

**JEFFERSON  
SOIL & WATER  
CONSERVATION DISTRICT  
210 S. 5<sup>TH</sup> W.  
RIGBY, IDAHO 83442**



**FIVE-YEAR RESOURCE CONSERVATION  
BUSINESS PLAN  
2023-2028**

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### **Cover page photo –Great Plains No-till Drill owned by District**

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## ***Executive Summary or Forward***

The Jefferson Soil and Water Conservation District is one of 50 Conservation Districts in Idaho. Idaho Soil and Water Conservation Districts are political subdivisions of state government but are not state agencies. Conservation Districts are charged with carrying out a program for the conservation, use and development of soil, water, and other natural resources.

Conservation Districts are the primary entities to provide assistance to private landowners and land users in the conservation, sustainment, improvement and enhancement of Idaho's natural resources. They are catalysts for coordinating and implementing conservation programs, channeling expertise from all levels of government into action at the local level. Programs are non-regulatory; science-based technical assistance, incentive-based financial programs, and informational and educational programs at the local level.

Both by legislation and by agreement the USDA Natural Resources Conservation Service provides technical assistance to landowners and land users through Conservation Districts. Each Conservation District in Idaho has a signed Mutual Agreement with the Secretary of Agriculture and the Governor of Idaho that establishes a framework for cooperation.

This Annual Plan/Five-Year Resource Conservation Business Plan was developed not only to guide the Conservation District, 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 Jefferson Soil and Water Conservation District.

This document identifies the resource needs in the Conservation District and presents a resource conservation action plan for meeting these needs.

## ***Mission of the Jefferson Soil and Water Conservation District***

To Protect and promote the natural resources found in the Jefferson Soil and Water Conservation District.

## ***Vision of the Jefferson Soil and Water Conservation District***

*To work cooperatively with various agencies, businesses and individuals to educate and motivate entities relevant to natural resources issues.*

## ***Values of the Jefferson Soil and Water Conservation District***

- Sustainable use of natural resources
- Support for agriculture activity that uses sustainable, economically-feasible practices
- Value and respect for the Idaho Conservation Partnership
- Conservation education for adults and youth

## *Jefferson SWCD History*

On September 1, 1952 the Jefferson Soil Conservation Service was established, and located in the county courthouse. The District was comprised of approximately 243,000 acres of which 105,000 acres are in farmlands with about 900 operating units. The office was established in connection with soil and water conservation problems in Jefferson District to provide headquarters for technical personnel assigned by the Soil Conservation Service.

District – owned equipment was in operation and expected to solve the problems of financing district activities.

By 1954, more interest was being shown toward soils information, soil maps, farm planning, land leveling designs, etc. The unit conservationist was now being assisted by a conservation aide, an engineer, and a part – time clerk. By the end of 1954, the district had signed 279 cooperators.

Interest in soils information, soil maps, farm planning and engineering assistance continued to increase. The district began renting a rock picker and land plane to landowners. Working in cooperation with the Soil Conservation Service, much progress was made in the next few years, with the Soil Conservation District becoming a recognized organization for the promotion of soil conservation practices.

As new and better machinery became available, the district replaced the obsolete or worn and purchased additional equipment to meet the demands of the area farmers. Much progress was made in drainage projects, topographic surveys, land leveling and farm planning. In 1960 plans were made for a district tour to show the many phases of local conservation work to the public, this tradition is still carried on today by our annual tour. The District published its first newsletter in 1961, and has since published newsletters annually as a service to district cooperators and other interested agencies.

Wilford Taylor, R.O. Lounsbury, Clayton DaBell, Seymour Thomas, and Wilford Hymas were the first supervisors of the Jefferson SWCD. On March 6, 1964 the board of supervisors submitted a request to the State of Idaho for the change of name from Soil Conservation District, to Soil and Water Conservation District as the program had expanded to include the conservation of water as well as soil. On September 15, 2010 the Jefferson SWCD petitioned to consolidate with the Mud Lake Soil and Water Conservation District was approved by the State of Idaho. Mud Lake SWCD was formed in 1946.

Each year the Jefferson SWCD provides technical assistance to landowners and operators on a variety of soil and water conservation practices. Some of the more popular conservation measures being adopted in the district today are conservation tillage, brush control, irrigation water management, windbreaks, grazing management, use of crop residue, and irrigation system improvements. The purchase of a no-till drill in 2019 to rent to county farms is an attempt to further the use of crop residue and improve soil health.

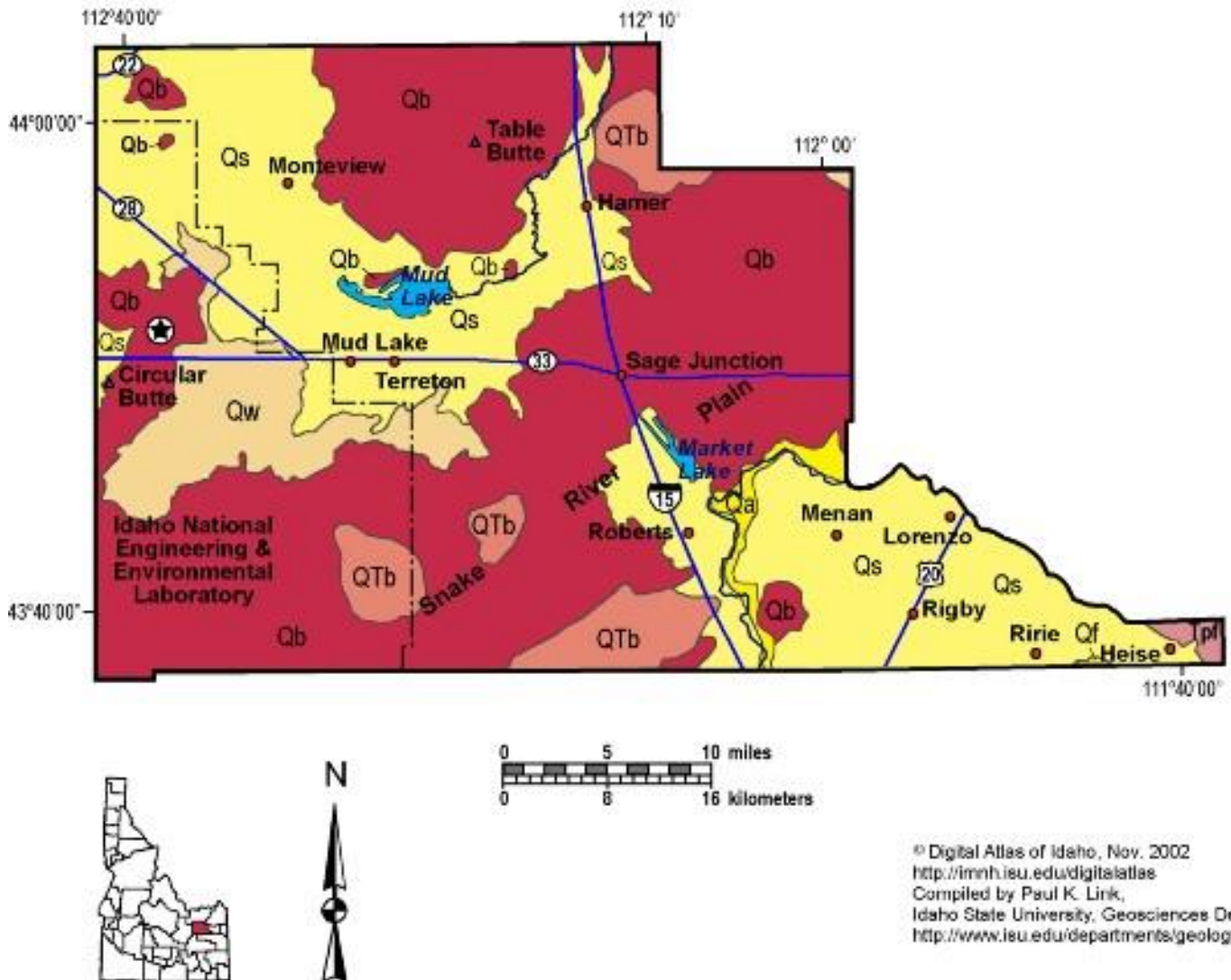
SECTION 1: Physical Characteristics of the District

