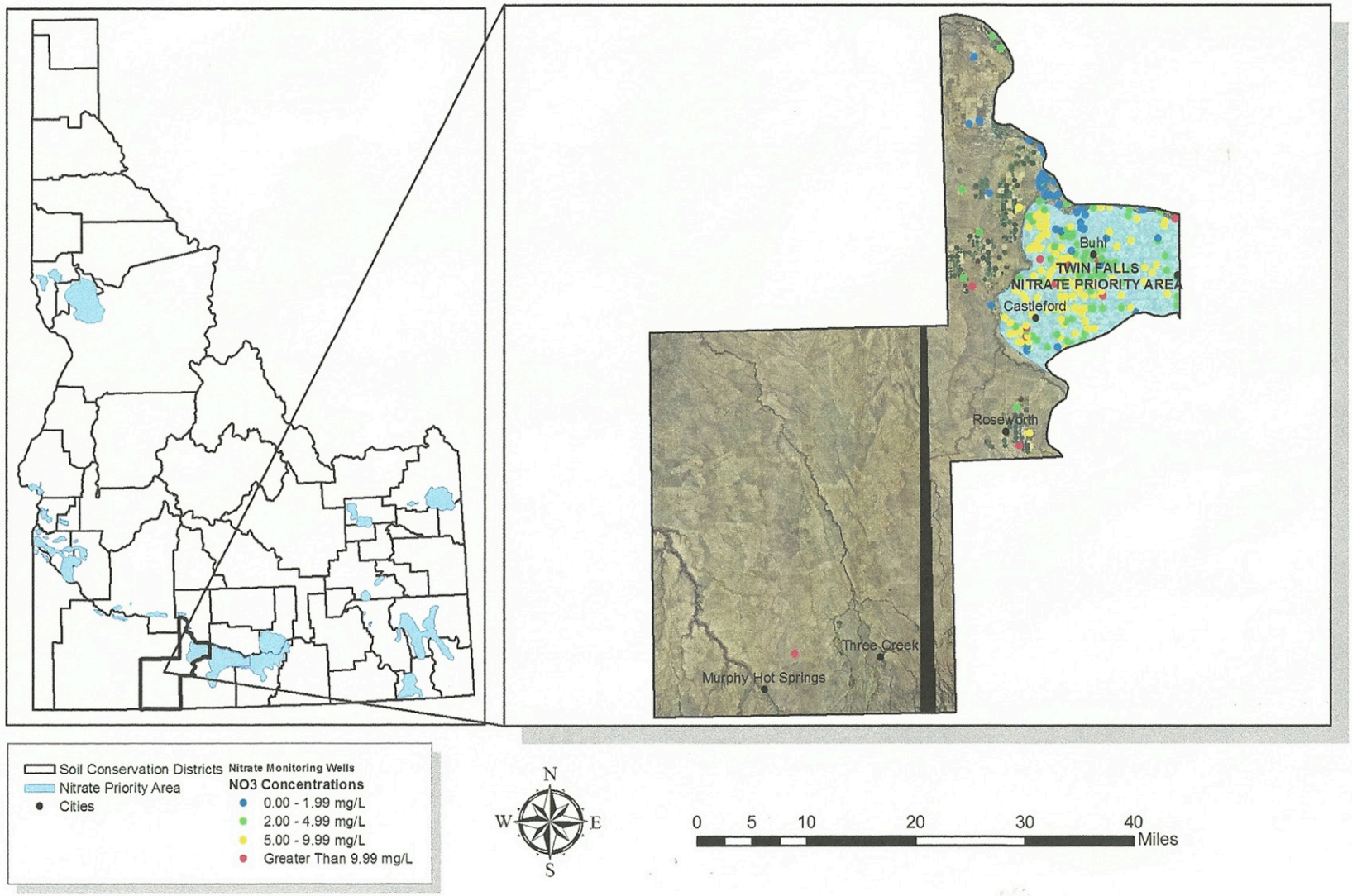
USDA-Agricultural Research Service — research to reduce irrigation-induced soil erosion, research for more efficient irrigation scheduling, provide technical assistance for water quality field days and tours

