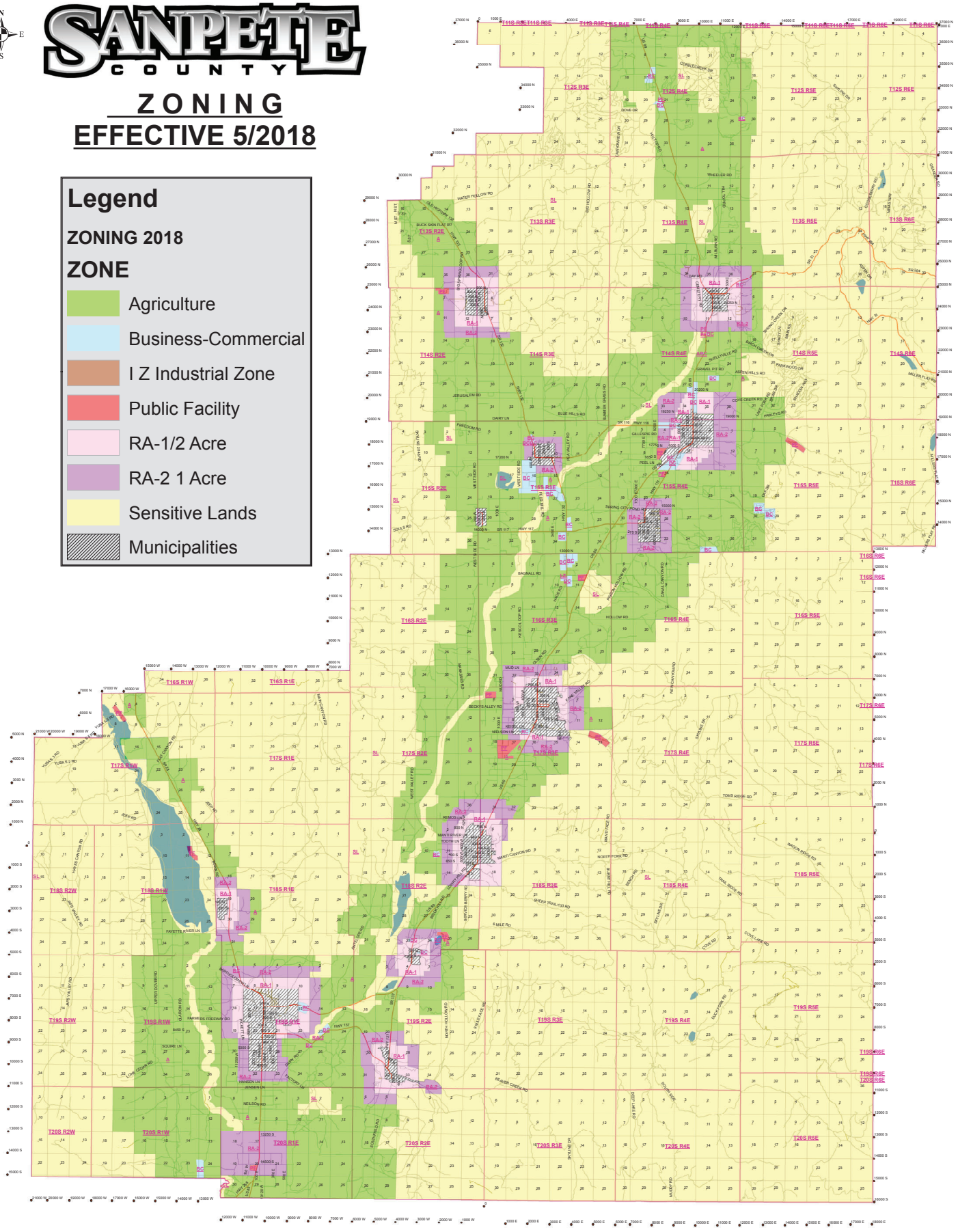
Appendix C. Support Maps

Sanpete County Zoning Map

SANPETE COUNTY

ZONING
EFFECTIVE 5/2018



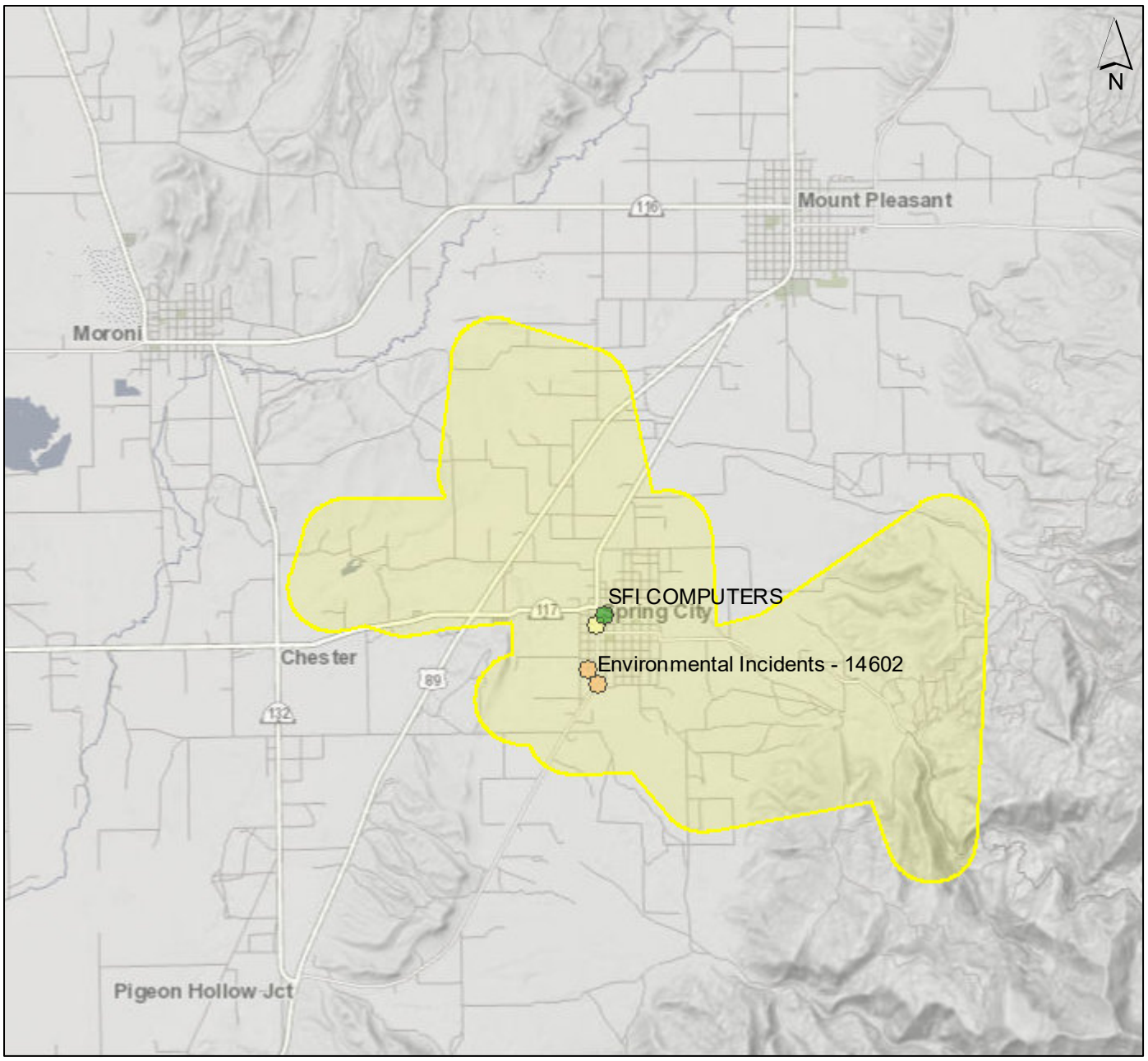
Sanpete County GIS Map
5/2018 wklarsen

3 1.5 0 3 Miles

For Graphical Representation Only. For Offical Boundary or Recorded Property Description Please Contact the Sanpete County Recorders Office

Department of Environmental Quality Map

Printed from the Utah DEQ Interactive Map



6/15/2021

1:144,448

- Hazardous Waste and Used Oil
- Underground Storage Tanks
- Environmental Incidents

0 1 2 4 mi

0 1.75 3.5 7 km

FEMA Firm Floodplain Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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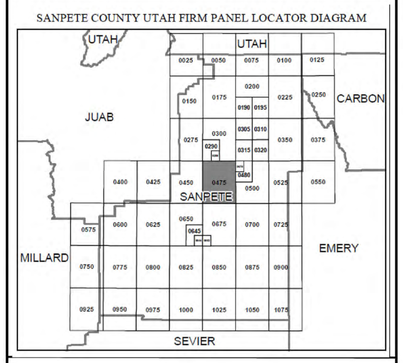
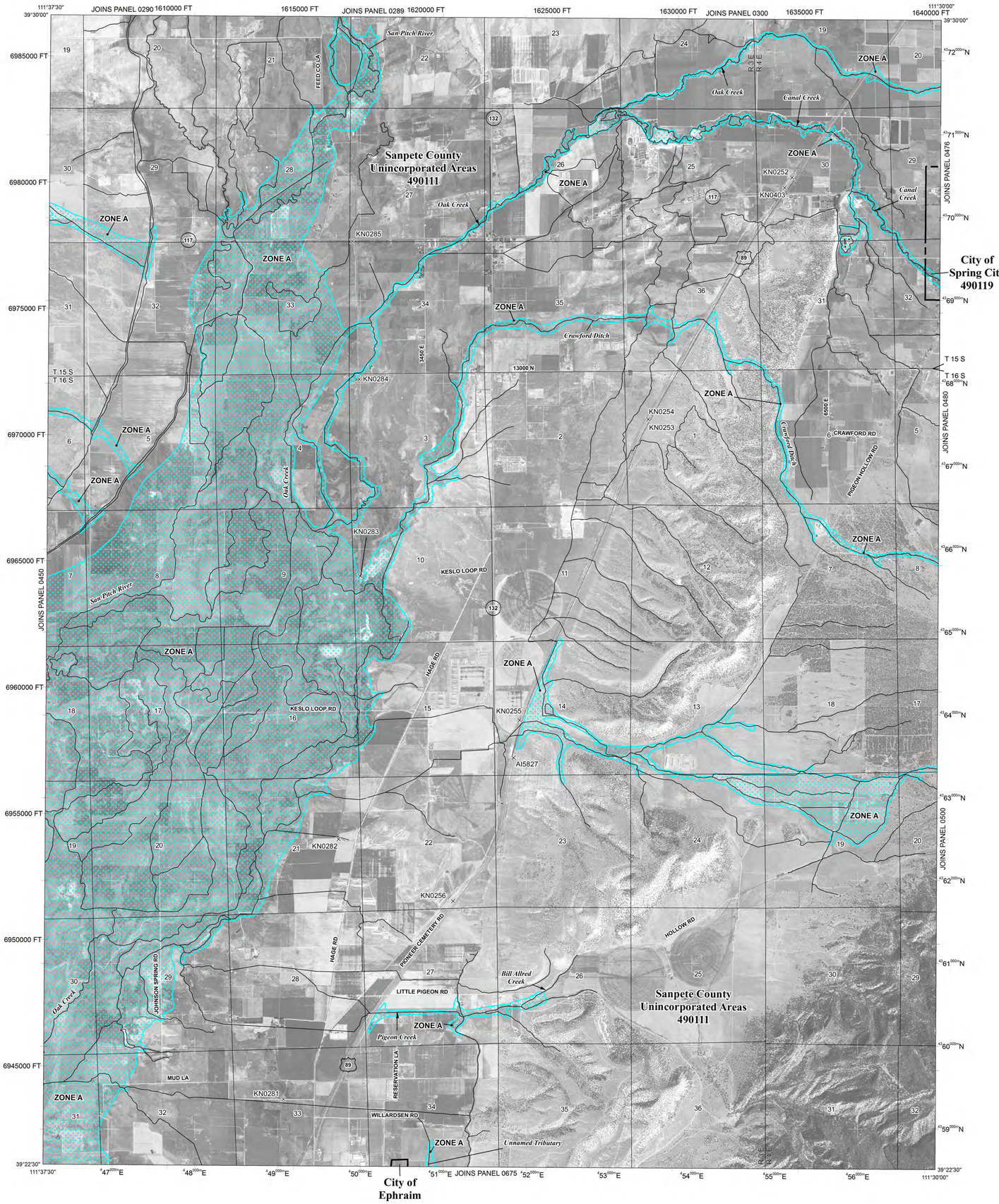
SANPETE COUNTY UTAH FIRM PANEL LOCATOR DIAGRAM





LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
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ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
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ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- Footbridge
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4476000mN — 1000-meter Universal Transverse Mercator grid values, zone 12N
- 600000 FT — 5000-foot grid values: Utah State Plane coordinate system, Central zone (FIPSZONE 4302), Lambert Conformal Conic projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
May 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
600 0 600 1200 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0475C

FIRM
FLOOD INSURANCE RATE MAP

SANPETE COUNTY, UTAH
AND INCORPORATED AREAS

PANEL 475 OF 1075

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EPHRAIM, CITY OF	490112	0475	C
SANPETE COUNTY	490111	0475	C
SPRING CITY, CITY OF	490119	0475	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
49039C0475C

EFFECTIVE DATE
MAY 2, 2012

Federal Emergency Management Agency

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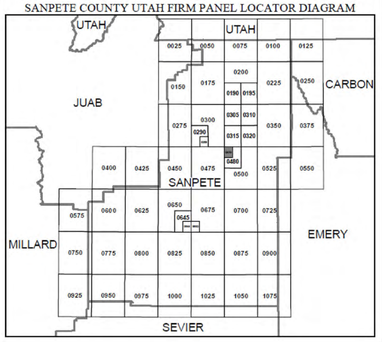

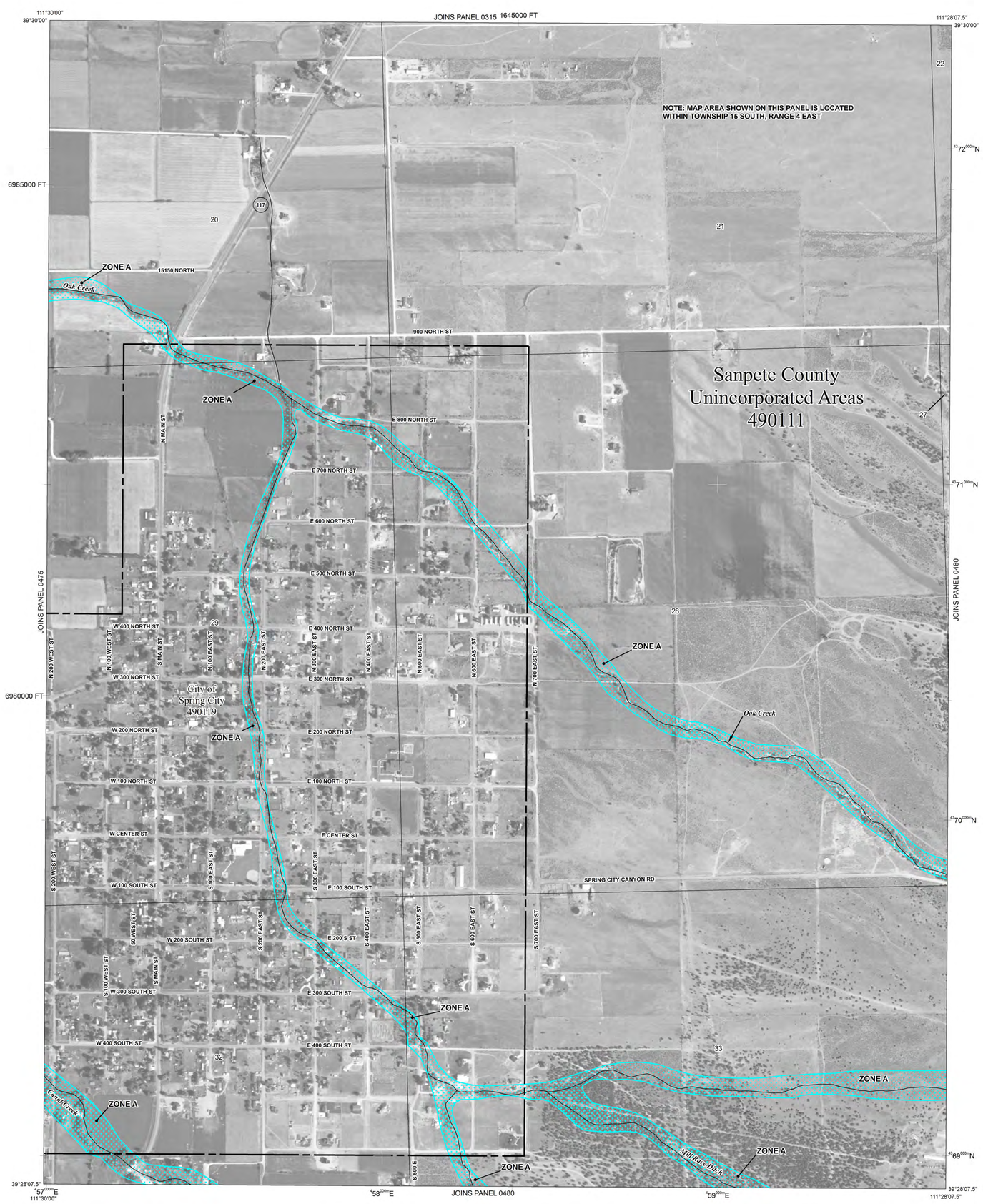

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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May 2, 2012

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NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0476C

FIRM

FLOOD INSURANCE RATE MAP

SANPETE COUNTY, UTAH
AND INCORPORATED AREAS

PANEL 476 OF 1075
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
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SPRING CITY, CITY OF	490119	0476	C

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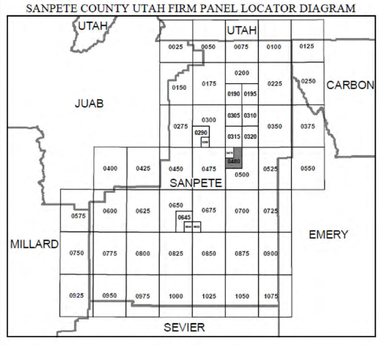

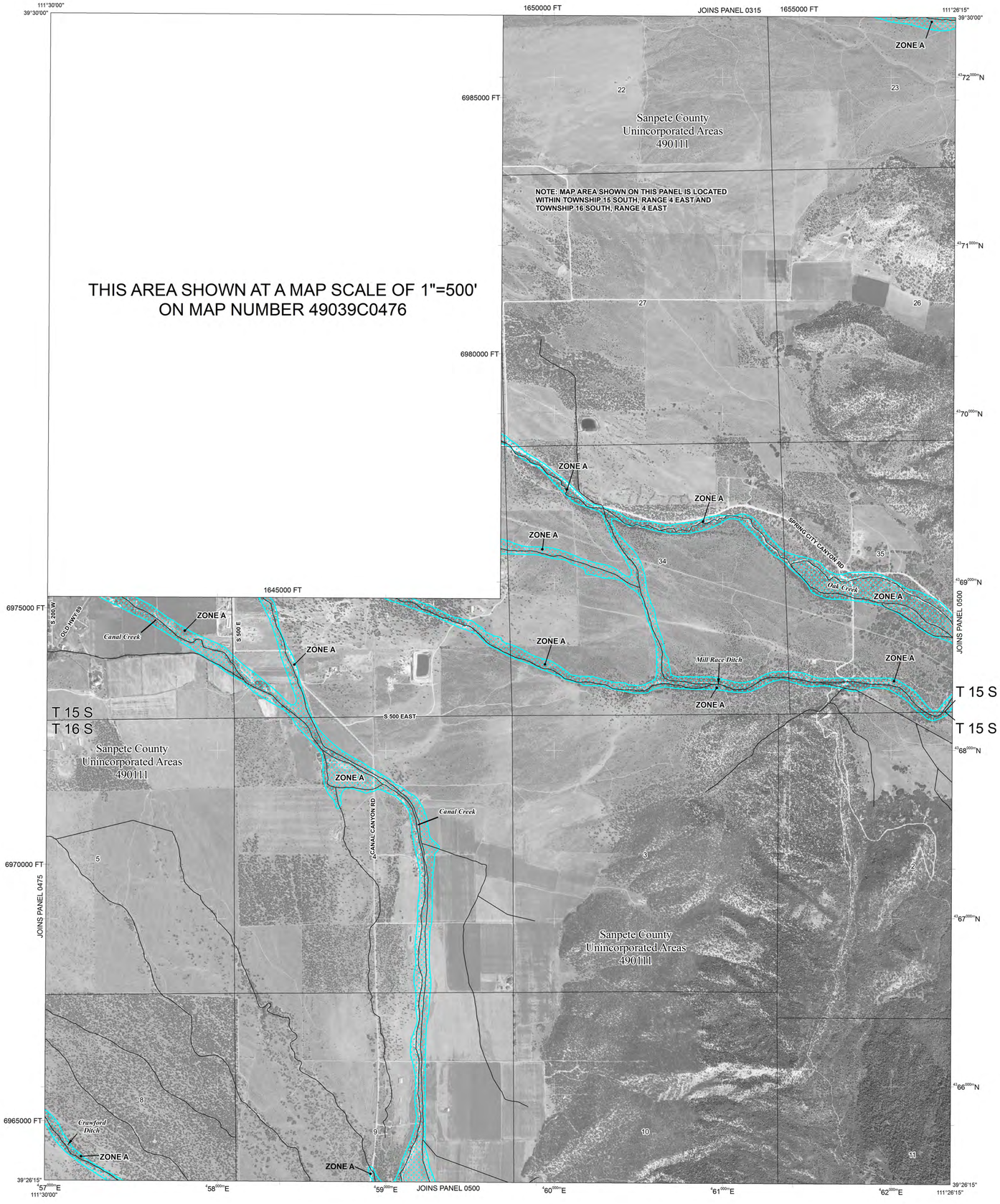

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- Road or Railroad Bridge
- Footbridge
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4276000mN — 1000-meter Universal Transverse Mercator grid values, zone 12N
- 600000 FT — 5000-foot grid values: Utah State Plane coordinate system, Central zone (FIPSZONE 4302), Lambert Conformal Conic projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
May 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0480C

FIRM

FLOOD INSURANCE RATE MAP

SANPETE COUNTY, UTAH
AND INCORPORATED AREAS

PANEL 480 OF 1075

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANPETE COUNTY	490111	0480	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
49039C0480C