## Counties of Idaho



State Map

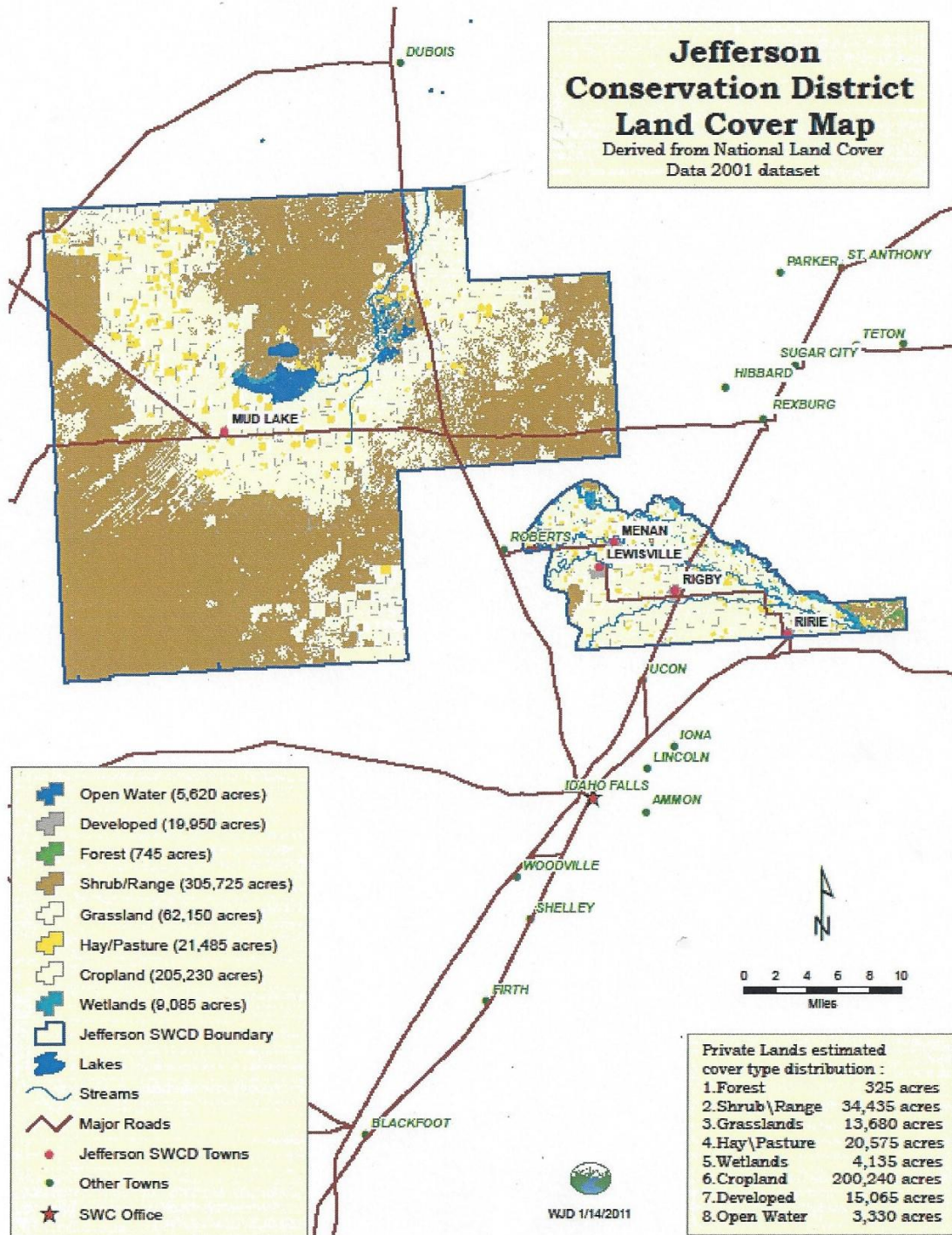
# Jefferson County, Idaho

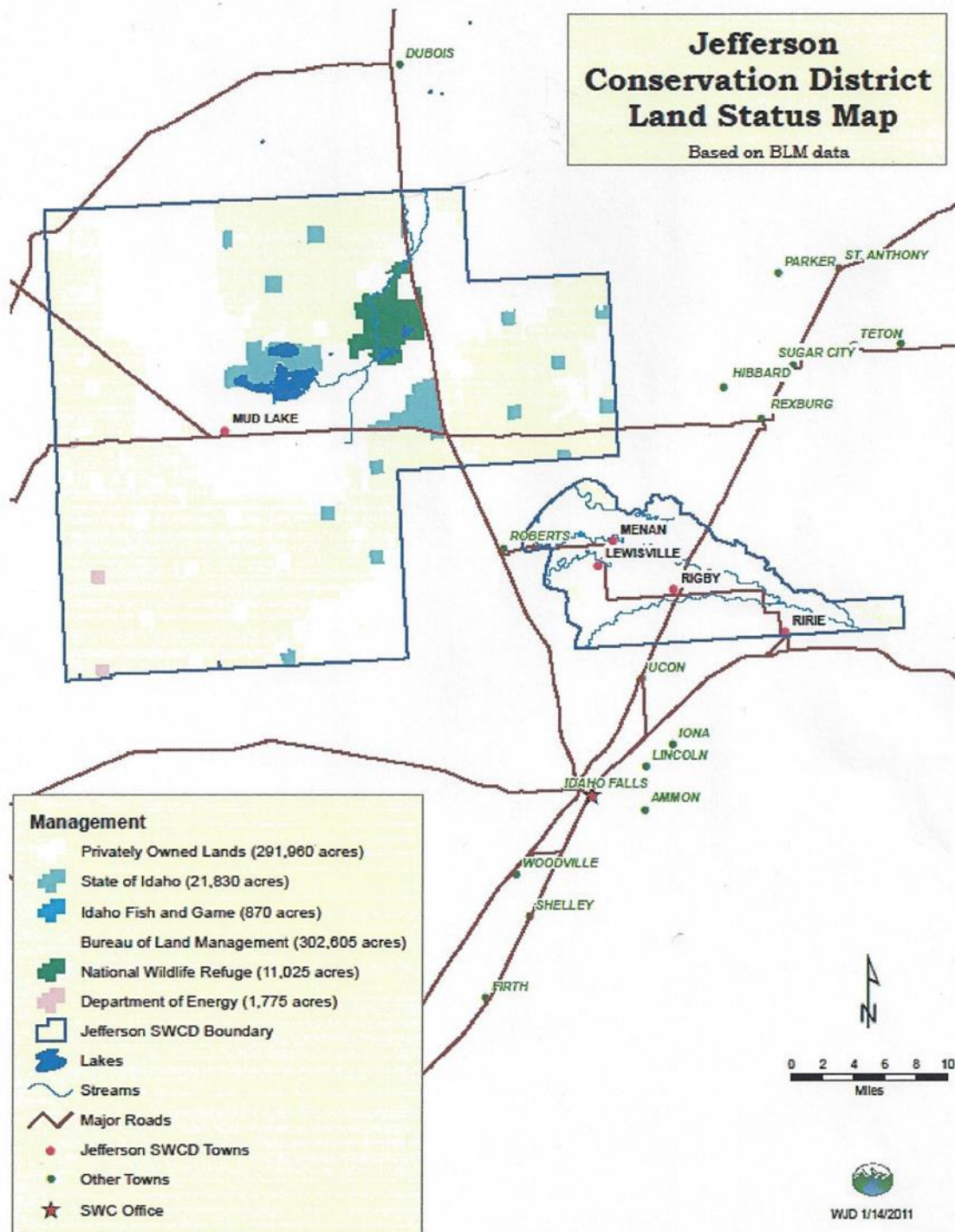


## County Map



## SECTION 1: Physical Characteristics of the District







## SECTION 2: Economic Conditions and Outlook

### *Population Labor Force & Employment*

Following a trend of continuous growth, Jefferson County's population has increased to 32,202 in 2021. The county is part of the Idaho Falls Metropolitan Statistical Area and sits between the high-growth counties of Bonneville and Madison, which affects Jefferson, as housing pressure issues overflow to this county.

Jefferson County's largest city is Rigby with a population of 5,241 in 2021. Many new residential subdivisions and commercial developments are being added, and the county is trying to stay abreast of infrastructure issues. Many businesses have expanded to meet the needs of this growing county.

Top Employers, 2021		
Employer	Ownership	Range
Jefferson County School District	Local Government	500-999
Idahoan Foods	Private	250-499
Idaho Gold Corporation	Private	100-249
Broulim's Foodtown	Private	100-249
Jefferson County	Local Government	100-249
west Jefferson School District	Local Government	100-249
Idaho Transportation Dept.	State Government	50-99
Jefferson Central Fire District	Local Government	50-99
Heise Hot Springs	Private	50-99
Taylor Rigby Chevrolet	Private	10-49

Jefferson County's unemployment rate remained comparatively low, remaining below the state and national rates during the last decade. The 2021 unemployment rate ended at 2 percent, with a spike in June matching national and state trends. Many residents commute to Madison or Bonneville counties, where a growing job market has been substantial. The labor force grew 670 persons, from December 2021 to December 2022. The labor force has grown from just over 12,000 to 15,448 persons in a decade.

U.S. Highway 20 is a gateway for tourists heading to Island Park and Yellowstone National Park, and the county wants to take advantage of that traffic. Jefferson Lake offers picnic sites, day use and swimming. There are several boat ramps on the Snake River for recreation and fishing. Menan 4<sup>th</sup> of July fireworks attract thousands. Two county fairs and community celebrations add to recreation opportunities.

Labor Force	2019	2020	2021	2022
Civilian Labor Force	14,280	14,603	14,667	15,448
Total Employment	13,932	14,150	14,466	15,142
Unemployed	348	453	201	309
% of Labor Force Unemployment	2.4	3.1	1.4	2
State of Idaho % Unemployment	2.9	4.5	*	2.9
U.S. % Unemployment	3.5	6.7	*	3.5

