

VALLEY SOIL AND WATER CONSERVATION DISTRICT
209 North Idaho Street
Cascade, ID 83611



FIVE-YEAR RESOURCE CONSERVATION BUSINESS PLAN
(7/1/22 – 6/30/2027)
AND
FY23 ANNUAL PLAN
(7/1/22 – 6/30/23)

Table of Contents

Introduction	3
Section 1 - Physical Characteristics of Valley County	3
Land	3
Ownership.....	3
Uses	3
Geology	4-6
Section 2 - Valley County Economic Conditions and Outlook	7
2017 Census of Agriculture.....	8-9
2021 Workforce Trends	10-14
Population, Labor Force and Employment	11
Nonfarm Payroll, Per Capita Income and Major Employers	13
Climate	15
Section 3 - Assessment	16
Soil Resources	16
Water Resources and Water Quality	16
Surface and Groundwater	17
Flooding and Drainage	17
Drought Conditions and Valley County Declaration	17
Section 4 – District Objectives	18
Cooperating Agencies and Organizations	19
Key Decision Makers and Contacts.....	19
5-year plan references and resource documents.....	19
Section 5 – Water Quality Component	20
Water Quality	20
Idaho’s 303(d) Impaired Waters List.....	20
Lake Cascade Harmful Algal Blooms 2018, 2019, 2020, 2021	
Section 6 – Conservation Project Priorities	21
Section 7 – Valley SWCD FY2023 Annual Implementation Plan	22

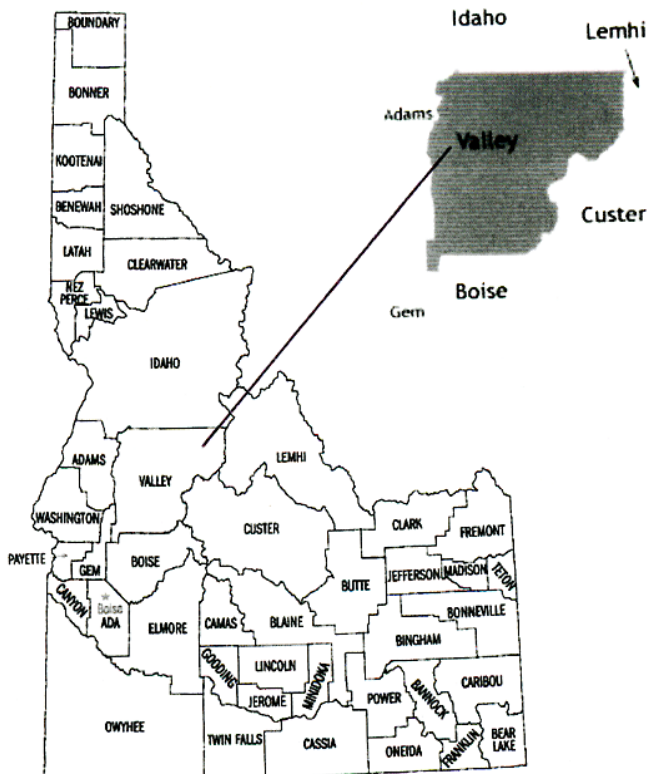
INTRODUCTION

The Valley Soil and Water Conservation District (SWCD), one of 50 soil and water conservation districts in the State of Idaho, was organized on February 11, 1957 following a public referendum. Conservation districts are one of the primary non-regulatory entities to protect, sustain and improve Idaho’s soil, water and other natural resources. Districts are separate legal entities and political subdivisions of state government but are not state agencies. Districts are led by a locally elected board of Supervisors who serve on a volunteer basis.

Valley SWCD encourages cooperation among landowners, government agencies, private organizations and elected officials to protect and develop multiple and beneficial uses of our natural resources. We believe that knowledge, peer involvement, cooperation and incentives are the best methods to improve and conserve our soil and water resources. Conservation Districts 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 (NRCS) provides technical assistance to landowners and land users through Conservation Districts. Each District in Idaho has a signed Mutual Agreement with the USDA Secretary of Agriculture and the Governor of Idaho that establishes a framework for cooperation.

This Five-Year Resource Conservation Business Plan and Annual Plan has been developed to guide Valley SWCD, and as a tool to help coordinate local joint partnership efforts, increase productivity of agriculture, and to protect and ensure a sustainable natural resource base for present and future generations. This document identifies Valley SWCD resource needs and presents a resource conservation action plan for meeting those needs.

SECTION 1 - PHYSICAL CHARACTERISTICS: Location, Land Ownership and Uses



Valley SWCD is located in west central Idaho and includes nearly all of Valley County, and is bordered by Adams, Gem, Boise, Lemhi, Custer and Idaho Counties. Valley County, established in 1917, is named after the Long Valley of the North Fork of the Payette River, which extends over 30 miles from Payette Lake at McCall south to Cascade and then to Round Valley. Valley County also serves as summer pasture for livestock from the Boise Treasure Valley and surrounding area.

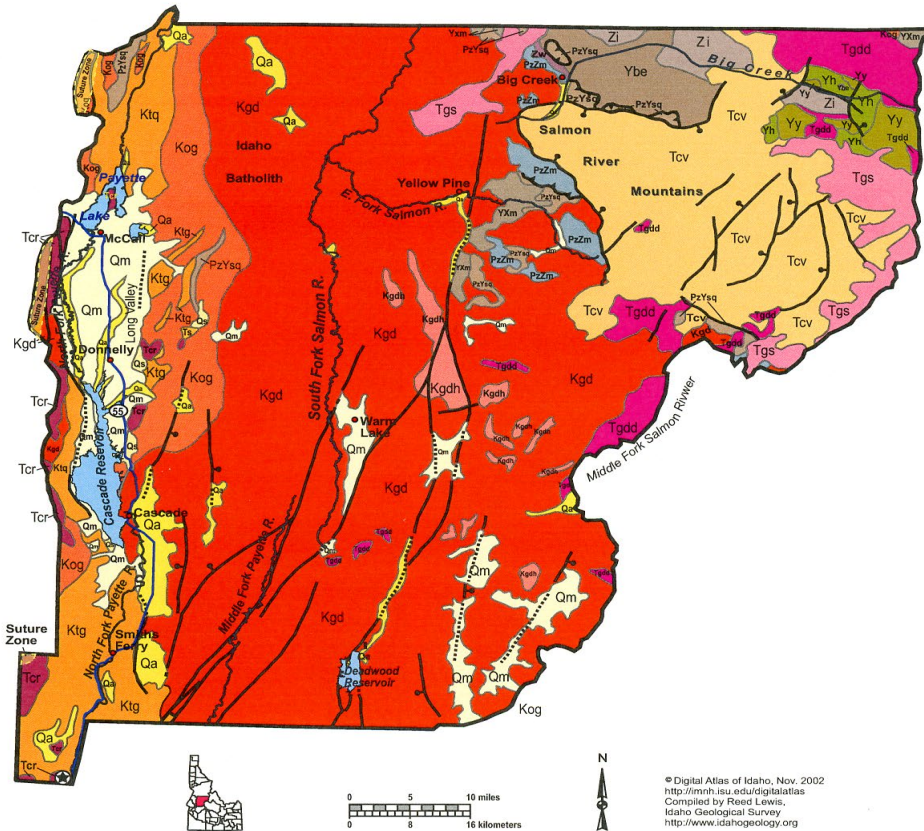
Since completion of the Cascade Dam in 1948, Cascade Reservoir, renamed Lake Cascade now covers much of the western central valley floor. The total land and water area of the Valley SWCD is nearly 3,680 square miles, over 2.3 million acres. Most is federally owned (88%), predominately forestland and overseen by the USDA National Forest Service. Approximately two-thirds of the private and state-owned lands are woodlands. These woodlands provide multiple uses – timber harvest, livestock grazing, wildlife habitat and recreation. About one-tenth of Valley Soil & Water Conservation District is rangeland and is utilized by livestock and wildlife.

