POWER SOIL & WATER CONSERVATION DISTRICT

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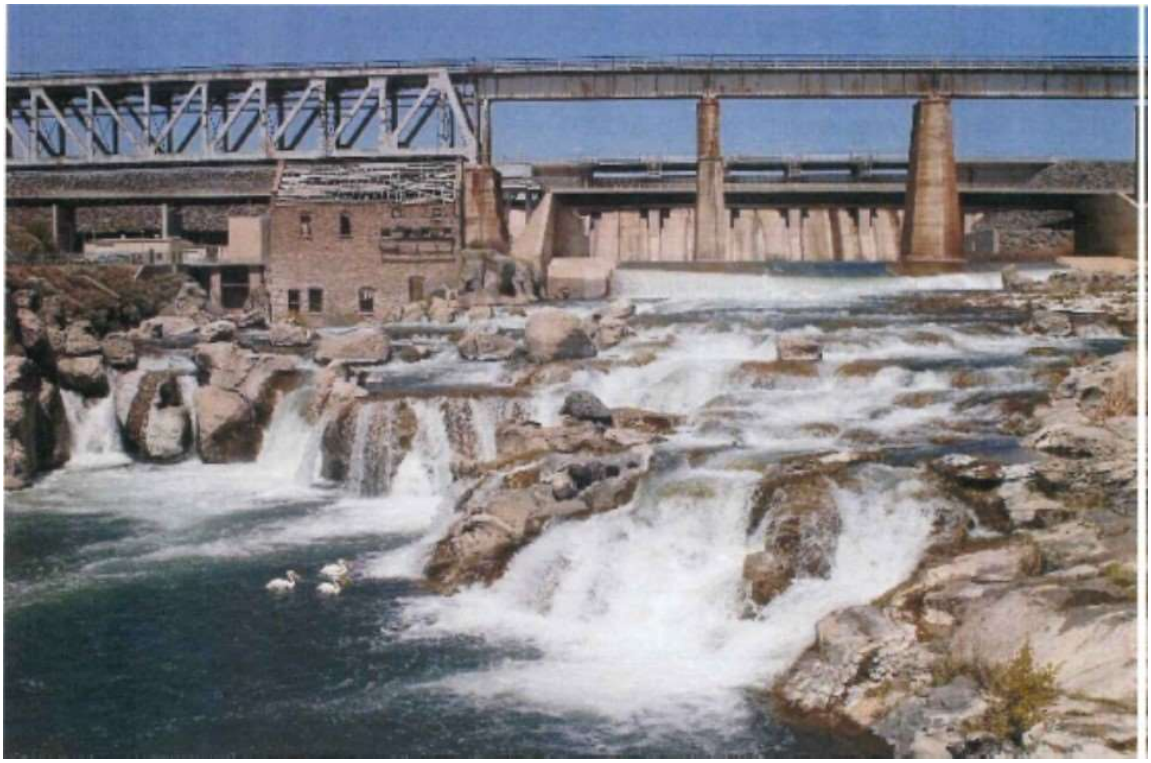
American Falls, ID 83211



FIVE-YEAR PLAN
JULY 1, 2025- JUNE 30, 2030

AND

ANNUAL WORK PLAN
JULY 1, 2025 – JUNE 30, 2026

Forward

The Power Soil Conservation District is one of 50 Conservation Districts in Idaho. Idaho's Soil and Water Conservation Districts are political subdivisions of the state government. Conservation Districts are charged with carrying out a program for soil and water conservation and wise use and development of natural resources.

Conservation Districts are the primary entities to aid private landowners in the conservation, sustainment, improvement, and enhancement of Idaho's natural resources. Districts are catalysts for coordinating and implementing conservation programs, channeling expertise into action at the local level. These programs are voluntary, 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 Agriculture and the Governor of Idaho that establishes a framework for cooperation.

It is the goal of the Power Soil Conservation District elected officials to set high standards for conservation of natural resources within the district. The district developed an action plan for meeting these needs. The Power SCD acknowledges that among their role as an elected board is the need to provide a service to the community, to assist in the economic stability of the area, to enhance the traditional way of life that is important to those we serve and to encourage the wise use of natural resources. The district further acknowledges the very important role our conservation partners play in the success of the Power Soil Conservation District Programs.

This Annual Plan/Five-Year Resource Conservation Business Plan was developed not only to guide the Conservation District, but also to encourage cooperation among landowners, government agencies, private organizations, and elected officials. Through knowledge and cooperation, all concerned can ensure a sustainable natural resource base for present and future generations in the Power Soil Conservation District.

This document identifies resource needs, priorities, and goals/objectives in the Conservation District and presents a plan for meeting these.

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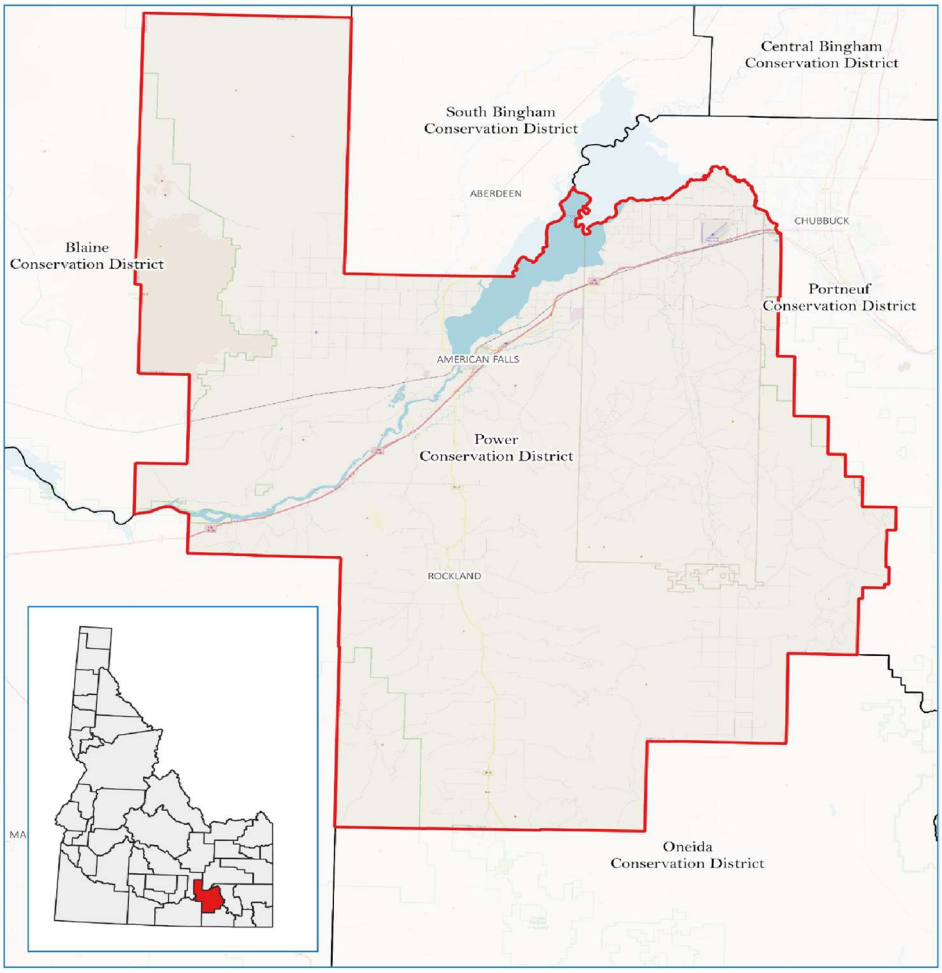
1. Physical Characteristics of the District