With 578 established businesses, in 2020, leading industries were retail, education, manufacturing and wholesalers. The Department of Transportation, local officials and several school districts account for government jobs. Two potato fresh-pack plants employ many in wholesale trade. Most manufacturing jobs are at the two large potato processing plants, Idahoan Foods and Idaho Pacific. Grain, corn, and potatoes are produced in the county. Perhaps the county's biggest claim to fame is the city of Rigby, which is the home of the inventor of television, Philo Farnsworth.

Covered Employment & Average Annual Wages Per Job	Average Employment	Average Wages	Average Employment	Average Wages	Average Employ	Average Wages
<b>Total Covered Wages</b>	6,857	\$32,929	7,010	\$33,512	7,642	37,858
<b>Agriculture</b>	698	\$36,729	711	\$37,447	*	*
<b>Mining</b>	0	\$0	0	\$0	739	39,763
<b>Construction</b>	822	\$38,148	828	\$40,293	982	43,916
<b>Manufacturing</b>	1,117	\$41,429	1,172	\$43,564	1,138	51,929
<b>Trade, Utilities &amp; Transportation</b>	1,292	\$32,571	1,316	\$34,156	1,475	37,706
<b>Information</b>	39	\$33,744	59	\$28,708	42	33,100
<b>Financial Activities</b>	188	\$53,827	122	\$53,744	197	51,853
<b>Professional and Business Services</b>	388	\$34,702	269	\$33,300	373	57,232
<b>Educational and Health Services</b>	567	\$22,216	1,452	\$22,987	1639	26,750
<b>Leisure and Hospitality</b>	316	10,409	346	11,274	463	12,777
<b>Other Services</b>	99	\$21,458	103	\$24,653	131	27,698
<b>Government</b>	1,332	\$28,189	435	\$33,237	457	34,461
	<i>2018</i>		<i>2019</i>		<i>2021</i>	

Per Capita Income	2010	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Jefferson County</b>	\$27,210	\$29,496	\$29,870	\$30,022	\$31,296	\$36,678	\$33,745	\$34,900	37,482	40,288
<b>State of Idaho</b>	\$31,957	\$35,188	\$36,200	\$37,896	\$39,857	\$40,670	\$42,094	\$43,901	46,535	48,759
<b>United States</b>	\$40,546	\$44,599	\$44,851	\$47,058	\$48,978	\$49,870	\$51,885	\$54,446	57,187	59,510

### ***Trends Impacting Conservation in the Jefferson Soil & Water Conservation District***

- Continued reduction in state funding which further reduces the district's efforts to be effective as in conservation.
- Unfunded mandates as it affects agricultural, natural resource and forest management.
- Endangered Species Act mandates and enforcement.
- Urban development and absentee landowners.
- Recreational use and its impact to agricultural management.

### ***Strategies to Address Trends***

- Develop legislative an outreach program to address funding shortfalls from State funds.
- Secure funding to address agricultural mandates and landowner private property rights.
- Implementation of water quality and water quantity projects to improve fish passage and wildlife habitat within the District to help address ESA issues.
- Continue an active information and education program for landowners to address urban development.