EFFECTIVE DATE
MAY 2, 2012

Federal Emergency Management Agency

Soils Map

United States Department of Agriculture

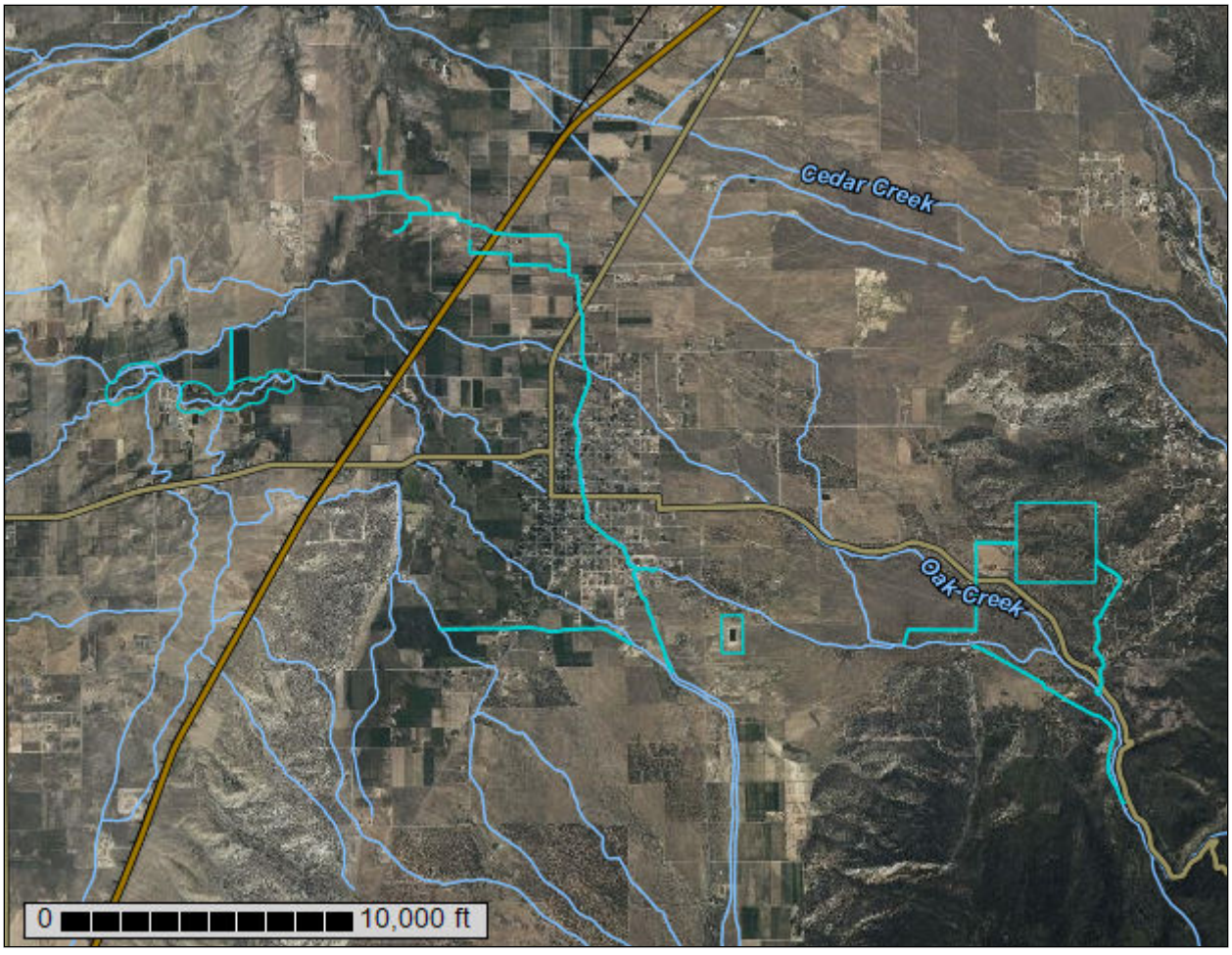
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties; and Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

Spring City Watershed EA



August 2, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

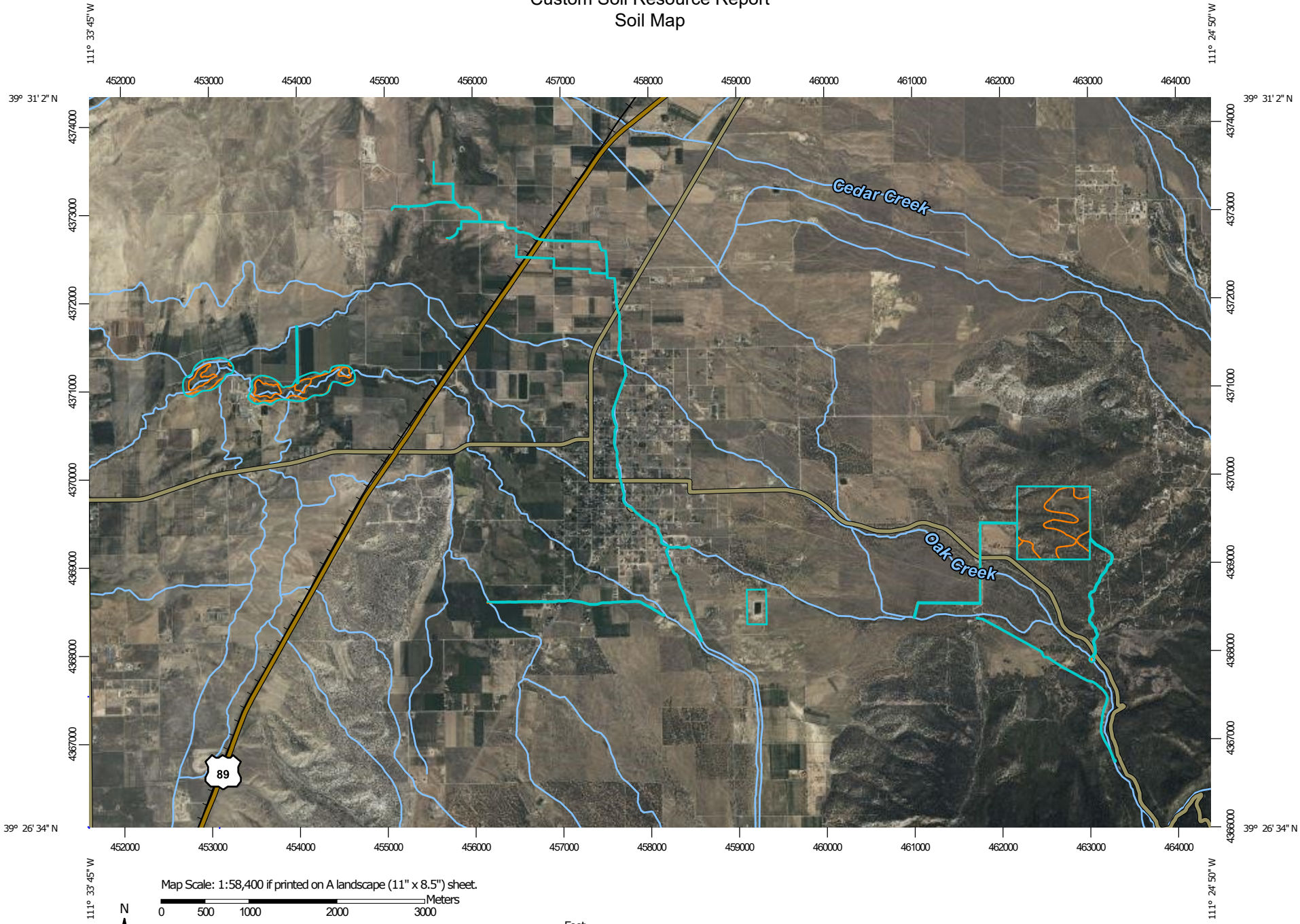
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2021—Aug 27, 2021

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

12	Birdow-Shupert families complex, 2 to 8 percent slopes	1.8	0.5%
253	Deer Creek-Preussrange families complex, 30 to 60 percent slopes	2.2	0.6%
NOTCOM	No Digital Data Available	0.2	0.1%
Subtotals for Soil Survey Area		**4.2**	**1.2%**
Totals for Area of Interest		**353.1**	**100.0%**

Ag	Anco silty clay loam	0.9	0.3%
AmB	Arapien fine sandy loam, 1 to 2 percent slopes	10.2	2.9%
AmC2	Arapien fine sandy loam, 2 to 5 percent slopes, eroded	2.5	0.7%
AoB	Arapien fine sandy loam, wet, 1 to 2 percent slopes	4.0	1.1%
ATF	Atepic very cobbly silty clay loam, 8 to 40 percent slopes	94.5	26.8%
BTC	Borvant-Doyce complex, 2 to 10 percent slopes	27.5	7.8%
Ch	Chipman silty clay loam	1.6	0.5%
CNC	Clegg loam, 3 to 10 percent slopes	47.2	13.4%
DCD	Deer Creek stony silt loam, 6 to 30 percent slopes	16.1	4.5%
DFF	Deer Creek-Mower complex, 25 to 50 percent slopes	17.7	5.0%
DgC	Denmark gravelly loam, 2 to 5 percent slopes	1.2	0.3%
DKD	Donnardo very stony loam, 4 to 16 percent slopes	4.9	1.4%
Ds	Dyreng silty clay	1.2	0.3%
FN	Fluvaquents	65.9	18.7%
GeB	Genola loam, 0 to 2 percent slopes	9.8	2.8%
Gr	Green River loam	0.1	0.0%
LeB	Lisade loam, 1 to 2 percent slopes	4.0	1.1%
MoC	Mountainville-Doyce complex, 2 to 8 percent slopes	0.1	0.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PDC	Pavant-Doyce complex, 2 to 8 percent slopes	9.8	2.8%
W	Water	26.1	7.4%
WoA	Woodrow silty clay loam, 0 to 2 percent slopes	3.9	1.1%
Subtotals for Soil Survey Area		**349.0**	**98.8%**
Totals for Area of Interest		**353.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties

12—Birdow-Shupert families complex, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2zscz
Elevation: 6,000 to 8,000 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 40 to 49 degrees F
Frost-free period: 70 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition

Birdow family and similar soils: 50 percent
Shupert family and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Birdow Family

Setting

Landform: Flood plains, stream terraces
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 17 inches: loam
Bw - 17 to 25 inches: gravelly loam
C - 25 to 60 inches: gravelly loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.71 to 2.13 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Shupert Family

Setting

Landform: Stream terraces, flood plains

Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 8 inches: loam
C - 8 to 60 inches: gravelly loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.71 to 2.13 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Calcium carbonate, maximum content: 7 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

253—Deer Creek-Preussrange families complex, 30 to 60 percent slopes

Map Unit Setting

National map unit symbol: 30gvv
Elevation: 6,990 to 9,090 feet
Mean annual precipitation: 21 to 27 inches
Mean annual air temperature: 38 to 42 degrees F
Frost-free period: 70 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Deer creek family and similar soils: 50 percent
Preussrange family and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deer Creek Family

Setting

Landform: Mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from sandstone and shale

Typical profile

A - 0 to 13 inches: very gravelly loam
Bt1 - 13 to 17 inches: gravelly clay
Bt2 - 17 to 38 inches: gravelly clay
Bk - 38 to 60 inches: gravelly clay loam

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.07 to 0.21 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Preussrange Family

Setting

Landform: Mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from limestone and shale

Typical profile

A - 0 to 5 inches: very gravelly loam
Bt - 5 to 23 inches: very gravelly silt loam
Bk - 23 to 30 inches: very gravelly loam
Cr - 30 to 60 inches: bedrock

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C
Hydric soil rating: No

NOTCOM—No Digital Data Available

Map Unit Composition

Notcom: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Notcom

Properties and qualities

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

Ag—Anco silty clay loam

Map Unit Setting

National map unit symbol: j5rq
Elevation: 5,100 to 5,700 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 110 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Anco and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Anco

Setting

Landform: Flood plains, alluvial fans
Down-slope shape: Linear, concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 16 inches: silty clay loam
C1 - 16 to 38 inches: silty clay loam
C2 - 38 to 46 inches: silt loam
C3 - 46 to 62 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C
Ecological site: R028AY010UT - Semiwet Saline Meadow
Hydric soil rating: No

Minor Components

Abcal

Percent of map unit: 5 percent
Landform: Alluvial fans, flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

Shumway

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

AmB—Arapien fine sandy loam, 1 to 2 percent slopes

Map Unit Setting

National map unit symbol: j5rw
Elevation: 5,200 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Arapien and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arapien

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A - 0 to 10 inches: fine sandy loam
C1ca - 10 to 13 inches: fine sandy loam
C2ca - 13 to 30 inches: clay loam
C3ca - 30 to 38 inches: loam
C4 - 38 to 48 inches: very fine sandy loam
C5 - 48 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 60.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R028AY227UT - Semidesert Gravelly Sandy Loam (Black Sagebrush)
Hydric soil rating: No

Minor Components

Lisade

Percent of map unit: 5 percent

Linoyer

Percent of map unit: 5 percent

AmC2—Arapien fine sandy loam, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: j5rx
Elevation: 5,200 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Arapien and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arapien