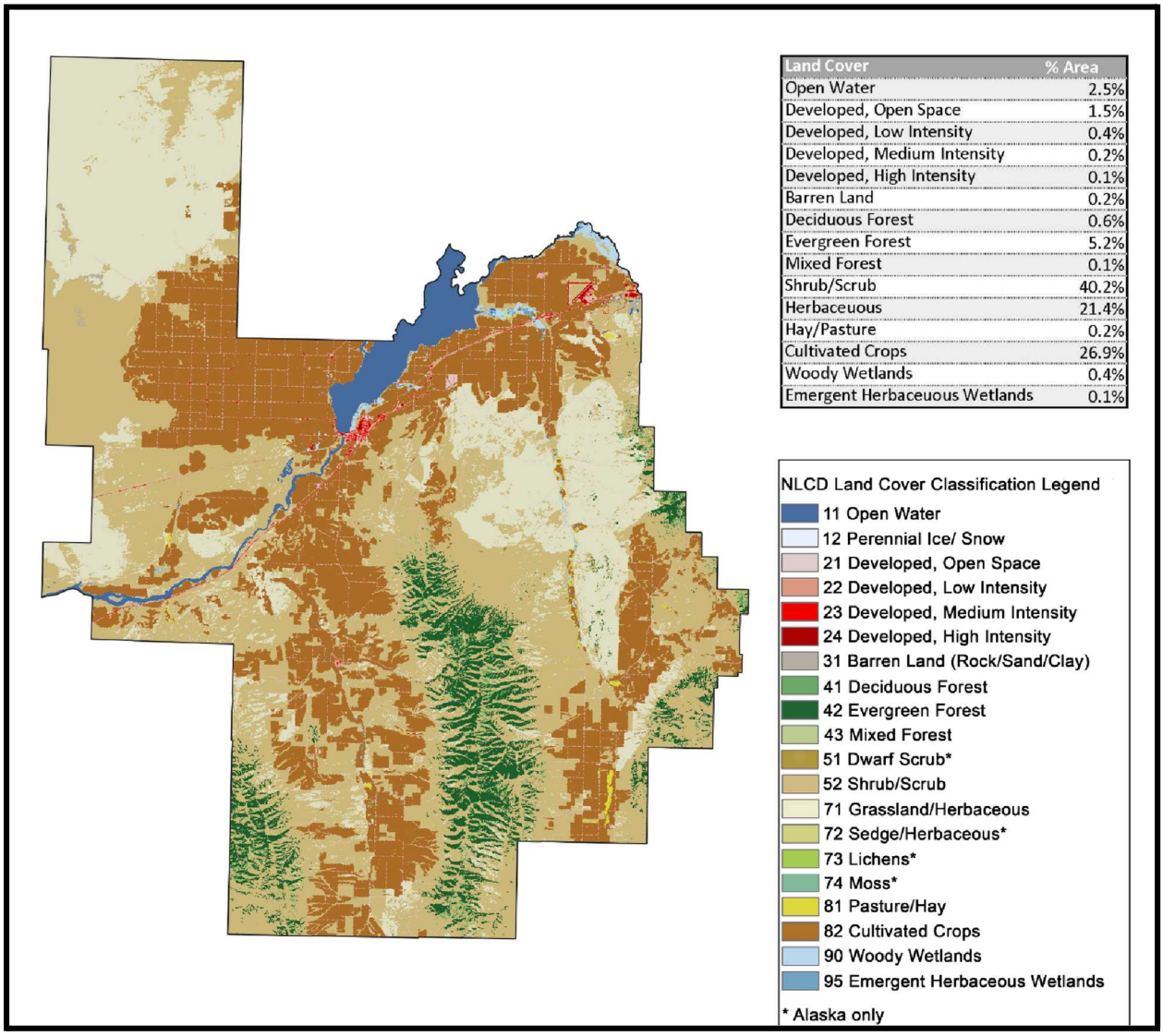
Location

Power County is in the southeastern Portion of Idaho, bisected by the American Falls Reservoir and the Snake River, see map below. There are foothills, mountain, and valley regions south of the Snake River, and the Snake River Plane to the north.