Geology

The Idaho Batholith occupies in nearly all the mountainous areas surrounding Long Valley and Round Valley. A few intrusions of Columbia River basalt occupy on the valley floor in the upper Long Valley area. The northern end of the West Mountain range near McCall is made up of Columbia River basalt. The valley floor is the result of glaciations and sediment deposition by water.

The valleys are the result of a combination of glaciations and faulting. A survey in 1957 indicated a thickness of 7,000 feet of sediments in the Long Valley area between West Mountain and Donnelly (Geological Survey Bulletin 1331-A, 1970). The soils are developed in thin layers of sandy till and residuum weathered from bedrock in the Idaho Batholith and Columbia River basalt areas. In the McCall area, Payette Lake and Little Payette Lake areas are the result of glaciations.

Valley County, Idaho



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 Compiled by Reed Lewis,
 Idaho Geological Survey
<http://www.idahogeology.org>

Symbols	
	Geologic unit contacts with unit designation.
	Normal fault: certain; dashed where approximately located; dotted where concealed.
	Thrust fault: certain; dashed where approximately located; dotted where concealed.
	Detachment fault: certain; dashed where approximately located; dotted where concealed.
	Anticline: trace of axial plane; large arrow indicates direction of plunge.
	Syncline: trace of axial plane; large arrow indicates direction of plunge.
	Overturned anticline: trace of axial plane.
	Overturned syncline: trace of axial plane.
	Location of ISU Rockwalk rock from each county.
	Cities
	Feature location
Roads	
	Interstate Route
	U.S. Route
	State route

- Qa** Quaternary alluvial deposits
- Qm** Quaternary moraine (unsorted boulders, cobbles and sand) and glaciofluvial outwash (bedded stream deposits formed from streams draining active glacial ice).
- Qs** Quaternary surficial cover, including colluvium, fluvial, alluvial fan, lake, and windblown deposits. Included fluvial cover on Snake River Plain, (Snake River Group).
- Tcr** Miocene basalt (Columbia River Basalt Group); flood basalt, extensively exposed in western Idaho; fed by fissures, many of which are near the Idaho-Oregon border. Flowed eastward up valleys cut into the Idaho mountains.
- Tcv** Eocene Challis Volcanic Group, volcanics and volcanoclastics; Older andesitic lavas, intermediate age dacite lava and tuff and younger rhyolite flows and tuffs; 51 to 44 Ma. (Includes Potato Hill and Kamiah volcanics of northern Idaho).
- Tgs** Eocene granite, pink granite, syenite, rhyolite dikes, and rhyolitic shallow intrusive; last phase of the Challis magmatic event (46 to 44 Ma). Forms craggy scenic mountain landscape in central and northern Idaho.
- Tgdd** Eocene granodiorite and dacite porphyry intrusive, also includes diorite and, in northern Idaho, minor granitic rock; intermediate phase of Challis magmatic event (50 to 46 Ma). Summit Creek stock.
- Kog** Cretaceous orthogneiss, and foliated granodiorite and granite (includes mylonitic plutonic rocks in western Idaho suture zone); deformed early phases of the Idaho batholith.
- Kgdh** Cretaceous granitic rocks of the hornblende-biotite suite; granite, granodiorite and megacrystic granodiorite. Potassium (K) rich. Age about 80 to 90 Ma.
- Ktg** Cretaceous tonalite and quartz diorite; hornblende and biotite bearing early phases of the Idaho batholith. Intruded about 90 to 95 Ma.
- Kgd** Cretaceous granitic rocks of the 2 mica suite. Idaho batholith and related plutons; granite and granodiorite that contains both muscovite and biotite. Sodium (Na) rich. Intruded between 80 and 65 Ma.
- PzZm** Paleozoic/Neoproterozoic metasedimentary rocks, mainly quartzose sandstone (includes formation of Leaton Gulch).
- PzYsq** Paleozoic/Mesoproterozoic schist and quartzite; age uncertain.
- Zi** Neoproterozoic dioritic and syenitic intrusive rocks along Big Creek, west of the Middle Fork of the Salmon River; about 600 to 700 Ma.
- Zw** Windermere Supergroup (metasedimentary and metavolcanic rocks in Big Creek area and northern Idaho).
- Ybe** Belt Supergroup undivided; contains siltite, argillite, sandstone (quartzite) and minor conglomerate in Lemhi Range and near Salmon; includes Meadow Creek metamorphic sequence east of Elk City in the Clearwater River drainage.
- Yh** Hoodoo Quartzite (Ravalli Group); light-colored feldspathic sandstone, cross bedded.
- Yy** Yellowjacket Formation in the type area near Yellowjacket Mine, Bighorn Crags, and west to town of Big Creek. Contains siltite, calc-silicate rocks, and fine sandstone.
- YXm** High-grade metamorphic rocks (schist, gneiss, quartzite, calc-silicate rocks); includes Elk City metamorphic sequence and related rocks, Syringa metamorphic sequence, and Priest River metamorphic complex.

Valley County

Valley County covers a huge area in central Idaho, from Long Valley and McCall east to the Middle Fork of the Salmon River. The South Fork of the Salmon divides the county in two, flowing north toward the Main Salmon river, which is north across the border in Idaho county. The Payette River drains southward in the western part of the county.

On the extreme northwest are accreted terrane rocks west of the Idaho suture zone.

East of the suture are Cretaceous tonalites and orthogneiss of the Idaho batholith, which pass eastward to granodiorite that underlies the bulk of the county. A few inliers of Proterozoic and Paleozoic sedimentary rocks remain, as roof pendants to the batholith.

On the northeast is a downdropped block, the Thunder Mountain caldera, filled with Eocene Challis volcanic group rocks. North of this block of volcanic rocks is a northwest trending belt along Big Creek that exposes Mesoproterozoic Belt Supergroup strata and unique Neoproterozoic intrusive rocks.

Miocene and younger north-striking faults, part of the Basin and Range system, cut the batholith of the central part of the county, and form the Long Valley graben near Cascade Reservoir and Payette Lake.

Geology near McCall

Three major rock groups are exposed near McCall, Idaho. These include: the Cretaceous Idaho batholith, the Triassic-Jurassic metamorphosed island-arc sedimentary and volcanic rocks of the Seven Devils Group and the Miocene flood-basalt flows of the Columbia River Basalt Group. Several structural features are prevalent in the area and most likely control along with the past glaciation the geomorphology in the region.

Structurally, McCall is situated at the end of Long Valley, a major tectonic and structural feature of west central Idaho. The West Mountain escarpment is the high ridge formed along the west side of the Long Valley fault. West Mountain and Long Valley are part of a group of linear north-south ranges and valleys formed by block faulting during the late Tertiary and Quaternary. As West Mountain rose and Long Valley subsided, as much as 7,000 feet of alluvium accumulated in the valley (Idaho Geological Survey website .)