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A - 0 to 10 inches: fine sandy loam
C1ca - 10 to 13 inches: fine sandy loam
C2ca - 13 to 30 inches: clay loam
C3ca - 30 to 38 inches: loam
C4 - 38 to 48 inches: very fine sandy loam
C5 - 48 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 60.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R028AY227UT - Semidesert Gravelly Sandy Loam (Black Sagebrush)
Hydric soil rating: No

Minor Components

Arapien

Percent of map unit: 5 percent

Lisade, eroded

Percent of map unit: 5 percent

Sanpete

Percent of map unit: 5 percent

AoB—Arapien fine sandy loam, wet, 1 to 2 percent slopes

Map Unit Setting

National map unit symbol: j5s0
Elevation: 5,200 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Arapien and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arapien

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A - 0 to 13 inches: fine sandy loam
C1ca - 13 to 38 inches: clay loam
C2 - 38 to 60 inches: loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C
Ecological site: R028AY012UT - Semiwet Fresh Meadow
Hydric soil rating: No

Minor Components

Arapien, saline-alkali
Percent of map unit: 5 percent

Arapien
Percent of map unit: 5 percent

ATF—Atepic very cobbly silty clay loam, 8 to 40 percent slopes

Map Unit Setting
National map unit symbol: j5s4
Elevation: 6,000 to 7,200 feet
Mean annual precipitation: 12 to 15 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 100 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition
Atepic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atepic

Setting
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and residuum derived from shale

Typical profile
A - 0 to 6 inches: very cobbly silty clay loam
C1 - 6 to 11 inches: channery silty clay loam
C2ca - 11 to 17 inches: channery silty clay loam
Cr - 17 to 40 inches: weathered bedrock

Properties and qualities
Slope: 8 to 40 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY324UT - Upland Shallow Loam (Utah Juniper - Singleleaf Pinyon)
Hydric soil rating: No

Minor Components

Atepic, eroded

Percent of map unit: 5 percent

Borvant, eroded

Percent of map unit: 5 percent

Mower

Percent of map unit: 5 percent

BTC—Borvant-Doyce complex, 2 to 10 percent slopes

Map Unit Setting

National map unit symbol: j5sm
Elevation: 5,600 to 7,000 feet
Mean annual precipitation: 11 to 14 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 90 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition

Borvant and similar soils: 55 percent
Doyce and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Borvant

Setting

Landform: Alluvial fans, ridges
Down-slope shape: Concave, convex
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from limestone and shale

Typical profile

A11 - 0 to 3 inches: very stony loam
A12 - 3 to 14 inches: very cobbly loam
C1ca - 14 to 19 inches: extremely gravelly loam
C2cam - 19 to 29 inches: indurated

Properties and qualities

Slope: 2 to 10 percent
Depth to restrictive feature: 16 to 20 inches to petrocalcic
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY320UT - Upland Shallow Hardpan (Pinyon-Utah Juniper)
Hydric soil rating: No

Description of Doyce

Setting

Landform: Fans, swales
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A1 - 0 to 10 inches: loam
B2t - 10 to 20 inches: sandy clay loam
C1ca - 20 to 32 inches: sandy clay loam
C2ca - 32 to 44 inches: stony sandy clay loam
C3 - 44 to 48 inches: loam
C4cab - 48 to 60 inches: stony loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (028AY310UT)
Hydric soil rating: No

Minor Components

Donnardo
Percent of map unit: 10 percent

Mountainville
Percent of map unit: 5 percent

Ch—Chipman silty clay loam

Map Unit Setting
National map unit symbol: j5sy
Elevation: 5,500 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 100 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition
Chipman and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chipman

Setting
Landform: Valley floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile
A1 - 0 to 12 inches: silty clay loam
C1ca - 12 to 26 inches: silty clay loam
C2 - 26 to 60 inches: silty clay loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 12 to 24 inches

Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

Minor Components

Poganeab, high lime variant

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: No

Beek

Percent of map unit: 5 percent

Poganeab

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

CNC—Clegg loam, 3 to 10 percent slopes

Map Unit Setting

National map unit symbol: j5t0
Elevation: 6,500 to 7,500 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 100 days
Farmland classification: Not prime farmland

Map Unit Composition

Clegg and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Clegg

Setting

Landform: Flats, alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A1 - 0 to 8 inches: loam
B2t - 8 to 29 inches: clay loam
Cca - 29 to 60 inches: clay loam

Properties and qualities

Slope: 3 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R047XA430UT - Mountain Loam (mountain big sagebrush)
Hydric soil rating: No

Minor Components

Mower

Percent of map unit: 5 percent

Deer creek, high rainfall

Percent of map unit: 5 percent

DCD—Deer Creek stony silt loam, 6 to 30 percent slopes

Map Unit Setting

National map unit symbol: j5t6
Elevation: 6,500 to 7,500 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 80 to 100 days

Farmland classification: Not prime farmland

Map Unit Composition

Deer creek and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deer Creek

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainbase
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from sandstone, limestone, quartzite, and mixed igneous rocks

Typical profile

A11 - 0 to 2 inches: stony silt loam
A12 - 2 to 10 inches: silty clay loam
B21t - 10 to 19 inches: stony clay
B22t - 19 to 28 inches: cobbly clay
C1ca - 28 to 50 inches: cobbly clay loam
C2 - 50 to 60 inches: cobbly silty clay loam

Properties and qualities

Slope: 6 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 65 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R047XA308UT - Upland Loam (basin big sagebrush)
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (047XA308UT)
Hydric soil rating: No

Minor Components

Sanpitch

Percent of map unit: 5 percent

Ant flat, low rainfall

Percent of map unit: 5 percent

DFF—Deer Creek-Mower complex, 25 to 50 percent slopes

Map Unit Setting

National map unit symbol: j5t9
Elevation: 6,500 to 8,000 feet
Mean annual precipitation: 14 to 20 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 70 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Deer creek and similar soils: 60 percent
Mower and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deer Creek

Setting

Landform: Swales
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium and colluvium derived from sandstone, limestone, quartzite, and mixed igneous rocks

Typical profile

A11 - 0 to 2 inches: stony silt loam
A12 - 2 to 10 inches: silty clay loam
B21t - 10 to 19 inches: stony clay
B22t - 19 to 28 inches: cobbly clay
C1ca - 28 to 50 inches: cobbly clay loam
C2 - 50 to 60 inches: cobbly silty clay loam

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 65 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R047XA432UT - Mountain Loam (oak)
Hydric soil rating: No

Description of Mower

Setting

Landform: Ridges
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium, colluvium, and residuum derived from sandstone and shale

Typical profile

A1 - 0 to 11 inches: very stony loam
B2 - 11 to 17 inches: silty clay loam
C1ca - 17 to 35 inches: shaly silty clay loam
Cr - 35 to 45 inches: weathered bedrock

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: R047XA461UT - Mountain Stony Loam (mountain big sagebrush)
Hydric soil rating: No

Minor Components

Ant flat

Percent of map unit: 5 percent

Atepic

Percent of map unit: 5 percent

DgC—Denmark gravelly loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: j5tb
Elevation: 5,100 to 5,600 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition

Denmark and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denmark

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and sandstone

Typical profile

A1 - 0 to 8 inches: gravelly loam
C1ca - 8 to 18 inches: gravelly loam
C2cam - 18 to 28 inches: indurated

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 10 to 20 inches to petrocalcic
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D

Ecological site: R028AY236UT - Semidesert Shallow Loam (Black Sagebrush)
Hydric soil rating: No

Minor Components

Freedom
Percent of map unit: 5 percent

Arapien, eroded
Percent of map unit: 5 percent

DKD—Donnardo very stony loam, 4 to 16 percent slopes

Map Unit Setting
National map unit symbol: j5td
Elevation: 5,400 to 6,200 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 100 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition
Donnardo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Donnardo

Setting
Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile
A11 - 0 to 10 inches: very stony loam
A12 - 10 to 15 inches: very cobbly loam
C1ca - 15 to 30 inches: very stony loam
C2 - 30 to 65 inches: extremely stony loam

Properties and qualities
Slope: 4 to 16 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent

Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)
Other vegetative classification: Upland Stony Loam (Mountain Big Sagebrush) (028AY334UT)
Hydric soil rating: No

Minor Components

Fontreen

Percent of map unit: 5 percent

Pavant

Percent of map unit: 5 percent

Mountainville

Percent of map unit: 5 percent

Ds—Dyreng silty clay

Map Unit Setting

National map unit symbol: j5tk
Elevation: 5,000 to 5,200 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 110 to 140 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Dyreng and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dyreng

Setting

Landform: Flood plains, alluvial fans
Down-slope shape: Linear, concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from shale

Typical profile

Ap - 0 to 10 inches: silty clay
C1 - 10 to 33 inches: silty clay
C2g - 33 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C
Ecological site: R028AY001UT - Alkali Bottom (Alkali Sacaton)
Hydric soil rating: No

Minor Components

Dyreng, strongly saline

Percent of map unit: 5 percent

Anco

Percent of map unit: 5 percent

Shumway

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

FN—Fluvaquents

Map Unit Setting

National map unit symbol: j5tn
Elevation: 5,000 to 6,000 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Typical profile

A1 - 0 to 6 inches: loam
C1 - 6 to 60 inches: stratified loamy sand to clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

Minor Components

Ponded soils

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

GeB—Genola loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j5tv
Elevation: 5,100 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Genola and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Genola

Setting

Landform: Alluvial flats, alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 13 inches: loam
C1 - 13 to 19 inches: loam
C2 - 19 to 23 inches: silt loam
Ab - 23 to 31 inches: silty clay loam
C3 - 31 to 34 inches: silt loam
C4 - 34 to 60 inches: stratified loamy fine sand to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R028AB221UT - Semidesert Loam (Basin Big Sagebrush)
Hydric soil rating: No

Minor Components

Linoyer
Percent of map unit: 5 percent

Woodrow
Percent of map unit: 5 percent

Gr—Green River loam

Map Unit Setting
National map unit symbol: j5v0
Elevation: 4,800 to 6,000 feet
Mean annual precipitation: 6 to 11 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 120 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Green river and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Green River

Setting
Landform: Alluvial fans, flood plains
Down-slope shape: Concave, linear
Across-slope shape: Convex, concave
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile
Ap - 0 to 6 inches: loam
C1 - 6 to 17 inches: loam
C2 - 17 to 23 inches: silt loam
C3 - 23 to 36 inches: loamy sand
C4 - 36 to 40 inches: clay loam
C5 - 40 to 60 inches: silt loam

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 24 to 42 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C
Ecological site: R028AY012UT - Semiwet Fresh Meadow
Hydric soil rating: No

Minor Components

Genola
Percent of map unit: 5 percent

Poganeab
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY020UT - Wet Fresh Meadow
Hydric soil rating: Yes

Anco
Percent of map unit: 5 percent

LeB—Lisade loam, 1 to 2 percent slopes

Map Unit Setting
National map unit symbol: j5vd
Elevation: 5,000 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Lisade and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lisade

Setting
Landform: Alluvial flats, alluvial fans

Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave, convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A1 - 0 to 5 inches: loam
C1ca - 5 to 12 inches: sandy loam
C2ca - 12 to 22 inches: sandy loam
C3ca - 22 to 34 inches: gravelly sandy loam
C4 - 34 to 55 inches: gravelly sandy loam
C5 - 55 to 66 inches: gravelly loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R028AY220UT - Semidesert Loam (Wyoming Big Sagebrush)
Hydric soil rating: No

Minor Components

Arapien

Percent of map unit: 5 percent

Sanpete

Percent of map unit: 5 percent

Linoyer

Percent of map unit: 5 percent

MoC—Mountainville-Doyce complex, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: j5w8
Elevation: 5,600 to 6,200 feet

Mean annual precipitation: 11 to 14 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 100 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition

Mountainville and similar soils: 50 percent
Doyce and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mountainville

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from sandstone, limestone, and conglomerate

