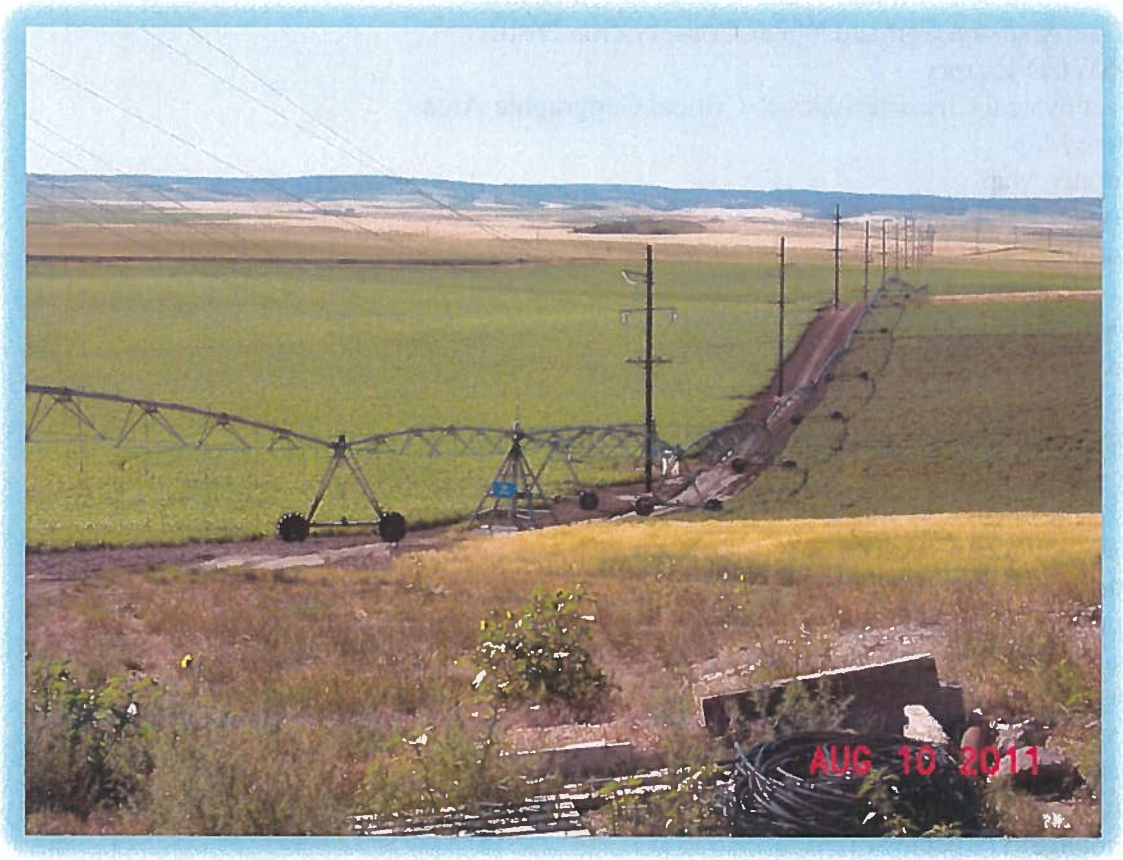
MADISON SOIL AND WATER CONSERVATON DISTRICT
302 PROFIT STREET
REXBURG, IDAHO 83440



FIVE-YEAR RESOURCE CONSERVATION

BUSINESS PLAN

2023 - 2028

Index

Cover page photo – Variable Frequency Drive Pivot – Rexburg Bench

Executive Summary or Forward

The Madison 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 aid 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 nonregulatory; 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 Agricultural and the Governor of Idaho that establishes a framework for cooperation.

The District's Annual Plan and Five-Year Resource Conservation Business Plan were 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 Madison 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 Madison Soil and Water Conservation District

To take available Technical, Financial and Educational resources, whatever their source, and focus or coordinate them so that they meet the needs of the local land user for conservation of Soil, Water and related resources. Also, to protect and improve the natural resources in Madison County for landowners to use for generations to come.

Vision of the Madison Soil and Water Conservation District

The vision of the district is to provide landowners and users with a legal mechanism whereby they might cooperate with one another and with state, local and federal agencies in establishing sound soil and water conservation measures within the district. Also, to encourage each landowner to put all land and water resources to the most beneficial use and to treat each acre in accordance with its needs for protection and improvement.

Values of the Madison Soil and Water Conservation District

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

Madison SWCD History

After the Madison Soil and Water Conservation District was organized February 2, 1948, farmers came to the SWCD primarily for help to modernize their irrigation systems, level land, and control the spread of noxious weeds. Ranchers sought assistance in improving the quality and quantity of forage for their cattle.

The SWCD includes all of Madison County in eastern Idaho. The first supervisors of the Madison SWCD were Wilford L. Jensen and Ed S. Covington, Rexburg; Clendon Gee, Sugar City; James H. Steel, Plano; and Glenn Sharp, Archer.

Agriculture remains the backbone of Madison County's economy. The amount of irrigated cropland has increased from 57,600 acres in 1948 to 112,525 acres in 1980, as farmers have steadily brought dry farmland under sprinkler irrigation. Potatoes, wheat, barley, and alfalfa hay are the major crops produced on irrigated land. Sugar beets, once a major crop in Madison County, have declined in importance but are making a gradual comeback.

Some of the conservation problems found on irrigated land when the SWCD formed are still problems today. Over-irrigation leads to erosion on much of the surface and sub-irrigated cropland. Irrigation systems that grew up with the farms need reorganizing for better water management. The SWCD encourages farmers to apply water according to crop needs and the soil's water-holding capacity. Leaving crop residues on the soil surface and using conservation tillage, along with soil-building crop rotations, will reduce erosion and improve yields on these lands.

Wheat and barley are the main crops raised on the approximately 100,000 acres of dry land farms in the SWCD. Slopes ranging to 20 percent allow early spring runoff to cause considerable erosion. The number and size of gullies on dry land farms is increasing each year, while soil fertility is declining. Wind erosion is also a common problem on dry land farms.

Dry land conservation practices have changed since the Madison SWCD was formed. Farmers have gradually replaced strip cropping on dry land farms with terraces and debris basins. The SWCD promotes these dry land conservation practices as well as stubble mulching, chiseling, and sub soiling.

Four major river channels in the Madison SWCD provide habitat for big game and upland game birds. The rivers are the North and South forks of the Snake River, the Teton River, and the Texas Slough. Fishing in the main channels and numerous streams is rated well throughout the SWCD. Sportsmen and landowners sometimes come into conflict over access to the main rivers and other public hunting and fishing areas. The Madison SWCD supports development of adequate access roads to public hunting and fishing facilities. The district also encourages private landowners to develop waterfowl nesting areas and needed food and cover for game birds.