### ***Status of the Agricultural Economy and Outlook***

The right of agriculture to exist and continue to operate is protected by Idaho law. Given the rural nature of the county, local ordinances and resolutions must not conflict with the right to farm protections for agricultural operations in *Idaho Code, Title 22, Agriculture and Horticulture, Chapter 45, Right to Farm*.

## SECTION 3: Assessment

High-density residential development defined as more than one home per acre, or conflicting development should be directed away from irrigated agricultural land, taking into consideration the following factors:

1. Potential crop productivity
2. Availability of water
3. Grazing potential
4. Environmental factors
5. Availability of public services
6. Historical land use practices

Lands designated for agricultural use are suitable for all types of agricultural and range operations, as well as single family homes, including manufactured homes, and accessory buildings necessary for agricultural operations.

Existing commercial, industrial, and residential land uses, home-based businesses and occupations and livelihoods are historical uses and will be allowed and will be managed to minimize the impacts on agriculture. Non-agricultural uses that could have adverse impacts on agricultural land use areas must be carefully reviewed.

### ***Pasture/Hay land:***

Pasture and hay land is limited throughout the sub basin, reasonably considered a subset of the other major land uses, such as cropland and rangeland. Pasture/hay land is typically irrigated; however, non-irrigated riparian areas are used for forage for domestic animals. Irrigated pastureland includes low elevation pastures and high elevation mountain valleys. Pasture/hay land can be found throughout the sub basin. The elevation of the sub basin ranges from approximately 5,000 feet south of Dubois to almost 10,000 feet along the continental divide. Precipitation ranges from less than 10 inches to 30 inches. Between the Jacoby Ranch and Eighteen Mile Shearing Corrals, located along Camas Creek, the soils are medium textured and dark colored. They have formed chiefly in wind deposited material over basalt bedrock. Much of this area is characterized by a landscape of volcanic cones, craters, fissure vents and rock outcrops along pressure ridges and tumuli on the lava flows. The soils are used for rangeland pasture and wildlife refuge. In the Kilgore area, the soil is generally moderately fine textured and has a high-water table. The soil color is very dark due to wetness. Pasture plants are introduced perennial forage species, such as Timothy, Smooth Brome grass, Meadow Foxtail, and Orchard Grass or native grass/rush/sedge complexes. Hay land plants consist of Grain and Alfalfa Hay grown in rotation.

### ***Irrigated Cropland (Sprinkler and Surface Irrigated):***

Cultivated cropland is conventionally tilled with a potato/grain rotation. Other commonly raised crops include barley, dry peas, wheat, oats, alfalfa, grass hay, and nursery stock. Elevation ranges from less than 5,000 feet to 6,600 feet and precipitation ranges from less than 10 inches to 30 inches. Most of the irrigated land is situated near the 5,200-foot level, except at Kilgore, which is approximately 6,200 feet. A large majority of the cropland is located in the southern portion of the sub basin, near Hamer and the Camas National Wildlife Refuge. In the Camas National Wildlife Refuge, small grain crops are grown for wildlife and haying. Prescribed fires are used for management purposes. The southern part of the sub basin consists of lava fields and lava flows of basalt covered by Eolian sands and loess deposits. The Clark County drainage soils are well-

drained soils that formed in mixed alluvium on stream terraces. The soils are medium and coarse textured and usually effervescent with reaction to acid. Carbonates are present at the surface and extend through the subsoil. The soils are used for both cropland and rangeland. Soil series consist of Idmonton, Kilgore, Alex, Malm, Matheson, Hagenbarth, Crabcreek, and Richvale; ranging from 0 to 12 percent slopes. It is very difficult to give a generalized estimate on erosion hazards. Soil ratings in this area may be from slight to very severe erosion potential. Factors such as slope and depth to bedrock vary greatly with soils within these map units. The land capability classes of the dominant soils are 4c, 4e, 5w, and 6e. The available water holding capacity ranges from 0.03 to 0.21 inches of water per inch of soil for the major soil types in this area.

### ***Rangeland:***

Rangeland is typical of high elevation desert habitat. Rangeland and adjacent riparian corridors are grazed predominantly by cattle and sheep. A significant portion of the Beaver Creek drainage near Dubois is owned and operated by the U.S. Sheep Experiment Station. Elevation ranges from 5,000 feet to 7,200 feet and precipitation ranges from less than 10 inches to 30 inches. Near Monida Pass, the soils are moderately fine to medium textured, and have formed in calcareous sandstone, siltstone, and shales. The soils of this area are used almost exclusively for rangeland and wildlife habitat. From approximately Indian Creek east to Idmon, the soils have formed in glacial outwash and residuum from rhyolite. They are dark-colored, medium textured, and used primarily for rangeland. Soil series consist of Blacknoll, Jipper, Jacoby, Eaglecone, Pyrenees, Hotspot, Nayrib, Pinebutte, Vadnais, Stoneman, Maremma, Crystalbutte, Cinderbutte, Malm, Matheson, Becreek, Mogg, Buist, Kilgore, and Idmonton; ranging from 0 to 12 percent slopes, except 5 to 35 percent slopes on crater/butte side slopes.

It is very difficult to give a generalized estimate on erosion hazards. Soil ratings in this area may be from slight to very severe erosion potential. Factors such as slope and depth to bedrock vary greatly with soils within these map units. The land capability class of the dominant soils range from 3e to 4e. However, soils that are shallow, rocky or wet are rated at 5w, 6e, 7e, 6s, and 7s. The available water holding capacity ranges from 0.3 to ? inches of water per foot of soil for the major soil types in this area. Rangeland management practices typically follow planned grazing systems to include rest and rotation of pastures. This system is augmented with stock water pipelines and tanks to provide watering to the grazing units.

The northern part of the watershed is mountainous, formed by the continental divide. Mostly timber covered, Douglas fir is the main tree species, but Lodge pole Pine, Limber Pine, Engelmann Spruce, and Quaking Aspen are common. Shrub species include Antelope Bitterbrush, Basin Big Sagebrush, Broom Snakeweed, Horse brush, Juniper, Mountain Big Sagebrush, Rabbit brush, three tip Sagebrush, and Wyoming Big Sagebrush. Forbs include Arrow leaf Balsamroot, Aster, Buckwheat Spp., Bushy Birds beak, Buttercup, Death Camas, Globe Mallow, Larkspur, Lupine, Onion, Phlox, Prickly Pear Cactus, Puss toes, Taper tip Hawks beard, Western Yarrow, Wooly pod Milkvetch, and Russian Thistle. Grass species include Basin Wildrye, Bluebunch Wheatgrass, Bluegrass spp, Idaho Fescue, Indian Rice grass, Mountain Brome, Needle-and-Thread, Prairie June grass, and Timothy. Rangeland east of Dubois is part of the Egin-Hamer wildlife closure area, which provides winter habitat for migrating herds of antelope, deer, elk, and moose. There is an emphasis on sage grouse study and management because the area has one of the largest populations of sage grouse in the state. The entire drainage possesses and supports numerous species of raptors. The sagebrush grassland also provides habitat for badger, coyote, fox, and raccoons.