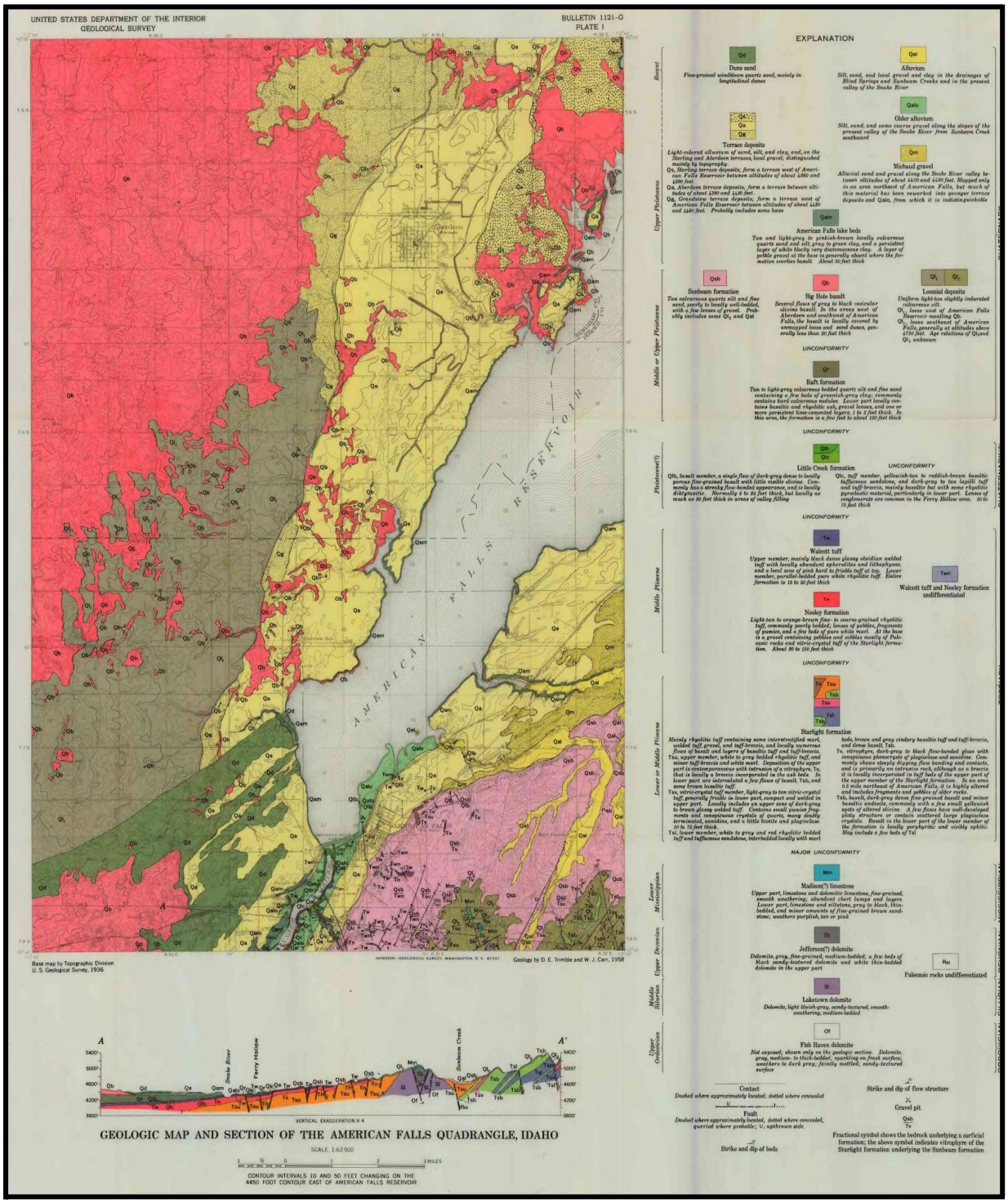
Land Use / Land Cover

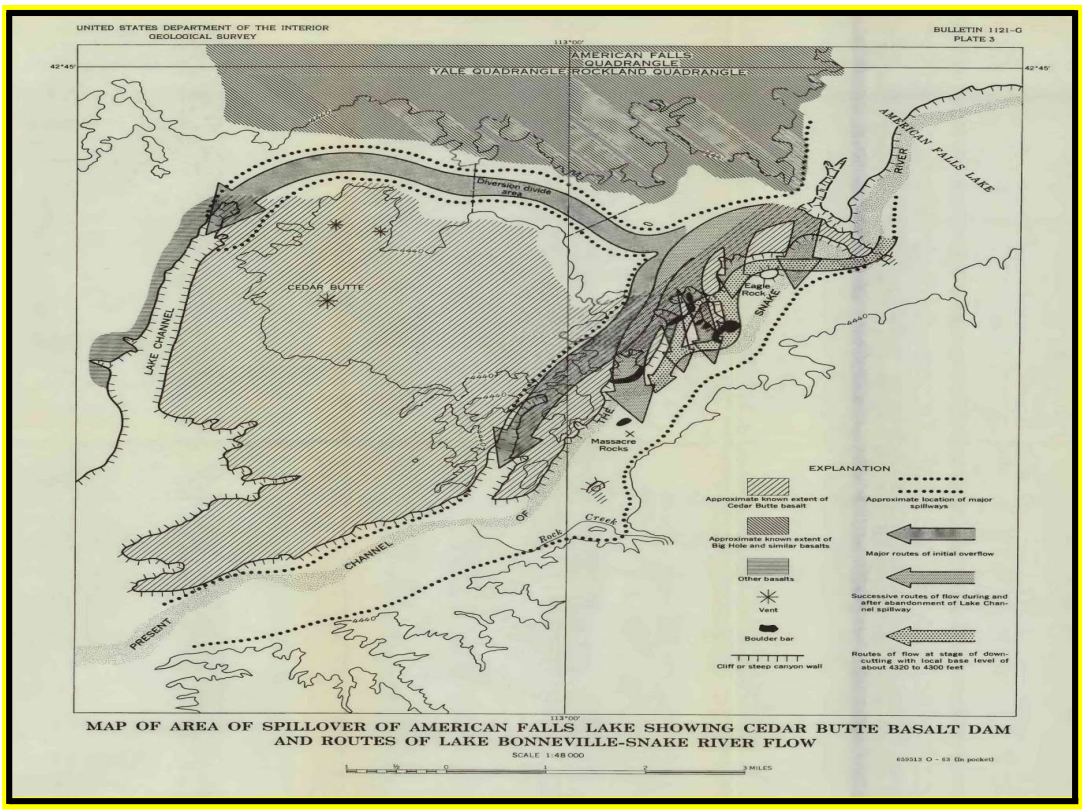
Land use is closely correlated with land cover in power county Cultivated cropland, Pasture/Hay make up a large portion of the agricultural cropland. Irrigated Cropland is largely in the proximity of surface waters or canal systems, on the Snake River Plane, and valley bottoms. Dryland cropland is largely located in the farmed foothill areas. Private shrubs/scrub, forested, and grassland areas are largely utilized for grazing livestock.

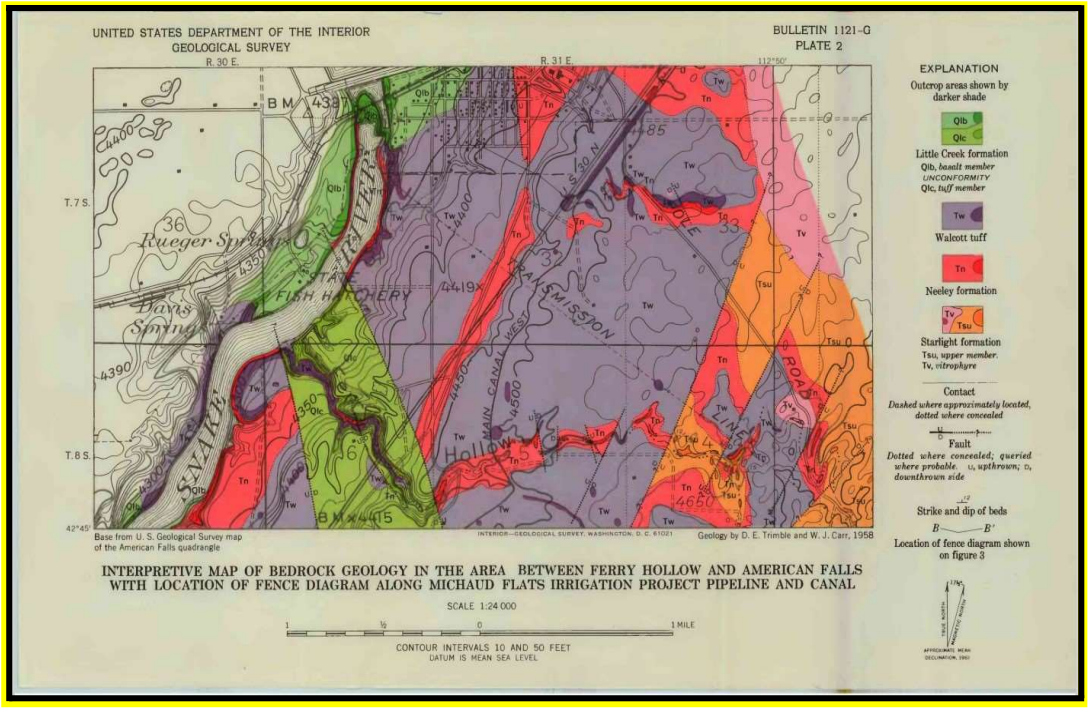


Geology and physical geography

The geology of the area is dominated by prehistoric events like the volcanic activities to the north, travel of the Yellowstone Hotspot, Bonneville Floods, and the Snake River. See geologic maps below.







Soils

The Soil Survey of Power County contains useful information for any land-planning program of prime importance and the predictions of soil behavior for selected land uses. Also highlighted are limitations or hazards to land uses that are inherent in the soil; improvements needed to overcome these limitations, and the impact that selected land uses will have on the environment.

This soil survey has been prepared for many different users such as farmers, ranchers, foresters, and agronomists to determine the potential of the soil and management practices required for food and fiber production.

Planners, community officials, engineers, developers, builders, and homebuyers can use it to plan land use, select sites for construction, develop soil resources, and or identify any special practices that may be needed to insure proper performance.

Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the soil survey to help them understand, protect, and enhance the environment.

There can be great differences in soil properties that can occur even within a short distance. Soils may be seasonally wet or subject to flooding, shallow to bedrock.

Some soils are too unstable to be used as a foundation for buildings or roads. A high-water table makes soil poorly suited to basements or underground installations. Such as soil that has too much clay or wet soils are poorly suited to septic tank absorption fields. These and many other soil properties that affect land use are described in this soil survey.

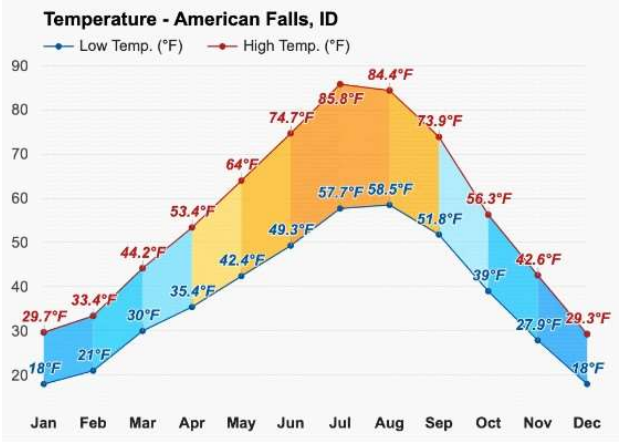
. Each kind of soil in the survey area is described, and information is given about each soil for specific uses. Additional information or assistance in using this publication can be obtained from the local office of the NRCS or the Cooperative Extension Service. This soil survey can be useful in the conservation, development, and productive use of soil, water, and other resources.