After the Teton Dam collapsed on June 5, 1976, the SWCD assisted in the cleanup by publishing a county-wide plat book. 'Only traces of this tragedy remain today.

SECTION 1: Physical Characteristics of the District
(IDAPA.60.05.02.025.01)

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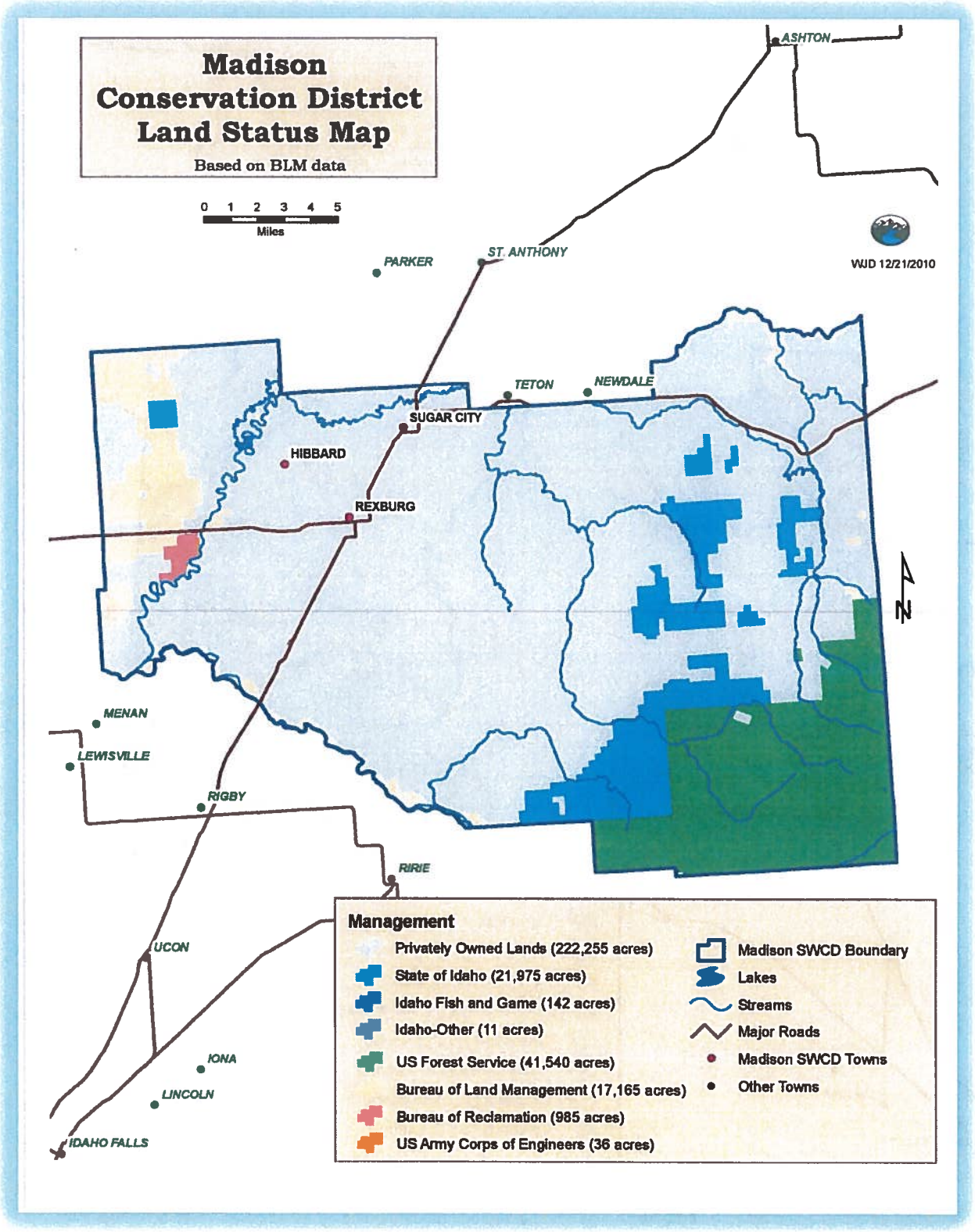

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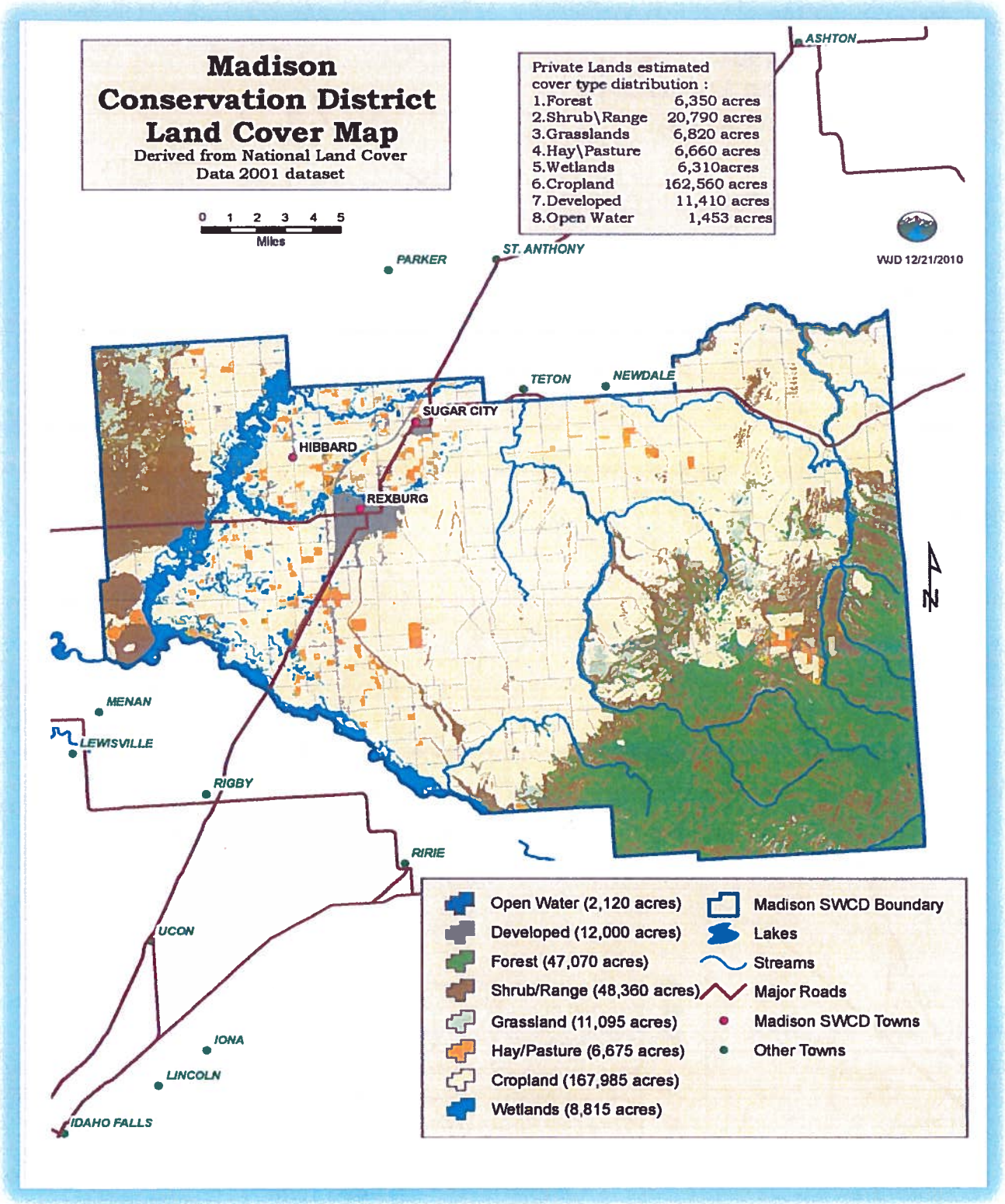