### ***Grazed Forest:***

Forest resource use consists of private and public lands that are grazed by cattle and sheep, harvested for timber, and sources of recreational activities. Elevation ranges from 5,600 feet to 9,000 feet and precipitation ranges from less than 10 inches to 30 inches. Soil series consist of Koffgo, Monida, Zeebar, Edgway, Fitzwil, Vitricryands, Cryumbrepts-Rock Outcrop, Fourme, and Cryaquolls, poorly drained, ranging from 0 to 60 percent slopes. It is very difficult to give a generalized estimate on erosion hazards. Soil ratings in this area may be from slight to very severe erosion potential. Factors such as slope and depth to bedrock vary greatly with soils within these map units. Soil property and interpretation tables are listed by unit in the Targhee National Forest ecological unit inventory. The major limitations associated with the specific soil/units for this drainage are as follows: Fencing is severely limited because of rocky soils; unsurfaced roads and parking areas are severely limited because of soils having low strength; the use of heavy equipment for rangeland management is severely limited. The slopes of some units have a high potential for mass movement. Slump–earth flows and small slumps are common in the drainage ways. Shallow excavations and dwellings without basements are severely limited because of slope. Pond reservoir areas are severely limited because of seepage and slope. The potential off-road vehicle use is severely limited because the soils erode easily and compact easily. The potential for runoff from rain events or snowmelt is high. Evidence of overland and concentrated flows is common. The soils have reduced infiltration rates because of strong, coarse structure and hydrophobic conditions in the surface layers. The available water holding capacity ranges from 0.1 to 0.23 inches of water per inch of soil for the major soil types in this area. The most abundant tree species include Douglas fir, Lodge pole Pine, Quaking Aspen, Sub-Alpine Fir, and White bark pine. Shrub species include Currants, Huckleberry, Mountain Big Sagebrush, Snowberry, Spirea, and Willow Spp. Forbs

### ***Erosion***

Sheet and rill erosion by water on croplands and pasturelands in this watershed have been essentially static since 1982. Sheet and rill erosion is not a major issue on cropland in this sub basin. Susceptibility to sheet and rill erosion is low in this sub basin because the natural precipitation is low, and the cropland is relatively flat. Controlling erosion not only sustains the long-term productivity of the land, but also affects the amount of soil, pesticides, fertilizer, and other substances that move into the nation's waters. Wind erosion has decreased by slightly more than 2 tons per acre per year on cropland, pasture, and CRP in this sub basin between 1982 and 1997. Following a spike in wind erosion to approximately 10 tons per acre per year in 1987, wind erosion has decreased to approximately 5.5 tons per acre per year in 1997. Conservation practices that can be used to address wind erosion include surface wetting, surface roughening, windbreak, seedbed preparation (delayed seeding), mulching, and pasture and hay land planting.

## ***USFWS Endangered Species listings and occurrences for Jefferson County***

### ***Summary of Animal, Fish and Bird listings***

<b><u>Status</u></b>	<b>Species</b>
T	Lynx, Canada (Contiguous U.S. DPS) ( <i>Lynx canadensis</i> )
T	Grizzly Bear ( <i>Ursus arctos horribilis</i> )
E	Southern Mountain caribou ( <i>Rangifer tarandus caribou</i> )
R	North American Wolverine ( <i>Gulo gulo luscus</i> )
R	Greater sage-grouse ( <i>Centrocercus urophasianus</i> )
D	Peregrine Falcon ( <i>Falco peregrinus</i> )
T	Bull Trout ( <i>Salvelinus confluentus</i> )
E	Snake River physa snail ( <i>Physa natricina</i> )
C	Monarch Butterfly (Danaus plesippus)
P	Western Bumble Bee (Bombus occidentalis)
U	Suckley's Cuckoo (Bombus suckleyi)
P	Little Brown Bat (Myotis lucifugus)

### ***Summary of Plant listings***

<b><u>Status</u></b>	<b>Species</b>
T	McFarlane's four-o'clock ( <i>Mirabilis macfarlanei</i> )
T	Slickspot peppergrass ( <i>Lepidium papilliferum</i> )
T	Spalding's catchfly ( <i>Silene spaldingii</i> )
T	Whitebark Pine ( <i>Pinus albicaulis</i> )

T-Threatened C-Candidate E-Endangered D-Delisted or Removed U-Under Review

### ***District Staffing Requirements/ Needs***

- Part-time Conservation District Administrative Assistant, and education coordinator/specialist.
- Seasonal part-time employee to help with tree sales related duties February-April.

### ***Technical Assistance***

- In partnership with the Natural Resource Conservation Service (NRCS), the District is able to utilize Engineer, Range and Soil technical assistance. The Idaho Soil and Water Conservation Commission support the District with a Water Quality Specialist. The Clark SCD will seek and accept appropriate and legitimate technical assistance outside the NRCS and ISWCC when or if required.

## SECTION 4: Identify and Prioritize Objectives

### *Natural Resource Priorities and Goals:*

#### 1. Water Quality/ Quantity

- Promote improved water quality by complying with Idaho Water Quality Law Quality Law and Federal Clean Water Act.
- Supervisor will be active in attending the WAG meetings.
- Provide nutrient management technical assistance to producers on cropland and dairies.
- Attend South Fork Watershed Advisory Group and administer financial funds for administrative assistance.
- Educate people on Water management tools through Newsletters and hold an annual meeting in the spring.
- Keep landowners informed on NRCS programs through District Newsletters.
- Fish & Wildlife

#### 2. Irrigated Cropland

- Attend local conservation working group meetings.
- Promote EQIP, WHIP and other Farm Bill programs.
- Keep Landowners informed on NRCS programs through District newsletters
- Assist conservation partners with Farm Bill Programs

#### 3. Weed Management

- Major reduction of weed infestations in the Jefferson SWCD.
- Continue to support the CWMA and the Jefferson County Weed Department.
- The Jefferson SWCD will sponsor a Weed awareness meeting annually in March with a target of reaching 80 landowners and operators.
- Supply native grasses list that will grow in our area.
- Rangeland, Pasture & Hay Land, Irrigated, and Non- Irrigated

#### 4. Wind Erosion/ Windbreak habitat improvement

- Promote windbreak plantings through district newsletters and conservation tree sale program.

- Provide education awareness of conservation and water quality.
- Promote windbreak plantings, weed control and responsible use of pesticides.
- Work with planning and zoning on issues.
- Conduct a Conservation Tree Sale Program annually to encourage constituents to develop conservation and farmstead windbreaks.
- Non- Irrigated and Irrigated cropland.
- Sponsor a Soil Erosion meeting in Mud Lake

## 5. Information & Education

- Improve awareness of conservation in the district and the community.
- Sponsor and conduct a district tour.
- Create an Educational Program for Dolly the Idaho Dairy Cow to educate the youth and community about Agriculture.
- Conduct a conservation tree sale program.
- Publish newsletter annually.
- Nominate a cooperator annually for conservation award.
- Annually conduct youth environmental education programs and increase participation in – speech contest, poster contest, & sponsor Envirothon Teams
- Award scholarships to High School seniors seeking a degree in Ag
- Annually sponsor a fair booth.
- Hold an annual Weed Awareness meeting for the community.
- Provide a no-till drill for rent to promote minimum and no-till practices.