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

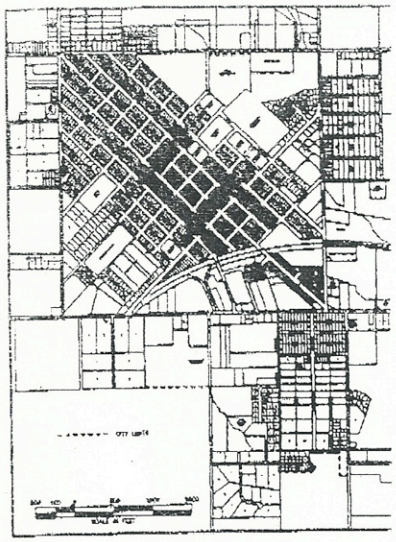
USDI-Bureau of Land Management — cooperation on developing grazing plans and implementing TMDLs

USDA-Natural Resources Conservation Service — provide District with assistance in program guidelines, soil and range surveys, technical help in applying conservation practices, preparing conservation plans on individual farms and ranches, office space for District employees, meeting room facilities.

Balanced Rock Soil Conservation District
Nitrate Priority Areas



NOTE: This map is only a representation of wellhead protection zone boundaries and should not be used for legal or surveying applications.



CITY OF BUHL

WELLHEAD PROTECTION MAP

JANUARY, 1998

N.