Glacial deposits are divided into two categories on the basis of origin. "Till" is unsorted, rounded glacial sediments which commonly form moraines. Moraines can be one of four types. "Lateral" moraines are formed from the large accumulations of unsorted debris at the glacier-valley wall interface. "Medial" moraines form when two glaciers merge, and their lateral moraines are incorporated into the center – or medial portion – of the glacier, much like when two streams come together. A "Terminal" moraine is one that marks the furthest advance of the glacier; each farther-reaching advance wipes out the previous terminal moraine. "Recessional" moraines mark periods when the glacier is retreating – that is, the end of the glacier (the snout) where moraine is being deposited is short of the terminal glacier. It is important to remember, however, that even when a glacier is retreating the ice and sediment movement is always forward. In terms of glacial sediment transport, a glacier is not unlike a conveyor belt that can lengthen and shorten as conditions mandate.

The second category of glacial deposit is not formed by flowing ice, but flowing water and is referred to as outwash. "Outwash" is deposited by meltwater discharging at the base of glaciers. Outwash from glaciers commonly forms expansive braided stream networks downvalley from glaciers and differ from moraines in that outwash sediments are well-sorted. For further information on glaciers and glacial geomorphology, please visit the USGS website .

Glacial features can be found around the area as most of the broad, high elevation region north of McCall was buried by an ice cap during the Pleistocene. Payette Lake and Little Payette Lake were formed as a result of glaciation in the region as valley glaciers carved the basin and deposited the moraines which impound the lakes. Other glacial geomorphic features, such as cirques – the alpine headwalls where glaciers begin – and medial moraines, around the area are visible in the landscape. An example would be Timber Ridge which formed originally as a large prominent medial moraine. Meltwater streams from these glaciers coursed across the valley depositing thick deposits of sand and gravel that can be seen as high terraces above the Payette River. These terraces are relict valley floors that have been incised as the post-glacial climate has changed and discharges in the Payette drainages have diminished.

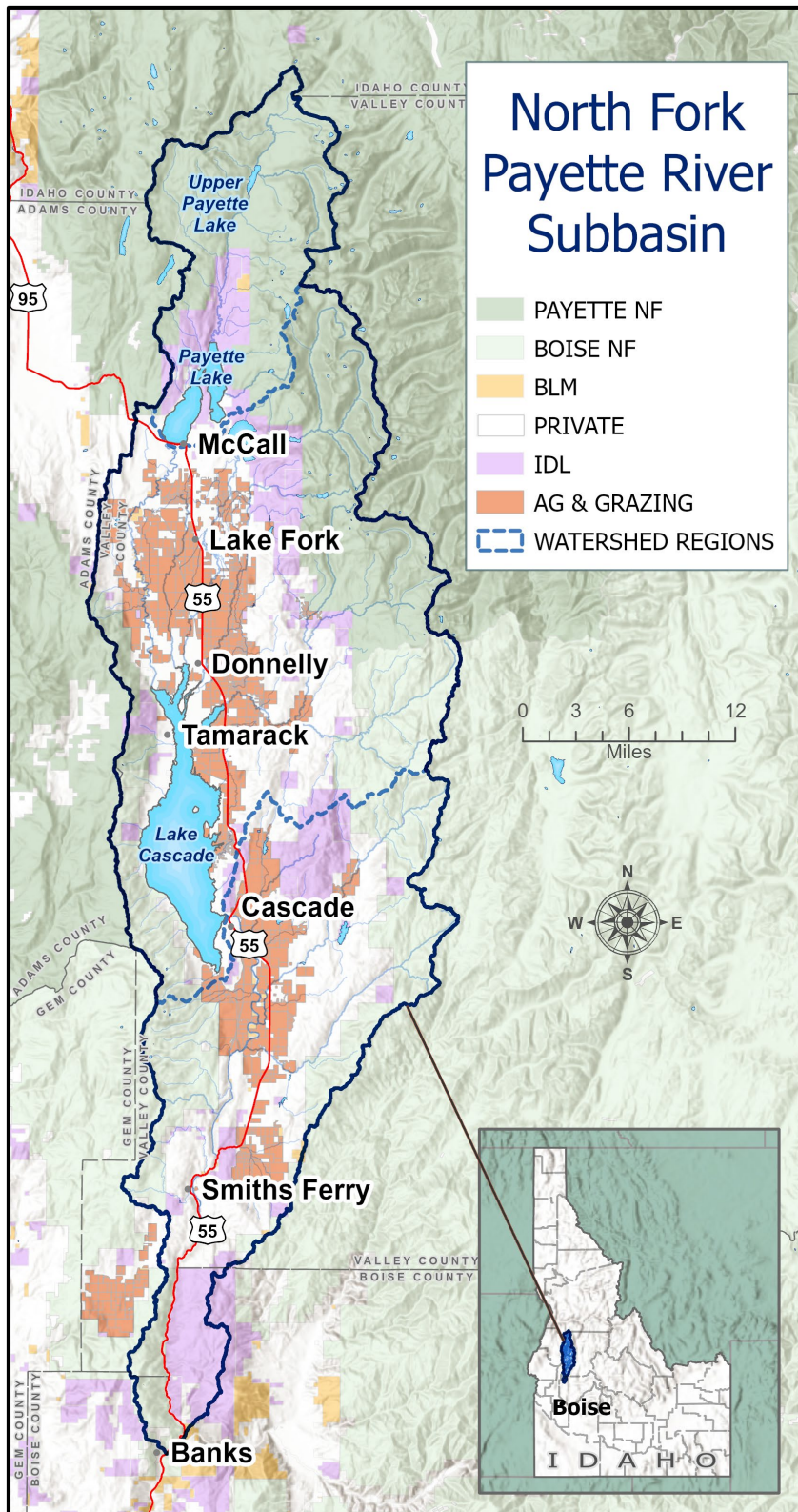
See Winston et al. article in Guidebook to the Geology of Eastern Idaho.

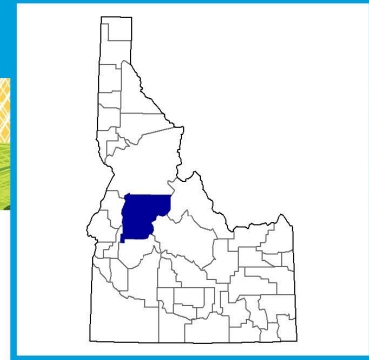
Tamra Schiappa and P.K. Link, 10/02

SECTION 2 ECONOMIC CONDITIONS AND OUTLOOK

The 2017 Census of Agriculture for Valley County lists 50,959 acres as farmland, a 17% decrease from 2012 census with an average farm size of 271 acres, a 48% decrease from 2012. Cattle continue to be trucked

in for the summer to graze a majority of the primarily irrigated pastureland which is 65.4% of the farmland in Valley County. Livestock share of sales at 91%, compared to crops at 9%, reflects the major source of Agriculture Market Value of Products sold in Valley County. Note: 2017 Census of Agriculture – Valley County Profile on the next two pages for further information. A Census of Agriculture, completed every five years, has been updated to most current census completed in 2017 with data published in 2020. Recreation and tourism are of major importance to the Valley County economy. Fishing, boating, hunting and camping attract many visitors. Wildlife is abundant in the District. Big game animals, particularly deer and elk, utilize the woodlands and rangelands. Waterfowl and raptors live on and around the many lakes, reservoirs and streams. Small animals and birds abound throughout the county. Many species of fish inhabit the water bodies. However, only a small amount of acres have been set aside as wildlife acres. Other land uses include mining, lands incorporated in towns, platted subdivisions and some industrial uses. Conservation efforts for these lands involve integrated land use changes with surrounding and existing uses