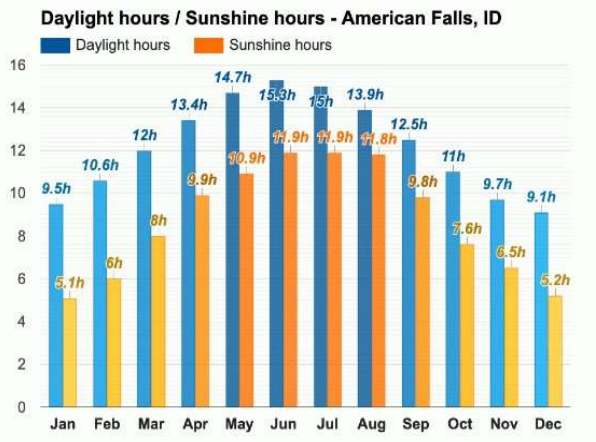
Climate in American Falls, Idaho

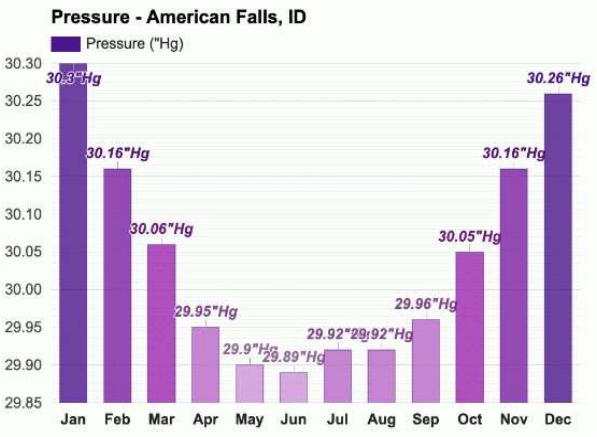
American Falls, Idaho gets 11 inches of rain, on average, per year. The US average is 38 inches of rain per year. American Falls averages 33 inches of snow per year. The US average is 28 inches of snow per year. On average, there are 200 sunny days per year in American Falls. The US average is 205 sunny days.

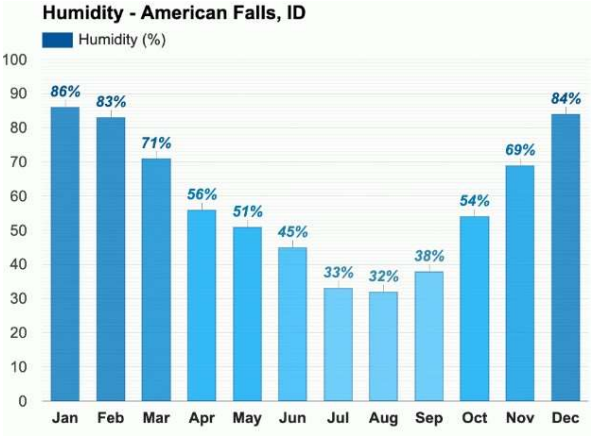
American Falls gets some kind of precipitation, on average, 79 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted you must get at least .01 inches on the ground to measure.

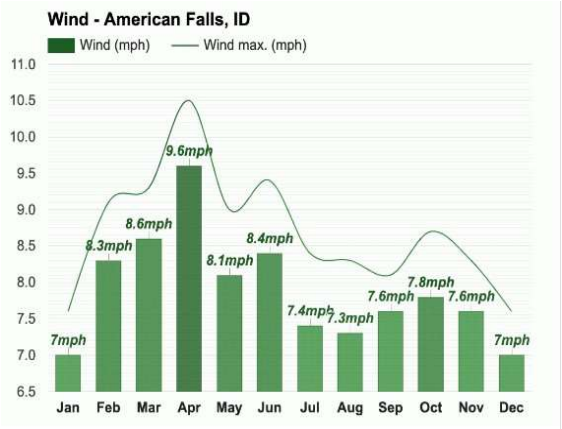
Weather Highlights

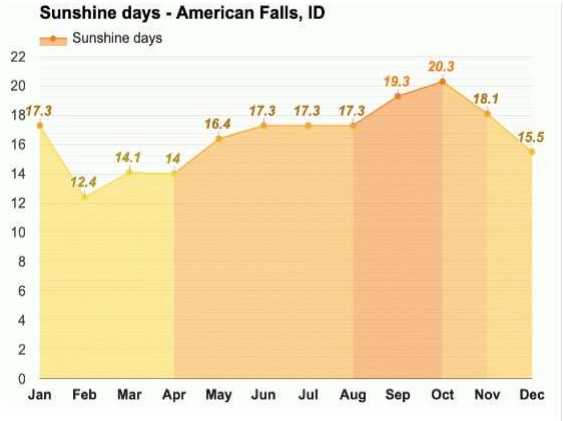


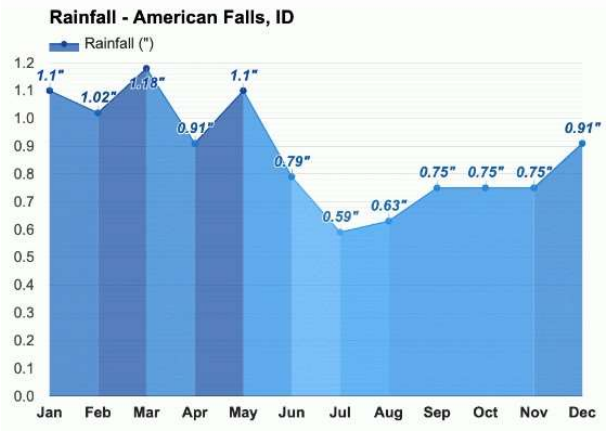


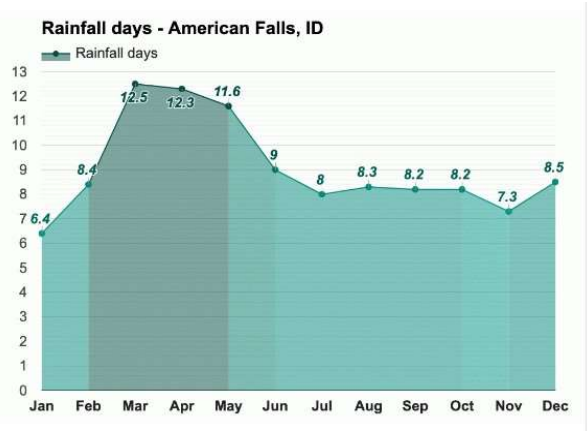


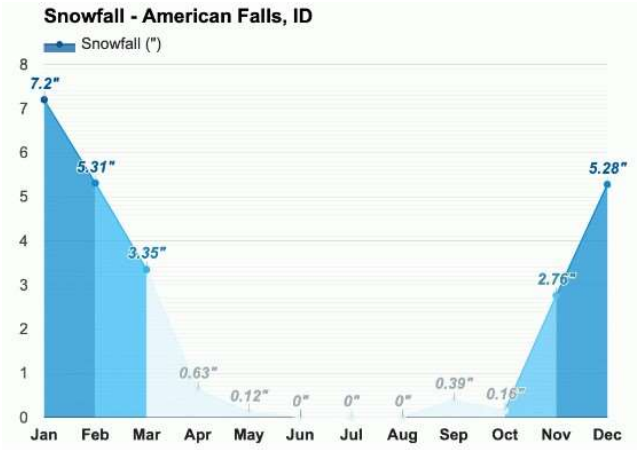


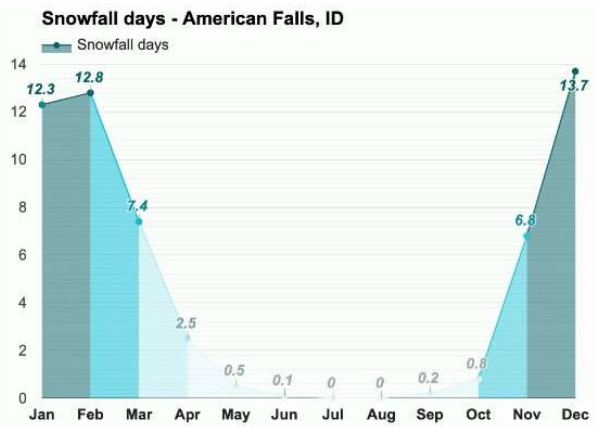












2. Economic Conditions and Outlook

American Falls is a city located in Power County Idaho. It is also the county seat of Power County. With a 2023 population of 4,781, it is the 39th largest city in Idaho and the 6,967th largest city in the United States. American Falls is currently growing at a rate of 0.24% annually and its population has increased by 0.72% since the most recent census, which recorded a population of 4,568 in 2020. Spanning over Two miles. American Falls has a population density of 2,851 people per square mile.

The average household income in American Falls is $65,330 with a poverty rate of 10.09%. The median rental cost in recent years comes to per month, and the median house value is $300,000 The median age in American Falls is 30.8 years, 29.9 years for males and 31.3 years for females.