Typical profile

A11 - 0 to 4 inches: very stony sandy loam
A12 - 4 to 11 inches: very stony fine sandy loam
B1 - 11 to 20 inches: very stony loam
B21t - 20 to 31 inches: very stony sandy clay loam
B22t - 31 to 38 inches: extremely stony sandy clay loam
C1ca - 38 to 60 inches: very stony loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: R047XA332UT - Upland Stony Loam (black sagebrush)
Hydric soil rating: No

Description of Doyce

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A1 - 0 to 10 inches: loam
B2t - 10 to 20 inches: sandy clay loam
C1ca - 20 to 32 inches: sandy clay loam
C2ca - 32 to 44 inches: stony sandy clay loam
C3 - 44 to 48 inches: loam
C4cab - 48 to 60 inches: stony loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (028AY310UT)
Hydric soil rating: No

Minor Components

Pavant

Percent of map unit: 15 percent

Donnardo

Percent of map unit: 3 percent

Borvant

Percent of map unit: 2 percent

PDC—Pavant-Doyce complex, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: j5wl
Elevation: 5,600 to 6,300 feet
Mean annual precipitation: 11 to 14 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 100 to 120 days

Farmland classification: Not prime farmland

Map Unit Composition

Pavant and similar soils: 40 percent
Doyce and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pavant

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and sandstone

Typical profile

Ap - 0 to 7 inches: loam
C1 - 7 to 13 inches: clay loam
C1ca - 13 to 17 inches: clay loam
C2cam - 17 to 29 inches: indurated

Properties and qualities

Slope: 4 to 8 percent
Depth to restrictive feature: 10 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY320UT - Upland Shallow Hardpan (Pinyon-Utah Juniper)
Hydric soil rating: No

Description of Doyce

Setting

Landform: Swales
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A1 - 0 to 10 inches: loam
B2t - 10 to 20 inches: sandy clay loam
C1ca - 20 to 32 inches: sandy clay loam
C2ca - 32 to 44 inches: stony sandy clay loam
C3 - 44 to 48 inches: loam

C4cab - 48 to 60 inches: stony loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (028AY310UT)
Hydric soil rating: No

Minor Components

Borvant

Percent of map unit: 15 percent
Ecological site: R028AY325UT - Upland Shallow Loam (Black Sagebrush)

Donnardo

Percent of map unit: 15 percent
Ecological site: R028AY334UT - Upland Stony Loam (Wyoming Big Sagebrush)

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WoA—Woodrow silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: j5y3
Elevation: 5,000 to 6,000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 115 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodrow and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodrow

Setting

Landform: Flood plains, alluvial fans
Down-slope shape: Linear, concave
Across-slope shape: Linear, convex
Parent material: Alluvium derived from limestone

Typical profile

A1 - 0 to 11 inches: silty clay loam
A2 - 11 to 18 inches: clay loam
C1 - 18 to 36 inches: silty clay
C2 - 36 to 48 inches: silt loam
C3 - 48 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R028AY220UT - Semidesert Loam (Wyoming Big Sagebrush)
Hydric soil rating: No

Minor Components

Genola

Percent of map unit: 4 percent
Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R028AB221UT - Semidesert Loam (Basin Big Sagebrush)
Hydric soil rating: No

Quaker

Percent of map unit: 4 percent

Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R028AB221UT - Semidesert Loam (Basin Big Sagebrush)
Hydric soil rating: No

Wales

Percent of map unit: 4 percent
Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R028AB221UT - Semidesert Loam (Basin Big Sagebrush)
Hydric soil rating: No

Ephraim

Percent of map unit: 3 percent
Landform: Valley floors, flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R028AY012UT - Semiwet Fresh Meadow
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

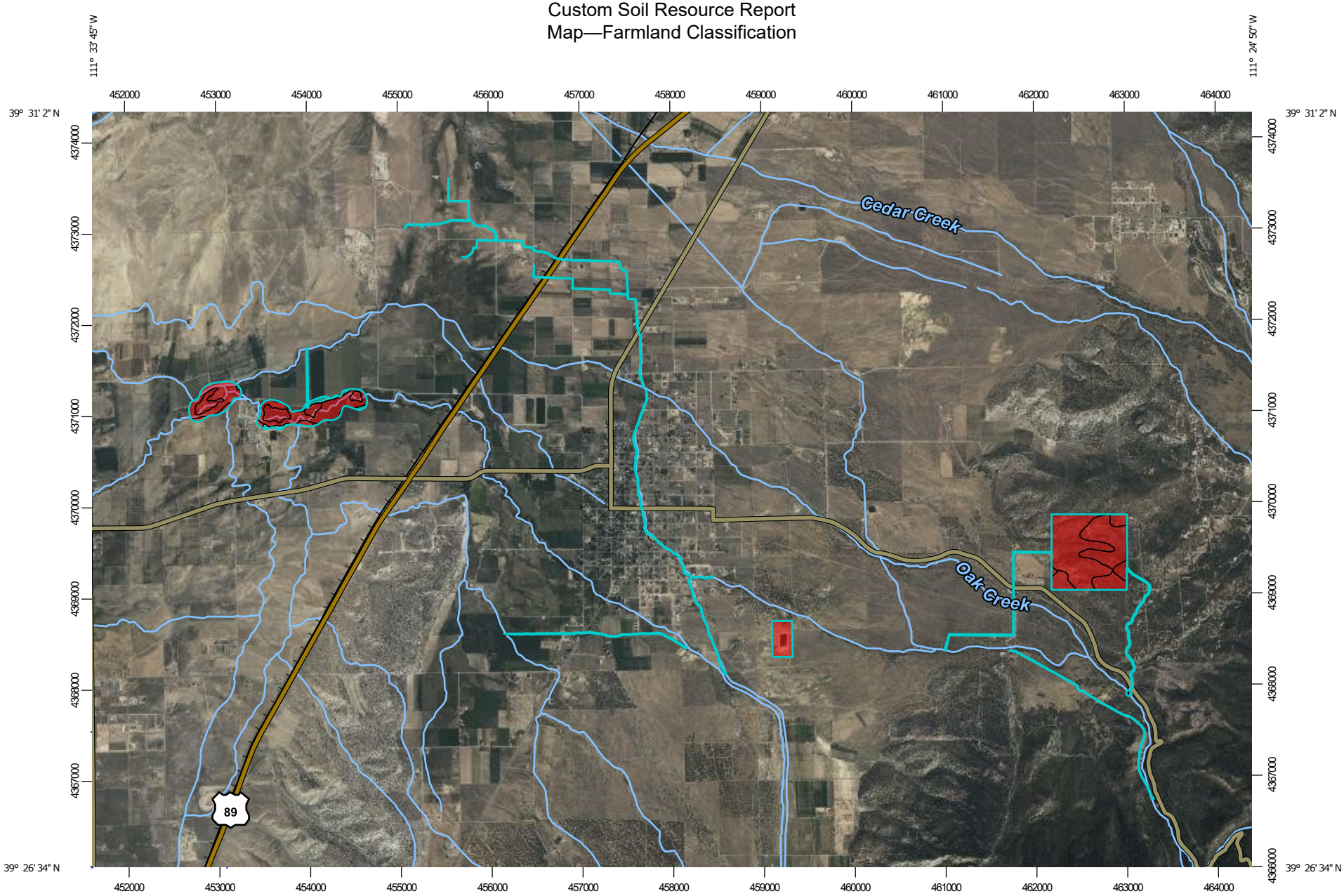
The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.