SECTION 2: Economic Conditions and Outlook
(IDAPA.60.05.02.025.02)

Population

Madison County's population increased 7.5 percent between 2009 and 2019 to 39,907. Brigham Young University-Idaho, a four-year college, is located in Madison County which has a major impact on the county's population. BYU-Idaho transferred from a two-year school to a four-year school in 2004 resulting in a major expansion. BYU-Idaho plans to further expand its student population through 2020.

The county's population slowed beginning in 2012 but has increased each year except for a slight dip in 2018.The City of Rexburg ranked 12th in the state in population. Rexburg is the largest city in the county with a population of 29,400 in 2019.

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
37,121	37,592	37,908	37,662	37,527	37,900	37,989	38,972	39,370	39,261	39,907
	1.27%	0.84%	-0.65%	-0.36%	0.99%	0.23%	2.59%	1.02%	-0.28%	1.65%

Labor Force & Employment

Madison County has maintained *the lowest unemployment rate in the state.* The annual unemployment rate for Madison County's unemployment rate has steadily declined since 2009 reaching a record low in 2018 at 1.7 percent but experienced a slight increase to 1.8 percent in 2019.

The county has been well below the national and state rates, and the expansion of existing businesses and emergence of new ones has kept its multilingual labor market very tight. Call centers are finding the bilingual skills of computer-trained students enticing. Of the county's major employers, three are call-center based. New business parks in Rexburg are also attracting many new and expanding businesses.

Trade generates about one-fourth of the county's jobs, strong in both retail and wholesale. Health care and education also play a large role, and the hospital is expanding as the number of clinics countywide increases. The university is still growing and adding more degree programs, fueling an increase in education employment.

Full-time students are not counted by the U.S. Bureau of Labor Statistics as part of the civilian labor force. As a result, these estimates can understate the actual size of the labor force and the unemployment rate for small counties with a large university presence. In 2013 the Idaho Department of Labor estimated the county's underemployment rate at 46.0 percent—highest in the state.

Major Employers
Brigham Young University - Idaho
Melaleuca, Inc
Madison Memorial Hospital
Broulim's Food town
Basic American Foods
Wal-Mart

SECTION 2: Economic Conditions and Outlook (IDAPA.60.05.02.025.02)

Labor Force	Oct 2020	Oct 2019
Civilian Labor Force	24,182	22,324
Total Employment	23,450	21,932
Unemployed	732	392
% of Labor Force Unemployed	3.0	1.8
State of Idaho % Unemployed	5.5	2.9
U.S. % Unemployed	6.9	3.6

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Civilian Labor Force	16,049	17,485	17,907	18,434	18,447	19,017	19,783	20,599	21,172	21,641	21,941
Unemployment	978	939	946	841	752	607	520	498	401	379	402
% of Labor Force Unemployed	6.1	5.4	5.3	4.6	4.1	3.2	2.6	2.4	1.9	1.8	1.8
Employment	15,071	16,546	16,961	17,593	17,695	18,410	19,263	20,101	20,771	21,262	21,539
State of Idaho	8.8	9.0	8.3	7.2	6.1	4.8	4.1	3.8	3.2	2.9	2.9
United States	9.3	9.6	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7

Covered Employment & Average Annual Wages Per Job for 2009, 2018 & 2019	2010		2019		2020	
	Average Employment	Average Wages	Average Employment	Average Wages	Average Employment	Average Wages
Total Covered Wages	12,025	$27,452	15,629	$30,872	15,777	$32,144
Agriculture	348	$26,927	361	$33,087	349	$32,734
Mining	**	**	**	**	**	**
Construction	445	$26,740	577	$35,784	608	$35,586
Manufacturing	799	$31,472	1,040	$35,083	1,058	$36,248
Trade, Utilities & Transportation	3,264	$22,829	3,112	$30,220	3,080	$31,354
Information	85	$21,173	58	$22,268	107	$23,491
Financial Activities	461	$25,931	607	$31,941	647	$33,263
Professional and Business Services	1,188	$22,427	2,604	$22,960	2,481	$25,208
Educational and Health Services	2,269	$41,763	3,202	$42,382	3,194	$44,880
Leisure and Hospitality	1,096	$9,908	1,616	$11,361	1,741	$11,176
Other Services	149	$22,219	276	$19,759	287	$21,370
Government	1,924	$31,097	2,174	$36,530	2,223	$37,569

Per Capita Income	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Madison County	$18,155	$18,489	$19,579	$20,844	$21,593	$22,052	$23,900	$23,981	$24,969	$27,628	$28,780
State of Idaho	$31,186	$31,957	$33,514	$35,190	$36,208	$37,905	$39,783	$40,567	$42,268	$44,554	$45,968
United States	$39,284	$40,547	$42,739	$44,605	$44,860	$47,071	$49,019	$50,015	$52,118	$54,606	$56,490

SECTION 2: Economic Conditions and Outlook
(IDAPA.60.05.02.025.02)

Trends Impacting Conservation in the Madison Soil and 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 (IDAPA. 60.05.02.025.03)

- 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 (IDAPA.60.05.02.025.02)

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.*

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.