American Falls is the urban and commercial center within the Power SWCD. Pocatello Municipal Airport is within the district, which is the urban and commercial center for southeastern Idaho.
The primary employers within the Power SWCD are in agricultural and manufacturing related industries. Potatoes, spring and fall grain, sugar beets and cattle are the primary commodities. Large farm operations employ annual and seasonal workers. Potatoes are processed locally at Lamb Weston/ ConAgra, Inc., Driscoll Potatoes, Inc., Simplot's, Duffin Potatoes, and Idaho Select, Inc. Sugar beets are shipped, via rail and a trucking company, to Paul, Idaho for processing by Snake River Sugar Company, formerly known as Amalgamated Sugar Company. Small grains are processed and shipped by grain elevator companies in American Falls. These include The Arthur Company, The Andersons Trade group, Nelson's Seed Company, and Secular Grain. Most livestock in the county are marketed in Burley, Twin Falls and Blackfoot, Idaho. Other industries in the county, including the only chemical manufacturing at J. R. Simplot (due to the recent loss of FMC), are R & G Potatoes, Snake River Cattle Company, Idaho Power Company, Art's Manufacturing and Supply, E & R Trucking, Bingham Ag, Valley Ag, Double M and Many other businesses such as Implement Dealers, Stolz Equipment and Titan Machinery, Retailers and Financial Institutions exist in support of our ag community.

Farming and Ranching

The first settlers in Power County were cattle and sheep ranchers. Farming became important when the land was opened to homesteaders. Soil is a major natural resource in the survey area. The soil throughout most of the arable land in the Area provides an excellent medium for crop growth. Water is adequate for domestic, and livestock use on farms and ranches in most of the county. Irrigation water is provided by the American Falls Reservoir and the Snake River for both the Falls Irrigation District and the Aberdeen-Springfield Irrigation District. The supply is supplemented by a number of deep wells. Much of the increase in irrigated acreage in recent years has been the result of the water available from deep wells. On the Snake River Plain, deep wells in the aquifer provide much of the water. Except in rare years, water has always been adequate, and no natural disasters have deterred farming.

3. Assessment

Soil Resources

Because of the sparse rainfall north and west of the Snake River, irrigation is needed for successful farming. Higher rainfall and deep fertile soils make the Arbon and Rockland Valleys prime dryland wheat-growing areas. In recent years, however, significant acreage in the Rockland Valley has been brought under irrigation through water supplied by Rock Creek and by deep wells.

Pleasant Valley is the prime potato-producing area. Most irrigated land in the survey area is below 4,500 feet in elevation. Most of the dry farmed cropland is below 5,500 feet.

Completion of the railroad through American Falls in 1903 greatly facilitated shipping farm products to market. The railroad and wagon bridge over the Snake River provided a needed crossing for the area. Enactment of Soil Conservation District legislation in 1937 gave landowners an opportunity to form organizations through which to solve their mutual problems. Formed in May 1948, the Power Soil and Water Conservation District was organized to help farmers use irrigation water more efficiently, control soil blowing on the sandy soils, and control soil erosion on steeper soils. In the Power County Area, the climate, and the soils, if irrigated, are suited to a variety of crops, including Irish potatoes, small grain, sugar beets, alfalfa, and pasture. Much of the acreage is dry farmed wheat and barley. Some corn is grown for silage.

Considerations that can limit crop production and that require special attention are the short growing season, the scant precipitation in the southern part of the county, soil blowing, water erosion, and the need for careful management of available water. Large areas in the county are rangeland. Water is available for livestock on most rangeland. In mountainous areas, water for livestock is available from development of springs, from numerous small streams, and from wells. On the Snake River Plain, in the northern part of the survey area, water is much more difficult to obtain. Because of the lack of surface sources, all water for livestock on rangeland must come from wells. An adequate supply is available if the wells are deep. Water is available in adequate quantity and quality for present and expected municipal, industrial, and residential uses. Future irrigation development will depend primarily on deep wells.

Climate

The Rocky Mountains partly shield Power County from strong arctic winds. Winters, though cold, generally are not too severe. In summer, winds from the Pacific Ocean are partly blocked. Days are hot, but nights are cool. Except in mountainous areas, precipitation is scant in summer but in many places is adequate during the cooler parts of the year for dry farmed small grain or for rangeland.

The snowpack accumulation at high elevations supplies irrigation water for intensive farming in parts of the lowland. Table 1 gives data on, temperature and precipitation for the survey area, as recorded at American Falls for the period 1951 to 1973. The Climate section above shows probable dates of the first freeze in fall and the last freeze in spring and the length of the growing season, and average temperatures.

Growing degree days are equivalent to ‘heat units’. During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall. Of the total annual precipitation, 5 inches, or 50 percent, usually falls in April through September, which includes the growing season for most crops. In 2 years out of 10, the rainfall in April through September is less than 4 inches. The heaviest 1-day rainfall during the period of record was 1.34 inches at American Falls on December 23, 1964.

Thunderstorms number about 24 each year, 16 of which occur in summer. Average seasonal snowfall is 30 inches. The greatest snow depth at any one time during the period of record was 13 inches. On average, 14 days have at least 1 inch of snow on the ground, but the number of such days varies greatly from year to year. Every few years a blizzard with high winds and drifting snow strikes the survey area. Even at low elevations, snow remains on the ground for weeks to months. Severe storms can be hazardous to livestock. The average relative humidity in midafternoon is about 40 percent.

Land Uses and Resources

Recreation

The area provides varying kinds of recreation for the more populated area, particularly Pocatello, Blackfoot, and Idaho Falls. The climate, geology, and vegetation provide interesting contrasts for summer and winter outdoor activities.

Boating, fishing, camping, and picnicking facilities are available at Massacre Rock State Park on the south bank of the Snake River. The Minidoka National Wildlife Refuge is a sanctuary for migratory waterfowl. Crystal Ice Caves and the Great Rift area in the northwestern part of the survey area have unique volcanic formations. American Falls Reservoir and the Snake River provide boating, fishing, and other water-based recreation. The state-owned fish hatchery is about 1 mile downstream from the dam. Hot springs and swimming and picnicking facilities are available at the Indian Springs Natatorium about 1/2 miles south of 1-15 W on State Highway 37.

East of Rockland offers fantastic camping and creek fishing along with four wheeling and hiking on the East Fork of Fall Creek. Mountainous areas provide hiking, hunting, snowmobiling, and cross-country skiing opportunities. Care is needed in traversing avalanche-prone areas. Drifting snow forming cornices at the crest of steep slopes is especially hazardous.

The soils of the survey area are rated in the soil survey according to limitations that affect their suitability for recreation uses. The ratings are based on such restrictive soil features as flooding, wetness, slope, and texture of the surface layer. Not considered in these ratings, but important in evaluating a site, are location and accessibility of the area, size and shape of the area and its scenic quality, the ability of the soil to support vegetation, access to water, potential water impoundment sites available, and either access to public sewer lines or capacity of the soil to absorb septic tank effluent.

Soils subject to flooding are limited, in varying degree, for recreation use by the duration and intensity of flooding and the season when flooding occurs. Onsite assessment of height, duration, intensity, and frequency of flooding is essential in planning recreation facilities. The degree of the limitation of the soils is expressed as slight, moderate, or severe. Slight means that the soil properties are generally favorable and that the limitations are minor and easily overcome. Moderate

means that the limitations can be overcome or alleviated by planning, design, or special maintenance. Severe means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

Especially helpful are interpretations for septic tank absorption fields and interpretations for dwellings without basements and for local roads and streets within the soil survey.

Camp areas require RV, tent, parking areas, roads, trails, signage, sanitary facilities, and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils for this use have mild slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing camping sites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for use as picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that will increase the cost of shaping sites or building access roads and parking areas. Playgrounds require soil that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones or boulders, is firm after rains, and is not dusty when dry. If shaping is required to obtain a uniform grade, the depth of the soil over bedrock or hardpan should be enough to allow necessary grading.

Paths and trails for walking, horseback riding, bicycling, and other uses should require little or no cutting and filling. The best soils for this use are those that are not wet, are firm after rain, are not dusty when dry, and are not subject to flooding more than once during the annual period of use. They should have moderate slopes and have few or no stones or boulders on the surface.