Valley County Idaho

Total and Per Farm Overview, 2017 and change since 2012

	2017	% change since 2012
Number of farms	188	+61
Land in farms (acres)	50,959	-17
Average size of farm (acres)	271	-48
Total (\$)		
Market value of products sold	10,541,000	+59
Government payments	84,000	+35
Farm-related income	773,000	-15
Total farm production expenses	8,394,000	+20
Net cash farm income	3,004,000	+383
Per farm average (\$)		
Market value of products sold	56,069	-1
Government payments (average per farm receiving)	10,520	+154
Farm-related income	9,790	-57
Total farm production expenses	44,650	-25
Net cash farm income	15,981	+200

(Z) Percent of state agriculture sales

Share of Sales by Type (%)

Crops	9
Livestock, poultry, and products	91

Land in Farms by Use (%)^a

Cropland	8
Pastureland	75
Woodland	14
Other	3

Acres irrigated: 22,112

43% of land in farms

Land Use Practices (% of farms)

No till	2
Reduced till	1
Intensive till	5
Cover crop	2

Farms by Value of Sales

	Number	Percent of Total ^a
Less than \$2,500	78	41
\$2,500 to \$4,999	19	10
\$5,000 to \$9,999	16	9
\$10,000 to \$24,999	25	13
\$25,000 to \$49,999	21	11
\$50,000 to \$99,999	14	7
\$100,000 or more	15	8

Farms by Size

	Number	Percent of Total ^a
1 to 9 acres	50	27
10 to 49 acres	58	31
50 to 179 acres	32	17
180 to 499 acres	21	11
500 to 999 acres	15	8
1,000 + acres	12	6



Market Value of Agricultural Products Sold

	Sales (\$1,000)	Rank in State ^b	Counties Producing Item	Rank in U.S. ^b	Counties Producing Item
Total	10,541	40	44	2,646	3,077
Crops	922	43	44	2,842	3,073
Grains, oilseeds, dry beans, dry peas	(D)	39	42	(D)	2,916
Tobacco	-	-	-	-	323
Cotton and cottonseed	-	-	-	-	647
Vegetables, melons, potatoes, sweet potatoes	32	33	41	1,872	2,821
Fruits, tree nuts, berries	-	-	37	-	2,748
Nursery, greenhouse, floriculture, sod	(D)	27	43	(D)	2,601
Cultivated Christmas trees, short rotation woody crops	-	-	14	-	1,384
Other crops and hay	530	42	44	2,299	3,040
Livestock, poultry, and products	9,619	30	44	2,133	3,073
Poultry and eggs	1	40	43	2,112	3,007
Cattle and calves	(D)	31	44	(D)	3,055
Milk from cows	(D)	34	35	1,121	1,892
Hogs and pigs	13	23	40	1,507	2,856
Sheep, goats, wool, mohair, milk	28	38	43	2,051	2,984
Horses, ponies, mules, burros, donkeys	43	35	44	1,878	2,970
Aquaculture	(D)	4	22	(D)	1,251
Other animals and animal products	62	26	42	914	2,878

Total Producers ^c	329	Percent of farms that:	Top Crops in Acres ^d
Sex		Have internet access	68
Male	186	Farm organically	1
Female	143	Sell directly to consumers	11
Age		Hire farm labor	22
<35	26	Are family farms	93
35 – 64	177		
65 and older	126		
Race			
American Indian/Alaska Native	1		
Asian	3		
Black or African American	-		
Native Hawaiian/Pacific Islander	-		
White	325		
More than one race	-		
Other characteristics			
Hispanic, Latino, Spanish origin	-		
With military service	38		
New and beginning farmers	124		
			Livestock Inventory (Dec 31, 2017)
			Broilers and other meat-type chickens
			Cattle and calves
			Goats
			Hogs and pigs
			Horses and ponies
			Layers
			Pullets
			Sheep and lambs
			Turkeys

See 2017 Census of Agriculture, U.S. Summary and State Data, for complete footnotes, explanations, definitions, commodity descriptions, and methodology.

^a May not add to 100% due to rounding. ^b Among counties whose rank can be displayed. ^c Data collected for a maximum of four producers per farm.

^d Crop commodity names may be shortened; see full names at www.nass.usda.gov/go/cropnames.pdf. ^e Position below the line does not indicate rank. (D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.

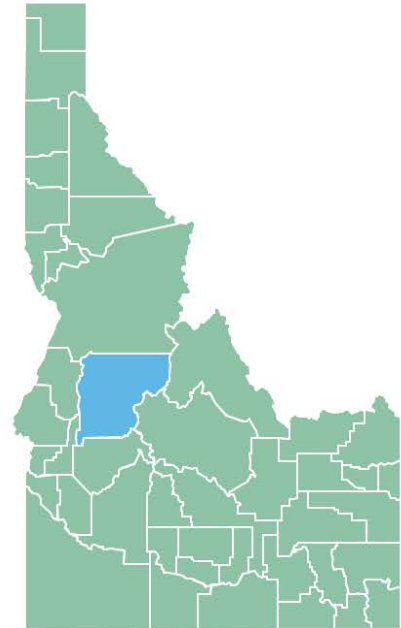
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Valley County Labor Force And Economic Profile

Last Updated: January 2022

Valley County Economic Overview

Civilian Labor Force (Dec 2021)	5,732
Unemployment Rate (Dec 2021)	2.5%
Population (2020)	11,792
Median Household Income (2019)	\$64,475
Per Capita Personal Income (2020)	\$52,298
Poverty Rate (2019)	7.2%



Idaho Department of Labor

labor.idaho.gov



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1. County Demographic Characteristics, 2019

	Valley County	Valley County (%)	State of Idaho (%)	United States (%)
Total Population	10,709	100.0%	1,717,750	324,697,795
Race and Ethnicity				
White alone, not hispanic	10,130	94.6%	82.0%	60.7%
Black or African American alone, not hispanic	6	0.1%	0.7%	12.3%
Native American alone, not hispanic	22	0.2%	1.1%	0.7%
Asian alone, not hispanic	26	0.2%	1.3%	5.5%
Hispanic, or Latino (of any race)	495	4.6%	12.5%	18.0%
Gender				
Male	5,411	50.5%	50.1%	49.2%
Female	5,298	49.5%	49.9%	50.8%
Age				
Median age	50.6	-	40.3	38.1
Under 18 years	1,819	17.0%	25.7%	22.6%
Over 18 years	8,890	83.0%	74.3%	77.4%
21 years and over	8,520	79.6%	64.9%	67.9%
Over 65 years	2,949	27.5%	15.4%	15.6%
Educational Attainment (Population 25 years and Over)				
Less than 9th grade	114	1.1%	2.2%	3.5%
High school graduate (with equivalencies)	2,272	21.2%	17.8%	18.3%
Some college, no degree	2,583	24.1%	16.9%	13.9%
Associate's degree	617	5.8%	6.4%	5.8%
Bachelor's degree	1,684	15.7%	12.1%	13.4%
Graduate or professional degree	904	8.4%	5.8%	8.4%
Median Household Income	\$64,475	-	\$56,605	\$62,843