SECTION 3: Assessment
(IDAPA.60.05.02.025.03)

Non-Irrigated Cropland

Primarily winter wheat/fallow (precipitation 10-14 inches), winter wheat/spring barley/fallow (precipitation 12-16 inches) or annual spring barley (precipitation 16-22 inches) on silt loams with slopes 0-16%. Non-irrigated cropland is often characterized by significant ephemeral gully and concentrated flow erosion as well as sheet and rill erosion. Conventional tillage results in less than 10% residue after planting. Application of nutrients and pesticides typically does not meet Idaho NRCS standards.

Surface Irrigated Cropland

Conventionally tilled, often intensively cultivated border irrigated cropland on 0-1% slopes. Precipitation is 12 inches or less. Soils are typically sandy loams, silt loams, and loams, and may have been extensively land-leveled in the past. Typical rotations small grains and alfalfa, although annual grain is also common. Nutrient, pest, and/or irrigation water management may be less than desirable. Impacted surface and/or ground water quality is common.

Sprinkler Irrigated Cropland

Conventionally tilled cropland on soils ranging from sands to loams. Rotations containing less than 66% high residue crops can lead to wind erosion problems. Wind erosion is typically a problem from March to June, creating air quality and visibility hazards in some portions of the sub basin. Various combinations of small grains, alfalfa, beets, potatoes, and barley are grown. Potatoes with one or two years of spring grain is a typical rotation on slopes ranging from 0-8%. These rotations may have sheet and rill and ephemeral gully erosion problems in the spring following potatoes. Sprinkler-irrigation induced erosion may also be a concern, especially on steeper slopes. Nutrient and pest management may be less than desirable. Irrigation water management and maintenance of sprinkler systems may be less than desirable. Wildlife habitat is often inadequate with limited permanent cover.

Hayland

Conventionally tilled, surface and sprinkler irrigated on 0-7% slopes. Precipitation is 20 inches or less per year with a growing season ranging from 80 to 160 days. Irrigation water is normally plentiful though ground water quantity is a concern in some areas. Small grains and alfalfa are grown in rotation, with alfalfa typically maintained for 4-6 years. Grazing of crop aftermath may occur. Nutrient, pest or irrigation water management may be less than desirable.
Non-irrigated upland hay consists of introduced perennial grasses and legumes. One cutting is common. Renovations occur every 6-10 years. Soils vary from loams to silt loams with slopes ranging from three to 30 percent. Precipitation is 16 inches or greater. Soil testing and fertility management is typically lacking. Grazing of crop aftermath is common.

Pasture

Some improved non-irrigated land pasture with introduced forage species including wheat grasses, fescues, bromes, orchard grass, sanfoin, clover and alfalfa. The older established stands are of low vigor, with encroachment of noxious weeds. Continuous season-long grazing is typical, with below-optimum forage production. No commercial fertilizers are applied, and pest management

practices are limited. Livestock water may be inadequate or poorly managed. Irrigated pastureland includes both low elevation pastures and high elevation mountain valleys. Irrigated pastures are sprinkler or surface irrigated on variable soils with slopes 1-5%. Irrigation water is distributed via earthen ditches, with tail water eventually returning to rivers or streams. Fields may have been leveled. Surface irrigation efficiency is 20-35%. Plants are introduced forage species and native perennials, conventionally tilled when rotating pasture (10 years) and grain (2 years). Commercial fertilizers and/or animal waste are sometimes applied, but without soil testing or nutrient management. Adjacent riparian areas are important for wildlife. Non-irrigated riparian pastures of native grass, sedge and rush species mixed with introduced timothy, smooth brome grass, creeping meadow foxtail, orchard grass and clover forage species are typically utilized by livestock from early spring through fall. Wildlife use these areas throughout the year. Annual precipitation is 20 inches or less. Soils are variable in texture on slopes of 0 to 2 percent. Nutrients are occasionally applied.

Rangeland

Mid elevation desert to high elevation, steep rangeland. Mid-elevation rangeland has precipitation ranging from 12-16 inches. This range consists of sagebrush, perennial bunchgrasses and forbs with variable soils on nearly level flats to benches and rolling hills. Frequent fires have eliminated some areas of sagebrush, with annual invaders dominant. Carrying capacity can be limited by available water. High elevation range has precipitation greater than 16 inches, on steep slopes and high mountain valleys. Land is utilized by antelope, deer, elk and livestock in winter and early spring. Areas are important sage grouse habitat. Riparian grazing units typically exhibit impacts to riparian vegetation and a loss of woody species. Riparian vegetation consists of grasses, sedges, rushes and a variety of woody species. These areas are important habitat for a variety of fish and wildlife. Soils vary from gravelly to loamy. Elevation and precipitation vary widely throughout the area. Access to riparian areas on all rangeland types is not typically managed, and temperature, nutrients, and sediment may be an associated water quality concern.

Headquarters

Livestock operations (AFO/CAFO), including winter feeding areas, that may or may not be adjacent to surface waters. Annual precipitation ranges from 8-25 inches and falls primarily from November to March. Soils vary from deep to shallow clays, silts, and sandy loams that are poor to excessively drained. Animal waste is typically applied to cropland or pasture and suitable acreage may be limited. There is a high risk to surface water and/or ground water due to inadequate or incomplete waste management systems and livestock operations and related structures built adjacent to waterways or in floodplains. Livestock often have direct access to waterways resulting in water quality, stream bank, and aquatic habitat concerns. Pesticides are often used without a management plan. Odor concerns may affect adjacent landowners.

The Madison Soil and Water Conservation District have actively promoted resource conservation practices within the sub basin. Conservation practices that can be used to address these water quality issues include erosion control, grazing management, irrigation water management, nutrient and pest management, residue management, conservation cover, stream bank enhancement/restoration, and riparian buffers, cropland and slight increase in non-cultivated cropland acres, along with improved erosion control.

SECTION 3: Assessment
(IDAPA.60.05.02.025.03)

Erosion

Sheet and rill erosion by water on the sub basin croplands, pasturelands and CRP have decreased since 1982. Water erosion rates have ranged from a high of about 3.9 tons per acre per year in 1982 to about 2.9 tons per acres per year in 1997. A slight decrease in acres of cultivated methods probably contributed to the decrease in water erosion over the 15-year period. Wind erosion rates on the sub basin croplands, pasturelands and CRP have fluctuated from about 2.5 tons per acre per year in 1982 to about 3.4 tons per acre per year in 1992 and then decreased to about 2.6 tons per acre per year in 1997.