JUB

8/3/98

2421.352

APPENDIX 1

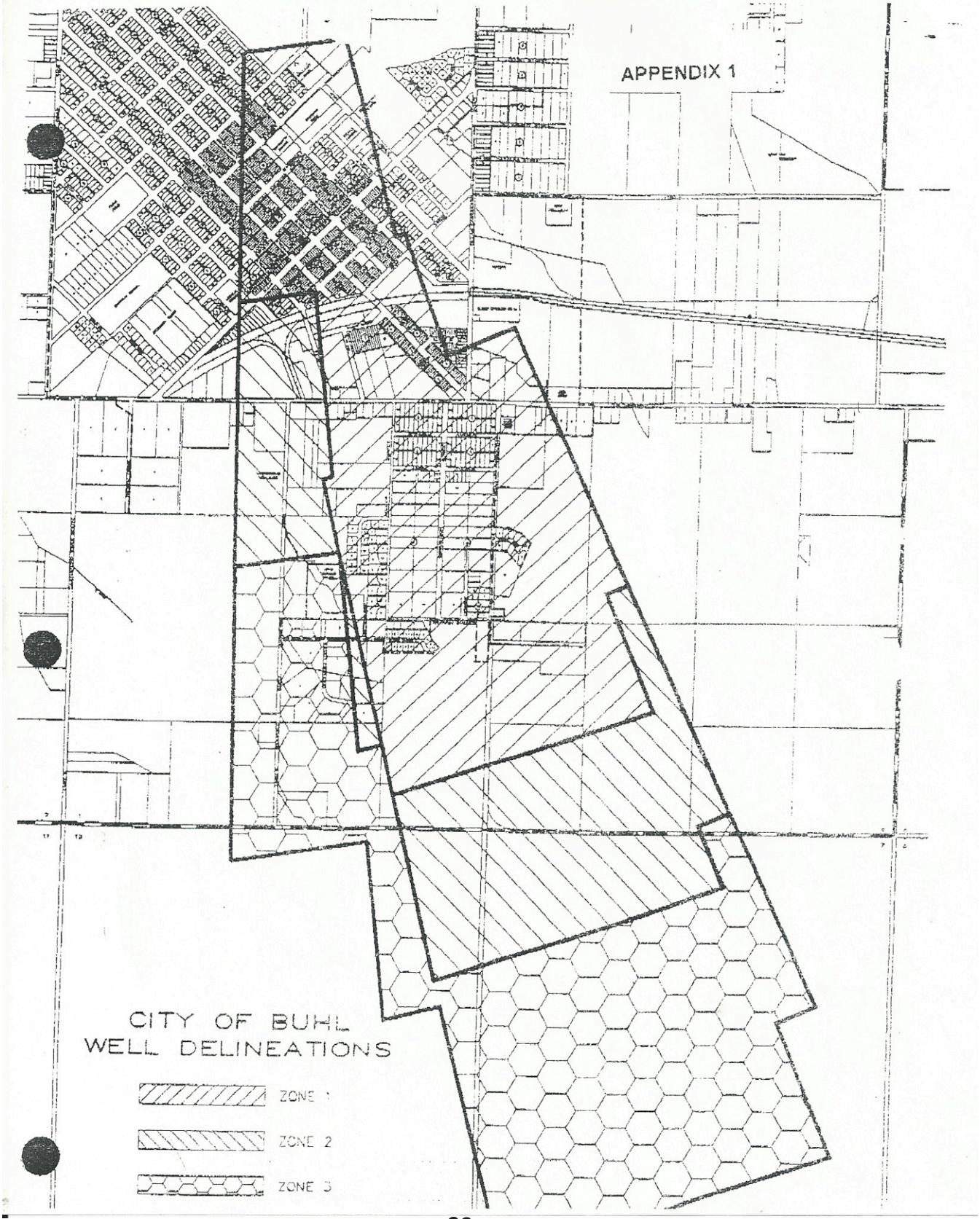
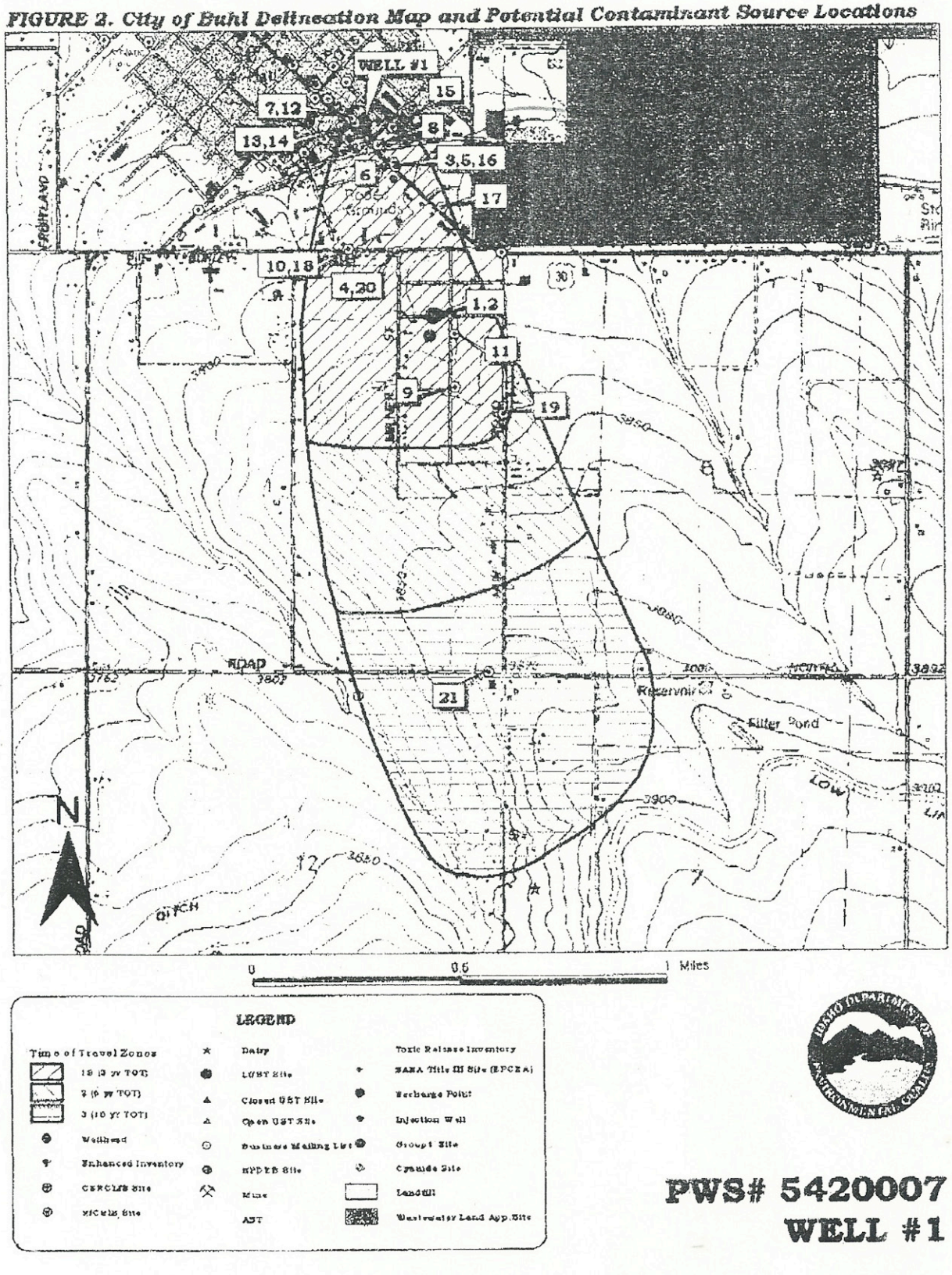