111° 33' 45" W
111° 24' 50" W
39° 31' 2" N
39° 26' 34" N
452000
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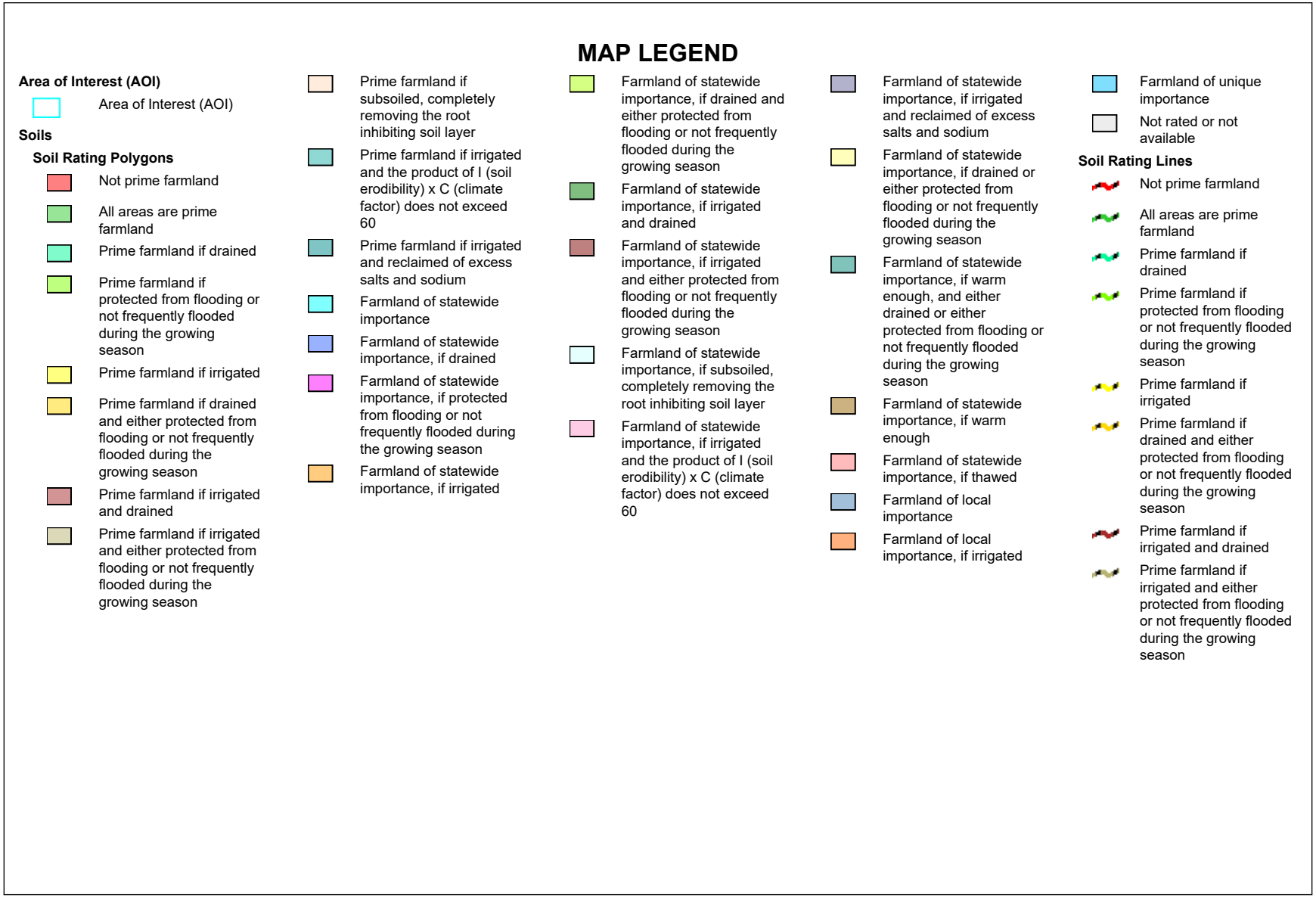
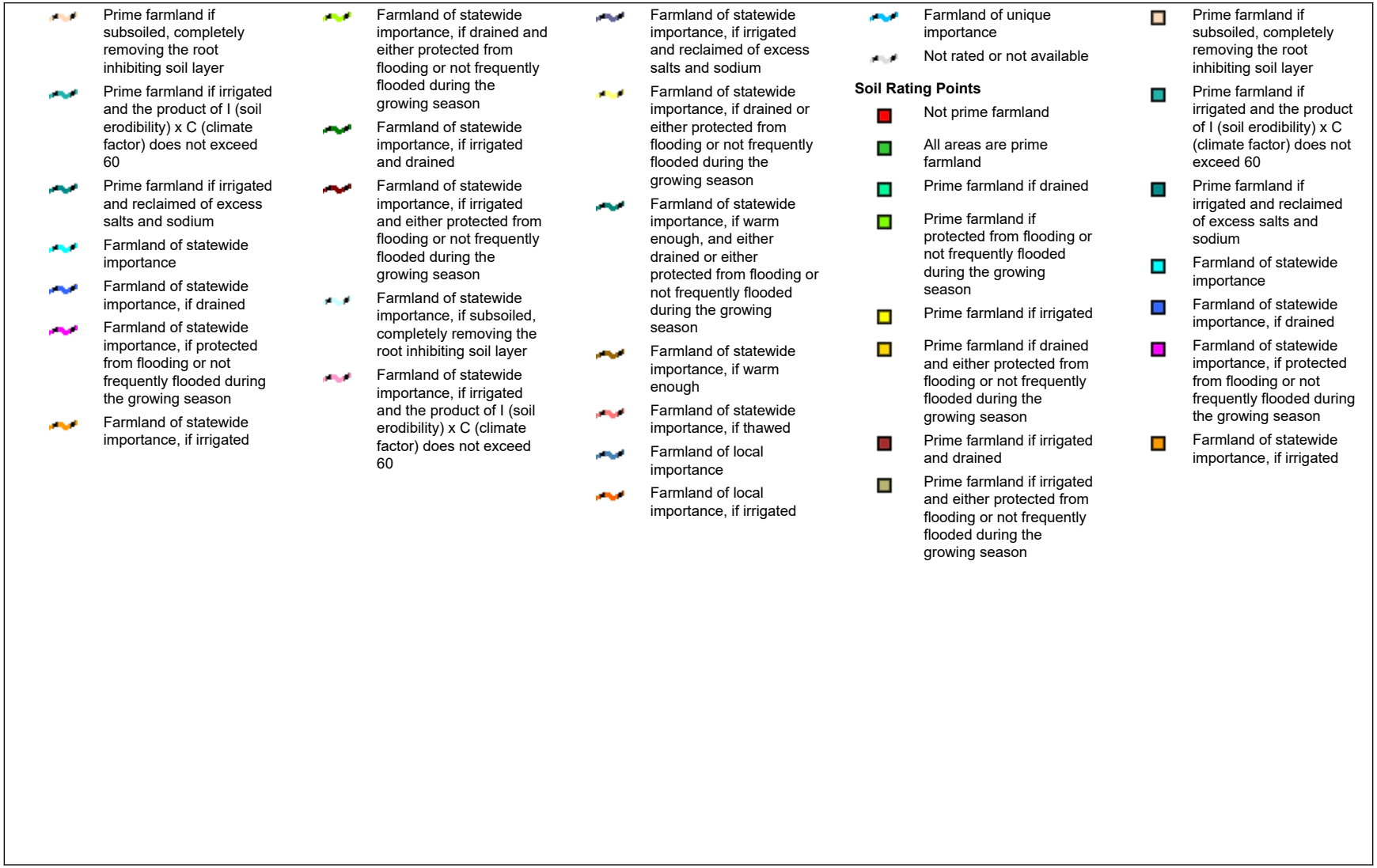
Cedar Creek
Oak Creek
89
Map Scale: 1:58,400 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 500 1000 2000 3000
Feet
0 2500 5000 10000 15000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Lines
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2021—Aug 27, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
12	Birdow-Shupert families complex, 2 to 8 percent slopes	Not prime farmland	1.8	0.5%
253	Deer Creek-Preussrange families complex, 30 to 60 percent slopes	Not prime farmland	2.2	0.6%
NOTCOM	No Digital Data Available	Not prime farmland	0.2	0.1%
Subtotals for Soil Survey Area			**4.2**	**1.2%**
Totals for Area of Interest			**353.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ag	Anco silty clay loam	Farmland of statewide importance	0.9	0.3%
AmB	Arapien fine sandy loam, 1 to 2 percent slopes	Not prime farmland	10.2	2.9%
AmC2	Arapien fine sandy loam, 2 to 5 percent slopes, eroded	Not prime farmland	2.5	0.7%
AoB	Arapien fine sandy loam, wet, 1 to 2 percent slopes	Not prime farmland	4.0	1.1%
ATF	Atepic very cobbly silty clay loam, 8 to 40 percent slopes	Not prime farmland	94.5	26.8%
BTC	Borvant-Doyce complex, 2 to 10 percent slopes	Not prime farmland	27.5	7.8%
Ch	Chipman silty clay loam	Not prime farmland	1.6	0.5%
CNC	Clegg loam, 3 to 10 percent slopes	Not prime farmland	47.2	13.4%
DCD	Deer Creek stony silt loam, 6 to 30 percent slopes	Not prime farmland	16.1	4.5%
DFF	Deer Creek-Mower complex, 25 to 50 percent slopes	Not prime farmland	17.7	5.0%
DgC	Denmark gravelly loam, 2 to 5 percent slopes	Not prime farmland	1.2	0.3%
DKD	Donnardo very stony loam, 4 to 16 percent slopes	Not prime farmland	4.9	1.4%
Ds	Dyreng silty clay	Farmland of statewide importance	1.2	0.3%
FN	Fluvaquents	Not prime farmland	65.9	18.7%
GeB	Genola loam, 0 to 2 percent slopes	Farmland of statewide importance	9.8	2.8%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Gr	Green River loam	Farmland of statewide importance	0.1	0.0%
LeB	Lisade loam, 1 to 2 percent slopes	Farmland of statewide importance	4.0	1.1%
MoC	Mountainville-Doyce complex, 2 to 8 percent slopes	Not prime farmland	0.1	0.0%
PDC	Pavant-Doyce complex, 2 to 8 percent slopes	Not prime farmland	9.8	2.8%
W	Water	Not prime farmland	26.1	7.4%
WoA	Woodrow silty clay loam, 0 to 2 percent slopes	Farmland of statewide importance	3.9	1.1%
Subtotals for Soil Survey Area			**349.0**	**98.8%**
Totals for Area of Interest			**353.1**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

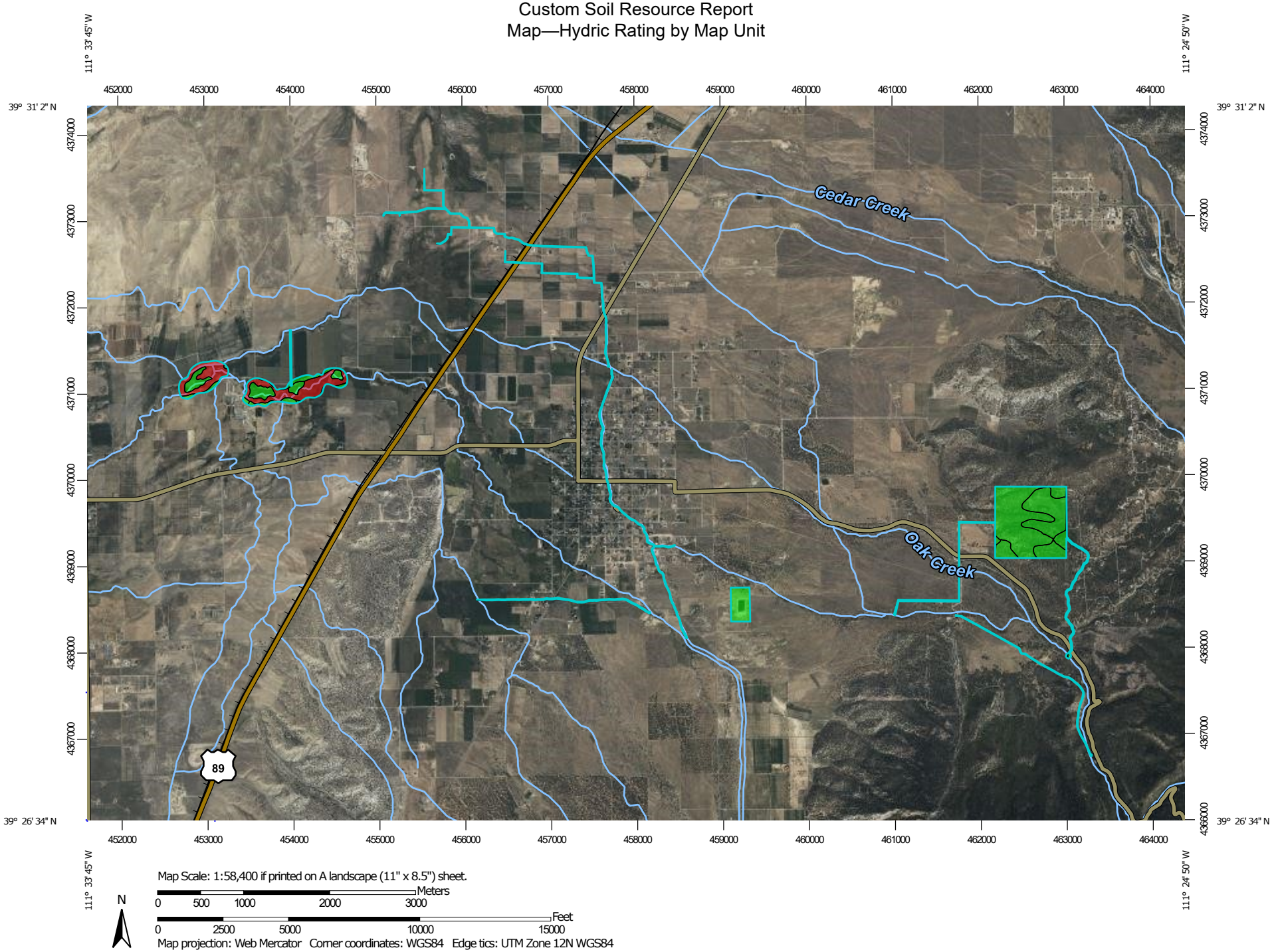
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Map—Hydric Rating by Map Unit



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2021—Aug 27, 2021

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
12	Birdow-Shupert families complex, 2 to 8 percent slopes	0	1.8	0.5%
253	Deer Creek-Preussrange families complex, 30 to 60 percent slopes	0	2.2	0.6%
NOTCOM	No Digital Data Available	0	0.2	0.1%
Subtotals for Soil Survey Area			**4.2**	**1.2%**
Totals for Area of Interest			**353.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ag	Anco silty clay loam	10	0.9	0.3%
AmB	Arapien fine sandy loam, 1 to 2 percent slopes	0	10.2	2.9%
AmC2	Arapien fine sandy loam, 2 to 5 percent slopes, eroded	0	2.5	0.7%
AoB	Arapien fine sandy loam, wet, 1 to 2 percent slopes	0	4.0	1.1%
ATF	Atepic very cobbly silty clay loam, 8 to 40 percent slopes	0	94.5	26.8%
BTC	Borvant-Doyce complex, 2 to 10 percent slopes	0	27.5	7.8%
Ch	Chipman silty clay loam	90	1.6	0.5%
CNC	Clegg loam, 3 to 10 percent slopes	0	47.2	13.4%
DCD	Deer Creek stony silt loam, 6 to 30 percent slopes	0	16.1	4.5%
DFF	Deer Creek-Mower complex, 25 to 50 percent slopes	0	17.7	5.0%
DgC	Denmark gravelly loam, 2 to 5 percent slopes	0	1.2	0.3%
DKD	Donnardo very stony loam, 4 to 16 percent slopes	0	4.9	1.4%
Ds	Dyreng silty clay	5	1.2	0.3%
FN	Fluvaquents	100	65.9	18.7%
GeB	Genola loam, 0 to 2 percent slopes	0	9.8	2.8%
Gr	Green River loam	5	0.1	0.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LeB	Lisade loam, 1 to 2 percent slopes	0	4.0	1.1%
MoC	Mountainville-Doyce complex, 2 to 8 percent slopes	0	0.1	0.0%
PDC	Pavant-Doyce complex, 2 to 8 percent slopes	0	9.8	2.8%
W	Water	0	26.1	7.4%
WoA	Woodrow silty clay loam, 0 to 2 percent slopes	0	3.9	1.1%
Subtotals for Soil Survey Area			**349.0**	**98.8%**
Totals for Area of Interest			**353.1**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Road, Trail)

FOR - Forestry

The ratings in this interpretation indicate the hazard of soil loss from unsurfaced roads and trails. The ratings are based on soil erosion factor K, slope, and content of rock fragments.