### ***Information and Education Priorities and Goals:***

- All 6<sup>th</sup> grade students will continue to have the opportunity to participate in the conservation poster contest.
- Conservation District cooperator addresses and files will be updated.
- All High School students will continue to have the opportunity to participate in the conservation speech contest.
- All High Schools represented in our district will have the opportunity to participate and be a part of the Envirothon team.
- High School Seniors seeking education in an Agriculture related field will continue to have the opportunity to apply for the Jefferson SWCD scholarship which is \$1,000.00 per student.
- All grade schools represented in our district will have the opportunity to participate with Dolly the Milk Cow
- Each year Jefferson SWCD will seek new opportunities to present Dolly the Milk Cow to audiences and educate on conservation.
- Each year Jefferson SWCD will reach out in the community and provide service and tree donations to better Jefferson County.

## SECTION 5: Water Quality Component

### ***Beaver-Camas Sub basin***

Hydrologic Unit Code	17040214
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Size	643,083 acres (1,005 square miles)
§303(d) Listed Stream Segments	Camas Creek (2 segments), Beaver Creek (2 segments), Cow Creek
Beneficial Uses Affected	Cold water, salmonid spawning, primary/secondary contact recreation, domestic water supply
Pollutants of Concern	Nutrients, sediment, temperature, flow alteration, habitat alteration
Major Land Uses	Range, irrigated agriculture, forestry
Date Approved by U.S. EPA	August 2005

### *Overview*

The Beaver-Camas Sub basin of southeast Idaho is a watershed of the Upper Snake River Basin. The watershed is the easternmost in a series of five "sinks drainages." The sub basin is dominated by both natural and human-caused flow alterations.

Data that has been collected and analyzed to evaluate the scope of the water quality has limiting issues on §303(d) listed and non-listed streams. Seven temperature TMDLs and one sediment TMDL have been developed in response to the data. Some TMDLs have been established for non-listed streams since water quality data show that there are exceedances of Idaho's water quality standards.

Stream bank erosion, reduced riparian vegetation, and low flow conditions are the causes of increased water temperatures in the sub basin. Riparian grazing is the principal source of temperature and sediment loading to the watershed. Elevated temperatures from reduced riparian vegetation and accelerated stream bank erosion have been exacerbated by an ongoing drought.

There are two §303(d) listed segments on Beaver Creek. Temperatures in the upper segment of the creek exceed the state standard and a TMDL was developed. Perennial flows are seldom seen in the lower segment; therefore, it is proposed to be de-listed for all currently listed pollutants and re-listed only as flow altered.

## SECTION 5: Water Quality Component

Camas Creek is §303(d) listed from its headwaters to its mouth (as two segments). Riparian grazing has contributed to bank erosion and elevated stream temperatures. Sediment and temperature TMDLs have been calculated to address the pollutants of concern in the upper segment. The lower segment of Camas Creek is intermittent and flow altered for irrigation; therefore, it is recommended this segment be listed only as flow altered. No TMDLs were developed for the lower segment.

Cow Creek is §303(d) listed but is an ephemeral stream and therefore should be de-listed; ephemeral streams are not expected to support the same biological communities as perennial waters.

Dairy, East Fork Camas, Modoc, Three Mile, and West Fork Camas Creeks are not §303(d) listed. However, stream temperature data show that there were major exceedances in Idaho's numeric temperature criteria in these creeks. Temperature TMDLs were established for all five streams.

TMDLs were not developed for streams listed as flow or habitat altered. The EPA does not believe that flow or habitat alterations are pollutants as defined by the Clean Water Act. Since TMDLs are not required for water bodies impaired by pollution but not pollutants, TMDLs were not developed for flow or habitat altered streams.

### ***Streams and Pollutants for which TMDL's were developed***

Beaver Creek	Temperature
Camas Creek	Sediment, Temperature
Dairy Creek	Temperature
East Camas Creek	Temperature
Modoc Creek	Temperature
Three mile Creek	Temperature
West Camas Creek	Temperature

## **SECTION 5: Water Quality Component**

### ***Medicine Lodge Sub basin***

Hydrologic Unit Code	17040215
Size	872 square miles
§303(d) Listed Stream Segments	Edie Creek, Irving Creek, Fritz Creek, Medicine Lodge Creek, Warm Springs Creek
Beneficial Uses Affected	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, domestic water supply, special resource water
Pollutants of Concern	Sediment, temperature, nutrients, flow alteration, habitat alteration
Major Land Uses	Grazing, irrigated agriculture, dryland farming

### ***Overview***

The Medicine Lodge watershed is located in southeastern Idaho and borders Montana to the north. The northern half of the sub basin is rural and occupied by about one person per every two acres. The southern half of the sub basin has a higher population but does not contain any of the flowing streams of the Medicine Lodge watershed.

This document assesses the §303(d) listed stream segments in the Medicine Lodge Sub basin as well as several other streams. Medicine Lodge Creek sinks and is diverted very soon after the town of Small, Idaho. Crooked Creek, Warm Springs Creek, and Deep Creek flow independently in drainages to the west of Medicine Lodge Creek. These streams also sink before reaching other water bodies.

Three species of salmonids have been documented in the watershed. Rainbow trout, brook trout, and Yellowstone cutthroat trout are all found throughout Medicine Lodge Creek and its tributaries. The Yellowstone cutthroat trout is a state sensitive species and is carefully managed by the Idaho Department of Fish and Game. Warm Springs Creek contains some warm water species of fish. Salmonid spawning has been determined an existing use for streams within the Medicine Lodge Sub basin, except for Warm Springs Creek, Divide Creek, Deep Creek, and the lower portion of Medicine Lodge Creek.

## **SECTION 5: Water Quality Component**

DEQ has collected data throughout the sub basin and has determined that sediment and temperature are the primary pollutants of concern. Instream sediment targets have been identified from literature values that are supportive of salmonid spawning and cold-water aquatic life. These target values will be used to track the progress of stream bank recovery and determine the need for additional management practices to improve water quality.

Sediment TMDLs were written for Medicine Lodge Creek, Irving Creek, and Edie Creek. Temperature TMDLs have been developed for 11 streams. Nutrient TMDLs will not be written for the streams in the Medicine Lodge Sub basin since there are no data indicating nutrient enrichment in any part of the watershed.

Edie and Irving Creeks are listed for habitat alteration, and Medicine Lodge Creek is listed for flow alteration. The U.S. Environmental Protection Agency does not believe that habitat or flow alterations are pollutants as defined by the Clean Water Act. Since TMDLs are not required for water bodies impaired by pollution but not pollutants, TMDLs were not developed for habitat or flow alteration.