FIGURE 2. City of Buhl Delineation Map and Potential Contaminant Source Locations



PWS# 5420007
WELL #1

FIGURE 3. City of Buhl Delineation Map and Potential Contaminant Source Locations

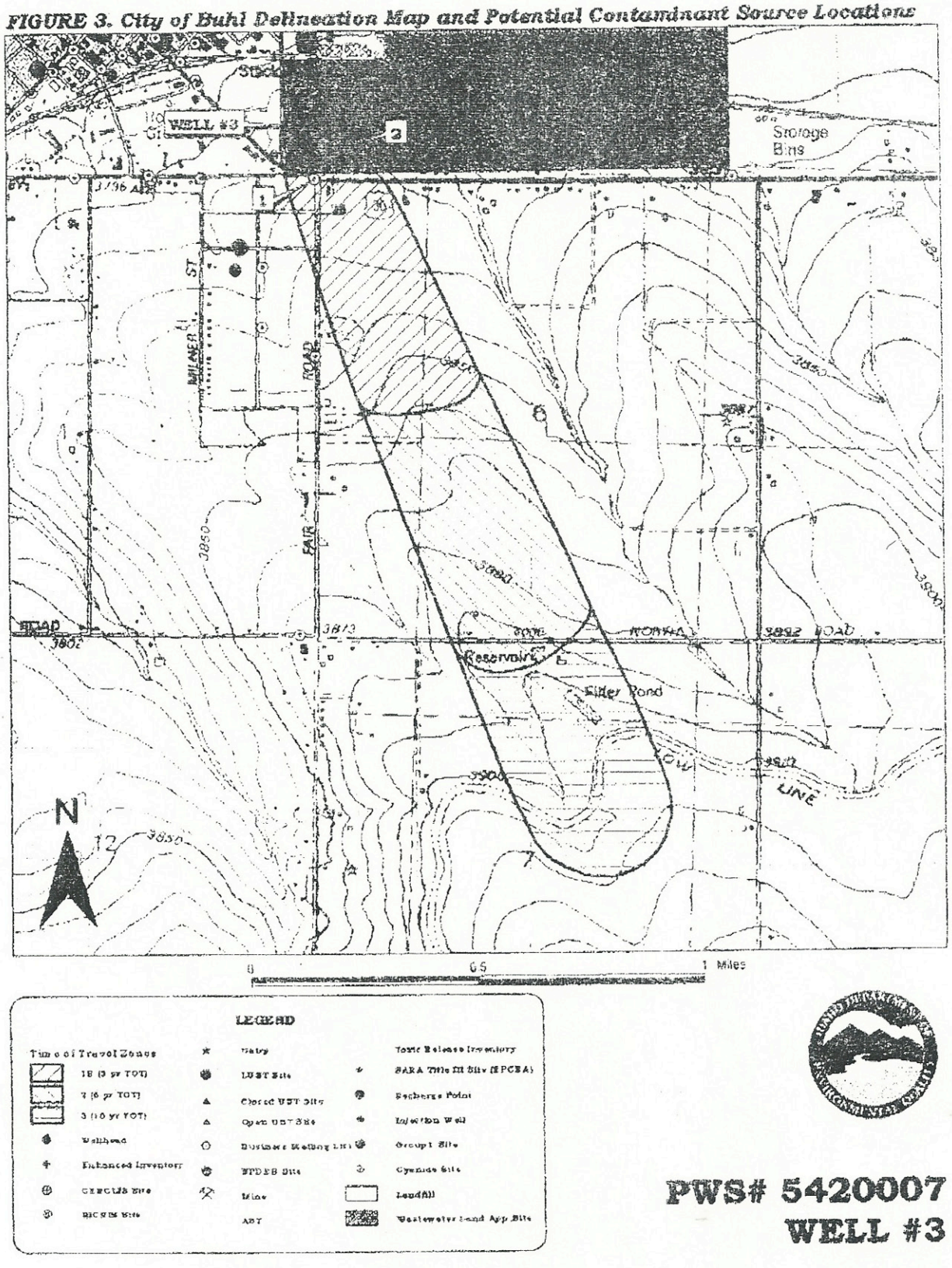
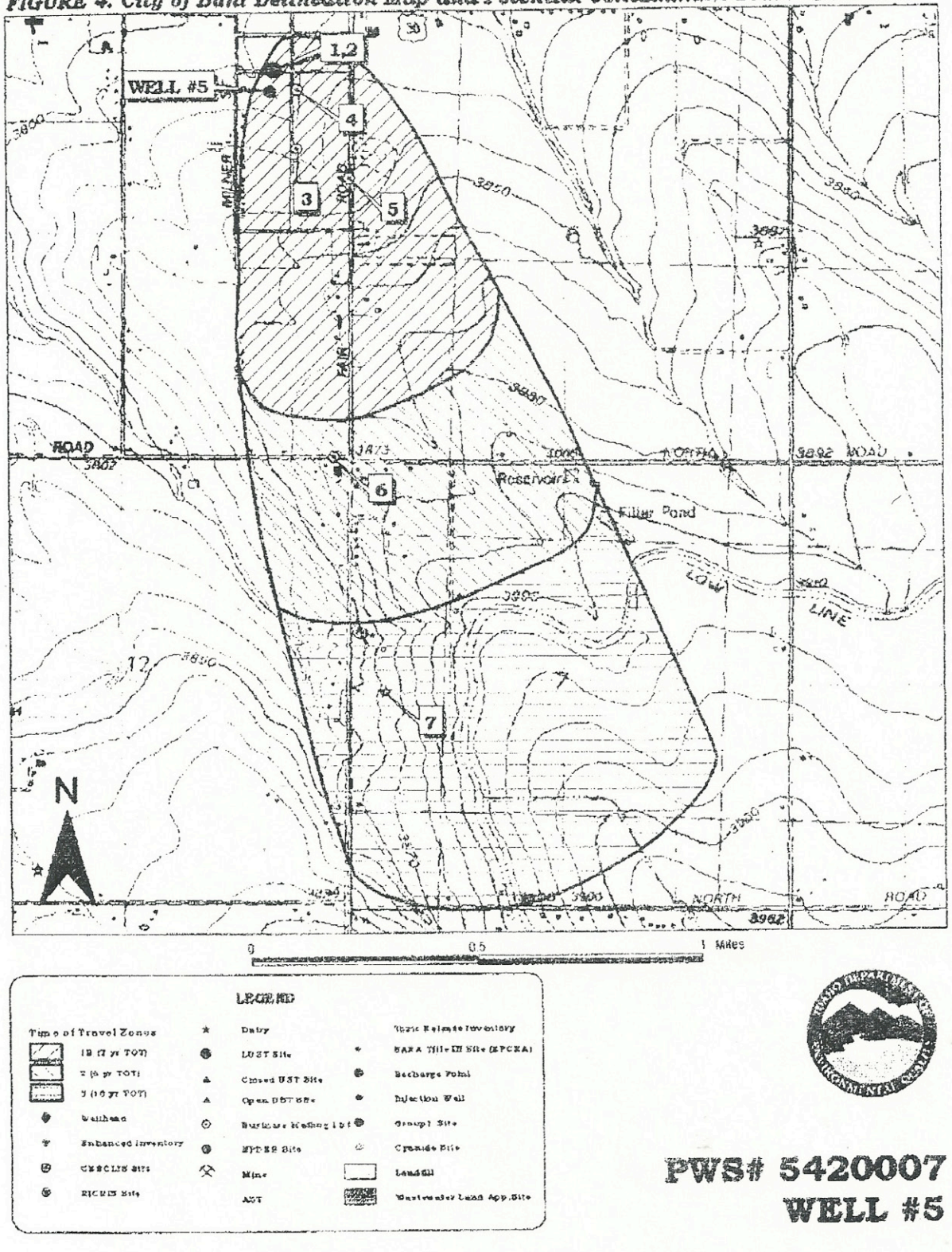
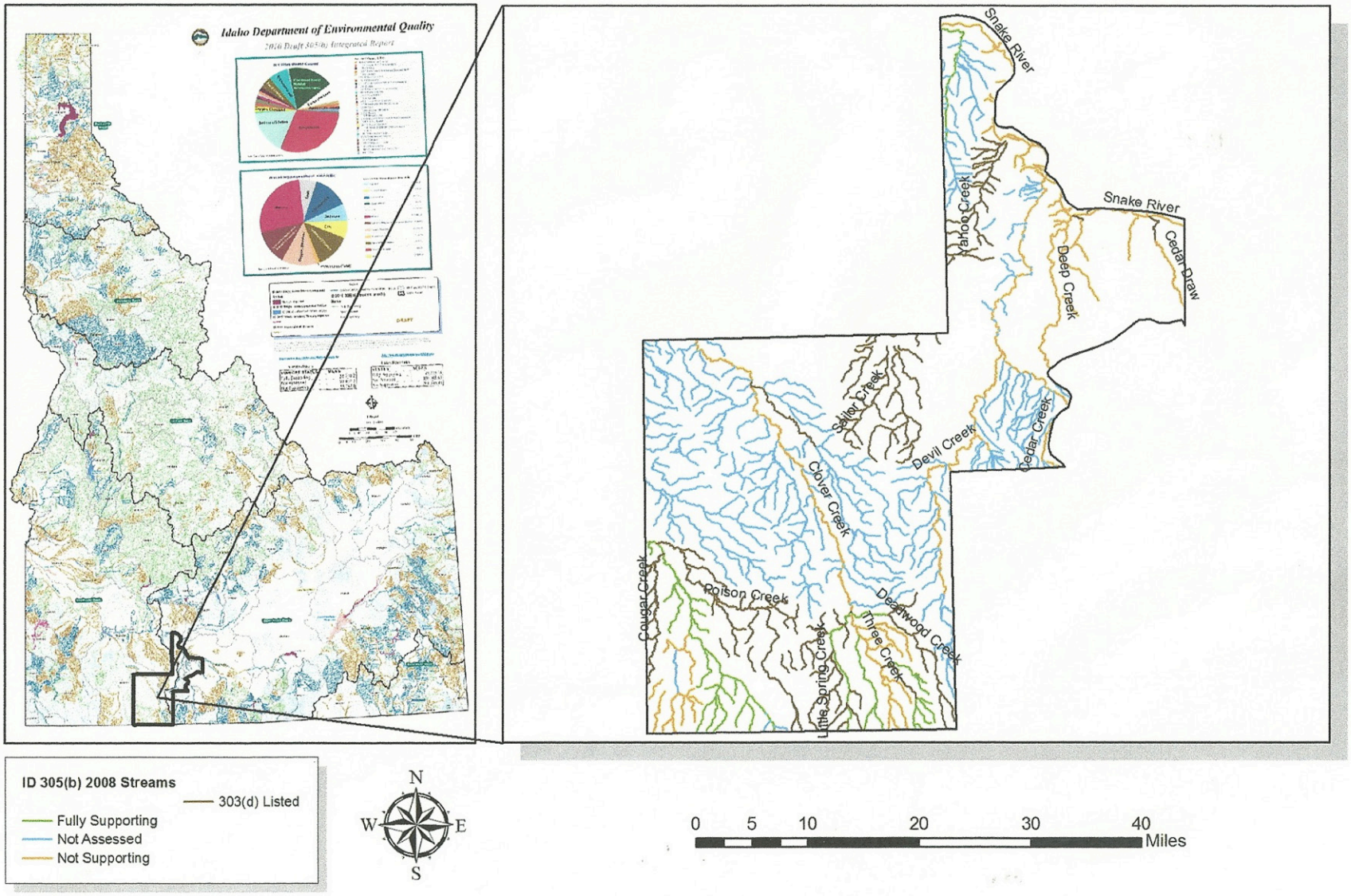