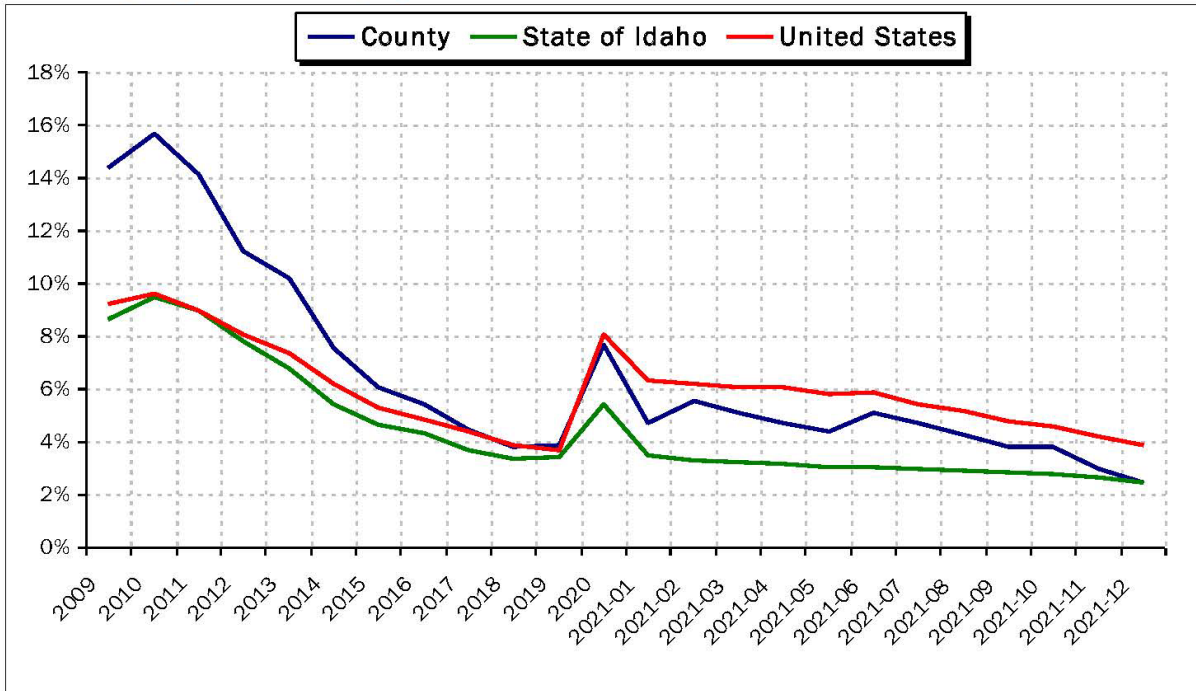
Source: US Census Bureau, American Community Survey 2019 5-Year Estimates

2. Labor Force

	Labor Force	Employment	Unemployed	Unemployment Rate
December 2021	5,732	5,590	142	2.5%
December 2020	6,427	6,061	366	5.7%

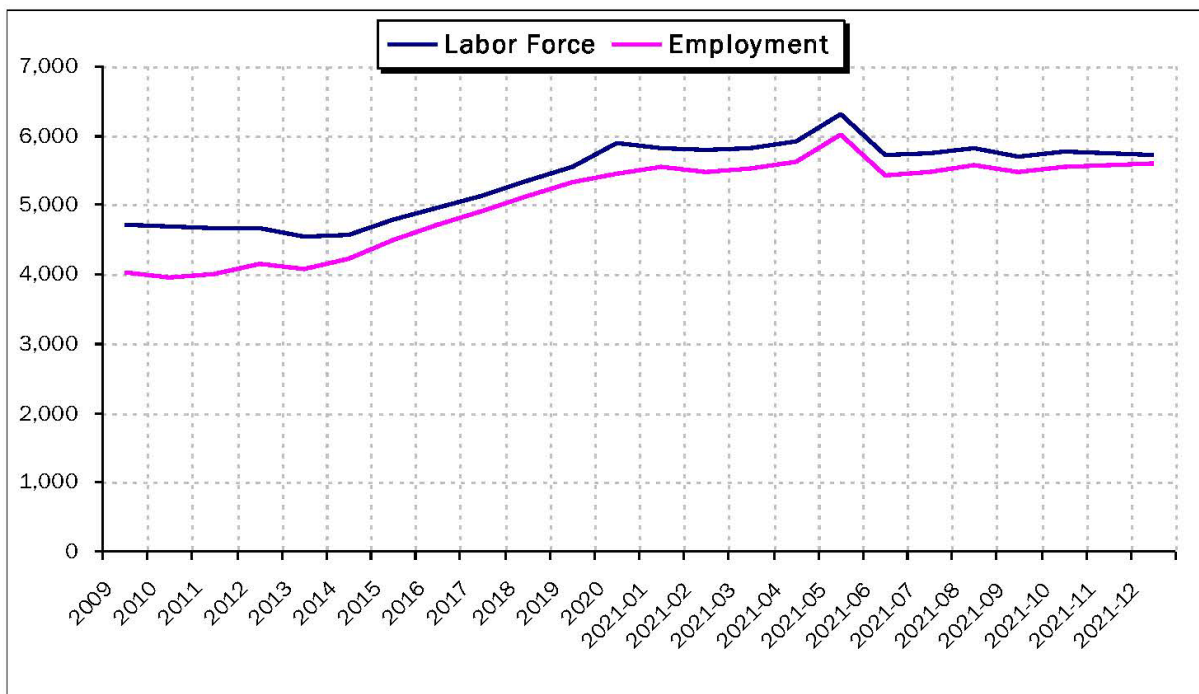
Source: Idaho Department of Labor

3. Seasonally-Adjusted Unemployment Rate, 2009 - Current



Source: Idaho Department of Labor

4. Seasonally-Adjusted Labor Force and Employment, 2009 - Current



Source: Idaho Department of Labor

5. Industry Employment and Wages - 2010, 2019 and 2020

Supersector	2010		2019		2020	
	Average Employment	Average Wages	Average Employment	Average Wages	Average Employment	Average Wages
Total Covered Wages	3,613	\$29,377	4,940	\$37,841	4,697	\$40,355
Natural Resources and Mining	64	\$37,778	90	\$58,648	85	\$61,412
Construction	260	\$30,944	545	\$41,508	413	\$39,435
Manufacturing	43	\$27,027	36	\$34,947	31	\$42,750
Trade, Transportation, and Utilities	664	\$27,416	851	\$38,229	862	\$40,208
Information	44	\$46,885	50	\$63,561	27	\$52,603
Financial Activities	201	\$28,315	204	\$39,205	222	\$46,623
Professional and Business Services	126	\$30,332	204	\$40,467	197	\$43,328
Education and Health Services	612	\$37,651	738	\$50,569	751	\$52,068
Leisure and Hospitality	805	\$16,174	1,436	\$23,350	1,346	\$26,102
Other Services	121	\$18,087	139	\$24,122	132	\$28,879
Public Administration	665	\$39,825	639	\$49,469	624	\$54,010