### ***Streams and Pollutants for which TMDL's were developed***

Medicine Lodge Creek	Temperature, sediment
Fritz Creek	Temperature
Irving Creek	Temperature, sediment
Crooked Creek	Temperature
Deep Creek	Temperature

Edie Creek	Temperature, sediment
Horse Creek	Temperature
Indian Creek	Temperature
Middle Creek	Temperature
Warm Creek	Temperature
Webber Creek	Temperature

## SECTION 5: Water Quality Component

### *Idaho Falls sub basin*

Hydrologic Unit Code	17040201
§303(d) Listed Stream Segments	Birch Creek, South Fork Snake River, South Fork Willow Creek
Beneficial Uses Affected	Cold water aquatic life, salmonid spawning
Pollutants of Concern	Sediment, flow alteration
Major Land Uses	Agriculture, rangeland
Date Approved by U.S. EPA	November 2004

### ***Overview***

Three stream segments in the Idaho Falls sub basin are listed on the §303(d) list. The hydrology of the Idaho Falls sub basin is dominated by the Snake River and its associated diversion structures for irrigation of farmland on the Snake River Plain.

Flow in the South Fork Snake River is controlled upstream of the sub basin by Palisades Reservoir. Numerous irrigation diversions also influence flow on the South Fork Snake River. A small section of the South Fork Snake River at the eastern-most border of the sub basin is §303(d) listed for flow alteration, but a TMDL was not prepared for this. Flow is not considered a “pollutant” under the Clean Water Act, and TMDLs are not



required for pollution that isn't caused by a "pollutant." However, it is recommended that this stream reach remain on the §303(d) list for flow alteration.

South Fork Willow Creek has been §303(d) listed for sediment; however, this stream no longer exists as a natural watercourse. Since the construction of Ririe Dam in the 1970s, the flow in the Willow Creek/Sand Creek complex has been controlled for irrigation. Willow Creek, including both the North Fork and the South Forks, has been converted to canal conveyance structures with straightened channels and riprap style bank reinforcement. No water flows in these channels during the non-irrigation season. Therefore, it is recommended that South Fork Willow Creek be removed from the §303(d) list.

## SECTION 5: Water Quality Component

Birch Creek was added to the 1998 §303(d) list with unknown pollutants. A subsequent inspection of the water body revealed that the primary water quality problem is likely sediment from bank erosion. Birch Creek is in a predominantly dryland agricultural region and is constrained between a road and agricultural fields. No data were available for Birch Creek; hence, a TMDL for sediment was constructed by using the adjacent Antelope Creek TMDL as a proxy. Because of similar geology, soils, and land use, loading analyses from Antelope Creek will suffice until such time that erosion surveys can be completed for Birch Creek.

### *Stream and Pollutant for Which TMDLs Were Developed*

Birch Creek	Sediment
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## SECTION 6: Identify and Prioritize Projects

The Jefferson SWCD has identified projects and programs for State and County funding as follows:

- ✓ Maintain staff hours to conduct and implement District business
- ✓ Conduct Workshops and Tours and provide Publications on Water quality and quantity improvement projects, Rangeland, Crop and Hay land improvement projects and Sage Grouse Initiative projects
- ✓ Organize and conduct Awareness workshops
- ✓ Sponsor a Poster contest for 6<sup>th</sup> Graders
- ✓ Sponsor a Speech contest for High School students
- ✓ Award scholarships to High School seniors seeking a degree in Ag or natural resources- related fields
- ✓ Support and participate with the State Lands judging contest
- ✓ Support Idaho Ag in the Classroom
- ✓ Support and contribute to the High Country RC&D Cloud Seeding program
- ✓ Support the control of Noxious Weeds and hold our annual weed awareness meeting
- ✓ Provide the community with leadership and support for the conservation of natural resources
- ✓ Support of the IASCD, RC&D and IDEA
- ✓ Conduct our annual Conservation Tree Sale
- ✓ Provide information through district newsletters
- ✓ Nominate a cooperator annually for conservation award
- ✓ Annually sponsor a fair booth

- ✓ Visit and conduct conservation presentations to the schools
- ✓ Sponsor and help Envirothon teams and serve on the Envirothon board
- ✓ Provide a no-till drill for rent to promote minimum till and no-till practices.
- ✓ Present Dolly the Milk Cow in various educational venues

Implementations of these projects and activities are scheduled to take place through the fiscal year, starting July 1<sup>st</sup>, 2023, and have secured funding. The Jefferson SWCD Board of Supervisors and Administrative Staff will oversee the implementation of this work with the assistance from the NRCS, RC&D and County.

## SECTION 7: See Annual Plan of Work

### Key Decision Makers

#### ➤ **The Citizens in Jefferson Soil and Water Conservation District County Commissioners:**

Shane Young, District 1

Scott Hancock, District 2

Roger Clark, District 3

#### ➤ **County Planning and Zoning Administrator and Coordinator:**

Kevin Hathaway, Administrator

Tyson Schwartz, Code Compliance Coordinator

#### ➤ **Mayor of Rigby:**

Richard Datwyler

#### ➤ **State Legislators representing District 35, Conservation District:**

State Senator Van T. Burtenshaw

State Representative Rod Furniss

State Representative Jerald Raymond

#### ➤ **U.S. Senators, Representatives:**

U.S. Representative Michael Simpson

U.S. Senator Michael Crapo

U.S. Senator James Risch

#### ➤ **Conservation District Supervisors:**

Pat Hendren, Chairman

Pete McGarry, Vice Chairman

Lanny Burtenshaw, Member

Ric Sterzer, Member

Ryan Holman, Member

Bob Harrop, Member

### ➤ **Technical Expertise Groups:**

NRCS Field Office

NRCS Soils Office

High Country RC&D

University of Idaho Extension Office

Watershed Advisory Group (WAG)

Upper Snake Cooperative Weed Management Area

Jefferson County Noxious Weeds and Invasive Species Control Department

University of Idaho Extension Office

U.S. Bureau of Land Management

U.S. Forest Service

### ***Acronyms and Definitions***

#### ***Acronym***

AFO  
BLM  
USBoR  
CRP  
CWMA  
DEQ  
EQIP  
FSA  
IDA  
IDFG  
IDWR  
ISWC  
NRCS  
OSC  
RC&D  
SWCD

#### ***Defined***

Animal Feedlot Operation  
Bureau of Land Management  
U. S. Bureau of Reclamation  
Conservation Reserve Program  
Cooperative Weed Management Area  
Department Environmental Quality  
Environmental Quality Incentives Program  
Farm Service Agency  
Idaho Department of Agriculture  
Idaho Department of Fish and Game  
Idaho Department of Water Resources  
Idaho Soil and Water Conservation Commission  
Natural Resources Conservation Service  
Idaho Governor's Office of Species Conservation  
Resource Conservation and Development  
Soil and Water Conservation District

TNC	The Nature Conservancy
USDA	United States Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAG	Watershed Advisory Group
WHIP	Wildlife Habitat Incentives Program
WQPA	Water Quality Program for Agriculture