USFWS Endangered Species listings and occurrences for Madison County, Idaho

Summary of Animal, Fish and Bird listings

Status	Species
T/DCH	Canadian Lynx *(Lynx canadensis)*
SC	Greater Sage-Grouse *(Centrocercus urophasianus)*

Summary of Plant listings

Status	Species
T	Ute Ladies'-Tresses *(Spiranthes diluvialis)*

T	-	Threatened Species
C	-	Candidate Species
P	-	Proposed Species
DCH	-	Designated Critical Habitat
SC	-	Species of Concern

SECTION 3: Assessment
(IDAPA.60.05.02.025.03)

District Operations: Financial

Income	
Clark SCD Contribution	11,500.00
Total Conservation Projects	10,000.00
County Appropriations	6,000.00
Equipment Rental	250.00
Interest Income	5.00
Base Funding	8,500.00
General	1,800.00
State Increase	12,000.00
Total State Appropriations	22,300.00
Tree Sale	5,000.00
Weed Fabric	6,400.00
Total Income	61,455.00
Expenses	
Audit	1,000.00
Board Meetings	150.00
Computer Expenses	500.00
Contributions	1,225.00
District Employee Travel	2,000.00
District Insurance	1,000.00
Division Meeting	100.00
Dues	2,400.00
Equipment Expense	55.00
IASCD Annual Meeting	1,800.00
Id State Insurance Fund	150.00
Internet	725.00
Licenses and Permits	100.00
Office Supplies	500.00
Payroll Expenses	27,000.00
Postage and Delivery	200.00
Annual Business Meeting	1,200.00
Conservation Projects	8,000.00
Newsletters	500.00
Public Meetings	350.00
Tours and Workshops	1,000.00
Youth Education	700.00
Public Outreach - Other	0.00
Total Public Outreach	11,750.00
QuickBooks renewal	400.00
Supervisor Travel	3,100.00
Tree & Shrub Labor	300.00
Trees, Shrubs, Fabric	7,000.00
Total Expense	61,455.00
Net Ordinary Income	0.00

SECTION 3: Assessment
(IDAPA.60.05.02.025.03)

District Staffing Requirements/ Needs (IDAPA.60.05.02.025.03)

- Full-time Conservation District Administrative Assistant with benefits
- Half Time Information and Education Staff with benefits

Technical Assistance (IDAPA.60.05.02.025.03)

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

SECTION 4: Identify and Prioritize Objectives (IDAPA.60.05.02.025.03)

Natural Resource Priorities and Goals that address Resource conditions and Conservation needs:

1. **Soil Quality (Rangeland, Irrigated & Non-Irrigated Cropland, Pasture & Hayland)**

- Actively support NRCS in their goal to implement Resource Management Systems through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- Use all available USDA Farm Programs to meet Soil Quality goals.
- Advise and provide technical support to producers to utilize Cover Crops to reduce Soil erosion through local working groups, information meetings, newsletters, tours and cost share programs and grants.

2. **Water Quality and Water Resources**

- To identify and develop priorities for water quality on limited streams by working with DEQ and BAG's through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- Aggressively plan and implement projects to improve water quality in county streams through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- The Madison SWCD will provide technical assistance to landowners and operators to meet the Idaho Water Quality Law and Federal Clean Water Act regulations.
- Improve irrigation water management by working with local Canal districts and local landowners.
- Address new water development issues such as urban subdivision developments by working with City and County Planning and Zoning departments.
- Promote conservation from flood irrigating to pivot systems for saving ground and surface water by working with the NRCS and local producers through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- Assist Canal Districts and producers with irrigation systems and recharge awareness.

3. **Vegetative Management (Rangeland, Irrigated & Non-Irrigated Cropland, Pasture & Hayland)**

- Supervisor participation in Coordinated Weed Management groups.
- Promote coordinated Weed Management area goals with cooperators and urban residents through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- Advertise, promote, monitor and provide technical assistance for conservation windbreaks through the Districts Annual Conservation Tree Sale.

4. **Riparian / Wetlands (Fish/Wildlife and Water Quality)**

- Create and promote an awareness of the value of riparian and wetland areas through local working groups, information meetings, newsletters, tours and cost share programs and grants.
- Determine and work with landowners who are interested in participating in applicable projects.
- Promote riparian conservation improvements through EQIP and other cost share programs.

5. **Fish and Wildlife**

- Promote and utilize EQIP, CRP, WHIP and WRP with eligible cooperators for habitat improvements.
- Continue the efforts to improve fish and wildlife habitats by promoting applicable programs and awareness through local working groups, information meetings, newsletters, tours and cost share programs and grants.

SECTION 4: Identify and Prioritize Objectives
(IDAPA.60.05.02.025.03)

Information and Education Priorities and Goals:

- By 2018 work with the County School District to provide all 5th and 6th grade students with the opportunity to participate in the annual conservation poster contest.
- By 2018 work with the County School District to provide all High School students the opportunity to participate in the annual conservation speech contest.
- Continue to seek and sponsor interested students to attend the annual Natural Resource Camp.
- Continue to publish informative newsletters to not only educate but promote conservation programs and practices.
- Continue to conduct tours, meetings and workshops to educate, promote and gain insight on conservation practices and concerns.
- Participate in legislative displays to educate and promote Natural Resource conservation to our legislative leaders.

District Operations Priorities, Goals:

- The Madison SWCD will continue to be the primary entity in Madison County to aid private landowners and land users in the conservation, sustainment, improvement and enhancement of Idaho's natural resources as stated in State Statute 22-2716.
- Ensure that new supervisors will have completed New Supervisor Training.
- In cooperation with the IASCD, ISWCC and Conservation Districts, develop and carry out an effective legislative outreach program to ensure 100 per cent State matching funds for all Districts.
- Invite and include legislative leaders (County, State and Federal) whenever possible, to tours and working groups to gain support and recognition for conservation practices and programs.
- Continue to lead and or participate in local workshops, meetings and seminars to address conservation programs and practices as well as the control of noxious Weeds.

SECTION 5: Water Quality Component
(IDAPA.60.05.02.025.03)

Teton River Sub basin

Hydrologic Unit Code	17040204
Size	1,133 square miles (725,120 acres)
§303(d) Listed Stream Segments	Badger Creek, Darby Creek, Fox Creek, Horseshoe Creek, Moody Creek, North Leigh Creek, Packsaddle Creek, South Leigh Creek, Spring Creek, Teton River (headwaters to Bitch Creek), North Fork Teton River
Beneficial Uses Affected	Cold water aquatic life, salmonid spawning
Pollutants of Concern	Sediment, nutrients, temperature, flow alteration, habitat modification
Major Land Uses	Agriculture, recreation
Date Approved by U.S. EPA	February 2003
Date Supplement Approved by U.S. EPA	September 2003

Overview

The Teton Sub basin is one of three watersheds that comprise the Henry's Fork Basin. The Teton River drains an area of 806 square miles in Idaho and 327 square miles in Wyoming. The river originates from headwater streams in the Teton, Big Hole, and Snake River mountain ranges and flows more than 64 miles to the point at which it discharges to the Henry's Fork River.