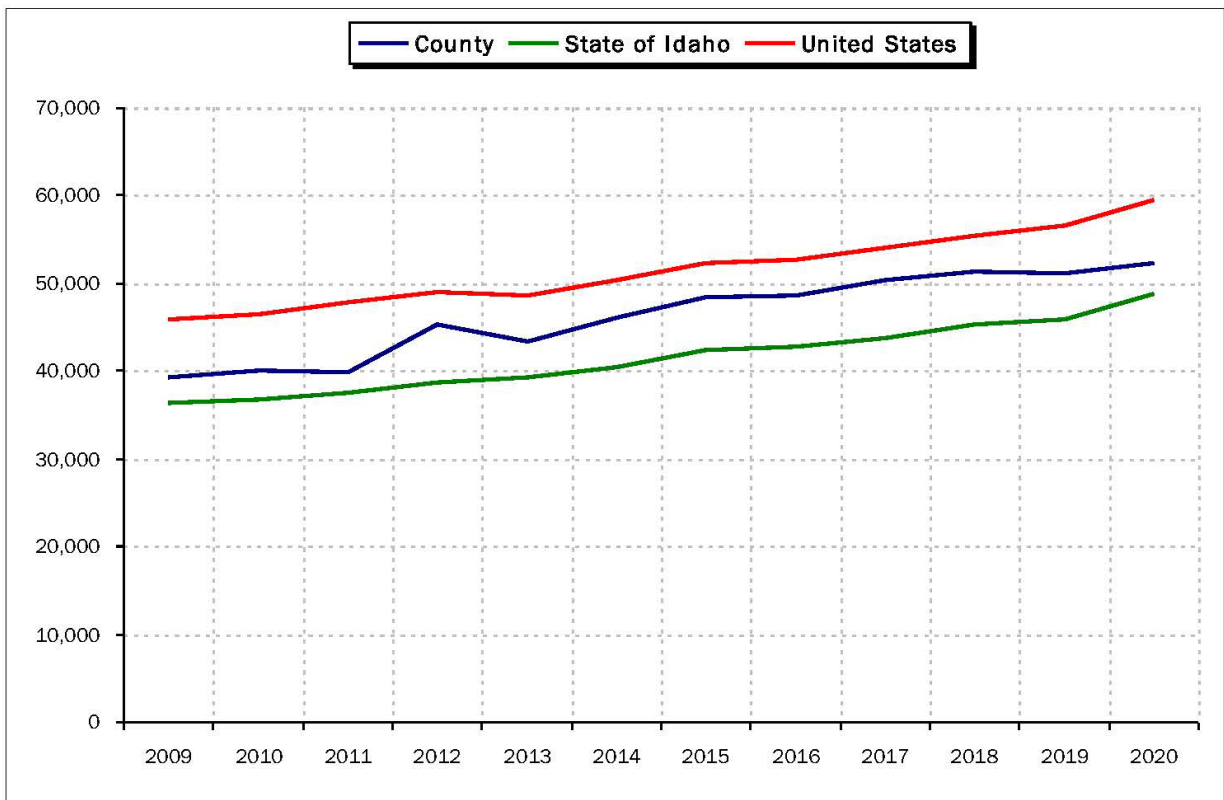
Source: Idaho Department of Labor

6. Top Employers, 2020

Employer	Ownership	Range
Shore Lodge	Private	100 - 249
U. S. Forest Service	Federal Gov	100 - 249
Mccall-donnely School District	Local Gov	100 - 249
Valley County	Local Gov	100 - 249
Albertson	Private	100 - 249
Brundage Mountain	Private	100 - 249
Brundage Mountain Resort	Private	50 - 99
City Of Mccall	Local Gov	50 - 99
Cascade School District	Local Gov	50 - 99
St. Luke's Mccall Medical Center	Private	50 - 99

NOTE: Only employers that have given the Department permission to release employment range data are listed. Source: Idaho Department of Labor

7. Real Per Capita Income, 2009 - 2020



Source: U.S. Bureau of Economic Analysis

Climate

Valley SWCD temperatures show a high of 104 degrees in August and a low of -50 degrees in January. The latest killing frost is usually mid-June and earliest is normally in early September, however, frosts may occur during any of Most precipitation comes in the winter in the form of snow. Of the total annual precipitation, 32% normally occurs in April through September, which includes the growing season for most crops. The average relative humidity during the mid-afternoon is about 40%. Humidity is higher at night, and the average at dawn is about 65%. the summer months. The usual daytime summer temperatures range from 70 to 90 degrees.

Monthly Climate Summary

McCall Period of Record : 05/27/1905 to 06/09/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	30.3	35.4	41.4	50.4	61.1	69.7	81.0	80.0	70.2	57.3	40.4	31.2	54.0
Average Min. Temperature (F)	10.6	12.5	17.8	25.6	33.5	39.6	44.2	41.8	34.9	28.1	21.7	14.0	27.0
Average Total Precipitation (in.)	3.49	2.79	2.52	1.96	2.20	2.05	0.63	0.80	1.26	1.99	2.93	3.57	26.19
Average Total SnowFall (in.)	35.5	23.9	18.2	5.7	0.8	0.1	0.0	0.0	0.1	1.9	15.9	32.1	134.2
Average Snow Depth (in.)	26	32	27	8	0	0	0	0	0	0	3	14	9

Percent of possible observations for period of record.

Max. Temp.: 96.9% Min. Temp.: 97% Precipitation: 98% Snowfall: 96.1% Snow Depth: 92.8%

Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

SECTION 3 - ASSESSMENT

- **Soil Resources**

General Soil Map and Legend: Soil Survey Valley Area, Idaho information can be found on the web soil survey at <http://soils.usda.gov.survey>

Highly Erodible Land (HEL): A map of highly erodible land has not been prepared. Most HEL is forested and administered by the USDA Forest Service. Except for limited grazing by livestock, these lands are not used for agriculture.

Wetlands: Copies of quadrangle sheets of the National Wetlands Inventory prepared by the U.S. Department of the Interior, Fish and Wildlife Service are located in the District Office. Most wetlands are located along the banks of rivers and creeks and larger waterbodies. High mountain meadows in forested areas make up a small part of the wetlands.

Water Resources and Water Quality

Valley SWCD is in the upper watershed of the Payette River Drainage. Also included are large portions of the South and Middle Forks of the Salmon River Drainages. Major water users include irrigation, power generation, recreation and spawning waters for anadromous fish (salmon and steelhead). Several irrigation districts supply water to farms and ranches in one quarter of the District.

Surface and Groundwater: Valley SWCD has a complex surface water system with an abundance of streams, lakes and reservoirs. Irrigation canals and laterals are abundant and transport water throughout the valley. Major rivers include the South and Middle Forks of the Salmon River, which drain into the Main Salmon River. Numerous creeks feed these rivers. The largest lakes within the District are Payette Lakes located near McCall. Cascade and Deadwood Reservoirs are major storage sources for irrigation and power generation to Gem, Payette, Washington and Canyon Counties. Several small reservoirs store water for local irrigation needs. Most of these are in the Cascade Reservoir Watershed.

Ground water supplies are adequate to meet present needs. Most of the District is part of the Idaho Batholith, a huge granitic intrusion covering most of central Idaho. This area has no extensive deep aquifers. Wells obtain water from fractures in the rock. The intermountain valley floor sediments have been estimated to have a thickness up to 7,000 feet. Domestic water supplies have used an existing shallow water table aquifer. Possible decline in water table levels could occur as more farmland is sprinkler irrigated and irrigation canals and laterals eliminated. Development of deeper aquifer has been limited because of adequate shallow water of good quality. Due to the great sediment thickness under the valley floor an extensive aquifer system could exist and provide a good source of water for future development. Many springs supply domestic and livestock water. Some springs are induced due to irrigation water drainage and would stop producing if irrigation water usage decreases. Several hot springs are located in the District as well as geothermal wells that produce warm water. The Cascade School building is heated by one of these geothermal wells.