***Reference sources for information used to compile plan:***

United States Fish and Wildlife Service

Natural Resource Conservation Service Rapid Watershed Assessment

Idaho Department of Environmental Quality

Idaho Department of Commerce

Idaho Department of Labor

Idaho Soil and Water Conservation Commission

Jefferson Soil and Water Conservation District Annual Work Plan

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## **FY2020 (7/1/2023– 6/30/2024) Annual Plan of Work Jefferson Soil and Water Conservation District**

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**Conservation District Mission: Jefferson SWCD is dedicated to promoting good sound conservation. Jefferson SWCD also coordinates technical, financial, and educational assistance for responsible management to conserve and improve soil, water, and other natural resources on the land.**

**Trends Impacting Conservation in Jefferson County: loss of farmland to brisk growth of subdivision housing development, movement to pivots over flood irrigation, noxious weeds, burgeoning voles population and other pests, drought, increasing interest in high tunnel gardening**

**Projects Planned, Coordinated, or Managed: windbreak installations encouraged, no-till drill rental, workshop schedule expanded to target each community's conservation issues, tree and shrub sale**

**Funding Sources: Jefferson County, State of Idaho, annual tree and shrub sale**

**Board of Supervisors: Pat Hendren chairman, Pete McGarry vicechair, Lanny Burtenshaw, Ric Sterzer, Ryan Holman, Bob Harrop.**

*Jefferson Soil and Water Conservation District assisting land managers with their conservation choices*



## FY2020 (7/1/2023– 6/30/2024) Annual Plan of Work Jefferson Soil and Water Conservation District

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### **Conservation District Priority Number 1: Water Quality/Water Quantity**

**Goal(s): Promote improved water quality by complying with Idaho Water Quality Law and Federal clean Water Act. (DEQ, IDWR)**

**Objective: Provide administrative and technical assistance to assist producers with dairy and beef waste management, and to conserve water.**

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Board will offer administrative and financial assistance to water advisory groups concerned with water ways affecting Jefferson County.	Ongoing	Board/Staff
Educate people on water management tools through newsletter and hold an annual meeting in the Spring.	Yearly	Board/Staff
Provide nutrient management technical assistance to producers on cropland and dairies	As Needed	NRCS
Provide information on nutrient management issues through district newsletters.	Ongoing	Board/Staff

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## FY2020 (7/1/2023– 6/30/2024) Annual Plan of Work Jefferson Soil and Water Conservation District

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### Conservation District Priority Number 2: Irrigated Cropland

**Goal(s): Improve Irrigation water management and wind erosion control.**

**Objective: Improved irrigation water management and use all conservation measures to control wind erosion.**

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Attend local conservation working group (LWG) meetings.	Ongoing	Board/Staff/NRCS
Assist conservation partners with Farm Bill programs	Ongoing	Staff
Promote EQIP and other Farm Bill programs for cooperators.	Ongoing	Board/Staff/NRCS
Promote windbreak plantings through district newsletters and conservation tree sale program.	Ongoing	Staff
Sponsor a Soil Health meeting annually	Annually	Board/Staff/NRCS
Promote University of Idaho workshops (range school, pasture school etc.)	Ongoing	Staff

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## **FY2020 (7/1/2023 – 6/30/2024) Annual Plan of Work Jefferson Soil and Water Conservation District**

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### **Conservation District Priority Number 3: Weed Management**

**Goal(s): Major reduction of weed infestations in the district.**

**Objective: Continue public awareness of the need to control weed infestations through newsletters, fair booth, and Weed Awareness Meeting.**

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Support high priority areas with technical and financial assistance.	Ongoing	NRCS
Continue public awareness of the need to control weed infestations through newsletters, fair booth, and Weed Awareness meeting	annually, July, & March	Board/Staff
Provide a list of native grasses that will grow in our area.	Spring	Staff
Provide cooperators with information on funding and weed problem areas.	Spring	Board/Staff/NRCS

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## FY2020 (7/1/2023– 6/30/2024) Annual Plan of Work Jefferson Soil & Water Conservation District

### Conservation District Priority Number 4: Wind Erosion/Windbreak Habitat Improvement

**Goal(s):** To provide cooperators with the assistance and knowledge of how to properly install an effective windbreak.

**Objective:** To lessen wind erosion in the District by using all conservation measures to control wind erosion.

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Promote windbreak plantings through district newsletters and conservation tree sale program. Provide landowners trees at an affordable price.	Ongoing	Staff
Sponsor a Soil Health meeting Annually	Annually	Board/Staff/NRCS
Help with the planning and the design of the windbreaks. Give information on trees and bushes that will be suited best for their needs.	Spring	NRCS/Board/Staff
Provide cooperators with a tree planter and a landscape fabric laying machine.	Annually	Board/Staff
Attend local conservation working group meetings.	Ongoing	Board/Staff
Promote rental use of no-till drill to reduce wind erosion.	Annually	Board/Staff

*Jefferson Soil and Water Conservation District* assisting land managers with their conservation choices



## **FY2020 (7/1/2023– 6/30/2024) Annual Plan of Work Jefferson Soil & Water Conservation District**

### **Conservation District Priority Number 5: Information and Education**

**Goal(s): Improve awareness of conservation in the district and the community.**

**Objective: Increase knowledge of conservation practices.**

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Publish at least one newsletter annually. Maintain a webpage. Send stories related to conservation district activities to local newspaper.	Jan/Sept	Staff
Nominate a cooperator annually for conservation award.	March	Board/Staff
Annually promote conservation through a poster contest, speech contest, present at 3 <sup>rd</sup> grade Ag Day, promote Natural Resource Camp through scholarships, sponsor Envirothon Teams, offer financial and administrative support for Soil & Land Judging contest, administer scholarships to high school seniors seeking a degree in agriculture or biological science. Use Dolly the Milk Cow to educate youth and community on the importance of Ag.	Ongoing	Board/Staff
Annually sponsor a fair booth sharing District, NRCS & FSA information. Sponsor and conduct a district tour and annual weed awareness/soil health workshop.	Summer	Board/Staff
Conduct a conservation tree sale program annually to encourage constituents to develop windbreaks.	Spring	Staff
Offer rent of a no-till drill for the education of public about no-till & minimum till practices.	Ongoing	Board Chair/Staff

*Jefferson Soil & Water Conservation District assisting land managers with their conservation choices*





## **FY2020 (7/1/2023 – 6/30/2024) Annual Plan of Work Jefferson Soil & Water Conservation District**

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### **Conservation District Priority Number 6: District Operations**

**Goal(s): Increase effectiveness and efficiency of District Operations.**

**Objective: Improve effectiveness and knowledge of SWCD board members & district staff responsibilities.**

<b>Actions</b>	<b>Target Date</b>	<b>Individual(s) Responsible</b>
Complete a District Financial Review as per SWCC guidelines.	July	Board
District employee attend Div. VI IASCD, & IDEA meetings and trainings	Ongoing	Staff
Pay District Dues: NACD, IASCD, Division VI, IDEA, H C RC&D	When due	Board/Staff
Administrative Assistant does general office duties, bookkeeping, filing, reports, phone, walk-ins, workshops, trainings, and meetings, and purchase of office supplies	Ongoing	Staff
Supervisor's attend Div. VI, IASCD and other meeting when possible.	Ongoing	Board

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