Teton Canyon contains the river for approximately 17 miles. In 1975, Teton Dam was completed at the lower end of the canyon to create a reservoir for irrigation water. In June 1976, when the reservoir behind the dam had almost filled, the earthen dam collapsed. More than 250,000 acre-feet of water and four million cubic yards of embankment material flowed through the breach in less than six hours.

SECTION 5: Water Quality Component (IDAPA.60.05.02.025.03)

The portion of the river below the dam was extensively altered by the flood and by the mitigation and restoration work that followed. However, the quality of water in the Teton Sub basin is generally good. Of the 13 segments (11 streams/rivers) in the sub basin on Idaho's 1998 §303(d) list, sediment is cited as the pollutant responsible for the impairment of nine. Agriculture is the main contributor of sediment. The other pollutants shown on the 1998 §303(d) list are also associated primarily with agriculture.

Sediment TMDLs were developed for eight water bodies and nutrient TMDLs for two in the original TMDL. Temperature TMDLs for Fox and Spring Creeks and a nutrient TMDL for Moody Creek were developed in the TMDL supplement. Sediment allocations for North Leigh Creek were included in the Spring Creek sediment TMDL.

Darby, Fox, Horseshoe, Packsaddle, and Spring Creeks are listed for flow alteration, and the Teton River is listed for habitat alteration. However, the U.S. Environmental Protection Agency does not believe that flow and habitat alteration 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 alteration.

Streams and Pollutants for Which TMDLs Were Developed

Original TMDL

Badger Creek	Sediment
Darby Creek	Sediment
Fox Creek	Sediment
Packsaddle Creek	Sediment
S. Leigh Creek	Sediment
Spring Creek	Sediment
Teton River	Sediment, nutrients (total phosphorus)
N. Fork Teton River	Sediment, nutrients (total phosphorus and nitrate)

Supplement

Fox Creek	Temperature
Moody Creek	Nutrients (total phosphorus and nitrogen)
Spring Creek	Temperature

SECTION 5: Water Quality Component
(IDAPA.60.05.02.025.03)

Key Findings

The Teton River subbasin has multiple AUs that are impaired by various pollutants. The primary pollutants are temperature, sediment, and *E. coli*. Since the 2003 TMDL, improvements to land uses have diminished but not eliminated the pollutant sources to the water bodies that cause impairments to their beneficial uses. However, there are still many AUs where the application and maintenance of best management practices (BMPs) are not sufficient to rectify impairments. Those TMDLs are still required or new TMDLs have been developed to identify those impairments and needed reductions to meet Idaho water quality standards. Since most of the pollutants are from nonpoint sources, the use of BMPs is essential. Temperature and sediment impairments are expected to persist about a decade after mitigation BMPs are applied so that natural stream processes and vegetation can recover. *E. coli* impairments are variable by season; mitigation options, such as exclosure fencing, can cause nearly instant improvements, as was the case in Warm Creek (in the Trail Creek sub watershed). In the case of the Woods Creek wetland region of the Teton River subbasin, the primary source of *E. coli* has been identified as avian in origin rather than from domesticated animals. In this case, alternative mitigation options may be required.

In total, 14 AUs received at least one new or updated TMDL (Table A).

- Temperature was determined to be impairing water quality in 5 unlisted AUs, and temperature load allocations are provided in this document. In addition, 5 AUs received updated temperature TMDLs using the current Idaho Department of Environmental Quality method for estimating shade.
- Sediment was found to be impairing beneficial uses in 1 listed AU, and 2 unlisted AUs; allocations for sediment load reductions are provided in this document. Additionally, 3 AUs received updated TMDLs for sediment impairments.
- *E. coli* was determined to be impairing water quality in 3 AUs; bacteria TMDLs are provided for restoring beneficial uses to these AUs.

A summary of assessment outcomes for listed and unlisted AUs in the 2012 Integrated Report is given in Table B. The "TMDL Completed" column refers to new or updated TMDLs in this addendum based on current determinations of watershed conditions.

Public Participation

This TMDL addendum was developed with participation from the Watershed Advisory Group (WAG, a.k.a.: Henry's Fork Watershed Council) and the Teton River technical advisory group. The last meeting with the technical advisory group took place in October 2015, after which their comments were taken and used to improve this addendum. DEQ presented this document to the WAG at the November 2015 Annual Watershed Conference and gave the group the opportunity to provide comments and approve the document for public comment. At this point, the group gave their approval for moving forward with the public comment process. Additional participation included meetings, field tours, and sampling with Friends of the Teton River; meetings with Teton Soil Conservation District and the National Resource Conservation Service; and monthly Henry's Fork Watershed Council meetings.

SECTION 5: Water Quality Component (IDAPA.60.05.02.025.03)

Table A. Water bodies and pollutants for which TMDLs were developed.

Assessment Unit Name	Assessment Unit Number	Pollutant(s)
South Fork Moody Creek – source to mouth	ID17040204SK006_02	Sedimentation/siltation
North Fork Moody Creek – source to mouth	ID17040204SK007_02	*Escherichia coli*
Teton River – Cache Bridge to Highway 33 Bridge	ID17040204SK017_04	Sedimentation/siltation (update); temperature
Teton River – Teton Creek to Cache Bridge	ID17040204SK020_04	Sedimentation/siltation (update); temperature
Teton River – Teton River – Tributaries between Trail Creek to Teton Creek	ID17040204SK026_02	Temperature (update)
Teton River – Trail Creek to Teton Creek	ID17040204SK026_04	Sedimentation/siltation (update); temperature
Teton River – Warm and Drake Creeks Confluence to Trail Creek	ID17040204SK028_03	Sedimentation/siltation; temperature
Trail Creek – Diversion to mouth	ID17040204SK035_03	Sedimentation/siltation
Fox Creek	ID17040204SK041_02	Temperature (update)
Fox Creek	ID17040204SK042_02	Temperature (update)
Driggs Springs spring creek complex – located between Teton Creek and Woods Creek	ID17040204SK049_02	*Escherichia coli*
Woods Creek	ID17040204SK050_02	*Escherichia coli*
Spring Creek – North Leigh Creek to mouth	ID17040204SK054_03	Temperature (update)
Spring Creek – source to North Leigh Creek	ID17040204SK056_02	Temperature (update)
Spring Creek – source to North Leigh Creek	ID17040204SK056_03	Temperature (update)

