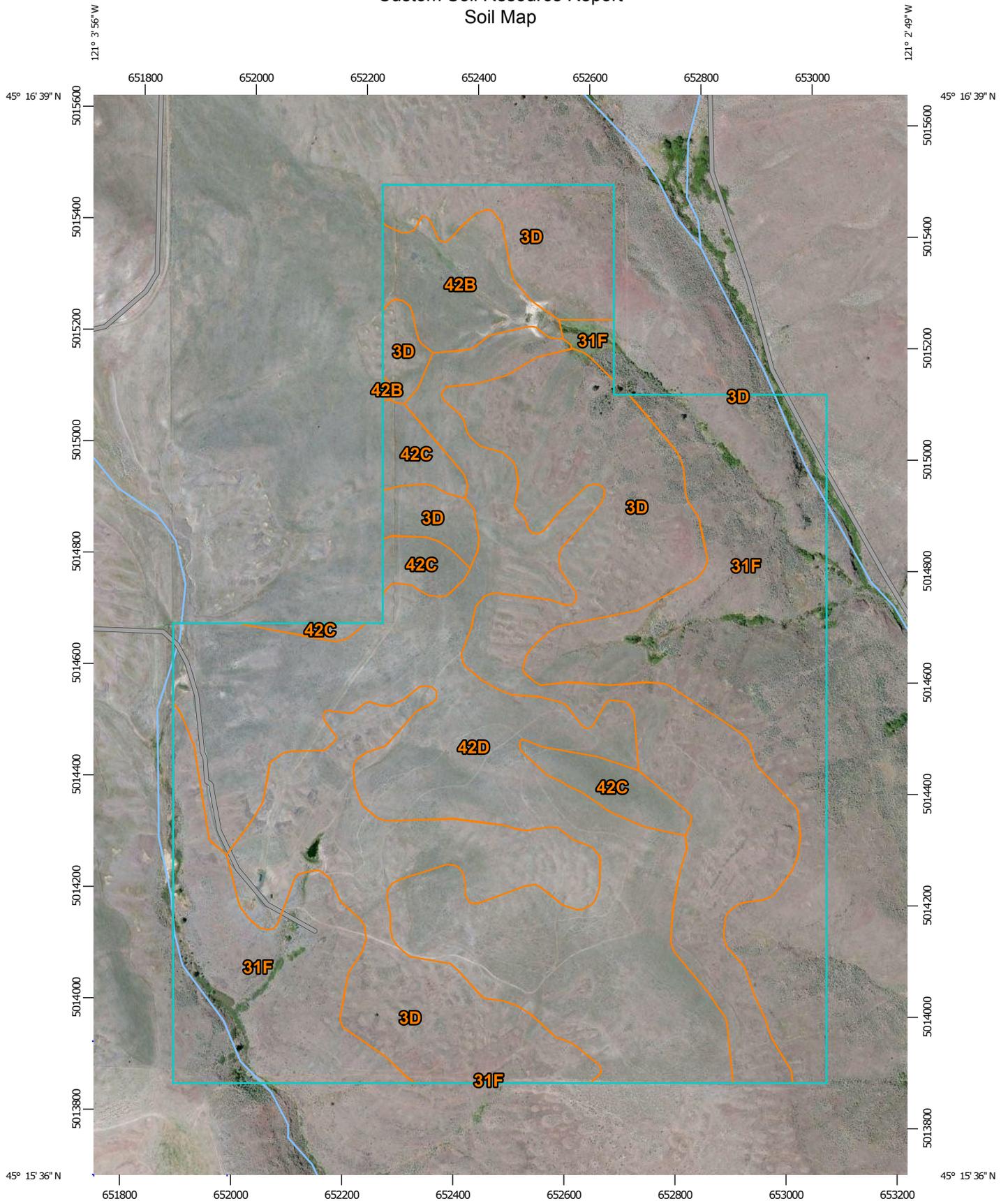
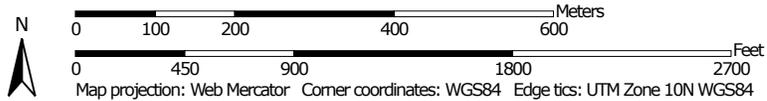


Custom Soil Resource Report Soil Map



Map Scale: 1:9,440 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

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 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 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: Wasco County, Oregon, Northern Part
 Survey Area Data: Version 9, Sep 16, 2014