Wildlife Habitats

Wildlife habitat soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover, and they affect the construction of water impoundments. The kind and abundance of wildlife that populates an area

depends largely on the amount and distribution of food, cover, and water. If any one of these elements is missing, is inadequate, or is inaccessible, wildlife either is scarce or does not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by helping the natural establishment of desirable plants. Soils are also rated according to their potential to support the main kinds of wildlife habitat in the area. This information can be used in planning for parks, wildlife refuges, nature study areas, and other developments for wildlife; selecting areas that are suitable for wildlife; selecting soils that are suitable for creating, improving, or maintaining specific elements of wildlife habitat; and determining the intensity of management needed for each element of the habitat. The potential of the soil is rated good, fair, poor, or very poor.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds, that provide food and cover for wildlife. Major soil properties that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are bluestem, goldenrod, wild rye, wheatgrass, and fescue.

Coniferous plants are cone-bearing trees, shrubs, or ground cover plants that furnish habitat or supply food in the form of browse, seeds, or fruitlike cones. Soil properties that have a major effect on the growth of coniferous plants are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, or foliage used by wildlife or that provide cover and shade for some species of wildlife. Major soil properties that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and moisture. Examples of shrubs are mountain mahogany, bitterbrush, snowberry, and big sagebrush.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites, exclusive of submerged or floating aquatics. They produce food or cover for wildlife that use wetlands as habitat. Major soil properties affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are

smartweed, wild millet, salt grass, and cordgrass and rushes, sedges, and reeds. Shallow water areas are bodies of water that have an average depth of less than 5 feet and that are useful to wildlife. They can be naturally wet areas, or they can be created by dams or levees or by water-control structures in marshes or streams. Examples of shallow water areas are marshes, waterfowl feeding areas, Open/and habitat consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kinds of wildlife attracted to these areas include pheasant, meadowlark, field sparrow, cottontail, and red fox.

Woodland habitat consists of areas of hardwoods or conifers, or a mixture of both, and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Wetland habitat consists of open, marshy, or swampy, shallow water areas where water-tolerant plants grow. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver. Rangeland habitat consists of areas of wild herbaceous plants and shrubs.

Wildlife attracted to rangeland include elk, antelope, desert mule deer, moose, cougars, coyotes, sage grouse, meadowlark, and lark bunting.

Crops and pasture

The major management concerns in the use of the soil for crops and pasture are described in this section.

Farming, both dryland and irrigated, is a dominant part of the economy. The acreage in dryland crops is being reduced as more and more land is irrigated. The most important dryland cash crops are wheat and barley. The most important irrigated cash crops are sugar beets, potatoes, wheat, and barley. Livestock, mainly beef cattle, is a major part of the economy. The rangeland acreage is also slowly being reduced as it is converted to irrigated cropland. The potential is good for increased food production and a significant portions of other land uses have potential as irrigated cropland if water becomes available.

Soil erosion is the major problem on most of the land in the area. If the soil is irrigated, and the slope is more than 2 percent, erosion from water is a hazard. On dry farmed soils, erosion is a hazard if the slope is more than 4 percent. Loss of the surface layer through erosion is damaging for two reasons. First, productivity is reduced as the surface layer is lost and part of the subsoil or underlying material is incorporated into the plow layer.

Soil erosion due to wind is of great concern for the area. Farming methods/crops that have a high level of soil disturbance and low residue, like potato and sugar beet production are major factors.

Loss of the surface layer is especially damaging on soils that have a clayey subsoil, such as the Arbonne variant; on soils having strongly alkaline layers near the surface, such as Escalante and Pocatello; and on soils having a layer that limits the depth of the root zone. Such layers include nodular horizons, as in Portneuf soils, or bedrock, as in the Portino, Trevino, Neeley variant, and Vining soils. Second, soil erosion on farmland results in sediment entering streams. Erosion control minimizes the pollution of streams by sediment and improves the quality of water for municipal use and recreation and for fish and wildlife. Erosion control provides a protective surface cover, reduces runoff, and increases infiltration.

A cropping system that keeps a plant cover on the soil for extended periods can hold soil erosion losses to amounts that do not reduce the productive capacity of the soil. On livestock farms, which require pasture and hay, the legume and grass forage crops in the cropping system reduce erosion on sloping land. They also provide nitrogen and improve tilth for the following crops. Minimizing tillage and leaving crop residue on the surface increase infiltration and reduces the hazards of runoff and erosion. These practices can be adapted to most soils in the survey area.

Annual cropping to small grain combined with minimum tillage is effective in reducing erosion on the dry farmed Newdale, Rexburg, Arbonne variant, and Lanoak soils. This practice cannot be used successfully on those dry farmed soils that receive less precipitation. Terraces and diversions reduce the length of slope, reduce runoff and erosion. They are most practical on deep, well drained soils that have regular slopes of up to about 15 percent. Arbon, Newdale,

Rexburg, Lanoka, Neeley, Pocatello, Wheeler, and Wheeler Ville soils with slopes of less than about 15 percent are suitable for terraces.

The other soils in the survey area are less suitable for terraces and diversions because of irregular or steep slopes. Contour or cross-slope farming is an erosion control practice in the survey area. It is best suited to soils with smooth, uniform slopes, for example, some areas of Arbon, Newdale, Rexburg, Lanoak, Neeley, Pocatello, Wheeler, and Wheelerville soils. Soil blowing is a hazard on the sandy Feltham and Quincy soils; on the sandy loam Declo, Kecko, Escalante, and Paniogue soils; and in spring on the silt loam Pocatello, Neeley, Wheeler, Portino, and Portneuf soils. Soil blowing can damage these soils in a few hours if winds are strong and the soils are dry and bare of vegetation or surface mulch. Maintaining a plant cover, surface mulch, or a rough surface through proper tillage minimizes the hazard of soil blowing. Information on the design of erosion control measures for each kind of soil is contained in the Technical Guide, available in local offices of the NRCS.

Soil drainage is the major management need on only a small percentage of the acreage used for crops and pasture in the survey area. This acreage consists of the somewhat poorly drained Parehat, Schodson, and hall soils, which make up about 6,900 acres. It also includes the small areas of wetter soils along drainageways and in swales. Artificial drainage is needed in some of the wetter areas. Information on drainage design for each kind of soil is contained in the Technical Guide, available from NRCS. Soil fertility is naturally low in the sandy soils and moderate to high in the loamy alluvial and wind-deposited soils. A large acreage of wind-deposited soils has been farmed for many years. Cropping and erosion have gradually reduced natural fertility.

The soils in the area range from the slightly acid Lanoak soils to the strongly alkaline Zunhall soils. Most are mildly to moderately alkaline. The soils are inherently low in nitrogen. The rate at which nitrogen fertilizer should be applied depends on the available moisture. Much heavier rates of application can and should be used on the irrigated soils than on the dry farmed soils. Phosphorus can be beneficial, especially on irrigated soils. On all soils, the addition of fertilizer should be based on the results of soil tests, on the need of the crop, and on the expected level of yields. The Extension Service can help in determining the kinds and amounts of fertilizer to be applied. Latest information and

suggestions on growing crops can be obtained from local offices of the U of I Extension Service and the NRCS

Key Points

- Soil tilth is an important factor in the germination of seeds and in the infiltration of water into the soil.
- Soils with good tilth are granular and porous.
- Most of the soils used for crops in the area have a silt loam surface layer that is low to moderate in content of organic matter.
- Regular additions of crop residue, manure, and other organic material can help to improve soil structure.
- Fall plowing is not a good practice on high sloped soils that are subject to erosion.

- Minimum tillage is generally suggested for all croplands. It helps to reduce compaction and maintain soil structure.
- Field crops suited to the soils and climate of the dryland part of the area include winter wheat, spring wheat, and barley.
- A small amount of alfalfa is grown for hay, but yields are low because of the limited moisture available.
- The main crops produced in the irrigated areas are sugar beets, potatoes, winter wheat, spring wheat, and barley.
- Farmers that raise livestock, likely also raise alfalfa for hay and pasture and corn that is generally cut for silage.

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Rangeland (Note: This section was prepared by John Davis, range conservationist, NRCS, Pocatello, Idaho.)