SECTION 6: Identify and Prioritize Projects (IDAPA.60.05.02.025.03)

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

- Maintain staff hours to conduct and implement District business and objectives.
- Conduct workshops and tours and provide publications on Water quality and quantity improvement projects, Crop and Hay land improvement projects and Wildlife Initiative projects.
- Organize and conduct Awareness workshops when needed.
- Conduct an annual Tree, Shrub and Weed barrier sale to promote Conservation Wind Breaks that prevent soil and water erosion as well the spread of noxious Weeds.
- Sponsor conservation outreach for County 5th and or 6th Graders.
- Sponsor conservation outreach County High School students.
- Operate the District equipment program (District owns and rents a Weed fabric layer and Tree planter).
- Sponsor the State Envirothon competition.
- Support the State Lands judging contest.
- Support the State Forestry contest.
- Support and contribute to the High Country RC&D Cloud Seeding program.
- Support and actively participate in the control of Noxious Weeds.
- Provide the community with leadership and support for the conservation of natural resources.
- Support of the IASCD, RC&D and IDEA.
- Sponsor local school's Conservation field trips to promote the conservation of our natural resources.
- The Madison SWCD will also continue to sponsor the Conservation Farmer of the Year which is an award that recognizes the conservation our natural resources by a county producer that is above and beyond normal practices.

The above projects and activities are ranked in a priority order however the Madison SWCD believes they have secured adequate funding to provide both staff and sponsorship of these activities for the next fiscal year.

Implementations of these projects and activities are scheduled to take place through the fiscal year, starting July 1st, 2015 and have secured funding. The Madison SWCD Board of Supervisors and Administrative Staff will oversee the implementation of this work with the assistance from the NRCS, RC&D and Madison County.

Key Conservation Decision Makers

- The Citizens within the Madison Soil and Water Conservation District
- County Commissioners;
  Todd Smith, Commission Chairman, 3rd District
  Brent Mendenhall, Commissioner, 1st District
  Dustin Parkinson, Commissioner, 2nd District
- County Planning and Zoning Administrator and Coordinator;
  Bradley Petersen, Administrator
- Mayor of Rexburg;
  Jerry Merrill
- Mayor of Sugar City;
  Steve Adams
- State legislators representing the Conservation District, Legislative District #34;
  State Senator, Doug Ricks
  House Seat A, Representative, Jon Weber
  House Seat B, Representative, Britt Raybould
- U.S. Senators and Representative;
  U.S. Senator, Michael Crapo
  U.S. Senator, James Risch
  U.S. Representative, Michael Simpson
- Conservation District Supervisors;
  Joe Jeppesen, Chairman
  Brett Ricks, Vice-Chairman
  Susan Hymas, Treasurer
  Rod Robison, Member
  Greg Blaser, Member
- Technical Expertise Groups;
  NRCS
  NRCS Soils Office
  U.S. Bureau of Land Management
  U.S. Forest Service
  U.S. Fish and Wildlife Service
  Idaho Department of Environmental Quality
  Idaho Department of Agriculture
  Madison County Weed Department
  High Country RC&D
  University of Idaho Extension Office
  Henry's Fork Foundation
  Upper Snake River Coordinated Weed Management Area
  Local Canal Companies

Acronyms and Definitions

Acronym	***Defined***
AFO	Animal Feedlot Operation
BLM	Bureau of Land Management
USBoR	U. S. Bureau of Reclamation
CRP	Conservation Reserve Program
CWMA	Cooperative Weed Management Area
DEQ	Department Environmental Quality
EQIP	Environmental Quality Incentives Program
FSA	Farm Service Agency
IDA	Idaho Department of Agriculture
IASCD	Idaho Association of District Conservation Districts
IDEA	Idaho District Employees Association
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
ISWC	Idaho Soil and Water Conservation Commission
NRCS	Natural Resources Conservation Service
OSC	Idaho Governor's Office of Species Conservation
RC&D	Resource Conservation and Development
SWCD	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
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

Idaho Department of Environmental Quality

Idaho Department of Commerce

Idaho Department of Labor

Madison Soil and Water Conservation District Annual Work Plan

conserving natural resources
for our future

FY-2024 (7/1/23 – 6/30/24) Annual Plan of Work
Madison Soil & Water Conservation District

For Information Contact: Chairman Joe Jeppesen
Telephone Number: (208) 497-3653
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Counties Served: Madison
Legislative District: 34

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Mission of the Madison Soil & Water Conservation District

To take available Technical, Financial and Educational resources, whatever their source, and focus or coordinate them so that they meet the needs of the local land user for conservation of Soil, Water, and related resources. Also, to protect and improve the natural resources in Madison County for landowners to use for generations to come.

Trends Impacting Conservation in the Madison Conservation District

Urban sprawl.
Noxious weeds.
Water quality/rights issues.

Projects Planned, Coordinated or Managed

Work with local, State and Federal organizations to improve Conservation and the quality of lands within Madison County.
Work on informing the community of noxious weeds and how to control and prevent them.
Develop and promote Erosion control projects.
Work on obtaining 319 grants when needed.

Funding Sources for District Operations and Projects Coordinated

Madison County: $6,500
State of Idaho: $13,000
Conservation tree and weed fabric sale program: $1,000.00

Priority Area Number 1: Soil Quality
Objective: To develop and implement Resource Management Systems.
Goal(s): To reduce non-point source pollution on irrigated & dry cropland.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Support NRCS in their goal to implement Resource Management Systems for the improvement of Soil quality.	Ongoing	Board
Use all available USDA Farm Programs to meet goal.	Ongoing	Board
Advise producers to utilize Cover Crops to reduce Soil erosion.	Ongoing	Board
Conduct Local Working Groups and Tours to promote Cover Crops for both county and area landowners and producers.	Ongoing	Board

Objective: Improve irrigation water management.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Seek financial and technical assistance from the Farm Bill in cooperation with Locally Lead Conservation Groups to improve Soil quality.	Ongoing	Board / LWG
Conduct annual tour to demonstrate irrigation and water management practices that improve Soil quality.	Ongoing	Board

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Madison Soil & Water Conservation District assisting landowners and operators with their conservation choices