FIGURE 4. City of Buhl Delineation Map and Potential Contaminant Source Locations



PWS# 5420007
WELL #5

Balanced Rock Soil Conservation District
303(d)/305(b) Listed Waterbodies



TWIN FALLS COUNTY HEL

Date: 2/9/2016

Field Office: TWIN FALLS SERVICE CENTER
Agency: NRCS
Assisted By: MICHAEL REMMING

Balanced Rock SCD 2025 Annual Work Plan
February 19, 2025

Resource Concerns

Soil Health
Soil Erosion (wind and water)
Water Quality
Education

Proposed/planned Projects:	Leader:	Time:
1) Promote use of No-Till Drill.	Balanced Rock SCD board	January - Dec.
Newsletter, magnets and other outreach.	Outreach Specialist	January - Dec.
Buy another no-till dril	Balanced Rock SCD board	Jan. to Dec.
2) Administer Clover Pump WQPA.	Balanced Rock SCD	Jan. to Dec.
3) Support the Innovative Ag Marketing Partnership (IAMP)	Balanced Rock SCD board	Jan. to Dec.
4) Support the Magic Valley Soil Health Forum.	Balanced Rock SCD board	Jan. to Dec.
5) Participate in the Division IV soil health testing program.	Balanced Rock SCD board ISWCC	Jan. to Dec.
6) Develop a proposal to continue offering cost-share for cover crops and direct seed if a special EQIP is offered.	Balanced Rock SCD board	Jan. to Dec.

7) Talk to neighbors about tillage and residue management practices to reduce wind erosion potential.	Balanced Rock SCD board	Jan. to Dec.
8) Work with the Twin Falls County Fair Board and Twin Falls County Farm Bureau Federation for the 2025 Ag Pavillion.	Public outreach specialist	February to Sept.
9) Host annual poster and speech contests; educational days.	Public outreach specialist	February to October
10) Promote college scholarship program.	Balanced Rock SCD board	Jan. to Dec.
11) Promote Natural Resources Camp & Scholarships.	Balanced Rock SCD board	March to May
12) Work with the Twin Falls County Groundwater Protection Committee to promote private well testing/monitoring.	Balanced Rock SCD board/ Public outreach specialist	Jan. to Dec.
13) Monitor proposed wind and solar projects.	Balanced Rock SCD	Jan. to Dec.

IDAHO SOIL & WATER CONSERVATION COMMISSION

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

DISTRICT: Bonner & Boundary SCD

FOR FISCAL YEAR: FY 2025

DUE : March 31,

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.

Rick Rodgers

Board Supervisor Signature

Rick Rodgers

Printed Name

3-19-25

Date

208-944-3736

District Telephone

2+3conservation@gmail.com

District Email Address

FOR SWC USE ONLY:

DATE OF CONFIRMATION: _____