Many farmers and ranchers depend on stream flow from creeks to irrigate agricultural lands. These streams have little or no storage resulting in potential water supplies being short in the summer. In spite of the seemingly abundant amount of water, conflicts arise over water rights. Local water uses are concerned over federal regulations that may preempt state water laws. Increasing demands for waterpower generation, recreation, stream flows and wildlife are major concerns to irrigators and others alike.

Flooding and Drainage: There is periodic flooding that causes property damage and threatens the health and safety of Valley County residents. (e.g., flooding that occurred winter 1996/97, April 2002, Spring 2017). Minor flooding occurs along some creeks during spring runoff with damage mainly to creek banks where vegetation is depleted. Poorly drained soils are common in Long and Round Valleys and in mountain meadows. Erosion of creek channels and some straightening of channels have lowered the shallow water table in some places. Over irrigation has created wet spots, particularly in poorly managed irrigated pastures.

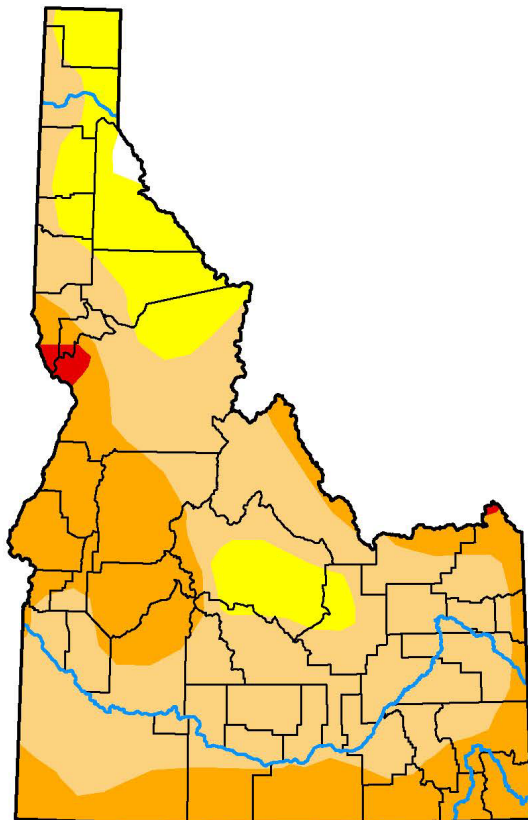
Water Resources and Water Quality (Cont.)

Drought Conditions







Valley Soil & Water proposed a Drought Declaration to Valley County Commissioners. Valley County remains in severe drought conditions. Climate change, changing weather patterns, and increased development have all affected water quantity and water quality in the NFPR watershed. Cloud Seeding options were introduced by Idaho Power and Idaho Dept of Water Resources to Valley Soil & Water Conservation District, Valley County Board of County Commissioners, Idaho Department of Fish & Game, NFPR Irrigation Districts and others as a viable option to consider for the watershed if drought conditions persist or worsen in the future.

U.S. Drought Monitor Idaho

March 1, 2022
(Released Thursday, Mar. 3, 2022)
Valid 7 a.m. EST



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu

SECTION 4 – CONSERVATION DISTRICT OBJECTIVES

Organization of the Valley Soil & Water Conservation District

A political subdivision of the State of Idaho – authorities, powers and structure contained in Soil Conservation District Law, Title 22, Chapter 27, Idaho Code

- Organized in 1957 to provide voluntary land and water conservation technical and financial assistance to landowners and uses within the Valley SWCD boundary.
-

Who We Serve & Why

- The people and natural resources in the Valley SWCD, to conserve the natural resources for beneficial and sustainable use by all.
-

Mission of the Valley Soil & Water Conservation District

- We encourage cooperation among landowners, government agencies, private organizations and elected officials to improve our natural resources thereby ensuring an adequate natural resource base for present and future generations. We believe that knowledge, peer involvement, cooperation and incentives are the best methods to improve soil and water resources.
-

Natural Resource Priorities and Goals:

The following are the Valley SWCD's top six priorities and goals applicable to our natural resources issues:

- Water Quality*
- Riparian
- Traditional Agriculture: Pasture & Hayland Management and Irrigated & Non Irrigated Cropland
- Woodland and Wildfire Mitigation
- Fish and Wildlife*
- District Operations

**Meets Antidegradation Plan for Agriculture criteria*

Trends Impacting Conservation in the Valley Soil & Water Conservation District

- Land use changes
- Absentee landowners
- Drought conditions/Climate change
- Need for fire mitigation
- Economics, fuel prices and maintenance costs
- Poorly planned growth in agricultural and forested areas
- Increasing small acreage farms, five acres or less
- Limited availability of State funds for conservation
- Focus on water quality compared to other conservation and nature resources issues
- Farm Bill financial assistance programs, such as EQIP, are being used to implement soil and water conservation projects in the district.

District Staffing Need

- Full-time, benefited Conservation District Manager and administrative assistant.
- Technical assistance for District BMP conservation project design, implementation and educational outreach.

Cooperating Agencies and Organizations

Valley SWCD has established effective working partnerships with many federal state and local agencies and organization to promote the wise use of our natural resources. Most contacts are through informal, cooperative arrangements although the District does have several Memorandums of Understanding. The District has partnered with agencies, organization and groups to provide assistance in resource planning and to implement the District's Resource Conservation Business Plan.

Key Decision Makers

- **Idaho Governor:** Brad Little
- **District 8 State Legislators representing Valley SWCD:** Steven Thayne, Senator; Terry Gestrin, Representative and Dorothy Moon, Representative
- **U.S. Senators and Representatives:** Senator Jim Risch, Senator Mike Crapo, Congressman Russ Fulcher and Congressman Mike Simpson
- **Citizens and landowners within Valley SWCD**
- **Valley County Commissioners:** Elt Hasbrouck, Chairman and Sherry Maupin. District 3 Commissioner TBD
- **Valley County Clerk:** Doug Miller
- **Valley County Planning & Zoning Commissioners:** Neal Thompson, Chairman; Ken Roberts, Vice-Chair Kaitlin Caldwell, Sasha Childs, Scott Freeman
- **Valley County P & Z Contacts:** Cynda Herrick, P & Z Administer and Floodplain Coordinator Lori Hunter, P & Z Technician
- **Valley County Weed Department:** Steve Anderson
- **UI Extension Office, Valley County:** Melissa Hamilton, Extension Educator
- **City of Cascade Mayor:** Judy Nissula
- **City of Donnelly Mayor:** Susan Dorris
- **City of McCall Mayor:** Bob Giles
- **Valley Soil and Water Conservation District Supervisors:** Art Troutner, Chairman; John Lillehaug, Treasurer; Bill Leaf, Supervisor; Colt Brown, Supervisor.