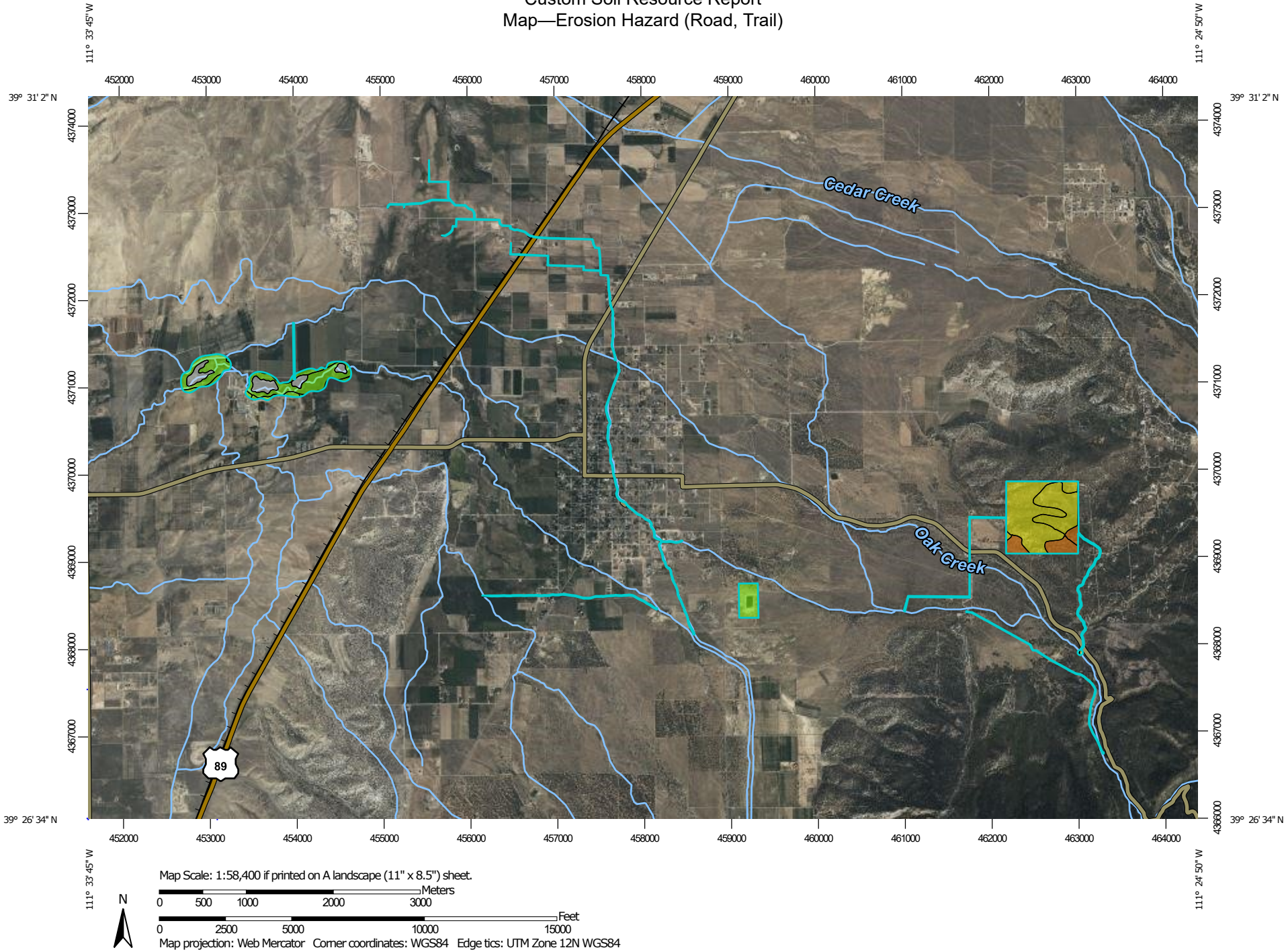
The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," or "severe." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Erosion Hazard (Road, Trail)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2021—Aug 27, 2021

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Road, Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
12	Birdow-Shupert families complex, 2 to 8 percent slopes	Moderate	Birdow family (50%)	Slope/erodibility (0.50)	1.8	0.5%
			Shupert family (30%)	Slope/erodibility (0.50)		
253	Deer Creek-Preussrange families complex, 30 to 60 percent slopes	Severe	Deer Creek family (50%)	Slope/erodibility (0.95)	2.2	0.6%
			Preussrange family (30%)	Slope/erodibility (0.95)		
				Slope/erodibility (0.95)		
NOTCOM	No Digital Data Available	Not rated	NOTCOM (100%)		0.2	0.1%
Subtotals for Soil Survey Area					**4.2**	**1.2%**
Totals for Area of Interest					**353.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Ag	Anco silty clay loam	Slight	Anco (90%)		0.9	0.3%
			Abcal (5%)			
			Shumway (5%)			
AmB	Arapien fine sandy loam, 1 to 2 percent slopes	Slight	Arapien (90%)		10.2	2.9%
AmC2	Arapien fine sandy loam, 2 to 5 percent slopes, eroded	Moderate	Arapien (85%)	Slope/erodibility (0.50)	2.5	0.7%
AoB	Arapien fine sandy loam, wet, 1 to 2 percent slopes	Slight	Arapien (90%)		4.0	1.1%
ATF	Atepic very cobbly silty clay loam, 8 to 40 percent slopes	Moderate	Atepic (85%)	Slope/erodibility (0.50)	94.5	26.8%
BTC	Borvant-Doyce complex, 2 to 10 percent slopes	Slight	Borvant (55%)		27.5	7.8%
Ch	Chipman silty clay loam	Slight	Chipman (85%)		1.6	0.5%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Poganeab, high lime variant (5%)			
			Poganeab (5%)			
CNC	Clegg loam, 3 to 10 percent slopes	Moderate	Clegg (90%)	Slope/erodibility (0.50)	47.2	13.4%
DCD	Deer Creek stony silt loam, 6 to 30 percent slopes	Severe	Deer Creek (90%)	Slope/erodibility (0.95)	16.1	4.5%
				Slope/erodibility (0.95)		
DFF	Deer Creek-Mower complex, 25 to 50 percent slopes	Severe	Deer Creek (60%)	Slope/erodibility (0.95)	17.7	5.0%
				Slope/erodibility (0.95)		
			Mower (30%)	Slope/erodibility (0.95)		
DgC	Denmark gravelly loam, 2 to 5 percent slopes	Slight	Denmark (90%)		1.2	0.3%
DKD	Donnardo very stony loam, 4 to 16 percent slopes	Moderate	Donnardo (85%)	Slope/erodibility (0.50)	4.9	1.4%
Ds	Dyreng silty clay	Slight	Dyreng (85%)		1.2	0.3%
			Shumway (5%)			
FN	Fluvaquents	Slight	Fluvaquents (90%)		65.9	18.7%
			Ponded soils (10%)			
GeB	Genola loam, 0 to 2 percent slopes	Slight	Genola (90%)		9.8	2.8%
Gr	Green River loam	Slight	Green River (85%)		0.1	0.0%
			Poganeab (5%)			
LeB	Lisade loam, 1 to 2 percent slopes	Slight	Lisade (85%)		4.0	1.1%
MoC	Mountainville-Doyce complex, 2 to 8 percent slopes	Slight	Mountainville (50%)		0.1	0.0%
PDC	Pavant-Doyce complex, 2 to 8 percent slopes	Moderate	Pavant (40%)	Slope/erodibility (0.50)	9.8	2.8%
			Doyce (30%)	Slope/erodibility (0.50)		
W	Water	Not rated	Water (100%)		26.1	7.4%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WoA	Woodrow silty clay loam, 0 to 2 percent slopes	Slight	Woodrow (85%)		3.9	1.1%
			Quaker (4%)			
			Wales (4%)			
			Genola (4%)			
			Ephraim (3%)			
Subtotals for Soil Survey Area					**349.0**	**98.8%**
Totals for Area of Interest					**353.1**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderate	160.6	45.5%
Slight	130.4	36.9%
Severe	35.9	10.2%
Null or Not Rated	26.3	7.4%
Totals for Area of Interest	**353.1**	**100.0%**

Rating Options—Erosion Hazard (Road, Trail)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

AOI Inventory

This folder contains a collection of tabular reports that present a variety of soil information. Included are various map unit description reports, special soil interpretation reports, and data summary reports.

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, provide information on the composition of map units and properties of their components.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties

Map Unit: 12—Birdow-Shupert families complex, 2 to 8 percent slopes

Component: Birdow family (50%)

The Birdow family component makes up 50 percent of the map unit. Slopes are 2 to 8 percent. This component is on stream terraces, mountains. The parent material consists of alluvium derived from interbedded sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Shupert family (30%)

The Shupert family component makes up 30 percent of the map unit. Slopes are 2 to 8 percent. This component is on stream terraces, mountains. The parent material consists of alluvium derived from interbedded sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 4 percent. There are no saline horizons within 30 inches of the soil surface.

Map Unit: 253—Deer Creek-Preussrange families complex, 30 to 60 percent slopes

Component: Deer Creek family (50%)

The Deer Creek family component makes up 50 percent of the map unit. Slopes are 30 to 60 percent. This component is on mountain slopes, mountains. The parent material consists of colluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water

saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Preussrange family (30%)

The Preussrange family component makes up 30 percent of the map unit. Slopes are 30 to 60 percent. This component is on mountain slopes, mountains. The parent material consists of colluvium over residuum weathered from limestone and shale. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 4 within 30 inches of the soil surface.

Map Unit: NOTCOM—No Digital Data Available

Component: NOTCOM (100%)

The NOTCOM component makes up 100 percent of the map unit. Slopes are Depth to a root restrictive layer is greater than 60 inches. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches.

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

Map Unit: Ag—Anco silty clay loam

Component: Anco (90%)

The Anco component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during June, July, August. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. The soil has a slightly saline horizon within 30 inches of the soil

surface. The soil has a maximum sodium adsorption ratio of 3 within 30 inches of the soil surface.

Component: Abcal (5%)

Generated brief soil descriptions are created for major soil components. The Abcal soil is a minor component.

Component: Shumway (5%)

Generated brief soil descriptions are created for major soil components. The Shumway soil is a minor component.

Map Unit: AmB—Arapien fine sandy loam, 1 to 2 percent slopes

Component: Arapien (90%)

The Arapien component makes up 90 percent of the map unit. Slopes are 1 to 2 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY227UT Semidesert Gravelly Sandy Loam (black Sagebrush) ecological site. Nonirrigated land capability classification is 7e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 48 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 37 within 30 inches of the soil surface.

Component: Lisade (5%)

Generated brief soil descriptions are created for major soil components. The Lisade soil is a minor component.

Component: Linoyer (5%)

Generated brief soil descriptions are created for major soil components. The Linoyer soil is a minor component.

Map Unit: AmC2—Arapien fine sandy loam, 2 to 5 percent slopes, eroded

Component: Arapien (85%)

The Arapien component makes up 85 percent of the map unit. Slopes are 2 to 5 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is

greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY227UT Semidesert Gravelly Sandy Loam (black Sagebrush) ecological site. Nonirrigated land capability classification is 7e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 48 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 37 within 30 inches of the soil surface.

Component: Arapien (5%)

Generated brief soil descriptions are created for major soil components. The Arapien soil is a minor component.

Component: Lisade, eroded (5%)

Generated brief soil descriptions are created for major soil components. The Lisade, eroded soil is a minor component.

Component: Sanpete (5%)

Generated brief soil descriptions are created for major soil components. The Sanpete soil is a minor component.