Of the 697,430 acres in the Power County Soil Survey Area, approximately 33 percent is federal land primarily under the management of the Bureau of Land Management. Practically all this federal land is classified as native rangeland. In addition, some 80,000 acres, or 11 percent of the total acreage in the area, is presently classified as rangeland and is either private or state endowment land and is under private or state management. Therefore, about 308,000 acres, or 44 percent of the total survey area, is considered rangeland.

Cow/calf and purebred cattle are the chief livestock enterprises in the area. There are several dairies and some sheep ranching. Some of the federal range

is used by operators not based within the county. With proper development and adequate water, about 35,000 acres of the present rangeland could be converted to irrigated cropland. This acreage is mainly the sandy soils north of the Snake River in the western part of the survey area. The forage produced on the rangeland is used mainly in spring and fall.

The native vegetation in many parts of the area has been greatly depleted by excessive use in the past. Even where protected from grazing, the more desirable native vegetation has been very slow to recover because of the scant precipitation in the area. The productivity of the more desirable native plants is probably a third of the amount originally produced. The productivity of the range can be increased by using management practices that are effective for the specific kind of soils and range sites.

Where climate and topography are about the same, differences in the kind and amount of vegetation that rangeland can produce are related closely to the kind of soil. Effective management is based on the relationships among soils, vegetation, and water. Some soils not listed do not support a natural plant community of predominantly grasses, grass like plants, forbes, or shrubs suitable for grazing or browsing.

A range site is a distinctive kind of rangeland that differs from other kinds of rangeland in its ability to produce a characteristic natural plant community. Soils that produce a similar kind, amount, and proportion of range plants are grouped into range sites. For those areas where the relationship between soils and vegetation has been established, range sites can be interpreted directly from the soil map.

Properties that determine the capacity of the soil to supply moisture and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction, salt content, and a seasonal high-water table are also important. In a favorable year the amount and distribution of precipitation and the temperatures are such that growing conditions are substantially better than average; in a normal year these conditions are about average for the area; in an unfavorable year, growing conditions are well below average, generally because of low available soil moisture.

Vegetation that is highly palatable to livestock and vegetation that is unpalatable are included. Some of the vegetation can also be grazed extensively by wildlife. Characteristic species of grasses, grass like plants, forbes, and shrubs that make up most of the potential natural plant community on each soil are listed by common name. Under Composition, the expected proportion of each species is presented as the percentage, in air-dry weight, of the total annual production of herbaceous and woody plants. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season. Generally, all of the vegetation produced is not used.

Range management requires, in addition to knowledge of the kinds of soil and the potential natural plant community, an evaluation of the present condition of the range vegetation in relation to its potential. Range condition is determined by comparing the present plant community with the potential natural plant community on a particular range site. The more closely the existing community resembles the potential community, the better the range condition. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the maximum production of vegetation, conservation of water, and control of erosion. Sometimes however, a range condition somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Windbreaks and environmental plantings

Windbreaks are established to protect livestock, buildings, and yards from wind and snow. Windbreaks also help protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low and high-growing broad-leaved and coniferous species provide the most protection. Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field, the interval depending on erodibility of the soil. They protect cropland and crops from wind, hold snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees are closely spaced. A healthy planting stock of suitable species planted properly on a well-prepared site and maintained in good condition can insure a high degree of plant survival. Additional information about planning windbreaks and screens and the

planting and care of trees can be obtained from local offices of the NRCS, Extension Service, or from nurserymen.

Water Resources

The American Falls Reservoir, with a capacity of 1,272,800 acres feet of water, is a distinguishing feature of the Power Soil Conservation District as well as being one of the largest man-made lakes in Idaho. The Snake River traverses the reservoir, Bannock Creek, Rock Creek and smaller drainages provide large quantities of water for local users along with downstream users.

The residents of Power County have a real interest in their water resources. The interest ranges from a very real concern of excess flood waters to anxiety for a scarcity of water. The stability of the farms making up the 79,000 acres of irrigated land is dependent upon an adequate season, long supply of irrigation water. The Power SCD has a rich treasure in this regard and in a favorable position. Falls Irrigation District and the Aberdeen/American Falls Canal Company, the two largest suppliers, with Snake River flow and reservoir storage rights, have been able to supply their water users with adequate amounts of water most years. Much of the increase in irrigated acres in recent years has been due to the tremendous Snake River Plain aquifer made accessible to farms by deep wells. Other irrigation developments, private and group, which lack storage facilities suffer from late season water shortage.

4. Prioritized Objectives

The following underlined list is Power SWCD's objectives, listed in order of priority.

District Operations

1. Meet with the County Commissioners to discuss ongoing projects and possible new projects, ideas, and request funding.
2. Seek new projects and operational funding opportunities.
3. Complete required annual reporting and documentation.
4. Complete regular District Supervisor training and new supervisor orientation, as needed. Work to improve partnerships and promote new partnerships to meet District goals and objectives.
5. Manage District assets. E.g., no-till drill, property, etc.

Non-irrigated cropland

1. Soil Quality and Erosion -
    a. Continue No-till leasing program.
    b. Identify and evaluate potential projects and seek funding to promote BMPs and activities that promote soil health and reduce erosion.
    c. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

2. Water Quality -
    a. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve Water Quality, especially ones that address impaired 303(d) surface waters.
    b. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

3. Weed and Disease Management
    a. Identify and evaluate potential projects and seek funding to promote BMPs that help control diseases, noxious and invasive species through IPM.
    b. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Irrigated cropland

1. Water Quantity -
    a. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve irrigation water efficiencies.
    b. Work cooperatively with irrigation companies/districts, landowners, and partners to improve irrigation water efficiencies, storage, aquifer recharge and other water quantity issues.
    c. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

2. Soil Quality and Erosion -
    a. Continue No-till leasing program and continue to find and obtain funding for education and implementation of BMPs that address these issues.
    b. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.
    c. Provide plants used for windbreaks and other uses through the annual tree sale.

3. Water Quality-
    a. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve Water Quality, especially ones that

address impaired 303(d) surface waters in the district, e.g., Rock Creek and American Falls Reservoir.

b. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

4. Weed and Disease Management
    a. Identify and evaluate potential projects and seek funding to promote BMPs that help control diseases, noxious and invasive species through IPM.
    b. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Information and Education

1. Provide education and outreach to youth and landowners in the county through workshops, youth education activities, and partnerships.
    a. Annual 5th Grade Education and other youth education activities
    b. Support FFA and 4-H groups within the district.
    c. Youth Scholarship Program
    d. Public and Producer workshops, tours, and education/outreach events
    e. Idaho Legislative Day and Legislative Social events
2. NACD/IASCD speech and poster contests
3. Support Idaho Envirothon, State Lands Judging, and Forestry Contests
4. Natural Resource Camp
5. Support IASCD, NACD, and IDEA

Water Quality

1. Restore beneficial uses to impaired waterbodies
    a. Continue No-till leasing program.
    b. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve Water Quality, especially ones that address impaired 303(d) surface waters in the district, e.g., Rock Creek and American Falls Reservoir.
    c. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Pasture and Hayland

1. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve forage production and improve natural resource concerns, e.g., erosion, pests, disease, etc.

2. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Rangeland

1. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve rangeland conditions, forage, and livestock access to water.
2. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Fish and Wildlife

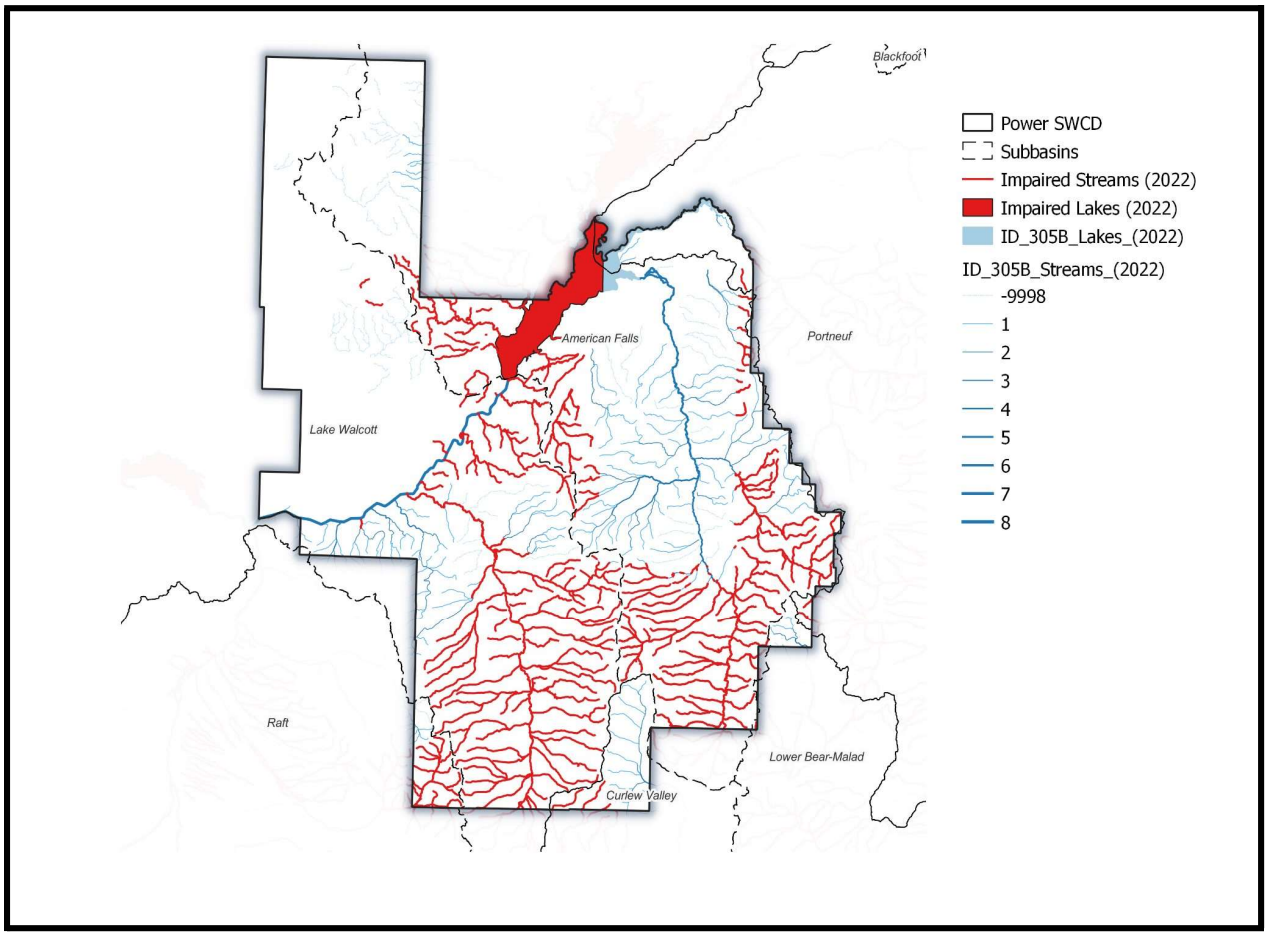
1. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve habitat and benefit fish and wildlife.
2. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

Woodland

1. Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve woodlands.
2. Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.

5. Water Quality

Status of water quality, impaired waterbodies, pollutants, standards, and beneficial uses are listed within TMDL documents and plans for the Curlew Valley, Lower Bear-Malad, American Falls, Portneuf River, Raft River, and Lake Walcott Subbasins located at https://www.deq.idaho.gov/water-quality/surface-water/total-maximum-daily-loads/. This information along with annual monitoring and updates on the condition of Idaho's water resources are summarized and updated via DEQ Integrated Reporting located at https://www.deq.idaho.gov/water-quality/surface-water/monitoring-and-assessment/. The figure below is a snapshot of the Power County area and impaired waterbodies.



6. Identify and Prioritize Projects

- Regular District Operations
- Youth Education and Scholarship programs and events
- No-till Equipment Lending, Soil Health, and Erosion programs.
- Focus projects addressing impaired waters that address pollutants of concern
- Tree and Shrub Sale
- Public Outreach and Education
- Seek WQPA Grant and other project funding.

7. Implementation

See Annual Work Plan, below.

Power Soil and Water Conservation District Annual Plan of Work - FY 2025

District Operations Priority Tasks	**Target Date**	**Responsible Person(s) or Group(s)**
Meet with County Commissioners and request funding	Feb.-Mar.	Staff, Supervisors
Seek additional funding sources, projects, and partnership opportunities	ongoing	Staff, Supervisors, NRCS, SWCC
Submit financial and match reporting	Aug	Staff, Supervisors
Submit updated 5 yr-annual report	March 31st	Staff, Supervisors
State agency registration	Jan 1st	Staff, Supervisors
Maintain and update financial records and reporting (QuickBooks, taxes)	ongoing	Staff, Treasurer
Manage District Assets (No-till Drill, Real Estate, and other property)	ongoing	Staff, Supervisors

Non-Irrigated Cropland Priority Tasks	**Target Date**	**Responsible Person(s) or Group(s)**
Wrap-up existing 319 soil health grant, Invoicing and Payments, Final Reporting	Sept-Oct.	Staff, Supervisors, SWCC, NRCS
Seek out additional projects and seek funding	ongoing	Staff, Supervisors, SWCC, NRCS
Continue No-Till Lending Program	ongoing	Staff, Supervisors
Project Tour	Fall	Staff, Supervisors, SWCC, DEQ

Irrigated Cropland Priority Tasks	**Target Date**	**Responsible Person(s) or Group(s)**
Wrap-up existing 319 soil health grant, Invoicing and Payments, Final Reporting	Sept-Oct.	Staff, Supervisors, SWCC, NRCS

Seek out additional projects and seek funding	ongoing	Staff, Supervisors, SWCC, NRCS
Continue No-Till Lending Program	ongoing	Staff, Supervisors
Project Tour	Fall	Staff, Supervisors, SWCC, DEQ
Apply for WQPA grant	May	Supervisors, Staff, SWCC
Information and Education Priority Tasks	**Target Date**	**Responsible Person(s) or Group(s)**
Social Media account for the district to promote district activities	Ongoing	Staff
Envirothon Planning, Event, Local Team	April	Staff, Supervisors
Fifth Grade Field Day Planning, Event	May	Staff, Supervisors
National Ag Day Planning, Event,	March	Staff, Supervisors
Whitnaugh Scholarship	Ongoing	Staff, Supervisors

Water Quality Priority Tasks	**Target Date**	**Responsible Person(s) or Group(s)**
Continue No-till leasing program.	March-Oct	Staff, Supervisors
Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve Water Quality,	ongoing	Staff, Supervisors, SWCC, NRCS
Promote existing partnerships and programs, seek out new opportunities for partnership	Ongoing	Staff, Supervisors, SWCC, NRCS

Pasture and Hayland Priority Tasks	Target Date	Responsible Person(s) or Group(s)
Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve forage production and improve natural resource concerns, eg., erosion, pests, disease, etc	Ongoing	Staff, Supervisors, SWCC, NRCS
Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues.	Ongoing	Staff, Supervisors, SWCC, NRCS

Rangeland Priority Tasks	Target Date	Responsible Person(s) or Group(s)
Search for Projects, and Funding	Ongoing	Staff, Supervisors, SWCC, NRCS

Fish and Wildlife Priority Tasks	Target Date	Responsible Person(s) or Group(s)
Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues	Ongoing	Staff, Supervisors, SWCC, NRCS

Woodland Priority Tasks	Target Date	Responsible Person(s) or Group(s)
Promote existing partnerships and programs and seek out new opportunities for partnership and collaboration to address these issues	Ongoing	Staff, Supervisors, SWCC, NRCS
Identify and evaluate potential projects and seek funding to promote BMPs and activities that improve woodlands.	Ongoing	Staff, Supervisors, SWCC, NRCS

IDAHO SOIL & WATER CONSERVATION COMMISSION

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

DISTRICT: Power SWCD

FOR FISCAL YEAR: 2025

DUE : March 31,

CERTIFICATION

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

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

Ivan Permann

Board Supervisor Signature

Ivan Permann

Printed Name

Mar. 17, 2025

Date

(208) 244-3726

District Telephone

powerswcd5@gmail.com

District Email Address

FOR SWC USE ONLY:

DATE OF CONFIRMATION: _____