5-Year Plan References:

2017 Census of Agriculture – County Profile Valley County, Idaho United States Department of Agriculture, National Agricultural Statistics Service

Guidebook to the Geology of Eastern Idaho – Tamra Schiappa and P. K. Link, October 2002

U. S. Bureau of Labor Statistics – U. S. Department of Labor

Valley County – Work Force Trends January 2022 Jan Roeser | Labor Economist Communications & Research, Idaho Department of Labor, lmi.idaho.gov

Soil Survey Valley Area, Idaho – Web Soil Survey at <http://soils.usda.gov/survey>

Idaho Department of Environmental Quality (DEQ) 2017 Integrated Report – Valley County 303d listing <http://www.deq.idaho.gov/media/1117323/integrated-report-2012-final-entire.pdf> Appendix J

IDEQ Monitoring Results for Big Payette Lake, 2016 and 2017, Kati Carberry, Idaho Department of Environmental Quality, Boise Regional Office Kati.Carberry@deq.id.gov

IDEQ Cascade 5 Year Review, 2018 Chase Cusack, Watershed Coordinator, Boise Regional Office Chase.Cusack@deq.id.gov

SECTION 5 - WATER QUALITY COMPONENT

Water quality improvements have been a focal point of the District's activities for over twenty years. The Cascade Reservoir, one of Idaho's prime recreation facilities, attracts thousands of visitors each year. Since 1994, there has been substantial progress made in implementing the Cascade Reservoir TMDL (Total Maximum Daily Load) to reduce phosphorus loading. This reduction progress is from the sum of both point source improvements (McCall Wastewater Treatment Plant and Idaho Department of Fish and Game fish hatchery) and nonpoint source improvements (Forestry, Agriculture and Urban/Suburban).

Progress made toward the TMDL goal has resulted in improved water quality at a cost of over \$20 million of both private and public funds. This represents a tremendous amount of work on the part of numerous private landowners, local governments, and state and federal entities. A critical part of the success has been the commitment of local agricultural landowners who have participated in improvements in grazing and irrigation practices, streambank stabilization and riparian revegetation. However, with budget and grant funding cutbacks it is increasingly difficult to provide cost share assistance to keep efforts moving forward to implement the TMDL goals.

However, Lake Cascade was closed in the fall of 2018, 2019, 2020 and 2021 due to Central District Health warnings for the harmful algal bloom (HAB) of cyanobacteria, also known as blue-green algae. Algal blooms are a public health concern as well as an ecological problem. One of the major contributions to the growth of algal bloom is excessive nutrient pollution, principally phosphorus and nitrogen to both the reservoir and its many tributaries. Though phosphorus and nitrogen are natural parts of the aquatic system, additional loading comes from soil erosion, agricultural fertilizer, manure, urban runoff, sewage and industrial effluent and increased human activities on the water body.

In response to the growing challenges for the watershed, Valley SWCD organized a North Fork Payette River Confluence Watershed Summit for 2021. Due to COVID-19 the original in-person format was modified and held online via Zoom. Designed to bring together resource agencies, local and state government and the general public, the four bi-weekly sessions of panelists provided an invaluable look at the watershed and the A primary goal of the educational online event was to create interest, motivate and inform one another of watershed activities, scientific findings and monitoring efforts. The event concluded with the asking for participation in various workgroups to explore solutions: lake operations; wastewater management; land management; and waves, erosion and sedimentation.

Idaho's 303(d) List and Water Quality Law: The 303(d) list is dynamic and will change as listed water bodies are added for additional monitoring or removed as TMDL's are developed and/or achieved. **The following is the Idaho Department of Environmental Quality (DEQ) 2017 Integrated Report – Valley County 303(d) listing:**

<http://www.deq.idaho.gov/media/1117323/integrated-report-2017-final-entire.pdf>

In the Table of Contents/ List of Appendices: [click on Appendix J](#)

Appendix J: Category 5 (§303(d) list): **Impaired Waters Needing TMDL**

- 17050123 North Fork Payette - [Starts on pg. 50 of 72](#)
 - ID17050123SW006_02 Beaver Creek - 1st and 2nd order -- Combined Biota/Habitat Bioassessments
 - ID17050123SW008_05 Gold Fork - upper 5th order, above Gold Fork Ditch -- Sediment / Siltation
 - ID17050123SW011_03 Boulder Creek - 3rd order (Louie Creek to mouth) --Water Temperature

- ID17050123SW012_02 Lake Fork below Little Payette Lake - 1st and 2nd order -- Combined Biota/Habitat Bioassessments
- ID17050123SW015_02 Mud Creek - 1st and 2nd order –E-coli
- ID17050123SW015_03 Mud Creek - 3rd order (Norwood to Reservoir) -- E-coli
- ID17050123SW017L_0L Payette Lake -- Mercury

IDEQ Monitoring Results for Big Payette Lake, 2016 and 2017, Kati Carberry, Idaho Department of Environmental Quality, Boise Regional Office (March 22, 2018 meeting)

201 Cascade Reservoir Watershed TMDL 5-Year Review, Chase Cusack, Watershed Coordinator, Idaho Department of Environmental Quality, Boise Regional Office

SECTION 6 – VALLEY SWCD CONSERVATION PROJECT PRIORITIES

Valley SWCD has a very active conservation project calendar. Not only from our current 319 Subgrants but also from our state funded conservation projects on Lake Cascade, educational outreach, National Park Service Planning Grant and EQIP projects. Listed below are the projects currently underway or in the engineering design phase for the District. With technical assistance from the Idaho Soil & Water Conservation Commission and/or NRCS, along with volunteer crews, these listed projects result in significant water quality improvement efforts, utilizing best management practices:

1. **IDEQ State Agricultural BMP Grant Applications to fund labor for Lake Cascade West Mountain Watershed Riparian Fencing, six miles along West Mountain and three miles on the south-end of Cascade Reservoir. Both are joint projects with the District, ICC, Idaho Fish & Game and USBR.**
2. **IDEQ Source Water Grant for Septic Pump-out Pilot Program**
3. **NF WaterSMART Cooperative Watershed Management Program Phase I Application to fund formation of a North Fork Payette River Watershed Coalition.**
4. **Water Operations Workgroup meetings. BOR secured funding to do a reservoir study to determine any available areas of operation that would affect water quality improvements.**
5. **NFPR Cascade Strand Stabilization 319 Project, fencing and focused access remain to be completed.**
6. **North Fork Payette River McCall Riverfront Park 319 Bank Stabilization and Fish Habitat Enhancements with continued bank plantings.**
7. **North Fork Payette River Surface Erosion Control- Gold Fork, Willow Creek**
8. **West Mountain Watershed Surface Erosion Control, Quenzer Creek and Gibson creek tributaries to be addressed with culvert upgrades and sediment reduction measures.**
9. **Mud Creek Off-site water development.for livestock**
10. **Gold Fork Irrigation Company projects conversion to pivots**
11. **Roseberry Irrigation District water saving conversion to pivots**
12. **Barker Lane Water Conservation Project (Donnelly)**
13. **Donnelly Boat Launch Bank Restoration, Stabilization 319 Project – Continuing shoreline revegetation and monitoring**
14. **Spring Forestry Tour with IDL, NRCS, Squaw and Adams Districts**
15. **VSWCD Ponderosa Seedling Tree Sale**
16. **Arbor Day Celebrations and seedling distribution with Cascade, Donnelly and McCall.**
17. **Annual NACD themed youth speech and poster contests**
18. **319 S696 projects: City of Cascade Stormwater improvement projects, West Mtn. Gibson Creek culvert/sediment improvements; Alzar, YWAM, and Heinrich/BLM Rec area NFPR Bank stabilization. Partners include Valley Co., Idaho Fish and Game, TU, BLM and ISWCC**

SECTION 7 – VALLEY SWCD ANNUAL IMPLEMENTATION PLAN