Map Unit: AoB—Arapien fine sandy loam, wet, 1 to 2 percent slopes

Component: Arapien (90%)

The Arapien component makes up 90 percent of the map unit. Slopes are 1 to 2 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during June, July, August. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY012UT Semiwet Fresh Meadow ecological site. Nonirrigated land capability classification is 6w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 48 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 15 within 30 inches of the soil surface.

Component: Arapien, saline-alkali (5%)

Generated brief soil descriptions are created for major soil components. The Arapien, saline-alkali soil is a minor component.

Component: Arapien (5%)

Generated brief soil descriptions are created for major soil components. The Arapien soil is a minor component.

Map Unit: ATF—Atepic very cobbly silty clay loam, 8 to 40 percent slopes

Component: Atepic (85%)

The Atepic component makes up 85 percent of the map unit. Slopes are 8 to 40 percent. This component is on hills. The parent material consists of colluvium and residuum derived from shale. Depth to a root restrictive layer, bedrock, paralithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY324UT Upland Shallow Loam (utah Juniper - Singleleaf Pinyon) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 60 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 3 within 30 inches of the soil surface.

Component: Atepic, eroded (5%)

Generated brief soil descriptions are created for major soil components. The Atepic, eroded soil is a minor component.

Component: Borvant, eroded (5%)

Generated brief soil descriptions are created for major soil components. The Borvant, eroded soil is a minor component.

Component: Mower (5%)

Generated brief soil descriptions are created for major soil components. The Mower soil is a minor component.

Map Unit: BTC—Borvant-Doyce complex, 2 to 10 percent slopes

Component: Borvant (55%)

The Borvant component makes up 55 percent of the map unit. Slopes are 2 to 10 percent. This component is on alluvial fans, ridges. The parent material consists of alluvium and colluvium derived from limestone and shale. Depth to a root restrictive layer, petrocalcic, is 16 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential

is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY320UT Upland Shallow Hardpan (pinyon-utah Juniper) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 60 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Doyce (30%)

The Doyce component makes up 30 percent of the map unit. Slopes are 2 to 4 percent. This component is on fans, swales. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R028AY310UT Upland Loam (bonneville Big Sagebrush) North ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Donnardo (10%)

Generated brief soil descriptions are created for major soil components. The Donnardo soil is a minor component.

Component: Mountainville (5%)

Generated brief soil descriptions are created for major soil components. The Mountainville soil is a minor component.

Map Unit: Ch—Chipman silty clay loam

Component: Chipman (85%)

The Chipman component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on valley floors. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during May, June, July. Organic matter content in the surface horizon is about 4 percent. This component is in the R028AY020UT Wet Fresh Meadow ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 30 percent. There are no saline horizons within 30 inches

of the soil surface. The soil has a maximum sodium adsorption ratio of 8 within 30 inches of the soil surface.

Component: Poganeab, high lime variant (5%)

Generated brief soil descriptions are created for major soil components. The Poganeab, high lime variant soil is a minor component.

Component: Beek (5%)

Generated brief soil descriptions are created for major soil components. The Beek soil is a minor component.

Component: Poganeab (5%)

Generated brief soil descriptions are created for major soil components. The Poganeab soil is a minor component.

Map Unit: CNC—Clegg loam, 3 to 10 percent slopes

Component: Clegg (90%)

The Clegg component makes up 90 percent of the map unit. Slopes are 3 to 10 percent. This component is on flats, alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R047XA430UT Mountain Loam (mountain Big Sagebrush) ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Deer Creek, high rainfall (5%)

Generated brief soil descriptions are created for major soil components. The Deer Creek, high rainfall soil is a minor component.

Component: Mower (5%)

Generated brief soil descriptions are created for major soil components. The Mower soil is a minor component.

Map Unit: DCD—Deer Creek stony silt loam, 6 to 30 percent slopes

Component: Deer Creek (90%)

The Deer Creek component makes up 90 percent of the map unit. Slopes are 6 to 30 percent. This component is on mountain slopes. The parent material consists of alluvium and colluvium derived from sandstone, limestone, quartzite, and mixed igneous rocks. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. This component is in the R047XA308UT Upland Loam (basin Big Sagebrush) ecological site. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 48 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Sanpitch (5%)

Generated brief soil descriptions are created for major soil components. The Sanpitch soil is a minor component.

Component: Ant Flat, low rainfall (5%)

Generated brief soil descriptions are created for major soil components. The Ant Flat, low rainfall soil is a minor component.

Map Unit: DFF—Deer Creek-Mower complex, 25 to 50 percent slopes

Component: Deer Creek (60%)

The Deer Creek component makes up 60 percent of the map unit. Slopes are 25 to 40 percent. This component is on swales. The parent material consists of alluvium and colluvium derived from sandstone, limestone, quartzite, and mixed igneous rocks. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. This component is in the R047XA432UT Mountain Loam (oak) ecological site. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 48 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Mower (30%)

The Mower component makes up 30 percent of the map unit. Slopes are 25 to 50 percent. This component is on ridges. The parent material consists of alluvium, colluvium, and residuum derived from sandstone and shale. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate.

This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 6 percent. This component is in the R047XA461UT Mountain Stony Loam (mountain Big Sagebrush) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 65 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 3 within 30 inches of the soil surface.

Component: Atepic (5%)

Generated brief soil descriptions are created for major soil components. The Atepic soil is a minor component.

Component: Ant Flat (5%)

Generated brief soil descriptions are created for major soil components. The Ant Flat soil is a minor component.

Map Unit: DgC—Denmark gravelly loam, 2 to 5 percent slopes

Component: Denmark (90%)

The Denmark component makes up 90 percent of the map unit. Slopes are 2 to 5 percent. This component is on hills. The parent material consists of alluvium derived from limestone and sandstone. Depth to a root restrictive layer, petrocalcic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY236UT Semidesert Shallow Loam (black Sagebrush) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 50 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Arapien, eroded (5%)

Generated brief soil descriptions are created for major soil components. The Arapien, eroded soil is a minor component.

Component: Freedom (5%)

Generated brief soil descriptions are created for major soil components. The Freedom soil is a minor component.

Map Unit: DKD—Donnardo very stony loam, 4 to 16 percent slopes

Component: Donnardo (85%)

The Donnardo component makes up 85 percent of the map unit. Slopes are 4 to 16 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY334UT Upland Stony Loam (wyoming Big Sagebrush) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 25 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Fontreen (5%)

Generated brief soil descriptions are created for major soil components. The Fontreen soil is a minor component.

Component: Pavant (5%)

Generated brief soil descriptions are created for major soil components. The Pavant soil is a minor component.

Component: Mountainville (5%)

Generated brief soil descriptions are created for major soil components. The Mountainville soil is a minor component.

Map Unit: Ds—Dyreng silty clay

Component: Dyreng (85%)

The Dyreng component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, alluvial fans. The parent material consists of alluvium derived from shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 48 inches during April, May, June, July. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 23 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Shumway (5%)

Generated brief soil descriptions are created for major soil components. The Shumway soil is a minor component.

Component: Anco (5%)

Generated brief soil descriptions are created for major soil components. The Anco soil is a minor component.

Component: Dyreng, strongly saline (5%)

Generated brief soil descriptions are created for major soil components. The Dyreng, strongly saline soil is a minor component.

Map Unit: FN—Fluvaquents

Component: Fluvaquents (90%)

The Fluvaquents component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R028AY020UT Wet Fresh Meadow ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 25 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Ponded soils (10%)

Generated brief soil descriptions are created for major soil components. The Ponded soils soil is a minor component.

Map Unit: GeB—Genola loam, 0 to 2 percent slopes

Component: Genola (90%)

The Genola component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial flats, alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This

soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R028AB221UT Semidesert Loam (basin Big Sagebrush) ecological site. Nonirrigated land capability classification is 7e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 28 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 3 within 30 inches of the soil surface.

Component: Linoyer (5%)

Generated brief soil descriptions are created for major soil components. The Linoyer soil is a minor component.

Component: Woodrow (5%)

Generated brief soil descriptions are created for major soil components. The Woodrow soil is a minor component.

Map Unit: Gr—Green River loam

Component: Green River (85%)

The Green River component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on alluvial fans, flood plains. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R028AY012UT Semiwet Fresh Meadow ecological site. Nonirrigated land capability classification is 6w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 13 within 30 inches of the soil surface.

Component: Anco (5%)

Generated brief soil descriptions are created for major soil components. The Anco soil is a minor component.

Component: Poganeab (5%)

Generated brief soil descriptions are created for major soil components. The Poganeab soil is a minor component.

Component: Genola (5%)

Generated brief soil descriptions are created for major soil components. The Genola soil is a minor component.

Map Unit: LeB—Lisade loam, 1 to 2 percent slopes

Component: Lisade (85%)

The Lisade component makes up 85 percent of the map unit. Slopes are 1 to 2 percent. This component is on alluvial flats, alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R028AY220UT Semidesert Loam (wyoming Big Sagebrush) ecological site. Nonirrigated land capability classification is 7e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 50 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 6 within 30 inches of the soil surface.

Component: Arapien (5%)

Generated brief soil descriptions are created for major soil components. The Arapien soil is a minor component.

Component: Sanpete (5%)

Generated brief soil descriptions are created for major soil components. The Sanpete soil is a minor component.

Component: Linoyer (5%)

Generated brief soil descriptions are created for major soil components. The Linoyer soil is a minor component.

Map Unit: MoC—Mountainville-Doyce complex, 2 to 8 percent slopes

Component: Mountainville (50%)

The Mountainville component makes up 50 percent of the map unit. Slopes are 2 to 8 percent. This component is on alluvial fans. The parent material consists of alluvium derived from sandstone, limestone, and conglomerate. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This

soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R047XA332UT Upland Stony Loam (black Sagebrush) ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 28 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Doyce (30%)

The Doyce component makes up 30 percent of the map unit. Slopes are 2 to 4 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R028AY310UT Upland Loam (bonneville Big Sagebrush) North ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Pavant (15%)

Generated brief soil descriptions are created for major soil components. The Pavant soil is a minor component.

Component: Donnardo (3%)

Generated brief soil descriptions are created for major soil components. The Donnardo soil is a minor component.

Component: Borvant (2%)

Generated brief soil descriptions are created for major soil components. The Borvant soil is a minor component.

Map Unit: PDC—Pavant-Doyce complex, 2 to 8 percent slopes

Component: Pavant (40%)

The Pavant component makes up 35 percent of the map unit. Slopes are 4 to 8 percent. This component is on alluvial fans. The parent material consists of alluvium derived from limestone and sandstone. Depth to a root restrictive layer, petrocalcic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is

in the R028AY320UT Upland Shallow Hardpan (pinyon-utah Juniper) ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 38 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Doyce (30%)

The Doyce component makes up 35 percent of the map unit. Slopes are 2 to 4 percent. This component is on swales. The parent material consists of alluvium derived from limestone, sandstone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R028AY310UT Upland Loam (bonneville Big Sagebrush) North ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Borvant (15%)

Generated brief soil descriptions are created for major soil components. The Borvant soil is a minor component.

Component: Donnardo (15%)

Generated brief soil descriptions are created for major soil components. The Donnardo soil is a minor component.

Map Unit: W—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit: WoA—Woodrow silty clay loam, 0 to 2 percent slopes

Component: Woodrow (85%)

The Woodrow component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, alluvial fans, intermontane basins. The parent material consists of alluvium derived from limestone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within

a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R028AY220UT Semidesert Loam (wyoming Big Sagebrush) ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 23 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Genola (4%)

Generated brief soil descriptions are created for major soil components. The Genola soil is a minor component.

Component: Quaker (4%)

Generated brief soil descriptions are created for major soil components. The Quaker soil is a minor component.

Component: Wales (4%)

Generated brief soil descriptions are created for major soil components. The Wales soil is a minor component.

Component: Ephraim (3%)

Generated brief soil descriptions are created for major soil components. The Ephraim soil is a minor component.

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