Priority Area Number 2: Water Quality and Water Resources
Objective: To identify and develop priorities for water quality limited streams.
Goal(s): Madison SWCD will provide technical assistance to landowners and operators to meet the Idaho Water Quality Law and Federal Clean Water Act regulations.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Provide technical & financial assistance to Moody Creek & North Fork of the Teton river for landowners for Nutrient contamination.	Ongoing	Board
Continue to be aware of problem areas on Moody Creek. The Sub basin assessment on Moody Creek is complete.	Ongoing	Board
Work with producers on AFO/CAFO issues regarding water quality of area streams.	Ongoing	Board / NRCS

Objective: Determine District's priorities on 303(d) listed streams.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Participate in Henry's Fork Watershed Council area group.	Ongoing	Board
Provide guidance on agriculture and grazing BMP's	Ongoing	Board / NRCS
Provide seed funding and technical assistance to treat 303(d) listed streams.	Ongoing	Board / NRCS
Establish a public outreach program to inform the community of water quality issues through newsletters, and public meetings.	Ongoing	Board / Admin Asst

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Madison Soil & Water Conservation District assisting landowners and operators with their conservation choices

Priority Area Number 2: Water Quality and Water Resources (continued)
Objective: Improve irrigation water management
Goal(s): Address agriculture and irrigation water management
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
SWCD will address new water development issues such as urban subdivision developments.	Ongoing	Board
SWCD will participate in water rights meetings & decisions, salmon issues, adjudication, aquifer recharge, and setting TMDL's.	Ongoing	Board
Promote Variable Frequency Drives to producers to preserve Water and Energy.	Ongoing	Board / NRCS
Promote conversion from flood irrigating to sprinklers for savings of ground and surface water.	Ongoing	Board / NRCS
Assist Canal Districts and with Irrigation Systems and Recharge awareness.	Ongoing	Board / Canal Districts

Objective: Monitor conditions to determine needs of water users
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Be involved in development of supplemental sources of water through cloud seeding.	Ongoing	Board / RC&D
Be informed about Endangered Species Act and how it will impact Madison SWCD, cooperators, and potential cooperators (Urban).	Ongoing	Board / NRCS
Pursue opportunities for producers to convert to a variable speed pump from a regular pump for water conservation.	Ongoing	Board / NRCS

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Priority Area Number 3: Vegetative Management
Objective: Actively participate in Upper Snake Coordinated Weed Management Area.
Goal(s): Control the spread of noxious weeds in Madison County and improve vegetative cover for erosion control.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Supervisor participation in Coordinated Weed Management group.	Ongoing	Board
Promote coordinated weed management area's goals with cooperators and urban residents.	Ongoing	Board / NRCS
Promote RC&D measures.	Ongoing	Board

Objective: Conduct tree sale program for conservation.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Advertise, promote, monitor, and provide conservation windbreaks.	Annually	Admin Asst
Provide technical assistance for proper installation and maintenance of conservation windbreaks.	Annually	Board / NRCS
Monitor the effectiveness of conservation windbreaks.	Annually	Board / NRCS
Continue promoting windbreaks with demonstration projects.	Annually	Board / NRCS

Priority Area Number 4: Riparian / Wetlands
Objective: Request an assessment from NRCS and ISWCC on prioritized zones.
Goal(s): Assure & maintain the integrity and quality of riparian and wetland zones.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Create and promote an awareness of the value of riparian and wetland areas.	Ongoing	Board / NRCS
Determine and work with landowners who are interested in participating in projects.	Ongoing	Board / NRCS
Seek financial and technical assistance for Madison County landowners.	Ongoing	Board / NRCS
Promote riparian conservation improvements through EQIP and other cost share programs.	Ongoing	Board / NRCS

Priority Area Number 5: Fish & Wildlife
Objective: Utilization of CRP, EQIP, & WHIP with cooperators for habitat improvement.
Goal(s): Continuation of efforts to improve fish & wildlife habitat.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Promote EQIP, CRP, WHIP, and WRP with potential participants as a means to increase and improve Conservation of our Natural Resources.	Ongoing	Board / NRCS

Objective: Predator control to sustain and increase populations of upland game birds.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Evaluate the needs and methods for predator control of coyotes and fox.	Ongoing	Board
Seek opportunities to enhance sage grouse populations to prevent Endangered Species listing.	Ongoing	Board / Cooperating agencies

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Madison Soil & Water Conservation District assisting landowners and operators with their conservation choices

Additional Priority Areas: Animal Waste Management
Objective: To assist AFO/CAFO operators with animal waste management systems.
Goal(s): Identify and develop management systems to address animal waste as related to surface and ground water quality.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Assist landowners in complying with AFO/CAFO regulations.	Ongoing	Board

Board = Joe Jeppesen, Susan Hymas, Rod Robison, Greg Blaser and Brett Ricks

Madison Soil & Water Conservation District assisting landowners and operators with their conservation choices

Additional Priority Areas: Information / Education
Objective: To promote locating personal dwellings within County Planning & Zoning impact zone.
Goal(s): Foster an awareness of the need to protect farmland and open spaces.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Continue District Supervisor membership on Madison County Planning & Zoning Board.	Ongoing	Board
Provide resource information to Planning & Zoning Board. Work closely with the Planning & Zoning Board to become aware of new Housing sub-divisions.	Ongoing	Board
Advocate the protection of prime farmland.	Ongoing	Board

Objective: Continue to educate the public in Natural Resource Issues.
Action(s): Below

Actions for FY-2022	Target Dates	Person(s) Responsible
Continued support of youth educational opportunities.	Ongoing	Board / Admin Asst
Continue with newsletters semi-annually.	Ongoing	Board / Admin Asst
Promote good relations with legislators by keeping them informed on events happening with the District and attending legislative displays.	Ongoing	Board / Admin Asst
Promote good relations with news media.	Ongoing	Board / Admin Asst
The board sponsors a weed information seminar for Madison County residents.	Ongoing	Board/ Admin Asst

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Madison Soil & Water Conservation District assisting landowners and operators with their conservation choices

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Acronym Definitions

Admin Asst	-	**District Administrative Assistant**
AFO/CAFO	-	**Animal Feeding Operation / Concentrated Animal Feeding Operation**
BMP's	-	**Best Management Practices**
Board	-	**Is defined as the Madison SWCD Board of Supervisors**
CRP	-	**Conservation Reserve Program**
EQIP	-	**Environmental Quality Incentive Program**
ISWCC	-	**Idaho Soil and Water Conservation Commission**
LWG	-	**Local Working Group**
NRCS	-	**Natural Resource Conservation Service**
RC&D	-	**Resource Conservation and Development**
TMDL's	-	**Total Maximum Daily Loads**
WHIP	-	**Wildlife Habitat Incentive Program**
WRP	-	**Wetland Reserve Program**