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

Date(s) aerial images were photographed: Jul 11, 2010—Jul 7, 2011

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

Wasco County, Oregon, Northern Part (OR673)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3D	Bakeoven-Condon complex, 2 to 20 percent slopes	131.1	36.3%
31F	Lickskillet extremely stony loam, 40 to 70 percent slopes	97.9	27.1%
42B	Sinamox silt loam, 1 to 7 percent slopes	12.4	3.4%
42C	Sinamox silt loam, 7 to 12 percent slopes	13.2	3.7%
42D	Sinamox silt loam, 12 to 20 percent slopes	106.3	29.5%
Totals for Area of Interest		361.0	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.

Custom Soil Resource Report

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.

Wasco County, Oregon, Northern Part

3D—Bakeoven-Condon complex, 2 to 20 percent slopes

Map Unit Setting

National map unit symbol: 23jv
Elevation: 1,600 to 3,600 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 110 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Bakeoven and similar soils: 65 percent
Condon and similar soils: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bakeoven

Setting

Landform: Plateaus
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and residuum weathered from basalt

Typical profile

H1 - 0 to 3 inches: very cobbly loam
H2 - 3 to 6 inches: very cobbly loam
H3 - 6 to 9 inches: very cobbly clay loam
H4 - 9 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 20 percent
Depth to restrictive feature: 4 to 10 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Very shallow loam 10-14 pz (R008XY150OR)

Description of Condon

Setting

Landform: Plateaus
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope

Custom Soil Resource Report

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and volcanic ash

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 27 inches: silt loam
H3 - 27 to 31 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 20 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Loamy 12-14 pz (R008XY120OR)

31F—Lickskillet extremely stony loam, 40 to 70 percent slopes

Map Unit Setting

National map unit symbol: 23jj
Elevation: 200 to 3,600 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Lickskillet and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lickskillet

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex, concave
Across-slope shape: Convex, concave
Parent material: Stony colluvium consisting of a mixture of loess and residuum weathered from basalt

Typical profile

H1 - 0 to 4 inches: extremely stony loam
H2 - 4 to 10 inches: very stony loam
H3 - 10 to 16 inches: very gravelly loam
H4 - 16 to 26 inches: unweathered bedrock

Properties and qualities

Slope: 40 to 70 percent
Depth to restrictive feature: 12 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Shallow south 10-14 pz (R008XY210OR)

42B—Sinamox silt loam, 1 to 7 percent slopes

Map Unit Setting

National map unit symbol: 23jy
Elevation: 1,500 to 2,500 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 120 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sinamox and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sinamox

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and gravelly colluvium

Typical profile

H1 - 0 to 24 inches: silt loam
H2 - 24 to 33 inches: silt loam

Custom Soil Resource Report

H3 - 33 to 49 inches: gravelly clay loam
H4 - 49 to 63 inches: silty clay
H5 - 63 to 67 inches: weathered bedrock

Properties and qualities

Slope: 1 to 7 percent
Depth to restrictive feature: 40 to 80 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: Jd shrubby loam 12-16 pz (R010XB013OR)

42C—Sinamox silt loam, 7 to 12 percent slopes

Map Unit Setting

National map unit symbol: 23jz
Elevation: 1,500 to 2,500 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 120 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sinamox and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sinamox

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and gravelly colluvium

Typical profile

H1 - 0 to 24 inches: silt loam
H2 - 24 to 33 inches: silt loam
H3 - 33 to 49 inches: gravelly clay loam
H4 - 49 to 63 inches: silty clay
H5 - 63 to 67 inches: weathered bedrock

Properties and qualities

Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 80 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Jd shrubby loam 12-16 pz (R010XB013OR)

42D—Sinamox silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 23k0
Elevation: 1,500 to 2,500 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 120 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sinamox and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sinamox

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluvium
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and gravelly colluvium

Typical profile

H1 - 0 to 24 inches: silt loam
H2 - 24 to 33 inches: silt loam
H3 - 33 to 49 inches: gravelly clay loam
H4 - 49 to 63 inches: silty clay
H5 - 63 to 67 inches: weathered bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 40 to 80 inches to paralithic bedrock

Custom Soil Resource Report

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: Jd shrubby loam 12-16 pz (R010XB013OR)